



ANAND AGRICULTURAL UNIVERSITY

21st Annual Report 2024-25







Anand Agricultural University

21st Annual Report 2024-25

From **01-04-2024** to **31-03-2025**

Published in pursuance of Section 49 of the
Gujarat Agricultural Universities Act, 2004

Published by

Dr. G. R. Patel

Registrar

Anand Agricultural University
Anand - 388110, Gujarat, India





Our Symbol



This is our Emblem;

One Square, One Leaf
with "AAU" firmly embedded

The Square with lighter and darker shades of green
Stands for Lusciousness, Fertility and Abundance of this land.
This is our Mother Land
With all the three elements abounding

Among the entire world, there is only one thing
That Could photo synthesize solar rays
into biomass i.e., the LEAF.
Hence, the LEAF stands as our symbol
Which could transform sun rays i.e. energy into matter

Thus leaf as a symbol of our commitment;
Our Dream
to make our Country
abundant in agriculture

Leaf is our tribute to
Our Mother Land
Our pledge to make Country prosperous

Our Motto is :

कृणवन्तो राष्ट्रं कृषि संपन्नम्

Means

We, the Scientists, Students and
all the employees of AAU unitedly
stand to make the solemn pledge
that we enrich and glorify
the grandeur of our Country
and make it agriculturally prosperous





ANAND AGRICULTURAL UNIVERSITY ANAND



From VC's Desk

It is with immense pride and great pleasure that I present the 21st Annual Report (2024–25) of Anand Agricultural University (AAU), marking yet another milestone in our journey of excellence, innovation, and service to the agricultural community. Over the past two decades, AAU has played a vital role in advancing agricultural education, research, and extension, contributing significantly to the transformation of Indian agriculture towards sustainability and prosperity. Through our commitment to academic excellence, cutting-edge research, and effective technology dissemination, AAU continues to empower farmers, students, and agri-entrepreneurs across the state and the nation.

The year 2024–25 has been a remarkable one for the university, marked by significant research accomplishments and innovations. During past year, a total of ten new crop varieties were recommended, reflecting AAU's continuous efforts to develop high-yielding, climate-resilient, and farmer-friendly technologies. These include Gujarat Small Round Brinjal 101 (Anand Samuh), Gujarat Cherry Tomato 302 (Anand Kundan), Gujarat Cherry Tomato 301 (Anand Lalima), Gujarat Vegetable Chilli 122 (Anand Agni), Gujarat Bitter Gourd 1 (Anand Karnika), Gujarat Drilled Rice 202 (Panam Dhan), Gujarat Lucerne 5 (Anand Charu), Gujarat Fodder Bajra 5 (Anand Virat), Gujarat Guar 4 (Anand Pancham), and Gujarat Maize Hybrid 7 (Anand Samrat). Among these, biofortified Cherry Tomato varieties are particularly noteworthy as they are likely the first of their kind to be developed in India, symbolizing AAU's pioneering efforts in horticultural crop improvement. In addition, two trait-specific germplasm lines of Castor and Paddy have been successfully registered with the National Bureau of Plant Genetic Resources (NBPGR), New Delhi, further enriching the nation's genetic repository and strengthening our research base for future crop improvement programs.

Sustainability and renewable energy have remained central to AAU's institutional vision. It is a matter of immense pride that the university has become the first in the country to meet 100 percent of its electricity requirements through solar energy. With the successful installation of a 2.6 MW on-grid and off-grid solar photovoltaic (PV) system across the campus, AAU has achieved complete energy self-sufficiency. This initiative not only supports environmental





conservation but also contributes significantly to reducing the university's carbon footprint, aligning with national goals for clean and green energy.

Our academic programs continue to evolve with technological advancements, ensuring that our students receive holistic and future-ready education. By integrating digital tools and innovative teaching methodologies, we have enhanced the learning experience and ensured continuity of education. Equally important is our extension outreach, which remains the cornerstone of AAU's mission to transfer knowledge from laboratories to farmers' fields. Through our Krushi Vigyan Kendras (KVKs) and research stations, we have conducted extensive training programs, field demonstrations, and awareness campaigns on natural farming, climate-smart practices, and sustainable agriculture, ensuring that farmers benefit directly from scientific innovations.

I extend my sincere gratitude to the Government of Gujarat, the Government of India, the Indian Council of Agricultural Research (ICAR), and all our funding agencies for their continued support and encouragement. I also express my heartfelt appreciation to our dedicated faculty members, scientists, staff, and students whose commitment and hard work have been instrumental in achieving these milestones. As we look to the future, AAU reaffirms its resolve to explore new frontiers in research, education, and extension. Together, we will continue to contribute to the growth and sustainability of Indian agriculture, ensuring food security, environmental stewardship, and prosperity for our farmers and future generations.

Place : Anand

Date : 11/11/2025

(K. B. Kathiria)
Vice Chancellor





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Our Song

हो संस्कृति कृषि वत्सलम्, कल्याण कीर्णे मंगलम्
कृषावन्तो राष्ट्रं कृषिसंपन्नम् कृषावन्तो राष्ट्रं कृषिसंपन्नम्
कृषावन्तो राष्ट्रं कृषिसंपन्नम्

सरदार गाथा गुर्जरी, याइ अमुल यरोतरी,
क्षीर संस्कृति महीसागरी, आतिथ्य आदर से लरी,
कृषावन्तो राष्ट्रं कृषिसंपन्नम्

डाडोर श्रीठाडोर डा, कायावरोहण कलिडा,
वडताल लाल गुलाल, सून करताल धून नारायणी,
कृषावन्तो राष्ट्रं कृषिसंपन्नम्

संतराम ओडाणा श्रीमद्, हरि मारगी जेधन लगत,
दिल के दिये जलते किये, गुंशु गीरा रविशंकरी,
कृषावन्तो राष्ट्रं कृषिसंपन्नम्

सरदार रास अडासमें, आपु यले थे साथ में,
विधानगर आणंद में, विज्ञान ज्ञान गंगोतरी,
कृषावन्तो राष्ट्रं कृषिसंपन्नम्

- डॉ. आलकृष्ण जेधी



Chapter

1

INTRODUCTION

In central region of Gujarat State, the agricultural education was started way back in 1938 through establishment of Krushi-Go-Vidya Bhavan at Anand, the milk city of India. This Institute was popularly known as Khetiwadi or the Institute of Agriculture. Later on, in 1947, with the establishment of B. A. College of Agriculture, which was initially affiliated to Bombay University until 1956 then to Gujarat University until 1962 and subsequently to Sardar Patel University, became integral institution of Gujarat Agricultural University in 1972 along with Sheth M.C. College of Dairy Science and the Government College of Veterinary Science and Animal Husbandry, Anand.

Anand Agricultural University came into existence with effect from 01 May, 2004 by enactment of Gujarat Agricultural Universities Act, 2004 (Gujarat Act, No.5 of 2004) with transfer of the activities of the Anand zone of the erstwhile Gujarat Agricultural University. This resulted in greater autonomy for regional agriculture development, and as it had inherited such a well-developed infrastructure with vibrant activities, AAU used this strength as a force multiplier to enlarge its vision, adding momentum to its efforts in fulfilling its mandate.

AAU and its progenitor Gujarat Agricultural University, always have dominant presence in Indian agricultural education system, ever since 1972. Prime institutions/ colleges like B. A. College of Agriculture, Sheth M. C. College of Dairy Science and College of Veterinary Science & A.H. had their reputed presence even from 1947, 1961 and 1964 respectively to undertake useful interventions

related to agricultural education and research, which later contributed significantly in paving a path for many revolutions (green revolution, white revolution and many other historic agricultural innovations). These historic institutions continue to remain prime faculties of present days AAU, which along with the subsequently added new faculties and colleges have gained increasing importance as well as higher status across the nation even though the AAU is in its second decade of existence.

AAU has now 8 constituent colleges, including three colleges for Agriculture, Agricultural Engineering & Technology, Agricultural Business Management Studies, Food Processing Technology and Bio Energy, Agricultural Information Technology, and Horticulture. It also has 10 on campus and 18 off-campus research centres, 1 Extension Education Institute and 16 Extension Education Centres. The districts of Anand, Ahmedabad, Vadodara, Dahod, Panchmahal, Kheda, Mahisagar, Chhotaudepur and Botad are covered under territorial jurisdiction of the university comprising nearly 17.41 per cent (3.413 million ha) area of Gujarat State (19.60 million ha). The headquarter of University is Anand, Milk City-famous for the Amul Dairy, located in Agro-climatic Zone-III. It is on the Ahmedabad-Mumbai railway line, 65 km from Ahmedabad and 40 km from Vadodara railway station and connected by express highway on Golden quadrilateral. The city is located at 22.56 °N Latitude and 72.95 °E Longitude.

AAU has passed several notable milestones and consistently improved on many fronts that





have a bearing on achieving academic excellence. Successful attempts have been made to establish the university as a great centre for the purpose to create the wealth of knowledge in its domain area. It has endeavoured to create a highly inspiring atmosphere and learning environment in a beautiful and green campus. Apart from quality education, AAU shoulders the responsibility of agricultural research of par excellence meeting the escalating demands of food grains and animal products as well as successful transfer of technologies through a strong network of extension education imparted to the farmers. Combined efforts have escalated the decadal agricultural growth of the state.

AAU is committed to develop competent human resource to serve the society in general and farmers and food industry in particular for sustainable livelihood, efficient use of natural resources, ensuring food security and safety for the nation. AAU believes in harnessing the power of science and innovation for increasing the prosperity of the society. The Emblem symbolizes our commitment to make our country abundant in agriculture and pay tribute to our mother land and our pledge to make country prosperous. Our Motto is "Krunvanto Rastram Krushi Sampannam" which means that we, the scientists, students and all the employees of AAU unitedly stand to make the solemn pledge that we enrich and glorify the grandeur of our country and make it agriculturally prosperous.

Considering the strengths acquired by AAU and opportunities looming large for further achievements and progress, the University is rightly set not only to continue its ongoing success stories but is also positioned rightly to usher in to next phase of excellence and contribution for agriculturally prosperous Gujarat and India.

1.1 Vision

Agriculturally Prosperous Gujarat and India

1.2 Mission

The mission of the Anand Agricultural University is to provide teaching, research and extension education services related to Agriculture and Allied Sciences including newer sciences like Agricultural Information Technology, Agricultural Engineering Technology, Food Processing Technology, Agricultural Business Management, Horticulture etc. and thereby develop excellent human resource and innovative technologies to serve the farming community with the motto of making Gujarat and India agriculturally prosperous.

1.3 Goals and Objectives

- ♦ Make provision to impart education and thereby develop quality human resources
- ♦ Furthering the advancement of learning through research
- ♦ Passing the knowledge gained through research to the stake holders – the farmers, through extension education
- ♦ Promoting partnership and linkages with national and international institutions
- ♦ Budding cutting edge technologies for national and international arena/markets

1.4 Education

- ♦ To impart education in agriculture and allied sciences at undergraduate and post graduate levels leading to Bachelor's, Master's and Doctorate degrees in various colleges of Agriculture, Agricultural Engineering & Technology, Agricultural Information Technology, Food Processing Technology & Bio-Energy, International Agribusiness Management, Horticulture and leading





to diploma in various Polytechnics in Agriculture, Food Science & Home Economics, Agricultural Engineering and Horticulture

- ◆ To provide integrated agricultural education at different levels to increase efficiency and effectiveness of skill of students
- ◆ To upgrade the technical competence of teachers by redesigning course curriculum as suggested by ICAR/Dean's Committee and coordinating the teaching with research in the field of agriculture
- ◆ To organize vocational courses to educate rural youth in various disciplines of agriculture and allied sciences with intention to develop self-employment
- ◆ To provide consultancy and advisory services to the industry, government and non-government sectors
- ◆ To architect agribusiness professionals for Agricultural, Agri. food firms, rural and allied sectors
- ◆ To encourage entrepreneurial spirit and develop qualified entrepreneurs for rural development
- ◆ To cater the needs of enterprises and cooperatives in agribusiness at national and international level

1.5 Research

- ◆ Evolving new varieties and breeds and developing technologies for increasing agricultural productivity with a view to improve socio-economic status of farmers of Gujarat and India
- ◆ Develop package of practices for cultivation of various crops and cropping

systems of middle Gujarat

- ◆ Develop integrated farming system, Integrated Pest and Disease Management Systems, Organic farming and Biological control
- ◆ Develop cutting edge technologies in the field of Nanotechnology pertaining to agriculture and Food sciences
- ◆ Develop technologies in the field of Food processing and Bio-energy

1.6 Extension Education

- ◆ Impart training to the officers and extension workers of line departments of Government of Gujarat and India, field functionaries, staff of the University, NGOs, farmers, entrepreneurs etc
- ◆ Conduct short and long duration vocational trainings for farmers, farm women, farm youth, entrepreneurs and tribals
- ◆ Assess, refine and demonstrate latest agricultural technologies of University through front line demonstrations for their wider adoption
- ◆ Transmit agricultural technologies to the farmers and rural masses of Gujarat through mass media, information technologies and video conferencing

1.7 University Organization

As per the GAU Act-2004, the Chancellor, Vice Chancellor, Director of Research and Dean, Post-graduate Studies, Dean, Faculty of Agriculture, Dean, Faculty of Food Processing Technology and Bio-energy, Dean, Faculty of Agricultural Engineering and Technology, Dean, Faculty of Agricultural Information Technology, Dean, Faculty of International Agri-business





Management Institute, Dean, Faculty of Horticulture, Director of Extension Education, Registrar, Comptroller, University Librarian, Executive Engineer, Director of Students' Welfare and Director of Information Technology are Officers of the University. The detailed organizational set-up as well as administrative and functional aspects are given in Chapter-2.

Hon'ble Governorshri of Gujarat acts as the Chancellor of the University. During the period of the year under report, Hon'ble Governorshri of Gujarat, Shri Acharya Devvrat, Chancellor; (From 17-07-2019 to continue). Dr. K. B. Kathiria, Vice Chancellor (From 03-03-2021 after noon continue) and Dr. M. K. Jhala, I/c. Director of Research and Dean, Post-graduate Studies (From 05-03-2021 to continue) and Dr. J. K. Patel, I/c. Director of Extension Education (From 01-03-2024 to continue). Dr. Gautam R. Patel, (From 25-03-2021 before noon continue) as the I/c. Registrar of the University.

1.8 Power and Functions of the University

Under Section 6 of the GAU Act-2004, the University is empowered to exercise the following powers.

- ◆ Provide education and instruction in agriculture and allied sciences and in such other branches of learning as the University may deem fit;
- ◆ Make provision for research in agriculture and allied branches of learning; Make provision for dissemination of the findings of research and technical information through extension education programmes;
- ◆ Make such provision which would enable affiliated colleges and

recognised institutions to undertake specialisation in different fields of studies;

- ◆ Institute degrees, diplomas and other academic distinctions;
- ◆ Lay down courses of study and instruction for various examinations;
- ◆ Hold examinations and confer degrees, diplomas and other academic distinctions and confer certificates to persons who –
 - a) have pursued approved courses of study at the University or at a college unless exempted there from, in the manner prescribed and have passed the examinations prescribed by the University or
 - b) have carried on research under conditions prescribed;
- ◆ Withdraw or cancel any degree, diploma or certificate conferred or granted by the University in such manner as may be prescribed;
- ◆ Confer Honorary degree and other distinctions in the manner prescribed;
- ◆ Provide lectures, instructions and training to persons who are not enrolled students of the University and grant such certificates to them as may be prescribed;
- ◆ Co-operate with any other University or authority in such manner and for such purpose as the University may determine;
- ◆ Establish and maintain colleges for imparting education in agriculture and allied sciences;





- ◆ Establish and maintain classrooms, laboratories, libraries, English language laboratory, research stations, institutions and museums with latest technology for teaching, research and extension education;
- ◆ Create such teaching, administrative and other posts as the University may deem necessary from time to time and make appointments thereto;
- ◆ Institute and award fellowships, scholarships and prizes in accordance with the Statutes;
- ◆ Associate or admit educational institutions imparting education in agriculture and allied sciences with, or to the privilege of the University by way of affiliation or recognition;
- ◆ Withdraw or modify, either in whole or part, affiliation or recognition of educational institutions;
- ◆ Inspect colleges and recognised institutions and take necessary measures to ensure that proper standards of instruction, teaching and training are maintained in them and that adequate library and laboratory provisions are made therein;
- ◆ Lay down and regulate the salary scales, allowances and other service conditions of the members of teaching, other academic and non-teaching staff of the University;
- ◆ Lay down and regulate the salary scales, allowances and other conditions of service of the members of the teaching, other academic and non-teaching staff in the affiliated colleges and recognised institutions to,
 - ⇒ control and co-ordinate the activities of, and to give financial aid to, affiliated colleges and recognised institutions; and
 - ⇒ regulate fees to be paid by the students in affiliated colleges and recognised institutions;
- ◆ Institute and maintain residential accommodation for students and staff of the University;
- ◆ Fix demand and receive or recover such fees and other charges as may be prescribed;
- ◆ Supervise, regulate and control the residence, conduct and discipline of the students of the University, make arrangements for promoting their health and general welfare;
- ◆ Conduct, co-ordinate, supervise, regulate and control post-graduate teaching and research work at the University departments and affiliated colleges and recognised institutions;
- ◆ Co-ordinate, supervise, regulate and control conduct of undergraduate teaching and instruction in the affiliated colleges and undertake the same in University colleges;
- ◆ Make special provision for agricultural education, research and extension in relation to arid areas and areas prone to scarcity in the University area;
- ◆ Perform all such other acts and things whether incidental to the powers aforesaid or not, as may be requisite in order to further the objectives of the University.





1.9 Focus and Thrust Areas

AAU's activities have expanded to span newer commodities and other sectors such as soil health card, plant tissue culture, plant bio-technology, medicinal plants, liquid biofertilizer, location specific micronutrient status, pesticide residue, genomics, probiotic food, interface between industry and scientists, distance education etc., apart from the mandatory ones like research focus on rice, maize, tobacco, vegetable crops, fruit crops, forage crops etc. The core of AAU's operating philosophy however, continues to create partnership between the rural people and committed academia as the basis for sustainable rural development. In pursuing its various programmes, AAU's overall mission is to promote continuous process of development of sustainable growth and economic independence in rural society. AAU aims to do this through education, research and extension education. Thus, AAU works towards the empowerment of the farmers.

AAU has taken a lead in agricultural education, research and extension education in the Country. The University is committed to frontier areas of research and formulate the programmes as per the need of the farmers. So far, 1850 technologies have been recommended for farmers/scientists/entrepreneurs including 108 crop varieties. About 822 projects pertaining to education, research and extension education are underway in different areas of agriculture, veterinary, dairy, food processing technology, agricultural engineering and horticulture. We have shown our strength in the areas of Liquid biofertilizer, Pesticide residue analysis, Micro Nutrient, Micro-propagation, post harvest value addition,

ICT tools incubation programme and Food Processing Technology etc.

1.10 Accreditation

The National Agricultural Education Accreditation Board (NAEAB) of Indian Council Agricultural Research (ICAR), New Delhi for notification dated: 5th August, 2022 has granted reaccreditation to Anand Agricultural University for a period of five years from (2021-22 to 2025-26) 01-04-2021 to 31-03-2026 with Score-2.99 equivalents to Grade-B. Constituent colleges of Anand Agricultural University (1) B. A. College of Agriculture, (2) College of Food Processing Technology & Bio-Energy, (3) College of Agriculture, Vaso, (4) College of Agriculture, Jabugam (5) International Agri-Business Management Institute, (6) College of Agricultural Engineering & Technology, Godhra and their respective degree programmes were accredited by National Agricultural Education Accreditation Board (NAEAB).

The National Agricultural Education Accreditation Board (NAEAB) of Indian Council Agricultural Research (ICAR), New Delhi for taken in its 34th meeting held in New Delhi on 13th July, 2023.

A. Considering grievance submitted by the University the following Programmes of Anand Agricultural University Anand, Gujarat were approved for accreditation as co-terminus with the University accreditation. The Notification dated: 7th August, 2023 has granted accreditation of (i) B.Tech. (Food Technology) and (ii) B.Sc. (Hons.) Horticulture for a period of five years from (2021-22 to 2025-26) 01-04-2021 to 31-03-2026.





The National Assessment and Accreditation Council (NAAC) Accreditation received by Anand Agricultural University for a period of five years from (2018-19 to 2022-23) Grade-B.

For Excellence in Research, Innovation & Entrepreneurship (Public), Anand Agricultural University is awarded 10th FICCI Higher Education Excellence Awards-2024 by Federation of Indian Chambers of Commerce and Industry, New Delhi on 18th October, 2024 of New Delhi.

1.11 Recognitions

Indian Council of Agricultural Research (ICAR) accredited AAU and its colleges, which indicates the higher standards of education and research maintained by the university. The Dagri breed of cow registered by AAU has been registered by the Breed Registration Committee of ICAR on 24 January, 2020 and a certificate awarded to Hon. Vice Chancellor, AAU by National Bureau of Animal Genetics Research (NBAGR), Karnal.

The Gujarat State Institutional Ratings Framework (GSIRF) is a pioneering attempt towards creating world class institutions in Gujarat by the Knowledge Consortium of Gujarat (KCG) in partnership with the Indian Centre for Academic Rankings & Excellence (ICARE), India's most trusted institution Ranking & Rating Authority. ICARE has been tasked with the responsibility to Audit, Assess & Rate Institutions with a clear has been outcome of the institutions so as to help academic leaders identify areas of improvements, bridge the gaps and achieve excellence Regionally and Globally.

In connection to the Gujarat State Institutional Ratings Framework

(GSIRF), Knowledge Consortium of Gujarat, Department of Education, Government of Gujarat rankings for the year 2024 on the constituent institute of Anand Agricultural University, Anand has been awarded "5 Star" ranking in the Institutions in the category of "Agriculture" on the basis of comprehensive performance metrics as set out in the Gujarat State Institutional Ratings Framework (GSIRF) on the 2nd December, 2024.

National Institutional Ranking Framework (NIRF) India Rankings 2024 Anand Agricultural University, Anand Ranked 23rd in Agriculture and Allied Sectors Category. The Patent Office, Government of India, granted "PNEUMATIC SEED METERING DEVICE" Patent Certificate Date: 22-02-2024. GREEN MENTORS, Ahmedabad awarded AAU as an Accredited Green University in Platinum Ranking, Green University Energy Audit Report Green University Environment Audit Report for the Academic Year 2023-2026. International Green University Award 2023 presented to AAU, Anand at the 7th NYC Green School Conference, ILR School Cornell University, New York, USA on 15th September, 2023.

AAU has signed memorandum of understanding with reputed foreign universities viz, Lund University, Sweden; Copenhagen University, Denmark; University of Alberta, Canada; and Florida Agricultural and Mechanical University, USA. Western Sydney University In addition, AAU has signed 75 MoUs including generic MoU with ICAR institutions and specific MoUs with other universities/institutes/ NGOs in Gujarat and India. Apart from national projects, AAU has handled and still operating collaborative projects funded by European Union, Swedish International Development Agency, Government of Australia for exchange of students, faculty as well as conducting high end research.





FICCI HIGHER EDUCATION EXCELLENCE AWARD-2024



Certificate

Awarded to

Anand Agricultural University

For
Excellence in Research, Innovation & Entrepreneurship (Public)

Jyoti Vij
Director General, FICCI



Anand Agricultural University

has been awarded

FICCI HIGHER EDUCATION EXCELLENCE AWARD-2024

for Excellence in Research, Innovation & Entrepreneurship (Public)

on 18th October 2024 at New Delhi





The Executive Committee of the **Knowledge Consortium of Gujarat, Department of Education, Government of Gujarat** on the recommendation of the duly appointed **assessment & rating agency**, the Indian Centre for Academic Rankings and Excellence (**ICARE**) has rated

ANAND AGRICULTURAL UNIVERSITY



as a **5 Star** Institution in the category of **Agriculture** on the basis of comprehensive performance metrics as set out in the **Gujarat State Institutional Ratings Framework (GSIRF)** on the 2nd December 2024.



BY ORDER

Sunaina Tomar IAS
Additional Chief Secretary
(Higher and Technical Education)
Government of Gujarat

Gaurav Dinesh Ramesh IAS
Director (Higher Education)
Government of Gujarat

Prof AU Patel
Advisor
Knowledge Consortium of Gujarat
Government of Gujarat

Dr Karthick Sridhar
Vice Chairman
Indian Centre for Academic
Rankings and Excellence

VALID UPTO 31st May 2025





Certificate

Ministry of Education
Government of India



NATIONAL INSTITUTIONAL RANKING FRAMEWORK

INDIA RANKINGS 2024

**Anand Agricultural University, Anand
Ranked 23 in Agriculture and Allied Sectors**

CHAIRMAN, NBA

MEMBER SECRETARY, NBA



Chapter

2

MANAGEMENT AND ADMINISTRATION

Agricultural Universities are mainly working on three aspects, i.e., teaching, research and extension education. Teaching imparts knowledge, while research provides wisdom, which ultimately leads to strengthening of extension activities in agriculture sector. Manpower at the University is broadly divided into two categories, i.e., technical and non-technical. Technical manpower includes staff involved in teaching, research and extension education activities. They are Professor, Associate Professor, Assistant Professor, Research Scientist, Associate Research Scientist, Assistant Research Scientist, Extension Educationist, Associate Extension Educationist, Assistant Extension Educationist, etc. Non-technical personnel are concerned with administrative and allied activities.

2.1 Management

Authority to govern the affairs of Anand Agricultural University flows from the GAU Act, 2004.

AAU was established under GAU Act, 2004 (Gujarat Act No. 5 of 2004) and functions under due authority of Chancellor, Vice Chancellor, Board of Management, Academic Council and Officers of the University. It has a territorial jurisdiction of nine districts of Gujarat namely Ahmedabad, Anand, Botad, Chhotaudepur, Dahod, Kheda, Mahisagar, Panchmahal, and Vadodara.

Functioning of the Authority

During the year under report, following authorities, of the University, as provided in Section-17 of the GAU Act, 2004 were functional.

- ◆ Board of Management
- ◆ Academic Council
- ◆ Faculties
- ◆ Board of Studies of different groups of subjects from different faculties
- ◆ Research Council
- ◆ Extension Education Council

The organizational set-up and decision making channel are given in chart-1 and chart-2.

Board of Management

The Board of Management considers and decides matters of general policies relating to the progress and development of the University. The list of Hon. members of the Board of Management is given in Annexure-2.

During the year under report, three regular meetings of Board of Management were held under the Chairmanship of Dr. K. B. Kathiria, Vice Chancellor. Dr. Gautam R. Patel, I/c. Registrar acted as the Secretary of the Board of Management.

Sr. No.	Meeting Number		Date	Place	Chairman
1	60 th	Regular	24-07-2024	Anand	Dr. K. B. Kathiria
2	61 st	Regular	30-11-2024	Anand	Dr. K. B. Kathiria
3	62 nd	Regular	03-01-2025	Anand	Dr. K. B. Kathiria



Academic Council

Academic Council has been constituted under Section-21 of GAU Act, 2004. Academic Council is responsible for the maintenance of standard of teaching and examinations in the University by controlling and regulating the quality of teaching, education and examinations in the University.

During the year under report, two regular meetings of Academic Council were held under the Chairmanship of Dr. K. B. Kathiria, Vice Chancellor. Dr. Gautam R. Patel,

I/c. Registrar acted as the Secretary of the Academic Council. The list of members of the Academic Council is given in Annexure-3.

The meetings were held to consider various issues pertaining to improvement of education, course curricula, course credits and recruitment rules for teachers and such other matters/concerns. Besides making recommendations to the Board of Management as mentioned above, the Academic Council also took various important decisions.

Sr. No.	Meeting Number		Date	Place	Chairman
1	62 nd	Regular	27-06-2024	Anand	Dr. K. B. Kathiria
2	63 rd	Regular	23-12-2024	Anand	Dr. K. B. Kathiria

Meetings of the Board of Post Graduate Studies

During the year under report, one regular meeting of Board of Post Graduate

Studies was held under the Chairmanship of Dr. M. K. Jhala, I/c. Director of Research & Dean, Post-graduate Studies. Dr. D. D. Parekh, I/c. Assistant Registrar (Academic) acted as the Secretary.

Sr. No.	Meeting Number		Date	Place	Chairman
1	22 nd	Regular	06-06-2024	Anand	Dr. M. K. Jhala

As per the Statute S. 9.0, the following Faculties have been constituted

As per the Section-23 of the GAU Act, 2004, faculties are the authorities within the University.

- ◆ Faculty of Agriculture
- ◆ Faculty of Veterinary Science & Animal Husbandry
- ◆ Faculty of Dairy Science
- ◆ Faculty of Food Processing Technology & Bio-energy
- ◆ Faculty of Agricultural Engineering and Technology
- ◆ Faculty of Agricultural Information Technology
- ◆ Faculty of Agri-business Management
- ◆ Faculty of Horticulture
- ◆ Faculty of Post Graduate Studies

Officers of the University, Members of the Board of Management, Members of the Academic Council and the Heads of the Departments of various faculties are listed in Annexure-1, 2, 3 and 4 respectively.

Faculties consider all administrative and academic matters pertaining to their respective purview and make recommendations to the Academic Council. The faculty either initiates the matters on its own or receives recommendations from the Board of Studies of group of subjects of the respective faculty.

As per the Statute S. 10.0, Constitution of Faculty

Each Faculty shall comprise of the following:

- (1) Dean of the Faculty **Ex-officio Chairman**
- (2) Principals
- (3) Heads of the Departments in the Faculty
- (4) Director of Research and Dean PG Studies





- (5) Director of Extension Education
- (6) Principals of affiliated colleges and recognized institutions in the related faculty
- (7) One Professor and its equivalent from each department other than Head of Department in the faculty.
- (8) Four Associate Professors and its equivalent from the faculty selected by the Vice-Chancellor on the basis of experience and merit on rotation.
- (9) Four Assistant Professors and its equivalent from the faculty selected by the Vice-Chancellor on the basis of experience and merit on rotation.
- (10) Assistant Registrar (Academic) **Ex-officio Secretary Provided** that where a Chairperson of the Board of Studies or a Head of Department of subject or a teacher, by virtue of the provisions of sub-section (2) of Section-23 of the Act, becomes a member of more than one Faculty, he shall, within one month from the date on which he becomes a member of more than one Faculty, intimate in writing to the Registrar, who shall obtain the concurrence of the Vice-Chancellor for his continuation as such.

As per the Statute S.15.0, Head of Departments/ Units/Research and Extension Education Stations

As per the provision of Section 2 (9) of Gujarat Agricultural Universities Act, 2004 and Statute S.15 (1) & S.15 (2) of First Common Statute for Agricultural Universities of Gujarat, 2011, the following Head of Departments in the University are appointed:

S.15.1 The Head of Departments/Units/Research and Extension Education Stations/ Centres shall be a person of the rank of Professor or Associate Professor or Assistant Professor or its equivalent to be appointed by the Vice Chancellor. Where there are more than one Professor or Associate Professor or Assistant Professor, the Vice Chancellor shall appoint the Head of the Department.

S.15.2 An appointment made under sub-clause (1)

shall be for a period of three years.

S.15.3 The post of a Head of the Department shall be honorary.

As per the Statute S.16.0, Powers and duties of the Head of Department

The powers and duties of the Head of Department shall be as follows:

- (1) He shall be responsible for teaching, research and extension education to the Dean of the Faculty, Director of Research and Director Extension Education respectively. He shall function in co-ordination with the concerned Dean, the Principal of the College and Research Scientist as the case may be.
- (2) He shall be responsible for the organization and conduct of teaching, research and extension education of his Department and for that purpose shall pass such orders as may be necessary in consultation with the concerned Principal, Dean and the concerned Director.
- (3) He shall tender necessary advice to the Principal, the Dean and Director concerned on all matters pertaining to his field in respect of teaching, research and extension.
- (4) He shall submit the budgetary needs of his Department to the concerned Dean and the Director in time.
- (5) He shall be responsible for expenditure of the budget.
- (6) He shall provide for protection against theft, fire and other damages.
- (7) He shall recommend the work load of each member of the staff with respect to teaching, research and extension education to the Principal, Dean and the Directors concerned as per the guidelines issued by the ICAR/ Government of Gujarat and the revisions made therein periodically.
- (8) He shall be responsible for all University properties and facilities assigned to his Department.
- (9) He shall recommend the proposals for making





improvement in the working of his Department to the Dean.

- (10) He shall supervise and guide the work of academic staff members of his Department.
- (11) He shall exercise such other powers and perform such other duties as may be conferred on or assigned to him by the Statutes and Regulations or by the concerned Dean or by the Vice Chancellor.

As per the Statute S. 17.0, the following Boards of Studies have been constituted

- (a) Board of Studies of the Faculty of Agriculture
- (b) Board of Studies of the Faculty of Agricultural Engineering and Technology
- (c) Board of Studies of the Faculty of Horticulture
- (d) Board of Studies of the Faculty of Post Graduate Studies
- (e) Board of Studies of the Faculty of Food Processing Technology and Bio-energy
- (f) Board of Studies of the Faculty of Agri-business Management
- (g) Board of Studies of the Faculty of Agricultural Information Technology

As per the Statute S. 19.0, Constitution of the Board of Studies other than Board of the Post Graduate Studies

- (a) The Dean of the Faculty **Chairman**
- (b) The Heads of the Department and Professors teaching subjects assigned to that faculty
- (c) The Director of Extension Education or his representative
- (d) The Director of Research and Dean, Post-graduate studies or his representative
- (e) Five Co-opted members
- (f) The Assistant Registrar (Academic) **Secretary**

As per the Statute S. 21.0, Function of the Board of Studies

As provided in Section-24 of the GAU Act, 2004 and as per Statute S.21.0, functions of the Board of Studies are as follows;

- (1) To propose the establishment of such departments as deemed best and the scope of work to be done by the department and various other departments and submit the plans thereof to the Academic Council through the Faculty.
- (2) To develop department course outlines to meet the degree and diploma requirements of the University.
- (3) To perform such other functions as may be assigned by the Vice Chancellor or the Dean.

As per the Statute S. 22.0, Duties of the Board of Studies

- (1) To consider and make recommendations to the Academic Council on all the matters pertaining to academics
- (2) To propose to the Academic Council, the courses of study for the various programmes of instructions offered in respective faculty of the University
- (3) To propose to the Academic Council, the curricula of the Department and advise in regard to all questions related to the syllabi for various under graduate courses and all other functions, referred to it by the Faculty
- (4) To recommend to Academic Council, the establishment of new Department, abolition / sub-division / or otherwise re-constitution of existing Department or Departments
- (5) To recommend text books and reference books, courses of studies relating to the subjects under the Board of Studies
- (6) To give a shape to the development of the subject or group of subjects on the Board of Studies
- (7) To report on all matters referred to it by the Faculty, Academic Council or the Board of Management





As per the Statute S. 24.0, Constitution of the Board of Post Graduate Studies

The Board of Post Graduate Studies shall comprise of the following members:

- (1) Dean of Post Graduate Studies **Chairman**
- (2) The Registrar
- (3) (3) All Deans / Principal
- (4) (4) The Director of Extension Education
- (5) (5) All Associate Director of Research
- (6) (6) Three Research Scientists and three Post Graduate teachers of the University to be nominated by the Dean of Post Graduate Studies with the approval of the Vice Chancellor
- (7) The Assistant Registrar (Academic) **Secretary**

As per the Statute S. 25.0, Duties of the Board of Post Graduate Studies

The duties of the Board of Post Graduate Studies shall be as under:

- (1) to consider and make recommendations to the Academic Council on all the matters pertaining to Post Graduate Studies
- (2) to propose to the Academic Council, the courses of study for the various programmes of instructions offered at Post Graduate Studies in the University
- (3) to propose to the Academic Council, the curricula of the University and advise in regard to all questions related to the syllabi for various Post Graduate subjects and all other functions, referred to it by the Academic Council
- (4) to recommend to Academic Council the establishment of a new Department, abolition/sub-division/re-constitution of existing Department or Departments
- (5) to meet at least once in a year, but sufficiently in advance of the meeting of the Academic Council in order that the Academic Council can consider

the recommendations of the Board

- (6) to recommend research areas, text books and reference books, courses of studies relating to the subjects under the Board
- (7) to give a shape to the development of the subject or group of subjects on the Board

As per the Statute S. 27.0, Constitution of the Research Council

The Research Council shall consist of the following members:

- (1) The Vice Chancellor **Chairman**
- (2) The Deans of the Faculties
- (3) The Director of Extension Education
- (4) The Conveners of the Agresco sub-committees
- (5) Two Eminent Scientists outside the University nominated by the Vice Chancellor in consultation with Director of Research
- (6) Five Professors or their equivalent from the University nominated by the Vice Chancellor in consultation with Director of Research
- (7) One progressive farmer to be nominated by the Vice Chancellor in consultation with Director of Research
- (8) The Directors of Agriculture/Horticulture/Animal Husbandry
- (9) All Associate Director of Research
- (10) The Director of Research **Member Secretary**

As per the Statute S. 29.0, Functions and duties of the Research Council

The function and duties of the Research Council shall be as under:

- (1) To monitor and determine the research priorities of the University area
- (2) To be responsible for Agriculture and Allied Sciences Research in the University
- (3) To advise the Board of Management on policy matters of research





- (4) To plan, execute and manage the research activities in the University efficiently
- (5) To organize and co-ordinate research programmes on Agriculture and Allied Sciences in the University
- (6) To review critically on-going research programmes and make suggestions to the Board of Management to continue or to abandon or to modify the on-going scheme
- (7) To approve Research Projects and consider Intellectual Property Rights (IPR) issues submitted by the Research Scientists / Institutions / Departments
- (8) Public private partnership mode in research
- (9) To make recommendations in respect of the following:
 - (i) Transfer of research recommendations to the Scientists/Farming Community and Industry through the Extension Agencies
 - (ii) Allocation of funds to Research Schemes and Projects
 - (iii) The terms and conditions for acceptance of the Research Projects/Consultancy Projects and funds thereof
 - (iv) Formulation of research programmes and projects undertaken or to be undertaken by the University
 - (v) Physical and fixed facilities required for implementing research projects
 - (vi) Integration of research with extension education and teaching in the University and participation of research workers in teaching and extension education
 - (vii) Orienting research to meet farmers' needs
 - (viii) To advise and accept the reports of on-going/completed research schemes
- (10) To perform such other duties and functions as may be referred to from time to time by the Board of Management and the other authorities

of the University as well as the Council of State Agricultural Universities.

As per the Statute S. 31.0, Constitution of the Extension Education Council

The Extension Education Council shall consist of the following members:

- (1) The Vice Chancellor **Chairman**
- (2) The Director of Research and Dean Post-Graduate Studies
- (3) Deans of the Faculties
- (4) Five Extension Education specialists to be nominated by the Vice Chancellor in consultation with Director of Extension Education from amongst the following:
 - (i) Professor of Extension Education
 - (ii) Agricultural Extension Educationist, Polytechnic
 - (iii) Programme Coordinator/Senior Scientist & Head, Krushi Vigyan Kendra
 - (iv) Other Extension Specialists/Farm Manager
- (5) Three eminent Extension Education specialists concerned with farmers' training, from outside the University to be co-opted by the Organization
- (6) The Directors of Agriculture / Horticulture / Animal Husbandry
- (7) Two progressive farmers to be nominated by the Vice Chancellor in consultation with Director of Extension Education
- (8) The Associate Director of Extension Education
- (9) The Director of Extension Education **Member Secretary**

As per the Statute S. 33.0, Functions and duties of Extension Education Council

In addition to the functions laid down under sub-section (3) of Section-27 of the Act, the functions and duties of the Extension Education Council shall





be as under:

- (1) To formulate extension education policies and annual extension education programmes of the University
- (2) To make recommendations for preparation of extension educational material and aids
- (3) To review critically ongoing Extension Education programme and make suggestions to Board of Management to continue or to abandon or to modify the ongoing scheme
- (4) To impart training to college students in Extension Education
- (5) To prepare materials for cultivators
- (6) To formulate short term courses for rural and urban people and field extension personnel in the areas of agriculture and allied sectors
- (7) To arrange training programmes on Agricultural Production, Processing and Marketing
- (8) To formulate programmes for cultivators, their families and rural youth
- (9) To recommend for:
 - (a) Co-ordination of extension education programmes and projects of the University with the Other Agricultural Universities / Institutions
 - (b) Coordination and co-operation of extension educational activities of various agencies
 - (c) Development of farmers' education, training and advisory services for identification and resolution of field problems and transfer of information
 - (d) Methodology of extension education activities of the University area
 - (e) Integration of extension education with teaching and research in the University and participation of extension workers teachers in the field of research programmes and education for their work

- (10) To perform such other duties and functions as may be referred to from time to time by the Board of Management and the other authorities of the University and Council of State Agricultural Universities

2.2 Administration

Anand Agricultural University was formed from erstwhile Gujarat Agricultural University during May 2004 with three colleges for Under Graduate & Post Graduate programme and for imparting education in Agriculture and allied sciences. Presently, Anand Agricultural University has **7** degree colleges, **5** Polytechnics and **1** Post-graduate Institute imparting education in Agriculture and allied sciences. The University has a total of **1228** sanctioned posts, out of which **616** are filled-up post and remaining **612** posts are vacant.

Technical personnel included the staff at the main campus as well as **28** research stations, who carried different activities like crop improvement, crop protection, crop production and improvement practices etc. under their domain of work. Our research endeavours have not only targeted excellence in Agriculture but also other allied sectors like Horticulture, Agricultural Engineering, Food Processing Technology and Agricultural Information Technology etc.

AAU organizes various programmes and activities to expand knowledge of its scientists, faculty and students. During the year under report, various programmes including conferences/trainings/workshops/seminars/winter schools group meetings were organized by the University.

Human Resource Development at Anand Agricultural University receives top priority. The changing global scenario demands traditional research be sharpened based on market driven economy. Therefore, AAU scientists are encouraged to update their knowledge and improve their skills. Need of the day is search for newer technologies with cutting edge research so that new generation young farmers and women are enlightened.





Human Resources:

The Staff position as on 31-03-2025 in the Anand Agricultural University is given as under:

Sr. No.	Cadres	Sanctioned post	Filled up post	Vacant post
1	University Officers			
	Director of Research & Dean P.G.	1	0	1
	Director of Extension Education	1	0	1
	Director of Information Technology	1	0	1
	Registrar	1	0	1
	Comptroller	1	1	0
Total :		5	1	4
2	Teaching/Research/Extension- Class-I & II			
	Principal	7	5	2
	Associate Director of Research	2	2	0
	Professor & its equivalent	43	11	32
	Associate Professor & its equivalent	140	67	73
	Assistant Professor & its equivalent	298	181	117
Total :		490	266	224
3	Administration Group No. 1			
	Assistant Registrar (Academic/Administration)	2	1	1
	Account Officer (Cash)	1	1	0
	Account Officer (PF / Cash)	1	0	1
	Assistant Administrative Officer	4	3	1
	Audit Officer	1	0	1
	Office Superintendent	8	1	7
4	Head Clerk	16	14	2
	Senior Clerk	78	69	9
	Junior Clerk	125	22	103
	Hostel Assistant Warden	7	7	0
	Hostel Warden	1	1	0
Total :		244	119	125
5	Administration Group No. 2			
	Steno Grade-I	3	1	2
	Steno Grade-II	5	1	4
	Steno Grade-III	4	0	4
Total :		12	2	10





Sr. No.	Cadres	Sanctioned post	Filled up post	Vacant post
6	Engineering Group			
	Executive Engineer	1	0	1
	Deputy Engineer	1	0	1
	Junior Engineer (Civil/Electric)	3	2	1
Total :		5	2	3
7	Technical Group No.1			
	Agri. Officer / SRA (Agri.) & its equivalent	91	35	56
	Senior Research Assistant (Agri. Engg.)	15	10	5
	Senior Technician	1	1	0
	Agril. Supervisor & its equivalent	11	10	1
	Agril. Assistant & its equivalent	153	93	60
	Foreman Instructor	2	2	0
	Supervisor Instructor	1	1	0
Total:		274	152	122
8	Technical Group No. 2			
	Programme Assistant (KVK)	9	6	3
	Programmer	3	3	0
	Computer / Computer Operator	1	0	1
Total :		13	9	4
9	Technical Group No. 3			
	Wireman	0	0	0
	Junior Wireman / Sr. Wireman	2	0	2
Total :		2	0	2
10	Isolated Group (Details given separately)			
11	Class- IV Group (Regular)	143	25	118
12	Supernumerary Posts (Class-III & IV)			
	Class-III (Jr. Clerk/Agri. Asstt./Driver/Tractor Driver)	4	4	0
	Class-IV	36	36	0
Total :		40	40	0
Grand Total :		1228	616	612





Details of Isolated Group (As mentioned at Sr. No.10 above)				
1	Instructor (Baking / Science)	3	0	3
2	Assistant Instructor	1	0	1
3	Lab Technician & its equivalent	27	18	9
4	Junior Instructor	2	0	2
5	Black Smith	2	0	2
6	Carpenter	1	0	1
7	Compounder	2	0	2
8	Mechanic / Sr. Mechanic / Jr. Mechanic	4	4	0
9	Bakery Operator	1	1	0
10	Balwadi Teacher	1	1	0
11	Sewing Teacher	1	0	1
12	Driver	35	10	25
13	Tractor Driver	13	2	11
14	Plumber	1	1	0
15	Tracer / Draftsman Tracer	2	1	1
16	Craftsman (Welder, Fitter, Turner, Electrician)	4	4	0
17	Junior Clerk (Ladies Hostel Warden)	1	0	1
Total :		101	42	59

New Appointments / Promotion :

During the year under report, following posts were filled up by direct recruitment/ promotion under various cadres.

Appointments during the year (01-04-2024 to 31-03-2025)

Sr. No.	Cadre	Direct Recruitment / Promotion	Total
1.	Assistant Administrative Officer (Class-II)	Promotion	2
2.	Head Clerk	Promotion	4
3.	Senior Clerk	Promotion	11
4	Junior Engineer (Civil / Ele.)	Direct Recruitment	2
5	Agril. Supervisor	Promotion	11
Total			30

Retirement :

Following Teaching & Non-teaching staff retired from the University by Superannuation / Voluntarily / Resignation / Death / Appointed in other University during the period under report.





Teaching & Non-teaching staff retired by Superannuation / Voluntarily / Resignation / Death / Appointed in other University during the year (01-04-2024 to 31-03-2025)

Sr. No	Cadre	No. of persons					
		Super-annuation	Voluntarily	Resign-ation	Death	Appointed in other University	Total
1.	Professor	2	0	0	0	0	2
2.	Associate Professor	3	0	2	1	0	6
3.	Assistant Professor	2	0	1	0	0	3
4.	Tractor Driver	1	0	0	0	0	1
5.	Laboratory Technician						
6.	Agriculture Assistant (kalam-1) (Class-III)	0	0	0	0	0	0
7.	kalam-1 (Class-IV) supreme	10	0	0	0	0	10
8.	Class-IV Regular	6	0	0	0	0	6
9.	Agriculture Assistant	3	0	0	0	0	3
10.	Agriculture Officer/SRA	0	0	0	0	0	0
11.	Agriculture Supervisor	0	0	0	0	0	0
12.	Junior Clerk	0	0	0	0	0	0
13.	Senior Clerk	2	0	0	0	0	2
14.	Head Clerk	2	0	0	0	0	2
15.	Asstt. Admi. Officer / Audit Officer	2	0	0	0	0	2
16.	Steno Grade-1	2	0	0	0	0	2
Total :		35	0	3	1	0	39

2.3 Finance & Accounts

Anand Agricultural University has established the University Fund since 01-05-2004 as per the provisions given in the "Gujarat Agricultural Universities Act, 2004". The 'Anand Agricultural University Fund' consists of (a) Contribution or Grant by the State Government, (b) The income of the University from all the sources including the income from fees and charges, (c) Bequest, Donations, Endowments and Other

Grants. The State Government, in each year after due appropriation made by the State Legislature by law in this behalf, making the provision of grants for the Anand Agricultural University consists of (a) a grant of an amount not less than the estimated net expenditure on Pay and Allowances of the Staff, Contingencies, and Services of the University; (b) a grant to meet such additional items of expenditure, recurring and non-recurring as the State Government may deem necessary for the proper functioning of the University.





The Annual Accounts and the Financial Estimates shall be considered by the Board at its annual meeting and pass a resolution adopting the accounts and financial estimates. The annual accounts so adopted shall be submitted to the State Government for audit. The Board shall, after the accounts are audited, submit a copy thereof along with a copy of audit report and the statement of the action taken by the University on the audit report, to the State Government. The State Government shall cause the copy of the accounts and the audit report along with the statement of action taken by the University on the audit report to be laid before the State Legislature.

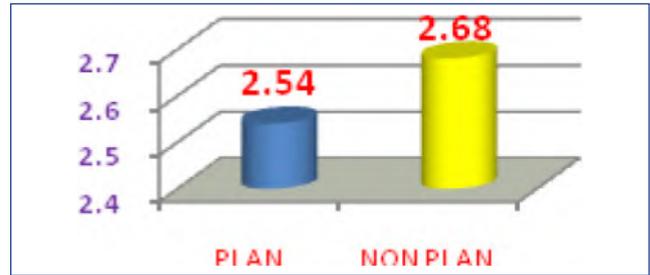
The Comptroller act as Financial Adviser to the Vice Chancellor regarding all financial matters of the University and keep the Vice Chancellor informed from time to time about the financial position of the university. The Comptroller is responsible for supervising the quality of accounting and financial reporting to the Vice Chancellor of the University, Board of Management and State Government. The Comptroller prepares the Financial Plans / Estimates for Development of the University and also prepares the Annual Accounts of the University in consultation with the concerned officers of the University and under the guidance of the Vice Chancellor.

The Comptroller ensures the grants are received in time from the Government of India, State Government and Other aid-granting Agencies. The Comptroller ensures that the University Fund is maintained and that a detailed and proper account of all credits into and withdrawals from the said fund is kept by the all Offices of University.

INCOME UNDER STATE GOVERNMENT SCHEMES FOR THE F.Y. 2024-25

(RUPEES IN CRORE)

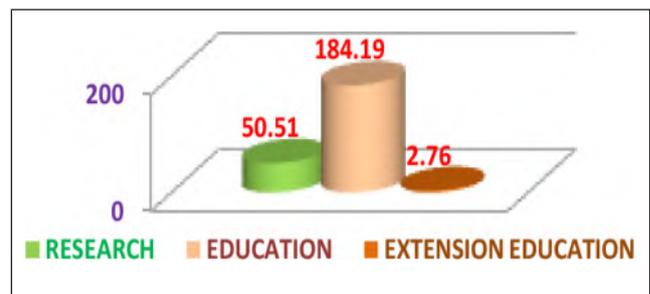
SCHEME	AMOUNT
PLAN	2.54
NON PLAN	2.68
TOTAL	5.22



Budgetary Provisions Made by Government of Gujarat for the F.Y. 2024-25

(Rupees in Crore)

SCHEME	Amount
RESEARCH	50.51
EDUCATION	184.19
EXTENSION EDUCATION	2.76
TOTAL	237.46



Budgetary Provisions Made by Government of Gujarat for the F.Y. 2024-25

(Rupees in Crore)

SCHEME	Amount
PLAN	76.53
NON PLAN	160.93
TOTAL	237.46





EXPENDITURE UNDER STATE GOVERNMENT SCHEMES FOR THE F.Y. 2024-25

(RUPEES IN CRORE)

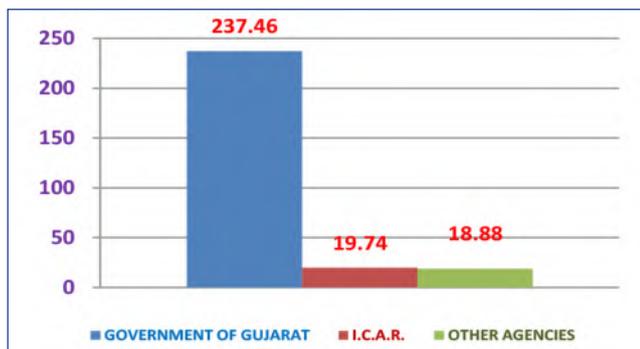
SCHEME	AMOUNT
PLAN	78.55
NON PLAN	160.13
TOTAL	238.68



TOTAL GRANT RECEIVED DURING F.Y. 2024-25 BY ANAND AGRICULTURAL UNIVERSITY

(RUPEES IN CRORE)

FUNDING AGENCY	GRANT
GOVERNMENT OF GUJARAT	237.46
I.C.A.R., NEW DELHI	19.74
OTHER AGENCIES	18.88
TOTAL	276.08



PERCENTAGE OF GRANT RECEIVED UNDER VARIOUS SCHEMES

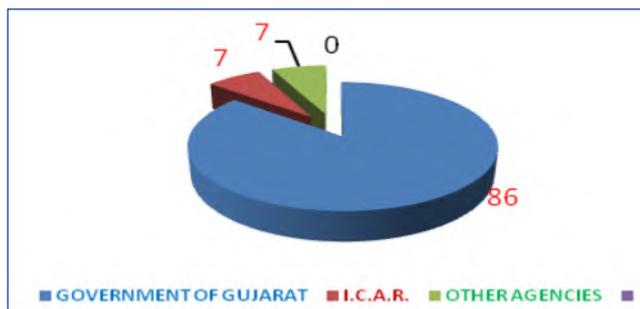
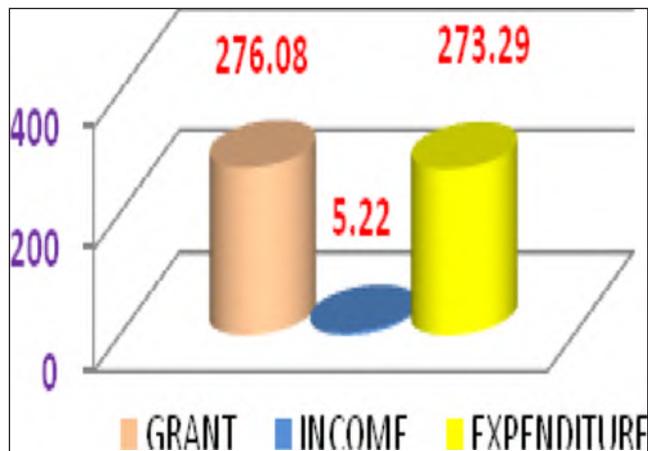


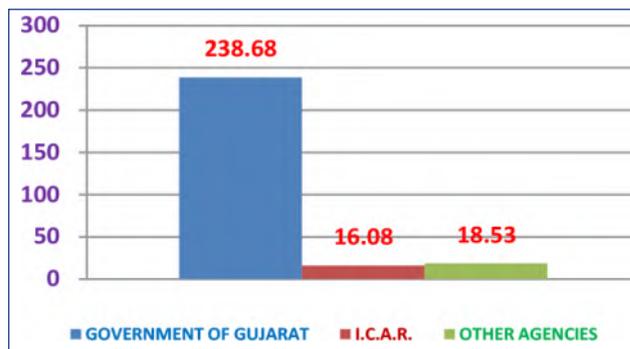
CHART SHOWING THE STATE GOVERNMENT GRANT, RECEIPT & EXPENDITURE



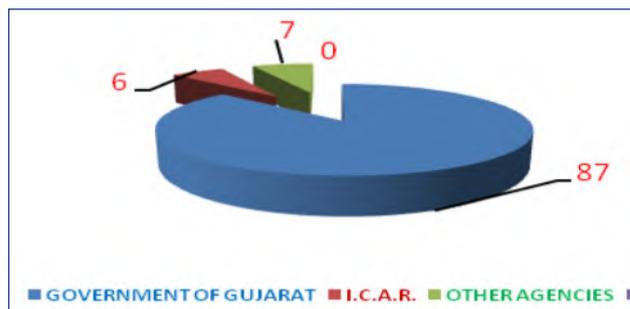
TOTAL EXPENDITURE DURING F.Y. 2024-25 BY ANAND AGRICULTURAL UNIVERSITY

(RUPEES IN CRORE)

FUNDING AGENCY	GRANT
GOVERNMENT OF GUJARAT	238.68
I.C.A.R., NEW DELHI	16.08
OTHER AGENCIES	18.53
TOTAL	273.29



PERCENTAGE OF EXPENDITURE UNDER VARIOUS SCHEMES





Annexure-1
Officers of the University
(01-04-2024 to 31-03-2025)

Shri Acharya Devvrat Hon'ble Governor	
Dr. K. B. Kathiria Vice Chancellor Anand Agricultural University, Anand (From 03-03-2021 to continue)	
Dr. M. K. Jhala I/c. Director of Research and Dean, Post-graduate Studies Anand Agricultural University, Anand (From 05-03-2021 to continue)	Dr. J. K. Patel I/c. Director of Extension Education Anand Agricultural University, Anand (From 01-03-2024 to continue)
Dr. Y. M. Shukla I/c. Dean B. A. College of Agriculture Anand Agricultural University, Anand (From 01-01-2024 to 31-10-2024) (Retired Date: 31-10-2024) Dr. N. I. Shah I/c. Dean B. A. College of Agriculture Anand Agricultural University, Anand (From 01-11-2024 to 31-10-2027)	Dr. Samit Dutta I/c. Dean Food Processing Technology & Bio-energy Anand Agricultural University, Anand (From 18-09-2023 to 17-09-2026)
Dr. R. Subbaiah Dean Agricultural Engineering & Technology Anand Agricultural University, Godhra-389 001 (From 01-10-2022 to 30-09-2025)	Dr. Y. R. Ghodasara I/c. Dean Agricultural Information Technology Anand Agricultural University, Anand (From 26-10-2023 to 25-10-2026)
Dr. R. S. Pundir I/c. Dean International Agri-business Management Institute Anand Agricultural University, Anand (From 01-08-2021 to 31-07-2024) (From 01-08-2024 to 31-07-2027)	Dr. N. I. Shah I/c. Dean Horticulture Anand Agricultural University, Anand (From 01-10-2022 to 30-09-2025)
Dr. R. S. Parmar I/c. Director, Information Technology Anand Agricultural University, Anand (From 26-10-2023 to Continue)	Dr. D. H. Patel I/c. Director, Students' Welfare Anand Agricultural University, Anand (From 30-05-2019 to Continue)
Shri R. H. Gondaliya I/c. Comptroller Anand Agricultural University, Anand (From 01-03-2018 to Continue)	Dr. Y. R. Ghodasara I/c. Librarian Anand Agricultural University, Anand (From 25-04-2012 to Continue)
Shri C. S. Baldhiya I/c. Executive Engineer Anand Agricultural University, Anand (From 01-06-2022 to Continue)	Dr. Gautam R. Patel I/c. Registrar & Secretary Anand Agricultural University, Anand (From 25-03-2021 to Continue)





Annexure-2
Members of the Board of Management
(01-04-2024 to 31-03-2025)

<p>Dr. K. B. Kathiria Vice Chancellor Anand Agricultural University, Anand (From 03-03-2021 to continue)</p>
<p>Shri A. K. Rakesh (IAS) Additional Chief Secretary Agriculture, Farmers Welfare & Co-operation Department (From 31-03-2023 to 31-07-2024)</p> <p>Dr. Anju Sharma (IAS) Additional Chief Secretary Agriculture, Farmers Welfare & Co-operation Department (From 01-08-2024 to continue)</p>
<p>Shri Mukesh Kumar (IAS), (Higher & Technical Education) Principal Secretary Department of Education Nava Sachivalaya, Gujarat State, Gandhinagar (From 31-03-2023 to 31-07-2024)</p> <p>Smt. Sunaina Tomar (IAS), (Higher & Technical Education) Additional Chief Secretary Department of Education Nava Sachivalaya, Gujarat State, Gandhinagar (From 01-08-2024 to continue)</p>
<p>Shri K. K. Nirala (IAS) Secretary (Expenditure) Department of Finance (From 01-02-2024 to 17-07-2025)</p>
<p>Shri S. J. Solanki Director of Agriculture Krushi Bhavan, Podium Level, Sector-10/A, Gujarat State, Gandhinagar (From 24-11-2021 to 31-01-2025)</p> <p>Shri P. S. Rabari Director of Agriculture Krushi Bhavan, Podium Level, Sector-10/A, Gujarat State, Gandhinagar (From 01-02-2025 to continue)</p>
<p>Dr. F. S. Thaker Director of Animal Husbandry Krushi Bhavan, Podium Level, Sector-10/A, Gujarat State, Gandhinagar (From 01-09-2019 to continue)</p>





Dr. P. M. Vaghasiya

Director of Horticulture

Krusha Bhavan, Podium Level, Sector-10/A, Gujarat State, Gandhinagar
(From 18-07-2018 to 30-06-2024) Retd.

Shri C. M. Patel

Director of Horticulture

Krusha Bhavan, Podium Level, Sector-10/A, Gujarat State, Gandhinagar
(From 01-07-2024 to 16-03-2025)

Shri H. M. Chavada

Director of Horticulture

Krusha Bhavan, Podium Level, Sector-10/A, Gujarat State, Gandhinagar
(From 17-03-2025 to continue)

Shri P. S. Rabari

Director

Agricultural Technology Management Agency (ATMA) & Sameti,

Krusha Bhavan, P-7, M-Floor, Sector-10/A, Gujarat State, Gandhinagar

(From 01-04-2023 to 14-03-2024)

Shri S. K. Joshi

Director

Agricultural Technology Management Agency (ATMA) & Sameti,

Krusha Bhavan, P-7, M-Floor, Sector-10/A, Gujarat State, Gandhinagar

(From 15-03-2024 to continue)

**One Director, to be nominated by the Vice Chancellor from amongst the
Director of Research and Dean of Post-graduate Studies or the
Director of Extension Education**

Nominated by Vice Chancellor

Dr. M. K. Jhala

I/c. Director of Research and Dean, Post-graduate Studies

Anand Agricultural University, Anand

(From 01-09-2022 to 31-08-2025)

**One member of the Gujarat Legislative Assembly,
to be nominated by the State Government**

Shri Pankajbhai Vinubhai Desai

Member of the Gujarat Legislative Assembly,

116-Nadiad Poll, Opp. Bharat Tobacco Company, V.K.V. Road,

Nadiad-387 001, District: Kheda (Gujarat).

(From 31-05-2023 to 30-05-2026)





Two Agricultural Scientist having background of Agricultural Research or Education Nominated by the State Government

Dr. K. V. Pethani

Ex. Director of Campus, G.A.U., Junagadh Campus

A-11, Surjit Society, Opp. Kailashdham-2,
India Colony Road, Bapunagar, Ahmedabad-382 350
(From 31-05-2023 to 30-05-2026)

Dr. H. C. Patel

Retd. Principal & Dean (Horticulture), AAU

39, Vishrut Park-II, Jitodiya Road, Anand-388 001
(From 05-08-2024 to 04-08-2027)

One farmer nominated by the State Government

Shri Bijalbhai Govindbhai Dabhi

At. Post: Kanavada-388 180, Tal. Tarapur, Dist: Kheda
(From 31-05-2023 to 30-05-2026)

One eminent women social worker having experience in rural development nominated by the State Government

Smt. Meeraben Rameshbhai Parmar

At. Bhanpur-389 175, Tal. Dhanpur, Dist: Dahod
(From 31-05-2023 to 30-05-2026)

One distinguished agro-industrialist nominated by the State Government

Shri Chiragbhai Punambhai Patel

Radha-Kishan Cold Storage, Near National Highway No.8,
At. Kanjari-387 325, Dist: Kheda
(From 31-05-2023 to 30-05-2026)

One representative Nominated by the

Director General of Indian Council of Agricultural Research

Nominated by Indian Council of Agricultural Research

Dr. Manish Das

Director

ICAR-Directorate of Medicinal and Aromatic Plants Research,

Boriavi-387 310, Ta. & Dist. Anand
(From 23-12-2023 to 22-12-2026)

Dr. Gautam R. Patel

I/c. Registrar & Secretary

Anand Agricultural University, Anand

(From 25-03-2021 to Continue)





Annexure-3
Members of the Academic Council
(01-04-2024 to 31-03-2025)

<p>Dr. K. B. Kathiria Vice Chancellor Anand Agricultural University, Anand (From 03-03-2021 to continue)</p>	
<p>Dr. M. K. Jhala I/c. Director of Research and Dean. Post-graduate Studies Anand Agricultural University, Anand (From 05-03-2021 to continue)</p>	<p>Dr. J. K. Patel I/c. Director of Extension Education Anand Agricultural University, Anand (From 01-03-2024 to continue)</p>
<p>Dr. Y. M. Shukla I/c. Dean B. A. College of Agriculture Anand Agricultural University, Anand (From 01-01-2024 to 31-10-2024) (Retired Date: 31-10-2024) Dr. N. I. Shah I/c. Dean B. A. College of Agriculture Anand Agricultural University, Anand (From 01-11-2024 to 31-10-2027)</p>	<p>Dr. Samit Dutta I/c. Dean Food Processing Technology & Bio-energy Anand Agricultural University, Anand (From 18-09-2023 to 17-09-2026)</p>
<p>Dr. R. Subbaiah Dean Agricultural Engineering & Technology Anand Agricultural University, Godhra-389 001 (From 01-10-2022 to 30-09-2025)</p>	<p>Dr. Y. R. Ghodasara I/c. Dean Agricultural Information Technology Anand Agricultural University, Anand (From 26-10-2023 to 25-10-2026)</p>
<p>Dr. R. S. Pundir I/c. Dean International Agri-business Management Institute Anand Agricultural University, Anand (From 01-08-2021 to 31-07-2024) (From 01-08-2024 to 31-07-2027)</p>	<p>Dr. N. I. Shah I/c. Dean Horticulture Anand Agricultural University, Anand (From 01-10-2022 to 30-09-2025)</p>
<p>Nominated Dr. B. H. Joshi Associate Professor & Head (Dept. of Food Safety & Quality Assurance) Food Processing Technology & Bio-Energy, Anand Agricultural University, Anand (From 01-01-2024 to 31-12-2026)</p>	<p>Nominated Dr. B. C. Patel Associate Professor & Head (Dept. of Genetics & Plant Breeding + Seed Science & Technology) College of Agriculture, Anand Agricultural University, Vaso-387 380 (From 01-03-2023 to 28-02-2026)</p>
<p>Nominated Dr. N. J. Jadav Professor & Head (Dept. of Soil Science & Agricultural Chemistry) B. A. College of Agriculture, Anand Agricultural University, Anand (From 01-04-2024 to 31-03-2027)</p>	<p>Nominated Dr. M. J. Patel Associate Professor & Head (Dept. of Horticulture) B. A. College of Agriculture, Anand Agricultural University, Anand (From 01-07-2024 to 30-06-2027)</p>





<p>Nominated Dr. Pankaj Gupta Professor & Head (Dept. of Farm Machinery and Power Engineering) College of Agricultural Engineering and Technology, Anand Agricultural University, Godhra-389 001 (From 01-04-2024 to 31-03-2027)</p>	<p>Nominated Dr. R. S. Pundir Principal & Dean International Agri-business Management Institute Anand Agricultural University, Anand (From 01-08-2021 to 31-07-2024) Nominated Dr. D. A. Patel Associate Research Scientist & Unit Head (Dept. of Agricultural Biotechnology) Anand Agricultural University, Anand (From 01-10-2021 to 30-09-2024) (From 01-10-2024 to 30-09-2027)</p>
<p>Nominated Dr. D. P. Gohil Research Scientist & Head Main Forage Research Station, Anand Agricultural University, Anand (From 01-07-2021 to 30-06-2024) Nominated Dr. V. J. Patel, Associate Professor & Head, (Dept. of Agronomy) B. A. College of Agriculture, Anand Agricultural University, Anand (From 01-07-2024 to 30-06-2027)</p>	<p>Co-opt Dr. D. H. Patel I/c. Director, Students' Welfare Anand Agricultural University, Anand (From 20-01-2023 to 19-01-2026)</p>
<p>Co-opt Dr. Suraj Savliya Chairman and Managing Director Patson Food (India) Private Ltd., Vada Road, N.H. No.8, Sisodara (Ganesh), Navsari-366 463 (From 20-01-2023 to 19-01-2026)</p>	<p>Co-opt Dr. Y. R. Ghodasara I/c. Librarian Anand Agricultural University, Anand (From 20-01-2023 to 19-01-2026)</p>
<p>Co-opt Shri Jayen Mehta, Managing Director Gujarat Co-operative Milk Marketing Federation, Post Box No.10, Amul Dairy Road, Anand-388 001 (From 20-01-2023 to 19-01-2026)</p>	<p>Co-opt Shri J. R. Vadodariya Retd. Registrar, SDAU D-1, Avatar Flat, Opp. Nagpal Eye Hospital, Near Sahibag Under Bridge, Sahibag, Ahmedabad-380 004 (From 20-01-2023 to 19-01-2026)</p>
<p>Co-opt Dr. Nikhil N. Gondaliya, Professor and Head Ph.D. (Computer Engineering) (Dept. of Information Technology), G. H. Patel College of Engineering & Technology, Vallabh Vidyanagar-388 120 (From 01-08-2023 to 31-07-2026)</p>	<p>Co-opt Dr. J. B. Prajapati, Retd. Principal and Dean (Dairy), AAU 25, Mangal Nagar Society, Vidya Dairy Road, Behind Veterinary College, Anand-388 001 (From 01-08-2023 to 31-07-2026)</p>





<p>Co-opt Dr. Rahul Ramesh Rao Mungikar, Deputy Director (Community Conversation), SCF, 24/4, "Nisargyan", Balaji Park, 4, Rao Colony, Talegaon Dabhade, Pune-410 506 (Maharashtra) (From 01-10-2021 to 30-09-2024)</p> <p>Co-opt Dr. K. P. Patel, Retd. Principal & Dean (Agri.), AAU B-1/91, Swyam Simphny, Opp. Madhuban Resort, Anand-388 120 (From 01-01-2025 to 31-12-2027)</p>	<p>Co-opt Dr. V. V. Sonani, Retd. Research Scientist, AAU 10-Ami, State Bank Staff Society, Beside Madhu Malti Society, Vejalpur, Ahmedabad-380 051 (From 15-09-2023 to 14-09-2026)</p>
<p>Co-opt Dr. P. R. Vaishnav Retd. Professor & Head, AAU (Dept. of Agricultural Statistics) 95, Tirthraj Bungalows, Near Jitodia Jilla Court, Anand-388 345 (From 01-10-2021 to 30-09-2024)</p> <p>Co-opt Dr. R. C. Jhala, Retd. Research Scientist, AAU (Dept. of Entomology) 01, Rajvi Park, Opp. Vidya Dairy, Anand-388 001 (From 01-01-2025 to 31-12-2027)</p>	
<p>Dr. Gautam R. Patel I/c. Registrar & Secretary Anand Agricultural University, Anand (From 25-03-2021 to Continue)</p>	





Annexure-4

Heads of the Departments

(01-04-2024 to 31-03-2025)

[1] College of Agriculture, AAU, Anand

Principal & Dean (I/c), Dr. Y. M. Shukla (01-01-2024 to 31-10-2024) Retd. 31-10-2024

Principal & Dean (I/c), Dr. N. I. Shah (01-11-2024 to 31-10-2027)

Sr. No.	Name and Designation of the Teacher		Department
1.	Dr. C. S. Baldhiya	Associate Professor	Agricultural Engineering (01-06-2022 to 31-05-2025)
2.	Dr. A. S. Shaikh	Assistant Professor	Agricultural Economics (01-07-2022 to 30-06-2025)
3.	Dr. R. G. Parmar	Associate Professor	Plant Pathology (01-01-2023 to 31-12-2025)
4.	Dr. R. M. Rajpura	Assistant Professor	Animal Science (01-05-2023 to 30-04-2026)
5.	Dr. D. B. Sisodiya	Associate Professor	Agricultural Entomology (01-05-2023 to 30-04-2026)
6.	Dr. R. K. Thumar	Associate Professor	Nematology (01-06-2023 to 31-05-2026)
7.	Dr. M. J. Patel	Associate Professor	Horticulture (01-09-2023 to 31-08-2026)
8.	Dr. M. B. Viradiya	Associate Professor	Sheth M. C. Polytechnic in Agriculture, Anand (01-10-2023 to 30-09-2026)
9.	Dr. Kalyanrao Patil	Assistant Professor	Seed Science & Technology (01-11-2023 to 31-10-2026)
10.	Dr. A. D. Kalola	Associate Professor	Agricultural Statistics (01-01-2024 to 31-12-2026)
11.	Dr. A. M. Parihar	Associate Professor	Genetics & Plant Breeding (15-07-2021 to 14-07-2024) (Exp. Dt: 24-04-24)
	Dr. Sneha S. Macwana	Associate Professor	Genetics & Plant Breeding (25-04-2024 to 24-04-2027)
12.	Dr. N. J. Jadav	Professor (P)	Soil Science & Agricultural Chemistry (01-06-2021 to 31-05-2024)
	Dr. N. J. Jadav	Professor (P)	Soil Science & Agricultural Chemistry (01-06-2024 to 31-05-2027)
13.	Dr. J. B. Patel	Associate Professor	Extension Education (01-07-2021 to 30-06-2024)
	Dr. J. B. Patel	Associate Professor	Agricultural Extension & Communication (01-07-2024 to 30-06-2027)
14.	Dr. V. J. Patel	Associate Professor	Agronomy (01-09-2021 to 31-08-2024)
	Dr. V. J. Patel	Associate Professor	Agronomy (01-09-2024 to 31-08-2027)





Sr. No.	Name and Designation of the Teacher		Department
15.	Dr. M. S. Kulshreshtha	Professor (P) (Maths.)	Basic Sciences and Humanities (01-01-2023 to 31-12-2025) (Retd. 30-09-2024)
	Dr. D. H. Patel	Professor (P) (Eng.)	Basic Science and Humanities (01-10-2024 to 30-09-2027)
16.	Dr. J. J. Dhruve	Associate Professor	Bio-chemistry (01-10-2021 to 30-09-2024)
	Dr. J. J. Dhruve	Associate Professor	Bio-chemistry (01-10-2024 to 30-09-2027)
17.	Dr. S. J. Macwan	Assistant Professor	Plant Physiology (01-10-2021 to 30-09-2024)
	Dr. S. J. Macwan	Assistant Professor	Plant Physiology (01-10-2024 to 30-09-2027)
18.	Dr. R. V. Vyas	Professor (P)	Agricultural Microbiology (01-07-2023 to 30-06-2026) (Retd. 30-09-2024)
	Dr. Y. K. Jhala	Assistant Professor	Agricultural Microbiology (01-10-2024 to 30-09-2027)
19.	Dr. M. M. Lunagaria	Associate Professor	Agricultural Meteorology (15-02-2022 to 14-02-2025)
	Dr. M. M. Lunagaria	Associate Professor	Agricultural Meteorology (15-02-2025 to 14-02-2028)

[2] College of Food Processing Technology & Bio-Energy, Anand

Principal & Dean (I/c), Dr. Samit Dutta (18-09-2023 to 17-09-2026)

Sr. No.	Name and Designation of the Teacher		Department
1.	Dr. H. Pandey	Associate Professor	Food Processing Technology (01-07-2023 to 30-06-2026)
2.	Dr. Samit Dutta	Associate Professor	Food Business Management (01-07-2023 to 30-06-2026)
3.	Dr. B. H. Joshi	Associate Professor	Food Safety & Quality Assurance (01-07-2021 to 30-06-2024)
	Dr. B. H. Joshi	Associate Professor	Food Safety & Quality Assurance (01-07-2024 to 30-06-2027)
4.	Dr. S. H. Akbari	Associate Professor	Food Plant Operations (01-02-2022 to 31-01-2025)
	Dr. S. H. Akbari	Associate Professor	Food Plant Operations (01-02-2025 to 31-01-2028)
5.	Dr. V. B. Bhalodiya	Associate Professor	Food Process Engineering (01-06-2022 to 31-05-2025)
	Dr. V. B. Bhalodiya	Associate Professor	Food Process Engineering (01-06-2025 to 31-05-2028)





[3] College of Agricultural Engineering and Technology, AAU, Godhra

Principal & Dean, Dr. R. Subbaiah (01-10-2022 to 30-09-2025)

Sr. No.	Name and Designation of the Teacher		Department
1.	Dr. D. K. Vyas	Associate Professor	Renewable Energy Engineering (01-12-2022 to 30-11-2025)
2.	Er. Arvind N. Kunapara	Assistant Professor	Irrigation and Drainage Engineering (01-12-2022 to 30-11-2025)
3.	Dr. Pankaj Gupta	Professor	Farm Machinery and Power Engineering (01-07-2023 to 30-06-2026)
4.	Dr. B. A. Amin	Assistant Professor	Basic Engineering and Applied Science (01-07-2023 to 30-06-2026)
5.	Dr. Mukesh Tiwari	Assistant Professor	Soil and Water Conservation Engineering (01-07-2023 to 30-06-2026)
6.	Dr. Neeraj Sheth	Assistant Professor	Processing and Food Engineering (01-04-2024 to 31-03-2027)

[4] College of Agricultural Information Technology, AAU, Anand

Principal & Dean (I/c), Dr. Y. R. Ghodasara (26-10-2023 to 25-10-2026)

Sr. No.	Name and Designation of the Teacher		Department
1.	Dr. Y. R. Ghodasara	Professor (P)	Agricultural Information Technology (26-10-2023 to 25-10-2026)
2.	Dr. R. S. Parmar	Professor (P)	Agricultural Science (01-01-2022 to 31-12-2024)
	Dr. R. S. Parmar	Professor (P)	Agricultural Science (01-01-2025 to 31-12-2027)

[5] International Agri-Business Management Institute, AAU, Anand

Principal & Dean (I/c), Dr. R. S. Pundir (01-08-2021 to 31-07-2024)

Principal & Dean (I/c), Dr. R. S. Pundir (01-08-2024 to 31-07-2027)

Sr. No.	Name and Designation of the Teacher		Department
1.	Dr. Ashish B. Mahera	Assistant Professor	Marketing Management (10-01-2023 To 09-01-2026)
2.	Dr. Y. A. Lad	Associate Professor	HRD & Personnel Management (01-07-2023 To 30-06-2026)
3.	Dr. M. R. Prajapati	Assistant Professor	Financial Management (01-07-2023 To 30-06-2026)
4.	Dr. D. R. Vahoniya	Assistant Professor	Agri-Entrepreneurship and Project Management (01-07-2023 To 30-06-2026)
5.	Dr. R. S. Pundir	Professor	Agribusiness Economics and Policies (01-04-2024 To 31-03-2027)
6.	Dr. S. R. Panigrahy	Assistant Professor	Operations Management (01-04-2024 To 31-03-2027)
7.	Dr. Chetan R. Dudhagara	Assistant Professor	Communication and Information Technology (01-04-2024 To 31-03-2027)





[6] College of Horticulture, AAU, Anand

Principal & Dean (I/c), Dr. N. I. Shah (01-10-2022 to 30-09-2025)

Sr. No.	Name and Designation of the Teacher		Department
1.	Dr. D. D. Parekh	Assistant Professor	Fruit Science (01-03-2022 to 28-02-2025)
2.	Dr. B. N. Satodiya	Associate Professor	Vegetable Science (01-03-2023 to 28-02-2026)
3.	Dr. R. R. Gajera	Associate Professor	Post-Harvest Technology (01-03-2023 to 28-02-2026)
4.	Dr. A. H. Barad	Assistant Professor	Plant Protection (01-03-2023 to 28-02-2026)
5.	Dr. C. H. Raval	Assistant Professor	Natural Resources Management (01-03-2023 to 28-02-2026)
6.	Dr. Prity Kumari	Assistant Professor	Basic Science (01-03-2023 to 28-02-2026)
7.	Dr. B. L. Dudhat	Assistant Professor	Social Science (01-03-2023 to 28-02-2026)
8.	Dr. Amita B. Parmar	Assistant Professor	Floriculture and Landscape Architecture (01-07-2023 to 30-06-2026)

[7] College of Agriculture, AAU, Vaso

Principal (I/c), Dr. B. C. Patel (01-09-2023 to Continue)

Sr. No.	Name and Designation of the Teacher		Department
1.	Ms. Pushpa Parmar	Assistant Professor	Soil Science & Agricultural Chemistry + (Agricultural Meteorology) (01-07-2023 to 30-06-2026)
2.	Dr. B. A. Jethava	Assistant Professor	Horticulture (01-04-2024 to 31-03-2027)
3.	Dr. C. B. Varma	Assistant Professor	Entomology (21-05-2021 to 20-05-2024)
	Dr. C. B. Varma	Assistant Professor	Entomology (21-05-2024 to 20-05-2027)
4.	Dr. B. C. Patel	Associate Professor	Genetics & Plant Breeding + (Seed Science & Technology) (01-07-2021 to 30-06-2024)
	Dr. B. C. Patel	Associate Professor	Genetics & Plant Breeding + (Seed Science & Technology) (01-07-2024 to 30-06-2027)
5.	Dr. B. C. Patel	Associate Professor	Biochemistry / Plant Physiology / Plant Molecular Biology (01-07-2021 to 30-06-2024)
	Dr. B. C. Patel	Associate Professor	Biochemistry / Plant Physiology / Plant Molecular Biology (01-07-2024 to 30-06-2027)





Sr. No.	Name and Designation of the Teacher		Department
6.	Dr. G. R. Patel	Associate Professor	Agricultural Engineering (01-07-2021 to 30-06-2024)
	Dr. G. R. Patel	Associate Professor	Agricultural Engineering (01-07-2024 to 30-06-2027)
7.	Dr. B. M. Christian	Assistant Professor	Agricultural Extension and Communication + (English) (01-07-2021 to 30-06-2024)
	Dr. B. M. Christian	Assistant Professor	Agricultural Extension and Communication + (English) (01-07-2024 to 30-06-2027)
8.	Dr. M. N. Jegoda	Assistant Professor	Animal Science (01-07-2021 to 30-06-2024)
	Dr. M. N. Jegoda	Assistant Professor	Animal Science (01-07-2024 to 30-06-2027)
9.	Dr. P. S. Panchal	Assistant Professor	Agronomy (01-07-2021 to 30-06-2024)
	Dr. P. S. Panchal	Assistant Professor	Agronomy (01-07-2024 to 30-06-2027)
10.	Dr. Nilesh B. Pawar	Assistant Professor	Plant Pathology / Nematology / Microbiology (01-07-2021 to 30-06-2024)
	Dr. Nilesh B. Pawar	Assistant Professor	Plant Pathology / Nematology / Microbiology (01-07-2024 to 30-06-2027)

[8] College of Agriculture, AAU, Jabugam

Principal (I/c), Dr. S. R. Patel (01-03-2022 to Continue)

Sr. No.	Name and Designation of the Teacher		Department
1.	Dr. S. R. Patel	Professor	Agricultural Extension and Communication (01-02-2022 to 31-01-2025)
	Dr. S. R. Patel	Professor	Agricultural Extension and Communication (01-02-2025 to 31-01-2028)
2.	Dr. H. C. Parmar	Associate Professor	Agricultural Economics (01-02-2022 to 31-01-2025) (Retd. 30-06-2024)
	Dr. A. R. Macwan	Associate Professor	Agricultural Economics (01-02-2025 to 31-01-2028)
3.	Dr. V. B. Mor	Assistant Professor	Agronomy (01-02-2022 to 31-01-2025)
	Dr. G. L. Kadam	Assistant Professor	Agronomy (01-02-2025 to 31-01-2028)
4.	Dr. R. D. Shinde	Assistant Professor	Soil Science and Agricultural Chemistry / Biochemistry (01-02-2022 to 31-01-2025)
	Dr. R. D. Shinde	Assistant Professor	Soil Science and Agricultural Chemistry / Biochemistry (01-02-2025 to 31-01-2028)





Sr. No.	Name and Designation of the Teacher		Department
5.	Dr. A. S. Damor	Assistant Professor	Genetics and Plant Breeding / Seed Science & Technology (01-02-2022 to 31-01-2025)
	Dr. A. S. Damor	Assistant Professor	Genetics and Plant Breeding / Seed Science & Technology (01-02-2025 to 31-01-2028)
6.	Dr. M. R. Dabhi	Assistant Professor	Entomology (01-02-2022 to 31-01-2025)
	Dr. M. R. Dabhi	Assistant Professor	Entomology (01-02-2025 to 31-01-2028)
7.	Dr. Ranganathswamy Math	Assistant Professor	Plant Pathology / Microbiology (01-02-2022 to 31-01-2025)
	Dr. Ranganathswamy Math	Assistant Professor	Plant Pathology / Microbiology (01-02-2025 to 31-01-2028)
8.	Dr. A. V. Kotecha	Assistant Professor	Horticulture (01-09-2024 to 31-08-2027) (Retd. 30-11-2024)
	Dr. V. B. Mor	Assistant Professor	Horticulture (01-02-2025 to 31-01-2028)
9.	Dr. Ashish K. Sharma	Associate Professor	Agricultural Engineering (01-06-2022 to 31-05-2025)





Chart-1
Organizational Set-Up

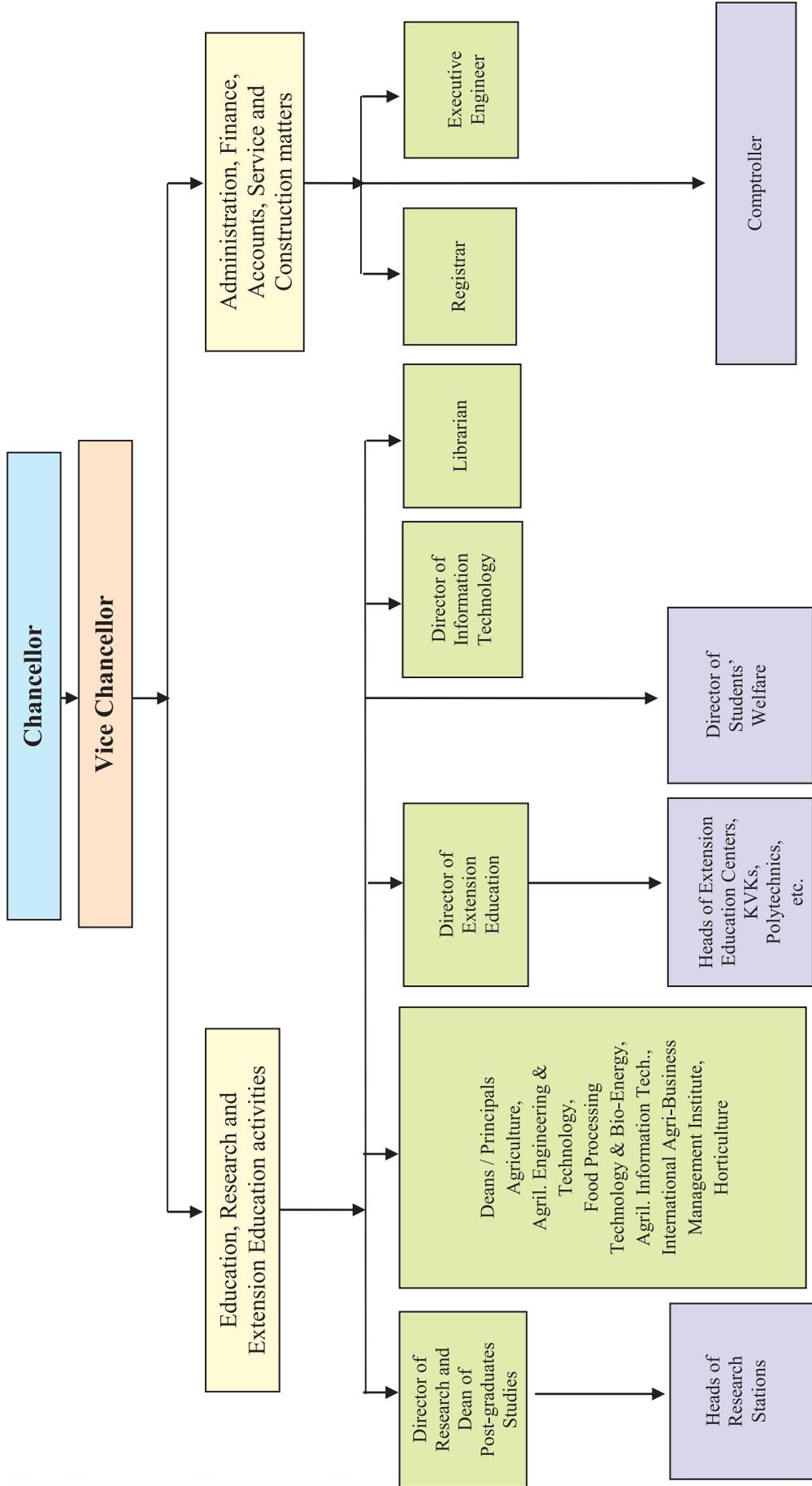
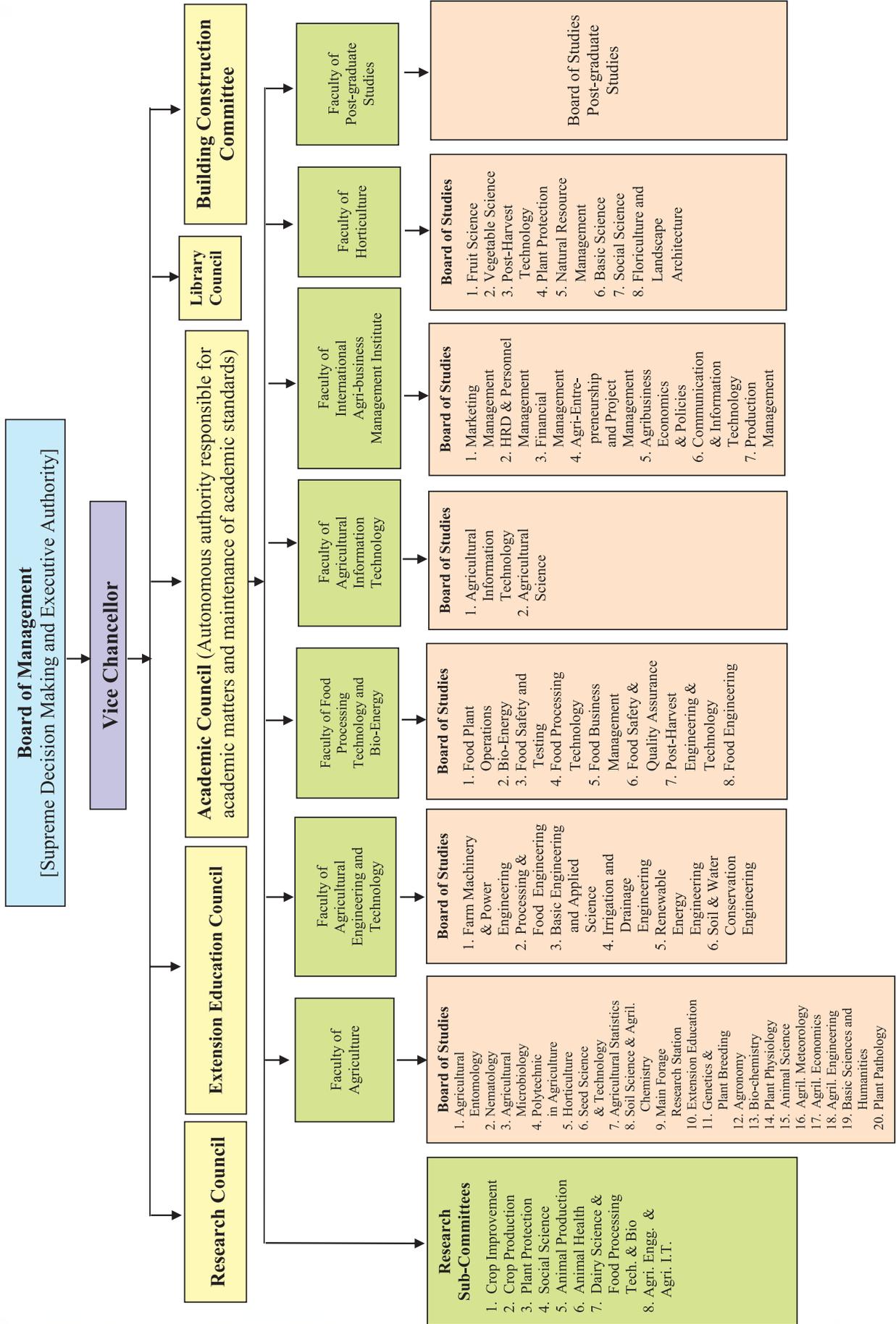




Chart-2

Organizational Chart & Decision making channels



Chapter

3

EDUCATION

Centralized Admission Process

Under Section 25 (7) (g) of the GAU Act, 2004, the function of supervising and coordinating the centralized admission to various degree courses at the University has been assigned to the Council of State Agricultural Universities. The Council has nominated Vice Chancellor of Anand Agricultural University as the Nodal Officer for carrying out function of the centralized admission for all SAUs of Gujarat.

Nodal Officer

As a Nodal Officer for Academic and Examination, Hon'ble Vice Chancellor Dr. K. B. Kathiria, successfully conducted an important exercise of centralized admissions at Diploma, UG and PG levels for four State Agricultural Universities of Gujarat. As a Nodal Officer, he convened meeting of the Registrars and Deans of four SAUs and arranged for smooth conduct of examinations and paper evaluation.

3.1 Under Graduate Courses

Admission Procedure

AAU is a residential university and follows semester system. Courses of B.Sc. (Hons.) Agriculture, B.Sc. (Hons.) Horticulture, B.Tech. (Agricultural Engineering), B.Tech. (Food Technology), B.Tech. (Agricultural Information Technology) are of four years duration divided into eight semesters. The medium of instruction is English. The University imparts resident instruction for the graduate programmes at their constituent colleges with the eligibility and admission requirements as given in Table 3.1. Under the semester system of education, all students are compulsorily required to stay in a University hostel, except otherwise permitted. Through online receipt of applications, a common merit list is prepared on the basis of Academic Regulations. Girl students are exempted from tuition and hostel fees.

Table 3.1 Eligibility criteria for admission in various degree programmes

Name of the graduate programme	Category wise minimum % requirement of marks in theory subjects in Physics, Chemistry and Biology of HSSCE examination			
	Category			
	General	SC	ST	SEBC
B.Sc. (Hons.) Agriculture	40	35	35	40
B.Sc.(Hons.) Horticulture	40	35	35	40
B.Tech. (Agricultural Information Technology)	40	35	35	40
Name of the graduate programme	Category wise minimum % requirement of marks in theory subjects in Physics, Chemistry and Mathematics/Biology of HSSCE examination			
	Category			
	General	SC	ST	SEBC
B.Tech. (Agricultural Engineering)	40	35	35	40
B.Tech. (Agricultural Information Technology)	40	35	35	40
B.Tech. (Food Technology)	40	35	35	40

Admission is considered on the merit basis of 60% of PCM/PCB theory and 40 % of GUJCET marks.



The college wise details i.e., number of seats and actual admitted students for the academic year 2024-25 are given in Table 3.2.

Table 3.2 Students intake and admitted in different graduation programmes (2024-25)

Degree	Name of the College	Admission Capacity		No of students
		Total Seat	ICAR	Admitted
B.Sc. Hons. (Agri.)	B. A. College of Agriculture, Anand	145	29	165
	College of Agriculture, Vaso	66	13	73
	College of Agriculture, Jabugam	61	12	69
B.Sc. Hons. (Horti.)	College of Horticulture, Anand	70	14	72
B.Tech. (Agril. Engg.)	College of Agril. Engineering & Technology, Godhra	65	13	66
B.Tech. (AIT)	College of Agricultural Information Technology, Anand	60	00	60
B.Tech. (FT)	College of Food Processing Technology & Bio-Energy, Anand	65	13	77

3.1.1 Diploma to Degree Programme (D to D)

Admission Procedure

10% seats of degree programme are kept reserved in Agriculture, Horticulture and Agricultural Engineering & Food Technology for Diploma to Degree programme. Based on the common entrance test, the qualifying students are admitted directly in the third semester of the concerned degree programme.

3.1.2 Polytechnic Programme

Admission Procedure

Students who have passed Secondary School Certificate Examination with English as compulsory subject are eligible for admission to three years (six semesters) Diploma programme in various subjects run at the Polytechnics of the University. The medium of instruction is English.

The details of number of seats and actual admitted students from different polytechnics are given in Table 3.3.

Table 3.3 Students intake and admitted in different Diploma Programmes for academic year 2024-25

Name of the Diploma Programme	Name of the Polytechnic College	Admission capacity	No. of students
		Total Seat	Admitted
Agriculture	Sheth M.C. Polytechnic in Agriculture, Anand	44	44
	Polytechnic in Agriculture, Vaso	44	44
Agricultural Engineering	Polytechnic in Agricultural Engineering, Dahod	44	33
Food Technology and Nutrition	Polytechnic in Food Science & Home Economics, Anand	44	35
Horticulture	Sheth D.M. Polytechnic in Horticulture, Vadodara	44	39





3.2 Post Graduate courses

Admission Procedure

A candidate aspiring to get admission in PG studies should have a graduate degree of the related field with an OGPA of not less than 6.50/10.00. Entrance test and counselling are conducted and admission is given on the basis of merit and as per the intake capacity.

For admission in International Agri. Business Management Institute, graduates of Agriculture and its allied science are eligible. Selection is made on the basis of merit in Entrance Test.

Two academic years (four semesters) are required for the course work, research and thesis preparation and examination leading to the Master's Degree. A minimum period of three academic years (six semesters) is required for the Ph.D. degree.

Intake Capacity

Intake capacity for Post Graduate programmes in a particular discipline is fixed on the basis of infrastructure of the concerned department and the availability of experts / recognized teachers in the department. On the basis of the decision taken by the Admission Committee, the intake capacity was fixed as shown in Table 3.4.

Table 3.4 Intake capacity in different faculties for the year 2024-25

Agriculture Faculty

Sr. No.	Subject	M. Sc. (Agri.)	Doctorate	Total
		Regular + ICAR	Regular + ICAR	
1.	Agronomy	8+4	5+2	13+6
2.	Soil Science	5+2	2+1	7+3
3.	Biochemistry	2+1	1+1	3+2
4.	Genetics and Plant Breeding	12+4	5+2	17+6
5.	Entomology	12+5	3+1	15+6
6.	Agril. Statistics	3+1	2+0	5+1
7.	Plant Pathology	8+2	2+0	10+2
8.	Agril. Economics	3+1	1+0	4+1
9.	Agricultural Extension Education	8+2	3+1	11+3
10.	Plant Physiology	1+1	1+0	2+1
11.	Agril. Meteorology	2+1	1+0	3+1
12.	Nematology	1+1	0+0	1+1
13.	Microbiology	3+1	2+0	5+1
14.	Molecular Biology & Biotechnology	2+2	2+1	4+3
15.	Seed Science & Technology	2+1	1+1	3+2
Total		72+29	31+10	103+39





Horticulture Faculty

Sr. No.	Subject	M. Sc. (Horti.)	Doctorate	Total
		Regular + ICAR	Regular + ICAR	
1.	Fruit Science	6+2	2+1	8+3
2.	Vegetable Science	1+0	2+0	3+0
3.	Floriculture & Landscaping	4+1	0+0	4+1
Total		11+3	4+1	15+4

Food Technology Faculty

Sr. No.	Subject	M. Tech. (FT)	Doctorate	Total
		Regular + ICAR	Regular + ICAR	
1.	Food Processing Technology	7+2	3+1	10+3
2.	Food Processing Engineering	1+3	1+1	2+4
3.	Food Safety and Quality	5+1	1+1	6+2
Total		13+6	5+3	18+9

Agri-Business Management Faculty

Sr. No.	Subject	MBA	Doctorate	Total
		Regular + ICAR	Regular + ICAR	
1.	Agribusiness Management	35+10	5+0	40+10
Total		35+10	5+0	40+10

Agricultural Engineering & Technology Faculty

Sr. No.	Subject	M.Tech. (Agril. Engg.)	Doctorate	Total
		Regular + ICAR	Regular + ICAR	
1.	Farm Machinery & Power Engineering	6+2	1+1	7+3
2.	Soil & Water Conservation Engineering	3+2	0+0	3+2
3.	Processing & Food Engineering	4+2	2+1	6+3
4.	Irrigation and Drainage Engineering	0+0	0+0	0+0
5.	Renewable Energy Engineering	1+1	0+0	1+1
Total		14+7	3+2	17+9

Admission and Output

The advertisement was published in leading daily news papers for the admission. The applications were processed and entrance tests were conducted through online system and merit

list was prepared and declared on website to call candidates for counselling.

Details of students passed out in different faculties at Graduate, Masters and Doctorate levels are given in Table 3.5.





Table 3.5 Passed out students (Graduates and Post Graduates) of AAU (2024-25)

Summary of students for 21st Annual Convocation

Degree wise - Class with Summary

Sr. No.	Name of Degree	First Class or I DIVISION with Distinction	First Class or I DIVISION	Second Class or II DIVISION	Without Class	Total
1	B.Sc. (Hons.) Agriculture	29	147	46	-	222
2	B.Tech (Agril.Engg.)	5	13	14	-	32
3	B.Tech (AIT)	6	17	2	-	25
4	B.Tech (FT)	2	30	17	-	49
5	B.Sc. (Hons.) Horticulture	9	40	9	-	58
6	Ph.D.	-	-	-	44	44
7	M.Sc. (Agri.)	39	42	1	-	82
8	M.Tech (Agril.Engg.)	2	2	-	-	04
9	M.Tech (FT)	4	7	1	-	12
10	M.Sc. (Horti.)	6	1	-	-	7
11	M.B.A. (ABM)	7	32	-	-	39
12	Post Graduate Diploma in Data Science	1	3	2	-	6
Total		110	334	92	44	580

Annual Convocation

21st Annual Convocation of AAU was held on 04th January 2025, in the presence of Hon'ble Governorshri of Gujarat and the Chancellor of this University, Shri Acharya Devvrat. Guest of Honour Shri Raghavjibhai Patel, Hon. Minister of Agriculture, Animal Husbandry, Cow Breeding and Fisheries, Rural Housing and Rural Development, Government of Gujarat has send his recorded message, Hon'ble Chief Guest of Convocation Dr. Meenesh Shah, Chairman, National Dairy Development Board(NDDDB), Anand and Dr. K. B. Kathiria, Hon'ble Vice Chancellor of Anand Agricultural University, Anand remain present.

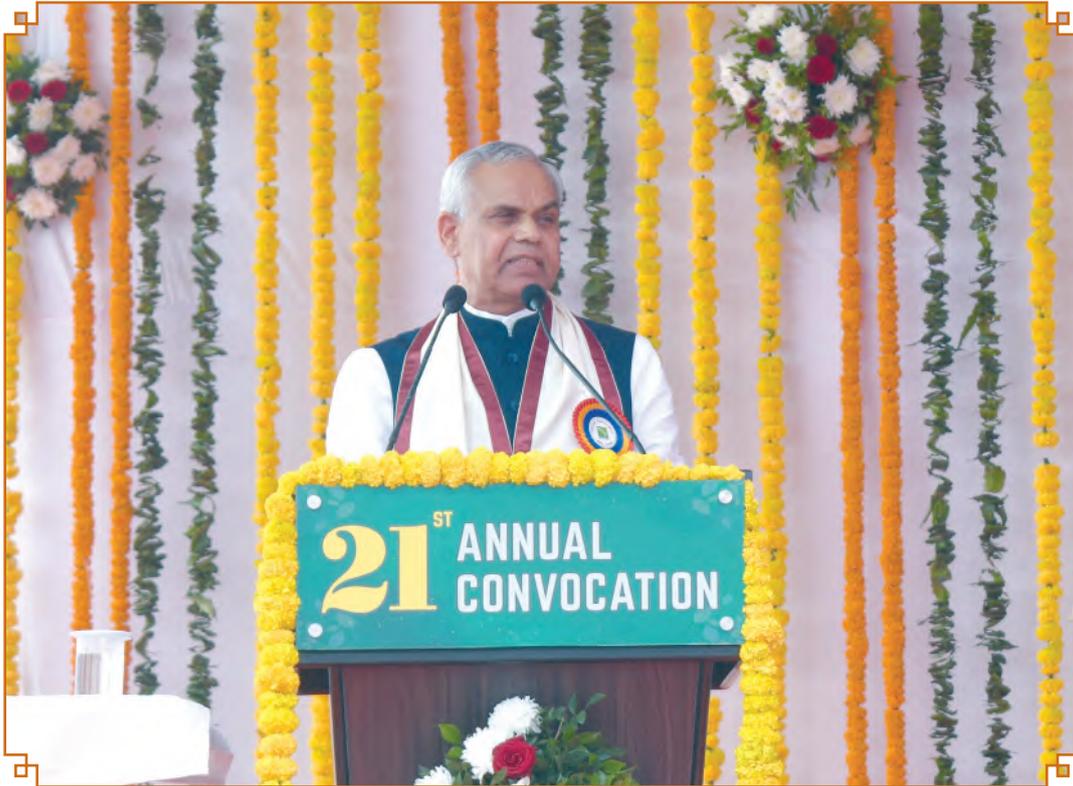
Vekariya Prashantbhai Rameshkumar a Ph. D. student of B.A. College of Agriculture; **Kalariya Bhautik Sureshbhai** a M.Sc. (Agri.) student of B.A. College of Agriculture and **Jijnasha Bal**, a student

of College of Agricultural Engineering & Technology, Godhara, were awarded Chancellor's Gold Medals.

Het Utsav Patel, a student of B. A. College of Agriculture; **Anupama Sharma**, a student of College of Agricultural Engineering & Technology; **Riyaben Chaudhari**, a student of College of Food Processing Technology & Bio-Energy; **Patel Indra Vijaybhai**, a student of College of Agricultural Information Technology; **Aravadiya Srushti Bharatbhai**, a student of College of Horticulture were awarded Vice Chancellor's Gold Medals. The details of medals and prizes are shown in Annexure-A.

Hon'ble Governorshri of Gujarat and Chancellor of AAU, Anand, Shri Acharya Devvrat conferred the degrees to the graduates and post-graduates in person and in absentia. Total 386 graduate and 194 post-graduate candidates received the degrees at the Convocation.





Shri. Acharya Devvrat, Hon'ble Chancellor & Governor Shri of Gujarat State addressing the audience during convocation



Dr. Meenesh Shah, Chairman, National Dairy Development Board (NDDDB), Anand addressing the audience during convocation





Address by **Dr. K.B.Kathiria**, Hon'ble Vice Chancellor of Anand Agricultural University during convocation



**Annexure-A****List of PG Gold Medals/Gold Plated Silver Medals/Cash Prizes****Awards for 21st Annual Convocation**

Sr. No.	Name of Medal	Gold Medal	Gold Plated Medal	Cash Prize	Name of Student
1.	Chancellor's Gold Medal (Ph.D.)	01	-	-	Vekariya Prashantbhai Rameshkumar
2.	Chancellor's Gold Medal (Master)	01	-	-	Kalariya Bhautik Sureshbhai
3.	Chancellor's Gold Medal	01	-	-	Jijnasha Bal
4.	UPL OpenAg Gold Medal of Merit	01	-	-	Vishnu S. U.
5.	Arun Iyer Gold Plated Silver Medal	-	01	-	Ashutosh Kumar
6.	Smt. Shraddha Dipakbhai Sheth Gold Plated Silver Medal	-	01	-	Senthilraja N.
7.	Smt. Manjulaben Pravinbhai M. Patel Gold Medal	01	-	-	Prajapati Bhavikkumar Jayantibhai
8.	Param Pujya Pramukh Swami Maharaj Prerit Dr. K. P. Kikani Gold Plated Silver Medal	-	01	-	Makvana Payalben Chandubhai
9.	Shrimad Rajchandra Gold Plated Silver Medal	-	01	-	Bagadiya Parth Ghanshyambhai
10.	Madhuben Thakorbbhai Patel Gold Plated Silver Medal	-	01	-	Devilal Birla
11.	Late Shri Sadhubhai Vallabhbhai Desai Medal	-	01	-	Chinmayee Sahoo
12.	Dr. C.B. Shah Medal	-	01	-	-
13.	Dr. K. S. Jadav Gold Plated Silver Medal	-	01	-	Twinkle Ram
14.	Late Dr. Diwaker R. Patel Medal	-	01	-	Krishti George Vilson
15.	Dr. C.A. Patel Gold Plated Silver Medal	-	01	-	Ravi
16.	Dr. Mahesh R. Vaishnav Gold Plated Silver Medal	-	01	-	Parmar Jignesh Kishanbhai
17.	Dr. Vyas Pandey Gold Plated Silver Medal	-	01	-	Chaudhari Bhargav Manjibhai
18.	Dr. K.P. Kikani Gold Plated Silver Medal	-	01	-	Bagadia Isha
19.	Smt. Venkata Seethamma Siripuraru Memorial Gold Medal	01	-	-	Ankita Jukaria





List of UG Gold Medals/Gold Plated Silver Medals/Cash Prizes

Awards for 21st Annual Convocation

Sr. No.	Name of Medal	Gold Medal	Gold Plated Medal	Cash Prize	Name of Student
B.Sc. (Hons.) Agri.					
1	Vice Chancellor's Gold Medal	01	-	-	Het Utsav Patel
2	Gujarat State's First Agricultural Graduates Golden Jubilee (1960-2010) Memorial Gold Medal	01	-	-	
3	Smt. Surajben Jethabhai Patel Gold Plated Silver Medal" (Only Girls)	-	01	-	
4	Memon Trust Dr. M. D. Patel Cash Prize (Only Girls)	-	-	01	
5	Late Shri. Dahyabhai Ambalal Patel Gold Medal	01	-	-	
6	Dr. M. V. Desai Medal	-	01	-	
7	Dr. Mrinal Kanti Chakraborty Medal	-	01	-	
8	Late. Shri Jashbhai J. Patel Medal	-	01	-	
9	Dr. Z. B. Patel Medal	-	01	-	
10	Dr. Ravjibhai Chhotabhai Patel Medal	-	01	-	
11	Dr. Sureshbhai. N. Patel Memorial Medal	-	01	-	
12	American Spring And Pressing Works Private Limited Cash Prize	-	-	01	
13	Ex. Vc, Nau & Jau, Dr. A. R. Pathak's Late Parents Taraben & Ramkrishna Pathak Memorial Gold Plated Silver Medal" (Only Baca)	-	01	-	Wagh Krishna Rohitbhai
14	Shri. Satyendrabhai K. Patel Of Dabhau Gold Medal	01	-	-	
15	Shri. Babubhai Jashbhai Patel Shashtipurti Smruti Gold Medal"	01	-	-	
16	Dr. Ranchhodbhai M. Patel Gold Medal	01	-	-	
17	Prof. H. N. Patel Memorial Medal	-	01	-	
18	Dr. Harikaka Medal	-	01	-	
19	Dr. C. A. Patel Gold Plated Silver Medal	-	01	-	Nikhil Sreenath
20	Dr. Ramjibhai M. Patel Medal	-	01	-	
21	Dr. B. V. Mehta Medal	-	01	-	
22	Late Shri Satishchandra & Smt. Umarani Kulshrestha Gold Plated Silver Medal	-	01	-	Anjusha
23	Dr. Purachand D. Mistry Medal	-	01	-	





Sr. No.	Name of Medal	Gold Medal	Gold Plated Medal	Cash Prize	Name of Student
24	Shri. Jethabhai Dayalajibhai Patel Gold Plated Silver Medal" (Only Boys)	-	01	-	Govil Beniwal
25	Matrushri Zakalba Parshottambhai Kikani Prerit Dr. K. P. Kikani Gold Plated Silver Medal	-	01	-	Joshi Keisha Brijesh
26	Mr. Girishbhai Patel Sponsored Late Shree Shankarbhai Ukhabhai Patel Gold Plated Silver	-	01	-	
27	Shri. Sunil Patel & Shri Indravadan Patel Sponsored Late Smt. Maniben Lallubhai Patel Gold Plated Silver Medal	-	01	-	
28	Shri. Pareshbhai Amin Parivar (Vaso) Gold Plated Silver Medal	-	01	-	
29	Dinkar Seeds Pvt. Ltd. (Himatnagar) Gold Plated Silver Medal	-	01	-	Raval Soham Kanaiyalal
30	Shri. Pareshbhai Amin Parivar (Vaso) Gold Plated Silver Medal	-	01	-	
31	Shri. Amrutbhai Jamnadas Patel Sponsored Late Smt. Chanchalben Jamnadas Patel Gold Plated Silver Medal	-	01	-	
32	Mr. V. M. Choksi (Manek Chowk, Ahmedabad) Sponsored Late Smt. Renukaben Choksi Gold Plated Silver Medal	-	01	-	
33	Dr. Kurjibhai M. Patel Sponsored Our Rushis Gold Plated Silver Medal	-	01	-	
34	Shri. Natwarbhai Bababhai Patel Gold Plated Silver Medal	-	01	-	Ankitsinh Chauhan
35	Shri. Pareshbhai Amin Parivar (Vaso) Gold Plated Silver Medal	-	01	-	
36	Prof. R. S. Amin Parivar(Vaso) Gold Plated Silver Medal	-	01	-	
37	Shri. Pareshbhai Amin Parivar (Vaso) Gold Plated Silver Medal	-	01	-	
38	Dr. D. B. Panchal Sponsored Late Shri Hiren Dinesh Panchal Gold Plated Silver Medal	-	01	-	Ankitsinh Chauhan
39	Dr. B. C. Patel Sponsored Late Smt. Shantaben Labhubhai Patel Gold Plated Silver Medal	-	01	-	
40	Dr. Bakul Joshi Sponsored Late Smt. Sagunaben Joshi Gold Medal	01	-	-	
41	Kartavya Agritech Private Limited Gold Plated Silver Medal	-	01	-	
42	Shri. Bharatbhai M. Choksi (Ahmedabad) Sponsored Late Smt. Manchiben Keshudas Choksi Gold Plated Silver Medal	-	01	-	





Sr. No.	Name of Medal	Gold Medal	Gold Plated Medal	Cash Prize	Name of Student
43	Narmada Bio-Chem Limited (Ahmedabad) Gold Plated Silver Medal	-	01	-	Rathod Divyaraj Nikulsinh
44	Shri. Narendrabhai Patel Sponsored Smt. Madhuben Jashbhai Patel Gold Plated Silver Medal	-	01	-	
45	Ex. Principal, COA, Vaso, Dr. V. P. Ramani's Father Late Shri Pragjibhai Ramani Gold Plated Silver Medal	-	01	-	
46	Smt. Dhaniben Narsibhai Madhani Prerit Shri Kantibhai Madhani Gold Plated Silver Medal	-	01	-	Prajapati Yashvi Pankajkumar
47	Prof. Anilbhai Jashbhai Patel Gold Plated Silver Medal	-	01	-	
48	Shri. Jashbhai Dhulabhai Patel Gold Plated Silver Medal	-	01	-	Shah Aditya Vinaykumar
49	Shri. Nikulbhai Patel Sponsored Late Shri Chhotabhai Patel Gold Plated Silver Medal	-	01	-	Patel Hetkumar Rashmikant
50	Dr. Jagruti Shroff Sponsored Smt. Madhukantaben Chhotubhai Shroff Gold Plated Silver	-	01	-	Patel Yashvi Nitinkumar
51	Dr. M. S. Chari Gold Plated Silver Medal	-	01	-	Gal Vishal Devshibhai
52	Ram Parivar's Smt. Madhuben & Ramjibhai Bhagat, Suryaghodawala Gold Plated Silver medal	-	01	-	
53	Dr. H. R. Patel's Maternal Uncles Shri Ramanbhai, Jagjivanbhai & Ramchandra Patel Memorial Gold Plated Silver Medal	-	01	-	
54	Pooja Pinakin Patel Gold Plated Silver Medal	-	01	-	Siddharth Giri
55	Late Smt. Sumitraben Rambhai Patel, Gold Plated Silver Medal(Sumitra - Ram Award)	-	01	-	
56	Virabhai Harjibhai Sonani Memorial Gold Plated Silver Medal	-	01	-	Baria Vishalkumar Ganpatsinh
57	Shri Ramsinhji Dipsinhji Vansadia (Jabugam) Gold Plated Silver Medal	-	01	-	Pathak Devanshi Maheshkumar
B.Tech. (Agricultural Engineering)					
58	Vice Chancellor's Gold Medal	01	-	-	Anupama Sharma
59	Shri Venkata Subbaiah Siripurapu Memorial Gold Medal	01	-	-	
60	Late Bhagwan Harji Bhesania Gold Plated Silver Medal (IDE Subject)	-	01	-	





Sr. No.	Name of Medal	Gold Medal	Gold Plated Medal	Cash Prize	Name of Student
61	Ornate Godhra Cash Prize (PFE Subject)	-	-	01	
62	Ornate Godhra Cash Prize (SWCE Subject)	-	-	01	
63	Indian Trading Cash Prize FMPE Subject)	-	-	01	
B.Tech. (Agri. Information Technology)					
64	Vice Chancellor's Gold Medal	01	-	-	Patel Indra Vijaybhai
65	Designstech Systems Gold Medal	01			
66	Smarttech Sponsored Gold Plated Silver Medal	-	01	-	Mistry Dhara Pareshkumar
67	Ishan Netsol PVT. Ltd. Sponsored Gold Plated Silver Medal	-	01	-	Patel Yashkumar Manharbhai
B.Tech. (Food Technology)					
68	Vice Chancellor's Gold Medal	01	-	-	Riyaben Chaudhari
69	Memon Trust Dr. K.M. Munshi Cash Prize	-	-	01	
70	Professor S.C. Bose Siripurapu Gold Medal	01	-	-	
71	Sia & Rhea Siddhartha Bhesania Gold Plated Silver Medal	-	01	-	
72	Koshambh Multitred Private Limited Gold Medal	01	-	-	
73	Relish Agro Food (India) Pvt. Ltd. Sponsored Jamalbhai Adambhai Deraiya Gold Plated Silver Medal	-	01	-	
74	Prosourcing International Llp Gold Plated Silver Medal	-	01	-	Shah Niyati Ankitbhai
B.Sc. (Hons.) Horticulture					
75	Vice Chancellor's Gold Medal	01	-	-	Aravadiya Srushti Bharatbhai
76	Smt. Urmilaben Hemantbhai Patel, Gold Plated Silver Medal	-	01	-	
77	Dr. N.S. Parekh Gold Plated Silver Medal	-	01	-	Patel Tirth Shashikant
78	Gujarat Bagayat Vikash Parishad Gold Plated Silver Medal	-	01	-	



Chapter

4

RESEARCH

Agricultural research and development (R&D) play a crucial role in addressing some of the most pressing issues faced by society today, such as ensuring sustainable food production, improving nutritional security for rural populations, addressing climate change, and promoting energy conservation. Over the years, agricultural research has expanded significantly, becoming more multidisciplinary and integrated to meet these challenges.

Anand Agricultural University (AAU) has been entrusted with the responsibility of delivering agricultural education, conducting research, and extending knowledge to farmers. The university has made significant strides in expanding its research activities, enabling agricultural scientists to tackle key production constraints faced by farmers in the region ultimately helping to improve their income. Under its various faculties, AAU has made remarkable progress in agricultural research.

With a strong foundation in research, AAU serves the agricultural needs of Gujarat's farming community. The university's primary goal is to generate technologies that enhance agricultural productivity and improve farm income, while aligning with the state's socio-economic and cultural needs in a sustainable manner. The research focuses primarily on the major crops grown in Gujarat but also covers a broad range of areas including soil and water management, natural farming, nano technology biofertilizer, biopesticides, post-harvest technology, value addition, plant biotechnology, tissue culture, distance hybridization, climate change and agriculture, soil health, forage crops, food quality and food testing, pesticide residue analysis, besides good quality seed production for farmers of the state.

The mission of AAU is to develop and disseminate modern agricultural technologies

that are specific to the region, cost-effective, and widely accepted by the farming community. To ensure the successful implementation of research, Agricultural Research Council serves as the apex body for planning and guiding long-term, medium-term and short-term research programs. The Director of Research and the Dean of Postgraduate Studies, under the guidance of the Vice Chancellor, coordinate, monitor and evaluate research initiatives in consultation with university experts and scientists. This ensures that the research meets the needs of the state and aligns with other agricultural universities (SAUs) when necessary.

AAU prioritizes research based on the challenges faced by Gujarat's farmers. New technical programs are designed and proposed to relevant research sub-committees for further discussion and approval, incorporating feedback from the state's agricultural departments and farmers.

The dedicated efforts of AAU's scientists and faculty members have helped advancement in agriculture in Gujarat, making it more locally adaptable and competitive. This chapter highlights the research achievements of AAU during the year 2024-25.

Seasonal weather features of year 2024

Gujarat experienced a significant monsoon season in 2024, receiving 1056 mm of rainfall, which is 48% more than the normal average of 712 mm. The monsoon began in the southern parts of the state in mid-June. Notably, all 251 talukas (sub-districts) of the state received at least 250 mm of rainfall, with only 7 talukas recording less than 500 mm. Unseasonal rainfall events also occurred in some areas during the first half of October.

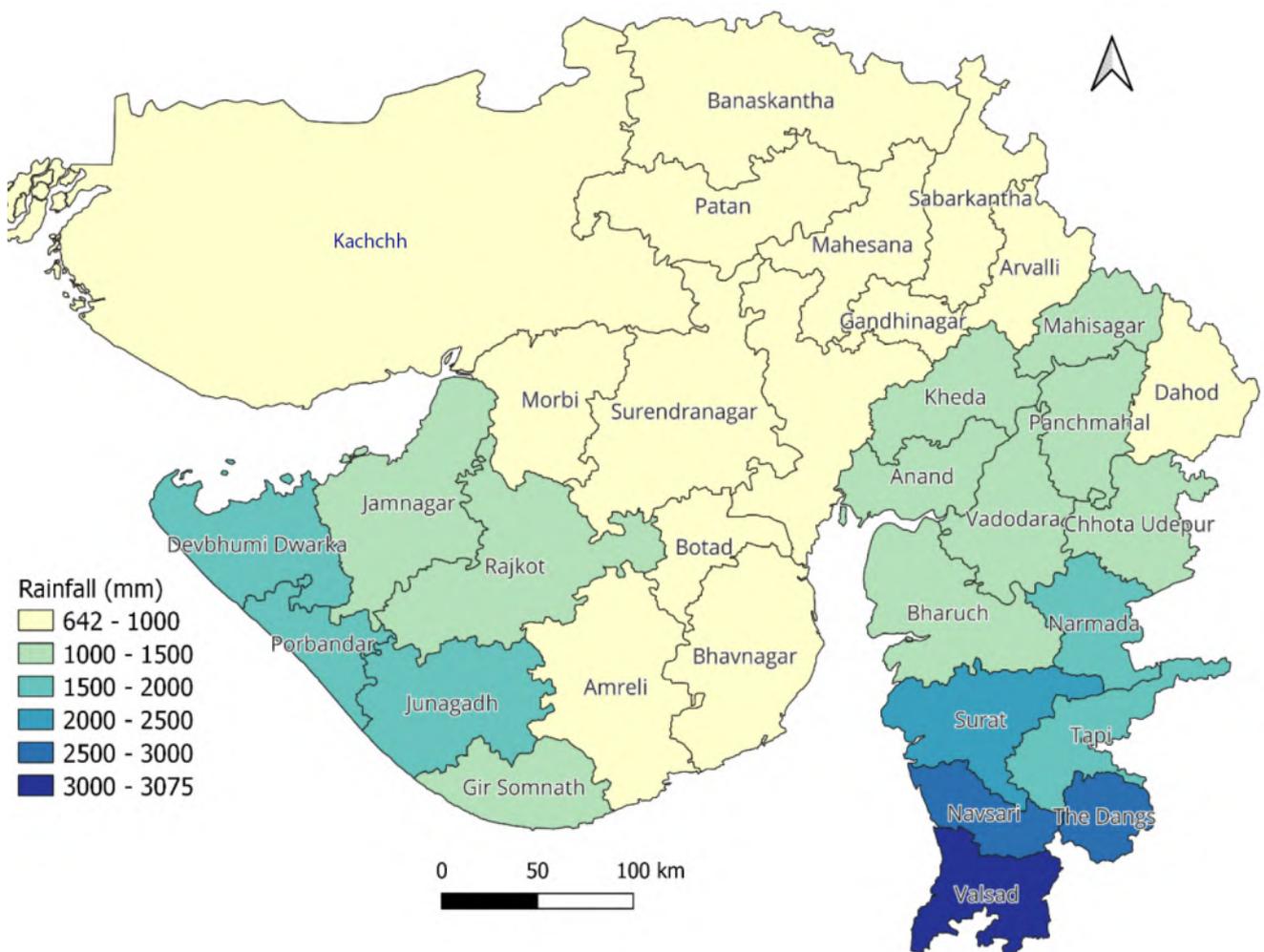
Map 1 illustrates the rainfall received against normal during year 2024, while Map 2 shows the





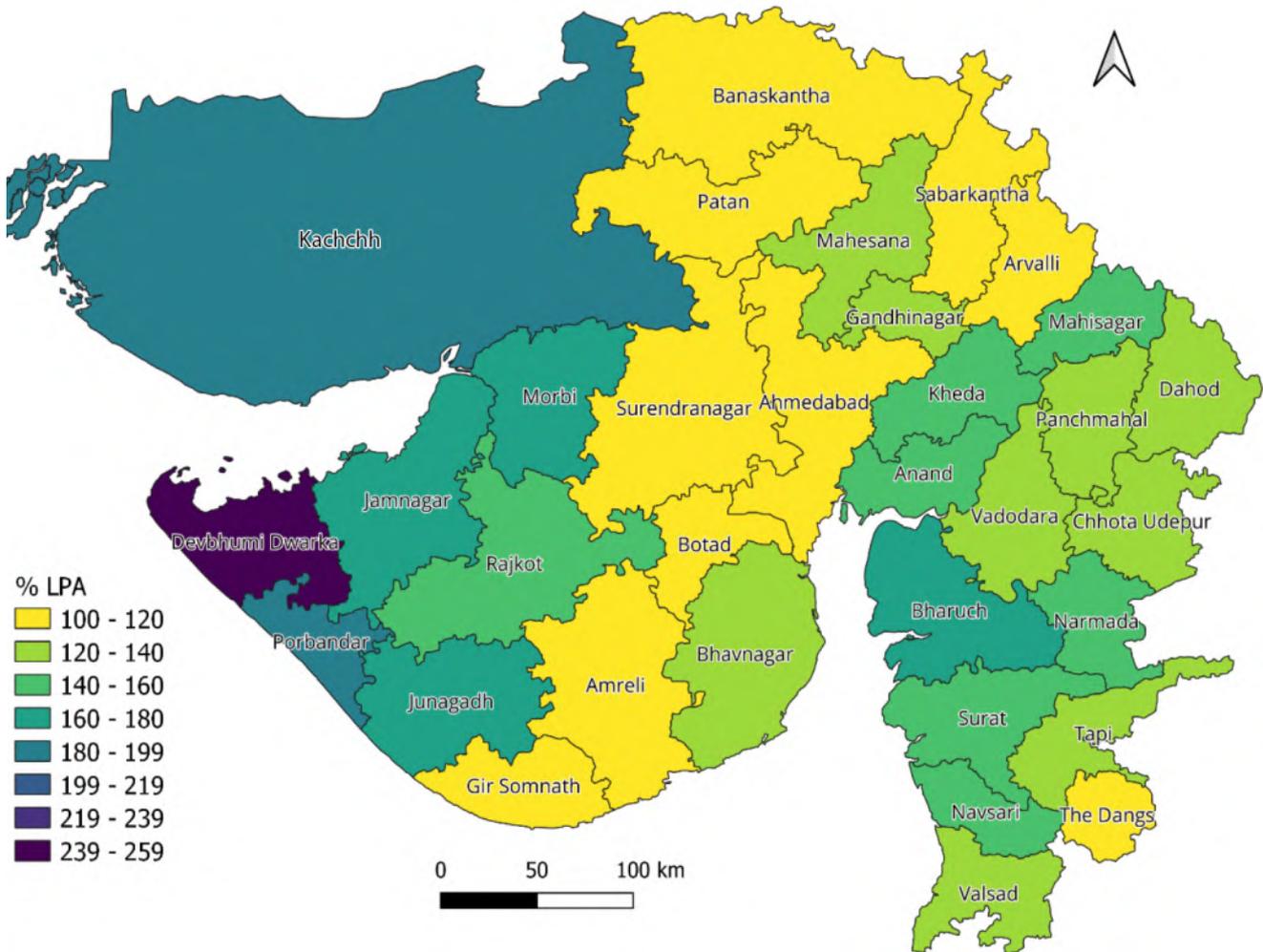
percentage of rainfall received against the long-period average. The districts of West Saurashtra and Kachchh received particularly high amounts of rainfall between 23rd and 30th August. This was due to a slowly moving depression that developed over the state, leading to extreme rainfall and widespread damage, with Kachchh and Saurashtra regions being the most affected by flooding. The Kachchh region recorded a large excess of rainfall (896 mm; 185% of the Long Period Average (LPA)). Saurashtra,

South Gujarat, and East Central Gujarat regions also experienced excess rainfall, with 148%, 141%, and 133% of LPA, respectively. The North Gujarat region received normal seasonal rainfall (115% of LPA). Valsad district recorded the highest rainfall at 3075 mm (132% of LPA), while Banaskantha district had the lowest with 642 mm (100% of LPA). Many parts of Gujarat continued to experience unseasonal rainfall events until the end of the year, primarily due to western disturbances.



Map 1: Rainfall received against normal during year, 2024





Map 2 : Percentage of rainfall received against long period average during year, 2024

In Anand, the Southwest monsoon commenced on June 29th with 11.4 mm of rainfall (Table 1; Figure 1). Total rainfall in June was low (58.8 mm) compared to the LPA of 109 mm, occurring over only 3 rainy days. July also saw less rainfall (207.0 mm in 11 rainy days) against an LPA of 319 mm, with dry spell conditions prevailing during the first fortnight of the month. Anand received good rainfall in August, making it the wettest month with 568.8 mm of rainfall and good temporal distribution over 17 rainy days, compared to the normal of 252 mm. In September, the rainfall amount was high (266.8 mm), but it was not well distributed, leading to a prolonged dry spell. Overall, during monsoon season, Anand received 1101 mm of rainfall, which was 26% higher than the LPA of 870 mm, spread over 41 rainy days. Unseasonal rainfall events also

occurred in Anand during March, October and December.

Maximum temperatures during most weeks in Anand were around normal, except for some heatwaves during summer and monsoon. Minimum temperatures were consistently higher throughout the year compared to normal, indicating a prevalence of higher night temperatures across all seasons. Very high morning relative humidity was observed during most weeks, excluding May and the first fortnight of June. Afternoon relative humidity followed a similar pattern, though with less deviation from the normal. Sunshine hours and evaporation rates were generally close to normal for most of the year, except during heavy and unseasonal rainfall events.



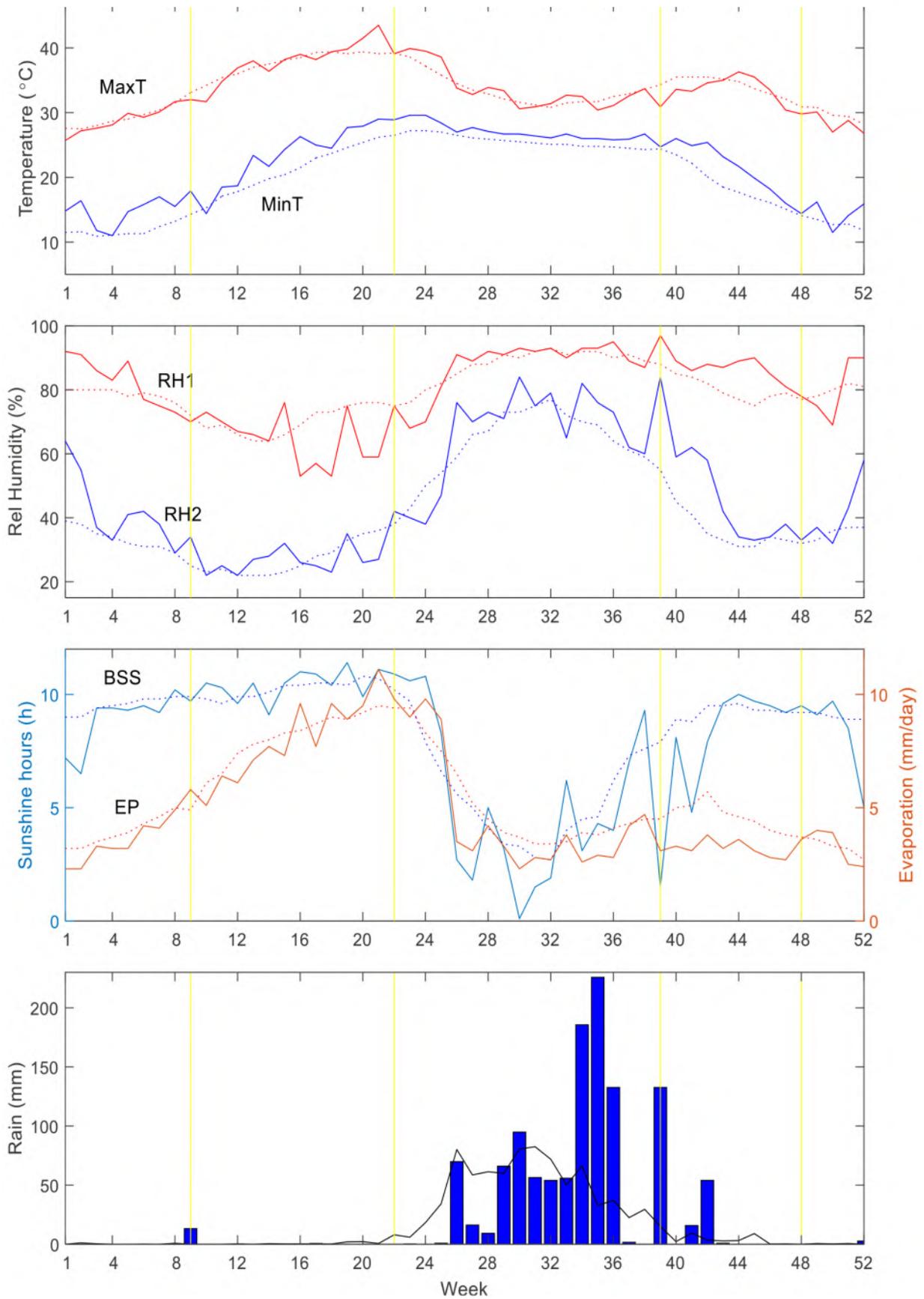


Fig. 1: Normal and actual weekly weather parameters prevailed at Anand during year 2024





Table 1: Daily rainfall distribution during June-September 2024 at Anand

Date	June	July	August	September
1	0.0	12.0	0.0	0.0
2	0.0	8.6	14.8	0.0
3	0.0	1.6	2.2	68.6
4	0.0	1.4	29.8	12.8
5	0.0	1.0	0.8	1.8
6	0.0	3.0	21.2	48.0
7	0.0	0.6	2.6	1.4
8	0.0	0.0	1.8	0.0
9	0.2	0.8	8.8	0.0
10	0.0	6.4	4.6	0.0
11	0.0	0.2	11.2	0.0
12	0.0	0.0	3.8	0.0
13	0.0	0.8	55.2	0.0
14	0.0	0.0	0.4	0.0
15	0.0	1.0	0.0	1.6
16	0.0	60.8	0.2	0.0
17	0.0	3.8	0.0	0.0
18	0.0	0.0	0.0	0.0
19	0.0	0.2	0.0	0.0
20	0.0	0.0	0.0	0.0
21	0.0	0.0	1.6	0.0
22	0.0	1.2	0.0	0.0
23	0.4	1.2	3.2	0.0
24	0.4	4.0	18.2	22.6
25	12.4	15.4	35.0	23.2
26	1.2	0.0	127.6	3.8
27	2.2	48.6	180.0	7.0
28	0.0	0.0	35.8	55.2
29	11.4	25.6	4.4	10.4
30	30.6	6.8	3.6	10.4
31	-	2.0	2.0	-
Total	58.8	207.0	568.8	266.8
Rainy Days	3	11	17	10

RESEARCH COUNCIL

The Research Council (mentioned below) has been constituted as per the provision of Gujarat Agricultural Universities Act-5 of 2004, under section-26 and Common Statutes for Agricultural Universities of Gujarat 2011, Section -26, S-27.

Sr. No.	Name, Designation & Address	
1.	Dr. K. B. Kathiria, Vice Chancellor, AAU, Anand	
		Chairman
2.	Deans of the Faculties	
	i	Member
		Dr. Y. M. Shukla, Dean, Faculty of Agriculture, AAU, Anand (From 1-4-2024 to 31-10-2024)
		Dr. N. I. Shah, Dean, Faculty of Agriculture, AAU, Anand (From 1-11-2024 onwards)





Sr. No.	Name, Designation & Address		
	ii	Dr. Samit Dutta, Dean, Faculty of Food Processing Tech. & Bio-energy, AAU, Anand	Member
	iii	Dr. R. Subbaiah, Dean, Faculty of Agril. Engineering and Technology AAU, Godhra	Member
	iv	Dr. Y. R. Ghodasara, Dean, Faculty of Agril. Information Technology, AAU, Anand	Member
	v	Dr. R. S. Pundir, Dean, IABMI, AAU, Anand	Member
	vi	Dr. N. I. Shah, Dean, Faculty of Horticulture, AAU, Anand	Member
3.	Dr. J. K. Patel Director of Extension Education, AAU, Anand		Member
4.	The Conveners of the AGRESKO Sub-committees		
	i.	Dr. B.N.Patel, Convener of CISC and Research Scientist, PRS, AAU, Vadodara	Member
	ii.	Dr. Manoj Lunagaria, Convener of CPSC and Professor & Head, Dept. of Agril. Meteorology, BACA, AAU, Anand	Member
	iii.	Dr. J.B.Patel, Convener of SSSC and Professor and Head, Dept. of Agril. Extension Education, BACA, AAU, Anand	Member
	iv.	Dr. D.K.Vyas, Convener of FPT & BE, AET & AIT Research Sub Committee and Professor and Head, Dept. of RE, College of AET, AAU, Godhra	Member
	v.	Dr. N.M.Gohel, Convener of PPSC and Professor, Dept. of Pl. Pathology, BACA, AAU, Anand	Member
5.	Two Eminent Scientists outside the university nominated by the Vice Chancellor in consultation with Director of Research		
	i.	Dr.V. A. Solanki, (Retd. Professor & Head (Pl. Pathology), NMCA, NAU, Navsari) 62, Indiranagar Co-operative Society, Opp. Sai Mandir and Zadeshwar Police Station, Zadeshwar, Bharuch	Member
	ii.	Dr. P.G.Shah, Retd. Residue Analyst, ICAR Unit-9, AAU, Anand	Member
6.	Five Professors or their equivalent from the university nominated by the Vice Chancellor in consultation with Director of Research		
	i.	Dr. B. N. Patel, Unit officer, Pulses Research Station, AAU, Vadodara	Member
	ii.	Dr. Manoj Lunagaria, Professor and Head, Dept. of Agri. Meteorology, BACA, AAU, Anand	Member
	iii.	Dr. R.R.Gajera, Prof. & Head, Dept. of PHT, CoH, AAU, Anand	Member
	iv.	Dr. Y. A. Lad, Professor & Head, Dept. of HRD & Personnel Management, IABMI, AAU, Anand	Member
	v.	Dr. M.K.Tiwari, Assistant Professor & Head, Dept. of SWE, CAET, Godhra	Member
7.	One Progressive Farmer nominated by the Vice Chancellor in consultation with Director of Research		
	i.	Shri. Ketanbhai Punambhai Patel, Progressive farmer, At. Bhalej, Ta. Umreth, Dist. Anand	Member
8.	The Director of Agriculture/Horticulture/Animal Husbandry		Member
9.	The Associate Directors of Research (Agriculture and Animal Science)		
	i.	Dr. S. N. Shah, Associate Director of Research, (Agriculture), AAU, Anand	Members
	ii.	Dr. M. K. Jhala, Associate Director of Research (Animal Science), AAU, Anand	Member
10.	Dr. M. K. Jhala, Director of Research & Dean, PG Studies, AAU, Anand		Member Secretary





RESEARCH SUB-COMMITTEES

To evaluate the research work carried out and to finalize the technical programmes for future research, the research areas of different subjects have been sub-grouped in 5 research sub-committees, as follows.

Faculty of Agriculture/Horticulture

- 1. Crop Improvement Research Sub-Committee** : Genetics & Plant Breeding, Agri Biotechnology, Nanotechnology, Plant Physiology, Seed science and technology and Biochemistry
- 2. Crop Production Research Sub-Committee:** Agronomy, Soil Science, Horticulture, Meteorology and Agril. Microbiology
- 3. Plant Protection Research Sub-Committee:** Entomology, Plant Pathology and Nematology
- 4. Social Science Research sub-committee:** Agril. Statistics, Agril. Economics, Extension Education and International Agril. Business Management

Faculty of Food Processing Technology & Bio-Energy, Agril. Engineering and Agril. Information Technology

- 5. Food Processing Technology & Bio-Energy, Agril. Engineering and Agril. Information Technology Research Sub Committee:** Food Bio-technology, Post Harvest Technology, Food Processing Technology and Bio-Energy, Soil and Water Conservation, Farm Power Machinery, Agril. Product Processing and Renewable Energy, Agril. Information Technology

4.1 NEW CROP VARIETIES, FARM IMPLEMENTS AND VARIOUS AGRICULTURAL AND ALLIED SCIENCE TECHNOLOGIES DEVELOPED

Research Sub-Committees met and finalized different research programmes considering the feedback received from farmers through extension machinery, educational needs and as per the requirement. As a result of sincere efforts of the scientists, the research accomplishments made are given below.

Name of the sub-committee	Date of Meeting	No. of recommendations finalized	
		For farming community	For scientific community
Crop Improvement	11-12 March, 2024		
• Genetics & Plant Breeding		06	01
• Basic Science		-	05
Crop Production	6-7 March, 2024		
• Cultural Practices		05	03
• Nutrient Management		07	01
• Weed Management		03	-
• Water Management		01	-
• Horticulture		09	-
Plant Protection	1-2 March, 2024		
• Entomology		01	42
• Plant Pathology and Nematology		04	07
FPTBE, Agril. Engineering & Agril. IT	26-27 February, 2024	06	07
Social Science	16-17 February, 2024	--	05
Joint AGRESCO, AAU, Anand	4 April, 2024	42	71
Combined AGRESCO of SAU's organized by NAU, Navsari.	10-17 May, 2024	42	71

The details of recommendations of AAU, Anand approved in the combined AGRESCO meeting of SAUs of Gujarat organized online by NAU, Navsari are given below.





4.1.1 RECOMMENDATIONS FOR FARMING COMMUNITY

4.1.1.1 CROP IMPROVEMENT

I CROP IMPROVEMENT

Varieties Released

1. Crop : Maize

Variety : Gujarat Maize Hybrid 5 (GMH 5: Panam Gold)



The farmers of maize growing areas of Gujarat are recommended to grow Gujarat Maize Hybrid 5 (GMH 5: Panam Gold) during *kharif* season. This hybrid gave 7094 kg/ha average kernel yield, and it was 44.7 and 3.5% higher yield than checks GAYMH 1 and Bio-605, respectively. It is medium maturing and having orange flint kernels with higher test weight (367 g). It contains 69.45% starch, 12.55% protein, 4.85% oil, 0.59% tryptophan and 2.67 % lysine in protein. This hybrid is moderately resistant against *Maydis* Leaf Blight, *Turcicum* Leaf Blight and *Fusarium* stalk rot disease.

2 Crop : Cotton

Variety : Gujarat Desi Cotton 5 (GDC 5: Anand Kanchan)



The farmers of Gujarat growing rainfed *desi* cotton are recommended to grow high yielding and long linted variety Gujarat Desi Cotton 5 (GDC 5: Anand Kanchan). This variety gave 1375 kg/ha seed cotton yield which was higher by 5.8, 20.3 and 24.8% over check varieties viz., G Cot 21, GADC 2 and GADC 4, respectively over its mean. It has recorded 34.2 per cent ginning out turn, 27.3 mm upper half mean length, 4.2 micronaire value and 26.6 g/tex tenacity in HVI mode.

3. Crop :Chilli

Variety : Gujarat Vegetable Chilli Hybrid 2 (GVCH 2: Anand Surya)



The farmers of green chilli growing area of Gujarat are recommended to grow Gujarat Vegetable Chilli Hybrid 2 (GVCH 2: Anand Surya) during *kharif-rabi* season. This hybrid gave 198.96 q/ha average green fruit yield in Gujarat which exhibited 22.64 and 52.78 *per cent* higher over the checks GAVCH 1 and GAVC 112, respectively. Fruits of this hybrid have light green colour at unripe stage and medium situation of pericarp, slightly rough texture with strong glossiness. This hybrid contains 0.160% total antioxidant activity, 0.195% capsaicin, 2.80% total soluble sugars and 0.059% flavonoid. Under natural field condition, this hybrid has less affect of chilli leaf curl disease incidence as well as fruit borer and thrips infestation comparable to the check GAVCH 1.





4. Crop : Sponge Gourd

Variety: Gujarat Sponge Gourd 3 (GSG 3: Anand Mrudula)



The farmers of Gujarat are recommended to grow sponge gourd variety Gujarat Sponge Gourd 3 (GSG 3: Anand Mrudula) during *kharif* season. This variety recorded average fruit yield 126.72 q/ha which was 33.88, 19.53 and 13.69% higher over checks GSG 1, GJSG 2 and Pusa Chikni, respectively in Gujarat. This variety has medium size fruits having dark green skin with white flesh colour. This variety contains 2.18% total soluble sugar, 9.36 mg/100gm ascorbic acid and 0.97% crude protein. This variety has comparable prevalence of CMV, powdery mildew and downy mildew disease as well as less leaf miner and fruit fly infestation as compared to the check Pusa Chikni and GJSG 2.

5. Crop :Chilli

Variety : Gujarat Vegetable Non Pungent Chilli 132 (GVNPC 132: Anand Saumya)



The farmers of green chilli growing area of Gujarat are recommended to grow chilli variety, Gujarat Vegetable Non-Pungent Chilli 132

(GVNPC 132: Anand Saumya) during *kharif-rabi* season. This variety gave 195.26 q/ha average green fruit yield in Gujarat which exhibited 69.23 per cent higher green fruit yield over the check AVNPC 131. Fruits of this variety have medium intensity of green colour, big in size and non-pungent at unripe stage with smooth texture and strong glossiness. This variety contains higher antioxidant activity (0.112%) as well as total soluble sugars (3.00%) and lower content of capsaicin (0.088%) as compared to the check AVNPC 131. This variety has lower or comparable level of chilli leaf curl disease, fruit damage by fruit borer and thrips infestation as compared to the check AVNPC 131.

6. Crop :Okra

Variety : Gujarat Okra 9 (GO 9: Anand Anamika)



The farmers of Gujarat are recommended to grow Gujarat Okra 9 (GO 9: Anand Anamika) during *kharif* and summer seasons. It recorded 137.86 q/ha average fruit yield in Gujarat which manifested 22.33, 25.84, 33.04 and 17.20 per cent higher fruit yield over the checks GAO 5, GO 6, Pusa Sawani and GAO 8, respectively in *kharif* season. It produced 111.31 q/ha average fruit yield in summer season, which was 22.31, 29.66, 34.25 and 12.48% higher than checks GAO 5, GO 6, Pusa Sawani and GAO 8, respectively. This variety has short plant stature with short internodes, long leaf blade length and broad width with deep depth of lobbing. Fruits of this variety are dark green colour, tender, smooth, medium long having acute shape of apex. This variety contains 2.715% total soluble sugars, 0.112% phenol, 0.207% antioxidant activity and 14.47 g/kg mucilage which were found comparable with





checks GAO 5, GO 6, Pusa Sawani and GAO 8. Under natural field conditions, this variety has less prevalence of yellow vein mosaic virus disease and enation leaf curl virus disease. It has lower jassids and whitefly population as well as shoot and fruit damage as compared to the checks GAO 5, GO 6, Pusa Sawani, GAO 8 and susceptible check (ELCv) AOL 23-01.

II BASIC SCIENCE ---NIL---

4.1.1.2 CROP PRODUCTION

I CULTURAL PRACTICES

1. Study the feasibility of conservation tillage in rice - wheat cropping system under middle Gujarat conditions.

The farmers of middle Gujarat Agro-climatic Zone growing wheat crop after rice harvested with combined harvester are recommended to drill wheat seed with happy seeder followed by spraying of Anubhav Bacterial Biodegradable Consortium (ABBC) @ 2 L/ha (5 x 10⁹ CFU/ml) on rice residues obtained higher wheat equivalent yield and net returns. Further, conservation tillage practices with ABBC improve the physico-chemical and biological properties of soil.



Conservation tillage +Anubhav Bacterial Biodegradable Consortium (ABBC)

2. Assessment of organically managed pigeon pea based cropping sequence

The farmers of middle Gujarat Agro-climatic Zone are recommended to grow pigeonpea in *kharif* and greengram or cowpea in summer season organically and apply 25 kg N/ha through vermicompost (approx. 1250 kg/ha) only to pigeonpea crop for getting higher yield and net return

3. Effect of spacing and phosphorus management on pigeon pea grown on heavy black soil

The farmers of middle Gujarat Agro-climatic Zone growing pigeon pea (AGT2) are recommended to treat seeds with ANUBHAV PSB and Rhizobium culture each at 5 mL/kg seed each before sowing and fertilize the crop with 5 t FYM and 25 kg P₂O₅/ha as basal and sow the crop in paired row either at the spacing of 60-120-60 cm or 60-150-60 cm for getting higher yield and net return. Besides, application of recommended dose of nitrogen (25 kg/ha) as basal.



60-120-60 cm (Paired row) + 25 kg P₂O₅/ha + PSB



60-150-60 cm (Paired row) + 25 kg P₂O₅/ha + PSB



180 x 60 cm (Farmer's practice) +50 kg P₂O₅/ha

4. Effect of spacing and nutrient management in summer black gram

The farmers of Chhotaudepur region of





middle Gujarat Agro-climatic Zone growing black gram in summer season are recommended to sow at 30 cm row spacing and apply 20:20:0 kg/ha N:P₂O₅:K₂O/ha as basal for getting higher yield and net return.



30 cm row spacing + 20:20:0 kg/ha N:P₂O₅:K₂O/ha

5. Effect of spacing, nitrogen levels and biofertilizer on yield of desi cotton variety Wagad Gaurav under rainfed condition

The farmers of North-West Agro-climatic Zone and Bhal & Coastal Agro-climatic Zone growing rainfed *desi* cotton (GADC 3) are recommended to treat the seed with bio NPK consortium (10 mL/kg) keeping sowing distance either 120 x 30 cm or 180 x 45 cm and apply 40 kg N (two equal splits at 25-30 DAS and 50-60 DAS) to get higher seed cotton yield and net return.



120 x 30 cm + 40 kg N + Bio NPK



180 x 45 cm + 40 kg N + Bio NPK

II NUTRIENT MANAGEMENT

6. Effect of nitrogen levels on yield and quality of bidi tobacco varieties under middle Gujarat conditions

The farmers of middle Gujarat Agro-climatic Zone growing bidi tobacco (GT 7) are recommended to apply 10 t FYM/ha as basal along with 180 kg N/ha in four equal splits (45 kg N as basal through Ammonium sulphate, 135 kg N applied in three equal splits through Urea at 30 days interval after transplanting) for getting higher yield and net return.



10 t FYM/ha as basal along with 180 kg N/ha

7. Effect of potassium application on the yield of Kharif maize

The farmers of middle Gujarat Agro-climatic Zone growing hybrid maize in *kharif* season are recommended for seed treatment of 5 mL KMB/kg seed and soil application of 1 L KMB/ha (in 300 L water/ha) at 30 DAS along with recommended dose of nitrogen and phosphorus (160:20 N:P₂O₅ kg/ha) for getting higher yield and net return. Application of potash in *kharif* maize did not increase the yield.



Seed treatment of 5 mL KMB/kg seed and soil application of 1 L KMB/ha



Control



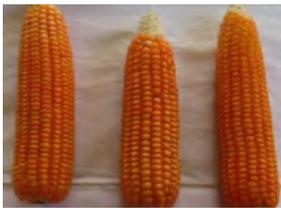


8. Effect of potassium application on the yield of Rabi maize

The farmers of middle Gujarat Agro-climatic Zone growing hybrid maize in *rabi* season are recommended for seed treatment of KMB 5 mL/kg seed and soil application@ 1 L/ha at 30 DAS along with recommended dose of nitrogen and phosphorus (150:40 N:P₂O₅ kg/ha)for getting higher yield and net return. Application of potash in *rabi* maize did not increase the yield.



Seed treatment Bio NPK 5mL/kg seed + 12.5:25:0 N:P₂O₅:K₂O kg/ha



Seed treatment of 5 mL KMB/kg seed and soil application of 1 L KMB/ha



Control

9. Integrated nutrient management for rice residual wheat crop sequence

The farmers of middle Gujarat Agro-climatic Zone growing Rice-Wheat cropping sequence are recommended to adopt any one of the following integrated nutrient management practices for getting higher yield and net return.

1. 50% RDF + 50% through castor cake i. e. 16 kg N, 12.50 kg P₂O₅ and about 900 kg castor cake/ha as basal, remaining 16 kg N/ha at tillering and 8 kg N/ha at panicle initiation stage through inorganic sources in rice.

OR

1. 75% RDF + 25% through castor cake i. e. 24 kg N, 18.75 kg P₂O₅ and about 450 kg castor cake/ha as basal, remaining 24 kg N/ha at tillering and 12 kg N/ha at panicle initiation stage through inorganic sources in rice.

10. Nutrient management in summer groundnut

The farmers of Chhotaudepur region of middle Gujarat Agro-climatic Zone growing groundnut in summer season are recommended for seed treatment with Bio NPK 5mL/kg seed along with application of 12.5:25:0 N:P₂O₅:K₂O kg/ha as a basal dose for getting higher yield and net return.

11. Nutrient management in summer sesame

The farmers of Chhotaudepur region of middle Gujarat Agroclimatic Zone growing sesame in summer season are recommended to apply 37.5:12.5:0 N:P₂O₅:K₂O kg/ha, of which 50 % N and 100 % P₂O₅ as basal, while remaining 50 % N at 30 DAS for getting higher yield and net return.



37.5:12.5:0 N:P₂O₅:K₂O kg/ha

12. Effect of soil and foliar application of multi-micronutrient mixture on growth, yield and nutrient content of drilled paddy

The farmers of Middle Gujarat Agro-climatic Zone growing drilled paddy are recommended to apply either 1.0% foliar spray (100 g/10 L water) of Government notified multi-micronutrient mixture Grade II (Fe: 6.0, Mn: 1.0, Zn: 4.0, Cu: 0.3 and B:0.5 per cent) OR 0.5% foliar spray of FeSO₄ (50 g/10 L water) at 20, 40 and 60 days after sowing along with 50 kg N /ha, of which 25 kg N per hectare and 25 kg P₂O₅/ha as basal and 25 kg N/ha at 30 days after sowing for getting higher yield and net return.

Note: 0.5% FeSO₄ solution should be neutralized with 0.25% Lime solution.





RDF + MM Grade II 1.0% foliar spray at 20, 40 and 60 DAS

III. WEED MANAGEMENT

13. Weed management in onion nursery

The farmers of Gujarat raising onion seedlings in nursery keeping the distance of 10 cm between row are recommended to adopt

any one of the following weed management practices for effective management of weeds, obtaining healthy transplantable onion seedlings and higher return.

- ◆ Propaquizafop 5% + oxyfluorfen 12% w/w EC (PM) 43.75+105 g a.i./ha (17.5 mL /10 L of water) at 10-15 DAS
- ◆ Oxyfluorfen 23.5% EC 80 g a.i./ha (6.8 mL /10 L of water) at 10-15 DAS
- ◆ Pendimethalin 30% EC 300 g a.i./ha (20 mL /10 L of water) at 1-2 DAS
- ◆ Hand weeding at 15 and 30 DAS

There was no any adverse effect of applied herbicide in onion nursery on succeeding crops (Wheat, Chickpea and Mustard).



Propaquizafop 5% + oxyfluorfen 12% w/w EC at 10-15 DAS



Oxyfluorfen 23.5% EC 80 g/ha EPOE



Pendimethalin 30% EC 300 g/ha PE



Hand weeding at 15 and 30 DAS



Weedy check

14. Weed management in onion

The farmers of Gujarat growing rabi onion by transplanting are recommended to adopt any one of the following weed management practices for effective management of weeds, obtaining higher onion bulb yield and return.

- ◆ Propaquizafop 5% + oxyfluorfen 12% w/w EC (PM) 43.75 +105 g/ha (17.5 mL /10 L of water) at 25-30 DATP
- ◆ Pendimethalin 38.7% CS 580.5 g/ha (30 mL/10 L

of water) at 2-3 DBTP fb oxyfluorfen 23.5% EC 120 g/ha (10.2 mL/10 L of water) at 25-30 DATP

- ◆ Oxyfluorfen 23.5% EC 120 g/ha (10.2 mL /10 L of water) at 2-3 DATP fb propaquizafop 5% + oxyfluorfen 12% w/w EC (PM) 43.75 +105 (17.5 mL / 10 L of water) g/ha at 25-30 DATP
- ◆ Twice hand weeding at 20 and 40 DATP.

There was no adverse effect of applied herbicide in rabi onion on succeeding (pearl millet, maize and greengram) crops.





Propaquizafop 5% + oxyfluorfen 12% w/w EC at 25-30 DATP



Pendimethalin 38.7% CS at 2-3 DBTP fb oxyfluorfen 23.5% EC at 25-30 DATP



Oxyfluorfen 23.5% EC at 2-3 DATP fb propaquizafop 5% + oxyfluorfen 12% w/w EC at 25-30 DATP



Twice hand weeding at 20 and 40 DATP



Weedy check

15. Weed management in direct dry seeded rice under irrigated condition

The farmers of middle Gujarat Agro-climatic Zone growing direct seeded rice (DSR) are recommended to adopt any one of the following weed management practices for effective management of weeds, obtaining higher grain yield and return.

- ◆ Triafamone 20% + ethoxysulfuron 10% WG (premix) 44.0+22.5 g a.i./ha (4.5 g/10 L of water) at 10-15 DAS fb HW at 30 DAS

- ◆ Penoxsulam 1.02% + cyhalofop-butyl 5.1% OD (premix) 120 g a.i./ha (40 mL /10 L of water) at 10-15 DAS fb HW at 30 DAS
- ◆ Pretilachlor 30% + pyrazosulfuron-ethyl 0.75% WG (premix) 600+15 g a.i./ha (40 g/10 L of water) at 1-2 days after sowing fb HW at 30 DAS
- ◆ Hand weeding carried out at 20 and 40 DAS

There was no adverse effect of applied herbicide in direct dry seeded rice (DSR) on succeeding (wheat, chickpea and mustard) crops.



Triafamone 20% + ethoxysulfuron 10% WG (premix) at 10-15 DAS fb HW at 30 DAS



Penoxsulam 1.02% + cyhalofop-butyl 5.1% OD (premix) at 10-15 DAS fb HW at 30 DAS



Pretilachlor 30% + pyrazosulfuron-ethyl 0.75% WG (premix) at 1-2 days after sowing fb HW at 30 DAS





Hand weeding at 20 and 40 DAS



Weedy check

IV. WATER MANAGEMENT

16. Response of sweet corn hybrid to irrigation in sandy loam soil

The farmers of middle Gujarat Agro-climatic Zone growing hybrid sweet corn in *rabi* season are recommended to irrigate the crop at sowing and at three critical stages i.e. knee-high stage (35 DAS), tasseling stage (55 DAS) and grain formation stage (65 DAS) for getting higher green cob yield and net return.

IV HORTICULTURE

17. Effect of integrated nutrient management on growth and yield of potato (*Solanum tuberosum* L.)

The farmers of middle Gujarat Agro-climatic Zone growing potato are recommended to apply 25% RDN through vermicompost (approximately 5 t/ha) or FYM (approximately 9 t/ha) and 75 % RDF (165-82-165 NPK kg/ha) from chemical fertilizers. From this N, P and K each 82 kg/ha should be applied as basal and remaining 83 kg N and K should be applied at 30 DAP for getting higher yield and net return.

18. Effect of seed treatment on germination of foxtail palm (*Wodyetiabifurcata*)

Nurserymen are recommended to grow foxtail palm seeds in walk in tunnel by soaking the seed for two days (48 hrs.) in 1000 ppm solution of gibberellic acid (1000 mg / 1 L water) and sowing in plastic bag for early germination and higher survival.

Seed soaking in 1000 mg GA₃/1 L water for 2 days

19. Effect of seed treatment on germination of fishtail palm (*Caryota urens* L.)

Nurserymen are recommended to grow fishtail palm seeds in naturally ventilated poly house with seed soaking for one day (24 hrs.) in 1000 ppm solution of gibberellic acid (1000 mg / 1 L water) for early germination, higher survival and quality planting material.

Seed soaking in 1000 mg GA₃/1 L water for 1 days



20. Effect of IBA and growing conditions on growth of cutting in mogra (*Jasminum sambac*) var. Local.

Nurserymen are recommended to propagate mogra in winter season (December) by semi-hardwood cuttings after dipping the basal end cuttings in IBA 1500 mg/L water for 5 minutes and placing them after planting in Naturally Ventilated Poly house to get early growth and higher survival percentage.



Dipping the basal end cuttings in IBA 1500 mg/L water them after planting in Naturally Ventilated Poly house

21. Effect of growing condition, rootstock height and poly-tube cap on softwood grafting in jamun

Nursery men are recommended that, 15 months old root stock are grafted with soft wood grafting method from the height of 20 cm during the first week of November and kept in naturally ventilated polyhouse for getting higher grafted plant height and growth as well as more number of surviving grafts.



Soft wood grafting from the height of 20 cm and kept in NVPH

22. Effect of secondary nutrients on yield and quality of banana

The The farmers of middle Gujarat Agro climatic Zone growing banana cv. Grand Naine are recommended to apply Bentonite Sulphur (90 %) 10 g/plant at planting and CaNO₃ 12 g/ plant in equal split at 4th, 5th and 6th month after planting as a soil application along with RDF for getting higher yield and net return.

Note : 10 kg FYM/plant applied at planting and 40 % NK and 100 % P applied at 30 and 60 DAP in ring equal split and remaining 60 % NK applied at 90,105,120, 135, 150, 165 DAP equal split as fertigation.



Bentonite Sulphur (90 %) 10 g/plant + CaNO₃ 12 g/plant

23. Effect of micronutrients on yield and quality of banana

The farmers of middle Gujarat Agro climatic Zone growing banana cv. Grand Naine are recommended to apply multimicronutrient government notified Grade-V @ 40 g/plant or Banana shakti @ 20 g/plant each at second and fourth month after planting as a soil application along with RDF for getting higher yield and net return.

Note: 10 kg FYM/plant applied at planting and 40 % NK and 100 % P to be applied at 30 and 60 DAP in ring equal split and remaining 60 % NK applied at 90,105,120, 135, 150, 165 DAP equal split as fertigation.





Multimicronutrient Grade V @ 40 g/plant



Banana shakti @ 20 g/plant

24. Integrated nutrient management in brinjal (*Solanum melongena* L.)

The farmers of middle Gujarat Agro-climatic Zone growing brinjal are recommended to dip seedling root for 15 minutes before transplanting in liquid Bio NPK consortium (5 mL/L water) and fertilized with 80-40-40 NPK kg/ha (20 kg N, 40 kg P₂O₅ and 40 kg K₂O/ha as basal and remaining 60 kg N/ha applied in three equal split at 30 days interval after transplanting) and soil drenching with Bio NPK (500 L water/1 L Bio NPK/ha) at 40 and 70 DATP.



80 % RDF + seedling dip with Bio NPK + soil drenching with Bio NPK at 40 and 70 DATP

25. Integrated nutrient management in chilli (*Capsicum annum* L.)

The farmers of middle Gujarat agro-climatic zone growing chilli are recommended to dip seedling root in liquid Bio NPK consortium (5 mL/L water) for 15 minutes before transplanting

and 100-40-40 NPK kg/ha (25 kg N, 40 kg P₂O₅ and 40 kg K₂O/ha as basal and remaining 75 kg N/ha applied in three equal split at 30 days interval after transplanting) and soil drenching with Bio NPK (1 L Bio NPK in 500 L water / ha) at 40 and 70 DATP for getting higher yield and net return.



80 % RDF + seedling dip with Bio NPK + soil drenching with Bio NPK at 40 and 70 DATP

4.1.1.3 PLANT PROTECTION

I ENTOMOLOGY

1. Effectiveness of fruit bagging on Rose-Ringed Parakeet *Psittaculakrameri* (Scopoli) damage in guava

The farmers of Gujarat having guava orchard are recommended to bag fruits before maturity with butter paper bag (20 × 24 cm) to reduce the damage caused by rose ringed parakeet.





II PLANT PATHOLOGY AND NEMATOLOGY

2. Evaluation of organic materials against root-knot nematodes in tomato

Farmers growing tomato in middle Gujarat are recommended to apply Agniastra 800 mL in 10 L of water and then dip the seedling roots for six hours. Thereafter, drench 500 mL Agniastra solution per plant at the time of transplanting and at 15, 30 and 45 days after transplanting for effective management of root-knot nematodes. The method for preparation of Agniastra is mentioned below:

Ingredients	Required Quantity
Cow urine (<i>desi</i>)	20 L
Neem leaves paste	5 kg
Garlic paste	500 g
Green chillies paste	500 g
Tobacco dust	1 kg

- Mix all the ingredients together in vessel and boil it 4-5 times continuously at medium flame and keep it for 48 hrs. Filter this by cloth and then use it



Root deep treatment in Agniastra @ 800 mL / 10 L water



Untreated check

3. Eco-friendly management of *Meloidogyne* spp. infecting tomato in nursery tomato

Farmers raising tomato nursery in Gujarat are recommended for soil application of neem cake powder @ 200 g/m² area at 15 days prior to seeding in nursery for the effective management of root-knot nematodes and thereby increase in number of transplantable seedlings.



Neem cake @ 2 t/ha



Control

4. Bio-efficacy of fungicidal schedule for management of damping-off in *bidi* tobacco nursery

- Drench ready-mix fungicide metalaxyl 8% + mancozeb 64%, 30 g/200 L water/100 m² two days before seeding in nursery with rose cane

- Drench Bordeaux mixture (0.6 %, copper sulphate 1.2 kg and lime 1.2 kg dissolved separately in water and make final volume 200 L), drench it in 100 m² with rose cane at the appearance of disease
- Drench ready-mix fungicide metalaxyl 8% +





mancozeb 64%, 30 g/200 L water/100 m² in nursery with rose cane again if the disease reappears

- Spray drench of azoxystrobin 23 SC, 50 mL/50 L water/100 m² with knapsack sprayer again, if the disease reappears

OR

- Spray drench of azoxystrobin 23 SC, 50 mL/50 L water/100 m² two days before seeding in nursery with knapsack sprayer

- Drench Bordeaux mixture (0.6 %, copper sulphate 1.2 kg and lime 1.2 kg dissolved separately in water and make final volume 200 L), drench it in 100 m² with rose cane at the appearance of disease

- Again, if disease reappear, spray drench of azoxystrobin 23 SC, 50 mL/50 L water/100 m² with knapsack sprayer

- Drench ready-mix fungicide metalaxyl 8 % + mancozeb 64 %, 30 g/200 L water/100 m² in nursery with rose cane again, if the disease reappears

Recommendation for PHI as per CIB guidelines

Year	Crop	Pest	Pesticide with formulation	Dosage				Application schedule	Waiting period/ PHI (days)
				g. a.i./ ha	Quantity of formulation/ ha	Conc (%)	Dilution in water (10 L)		
2024	Bidi Tobacco (Nursery)	Damping-off	Metalaxyl 8 % + mancozeb 64	3.6 kg	5.0 kg	0.015	1.5 g	As per treatment detail	--
			Azoxystrobin 23 SC	230	1 L	0.023	10 mL		

5. Rotational study with resistant bidi tobacco to manage root-knot disease in bidi tobacco

Bidi tobacco farmers whose fields are infested with root-knot nematode are recommended to grow Anand Bidi Tobacco 10 (root-knot resistant) by replacing susceptible variety for four years continuously for effective management of root-knot nematode.

4.1.1.4 FPT & BE, AGRICULTURAL ENGINEERING AND AGRICULTURAL INFORMATION TECHNOLOGY

I FOOD PROCESSING TECHNOLOGY

1. Process development for nutritive extruded snack utilizing amaranth grain

Entrepreneurs and food processors interested in manufacturing nutritious extruded snacks are recommended to adopt technology developed by AAU, Anand. The technology involves blending of coarse flours of amaranth (40%), rice (30%) and maize (30%) followed by

moisture conditioning (15.3%). This flour blend is passed through the extruder (Screw speed: 287.50 rpm, Barrel temperature: 118°C) and extruded snack is further dried for 1 h at 60 °C in a hot air oven. This product contains 12.2% protein, 4.8% fat, 4.9 mg/100 g iron, 65.0 mg/100 g calcium, 3.9 mg/100 g zinc and 469.3 mg/100 g phosphorus. The product remains acceptable up to 90 days at ambient temperature. The cost of 100 g pack is approximately Rs. 6.42.



Optimized amaranth based extruded snack





2. Standardization of thermal processing of drumstick pod pulp and its utilization in food products

Part-I

Entrepreneurs and food processors interested in processing of drumstick pod are recommended to adopt the technology developed by Anand Agricultural University, Anand. In this technology, matured drumstick pods are washed, cut and blanched followed by pulp extraction using brush type pulper, filling in retortable pouches, exhausting, sealing of pouches and thermal processing at F0 5 min in retort. This processed and packaged product of drumstick is acceptable up to 12 months at ambient condition.

Part-II

Entrepreneurs and food processors interested in production of drumstick chutney from thermally processed drumstick pod pulp are recommended to adopt the technology developed by Anand Agricultural University, Anand. The micronutrients rich drumstick chutney can be prepared with 62 % drumstick pod pulp and with other ingredients. The chutney is thermally processed, filled hot and packed in metalized laminated polyester pouches. The shelf life of drumstick chutney is 137 days at 7°C and 83 days at 30°C.

3. Development of sorghum based multigrain biscuits

Bakery industrialists and entrepreneurs interested in production of multigrain gluten free biscuits are recommended to use the technology developed by Anand Agricultural University, Anand. The technology involves formulation of 65% sorghum flour, 20 % soybean flour and 15 % oat flour. This product contains 11.69 % protein and 2.57 % fiber. The biscuits packed in polypropylene and aluminum laminates have remained acceptable upto 60

days at 30±1°C temperature.



Sorghum multigrain Biscuits

(65% sorghum flour + 15% oat flour + 20% soybean flour)

4. Development of pizza base incorporating millets

The technology developed by Anand Agricultural University is recommended to the bakery industrialists and entrepreneurs interested in manufacturing millet pizza base. Millet pizza base prepared by 40% Maida, 35% Sorghum flour, 15% Moraiyo flour and 10% Kodo flour shows 2.06g (68.90%) and 2.19g (106.80%) more ash and fiber per100g, respectively as compared to normal pizza base. Antioxidant activity of millet pizza base found slightly higher as compared to control. Millet pizza base can be stored up to 4 days in polyethylene pouches at ambient temperature.



Millet pizza base





II AGRICULTURAL ENGINEERING

5. Development of perforated storage bin for garlic

Manufacturers, restaurant owners and retailers are recommended to use storage bin (805 mm height x 470 mm diameter) having perforations of 6 mm developed at Anand Agricultural University to store 50 kg garlic bulbs with 21.99% losses for at least 6 months.

6. Experimental investigations of energy yield from Bifacial Silicon Solar photovoltaic (PV) module and its comparison with mono-facial solar photovoltaic module

Solar panel installers and consumers interested to adopt solar photovoltaic systems are suggested to implement the recommendations based on the field experiments carried out by the Anand Agricultural University, Anand. Bifacial solar photovoltaic modules, if installed at a height of two feet facing towards the south direction tilted at an angle equal to the latitude with reflective (white) surface having a minimum albedo between 0.25-0.30 of the site, produces 18-20 percent more energy compared to the mono facial solar photovoltaic modules and also produces 15-16 percent and 19-20 percent more energy higher compared to the one feet and five feet Bifacial solar photovoltaic installations respectively.

III AGRICULTURAL INFORMATION TECHNOLOGY

---NIL---

4.1.1. 5 SOCIAL SCIENCE

-----NIL----

4.1.2 RECOMMENDATIONS FOR SCIENTIFIC COMMUNITY

4.1.2.1 CROP IMPROVEMENT

I. CROP IMPROVEMENT

1. Effect of number of fruit retention and days to fruit maturity on seed yield and quality parameters of okra

For seed production of Gujarat Anand Okra 8 (Anand Komal), the fruit should be harvested at 60-65 days after fruit formation with 20 number of fruits retention per plant for higher germination (as per Indian minimum seed certification standards) and higher seed yield under the middle Gujarat condition.

II BASIC SCIENCE

2. QTL mapping for wilt resistance in castor

In castor, SSR markers namely, P-1014 and P-1015 located on LG1 found linked with Fusarium wilt resistance and can be used for the development of resistant varieties through backcross breeding and to screen the germplasm at seedlings stage.

Details of linked SSR markers identified for wilt resistance in castor

Sr. No	Marker name	Primer sequence (5'-3')	Product size (bp)	
			RP (48-1)	SP (JI-35)
1	P-1014	F:GGCCATTTTGGCATTAAAC R:TCCTTCAGATGGAAGGTTCA	250	215
2	P-1015	F:TTACCGATACCAAAAAGCAGG R:CAAGCTTTCATTCCCACACA	230	190

RP: Resistant product; SP: Susceptible product





3. Technology Development for Micropropagation of Indian sandalwood (*Santalum album* L.)

The standardized protocol for micropropagation of Indian sandalwood (*Santalum album* L.) involves utilization of nodal segment explants collected during the month of June from 20 years mature tree for establishment on WPM basal media. Multiple shoot induction was successfully achieved on WPM medium supplemented with 10 mg l^{-1} IBA with highest number of multiple shoots (6.67 ± 0.67). For defoliation control, WPM with 10 mg l^{-1} IBA and 185 mg l^{-1} Magnesium sulphate was found best for defoliation control with highest number of leaves per explants (25.33 ± 1.99). The rooting of the in vitro shoots can be achieved on MS medium supplemented with 0.5 mg l^{-1} NAA and 0.5 mg l^{-1} IBA with highest rooting percentage (40 %). In vitro hardening with dipping in liquid MS basal medium for twelve months reported to produce maximum shoots (3.00 ± 0.00) with highest average length of $10.00 \pm 0.57 \text{ cm}$ and highest number of roots (2.00 ± 0.00), while in case of ex vitro hardening, these plantlets showed highest percentages of survival (93%) with least mortality (7 %). After successful hardening, the plantlets were transferred to soil bags in polyhouse with host Brazilian joyweed (*Alternanthera brasiliana*) for further growth and development.

4. Technology development for mass multiplication using tissue culture and sex determination using molecular markers in papaya

Micropropagation protocol for mass multiplication of Arka Prabhat variety of Papaya (*Carica papaya* L.) has been standardized utilizing nodal segment explants collected from field grown 6 months old plant during July month for establishment on MS medium supplemented with 0.2 mg l^{-1} NAA and 0.1 mg l^{-1} Kinetin. Multiple shoot induction for large scale multiplication of cultures was successfully achieved on MS + 0.5 mg l^{-1} BAP + 0.01 mg l^{-1} IAA + 200 mg l^{-1} casein hydrolysate

with highest number of shoot per explants of 2.05 and highest multiplication rate (1.62). The best rooting of the in vitro shoots has been achieved on MS + 4 mg l^{-1} IAA + 4 mg l^{-1} IBA + 200 mg l^{-1} casein hydrolysate with number of roots, length of roots, number of secondary roots, days to root induction and rooting (%) recorded were 5.67, 8.50 cm, 13.67, 30 days and 80%, respectively. DNA based marker, CPSM-90 (Forward primer: 5'TAGCCTAGTG TACCATCTCT3', Reverse primer: 5'GAATTCATAGAATATGCATCC 3') produced 390 bp male specific bands in seed raised population of 'Madhubindu' and 'Arka Prabhat' varieties whereas; CPSM-31 (Forward primer: 5' TCCTCTCAATCCTAATAGCCTA 3', Reverse primer: 5'GAGTTAGTTGCTCTCAAGGAGT 3') produced 550 bp male specific bands in seed raised population of 'Madhubindu' variety. These markers can be used for the identification of male/hermaphrodite plants in seed raised population of 'Madhubindu' and 'Arka Prabhat' varieties.

5. Physiological and molecular responses of zinc (bulk and nano) particles on seedling growth of wheat (*Triticum aestivum* L.)

Zinc oxide nanoparticles were synthesized from the analytical grade zinc sulphate by pH mediated size reduction method as recommended earlier for synthesis of nanoparticles having desirable hydrodynamic size (72.76 nm), pdi (0.33) and zeta potential (-24mV). Seed priming by zinc using conventional and nano form on wheat found beneficial to seedling at physiological and biochemical level with promotory effect on seed germination, seedling growth, vigour and chlorophyll and protein content and lower IAA oxidase activity at a very lower concentration of 50 ppm. For gene expression study, eleven reference genes were evaluated for their stability in nano and normal treated seedling at two leaf stage. Among these reference genes, 18s rRNA endogenous gene was found to be highest stable transcript in all the treated seedlings. Further, IAA biosynthesis related gene study reveals that at 50 ppm, highest





expression of YUCCA9 (flavin mono oxygenase like protein) and ARF (auxin response factor) and AUX1 (auxin cellular influx carrier) confirms the biochemical and physiological observation and results into normal growth of seedlings under exposed nano particles concentration.

6. Greensynthesis of iron oxide nanoparticles and evaluation of its nano-priming activity in rice

Green synthesis of iron oxide nanoparticles using neem leaves extract and ferric chloride has been developed by Anand Agricultural University. Analytical grade ferric chloride was found to be more efficient as source of iron compared to sulphate for the iron oxide nanoparticle synthesis. Among the two approaches, room temperature mediated synthesis was found to be more effective in conversion of normal to nanoparticle. However, larger particle synthesis needs to be reduced using high energy 60 amplitude frequency source i.e. sonication for 10 mins at 60% amplitude frequency was found optimum for overcoming particle aggregation. The size of iron nanoparticles synthesized at room temperature for 12 hrs followed by sonication, recorded least 12.79 nm size with 0.24 PDI. Seed priming with iron oxide nanoparticle proves to be beneficial for the enhancement of rice physiological parameters like germination (%), vigour index I and II etc along with better

biochemical response compared to bulk treatment.

4.1.2.2 CROP PRODUCTION

1. Effect of Nano NP fertilizer on growth, yield and quality of summer fodder maize

Application of either 100% RDF (80 kg N: 40 kg P₂O₅: 40 kg K₂O/ha) OR 25% RDF + 250 ppm Nano NP foliar spray at 30 DAS OR 10 t FYM/ha + 1% Urea phosphate foliar spray at 30 and 45 DAS OR 25% RDF + 100 ppm Nano NP foliar spray at 30 and 45 DAS OR 10 t FYM/ha + 100 ppm Nano NP foliar spray at 30 and 45 DAS produced higher green fodder yield and quality of fodder maize cv. African Tall in summer season.

2. Evaluation and inter-comparison of CROPGRO, InfoCrop- and WOFOST models for cotton growth and yield simulation

CROPGRO-Cotton, Info Crop-cotton and WOFOST-cotton models calibrated and validated for two cultivars of cotton (GTHH 49 and G.Cot H8) and for three planting time (D₁: 1 June, D₂: 11 June and D₃: 21 June) in middle Gujarat agro-climatic zone. The validations of the models reveal that performance of CROPGRO-Cotton model is relatively accurate for phenology and productivity of cotton. The genetic coefficients of CROPGRO-Cotton model as follow for crop management and yield simulations of cotton crop.

Parameter	Description of parameter coefficients controlling development aspects	GTHH49	G. Cot H 8
CSDL	Critical Short Day Length below which reproductive development processes with no day length effect (for short day plants) (hours)	25	25
PPSEN	Slope of the relative response of development to photoperiod with time (positive for short day plants) (1/hours)	0.01	0.01
EM-FL	Time between plant emergence and flower appearance (R1)	49	51
FL-SH	Time between first flower and first pod (R3) (photothermal days)	13	10
FI-SD	Time between first flower and first seed (R5) (photothermal days)	19	22
SD-PM	Time between first seed (R5) and physiological maturity(R7) (photothermal days)	74	70
FL-LF	Time between first flower (R1) and end of leaf expansion (photothermal days)	75	74





LFMAX	Maximum Leaf photosynthesis rate at 30 °C, 350 vpm CO ₂ and high light (mgCO ₂ /m ² _S)	2.20	2.60
SLAVR	Specific leaf area of cultivar under standard growth condition (cm ² /g)	259	258
SIZLF	Maximum size of full leaf (three leaflets) (cm ²)	380.2	388.5
XFRT	Maximum fraction of daily growth that is partitioned to seed + shell	1.25	1.80
WTPSD	Maximum weight per seed (g)	0.290	0.300
SFDUR	Seed filling duration for pod cohort at standard growth conditions (photothermal days)	43	41
SDPDV	Average seed per pod under standard growing conditions (#/ pod)	31	28.65
PODUR	Time required for cultivar to reach final pod load under optimal conditions (photothermal days)	10	9

3. Moisture stress detection in rabi sunflower (*Helianthus annuus* L.) based on canopy-air temperature differential measurements

In infrared thermometry based crop water stress detection, Crop Water Satisfactory Index (CWSI) value 0.28 ± 0.047 should be used as threshold. The higher CWSI than the threshold indicates the crop is in water stress. The upper baseline $(T_c - T_a)_{ul}$ for CWSI calculation is 5.1°C . The lower baseline $(T_c - T_a)_{ll}$ calculated from canopy– air temperature difference and vapor pressure deficit using lower base line equation.

$$(T_c - T_a)_{ll} = -1.558VPD - 0.8101$$

Where,

$(T_c - T_a)_{ll}$ = Lower baseline

VPD = Vapour Pressure Deficit (kPa)

4. Screening of different rice varieties for methane emission

Early and mid-early maturing rice varieties showed lower methane emission as compared to late and mid late rice varieties. Irrespective of varietal traits, higher methane emission was observed during reproductive phase. Methane emission pattern was found to have positive correlation with morpho-physiological traits of the crop and root zone soil properties. Methane emission was found significantly correlated with root length, shoot length, root and shoot biomass and number of aerenchyma.

4.1.2.3 PLANT PROTECTION

I ENTOMOLOGY

1. Evaluation of various insecticides as lure toxicants for fruit fly in mango orchard

To prepare fruit fly traps using plywood block (5 x 5 x 1.2 cm) impregnating with ethyl alcohol: methyl eugenol: malathion 50 EC (6:4:1) (v/v) or ethyl alcohol: methyl eugenol: spinosad 45 SC (6:4:1) (v/v) and install at 30 meter apart to each other one feet below the crop canopy at flowering stage to trap maximum male fruit flies in mango orchard.

2. Evaluation of various insecticides as lure toxicants for fruit fly in bitter gourd

To prepare fruit fly traps using plywood block (5 x 5 x 1.2 cm) impregnated with in Ethyl alcohol: Cue-lure: Malathion 50 EC (6:4:1) (v/v) and install at 30 meter apart to each other one feet below pendal at flowering stage to trap maximum male fruit flies in bittergourd orchard (Cucurbitaceae vegetables) in case of unavailability of malathion 50 EC, use spinetoram 11.7 SC for trap preparation.

3. Evaluation of eco-friendly inputs against sucking pests of potato

Three sprays of either tobacco decoction 2 per cent (200 g/ 10 L water) or neem oil 0.5 per cent (50 mL/ 10 L water) first at initiation of pests and subsequent two sprays after 15 days interval found effective for management of sucking pests viz., jassid, whitefly and thrips in potato.





Note: Add sticker (10 mL/ 10 L water) in neem oil 0.5%.

Methods of Preparation of Tobacco decoction 2% (Cold method):

Take 200g of tobacco dust and soak in one litre of water, filter it with muslin cloth next day and add 9 L of water to make it 2%.

4. Impact of date of sowing on incidence of fall armyworm, *Spodoptera frugiperda* infesting sweet corn

Fall armyworm infestation remained low in sweet corn crop sown during 2nd to 4th week of June and recorded higher green cob as well as fodder yield.

5. Evaluation of insecticides as a seed treatment against thrips in summer green gram

Treat the seeds with imidacloprid 48% FS (8 mL/kg seeds) and sow after drying for 12 hr found effective for the management of sucking pests viz., thrips, whitefly and jassid up to one month after sowing in summer green gram.

Note: For the treatment of 1 kg seeds, prepare 25 ml solution by adding required quantity of water.

6. Management of fall armyworm, *Spodoptera frugiperda* (J. E. Smith) in fodder maize

Treat the seeds with acephate 50% + imidacloprid 1.80 SP, 6 g/kg seed using equal quantity of water before 12 hours of sowing and apply two foliar sprays of *Bacillus thuringiensis* var. *kurstaki* 1 % WG (1×10^8 cfu/g), 20 g/10 litre water, first spray at 25 and second spray at 35 days after sowing found effective for the management of fall armyworm.

Note: The treated seeds should be dried under shade condition before sowing.

7. Evaluation of bio-pesticides against invasive thrips, *Thrips parvispinus* (Karny) infesting chilli

Application of neem cake @ 250 kg/ha during soil preparation followed by sequential one

spray of following bio-pesticides at 7 days interval starting from initiation of pests found effective against black thrips *T. parvispinus* in chilli.

1. *Pseudomonas fluorescens* 1% WP (2×10^8 cfu/g) 40 g /10 litre of water
2. *Metarhizium anisopliae* 1.15% WP (1×10^9 cfu/g) 40 g /10 litre of water
3. Aqueous *bidi* tobacco dust extract 2 %, 200 g/ 10 litre of water
4. *Pseudomonas fluorescens* 1% WP (2×10^8 cfu/g) 40 g /10 litre of water
5. *Metarhizium anisopliae* 1.15% WP (1×10^9 cfu/g) 40 g /10 litre of water
6. Aqueous *bidi* tobacco dust extract 2 %, 200 g/ 10 litre of water

OR

Application of neem cake @ 250 kg/ha during soil preparation followed by sequential one spray of following bio-pesticides at 7 days interval starting from initiation of pests found effective against black thrips *Thripsparvispinus* in chilli.

1. Neem Seed Kernel Extract 5%, 500 g/ 10 litre of water
2. Azadirachtin 10000 ppm, 0.003%, 30 ml/ 10 litre of water
3. Aqueous *bidi* tobacco dust extract 2 %, 200 g/ 10 litre of water
4. Neem Seed Kernel Extract 5%, 500 g/ 10 litre of water
5. Azadirachtin 10000 ppm, 0.003%, 30 ml/ 10 litre of water
6. Aqueous *bidi* tobacco dust extract 2 %, 200 g/ 10 litre of water
8. Evaluation of different modules against invasive thrips, *Thrips parvispinus* (Karny) in chilli

For effective management of *T. parvispinus* in chilli adopt following module,





1. Root dipping of chilli seedlings with imidacloprid 17.8 SL 10 ml per 10 litre of water for two hours before transplanting
 2. Application of Neem cake @ 250 kg/ha at the time of transplanting and 30 days after transplanting
 3. Installation of blue sticky trap @ 75/ ha at 30 DAT
 4. Spraying of spinetoram 11.7 SC, 0.0117%, 58.50 g a.i./ha, 10 ml/ 10 litre of water at initiation of pest
 5. Spraying of *Metarhizium anisopliae* 1.15% WP (1 x 10⁸cfu/g), 50 g/ 10 litre of water after 10 days of first spray
 6. Spraying of broflanilide 300 G/L SC, 0.005%, 25.2, g a.i./ha, 1.68 ml/10 litre of water after 7 days of second spray
 7. Spraying of azadirachtin 10000 ppm, 20 ml/ 10 litre of water after 10 days of third spray
 8. Spraying of tolfenpyrad 15 EC, 0.030% 150 g a.i./ha, 20 ml/ 10 litre of water at 7 days of fourth spray
- 9. Development of low-cost production medium of bio-pesticide *Metarhizium anisopliae*, using spent larval medium of *Corcyra cephalonica***

The use of sorghum grains 100 g (33.3 %) with spent larval medium 200 g (66.7 %) of *C. cephalonica* found effective medium for the production of *Metarhizium anisopliae* AAUBC Ma1 with highest spore yield.

The formulation *M. anisopliae* AAUBC Ma1 - 1% WP (1x10⁸cfu/g) prepared from the above growth medium, applied once on tree trunk during the month of November @ 40 or 50 g/10 L of water and three sprays on foliage at ten days interval with the initiation of pest is found effective against hoppers infesting mango.

10. Efficacy of different biocontrol agents against onion thrips, *Thrips tabaci* L.

Foliar spray of either *Metarhizium anisopliae* AAU Ma1-1% WP (50 g/10 lit. of water) or

Azadirachtin 10000 ppm (20 mL/10 L of water) for three times at ten days interval with the initiation of pest is found effective for the management of thrips, *T. tabaci* infesting onion crop.

11. Residues and persistence of fluopyram 400 g/L SC in tomato (Drip irrigation)

Following either a single application of fluopyram 400 g/L SC at 500 g a.i./ha (at 3 days after transplanting) or two applications each at 250 g a.i./ha (at 3 and 21 days after transplanting) through drip irrigation to tomato crop, the residues of fluopyram in tomato fruits respectively at 50 and 29 days after the last application were found below the CODEX MRL of 0.5 mg/kg. Therefore, the preharvest interval (PHI) of 50 days (for a single application at 500 g a.i./ha) and 29 days (for two applications each at 250 g a.i./ha) are suggested for use at the recommended dose in tomato.

12. Residues and persistence of fluopyram 400 g/L SC in pomegranate (Soil drench)

Following either a single application of fluopyram 400 g/L SC at 500 g a.i./ha (at 2 days after defoliation) or two split applications each at 250 g a.i./ha (at 2 and 45 days after defoliation) through soil drenching near root zone of pomegranate tree, the residues of fluopyram in mature pomegranate fruits respectively at 176 and 131 days after the last application were found below the LOQ value of 0.01 mg/kg. Therefore, the preharvest interval (PHI) of 176 days (for a single application at 500 g a.i./ha) and 131 days (for two split applications each at 250 g a.i./ha) are suggested for use at recommended dose in pomegranate.

13. Residues and persistence of fluoxapiprolin 30 g/L + fluopicolide 200 g/L SC in cucumber

Following three foliar applications of a combi-product fluoxapiprolin 30 g/L + fluopicolide 200 g/L SC at 18.75 + 125 g a.i./ha (at 7 days interval starting from fruit development stage) to cucumber, the residues of fluoxapiprolin and fluopicolide in cucumber fruits were found below the LOQ value of 0.01 mg/kg at





5 and 21 days after the last foliar application, respectively. Therefore, the preharvest interval (PHI) of 21 days is suggested for use at the recommended dose in cucumber.

14. Residues and persistence of fluopyram 400 g/L SC in potato (Soil drench)

Following either a single application of fluopyram 400 g/L SC at 500 g a.i./ha (at 10 days after sowing) or two applications each at 250 g a.i./ha (at 14 and 35 days after sowing) through soil drenching near root zone of potato plant, the residues of fluopyram in potato tubers respectively at 78 and 43 days after the last application were found below the CODEX MRL of 0.15 mg/kg. Therefore, the preharvest interval (PHI) of 78 days (for a single application at 500 g a.i./ha) and 43 days (for two applications each at 250 g a.i./ha) are suggested for use at the recommended dose in potato.

15. Residues and persistence of fluopyram 400 g/L SC in okra (Drip irrigation)

Following either a single application of fluopyram 400 g/L SC at 500 g a.i./ha (at 10 days after sowing) or two applications each at 250 g a.i./ha (at 10 and 24 days after sowing) through drip irrigation to okra, the residues of fluopyram in okra fruits respectively at 30 and 16 days after the last application were found below the Limit of Quantification (LOQ) value of 0.01 mg/kg. Therefore, the preharvest interval (PHI) of 30 days (for a single application at 500 g a.i./ha) and 16 days (for two applications each at 250 g a.i./ha) are suggested for use at the recommended dose in okra.

16. Residues and persistence of fluopyram 400 g/L SC in okra (Soil drenching)

Following either a single application of fluopyram 400 g/L SC at 500 g a.i./ha (at 10 days after sowing) or two applications at each 250 g a.i./ha (at 10 and 24 days after sowing) through soil drenching near root zone of okra plant, the residues of fluopyram in okra fruits respectively at 30 and 16 days after the last application were found below the LOQ value of 0.01 mg/kg. Therefore, the preharvest interval

(PHI) of 30 days (for a single application at 500 g a.i./ha) and 16 days (for two applications each at 250 g a.i./ha) are suggested for use at the recommended dose in okra.

17. Residues and persistence of isocycloseram 9.2% w/w DC in tomato

Following two foliar applications of isocycloseram 9.2% w/w DC at 60 g a.i./ha (at 10 days interval starting from the fruit development stage) to tomato, the residues of isocycloseram in tomato fruits at 15 days after the last foliar application were found below the LOQ value of 0.01 mg/kg. Therefore, the preharvest interval (PHI) of 15 days is suggested for use at the recommended dose in tomato.

18. Residues and persistence of fluopyram 250 g/L + trifloxystrobin 250 g/L SC in mango

Following three foliar applications of a combi-product fluopyram 250 g/L + trifloxystrobin 250 g/L SC at 20 + 20 g a.i./100 L water (at 10 days interval starting from 35 days before harvest of mature mango fruits) to mango trees, the residues of fluopyram and trifloxystrobin in immature mango fruits (with peel) respectively at 0-day (2 h) and 1-day were found below the CODEX MRL of 1.00 mg/kg and FSSAI MRL of 0.40 mg/kg. Likely, the respective residues in mature mango fruits (with peel) and mango pulp 15 days after the last application were also found below the CODEX MRL of 1.00 mg/kg and FSSAI MRL of 0.40 mg/kg. Therefore, the preharvest interval (PHI) of 1 day for unripe mango fruits and 15 days for mature mango fruits are suggested for use at the recommended dose in mango.

19. Residues and persistence of flonicamid 20% + fipronil 8% SC in okra

Following two foliar applications of a combi-product flonicamid 20% + fipronil 8% SC at 98.4 + 39.4 g a.i./ha (at 15 days interval starting from the fruit development stage) to okra, the residues of flonicamid and fipronil in okra fruits respectively at 7 and 20 days after the last foliar application were found below the LOQ value of 0.01 mg/kg. Therefore, the preharvest interval (PHI) of 20 days is suggested for use at the recommended dose in okra.





20. Residues and persistence of tolfenpyrad 18.75% + emamectin benzoate 0.94% w/w SC in cauliflower

Following two foliar applications of a combi-product tolfenpyrad 18.75% + emamectin benzoate 0.94% SC at 140 + 7 g a.i./ha (at 14 days interval starting from curd development stage) to cauliflower, the residues of tolfenpyrad and emamectin benzoate in cauliflower curd respectively at 15 and 7 days after the last foliar application were found below the LOQ value of 0.01 mg/kg. Therefore, the preharvest interval (PHI) of 15 days is suggested for use at the recommended dose in cauliflower.

21. Residue and persistence of tetraniliprole 480 g/L FS in maize

Following a seed treatment of tetraniliprole 480 g/L FS at 7.20 g a.i./kg of maize seed, the residues of tetraniliprole in maize leaves, immature cobs, mature grain, and stover at 30 days after sowing were found below the LOQ value of 0.01 mg/kg. Therefore, the preharvest interval (PHI) of 30 days is suggested for use at the recommended dose as a seed treatment in fodder maize.

22. Residues and persistence of isoxaflutole 225 g/L + thien carbazole-methyl 90 g/L SC in maize

Following a single application of a combi-product isoxaflutole 225 g/L + thien carbazole-methyl 90 g/L SC at 90 + 36 g a.i./ha either as pre-emergence or as early pre-emergence in fodder maize field, the residues of isoxaflutole and thien carbazole-methyl in maize leaves, immature cobs, mature grains, and stover at 30 days after sowing were found below the LOQ value of 0.01 mg/kg. Therefore, the preharvest interval (PHI) of 30 days is suggested for use at the recommended dose in fodder maize.

23. Residues and persistence of fluopyram 250 g/L + trifloxystrobin 250 g/L SC in banana

Following three foliar applications of a combi-product fluopyram 250 g/L + trifloxystrobin 250 g/L SC at 125 + 125 g a.i./ha (at 10 days interval starting from 35 days before harvest

of mature banana fruits) to banana, the residues of fluopyram and trifloxystrobin in banana fruit (mature banana fruit with peel and banana pulp) at 15 days after the last foliar application were found below the respective MRLs of CODEX 0.80 mg/kg and FSSAI 1.0 mg/kg. Therefore, the preharvest interval (PHI) of 15 days is suggested for use at the recommended dose in banana.

24. Residues and persistence of tetraniliprole 120 g/L + spirotetramat 240 g/L SC in okra

Following three foliar applications of a combi-product tetraniliprole 120 g/L + spirotetramat 240 g/L SC at 45 + 90 g a.i./ha (at 7 days interval starting from fruit development stage) to okra, the residues of tetraniliprole and spirotetramat (and its metabolite, spirotetramat-enol) in okra fruits respectively at 5 and 0 days (2 h) after the last application was found below the LOQ value of 0.01 mg/kg and CODEX MRL of 1.0 mg/kg, respectively. Therefore, the preharvest interval (PHI) of 5 days is suggested for use at the recommended dose in okra.

25. Residue and persistence of flupyradifurone 200 g/L SL in tomato

Following three foliar applications of flupyradifurone 200 g/L SL at 200 g a.i./ha (at 10 days interval starting from the fruit development stage) to tomato, the residues of flupyradifurone in tomato fruits at 0 days (2 h) after the last foliar application were found below the CODEX MRL of 1.0 mg/kg. Therefore, the preharvest interval (PHI) of 1 day is suggested for use at the recommended dose in tomato.

26. Residues and persistence of tolfenpyrad 18.75% + emamectin benzoate 0.94% w/w SC in brinjal

Following two foliar applications of a combi-product tolfenpyrad 18.75% + emamectin benzoate 0.94% SC at 140 + 7 g a.i./ha (at 14 days interval starting from fruit development stage) to brinjal, the residues of tolfenpyrad and emamectin benzoate in brinjal fruits respectively at 15 and 0 (2 h) days after the last





application were found below the LOQ value of 0.01 mg/kg and CODEX MRL of 0.02 mg/kg, respectively. Therefore, the preharvest interval (PHI) of 15 days is suggested for use at the recommended dose in brinjal.

27. Residues and persistence of pyriproxyfen sodium 12.5% + bispyribac sodium 5% SC in paddy (direct seed rice)

Following a single application of combi-product pyriproxyfen sodium 12.5% + bispyribac sodium 5% SC at 62.5 + 25.0 g a.i./ha (at 15 days after sowing) in direct seed rice field, the residues of pyriproxyfen sodium and bispyribac sodium in plant foliage at 7 days after application were found below the LOQ of 0.01 and FSSAI MRL of 0.05 mg/kg, respectively. The residues in the paddy grains, husk, and straw at 105 days after application were also found below the respective MRLs. Therefore, the preharvest interval (PHI) of 105 days is suggested for use at the recommended dose in direct-seeded paddy.

28. Residues and persistence of fluopyram 200 g/L + tebuconazole 200 g/L SC in tomato

Following three foliar applications of a combi-product fluopyram 200 g/L + tebuconazole 200 g/L SC at 100 + 100 g a.i./ha (at 10 days interval starting from fruit development stage) to tomato, the residues of fluopyram and tebuconazole in tomato fruits at 0 (2 h) days after the last application were found below the CODEX MRL 0.5 mg/kg and FSSAI MRL of 2.0 mg/kg, respectively. Therefore, the preharvest interval (PHI) of 1 day is suggested for use at the recommended dose in tomato.

29. Residue and persistence of tebuconazole 430 g/L SC in mango

Following three foliar applications of tebuconazole 430 g/L SC at 47.30 g a.i./100 L water (at 10 days interval starting from 35 days before harvest of mature fruits) to mango, the residues of tebuconazole in mature mango fruits (with peel and without peel i.e. mango pulp) at 15 days after the last foliar application were found below the FSSAI MRL

of 0.2 mg/kg. Therefore, the preharvest interval (PHI) of 15 days is suggested for to use at the recommended dose in mango.

30. Residues and persistence of fluopyram 250 g/L + trifloxystrobin 250 g/L SC in okra

Following three foliar applications of a combi-product fluopyram 250 g/l + trifloxystrobin 250 g/ SC at 150 + 150 g a.i./ha (at 10 days interval starting from fruit development stage) to okra, the residues of fluopyram and trifloxystrobin in okra fruits at 5 days after the last application were found below the LOQ value of 0.01 mg/kg. Therefore, the preharvest interval (PHI) of 5 days is suggested for use at the recommended dose in okra.

31. Residues and persistence of tebuconazole 50% + trifloxystrobin 25% WG in turmeric

Following three foliar applications of a combi-product tebuconazole 50% + trifloxystrobin 25% WG at 200 + 100 g a.i./ha (at 10 days interval starting from 50 days before harvest of fresh mature rhizomes) to turmeric, the residues of tebuconazole and trifloxystrobin in mature fresh turmeric rhizomes and dry turmeric powder at 30 days after the last application were found below the LOQ value of 0.01 mg/kg. Therefore, the pre-harvest interval (PHI) of 30 days is suggested for use at the recommended dose in turmeric.

32. Residues and persistence of fluopyram 250 g/L + trifloxystrobin 250 g/L in tomato

Following three foliar applications of a combi-product fluopyram 250 g/L + trifloxystrobin 250 g/L SC at 150 + 150 g a.i./ha (at 10 days interval starting from fruit development stage) to tomato, the residues of fluopyram and trifloxystrobin in tomato fruits at 0 days (2 h) after the last foliar application were found below the CODEX MRL of 0.5 mg/kg and FSSAI MRL of 1.0 mg/kg, respectively. Therefore, the preharvest interval (PHI) of 1 day is suggested for use at the recommended dose in tomato.

33. Residues and persistence of fluopyram 200 g/L + tebuconazole 200 g/L SC in okra





Following three foliar applications of a combi-product fluopyram 200 g/L + tebuconazole 200 g/L SC at 100 + 100 g a.i./ha (at 10 days interval starting from the fruit development stage) to okra, the residues of fluopyram and tebuconazole in okra fruits at 7 days after the last application were found below the LOQ value of 0.01 mg/kg. Therefore, the preharvest interval (PHI) of 7 days is suggested for use at the recommended dose in okra.

34. Residues and persistence of beta-cyfluthrin 90 g/L + imidacloprid 210 g/L OD in rice

Following three foliar applications of a combi-product beta-cyfluthrin 90 g/L + imidacloprid 210 g/L OD at 22.5 + 52.5 g a.i./ha (at 10 days interval starting from the panicle initiation stage) to paddy, the residues of beta-cyfluthrin and imidacloprid in dry mature whole rice grains (with husk), polished rice grains, husk and straw at 40 days after the last application were found below the LOQ value of 0.01 mg/kg and FSSAI MRL of 0.05 mg/kg, respectively. Therefore, the preharvest interval (PHI) of 40 days is suggested for use at the recommended dose in paddy.

35. Residues and persistence of fluopyram 250 g/L + trifloxystrobin 250 g/L in cucumber

Following three foliar applications of a combi-product fluopyram 250 g/L + trifloxystrobin 250 g/L SC at 150 + 150 g a.i./ha (at 10 days interval starting from the fruit development stage) to cucumber, the residues of fluopyram and trifloxystrobin in cucumber fruits at 5 days after the last application were found below the CODEX MRL of 0.50 mg/kg and LOQ value of 0.01 mg/kg, respectively. Therefore, the preharvest interval (PHI) of 5 days is suggested for use at the recommended dose in cucumber.

36. Residues and persistence study of azoxystrobin 4.8% + chlorothalonil 40% SC in pea

Following two foliar applications of a combi-product azoxystrobin 4.8% + chlorothalonil 40% SC at 100.85 + 739.15 g a.i./ha (at 10 days interval starting from the pod formation

stage) on pea, the residues of azoxystrobin and chlorothalonil in green pea at 0 day (2 hr) after the last application were found below the CODEX MRL of 20 mg/kg and LOQ value of 0.01 mg/kg, respectively. The respective residues in dry peas 30 days after the last application were also found below the CODEX MRL of 20 mg/kg and LOQ value of 0.01 mg/kg. Therefore, the preharvest intervals (PHI) of 1 days for green peas and 30 days for dry peas are suggested for use at the recommended dose in peas. The dissipation of azoxystrobin (for a recommended dose) in green pea pods and green peas appeared to be monophasic with half-lives of 3.29 and 9.29 days, respectively. Likely the dissipation of chlorothalonil (for a recommended dose) in green pea pods was also monophasic with a half-life of 3.88 days.

37. Residues and persistence study of flubendiamide 90 g/L + deltamethrin 60 g/L SC in mango

Following three foliar applications of a combi-product flubendiamide 90 g/L + deltamethrin 60 g/L SC at 4.50 + 3.00 g a.i./100 L water (at 10 days interval starting from 35 days before harvest of mature mango fruits) to mango, the residues of flubendiamide and deltamethrin in mature mango fruit (without peel i.e. mango pulp) at 15 days after the last application were found below the LOQ value of 0.01 mg/kg and FSSAI MRL of 0.01 mg/kg, respectively. Therefore, the preharvest interval (PHI) of 15 days for mature mango (without peel i.e. mango pulp) is suggested for use at the recommended dose in mango. The dissipation of flubendiamide (for a recommended dose) in immature mango fruits appeared to be monophasic with a half-life of 9.4 days.

38. Residues and persistence study of tetraniliprole 200 g/L SC in groundnut

Following three foliar applications of tetraniliprole 200 g/L SC at 50 g a.i./ha (at 10 days interval starting from the pod formation stage) to groundnut, the residues of tetraniliprole and its metabolite (BCS-CQ63359) in mature groundnut pods, dry kernels, oil, and cake at





30 days after the last application were found below the LOQ value of 0.01 mg/kg. Therefore, the preharvest interval (PHI) of 30 days for mature groundnut pods, dry kernel, oil, and cake is suggested for use at the recommended dose in groundnut. The dissipation of tetraniliprole (for a recommended dose) in groundnut leaves appeared to be monophasic with a half-life of 19.3 days.

39. Residues and persistence study of chlorantraniliprole 4.3% + abamectin 1.7% SC in watermelon

Following two foliar applications of a combi-product chlorantraniliprole 4.3% + abamectin 1.7% SC at 37.5 + 37.5 g a.i./ha (at 15 days interval starting from the fruit development stage) to watermelon, the residues of chlorantraniliprole and abamectin in watermelon fruit at 15 days after the last application were found below the LOQ value of 0.01 mg/kg. Therefore, the preharvest interval (PHI) of 15 days is suggested for use at the recommended dose in watermelon. The dissipation of chlorantraniliprole (for a recommended dose) in watermelon fruits appeared to be monophasic with a half-life of 3.79 days.

40. Impact of storage bag container, application methods and insecticide against *Callosobruchus maculatus* (Fabricius) infesting green gram during storage

Green gram seeds can be stored for 135 days by managing pulse beetle effectively by adopting following measures

- ♦ Jute bag treated by spraying or impregnation with deltamethrin 2.8 EC (0.7 mL/L water) for 10 minutes OR
- ♦ Seed treated with deltamethrin 2.8 EC (0.7 mL/L water) or spinosad 45 SC (0.04 mL/L water) or fipronil 5 SC (0.40 mL/L water) and stored in jute bag.

41. Study to find out the critical weather parameters on insect-pests of rice at Nawagam

In *kharif* season (end of July to August)

transplanted rice, stem borer, leaf folder and white backed plant hopper population has congenial condition due to low minimum temperature (°C) and high sunshine hours. The overall peak infestation of stem borer, leaf folder occurs during 45th SMW, while maximum population of WBPH occur during 41st SMW.

42. Efficacy of different insecticides against pod borer complex of pigeon pea

Two sprays of chlorantraniliprole 8.80% + thiamethoxam 17.5% SC, 0.025%, 150 g a.i./ha (9.50 mL/ 10 L of water) first at flowering and second at pod setting stage was found effective for management of pod borer, *Heliocoverpa armigera* Hubner (Hardwick), blue butterfly, *Lampidesboeticus* and plume moth, *Exelastis atomosam* walsing hamin festing pigeonpea.

Two sprays either chlorantraniliprole 8.80% + thiamethoxam 17.5% SC, 0.025%, 150 g a.i./ha (9.50 mL/ 10 L of water) or emamectin benzoate 5% + lufenuron 40% WG, 0.005%, 27 g a.i./ha (1 g/ 10 litre of water) first at flowering and second at pod setting stage was found effective against pod fly, *Melanagromyza obtusa* (Malloch) infesting pigeonpea.

II PLANT PATHOLOGY AND NEMATOLOGY

43. Screening of potato varieties against foliar diseases

Among the 23 varieties screened, Kufri Lima was found resistant against early blight disease of potato whereas, Kufri Ganga and Kufri Arun were found resistant against late blight disease in potato.

44. Evaluation of nematicides against *Meloidogyne* spp. in cucumber

The application of fluopyram 400 g/L SC, 34.48% SC, 0.625 L/ha as soil drenching with 200 ml solution/ pit at 4 days before sowing reduced root-knot nematode population and root knot index with higher fruit yield of cucumber without any phytotoxicity.





45. Eco-friendly management of *Meloidogyne incognita* infecting cucumber under protected cultivation

Soil application of FYM enriched *Bacillus amyloliquefaciens* strain No. IIHR Ba 2 (2×10^8 cfu/g), 1 kg/1000 m² before sowing and 45 DAS in soil is effective for management of root-knot nematodes and with higher fruit yield of cucumber under polyhouse.

46. Field Bio-efficacy of ready-mix fungicides for management of powdery mildew in fenugreek

Two sprays of tebuconazole 10% + sulphur 65% WG at 0.187% (25 g /10 lit of water), first at initiation of powdery mildew and second at 15 days after first spray against powdery mildew of fenugreek.

47. Bio-efficacy of different bioagents against early blight of potato

The application of bioagents viz., *Trichoderma harzianum* (AAUBC-Th1, 2×10^6 cfu/g) 1% WP and *Pseudomonas fluorescens* (NBAIR PfDWD, 2×10^8 cfu/g) 1% WP through any of the following methods is effective for the management of early blight disease of potato.

1. Soil application of vermicompost enriched with bioagents (1.25 kg of each bioagent/250 kg vermicompost/ha) before transplanting, seedling root dip (5g of each bioagent/L of water) for 30 min just before transplanting and two foliar sprays (2.5g of each bioagent/L of water), first spray starting with the appearance of the disease and second at 10 days after first spray.
2. Soil application of vermicompost enriched with bioagent (2.5 kg of *P.fluorescens*/250 kg vermicompost/ha) before transplanting, seedling root dip (10g of *P.fluorescens*/L of water) for 30 min just before transplanting and two foliar sprays (5 g of *P.fluorescens*/L of water), first spray starting with the appearance of the disease and second at 10 days after first spray.

Note:

- For the preparation of vermicompost enriched with bioagents, mix the bioagents with vermicompost and keep for 10 days under shade.
- For seed treatment, mix the bioagents with equal quantity of plain talc powder for uniform treatment of tubers

48. Bio-efficacy of ready-mix fungicides against purple blotch of onion

Two foliar sprays of kresoxim-methyl 15% + chlorothalonil 56% WG, 0.177% (25 g per 10 L of water) mixed with sticker 0.1% (10 mL per 10 L of water), first at the appearance of disease and second spray at 10 days after first spray are found effective in managing purple blotch in onion.

49. Screening of maize genotypes for their resistance against *Turcicum (Exserohilumturcicum)* leaf blight of maize

Among 46 different maize inbreds screened, GWH-1230, I-07-66-2-2, GWC-1210, IGPHC-1203, and HKI-287-1 are resistant against *Turcicum* leaf blight (*Exserohilumturcicum*) of maize.

4.1.2.4 FPTBE, AGRICULTURAL ENGINEERING AND AIT

I FOOD PROCESSING TECHNOLOGY AND BIO ENERGY

1. Modification and performance evaluation of heat pump assisted dryer (HPAD) for effective heat transfer

Modified Heat Pump Assisted Dryer (HPAD) increased the temperature by 24.72% and reduced relative humidity by 15.59% in no load condition within dryer cavity. After modifications, temperature and velocity profile became uniform throughout the dryer cavity (870 x 530 x 870 mm) with maximum temperature of 50.05 °C and average velocity of 1.03 m/s. The modified drying chamber achieved a time saving of 2 hours and 27 minutes compared to the unmodified dryer for complete drying of fenugreek leaves.





2. Evaluation of decontamination efficacy of ozone on selected microorganisms

For non-thermal decontamination of strawberries and cherry tomatoes, treatment with aqueous ozone at a concentration of 3 ppm for 15 minutes decontaminates *Staphylococcus aureus* ATCC 25923 as well as *Escherichia coli* O157:H7 population by up to 6 logs.

3. Boric acid detection in wheat flour using “Tears of the wine” phenomenon

Boric acid adulteration in wheat flour can be detected using “Tears of Wine” phenomenon based method. This method can detect minimum level of 0.4% boric acid adulteration in wheat flour.

II AGRICULTURAL ENGINEERING

4. Development of location specific synthetic hyetographs for Middle Gujarat.

To mitigate the necessity of employing distinct sets of rainfall intensities for each drainage area or watershed, a set of synthetic rainfall distributions (hyetographs) has been developed based on study of empirical data of middle Gujarat Anand Agricultural University. These distributions can be an effective method for analyzing the hydrologic response of watersheds to rainfall events. It is recommended to scientists, hydrologists and decision-makers to utilize the developed hyetographs (synthetic rainfall distributions) AAU-6 h, AAU-12 h, and AAU-24 h for the districts of middle Gujarat to estimate runoff characteristics and design effective water management strategies for watersheds.

III AGRICULTURAL INFORMATION TECHNOLOGY

5. Classification of soil fertility for Anand district of Gujarat using Machine Learning techniques

The researchers and scientists are recommended to use a tree-based “Random Forest” Machine Learning algorithm for the classification of soil fertility using soil parameters viz., pH, EC, OC, OM, N, P, K, Zn, Fe, Cu, and Mn for the Anand District of Gujarat.

6. Estimating evaporation using artificial intelligence technique

The researchers and scientists are recommended to use Bagging Random Forest machine learning regression model developed by Anand Agricultural University, Anand for better prediction of weekly pan evaporation (mm) based on temperature °C ($\max T$ & $\min T$), bright sunshine hours (hr), wind velocity (km hr^{-1}) and relative humidity (%) data for Anand district.

7. Brassicaceae family ontology development

The scientific community is advised to develop information systems based on Fertilizer application ontology for cabbage, cauliflower and mustard crops of *Brassicaceae* family developed by Anand Agricultural University, Anand and even extend it further.

4.1.2.5 SOCIAL SCIENCE

1. Evaluation and development of yardstick of CV % for Vegetable crops experiments

The yard stick of CV% for accepting the results of the vegetable crops experiment is recommended as 16.72, i.e. 17 per cent for yield character.

2. Evaluation and development of yardstick of CV% for forage crops experiments

The yard stick of CV% for accepting the results of the forage crops experiment is recommended as 13.50, i.e. 14 per cent for yield character.

3. Detection of late blight and early blight diseases of potato using deep learning

It is recommended that the custom Convolutional Neural Network (CNN) architecture developed for detection of late blight and early blight diseases of potato can be utilized for disease identification based on its proven high accuracy rate of 97%, along with its computational efficiency, with reduced number of parameters relative to established models like VGG 16 and AlexNet.





4. Development and standardization of a scale to measure attitude of youth towards Agri- startup programmes

The scale is recommended for those researchers who want to measure the attitude of youth towards Agri startup programmes.

A. Final statements for scale to measure attitude of youth towards Agri startup programmes

Sr. No.	Statement	SA	A	UD	DA	SDA
1	Agri-startup initiative helps in addressing India's unemployment problems. (+) ભારતમાં બેરોજગારીના પ્રશ્નનું નિરાકરણ કરવામાં એગ્રી સ્ટાર્ટઅપ કાર્યક્રમ મદદરૂપ થશે. (+)	5	4	3	2	1
2	It is complicated to obtain financial aid through Agri-startup programmes. (-) એગ્રી સ્ટાર્ટઅપ કાર્યક્રમ માટે નાણાકીય સહાય મેળવવી જટિલ છે. (-)	1	2	3	4	5
3	Agri-startup programmes are helpful to give a contribution to the community by developing a successful business. (+) એગ્રી સ્ટાર્ટઅપ કાર્યક્રમો સફળ વ્યાપાર/ધંધાના વિકાસ દ્વારા સમાજને મદદરૂપ થાય છે. (+)	5	4	3	2	1
4	Agri-startup programmes help to achieve a high standard of living. (+) લોકોના જીવનધોરણ ઊંચા લાવવામાં એગ્રી સ્ટાર્ટઅપ કાર્યક્રમો મદદરૂપ થાય છે. (+)	5	4	3	2	1
5	Agri-startup programmes help in building self-reliance among youth. (+) એગ્રીસ્ટાર્ટઅપકાર્યક્રમોયુવાનોનેસ્વનિર્ભરબનાવવામાંમદદરૂપથાયછે. (+)	5	4	3	2	1
6	Agri-startup programmes promote versatility in the business. (+) એગ્રી સ્ટાર્ટઅપ કાર્યક્રમો વ્યાપાર/ધંધાના વૈશ્વિકરણને પ્રોત્સાહન આપે છે. (+)	5	4	3	2	1
7	Agri-startup programmes face a lot of problems due to a lack of market access. (-) એગ્રી સ્ટાર્ટઅપ કાર્યક્રમો ચલાવવામાં બજાર વ્યવસ્થાના અભાવને લીધે ઘણા પ્રશ્નો જોવા મળે છે. (-)	1	2	3	4	5
8	Starting an Agri-start up is not a practical approach for all the youth. (-) બધા જ યુવાનો માટે એગ્રી સ્ટાર્ટઅપ કાર્યક્રમ શરૂ કરવો એ વ્યાવહારિક રીતે પ્રેક્ટીકલી (અનુકૂળ અભિગમ નથી. (-)	1	2	3	4	5

SA-Strongly Agree, A - Agree, UD - Undecided, DA - Disagree, SDA -Strongly Disagree





5. Development of a scale to measure attitude of the trainees towards online training programmes

The scale is recommended for those researchers who want to measure the attitude of the trainees towards online training programmes.

A. Final statements for scale to measure attitude of the trainees towards online training programmes.

Sr. No.	Statement	SA	A	UD	DA	SDA
1	Online training is best alternative in situation like Covid (+) Covid-19 જેવી પરિસ્થિતિમાં ઓનલાઇન તાલીમ એ ઉત્તમ વિકલ્પ છે (+).	5	4	3	2	1
2	Online training saves resources (+) ઓનલાઇન તાલીમ, તાલીમ માટેના સ્ત્રોતની બચત કરે છે.	5	4	3	2	1
3	It is most convenient to me as I can turn anywhere with Internet access and electricity (+) ઓનલાઇન તાલીમ મારા માટે સૌથી અનુકૂળ છે, જેમાં હું ઇન્ટરનેટ અને વિજળીની ઉપલબ્ધતાથી ગમે ત્યાંથી તાલીમમાં ભાગ લઈ શકું છું.	5	4	3	2	1
4	Online training increases workload (-) ઓનલાઇન તાલીમ કામનું ભારણ વધારે છે. (-)	1	2	3	4	5
5	I prefer online training as it is hassle free (+) હું ઓનલાઇન તાલીમને પ્રાધાન્ય આપું છું કારણ કે પ્રમાણમાં સરળ છે. (+)	5	4	3	2	1
6	It is difficult to connect with other participants in online training (-) ઓનલાઇન તાલીમમાં અન્ય સહભાગીઓ સાથે જોડાવું મુશ્કેલ છે. (-)	1	2	3	4	5
7	Trainees are less responsive in online training class (-) ઓનલાઇન તાલીમ વર્ગમાં તાલીમાર્થીઓ ઓછા પ્રતિભાવ આપે છે. (-)	1	2	3	4	5
8	Skill training is impossible through online training (-) કૌશલ્યચુક્ત તાલીમ ઓનલાઇન માધ્યમ દ્વારા અશક્ય છે. (-)	1	2	3	4	5
9	Online training lacks practical learning (-) ઓનલાઇન તાલીમમાં પ્રાયોગિક શિક્ષણનો અભાવ છે.	1	2	3	4	5

SA-Strongly Agree, A - Agree, UD - Undecided, DA - Disagree, SDA -Strongly Disagree

4.2 AGRICULTURAL CROPS

4.2.1 CEREALS

4.2.1.1 Rice

Crop Improvement

- Rice is the predominant cereal crop of central Gujarat. A large number of varieties have been developed by the Main Rice Research Station, Nawagam, Gujarat. Presently, the centre is working for the development of new varieties/hybrids in rice. In addition, various breeding activities like development of fresh crosses,

handling of segregating generations, screening of germplasm and different categories of varietal trials are regularly conducted at the station.

- A total of 53 different paddy trials (State, AICRP, Summer Rice and others agencies) all the trials were successfully conducted and coordinated, total 1367 genotypes were evaluated during *kharif-2024*.
- In Crop Production department a total of 17 experiments of AICRP and state were successfully conducted.





- ◆ In Crop Protection department, 35 experiments (State, AICRP, IIRR and NRRRI) were successfully conducted by Plant Pathology and 15 experiments (State trials as well as AICRP) were conducted by the Entomology departments.
- ◆ During *Kharif-2024* and *Summer-2024-25*, a total of 2972 plant progenies of different generations were evaluated from which 2833 IPS and among the progenies 335 bulk were selected for Nawagam in crop improvement department.

State Transplanted Trials

During *Kharif-2024*, 17 transplanted trials were conducted at Nawagam, Dabhoi, Navsari and Vyara centers of Middle Gujarat.

AICRP Trials

During *Kharif-2024*, 19 AICRP trials at Nawagam and Dabhoi centres were conducted.

State Drilled Rice Trials

A total of 05 trials at Derol, Dabhoi and Thasra were successfully undertaken during *Kharif-2024*.

Rice Trials: (ARS, Derol)

- ◆ In LSVT (Early), total 10 genotypes with three checks were evaluated. The genotype DDR 20-1 was found promising.
- ◆ In SSVT (Early), total 21 entries including three checks were tested. The entries DDR 20238, DDR 20243, NVSR-4299, NVSR-4306 and NVSR-4218 were found promising.

Rice Trials: (ARS, Dabhoi)

At Dabhoi, following experiments on transplanted paddy were conducted under state and AICRP trials.

State Trials

- ◆ In LSVT-E-CO trial, the genotypes NVRS-1306, NVRS-1318 and NVRS-1200 were found promising.
- ◆ In LSVT-E-M trial, the genotypes NVSR -908, NWGR -18083 and NVSR -3626 were found promising.

- ◆ In LSVT- E- F, the genotypes NVSR -1361, NWGR -20063, NWGR -17074 genotypes were found promising.
- ◆ In LSVT-ML- F, the genotypes NVSR – 933, NVSR -1056, NVSR -1222 genotypes were found promising.
- ◆ In LSVT-ML-M the genotypes NVSR -2980, NWGR -19193, NVSR -3798 genotypes were found promising.
- ◆ In LSVT-ML-C the genotypes NVSR- –3777, NVSR-1065, NVSR -3672 genotypes were found promising.
- ◆ In LSVT-B-F the genotypes IET-31004, IET-31027, NVSR-3661 genotypes were found promising.
- ◆ In SSVT-E-F the genotypes NWGR-20004, NVSR-1623, NWGR- 21046 genotypes were found promising.
- ◆ In SSVT-ML-F the genotypes NVSR-4158, NVSR-4532, NVSR-4171 genotypes were found promising.
- ◆ In SSVT-E-CO the genotypes NWGR-21005, NWGR-21053, NVSR-1635 genotypes were found promising.
- ◆ In SSVT-ML-F the genotypes NWGR-21155, NWGR-20017, NWGR-20047 genotypes were found promising.
- ◆ In SSVT- ML-M & LS the genotypes NVSR-4250, TNR-14, NVSR-1614 genotypes were found promising.
- ◆ In SSVT- ML-M & LS the genotypes NVSR-4450, NVSR-4465, NVSR-1621 genotypes were found promising.
- ◆ In SSVT- B-F the genotypes NWGR-22270, NVSR- 1702, NVSR-1550 genotypes were found promising.

AICRP trials

- ◆ In IHRT-E trial, transplanted paddy genotypes 2809, 2811, 2805 were found promising.
- ◆ In IHRT-ME transplanted paddy genotypes 2907, 2909, 2920 were found promising.





- ◆ In IHRT-M transplanted paddy genotypes 3006, 3034, 3024 were found promising.
- ◆ In IHRT-MS transplanted paddy genotypes 3105, 3110, 3106 were found promising.

Crop Production

- ◆ Apart from Main Rice Research Station, Nawagam, two other centres viz., Dabhoi and Thasra also conducted research experiments on transplanted and drilled paddy.
- ◆ During the reporting period, total 17 experiments (AICRP 13 + State 3) were conducted on different agronomical aspects.

AICRP trials

- ◆ Nutrient response trials on selected AVT-2 E rice cultures under high and low input management
- ◆ Nutrient response trials on selected AVT-2 IME rice cultures under high and low input management
- ◆ Nutrient response trials on selected AVT-2 IM rice cultures under high and low input management
- ◆ Nutrient response trials on selected AVT-2 Aerobic rice cultures under high and low input management
- ◆ Nutrient response trials on selected AVT-2 MS rice cultures under high and low input management
- ◆ Nutrient response trials on selected AVT-2 NIL rice cultures under high and low input management
- ◆ Identification of suitable sowing method of Dry DSR for higher productivity in different zones
- ◆ Evaluation of varieties for their suitability & enhancement of the productivity in dry DSR (un-puddle soil)
- ◆ Identification of suitable sowing method of wet DSR for higher productivity in different zones
- ◆ Evaluation of varieties for their suitability & enhancement of the productivity in dry DSR (puddle soil)
- ◆ Long term trial on weed dynamics in rice based cropping systems under different establishment methods
- ◆ Evaluation of drones for spraying of agrochemicals (herbicides, insecticides & fungicides) in rice pest management
- ◆ Collaborative: Agronomy, Entomology and

Pathology

- ◆ Analysis of long-term meteorological data of the trial (Temp. and rainfall) for identifying the reasons for yield reduction

State trials

- ◆ Effect of soil conditioners on growth, yield and nutrient content in rice-wheat cropping sequence
- ◆ Effect of seedling age on yield of summer rice
- ◆ Optimizing method of sowing and seed rate of bold grain rice under DSR (direct seeded rice) method
- ◆ Optimizing method of sowing and seed rate of fine grain rice under DSR (direct seeded rice) method

Plant protection

Following trials were conducted under plant protection discipline

Entomology

State trials

- ◆ Efficacy of ready-mix insecticides and fungicides against major insect-pests and blast in rice
- ◆ Screening of various cultures/hybrids/genotypes from advance breeding material for resistance/tolerance to major insect-pests of rice

AICRP trials

- ◆ Pest survey reports (PSR)
- ◆ Plant hopper screening trial (PHS)
- ◆ Stem borer screening Trial (SBST)
- ◆ Multiple resistance screening trial (MRST)
- ◆ Leaf folder screening trial (LFST)
- ◆ National screening nursery -I (IIRR NSN-1)
- ◆ National screening nursery -I (NRRRI NSN-I)
- ◆ National hybrid screening nursery (NHSN)
- ◆ Prophylactic management of Plant hopper in rice (PMRH)
- ◆ Evaluation of drones for spraying of agrochemicals (Herbicides, insecticides,





fungicides) in rice pest management

- ◆ Influence of crop establishment methods of pest incidence (IEMP)
- ◆ Population dynamics of insect pests and natural enemies in rice ecosystem (PDPNE)
- ◆ Light trap collection of insect-pests in rice ecosystem (LT)

Plant Pathology

State trials

- ◆ Effect of fungicidal seed treatment on leaf blast and brown spot in rice nursery
- ◆ Screening of advanced breeding material against important diseases of rice
- ◆ Evaluation of entries under breeding experiments against important diseases of rice
- ◆ Screening of promising blast resistant entries under South Gujarat conditions in AES-I atWaghai
- ◆ Survey of summer paddy in middle Gujarat for diseases
- ◆ Maintenance/ multiplication of multiple resistant / tolerant genotypes
- ◆ Screening of private hybrids against important diseases of rice

AICRP trials

- ◆ Screening for leaf blast resistance (NSN-1, NSN-2, NHSN, DSN)
- ◆ Screening for neck blast resistance (NSN-1, NSN-2, NHSN, DSN)
- ◆ Screening for sheath rot resistance (NSN-1, NSN-2, NHSN, DSN)
- ◆ Screening for grain discolouration resistance (NSN-1, NSN-2, NHSN, DSN)
- ◆ Screening for bacterial leaf blight resistance (NSN-1, NSN-2, NHSN, DSN)
- ◆ Field monitoring of virulence of *Pyricularia oryzae*
- ◆ Field monitoring of virulence of *Xanthomonas oryzaepv. oryzae*
- ◆ Disease observation nursery

- ◆ Evaluation of new fungicides against location specific diseases
- ◆ Production oriented survey
 - Screening data for 330 RILs against blast (IIRR, Hyderabad)
 - False Smut Special Screening trial from NRRI, Cuttack

4.2.1.2 Maize

Crop Improvement

Rabi 2023-24

Testing of experimental hybrids/varieties

Testing of hybrid/varieties developed by different centers of AICRP on Maize and Private sectors across the country. The trials and its allocation was decided by Director (Maize), Indian Institute of Maize Research, (ICAR), Ludhiana. Total 10 trials were conducted successfully to test 146 hybrids of different maturity groups and speciality corn and results were submitted on online automation system.

Station (Location specific) programme

Research programme was conducted for testing station developed hybrids. Trials were taken at Godhra, Dahod of AAU and Bhiloda, Seed Technology Department, S.K.Nagar and Agricultural Research Station, Aseda (SDAU) for evaluation of single cross hybrids of Field corn and Pop corn. Total 05 trials were conducted successfully at five locations to test 57 single cross hybrids in Field corn and Pop corn.

Total 487 inbred lines in yellow maize were maintained, multiplied in winter maize nursery programme and these lines were used directly for developing single cross hybrids. In white maize, 111 inbred lines were maintained, multiplied in winter maize nursery programme and used for hybrid seed production

Total 71 single cross hybrids were developed in field corn yellow and white maize, 23 hybrids in sweet corn and 23 hybrids in popcorn were





developed to evaluate in *kharif* and *rabi* season multi location trials.

ICAR- CIMMYT drought trials:

An international project in collaboration with IIMR, Maize and CIMMYT, India was started at this center. Under this project 07 drought trials were conducted to test 347 hybrids of different maturity groups. The trials were conducted under enforced drought condition by restriction of irrigation at certain level of GDD value *i.e* 550 °C and again irrigation was resumed at 1000 °C GDD value.

Summer 2024

ICAR- CIMMYT Heat stress trials

Under the ICAR- CIMMYT project for identifying Heat Stress tolerant hybrids, the same set of 347 hybrids of rabi trials were planted in summer-2024 season for screening against the high temperature and extreme heat stress. The sowing of the trials was planned in March season, so it may come in flowering in mid-May. It would be a high injurious effect of high temperature on flowering and it would reduce the yield drastically.

Kharif 2024

Testing of experimental hybrids/varieties

Testing of hybrids developed by AICRP on maize centers and private sectors across the country as decided in 67th Annual Maize Workshop meeting held at Hyderabad, during May, 2024. Total 16 trials were conducted successfully comprising of Field corn and specialty corn. Total 367 hybrids were evaluated.

Station (Location specific) programme

Research programme was conducted to test station developed new hybrids. Trials were taken at Godhra, Dahod, Derol, Jabugam, Khedbrahma, Bhiloda, Deesa and Ladol center for multilocation evaluation. Total 14 trials were conducted successfully at different locations of Anand Agricultural University, Anand and SDAU including MMRS, Godhra to test 58 hybrids.

Crop production

At Department of Agronomy

Following Experiments were under taken during the year

- ♦ **Assessment of crop management module in Maize + Soybean - Wheat + Chickpea cropping system Kharif season, year: 202**

(Maize + Soybean)

- ♦ Result of maize + soybean cropping system data analyze and statistically result found non-significant. The grain yield of maize found higher in module –III (conventional farming) whereas, the seed yield of soybean found higher in module I (Low-cost natural farming, treatment: Seed treatment with *Bijamrut, GhanJivamrut* 250 kg/ha + FYM 250 kg/ha soil application at sowing + *Jivamrut* with irrigation at sowing and then after monthly interval. *Achhadan*: Wheat straw: 5 t/ha).

- ♦ **Response of nutrient management on sweet corn- amaranthus -greengram cropping sequence under organic farming**

Green cob weight at harvest, green cob yield and stover yield (kg/ha) of sweet corn was found significant and recorded higher under treatment T₂ (FYM 15 t/ha with mulching). While, number of cobs per plot was found non-significant during the course of investigation.

- ♦ **Comparative study of nano nitrogen and nano urea on rabi maize**

This trial was conducted at three different centres.

At Anand, Seed and stover yield of soybean were affected significantly due to different varieties. Variety JS 20-34 (1262 kg/ha) and JS 335 (1260 kg/ha) produced significantly higher seed yield than NRC 37 (1069 kg/ha). However, the difference between JS 20-34 and JS 335 was not statistically significant. The varieties did not show the significant





difference in haulm yield; however, NRC 37 produced the numerically higher haulm yield (1594 kg/ha).

Plant Protection

The research work related to plant protection were carried out with following objective

- ◆ Survey and surveillance for maize pest and diseases in different localities of maize growing district of Gujarat state.
- ◆ To diagnose, all appropriate problems in area of maize diseases.
- ◆ To screen germplasm lines against maize pest and disease for development of disease resistant varieties in rainfed *kharif* and *rabi* season.
- ◆ To identify/develop source of pest and disease resistant against maize diseases for specialty corn varieties, sweet corn, baby corn, popcorn and high corn oil.
- ◆ To develop pest and disease management strategies for maize cultivars in *kharif* and *rabi* season.
- ◆ To disseminate and popularize generated technologies through extension education and through deliver various lectures on scientific farming methods and technologies.

Following research experiments were under taken during the year

Plant Pathology Screening of maize genotypes for their resistance against turcicum leaf blight (*Exserohilum turcicum*) of maize

- ◆ Survey and surveillance of maize pests and diseases was conducted during *kharif* 2024. As a significant outcome, a maize germplasm line, I-07-66-2-2, exhibiting resistance to Turcicum Leaf Blight (TLB) caused by *Exserohilum turcicum* was recommended by IGIC Committee at Anand.

Entomology

- ◆ During *kharif* 2024, the Agricultural

Entomology discipline conducted experiments focusing on the evaluation of different management modules against fall armyworm (*Spodoptera frugiperda*) infesting maize, as well as studying the impact of intercropping on its incidence.

- ◆ During *kharif* 2024, the Agricultural Entomology discipline conducted experiments focusing on the evaluation of different management modules against fall armyworm (*Spodoptera frugiperda*) infesting maize, as well as studying the impact of intercropping on its incidence. Simultaneously, under the Plant Pathology discipline, an experiment on the evaluation of various fungicides against Turcicum Leaf Blight (TLB) disease in maize was successfully conducted during *Rabi* 2024–25.

4.2.1.3 Wheat

Crop Improvement

Triticum aestivum L.

RRS, Anand

Rabi 2024-25

- ◆ In *rabi* 2024, Total 85 germplasm were maintained including 03 new collections.
- ◆ Large Scale Trial - Feed Barley, there was five genotypes including three check varieties were tested. None of the genotypes showed significantly as well as numerically superiority over the best check variety BH 946.
- ◆ Under Small Scale Trial (SST-TS-IR-AST), total of 27 genotypes including four checks were evaluated. The genotype VA 2022-12 had significant grain yield over best check variety GW 322. However, four genotypes i.e. VA 2022-19, J 2022-39, VA 2022-18 and VA 2022-15 have numerically higher grain yield than best check variety GW 322.
- ◆ In Large Scale Trial (LST-HF-ES-AST), total six genotypes including three check varieties were tested. None of the genotype noted significant over the check and GW 543 showed numerically higher grain yield over the best check variety GW 322.





- ◆ In Large Scale Trial (LST-TS-IR-AST), total 12 genotypes including four check varieties were evaluated. The genotype GW 555 exhibited significantly higher grain yield over the best check variety GW 322. Whereas, GW 554 and GW 561 depicted numerically higher yield than the best check variety GW 322.
- ◆ In Large Scale Trial (LST-TS-IR-DRM), total seven genotypes were evaluated with four check varieties. None of the genotype gave higher grain yield over the best check variety HI 8737.
- ◆ Under Large Scale Trial (LST-TS-IR-DRM), total seven genotypes were evaluated with four check varieties. None of the genotype recorded higher grain yield over the best check variety HI 8737.
- ◆ In Large Scale Trial (LST-LS-IR-AST, total ten genotypes including 5 check varieties were tested. The genotype GW 556 noted significantly higher grain yield over the best check variety HD 2932. Whereas, LOK 83 exhibited numerically higher yield with 4.7% increase over the best check HD 2932.

Triticum durum L.

- ◆ At ARS Dhandhuka, 1032 Germplasm lines of durum wheat were maintained. 67 new crosses were attempted for development of high yielding varieties suitable under rainfed conditions. Out of 1403 progenies, 1365 IPS were selected.
- ◆ At ARS Dhandhuka, total 10 different trials viz. AVT (RI) A+D, NIVT-5B (RI) A+D, LST(RF)d, LST(RI)d, SST(RF)d, SST(RI)d, PET(RF)d, PET (RI)d, LST-RI-TS-A and SST-RI-TS-A on Durum Wheat were allotted and conducted successfully.
- ◆ At ARS, Arnej, 4 experiments viz., LST (RF) d, LST (RI) d, SST (RF) d and SST (RI) d were conducted successfully.

Crop production

At Department of Agronomy

Following Experiments were under taken during the year

- ◆ Assessment of crop management module in

Maize + Soybean - Wheat + Chickpea cropping system

Wheat + Chickpea

Result of wheat + chickpea cropping system data analyze and statistically result in wheat crop found non-significant whereas, in chickpea crop found significant. The grain yield of wheat found higher in module-I (Low-cost Natural Farming, treatment: Seed treatment with *Bijamrut*, *GhanJivamrut* 250 kg/ha + FYM 250 kg/ha soil application at sowing + *Jivamrut* with irrigation at sowing and then after monthly interval. *Achhadan*: Wheat straw: 5 t/ha) and chickpea seed yield (1355 kg/ha) found higher in module -II (Organic farming, treatment: 50% Vermicompost and 50% FYM Bio fertilizers as seed treatment, as well as *Panchagavyathree* sprays, first sprays at 21 DAS and remaining two sprays at 21 days interval after first spray).

◆ Response of irrigated wheat to potassium application

None of the treatment induce significant variation among different growth and yield of the wheat crop. Soil parameters after harvest of the crop also unaffected by different treatments

◆ Effect of nano nitrogen on irrigated wheat

The results indicated that treatment T₂ (RDF :120-60-0 NPK kg/ha + water spray) recorded significantly higher grain yield of wheat but it was at par with treatment T₁ (RDF: 120-60-0 NPK kg/ha), T₅ (75 % N *fb* foliar spray of urea 4%) and T₉ (75 % N *fb* foliar spray of nano urea 4 mL/litre) at Anand location.

◆ Comparative study of nano nitrogen and nano urea on irrigated wheat

None of the treatment induces significant variation among different growth and yield of the wheat crop. Soil parameters after harvest of the crop is also unaffected by different treatments.





4.2.1.4 Bajra

Crop Improvement

RRS, Anand

Summer 2024

- Under small-scale hybrid trial, thirty bajra hybrids including five hybrid checks viz., GHB 538, GHB 1129, GHB 1231, 86M84, and Dhanshakti were evaluated. None of the hybrids surpassed the best check hybrid, 86M84. All tested hybrids yielded significantly than GHB 538. The top three hybrids were GHB 1411, GHB 1412, and GHB 1400.
- In LSHT trial, total seven hybrids along with five check hybrids namely GHB 538, GHB 1129, GHB 1231, 86M84, and GHB Dhanshakti were evaluated. Significant differences in grain yields were observed. Among the tested hybrids, only GHB 1337 exhibited a significantly higher grain yield.

Kharif 2024

- The trial was allotted from JAU, Jamnagar. Total thirty-five hybrids were evaluated along with six check hybrids. Among all the tested hybrids, five hybrids showed significantly higher grain yield over best check hybrid GHB 1225. Fourteen hybrids were recorded significantly 3.50 to 87.16% higher grain yield over the check hybrid GHB 538.
- The trial was allotted by JAU, Jamnagar, Total eighteen hybrids were evaluated along with six hybrid checks. Only two hybrids namely GHB 1353 and GHB 1403 exhibited a significantly higher grain yield with fertile reaction compared to the best hybrid check 86M84. Nonetheless, six hybrids produced significantly 18.06 to 40.48% higher grain yields with fertile reactions compared to the check hybrid GHB 1231.

Semi rabi 2024

- The trial was allotted from JAU, Jamnagar. Total eight hybrids were evaluated along with two hybrid checks. Among all the tested hybrids, two hybrids namely GHB 1337 and GHB 1330 showed significantly higher grain

yield with 14.26 and 11.08% yield increment over best hybrid check GHB 1231. Compared to GHB 538 hybrid check, all the tested hybrids were recorded significantly higher grain yield with increment from 23.57 to 67.86%, respectively.

Crop Protection

Plant Pathology

- Total 24 pearl millet hybrids were screened against downy mildew (DM). In survey of pearl millet disease on 64 farmers field, DM range 05 to 10 per cent and blast rating was 3 to 5.

Entomology

- In population dynamics trial of different insect pest in pearl millet, population of lepidopteron pest viz. shoot fly and steam borer coleopteran pest viz. Flea beetle, blister beetle, chaffer beetle and grass hopper found throughout crop period.
- In survey of insect's pests of bajra, blister beetle, grass hopper, grey weevil, leaf binder, lady bird beetle and *Helicoverpa armigera* were found at 64 farmer's field. Maximum insects' incidence was observed *H. armigera*. Fall armyworm incidence was not observed.

4.2.1.5 Finger Millet and Kodo Millet

Crop Improvement

Kharif 2024

- At Agril. Research Station, Dahod, six experiments of finger millet were conducted under AICRP, state and station trials. Total 49 genotypes of finger millet were evaluated. Out of these, 04 genotypes viz., DN-14, DN-33, DN-20 and DN-22 were found promising for grain yield. 123 germplasm materials of finger millet were maintained including 06 were newly collected in current year.
- One varietal trial was conducted under AICRP in kodo millet. None of the genotypes was found promising for grain yield. 50 germplasm materials of kodo millet were maintained.





4.2.2 PULSES

4.2.2.1 Mungbean

Crop Improvement

RRS, Anand

Summer 2024

- Under Preliminary Evaluation Trial, total 20 entries including six check varieties viz., GM 4, GAM 5, GM 6, GM 7, GAM 8 and GM 9 were evaluated. Out of 14 tested entries, only one entry i.e., ANDGG 2403 exhibited significantly higher grain yield than best check variety GAM 8 with yield increment of 23.80.
- Germplasm Evaluation Trial (GET), the trial was conducted to evaluate the available mungbean germplasm of Regional Research Station, AAU, Anand. Total 110 entries including six check varieties viz., GM 4, GAM 5, GM 6, GM 7, GAM 8 and GM 9 were evaluated using Augmented design. Out of 104 tested entries, only three germplasm i.e., GP 26, GP 61 and GP 51 exhibited significantly higher grain yield than best check variety GAM 8 with yield increment of 45.30, 44.70 and 41.40%, respectively.

Pulse Research Station, Vadodara

Summer 2024

- In PET trial, total seven test entries were evaluated against five checks under station trial at Vadodara location. The perusal of data revealed that two entries PRSM-S-2406 and PRSM-S-2407 were out yielded best check GAM5 by 11.94 and 10.66 per cent, respectively.
- In SSVT + LSVT trial conducted at Vadodara comprised of 10 entries and 4 checks. None of the entries were out yielded to the best check GAM 8..

Kharif-2024

- The PET trial conducted at Vadodara and Anand location. The trial was vitiated at Anand location due to heavy rainfall. The variance due to grain yield was found significant at Vadodara. The data revealed that three entries viz., PRSM-S-2406, PRSM-S-2407 and PRSM-S-2404

recorded higher yield than best check GAM 5 by 11.35, 8.15 and 2.21 per cent, respectively.

- SSVT+LSVT trial conducted with ten entries and four checks at **Vadodara and Derol**. The trial was vitiated at Derol location due to heavy rainfall. The variances due to seed yield were statistically significant at Vadodara. The perusal of data revealed that three entries viz., GJM 2207, GJM 2211, VMG 130 recorded highest yield over best check GM 6 with the yield increment of 9.7, 6.3 and 4.5 per cent, respectively.
- In *kharif* 2024, Total 130 germplasm were maintained including 16 new collections.

4.2.2.2 Pigeon Pea

Crop Improvement

Pulse Research Station, Vadodara

- In PET (EE) trial, total 10 entries tested against 2 checks at Derol and Dahod locations. The variance due to grain yield was statistically significant at both the locations. Among the 10 test entries, AAUDT-22-02 found superior to the best check UPASH 120 by 4.99 per cent.
- In SSVT(M) trial on pigeon pea conducted at Vadodara and Derol locations. The trial consisted of 14 coded entries. Across the locations, top three high yielding entries were PSM 308, PSM 306 and PSM 313.
- SSVT(ME) trial conducted at Vadodara location consisted of eight coded entries. The variance due to grain yield was statistically significant. The top three high yielding entries were PSME 105, PSME 103 and PSME 104.
- In LSVT (M) trial was conducted at Vadodara and Derol locations consisting 12 coded entries. The variance due to grain yield was statistically significant at both the locations. The results revealed that PLM 401, PLM 402 and PLM 404 were found top three high yielded entries over the locations.
- In LSVT (ME) trial conducted at Vadodara and Dahod consisted 16 coded entries. The variance due to grain yield was statistically significant at both the locations. Based on yield performance





PLME 213, PLME-209 and PLME-212 were the high yielding entries. 238 germplasm materials of pigeonpea were maintained.

ARS, Derol

- ◆ In LSVT (M), 14 genotypes including checks were evaluated. Among them, PLM 24-408 was found promising.
- ◆ In SSVT (M), total 14 genotypes including checks were tested, among which PSM 24-310 was found promising.

ARS, Dahod

- ◆ Two experiments on pigeonpea were conducted under state trial. Total 38 genotypes of pigeonpea were evaluated. Out of these, one genotype AAUVT 22-06 was found promising. 43 germplasm materials of pigeonpea were maintained.

4.2.2.3 Chickpea

Crop Improvement

Station Trial (RI) conducted at Arnej comprised of 24 test entries and 4 checks. As many as seven entries were out yielded over best check GJG 6 ranging from 2.58 to 6.63 per cent. The best three test entries were ACP-1181, ACP-1201 and ACP-1198.

◆ **Station Trial (Rainfed)**

The Station trial (*rainfed*) consisting 24 test entries and 4 check varieties was evaluated at Arnej location. Out of 24 test entries, three entries viz., ACP 1198, ACP 1181 and ACP 1197 were recorded higher yield than best check GG 1 by 15.53, 8.45 and 3.54 per cent, respectively.

◆ **Preliminary Evaluation Trial (Rainfed)**

This trial was conducted at Arnej location to evaluate 14 test entries including 5 check varieties. Among all the test entries, two entries GJG 2314 and GJG 2310 were found superior over best check GG 7 by 3.46 and 2.61 per cent, respectively.

◆ **Preliminary Evaluation Trial-1 Rainfed)**

The trial comprised of 14 test entries and 6

checks. As many as eight entries were out yielded over best check JG 24 ranging from 2.76 to 32.50 per cent. The entries GJG-2311, GJG-2305, GJG-2304 and GJG-2307 were out yielded over the best check by 32.50, 15.13, 10.59 and 10.59 per cent, respectively.

◆ **Preliminary Evaluation Trial-2 (Rainfed)**

This trial was conducted at Dahod location comprised of 31 chickpea test entries along with 5 promising check varieties. The result revealed that as many as 18 test entries depicted higher grain yield over best check variety GJG 3. The highest yielding varieties was DCP-174 followed by DCP-128 & DCP 157 and their yield increment over best check GJG 3 by 22.20, 17.76 and 17.76 per cent, respectively.

◆ **Small Scale Varietal Trial (Rainfed)**

This trial consisting 13 test entries and 5 check varieties was evaluated at Arnej, Dahod and Dhandhuka locations. The grain yield differences were found significant at all the locations. Across the locations, none of the entry record higher yield than best check GG 1.

◆ **Small Scale Varietal Trial (Irrigated)**

This trial consists of 13 entries and five checks conducted at Derol location. The data revealed that two entries viz., GJG 2210 and GJG 2114 out yielded over best check Phule V by 12.84 and 3.17 per cent, respectively.

◆ **Large Scale Varietal Trial (Rainfed)**

The LSVT (*rainfed*) chickpea trial consisting 11 test entries and 5 check varieties conducted at Arnej, Dahod and Dhandhuka locations. The grain yield differences were found statistically significant at all the locations. Out of eleven test entries, only one entry *i.e.*, GJG 2103 recorded higher yield than best check GG 1 by 1.19 per cent over locations.

◆ **Large Scale Varietal Trial (Irrigated)**

This trial comprised of 11 test entries and 5 check varieties was conducted at Derol location. The data revealed that five test entries out yielded the best check GG 1 ranging from 4.58 to 8.25





per cent. The best three entries viz., GJG 2115, GJG 2011 and GJG 2010 were exhibited yield superiority over best check GG 1 by 8.25, 5.72 and 5.12 per cent, respectively.

ARS, Arnej

- ◆ At ARS, Arnej, 5 experiments viz., LSVT (RF), SSVT (RF), PET (RF), PETK (RF) and AVT-DTIL (RF) were conducted successfully.
- ◆ At ARS Arnej, 84 plant progenies of chickpea were maintained. 11 new crosses were attempted for development of high yielding varieties suitable under rainfed conditions. Out of 84 progenies, 77 IPS were selected.

ARS, Dhandhuka, ARS, Dahod

- ◆ At ARS, Dhandhuka, 2 experiments viz., LSVT (RF) and SSVT (RF) were conducted successfully.

4.2.2.4 Cluster bean

Crop Improvement

Kharif 2024

TRTC, Devgadh Baria

- ◆ Under SSVT + LSVT trial, total thirteen coded genotype were evaluated. The experiment was vitiated due to heavy rainfall during the Kharif-2024.
- ◆ Under LSVT trial, total seven coded genotype were evaluated. The experiment was vitiated due to heavy rainfall during the Kharif-2024.

4.2.2.5 Blackgram

Crop Improvement

Kharif 2024

- ◆ In Preliminary Evaluation Trial at Vadodara, total 10 test entries of Urdbean were evaluated against 4 check varieties. Out of ten test entries, four entries viz., ANDU-RIL-2325, ANDUS 2336, ANDUS 2324 and ANDUS 2341 were out yielded over best check GAU 4 by 13.72, 9.90, 2.86 and 2.63 per cent, respectively.
- ◆ In SSVT trial consisted of ten test entries and four checks conducted at Vadodara, Dahod

and D'baria locations. The yield differences were found statistically significant for all the locations. The data revealed that two test entries ANDUS-RIL-2325 and ANDUS 2336 recorded higher yield than the best check GAU 4 by 12.33 and 2.33 per cent, respectively.

4.2.3 OILSEEDS

4.2.3.1 Castor

Crop Improvement

RRS Anand

Kharif 2023-24

- ◆ Total 49 germplasm were maintained.
- ◆ In the PET trial, ten hybrids were assessed, including four hybrid checks: GCH 7, GCH 8, GCH 9, GCH 10, and one check variety GAC 11. Hybrid ANDCH 2203 and ANDCH 2201 recorded the highest seed yield, which was 14.83 and 12.17 percent higher than check GCH 10, respectively.

ARS, Sansoli

- ◆ In castor, total 96 entries were tested in different AICRP/State/Station trials.
- ◆ The LSVHT trial was conducted with inclusion of six hybrids and five checks at Sansoli and Derol under irrigated conditions. At Sansoli, hybrid SKI-472 and GAC-11 recorded numerically higher yield than the best check GCH-10 with tune of 0.7 and 1.0 %, respectively. None of the genotype found higher than GAC-11 check.
- ◆ In SSVHT trial, fourteen hybrids were evaluated at Sansoli along with three checks. The yield differences among the nine genotypes were found significant, which was more than 37.7% higher yield at Sansoli over GCH-9. None of the hybrids found significant against the check hybrid, GCH-8 and GCH-10. However, the hybrids JHB 1129, ANDCH-2041, SHB-1100, SHB-1097, SHB-1095 and SHB-1092 out yielded in range of 2.9 to 8.1 % over GCH-10.
- ◆ The SSVT trial consisted of five inbreds and two check varieties at this station during kharif 2023. The yield differences among genotypes found significant. Two inbred viz., SKI-485 and





Jl-471 recorded significantly yield over the best check GC-3 by 12.3 and 1.3 percent, respectively.

- ◆ Twenty hybrids/inbred were evaluated against five check varieties in PVHT-Set I trial. The yield differences of all the genotypes were found significant. Out of twentytested hybrids, the hybrids viz., SHB-1104, SHB-1102, SHB-1106, JHB-1147, SHB-1107 were recorded higher yield increment over best check, GCH-8 by range of 2.2 to 5.8 %.
- ◆ Total fifteen hybrids were evaluated against five check varieties in PVHT- Set-II trial. The yield differences of all the hybrids were found significant. Out of 15 hybrids, two hybridsviz., SHB-1091and GAC-11 were recorded higher yield over best check, GCH-10 by 3.69 and 8.13 %, respectively.

Crop protection

- ◆ For the effective management of capsule borer, *D. punctiferalis* infesting castor, apply two foliar spray of chlorpyrifos 50% + cypermethrin 5% EC, 625+62.5 g a.i./ha (0.137%), 25 ml per 10 litre of water or flubendiamide 19.92% + thiacloprid 19.92% SC, 60+60 g a.i./ha (0.024%), 6 ml per 10 litre of water, first spray when capsule borer damage crosses 10% and second spray at 15 days after first spray.
- ◆ Promising 82 castor line were screened against wilt disease in a sick plot. Out of those, 19 breeding line found highly resistance, 26 breeding lines found resistance, 10 breeding lines found moderately resistance, 2 breeding lines found moderately susceptible, 2 breeding line susceptible, 13 breeding lines found highly susceptible. Susceptible check Jl-35 found 100 per cent infestation with wilt disease while resistance check 48-1 had no infestation of wilt disease.

4.2.3.2 Mustard

Crop Improvement

Rabi2024-25

- ◆ In rabi2024, total 44 germplasm were maintained.
- ◆ In PET trial, total sixteen genotypes including

three check varieties i.e. GDM 4, Kranti and DHM 1 were evaluated. The genotypes SKM 2209, ANDM 20-24, SKMH 2202 and SKM 2236 were found numerically superior for seed yield than best check variety DMH 1.

- ◆ The LSVT trial was conducted at Anand and Derol station with total eight genotypes tested against four check varieties. On an average basis out of eight entries, none of the entries were recorded higher seed yield as compare to best check variety DHM 1.
- ◆ In LSVT trial at Anand conducted with eight genotypes and four check varieties i.e. DHM 1, GDM 4, Kranti and NRCHB 506. The genotype SKM 1924 was found promising.
- ◆ In LSVT trial conducted at Derol station with eight genotypes and four check varieties i.e. DHM 1, GDM 4, Kranti and NRCHB 506. Out of the tested genotypes, none of the genotype was found promising.

4.2.3.3 Groundnut

Crop Improvement

RRS Anand

- ◆ Ttotal 183 germplasm were maintained.

Summer2024

- ◆ In Preliminary Evaluation Trial, total 18 genotypes including four check varieties i.e. GG 34, GG 37, TG 37A and TG 24 were evaluated for their pod yield. The genotypes TAG 108 and TAG 110 were found promising.
- ◆ In Small Scale Varietal Trial - SB (SSVT-SB), total 12 genotypes including three check varieties i.e. GG 34, GG 37 and TG 37A were evaluated. The JB 1615, JB 1626 and JB 1616 were found promising.
- ◆ In Large Scale Varietal Trial - SB (LSVT-SB), total 12 genotypes were evaluated for their pod yield performance in comparison with three check varieties viz., GG 34, GG 37 and TG 37A. Among the genotypes evaluated, none of the entries were found promising.
- ◆ In the LSVT-SB trail, total eight entries were





evaluated for their pod yield performance in comparison with four check varieties viz., GJG 31, GG 34, GG 37 and TG 37A. Among the entries evaluated, none of the entries were found promising

Kharif 2024

- ◆ In Preliminary Evaluation Trial, total 18 genotypes including four check varieties i.e. GG 34, GG 37, TG 37A and TG 24 were evaluated at Anand location for their pod yield. The genotypes AG 2024-06 and AG 2024-04 were found promising.
- ◆ In Preliminary Evaluation Trial, total 22 genotypes including four check varieties i.e. GG 34, GG 37, TG 37A and TG 24 were evaluated. The genotype AG 2024-05 recorded significantly higher pod yield over the best check variety TG 37A, whereas, genotypes AG 24 01 and AG 24 06 were found promising.
- ◆ In Small Scale Varietal Trial - SB (SSVT-SB). This trial was allotted from MORS, JAU, Junagadh at two locations i.e. Anand and Derol. Total 10 genotypes tested against three check varieties i.e. GJG 32, TG 37A and GG 39 for pod yield differences. The pod yield differences were found significant among the tested genotypes. At RRS, Anand and ARS, Derol location out of ten genotypes, none of the genotype manifested significant superiority for higher pod yield as compared to best check variety GG 39 and GJG 32, respectively. On pooled basis of two locations, out of ten genotypes, three genotypes namely JB 1615, JB 1616 and JB 1614 were recorded 3.1 to 15.0% higher pod yield as compare to best check variety GG 39.
- ◆ In Large Scale Varietal Trial - SB (LSVT-SB). This trial was allotted from MORS, JAU, Junagadh at two locations i.e. Anand and Derol. Total 14 genotypes including four check varieties i.e. GJG 9, GJG 32, TG 37A and GG 39 were studied for pod yield differences. The pod yield differences were found significant among the tested genotypes. Out of ten genotypes, two manifested significant superiors i.e. JB 1583 and J 116 for pod yield as compared to best check variety GJG 32 at RRS, Anand. While, at

ARS, Derol none of the genotypes recorded significantly higher pod yield as compares to best check variety GJG 32. On pooled basis, out of fourteen genotypes, four genotypes were recorded higher pod yield as compare to best check variety GJG 32.

4.2.3.4 Soybean

Crop Improvement

TRTC, Devgadh Baria

Kharif 2024

- ◆ Under PET trial, total sixteen promising entries along with three check variety RSC 10-46, HIMSO 1689 and Guj. Soy. 4 were tested. The genotypes DBSGP-113 and DBSGP-134 were found promising.
- ◆ Under PET (Vegetable) trial, total ten promising entries along with one check variety Hara Soya. The results showed that genotypes Soya 23-27 and Soya 23-08 were gave 33.68 and 25.34 percent numerically superior over best check Hara Soya.
- ◆ Under LSVT (Early) trial, total fourteen varieties including checks were evaluated. The results revealed that the maximum seed yield was recorded in the variety NRC-130.
- ◆ The SSVT trial of soybean was conducted at TRTC, Devgadh Baria and Agricultural Research Station, JAU, Amreli. Total sixteen entry were evaluated with five checks; JS 335, GJS-3, G.Soy.-4 and early checks JS 20-34 and NRC 138 at TRTC, Devgadh Baria. The experiment results showed that the maximum seed yield was recorded under entry AS-134 and AS 132 over best check JS 335.
- ◆ The LSVT trial of soybean was conducted at TRTC, Devgadh Baria and Agricultural Research Station, JAU, Amreli. Total twelve entry were evaluated with four checks; three normal checks JS 335, G.Soy.-4 and GJS-3 and one early checks JS 20-34 at TRTC, Devgadh Baria. The experiment results showed that the maximum seed yield was recorded under AS 48 over best check G. Soya 4.





- ♦ In IVT trial, total twenty six coded genotypes were evaluated. The experiment results showed that the highest seed yield was recorded under coded entry SNM-24-11.
- ♦ In IVT (Early) trial, total forty eight coded genotypes were evaluated. The experiment results showed that the highest seed yield was recorded under coded entry SEM-24-32.
- ♦ In AVT-I, total eight coded genotype were evaluated. The experiment results showed that the highest seed yield was recorded under coded entry SNM-24-78.
- ♦ In AVT-I & II (Early), total eight genotype were evaluated. The experiment results showed that the highest seed yield was recorded under coded entry SEM-24-31.

Crop Production

TRTC, Devgadh Baria

- ♦ **Yield maximization through improved nutrient management Practices**

The results clearly highlighted the fact that among all the T₀: 100 % RDF + *Rhizobium* + MDSR 14 + 12c (*Burkholderia arboris*-High P solution) showed highest soybean seed yield and straw yield, respectively.

- ♦ **Assessing the impact of herbicides with PGPR on soybean productivity**

The results clearly highlighted the fact that among all the treatments, treatment H₂: Pre-emergence: Diclosulam @ 26 g/ha + One hand weeding at 40 days after sowing (DAS) showed highest seed yield and straw yield. While in case of Microbial strains treatment B₂: *Bacillus aryabhataii*(Zn & P-solubilizing bacteria) @ 10 g/kg seed recorded significantly higher seed yield (1395 kg/ha) and straw yield.

- ♦ **Standardization of sustainable management practices (Natural/organic/integrated crop management) for soybean-based cropping systems**

The results clearly highlighted the fact that soybean-chickpea cropping system (CS-2)

showed significantly higher soybean seed yield and straw yield which was remained at par with soybean-wheat cropping system (CS-1). While in case of management practices, the Integrated crop management (ICM) was showed significantly the highest seed yield and straw yield.

Dept. of Agronomy, BACA

- ♦ **Performance of soybean varieties to date of sowing in semi rabi season**

Among the varieties, NRC 37 (V₁) exhibited significantly higher seed yield but it was at par with JS 335 (V₃) while variety JS 20 34 (V₂) recorded the lowest seed yield. Stover yield followed a similar trend, with JS 335 and NRC 37 performing better than JS 20 34. Significantly the highest seed index was noted by variety V₂ (JS 20 34) while the higher oil content was observed under variety NRC 37. Among all the varieties, higher protein content was observed in JS 335 but it was at par with JS 20 34.

4.2.4 FIBRE CROPS

4.2.4.1 Cotton

Crop Improvement

RRS, Anand

Kharif 2024

- ♦ In non-Bt cotton PHT trial, total eighty-six hybrids, including two hybrid checks of *G. hirsutum*, were tested. Forty-four hybrids showed significant superiority over the best hybrid check G. Cot. Hy. 18. The top three hybrids with the highest seed cotton yields were recorded for ACH 2436, ACH 2415 and ACH 2481, respectively, surpassing the yield of the best check hybrid, G. Cot. Hy. 18 with yield increment of 51.94, 47.16 and 38.52%, respectively.
- ♦ In Bt cotton PHT trial, total thirty-three hybrids of *G. hirsutum* including three hybrid checks were evaluated. Among the tested hybrids, none of the hybrid exhibited significantly higher seed cotton yield over the best hybrid check G. Cot. Hy. 24 BG II.





- ◆ In this trial, total fifty-seven genotypes including two check varieties namely G. Cot. 40 and G. Cot. 38 of *G. hirsutum* were evaluated for seed cotton yield. Among all the genotypes, twenty-eight genotypes were found significantly superior over the best check G. Cot. 40. The entry AHC 2408 recorded the highest seed cotton yield with yield increment of 68.76 %.
- ◆ In this trial, six genotypes were evaluated for their seed cotton yield against two check varieties namely G. Cot. 40 and G. Cot. 38 of *G. hirsutum*. Among the six genotypes, the three genotypes namely AHC 2460, AHC 2458 and AHC 2454 were recorded significantly superior seed cotton yield over the best check G. Cot. 38.
- ◆ The trial was comprised of twelve genotypes of *G. hirsutum* including two checks varieties viz., Suraj NBT and GTHV 13/28. All the genotypes were found significantly superior over the best varietal check GTHV 13/28. The three top genotypes AHC 2407, AHC 2305 and AHC 2107 were recorded higher seed cotton yield over the best check variety GTHV 13/28 with yield increment from 68.91 to 85.76%.
- ◆ In SSVT experiment, total twenty genotypes of *G. hirsutum* including two checks varieties namely G. Cot. 40 and G. Cot. 38 were studied for seed cotton yield. The four genotypes i.e. GJHV 613, GSHV 279, GAHV 2301 and GBHV 285 were found significantly superior over the best varietal check G. Cot. 40. These four genotypes were exhibited the higher seed cotton yield over the best check variety G. Cot. 40 with yield increment from 14.61 to 24.32 %.
- ◆ In SSHT experiment, total twenty-seven Bt cotton hybrids of *G. hirsutum* including four hybrid checks were studied. None of the genotype was found significantly superior over the best hybrid check G. Cot. Hy. 10 BG II. However, the two genotypes namely TBG 22/30 BG II and TBG 22/29 BG II were found numerically higher seed cotton yield as compared to hybrid check G. Cot. Hy. 10 BG II.
- ◆ *herbaceum* were conducted including national, state and station varietal/hybrid trials for yield, yield contributing characters and fibre quality evaluation under rainfed situation of Gujarat.
- ◆ Total 170 entries including 48 new hybrids of desi cotton were evaluated among different trials.
- ◆ Total 507 progenies were sown of various generations (F_1 to F_9) and promising individual plants were selected from segregating materials and 300 new crosses were made during the year.
- ◆ Centre has maintained 363 germplasm lines of cotton.
- ◆ In mixoploid (*G. herbaceum* x *G. hirsutum*) population, total 79 progenies were sown of various generations (F_1 , F_2 , F_4 and F_8) and promising individual plants were selected from segregating materials.
- ◆ Five survey trials for major pest and disease occurrence of cotton are going on.
- ◆ In *Kharif* 2024-25, different trials of desi cotton (*G. herbaceum*) including national, state and station trials were conducted for seed cotton yield and fibre quality performance at Viramgam and five other rainfed locations of Gujarat. The result of MLT, LSHT, LSVT and LSVT (FQ) trials revealed that entries viz., GVhv 1338, GVhv 1350, GVDH 43, GVDH 145/22, GVhv 1356, GVhv 1255 and GVhv 1287 were found promising for seed cotton yield as well as fibre quality parameters.

4.2.5 CASH CROPS

4.2.5.1 Bidi Tobacco

BTRS, Anand

Kharif 2024

Crop Improvement

- ◆ In IVT, none of the line was significantly superior for cured leaf yield over better check.
- ◆ In AVT-I, none of the line was significantly superior for cured leaf yield over better check.

RCRS, Viramgam

- ◆ During *Kharif* 2024-25, total 15 trials of *G.*





Line ABD 244 showed maximum cured leaf yield.

- ♦ In AVT-II, none of the line was significantly superior for cured leaf yield over better check. Line ABD 228 showed maximum cured leaf yield.
- ♦ In PET trial, total fourteen entries were evaluated along with four checks viz., A 119, GT 7, MRGTH 1 and GAB 11. None of the entry was shown significant superiority over best check MRGTH 1 for cured leaf yield.
- ♦ In PYT trial, total fourteen entries were tested with four checks viz., A 119, GT 7, GABT 11 and GABTH 2. Entries ABD 273 and ABD 274 were found significantly superior than best check GABTH 2 for cured leaf yield.
- ♦ Under standard varieties assessment, total eight varieties along with two hybrids were evaluated. Variety GABT 11 and hybrid GABTH 2 produced higher cured leaf yield over rest of the varieties.
- ♦ Four advanced breeding lines along with four checks viz., A 119, GT 7, ABT 10 and GABT 11 were screened for yield, disease and quality traits. Line F_6 (ABT 10 x A 119)-131.7) was found significantly superior over RKN resistant variety ABT 10 as well as susceptible check A119 for cured leaf yield. The same line was also found resistant against RKN (RKI: 0.0).
- ♦ Nine hybrids with two checks viz., MRGTH 1 and GABTH 2 were evaluated. The hybrid BTH 380 was significantly superior for cured leaf yield over check GABTH 2.
- ♦ Fifteen entries with one check GT 5 were tested. None of the entry was found significantly superior over GT 5 for cured leaf yield and nicotine content. Line TMV 8 had shown numerical higher cured leaf yield.

Rustica Tobacco

- ♦ In Initial Varietal Trial, line IET 116 showed significant superiority for cured leaf yield over better check.

- ♦ In Advance Varietal Trial-I, none of the entry showed their superiority over better check for cured leaf yield.
- ♦ In Station Varietal Trial-II, none of the entry showed their superiority over better check for cured leaf yield.
- ♦ In PET trial, eleven entries were evaluated along with two checks viz., GC 1 and GCT 3. Entries AR 226, AR 224, AR 220, AR 217 and AR 219 were found significantly superior over both checks GC 1 and GCT 3 for cured leaf yield.
- ♦ In PYT trial, fourteen entries were evaluated along with two checks viz., GC 1 and GCT 3. Entries AR 209 and AR 208 were found significantly superior over better check GCT 3 for cured leaf yield.

Crop Production

- ♦ Experimental results on effect of long-term manuring on yield and quality of bidi tobacco and soil productivity revealed that leaf length, leaf width and yield were significantly influenced due to manures and fertilizer levels. Among different manure application, sunhemp green manuring recorded higher leaf length, leaf width, leaf thickness and cured leaf yield. It was remained at par with 12.5 t FYM /ha application every and alternate year for leaf length and cured leaf yield. With regards to fertilizer level, application of 250-00-00 NPK recorded higher leaf length, leaf width and cured leaf yield compared to 200-00-00 and 250-50-50 NPK application. Quality parameters i.e. nicotine and chloride contents were not significantly influenced due to manures and fertilizer levels. However, reducing sugar content was found significantly higher with sunhemp green manuring treatment and remained at par with application of 12.5 t FYM /ha alternate year.

Crop Protection

- ♦ Screening of Rustica tobacco cultures/genotypes raised under nursery conditions by plant breeding section was carried out in the year 2023-24 under natural population of





leaf eating caterpillar, *Spodoptera litura* (F). The population of the leaf eating caterpillar, *S. litura* was not sufficiently build up under natural conditions hence nursery remained free from infestation of *S. litura*.

- ◆ Bio efficacy of insecticides against leaf eating caterpillar, *Spodoptera litura* (F) in tobacco under nursery condition indicated that the population of leaf eating caterpillar, *S. litura* was not uniformly build up in nursery experimental area hence the results were not generated.
- ◆ In a trial on evaluation of insecticides against capsule borer, *Helicoverpa armigera* (Hubner) in tobacco indicated that the population of the capsule borer *H. armigera* (Hübner) was not built up in field experiment hence the results were not generated.
- ◆ In a trial on monitoring resistance development in *Pythium aphanidermatum* to metalaxyl MZ, results revealed that in nursery conditions 14 per cent damping-off disease incidence in comparison with control was recorded in the treatment of metalaxyl MZ.
- ◆ In a trial on search for resistance to damping-off and root-knot in tobacco, results revealed that out of 20 genotypes/lines. Out of 20 lines/ varieties the results shows that one, one, thirteen, four and one line showed highly resistant (ABT 10 Check), moderately resistant, moderately susceptible, susceptible and highly susceptible reaction to root-knot disease in pots, respectively.
- ◆ In a trial on monitoring resistance development in *Pythium aphanidermatum* to azoxystrobin, results revealed that in nursery conditions 20 and 15 per cent damping-off disease incidence in comparison with control was recorded in the treatment of azoxystrobin and azoxystrobin + difenoconazole, respectively.
- ◆ In a trial on screening of advanced breeding materials/ introductions/ genotypes for major diseases of tobacco under field and control conditions, 117 entries of advanced breeding materials /crosses of bidi tobacco and 37 entries of rustica tobacco including respective check were examined for leaf curl and cercospora leaf spot diseases. None of the entries were found free from leaf curl infection of bidi and rustica tobacco. During the year very low incidence of frog-eye leaf spot disease was noticed.
- ◆ Thirty-seven (including twenty-five mosaic resistant cultures) entries of bidi tobacco were artificially inoculated with tobacco mosaic virus and evaluated for resistance to mosaic. All the entries including segregation materials showed resistance to the disease and these materials are maintained by plant breeding section for further breeding advancement work.
- ◆ Screening of tobacco cultures for resistance to tobacco leaf curl virus (TLCV) during the year 2023-24 revealed that the entries were none of the entry was found free from the disease in field conditions.
- ◆ In a trial on screening of advanced breeding materials / introductions for root-knot disease under field/ control conditions, out of 72 genotypes screened including check varieties, two genotypes including check were found free from root-knot index in root-knot sick field and selected for further screening in the next year.
- ◆ In a trial on validation of incidence and severity of frog eye spot disease on bidi tobacco in relation to agro-meteorological parameters, results on prediction of FES disease in nursery and field revealed that according to the model it was true to the tune of 70 % and 78.94 % in nursery and field, respectively.
- ◆ In a trial on evaluation of fungicides against frog-eye leaf spot and alternaria leaf spot in bidi tobacco indicate that foliar spray of azoxystrobin 11% + tebuconazole 18.3% @ 0.0549 per cent immediately after appearance of the disease followed by another spray at 15 days interval recorded minimum per cent disease index (PDI) of 6.67 which was at par with azoxystrobin 11% + tebuconazole 18.3% @ 0.04395% (9.90 PDI) followed by zineb 68% + hexaconazole 4% @ 0.18 per cent (12.30 PDI).





4.2.6 FORAGE CROPS

MFRS, Anand

Crop Improvement

4.2.6.1 Forage Bajra

Summer2024

AICRP Trial

- **IVT Bajra (MC)**

In Initial Varietal Trial on Forage Bajra (Multi cut) trial, 17 entries were evaluated along with 3 checks viz., Giant Bajra, Moti Bajra and BAIF Bajra-1. Total three cuts were harvested. The statistical analysis showed that the genotypic differences were found significant for GF and DM yield. None of the entry found superior than best check BAIF Bajra 1 and Moti Bajra for green forage yield and crude protein yield, respectively. For dry matter yield, hybrid entry TMFH-1255 ranked on top followed by national check Moti Bajra. The best check variety BAIF Bajra 1 and hybrid entry TMFH-1255 ranked on top in case of per day productivity of green forage yield and dry matter yield, respectively. The entry BAIF Bajra-13 was the best for crude protein content.

- **AVT-1 + AVT-2 Bajra (MC)**

In Combined First and Second Advance Varietal Trial on Forage Bajra (Multi Cut), total seven entries were evaluated including 3 checks viz., BAIF Bajra-1, Giant Bajra and Moti Bajra. Total three cuts were taken. The experimental results showed significant differences for GF, DM and CP yield. The hybrid entry TSMCBH-2301 ranked first for GF yield, DM yield and CP yield with significantly superiority over the respective best check. Also, same hybrid entry ranked first for per day productivity of green fodder and dry matter. The national check variety Giant Bajra had the highest number of leaves per plant. The hybrid entry SBH-104 stood first for average crude protein content.

- **AVT-1 + AVT-2 Bajra (MC) Seed**

In Combined First and Second Advance Varietal

Trial on Forage Bajra (Multi Cut)- Seed, total seven entries were tested including 3 checks viz., BAIF Bajra-1, Giant Bajra and Moti Bajra. The experimental results showed significant differences for Seed yield and straw yield. The entry BAIF Bajra-10 found marginal superiority to the best check variety Moti Bajra for seed yield. Also, same entry ranked on top for straw yield, which was 8.89% higher than the best check BAIF Bajra-1.

State Trial

- **LSVT Bajra (MC): Large Scale Varietal Trial on Forage Bajra (Multi cut)**

This trial was conducted at four locations i.e. Anand, Derol, Dantiwada (SDAU) and Dhari (JAU), five entries were evaluated with 3 checks viz., Giant Bajra, Raj Bajra and GAFB 4. Total three cuts were harvested. The statistical analysis showed that the genotypic differences were found significant for GF, DM and CP yield at all locations except Dhari. The trial was vitiated at Dhari center due to damage by wild animals and data were not reported.

Looking to overall mean data of all the locations, the entry AFB-45 ranked first over locations followed by AFB-68; it gave numerically 18.08 and 13.59 % higher green fodder yield than the local check variety GAFB 4, respectively. In case of dry matter yield, entry AFB-45 stayed on top for the dry matter yield, which was surpassed with a margin of 24.51% and 19.01% higher than the local check variety GAFB 4 and national check Giant bajra, respectively.

Kharif 2024

AICRP Trials:

- ◆ In Initial Varietal Trial on Forage Pearl millet (Single Cut), total 17 entries were tested including one zonal check and three national checks. The results revealed that significant difference among the entries for the yield characters i.e. green forage, dry matter and crude protein yield. The entry ADV 5001, AFB-68 and AFB-68 found superior for GF, DM and CP yield, respectively. The entry JHPM-24-1 was ranked on top for crude protein content.





- ◆ In First Advance Varietal Trial on Forage Pearl millet (SC), eleven entries were evaluated including one zonal check and two national checks. The results revealed that significant difference among the entries for the yield characters *i.e.* green forage, dry matter and crude protein yield. The entry SBH-105, ADV 2386 and FSFBH 502 found superior for GF, DM and CP yield, respectively. The entry JHPM-23-1 had the highest for the number of leaves per plant. The entry JPM-18-71 ranked on top for the characters *i.e.* per day productivity of green fodder and dry matter. The national check RBB-1 was found the earliest (45 days) in days to 50% flowering and the highest crude protein content.

State trials

◆ Large Scale Varietal Trial on Forage Bajra

This trial was conducted at five locations of Gujarat, *viz.*, Anand, Dhandhuka, Derol, Dantiwada (SDAU) and Dhari (JAU). Total seven entries were tested against three check varieties. The experimental results showed significant differences for GF, DM and CP yield data at Anand, Dhandhuka, Dhari and Dantiwada. The trial was vitiated at Derol center due to high rainfall and data were not reported. Looking to overall mean data, the entry AFB-45 ranked first over locations; it gave numerically 27.19% higher green fodder yield than the best check variety GAFB 4. In case of dry matter yield, the same entry AFB-45 stayed on top for the dry matter yield, which was surpassed with a margin of 20.96% higher than the best check variety GAFB 4.

◆ Small Scale Varietal Trial on Forage Bajra

This trial conducted at two locations Anand and Dhari. The yield data were found significant at both locations. It comprised of ten entries including three check varieties and evaluated for fodder yield. Overall, the mean data clarified that all the entries under investigation were found at par with the best check variety GAFB 4.

◆ Preliminary Evaluation Trial on Forage Bajra

Total 28 entries were evaluated including three checks *viz.*, Giant Bajra, BAIF Bajra-1 and GAFB 4 in this trial. The experimental results showed significant differences for GFY and DMY. The result found non-significant for CPY. None of the entry found significantly superior to the best check variety GAFB 4. The entries AFB-113 and AFB-112 were found numerically on top than the best check variety GAFB 4 for green forage yield and dry matter yield, respectively.

4.2.6.2 Forage Maize

Kharif 2024

State trials

◆ Large Scale Varietal Trial

This trial comprised of eight entries including two check varieties *viz.*, GFM-1 (Anand Tall) and African Tall. The yield differences among the genotypes were found significant for GF, DM and CP yield. None of the entry found superior over the best check variety GFM-1 (Anand Tall) for yield. In case of per day productivity, best check variety GFM-1 (Anand Tall) was on top.

◆ Small Scale Varietal Trial

This trial consisted of eight genotypes including two check varieties *viz.*, African Tall and GFM-1 (Anand Tall). The yield differences among the genotypes were found significant for all three important yield characters *viz.*, green forage yield, dry fodder yield and crude protein yield. None of the entry observed as significantly superior for the green fodder yield over the best check GFM-1. Where in case of dry matter yield and crude protein yield, the same entry found significantly superior to the best check GFM-1. In addition to this, it also ranked on top for the characters *i.e.* per day production potential for green fodder and dry matter yield and leaf length.

◆ First Preliminary Evaluation Trial

In this trial twenty entries including two check varieties were evaluated for forage yield. The





difference among the entries were found significant for GF, DM and CP yield. None of the entry found significantly superior to the best check GFM-1.

♦ **Second Preliminary Evaluation Trial**

In this trial eleven Teosinte type entries tested with three check varieties and evaluated for forage yield. The difference among the entries were found non-significant for GF and DM yield. Looking to the overall mean data, the entry AFM-114 and AFM-112 found numerically on top for green fodder yield, dry matter yield and crude protein yield, respectively among the tested entries including the best checks.

4.2.6.3 Forage Cowpea

AICRP Trials

♦ **Initial Varietal Trial**

In this trial, 15 entries were evaluated with two national checks and one zonal check. One entry IVTC-9 was of Rice bean in all the three replications. The genotypic differences for green forage yield, dry matter yield and crude protein yield were found significant. The entry PFC-54 ranked first for green forage yield, which was marginal higher than the best check variety UPC-8705. Also, same entry PFC-54 found superior for the per day productivity of green fodder. In case of dry matter yield and crude protein yield, the entry FSCP 2024-1 found superior. The entry OUFC 24-2 found superior for the per day productivity dry matter and earliest in days to 50% flowering. The entry VFC-06 was ranked on top for crude protein content.

♦ **First Advanced Varietal Trial**

In this trial, total two entries were evaluated with two national checks and one zonal check. The genotypic differences were observed non-significant for green forage yield, dry matter yield and crude protein yield. None of the entry found than the best check variety UPC-9202 (ZC) for green forage yield and per day productivity of green forage. However, the entry UPC-23-1 and MFC 18-10 were the best for dry matter yield and crude protein yield, respectively. The

zonal check variety UPC-9202 was also found the earliest in days to 50% flowering. While, the national check variety UPC-5286 had the highest protein content.

4.2.6.4 Bajra Napier hybrid

AICRP Trials

♦ **Varietal Trial in Bajra Napier hybrid (Perennial) [3rd year]**

This Perennial trial was comprised of total seventeen entries. First year was considered as establishment year. During the first year, total 5 cuts (4th to 8th) were taken in period of 335 days. The experimental results showed that the yield differences were found significant for the GF, DM and CP yield. The entry code VTBN-2022-9 ranked first for GFY, CPY, per day productivity for GF. While, entry code VTBN-2022-1 found best for DMY and per day productivity for DM yield. The entry VTBN-2022-4 synthesized the highest crude protein content.

4.2.6.5 Forage Sorghum

AICRP Trial

♦ **Advanced Varietal Hybrid Trial on Forage Sorghum - Single cut**

Total ten entries were tested for single cut purpose. All entries were coded; hence analysis was not carried out. Overall, the entry code 2107 was found superior in leaf length. For leafiness entry code 2007 was the best. Quality point of view, entry code 2008 had the lowest HCN content.

State trials

♦ **Large Scale Varietal Trial on Forage Sorghum (Single cut)**

This trial was allotted by Research Scientist (Sorghum), Surat. This trial comprised of 14 entries including four checks and evaluated for forage yield. The genotypic differences were found significant for GFY, DMY and CPY. The entries AFS-91 and AFS-95 produced significantly higher green forage yield and it showed superiority by margin over 61.91





and 35.85 % over the best check Tapi Chari, respectively. In case of dry matter yield, the entry AFS-91 and AFS-95 ranked second in yield and it showed significant superiority by margin of 85.24 and 50.94 % over the best check Tapi Chari, respectively. Also, both entries, AFS-91 (and AFS-95 ranked on top in crude protein yield. The entry GVFS-24 was ranked on top for protein content. The entry AFS-95 and AFS-91 had the highest number of leaves per plant and leaf length, respectively. The entry SRF-445 had the highest leaf width. In case of days to 50% flowering the entry SRF-444 and check variety GAFS 12 found the earliest. While, consider the important quality parameter for feeding, all the entries were found safe for feeding to animal.

♦ **Small Scale Varietal Trial on Forage Sorghum (Single cut)**

This trial was allotted by Research Scientist (Sorghum), Surat. This trial comprised of 16 entries including three checks and evaluated for forage yield. The genotypic differences were found significant for GFY, DMY and CPY. The entry AFS-114 ranked first in yield and it showed significant superiority by margin of 36.48, 59.06 and 77.39 % over the best check Tapi Chari. Also, the same entry AFS-114 stood first for per day production potential of green and dry matter yield. The entry AFS-114 ranked on top for the characters *i.e.* number of tillers per plant and number of leaves per plant. While consider the important quality parameter for feeding, all the entries were found safe for feeding to animal. However, the entry SRF-468 had the lowest level of HCN.

♦ **Large Scale Varietal Trial on Forage Sorghum**

This trial comprised of twelve entries including four check varieties and evaluated for forage yield. The trial was conducted at two locations *i.e.* Anand and Viramgam. Overall, the entry AFS-101 and AFS-96 were yielded the highest green fodder yield, which was 32.23 and 30.96% higher over the best local check GAFS 12, respectively.

♦ **Small Scale Varietal Trial on Forage Sorghum**

This trial comprised of ten entries including four check varieties and evaluated for forage yield. The experimental results showed significant differences among the entries for yield data. None of the entry found significantly superior to the best check variety GAFS 11 (GFY: 278.7, DMY: 96.3 and CPY: 7.11 q/ha). Moreover, the entry AFS-121 (GFY: 281.5, DMY: 95.6 and CPY: 6.16 q/ha) was found numerically at par with the best check GAFS 11.

Rabi-2024-25

During the season under report, total 14 experiments were conducted, which include eleven experiments (8 Oat + 3 Lucerne) under AICRP program, while three experiments of Lucerne under state program. All the experiments were conducted successfully at Anand centre.

4.2.6.6 Oat

AICRP Trials

- ♦ Under Initial Varietal Trial (Single cut) total 17 entries were tested. The entry IVTOSC-7, IVTOSC-12 and IVTOSC-4 ranked first for GF yield, DM yield and CP yield, respectively. The entry IVTOSC-4 was stood first for green forage production potential and dry matter production potential. Also, same entry IVTOSC-4 was ranked on top for CP content and earliness.
- ♦ Under First Advanced Varietal Trial on Forage Oat (Single cut), total four entries were evaluated. The entry AVTO1SC-1 gave the highest GF yield, DM yield and CP yield. For fodder production potential, entry AVTO1SC-1 ranked on top for both GFY and DMY. The entry AVTO1SC-1 had the highest protein content and plant height. In case of leaf stem ratio (1.98) was found best in the entry AVTO1SC-4.
- ♦ In Second Advanced Varietal Trial on Forage Oat (Single cut), total four entries were evaluated. The entries AVTO-2SC-4, AVTO-2SC-1 and AVTO-2SC-3 gave the highest GF yield, DM yield and CP yield, respectively. For





fodder production potential, entry AVTO-2SC-2 ranked on top for both GFY and AVTO-2SC-1 ranked on top for DMY. The entry AVTO-2SC-2 had the highest protein content and leaf stem ratio. In case of plant height, the entry AVTO-2SC-1 (125.3 cm) was the tallest.

- ◆ In Second Advanced Varietal Trial on Forage Oat (Single cut) for Seed, total four entries were evaluated. The yield differences found non-significant for seed and straw yield. However, the entries AVTO-2SC-S-3 and AVTO-2SC-S-4 gave the highest seed yield and DM yield, respectively. In case of plant height, the entry AVTO-2SC-S (136.8 cm) was the tallest.
- ◆ In Initial Varietal Trial on Forage Oat (Multi cut), total 12 entries were evaluated against two national checks and one zonal check. The entry IVTOMC-15 ranked first for yield data viz. GF, DM, CP, per day productivity of green forage yield and per day productivity of dry matter yield. The average crude protein content was the highest in the entry IVTOMC-13. The entry IVTOMC-10 was the tallest and IVTOMC-15 had the highest number of tillers/m. row.
- ◆ Under Initial Varietal Trial on Forage Oat (Multi cut), total four entries were evaluated including one national check and one zonal check. The entry AVTO-1-MC-1 ranked first for yield data viz. GF, DM, CP, per day productivity of green forage yield, per day productivity of dry matter yield, number of tillers/m. row and average crude protein content. The entry AVTO-1-MC-4 was the tallest.
- ◆ This Initial Varietal Trial on Forage Oat (Dual) comprised of nine entries along with one zonal and one national check. The yield data viz., GFY, CPY and seed yield were found significant, while DM yield and straw yield were non-significant. The entry IVTOD-4 was found on top for DM yield, CP yield and per day productivity of DM. The entry IVTOD-12 and IVTOD-4 gave the highest seed yield and straw yield, respectively. The entry IVTOD-13 ranked on top for green forage yield. In case of CP content entry IVTOD-12 and leaf stem ratio IVTOD-8 were the best.

- ◆ In First Advanced Varietal Trial on Forage Oat (Dual), total four entries including one zonal and one national check were tested. The genotypic differences were found non-significant for GFY, DMY and CPY; while significant for seed yield and straw yield. The entry AVTO-1D-3 was ranked first for GF yield, DM yield, CP yield, per day productivity of GF and DM. The entry AVTO-1D-1 and AVTO-1D-4 showed the highest CP content and leaf stem ratio, respectively. In case of plant height, the entry AVTO-1D-1 was the tallest. The entry AVTO-1D-1 ranked on top for seed yield.

4.2.6.7 Lucerne

AICRP trials

- ◆ Initial Varietal Trial on Lucerne comprised of six entries including two checks. Five cuts were taken in this trial. The entry IVTLu-5 was found on top for GF yield, DM yield, CP yield, per day productivity of GF and per day productivity of DM. The entry IVTLu-1 showed the highest CP content. In case of plant height, the entry IVTLu-6 was the best. The entry IVTLu-5 ranked on top for number of tillers per meter row length.
- ◆ In First Advanced Varietal Trial on Lucerne, total six entries including two checks were tested. Five cuts were taken in this trial. The entry AVT-1-Lu-4 was found on top for GF yield, DM yield, CP yield, per day productivity of GF and DM. The entry AVT-1-Lu-2 showed the highest CP content. In case of plant height, the entry AVT-1-Lu-2 was the best. The entry AVT-1-Lu-6 ranked on top for number of tillers per meter row length.
- ◆ First Advanced Varietal Trial (Repeat) on Lucerne comprised of six entries including two checks. Five cuts were taken in this trial. The yield data viz., GF, DM, and CP yield were found non-significant. However, entry AVT-1-R-Lu-3 was found on top for GF yield, DM yield, CP yield, per day productivity of GF and DM. The entry AVT-1-Lu-R-5 showed the highest CP content. In case of plant height, the entry AVT-1-Lu-R-3 was the best. The entry AVT-1-Lu-RT-2 ranked on top for number of tillers per meter row length.





State Trials

- ◆ In LSVT trial, total ten entries including three checks were evaluated and five cuts were taken. This trial was conducted at two locations of Gujarat, viz., Anand and Dantiwada (SDAU). Looking to overall mean data, the entry AL-104 ranked first over locations; it gave numerically 17.12, 12.63 and 20.39 *per cent* higher than the checks Anand 2 (Annual type), AL 3 (Perennial type) and RL 88 (NC), respectively. In case of dry matter yield, the same entry AL-104 stayed on top, which was surpassed with a margin of 21.35, 14.69 and 21.82 *per cent* higher than the checks Anand 2, AL 3 and RL 88, respectively.
- ◆ Small Scale Varietal Trial on Lucerne comprised of 10 entries including three checks viz., RL 88, Anand 2 and AL 3. Five cuts were taken in this trial. The yield data viz., GF, DM, and CP yield were found non-significant. However, the entry AL-175 found superior, which was the marginal increment of 7.07, 8.08 and 6.82 % higher yield than the best check variety (perennial type) AL 3, respectively. Also, the entry AL-175 ranked on top for per day productivity of GF yield and DM yield. The check variety RL 88 stood on top for no. of tillers per meter row length, plant height and crude protein content.
- ◆ In Preliminary Evaluation Trial on Lucerne, newly developed 25 genotypes were tested with three checks and five cuts were taken. None of the entry found superior in yield (GFY, DMY & CPY) than the best check variety (perennial type) AL 3. The entry AL-2018 and check variety AL 3 stood first for plant height and number of tillers per meter row length, respectively. The entry AL-203 recorded higher crude protein content.

Crop Production

Summer 2024

State and AICRP trials

- ◆ Comparative Study of Zinc sulphate and Nano zinc of Summer Fodder Sorghum

Kharif 2024

State and AICRP trials

- ◆ Response of nitrogen and phosphorus levels on green fodder yield of *kharif* fodder maize
- ◆ Effect of seed rate, method of sowing and level of nitrogen on yield and quality of fodder maize in *kharif*
- ◆ Effect of Nano Urea, Nano DAP and Bio-products on productivity enhancement of Multicut Fodder Sorghum
- ◆ Enhancing the productivity and quality of Fodder Maize through Nano-urea

Rabi: 2024-25

State and AICRP trials

- ◆ Effect of seed rate, method of sowing and time of cutting on green fodder yield and quality of lucerne
- ◆ Effect of seed priming on green fodder yield and quality of fodder maize
- ◆ Effect of seed rate, method of sowing and level of nitrogen on yield and quality of fodder maize in *rabi*
- ◆ Effect of Nano-Urea on productivity and quality on single cut fodder oat
- ◆ Productivity enhancement of dual-purpose oats through organic and in-organic sources of nutrients
- ◆ Screening of Zn responsive varieties of single cut Fodder Oats

At AICRP on weed management, Anand

Management of *Cuscuta* in lucerne

Application of pendimethalin 30% EC 500 and 750 g a.i./ha at 10 DAS and pendimethalin 30%+imazethapyr 2% EC 640 and 800 g a.i./ha at 10 DAS were found effective for *Cuscuta* management in lucerne in which no emergence of *Cuscuta* was recorded even after 60 DAS with higher green fodder production of lucerne.





4.3 HORTICULTURAL CROPS

4.3.1 VEGETABLES

Kharif – Rabi 2024-25

4.3.1.1 Brinjal

Crop Improvement

- ◆ In brinjal crop, 14 trials were conducted (six trials of state and eight trials of AICRP) during *kharif* and *rabi* seasons. So far as evaluation of germplasm is concerned, 321 germplasms were maintained and 20 new germplasms were collected.
- ◆ For heterosis breeding, 113 fresh crosses were made as well as 18 crosses were made for ongoing programmes. Moreover, 902 segregating progenies were evaluated and individual plant selection was made for the next year.

Following state trials were conducted

◆ Large Scale Varietal Trial (Long)

The trial was conducted at five locations viz., Anand, Junagadh, Navsari, SKNagar and Ladol. In this trial, seven entries were tested along with three checks. The genotypic differences for fruit yield were found significant at all the locations. On the basis of mean data of fruit yield, genotypes AB 21-15 exhibited 10.87 and 17.00 per cent higher fruit yield than the check varieties GAB 6 and GJLB 4, respectively.

◆ Large Scale Varietal Trial – (Round)

The trial was conducted at six locations viz., Anand, Junagadh, Navsari, Waghai, SKNagar and Ladol. In this trial, fourteen genotypes were tested including four checks. The fruit yield differences were found significant at all the locations. On the basis of mean data of fruit yield, genotypes AB 20-13 exhibited 10.12 and 12.54 per cent higher fruit yield than the check varieties GRB 7 and GRB 8, respectively.

◆ Large Scale Hybrid Trial (Hybrid)

In this trial, seven hybrids were evaluated with three hybrid checks viz., ABH 1, GABH 3

and GJBH 4 at Anand, Junagadh, Navsari and SKNagar centers. The fruit yield differences among the hybrids were found significant at all the locations. At Anand, ABH 22-01 gave higher fruit yield over the best hybrid check GABH 3. At Junagadh JBH 21-04 gave higher fruit yield than the best check hybrid. The mean fruit yield data revealed that hybrids JBH 21-04 ranked first over locations and gave numerically 12.73 and 16.22 per cent higher fruit yield than the superior checks GABH 3 and GJBH 4, respectively.

◆ Small Scale Varietal Trial

The trial comprised of 11 genotypes tested with five checks viz., GAB 6, GRB 8, ABSR 2, GGB 9 and Punjab Sadabahar. The fruit yield differences among the genotypes were found significant. Genotypes AB 22-02 and AB 22-11 gave the significantly higher fruit yield than the best check GAB 6 which depicted 21.11 and 19.23 per cent higher fruit yield than the best check GAB 6.

◆ Preliminary Evaluation Trial

This trial comprised of 18 genotypes tested along with five checks GAB 6, GRB 8, ABSR 2, GGB 9 and Punjab Sadabahar. The genotype AB 23-04 gave the highest fruit yield followed by AB 23-16 and AB 23-15 with fruit yield increased by range of 2.09 to 10.59 per cent higher than the best check GAB 6.

◆ Preliminary Hybrid Trial

In this trial, ten hybrids were tested along with two check hybrids viz., GABH 3 and GJBH 4. The differences among hybrids for fruit yield were found significant. ABH 23-03 and ABH 23-07 gave significantly higher fruit yield with the tune of 35.90 and 25.38 per cent higher than the best check (GABH).

4.3.1.2 Chilli

Crop Improvement

- ◆ Ten trials (Four trials of state and six trials of AICRP) were conducted during *kharif* and *rabi* seasons. So far as evaluation of germplasm is concerned, 190 germplasms were maintained and 23 new germplasms were collected.





- ◆ For heterosis breeding, 40 fresh crosses were made as well as 07 crosses were made for ongoing programme. Total 564 segregating progenies were evaluated and individual plant selection was made for the next year, out of which 05 CMS lines were maintained.

Following state trials were conducted during the year

◆ Large Scale Varietal Trial

This trial was conducted at Anand, S. K. Nagar, Sihori and Dhod, but this trial was vitiated due to poor plant growth and heavy incidence of CLCV diseases at Sihori and Dahod locations. The green fruit yield differences found significant. At Anand, genotype ACNPS 20-21 gave significantly higher green fruit yield over best check GAVC 141.

◆ Large Scale Hybrid Trial

This trial was conducted at Anand and Deesa. The green fruit yield differences among the hybrids were found significant. At Anand, hybrid ACH 18-01 gave significantly higher green fruit yield over the best check GAVCH 1, while, at Deesa centre, hybrid ACH 22-15 gave significantly higher green fruit yield over the best check GAVCH 1. Looking to the mean green fruit yield over locations, ACH 18-01 hybrid gave higher green fruit yield over the best check GAVCH 1.

◆ Preliminary Evaluation Trial

This trial was conducted at Anand with 18 genotypes and two check varieties. The green fruit yield differences among genotypes were found significant. The genotype ACS 23-03 exhibited significantly higher green fruit yield than check variety GAVC 141 with increase of 24.92%.

◆ Preliminary Hybrid Trial

This trial was conducted at Anand with 15 hybrids and 5 check. The green fruit yield differences among hybrids were found significant. The hybrids ACH 22-15 and ACH 23-06 exhibited higher green fruit yield than check Arka Swetha with increase of 23.61 and 15.53 %, respectively.

◆ Evaluation of the male sterile lines

This trial was conducted at Anand with four cytoplasmic male sterile lines. Out of the four CMS lines, ACNPCMS 3 gave higher green fruit yield/plant and seed yield/plant.

4.3.1.3 Tomato

Crop Improvement

- ◆ In tomato, 08 experiments were conducted, which include five state trials and three AICRP trials.
- ◆ Total 170 germplasm lines were maintained and evaluated and 25 new germplasms were collected. 81 fresh crosses were made as well as 11 crosses were made for ongoing programme. In all 460 progenies of segregating materials were evaluated and individual plant selection was made for the next year.

Following state trials were conducted during the year

◆ Large Scale Varietal Trial (DT)

Total fourteen genotypes including five checks were evaluated at Anand, Junagadh, Navsari, S. K. Nagar, Jagudan and Thasra centers. The data was not considered at Jagudan location due to high CV %. Fruit yield differences among the tested genotypes were found significant at all the locations. Numerically the highest fruit yield recorded by the genotype ATL 22-03 over the best check variety GAT 8 at Anand. On the basis of mean data of fruit yield, genotype ATL 22-03 gave higher fruit yield than the best check variety GAT 8.

◆ Large Scale Hybrid Trial (DT)

Fruit yield differences among the seven tested hybrids were found significant at both the locations. Numerically higher fruit yield recorded by the hybrids ATH 22-01 and ATH 22-03 to the tune of 16.87 and 7.93% over the best check GAT 8, respectively at Anand. At Navsari, ATH 20-06 produced significantly higher fruit yield than the check GAT 5. On the basis of mean fruit yield, the hybrid ATH 22-01 ranks first.





♦ **Preliminary Evaluation Trial (DT)**

The genotypic differences for fruit yield were found significant. The genotype ATL 23-05 exhibited 22.08% significantly higher fruit yield over the best check variety GAT 8.

♦ **Preliminary Hybrid Trial (DT)**

Results of fruit yield showed significant differences among the tested hybrids. The top hybrid ATH 23-02 exhibited significantly higher fruit yield to the tune of 22.56% higher over the best check GAT 8.

♦ **Preliminary Evaluation Trial (Cherry)**

Fruit yield differences among the seven tested genotypes were found significant at all locations. Significantly higher fruit yield recorded by the genotypes ACTL 21-03 and ACTL 21-07 to the tune of 31.25 and 22.18 % over the check GACT 1, respectively at Anand. At Derol, genotype, ACTL 21-03 produced significantly higher fruit yield than the check GACT 1. On the basis of mean fruit yield, the genotype ACTL 21-03 ranks first.

4.3.1.4 Onion

- ♦ In onion, 06 experiments were conducted, which include two state trials and four AICRP trials.
- ♦ Total 13 germplasm lines were maintained and evaluated including 25 new collected germplasm.
- ♦ One state trial was conducted during *rabi* season.

♦ **Large Scale Varietal Trial (White Onion)**

The bulb yield differences among the tested genotypes were found significant. The genotypes JWO 21-13 and AWOS13-02 exhibited higher bulb yield than the superior check variety GJWO 3. These genotypes showed 18.69 and 13.29% higher bulb yield than the superior check variety GJWO 3, respectively.

♦ **Preliminary Evaluation Trial**

The bulb yield differences among the tested

genotypes were found significant. The genotypes AWOS 23-03 exhibited higher bulb yield than the superior check variety GAWO 2. It showed 4.80% higher bulb yield than the superior check variety GAWO 2.

Summerand Kharif-2024

4.3.1.5 Bottle gourd

- ♦ In onion, 05 state trials were conducted.
- ♦ Total 350 germplasm lines were maintained including 10 new collections and evaluated including three varieties.

Two state trial was conducted during summer season.

♦ **Large Scale Varietal Trial**

This trial was conducted at Anand, Junagadh and Deesa with ten genotypes including two checks. The fruit yield differences among genotypes were found significant. None of the genotypes exhibited significantly superior performance over best check at Anand location.

♦ **Preliminary Evaluation Trial: Anand**

This trial was conducted at Anand with nine genotypes and one check. The fruit yield differences among genotypes were found significant. Out of the nine tested genotypes, genotype ABGS 22-16 gave significantly higher fruit yield than the check ABG 1 while, ABGS 22-15, ABGS 22-13 and ABGS 22-10 recorded numerically higher yield.

Three state trial was conducted during kharif season.

♦ **Large Scale Varietal Trial**

The trial was conducted at three locations viz., Anand, Junagadh and SKNagar. Total 10 genotypes were tested including 2 checks. The fruit yield differences were found significant at all the locations viz., Anand, Junagadh and SKNagar. On the basis of mean data of fruit yield top three genotypes, JBG 20-02, ABGS 22-08 and JBG 22-03 exhibited higher fruit yield than the best check ABG 1.





◆ Preliminary Evaluation Trial

In this trial, eight genotypes were tested along with two check ABG 1 and Pusa Navin. The differences among genotypes for fruit yield were found significant. Among tested genotypes, genotype ABGS 24-02 gave significantly higher fruit yield which depicted 27.31 per cent higher than the best check ABG 1.

◆ Preliminary Hybrid Trial

In this trial, six genotypes were tested along with two checks viz., GABGH 1 and Pusa Navin. The fruit yield differences were found significant. None of the hybrids exhibited significantly superior performance over check. However, Hybrid ABGH 24-02 gave numerically higher fruit yield and exhibited 15.46 per cent higher fruit yield than the best check.

4.3.1.6 Muskmelon

- ◆ Total 120 germplasm lines were maintained including 06 new collections and evaluated including one variety.

4.3.1.7 Ridge gourd

- ◆ Total 220 germplasm lines were maintained including one variety.

Twostate trials were conducted.

◆ Large Scale Varietal Trial

The trial was conducted at three locations viz., Anand, Junagadh and SKNagar. Total 10 genotypes were tested including 2 checks. The fruit yield differences were found significant at all the locations viz. Anand, Junagadh and SKNagar. On the basis of mean data of fruit yield top three genotypes, JRG 22-16, ARGS 21-07 and ARGS 21-06 exhibited higher fruit yield than the best check GRG 2.

◆ Preliminary Evaluation Trial

In this trial, ten genotypes were tested along with three check variety viz., GARG 1, GRG 2 and Pusa Nasdar. The differences among genotypes for fruit yield were found significant. Among tested genotypes, genotypes ARGS 24-02) gave significantly higher fruit yield which depicted

25.22 per cent higher than the best check GARG 1.

4.3.1.8 Sponge gourd

- ◆ Total 126 germplasm lines were maintained including 04 new collections.
- ◆ Eight trials were conducted including four state trials and four AICRP trials during *kharif* and summer season.

Following four state trials were conducted.

◆ Large Scale Varietal Trial

The fruit yield differences were found significant at all the locations viz., Anand, Junagadh and SKNagar. At Anand location, genotype ASGS 22-01 gave significantly higher fruit yield. On the basis of mean yield data, best three genotypes were ASGS 21-12, ASGS 21-05 and JSG 20-06 which was 23.99, 23.94 and 20.74 per cent higher fruit yield than the best check GJSG 2.

◆ Large Scale Hybrid Trial

This trial was comprised of six hybrids along with two checks GJSG 2 and Kashi Rakshita. This trial was conducted at Anand and Junagadh; the fruit yield differences were found significant at both the locations. Based on mean data, all the hybrid higher fruit yield over the best check GJSG 2 except ASGH 23-02.

◆ Preliminary Evaluation Trial

In this trial, seven genotypes were tested along with three checks viz., Anand Mrudula, GJSG 2 and Pusa Chickni. The fruit yield differences were found significant. None of the genotypes exhibited significantly superior performance over check. However, Genotype ASGS 24-04 and ASGS 24-07 gave numerically higher fruit yield and exhibited the 5.80 and 2.67, respectively, per cent higher fruit yield than the best check.

◆ Preliminary Hybrid Trial

In this trial, six genotypes were tested along with two checks viz., Anand Mrudula and Pusa Chickni. The fruit yield differences were found significant. None of the hybrids exhibited





significantly superior performance over check. However, Hybrid ASGH 24-03 and ASGS 24-04 gave numerically higher fruit yield and exhibited the 24.02 and 20.60, respectively, *per cent* higher fruit yield than the best check.

4.3.1.9 Bitter gourd

- ◆ Total 35germplasm lines were maintained.
- ◆ In bitter gourd, 03 state trials were conducted
- ◆ **Large Scale Varietal Trial**

This trial was conducted at Anand and SKNagar with nine genotypes and one check. The fruit yield differences among genotypes were found significant. Out of the nine genotypes, two genotypes ABT 22-04 and ABT 22-01 gave significantly higher fruit yield than the check CO 1.

- ◆ **Preliminary Evaluation Trial**

This trial was conducted at Anand with six genotypes and one check. The fruit yield differences among genotypes were found significant. None of the genotypes exhibited significantly superior performance over check. However, ABT 23-02, ABT 23-06 and ABT 23-04 gave numerically higher fruit yield.

- ◆ **Large Scale Varietal Trial: Anand and SKNagar**

In this trial, nine genotypes were tested along with one check CO 1. The differences among genotypes for fruit yield were found significant. Among tested genotypes, genotype ABT 22-04 gave significantly higher fruit yield at both the locations. On the basis of mean data, top three genotypes were ABT 22-04, ABT 22-01and ABT 22-08 which was 23.78, 12.56 and 1.24 *per cent* higher than the check CO 1, respectively.

4.3.1.10 Cucumber

- ◆ Total 154 germplasm lines were maintained and evaluated including 02 new collections andtwo varieties.
- ◆ Four trials were conducted including three state trials and one AICRP trials during summer season.

- ◆ **Large Scale Varietal Trial: Anand, Deesa**

This trial was conducted at Anand and Deesa with seven genotypes and three checks. The fruit yield differences among genotypes were found significant. Significantly the highest fruit yield recorded by the genotype ACUS 22-08 over best check at Anand. On the basis of mean data of fruit yield, top three genotypes ACUS 22-08, ACUS 22-03 and ACUS 22-10 exhibited higher fruit yield than check Anand Shhetal with increase of 22.30, 12.08 and 3.51 % respectively.

- ◆ **Preliminary Evaluation Trial: Anand**

This trial was conducted at Anand with eight genotypes and two checks. The fruit yield differences among genotypes were found significant. Significantly the highest fruit yield recorded by the genotype ACUS 22-10 over best check at Anand. Out of the eight genotypes, three genotypes ACUS 22-10, ACUS 22-11, ACUS 22-13 and ACUS 22-02 gave higher fruit yield than the local check Anand Sheetal.

- ◆ **Large Scale Varietal Trial: Anand and Deesa**

This trial was conducted at Anand and Deesa with seven genotypes and three checks. The fruit yield differences among genotypes were found significant. None of genotypes exhibited significantly superior performance over check at Anand location. On the basis of mean data of fruit yield, top two genotypes ACUS 20-08and ACUS 22-04gave higher fruit yield than check Anand Sheetal with increase of 9.79 and 8.36 % respectively.

- ◆ **Preliminary Evaluation Trial: Anand**

This trial was conducted at Anand with eight genotypes and two checks. The fruit yield differences among genotypes were found significant. Significantly the higher fruit yield recorded by the genotypes ACUS 22-10, ACUS 22-11 and ACUS 22-06over the local check Anand Sheetal.

4.3.1.10 Pumpkin

- ◆ Total 73 germplasm lines were maintained including 03 new collection and evaluated 01 variety.





4.3.1.12 Okra

- ◆ Total 416 germplasm lines were maintained and evaluated including 88 new collected germplasm. 12 crosses were made for ongoing hybrid evaluation programme and 35 new crosses were made during the year. Total 1812 segregating progenies were evaluated and individual plant selection was made for the next year.
- ◆ 16 trials were conducted including 09 state trials and 07 AICRP trials during *kharif* and summer season.

Summer 2024

◆ Large Scale Varietal Trial: Anand, Waghai

The trial was conducted at two locations *viz.*, Anand and Waghai. In this trial, seven entries were tested along with five checks. The genotypic differences for fruit yield were found significant at both locations. On the basis of mean data of fruit yield, genotypes WO 6, WO 2 and WO 4 exhibited 63.01, 27.16 and 25.30 per cent higher fruit yield than the best check.

◆ Large Scale Varietal Trial: Anand, Junagadh, Navsari, S. K. Nagar

This trial constituted of 16 genotypes including four checks *viz.*, GO 6, GAO 8, Pusa Sawani and AOL 23-01 were evaluated in summer season at Anand, Junagadh, Navsari and SKNagar center. The fruit yield differences among the genotypes were found significant at all the locations. On the basis of mean data of fruit yield, genotype AOL 22-14 was recorded 13.00% higher fruit yield than the best check GAO 8.

◆ Large Scale Hybrid Trial: Anand, Junagadh, Navsari, SKNagar

This trial was comprised of ten hybrids along with four checks GJOH 4, Pusa Sawani, GAO 8 and AOL 23-01. This trial was conducted at Anand, Junagadh, Navsari and SKNagar. Based on all locations mean data hybrid AOH 23-06 produced 19.61 per cent higher fruit yield over the best check GJOH 4 followed by SKOH 23-04.

◆ Preliminary Evaluation Trial: Anand

This trial was conducted at Anand with ten genotypes and five checks. The fruit yield differences among genotypes were found significant. Out of tested genotypes, top two genotypes AOL 22-22 and AOL 23-12 exhibited 9.68 and 4.52 per cent higher fruit yield than best check GAO 8, respectively.

Kharif 2024

◆ Large Scale Varietal Trial: Anand, Junagadh, Navsari, SKNagar, Ladol

This trial constituted of 14 genotypes including five checks *viz.*, GO 6, GAO 8, AOL 23-01, Pusa Sawani and Kashi Lalima were evaluated at Anand, Junagadh, Navsari, SKNagar and Ladol centers. The fruit yield differences among the genotypes were found significant at all the locations. On the basis of mean data of fruit yield, genotypes SKNOL 23-03 and AOL 22-14 exhibited 13.97 and 9.22 per cent higher fruit yield than the best check variety GAO 8, respectively.

◆ Large Scale Hybrid Trial: Anand, Junagadh, Navsari, SKNagar, Ladol

This trial was comprised of 11 hybrids along with five checks GJOH 4, Anand Kranti, GAO 8, AOL 23-01 and Pusa Sawani. This trial was conducted at Anand, Junagadh, Navsari, SKNagar and Ladol centers. Based on mean data of all locations, hybrid AOH 23-02 produced 13.95 per cent higher fruit yield over the best check GJOH).

◆ Small Scale Varietal Trial: Anand

The trial comprised of 14 genotypes including four checks GO 6, GAO 8, Pusa sawani and AOL 23-01. The fruit yield differences among the genotypes were found significant. Among the tested genotypes, top two genotypes AOL 22-22 and AOL 23-12 recorded higher fruit yield than the best check GAO 8. These tested top two genotypes *viz.*, AOL 22-22 and AOL 23-12 recorded numerically 3.89 and 1.36 % higher fruit yield than the best check variety GAO 8 respectively.





♦ **Preliminary Evaluation Trial: Anand**

In this trial, total 28 genotypes were tested including four checks viz., GO 6, GAO 8, Pusa Sawani and AOL 23-01. The differences due to genotypes for fruit yield were found significant. Among 28 tested genotypes, AOL 24-18 gave higher fruit yield than the best check GAO 8. It gave numerically 8.72 and 18.63 per cent higher fruit yield as compared to GAO 8 and GO 6.

♦ **Preliminary Hybrid Trial: Anand**

In this hybrid trial, nine hybrids were evaluated along with five checks GJOH 4, Anand Kranti, Arka Nikita, Pusa Sawani and AOL 23-01. The hybrid differences were found significant for fruit yield. Among tested hybrids hybrids, AOH 24-03 gave 9.90 per cent higher yield than the best check hybrid Anand Kranti.

4.3.1.13 Pulses

Cowpea

- ♦ Total 100 germplasm lines were maintained and evaluated including 08 new collections and 01 variety during *kharif* season.
- ♦ Four state trials were conducted during Summer and *kharif* season.

Summer 2024

♦ **Large Scale Varietal Trial**

The trial was conducted at four locations viz., Anand, Junagadh, Navsari and SKNagar. In this trial, 12 genotypes were tested including four checks. The green pod yield differences were found significant at all the locations. On the basis of mean data of green pod yield, genotype JCPLB 22-06 recorded 26.62 per cent higher green pod yield compared to best check AVCP 1.

♦ **Preliminary Evaluation Trial**

In this trial, 12 genotypes were tested including three checks. The green pod yield differences were found significant among tested genotypes. Genotypes AVCP 23-08 exhibited 28.93 per cent significantly higher green pod yield over the check AVCP 1.

Kharif 2024

♦ **Large Scale Varietal Trial**

The trial comprised of nine genotypes alongwiththree checks, AVCP 1, GVC 9andPusa Phalguni. The green pod yield differences were found significant at all the locations viz., Anand, Junagadh, Navsari, SKNagar and Jagudan. The mean green pod yield over the locations reveled that genotype JCPLB 22-06 exhibited the highest green pod yield. The genotype JCPLB 22-06 recorded 33.08 per cent higher green pod yield than the best check AVCP 1 over the locations.

Indian bean

- ♦ 79and 38 germplasm lines of Indian bean and valor, respectively were maintained and evaluated during *rabi*2023-24.
- ♦ Three state trials were conducted during *rabi* season

♦ **Large Scale Varietal Trial**

The trial was conducted at four locations viz., Anand, Junagadh Navsari and S. K. Nagar. In this trial, eight entries were tested along with four checks. The genotypic differences for green pod yield were found significant at all the locations. On the basis of mean data of green pod yield, genotypes GJIB 20-02, AFB (V)-21-06 and GJIB 20-08 exhibited 15.52, 15.34 and 13.53 per cent higher green pod yield than the best check GNIB 22.

♦ **Preliminary Evaluation Trial (Papadi)**

This trial comprised of 17 genotypes tested along with two checks Gujarat Papdi 1 and GJIB 2. The greed pod yield differences were found significant. Three genotypes AFB (P) 23-07, AFB (P) 23-04 and AFB (P) 23-05 gave the significantly 29.99, 20.95 and 17.60 per cent higher green pod yield than the best check Gujarat Papdi 1.

♦ **Preliminary Evaluation Trial (Valor)**

The greed pod yield differences were found significant. This trial comprised of eight genotypes tested with two checks Guj. Papdi 1 and GJIB 2. Five genotypes AFB (V) 23-03,





AFB (V) 23-07, AFB (V) 23-02, AFB (V) 23-08 and AFB (V) 23-01 gave significantly higher green pod yield than the best check Gujarat Papdi 1, respectively.

Cluster bean

- ◆ One state trial were conducted.
- ◆ **Preliminary Evaluation Trial: Anand**

This trial was conducted at Anand with eight genotypes and two checks. The green pod yield differences among genotypes were found significant. Out of tested genotypes, ACLB 24-02, ACLB 24-06, ACLB 24-08 and ACLB 24-03 exhibited 23.56, 20.60, 19.72 and 19.15 per cent higher green pod yield than best check GVG 11, respectively.

4.3.1.14 Potato

AHRS, Khambholaj

Crop improvement

Rabi 2024-25

- ◆ Total 206 germplasm lines including 25 new germplasm lines were maintained.
- ◆ For generation advancement 42 F_1 , 14 F_1C_1 and 12 F_1C_2 crosses were sown and selection were made.

List of new germplasm / Generation advancement material collected from ICAR-CPRI, Modipuram, Meerut, Rabi 2024-25

1	HT-21-07
2	HT-21-12
3	HT-22-07
4	HT-22-22
5	HT-23-27
6	HT-23-28
7	HT-23-29
8	HT-23-32
9	HT-24-34
10	HT-24-35
11	HT-24-36
12	HT-24-37

13	HT-24-38
14	HT-24-39
15	MP-23-109
16	MP-23-98
17	MP-24-07
18	MP-24-09
19	MP-24-10
20	MP-24-17
21	MP-24-19
22	MP-24-31
23	MP-24-32
24	MP-24-33
25	MP-24-37

- ◆ In LSVT experiment, total twelve entries including three checks were tested for tuber yield at Khambholaj and Deesa locations. The results indicated significant differences among the genotypes for tuber yield at both the locations at 75 and 90 Days. On average basis, none of the genotypes were found significantly superior than best check K. Sukhyati at both the locations.
- ◆ In PET I experiment, nineteen entries with five checks were tested for tuber yield. The results indicated significant differences among the genotypes for tuber yield at 90 DAP. The genotypes HT/23-32, HT/23-27, P-85, HT/21-12, HT/22-22/22-24 and HT/21-7 recorded significantly higher tuber yield than best check K. Pukhraj with a tune of 45.42%, 41.86%, 37.11%, 26.72 %, 24.05%, 18.71%, respectively at 90 days after planting.
- ◆ In PET II heat tolerant experiment, 23 heat tolerance entries with four checks were tested for tuber yield. The results indicated significant differences among the genotypes for tuber yield at 75 and 90 DAP. The genotypes HT-21-24 and HT- 21-1 recorded significantly higher tuber yield than best check variety K. Sukhyati with tune of 21.64 and 20.01per cent, respectively at 75 days after planting. AT 90 DAP, three genotypes viz., HT-21-1, HT- 21-24 and HT-21-21 were found significantly superior than best check K. Sukhyati with the tune of 21.31, 18.88 and 17.62 per cent, respectively.





- ◆ In PET III experiment for processing, thirteen entries with three checks were tested for tuber yield. The results indicated significant differences among the genotypes for tuber yield at 90 DAP. The genotype MP-22-79 recorded significantly higher tuber yield than best check variety K. Chipsona 1 with tune of 32.37 per cent, at 90 days of planting.
- ◆ In PET IV experiment for processing purpose, twelve entries with three checks were tested for tuber yield. The results indicated significant differences among the genotypes for tuber yield at 90 DAP. The genotype MP-22-74 and MP-22-73 recorded significantly higher tuber yield than best check variety K. chipsona 3 with tune of 46.84 and 30.21 per cent, respectively at 90 days of planting. The genotypes MP-20-9 also recorded higher tuber yield than best check K. Chipsona 3 with tune of 11.92 per cent at 90 days after planting.
- ◆ In PET V experiment, twelve entries with six checks were tested for tuber yield. The results indicated significant differences among the genotypes for tuber yield at 90 Days. The genotypes P 34 and P 46 were recorded significantly higher tuber yield than best check variety K. Lima with tune of 27.70 and 17.07 per cent, respectively at 90 days of planting.

4.3.1.15 Tannia

- ◆ Two state trials were conducted during *kharif* season.

- ◆ **Large Scale Varietal Trial**

This trial constituted of 15 genotypes including two checks *viz.*, Navsari Pari and Konkan Haritparni. The yield of leaves differences among the genotypes were found significant. Genotype ATS 23-08 gave 16.35 per cent higher yield leaves with petiole than the best check Navsari Pari.

- ◆ **Preliminary Evaluation Trial**

In this trial, total six genotypes were tested alongwith two checks *viz.*, Navsari Pari and Konkan Haritparni. The differences due to genotypes for yield of leaves were found

significant. Among eight tested genotypes, ATS 24-02 gave 5.67 per cent higher leaves yield than the best check Navsari Pari.

4.3.1.16 Sweet Potato

- ◆ Total 25 germplasm lines were maintained and 61 new crosses were made.
- ◆ One state trial was conducted during *rabi* season
- ◆ **Large Scale Varietal Trial: Anand and Navsari**

In this trial, 10 clones were tested along with two checks *viz.* Bhu kanti and Gouri. Among tested clones, three clones *viz.* ASPS 22-08, ASPS 22-06 and NSP 2 gave significantly higher tuber yield which depicted 29.82, 28.62 and 27.35% higher than the best check Bhu kanti at Anand location. On the basis of mean data of fruit yield, top three clones NSP 2, ASPS 22-08 and ASPS 22-06 gave higher tuber yield than check Bhu Kanti with increase of 28.97, 22.52 and 16.83% respectively.

4.3.1.17 Leafy Vegetables

- ◆ Two trials on palak and coriander and one state trial on fenugreek were conducted during *rabi* season

- ◆ **Preliminary Evaluation Trial (Coriander)**

This trial was conducted at Anand with 12 genotypes and two checks. The biomass yield differences were found significant among genotypes. Genotype ACoS 23-04 exhibited 24.19 per cent significantly higher biomass yield than check variety Arka Isha.

- ◆ **Preliminary Evaluation Trial II (Coriander)**

This trial was conducted at Anand with eight genotypes and two checks. The biomass yield differences were found significant among genotypes. Genotypes ACoS 22-12, ACoS 22-06, ACoS 22-13, ACoS 22-09 and ACoS 22-08 exhibited significantly higher biomass yield than check variety Arka Isha.

- ◆ **Preliminary Evaluation Trial (Fenugreek)**

This trial was conducted at Anand with eight





genotypes and two checks. The biomass yield differences were found significant among genotypes. Genotype AFGS 23-05, AFGS 23-06 and AFGS 23-08 exhibited 21.93, 7.05 and 5.23 per cent higher biomass yield than the best check variety GM 2, respectively.

◆ Preliminary Evaluation Trial II (Fenugreek)

This trial was conducted at Anand with eight genotypes and two checks. The biomass yield differences were found significant among genotypes. Genotype AFGS 22-01, AFGS 22-02 and AFGS 22-03 exhibited 28.52, 26.73 and 23.97 per cent higher biomass yield than the best check variety GM 2, respectively.

◆ Preliminary Evaluation Trial (Palak)

This trial was conducted at Anand with 13 genotypes and one check. The leafy yield differences were found significant among genotypes. Genotype APAS 23-12, APAS 23-03 and APAS 23-04 exhibited 41.03, 40.36 and 35.37 per cent higher leafy yield than the check variety All Green, respectively.

4.3.2 MEDICINAL AND AROMATIC PLANTS

Crop Improvement

4.3.2.1 Isabgol

- ◆ Two trials were conducted during *rabi* season.
- ◆ **Small Scale Varietal Trial**

In this experiment, total 4 genotypes along with three check varieties i.e. GI-2, GI-3 & VI-1 were tested. None of the genotypes under testing surpassed the yield potential of Vallabh Isabgol-1. In the tested entries, APOG-20 demonstrated at par yield potential compared to the best check variety VI-1. The check variety VI-1 possesses higher number of spikes and branches per plant along with longer spike length.

◆ SSVT + LSVT trial

In SSVT + LSVT trial of Isabgol from Jagudan, twelve genotypes including two checks viz., GI-3 and GI-4 were evaluated for their yield and

yield contributing factors. The genotype IST-3 produced significantly higher seed yield with 6.00 percent increase over best check JIS 611 which was due to higher numbers of branches per plant, longer spike length and higher 1000 seed weight.

Isabgol Crossing programme (2024-25)

Sr. No.	Crosses made			Objective of the crossing
1	GI-2 (MS)	x	IG 23	Early, thick and long spike
2	GI-2 (MS)	x	IG 29	Wheat type spike mutant
3	GI-2 (MS)	x	IG 51	Early, longer spike length
4	GI-2 (MS)	x	IG 52	Early, sparse and long spike

4.3.2.2 Ashwagandha

◆ Preliminary Evaluation trial

This PET trial was formulated to identify best genotypes having higher dry root yield potential in Ashwagandha. Significant variations were observed among the six genotypes tested for dry root yield. AWSG-13 provided significantly higher dry root yield which was 12.2 per cent higher compared to the best check GAA-1 as it possesses longer root length and higher root girth. Genotypes AWSG 79, AWSG 95 and AWSG 76 also performed at par for the dry root yield potential.

4.3.2.3 Kalmegh

◆ Preliminary evaluation trial

- ◆ The trial consists a total eight test entries along with two check variety Anand Kalmegh-1 and Vallabh Kalmegh-1. The yield differences were found highly significant among tested genotypes. Genotype AAPG-63 gave highly significant yield than both the check varieties AK-1 and VK-1, which was 21.70 per cent higher than the best check variety VK-1. The genotype AAPG-63 gave higher dry panchang yield than the best check because of having higher plant height, plant spread, number of branches and larger leaf size.





Kalmegh Crossing programme (2024-25)

Sr. No.	Crosses made			Objective of the crossing
1	AK-1	x	APOG 63	Late maturity, Higher dry biomass and andrographolide content
2	AK-1	x	APOG 48	
3	AK-1	x	APOG 52	
4	AK-1	x	VK-1	Varietal cross

At M&APRS, AAU, Anand following new germplasm were collected during 2024-25

Sr. No.	Accessions	No. of accessions
1	Turmeric (<i>Curcuma longa</i>)	80
2	Ginger	2
3	Brahmi	1
4	Chamomile	1
5	Kalonji	1
6	Ashwagandha	3
7	Allied collections	20
8	Turmeric(<i>Curcuma longa</i>)	80
Total		108

4.3.2.4 Aloe vera

Development of Minimum Seed Certification Standards in Aloe vera

The trial was started with an objective to develop the seed standards and fixing the size of the suckers for the seed production. In this context, Gujarat Anand Kuvarpathu-1 variety was taken to test four sizes of suckers (T1: 6 inch, T2: 9 inch, T3: 12 inch and T4: 15 inch.) to grow at the time of transplanting. It was observed that the 15 inches size of the sucker was most suitable for the transplanting of suckers as it delivered 8.22 tons of mucilage yield.

Crop Physiology

Following trials were conducted

- Impact of source manipulation practices on morpho-physiological, biochemical and sennosides biosynthesis gene expression of Senna (*Cassia alexandriana* Mill.) under different harvesting stage
- Comparative nutritional assessment of

safedmusli under different drying conditions

- Morpho-physiological and phytochemical characterization of aromatic plants in response to cadmium stress
- Effect of different harvesting period on yield and phytochemical contents and its consequences on sprouting of Safed musli

Crop production

Following trial was conducted

- Effect of Date of transplanting and spacing on herbage yield and quality of Black Tulsi (*Ocimum sanctum* L.)

4.3.3 FRUIT CROPS

Department of Horticulture, BACA

In research front efforts are being made to concentrate on Hi-Tech recent advances in the field of horticulture including basic and applied research. These are being carried out separately by the department and with the collaboration of other departments. The department having about 25-hectare land for research and demonstration activities for fruit, vegetable and flower crops.

Following field trials were conducted successfully during the year 2024-25 on different horticultural crops.

- Evaluation of intervarietal and interspecific *Annona* hybrids
- Nutrient Management in Dragon Fruit (*Kamalam*)

Generation wise detail and new crosses made during the year. -

- Dragonfruit crosses did by two varieties - 21 crosses
- Guava crosses made by using four varieties - 41 crosses
- Sapota crosses made by using five varieties - 150 crosses





No. of direct crosses & reciprocal crosses attempted during *Kharif* 2024 in lime

Parents	Date	Number of crosses
Seedless × Kagdi	16-10-2024	20
	21-10-2024	10
	25-10-2024	4
	18-12-2024	17
	17-01-2025	5
	18-01-2025	14
	22-01-2025	15
	28-01-2025	13
	29-01-2025	25
	07-02-2025	24
	10-02-2025	23
	13-02-2025	22
	14-02-2025	17

Parents	Date	Number of crosses
Kagdi × Seedless	28-02-2025	2
	01-03-2025	20
	02-03-2025	10
	03-03-2025	11

No. of fruits set during *Kharif* 2024

Parents	Total Number of crosses	No. of Fruit setting
Seedless × Acid lime	209	80
Acid lime × Seedless	43	13

College of Horticulture

Fruit Science Dept.

- ◆ Effect of time and length of pruning on yield and quality of custard apple (*Annona squamosa* L.) under middle Gujarat conditions

Vegetable Science Dept.

- ◆ Effect of different time of transplanting and spacing on growth and yield of knol-khol under middle Gujarat conditions.
- ◆ Effect of growing conditions and soilless media on growth and yield of capsicum

- ◆ Effect of integrated nutrient management on growth, yield and quality of onion
- ◆ Assessment of crop management modules in okra + cowpea - cabbage + fenugreek inter-cropping system, CP/CoH, Anand 2020/02 (Collaborative members)

Floriculture and Landscape Architecture Dept.

- ◆ Effect of different growing condition and media on growth and flowering of orchid.

Plant Protection Dept.

- ◆ Effect of eco-friendly inputs against aphid infesting vegetable cowpea
- ◆ Bio-efficacy of ready mix fungicides against powdery mildew of coriander
- ◆ Efficacy of nano-particles against powdery mildew of coriander

Natural Resource Management Dept.

- ◆ Nutrient management on growth and yield of turmeric (*Curcuma longa* L.)

Post-Harvest Technology Dept.

- ◆ Development of reduced sugar aonla beverage utilizing stevia

Plant Protection Dept.

- ◆ Evaluation of different modules against major lepidopteran insect-pests infesting cabbage
- ◆ Effect of eco-friendly inputs against aphid infesting vegetable cowpea
- ◆ Bio-efficacy of insecticides against fruit borers infesting jamun
- ◆ Bio-efficacy of botanicals against fruit borers infesting jamun, Feeler Trial
- ◆ Bio-efficacy of ready-mix fungicides against powdery mildew of coriander
- ◆ Efficacy of nano-fungicides against powdery mildew of coriander
- ◆ Evaluation of ready-mix fungicides against Alternaria blight of cluster bean





Basic Science Dept.

- ◆ Machine learning approaches to irrigation water quality parameters prediction

Social Science Dept.:

- ◆ Crop diversification in Ahmedabad district

D. M. polytechnic in Horticulture, Vadodara

Following experiments conducted during the year

- ◆ Effect of seed treatment on germination and growth of Fishtail Palm (*Caryota urens* L.) seedling.
- ◆ Effect of nano nitrogen on yield and quality of mango
- ◆ Effect of IBA and growing conditions on growth of cutting in Mogra (*Jasminum sambac*) var. Local.
- ◆ Effect of growing condition, rootstock height and poly-tube cap on softwood grafting in jamun.
- ◆ Effect of different growing media and fertilizer on palak on terrace vegetable cultivation.
- ◆ Effect of different growing media and fertilizer on Fenugreek on terrace vegetable cultivation.
- ◆ Effect of nano Zn and Fe on yield and quality of Acid lime. cv. *Kagzi lime*
- ◆ Effect of different spacing and number of plants per pole on growth, flowering and fruiting of dragon fruit (*Kamalam*).

College of Agriculture, Jabugam

Following experiments conducted during the year

- ◆ Effect of spacing on yield of banana (dwarf banana)
- ◆ Effect of NPK on yield of Banana cv. Anand Vaaman

Mango

- ◆ Total 27 germplasm including 08 new germplasm were maintained.

Banana

- ◆ Total 86 germplasm were maintained including 06 new germplasm were collected.
- ◆ In Ornamental Banana Inter-specific hybrid 43 cross were maintained including 03 new cross.

4.3.4 SEED SPICES (Sanand)

Seed Spices Research Station is the only centre among all nine districts of AAU zone working on improvement of seed spice crops since 2008. The significant contribution of the centre revealed with the release of two high yielding dill varieties viz., Gujarat Anand Dill seed 1 for seed purpose and Gujarat Anand Vegetable Dill 1 for salad purpose. The centre is working as a voluntary centre of AICRP on Spices crops for cumin crop since 2014 with the main objective of collection, characterization, evaluation, conservation and screening of cumin germplasm. The centre has also started conducting AICRP trials for screening of the genotypes developed at different centres of India. The centre has a wide range of genetic stock in all major seed spice crops.

For creation and maintenance of genetic diversity, different aspects like mutation breeding, heterosis breeding, selection breeding etc. are being adopted for the improvement in yield and contributing traits. Hybridization programme has been started in coriander and fennel crops.

- ◆ Total 08 trials on different seed spices were conducted successfully during the year.
- ◆ AICRP trials- CVT on coriander and Cumin germplasm characterization were conducted successfully. All state trials S/LSVT on seed spices were conducted successfully except cumin due to high disease incidence of root rot and blight. S/LSVT on cumin was severely damaged by cumin blight disease, but it helped in screening out some of the cumin lines tolerant to blight disease. Cumin entry Sanand Cumin 13 (SC 13) was found tolerant to blight disease in the field condition. Fenugreek entry SFg 5 found early and tolerant to powdery mildew disease. Hybridization programme





by hand emasculation and pollination were started in coriander and successfully made crosses. Also, successfully made intergeneric reciprocal crosses of Dill seed var. GAD 1 and Fennel var. GF 11.

- ◆ Total 07 new crosses attempted in coriander. From these crosses, 250 seeds of coriander were harvested.
- ◆ Total 01 new crosses attempted in dill seed. From these crosses, 15 seeds of dill seed were harvested.
- ◆ Total 01 new crosses attempted in fennel. From these crosses, 21 seeds of fennel were harvested
- ◆ 267 progenies of coriander were raised of which 118 IPS were made
- ◆ 18 progenies of fennel were raised of which 20 IPS were made

4.4 FORESTRY --NA--

4.5 CENTRE FOR PLANT MOLECULAR BIOLOGY AND BIOTECHNOLOGY

Cotton, Chickpea, Tomato, Maize, Castor, Rice, Mustard, Cucumber, Cowpea, Chilli, Fenugreek, Kasuri methi, Mungbean, Uradbean, Ridge gourd, Brinjal, Cluster bean, Kodo Millet, Oats, Okra, Banana etc. are the crops in which research was carried out. The planning was done to carry out crop based research for improvement of yield and quality. The work pertaining to breeding varieties/hybrids for resistance to various biotic (disease and insect) and abiotic stresses (drought and salinity), identification and molecular characterization has been carried out. Crop-wise research activities carried out at this department under various schemes are given below

4.5.1 Cotton

- ◆ For QTL mapping in desi cotton, out of 836 SSR markers, 120 were observed polymorphic between parents [GVhv 1057 (lintless) and GVhv 936 (long linted >28mm UHML)].

- ◆ DNA was isolated from 188 F₂ lines and quality and quantity of genomic DNA was assessed on Agarose gel.
- ◆ Genotyping of population using 40 SSR markers was completed.
- ◆ Parental variability of 4 parents and hybridity testing of their hybrids were accessed for triple test cross using SSR molecular marker.

4.5.2 Okra

- ◆ Eighteen genotypes of okra were evaluated under PET in *Kharif*-2024. None of the genotypes exhibited YVMV symptoms in *Kharif* trial.
- ◆ Eighteen genotypes of okra were evaluated under PET in *Kharif* 2024. None of the genotypes exhibited YVMV symptoms in *Kharif* trial. The fruits per plant varied from 15.8 (DHO-20-3) to 27.9 (DHO-S-22-10). The maximum fruits per plant was depicted by DHO-S-22 -10 (27.9) followed by GAO-5 (24.5) & DHO-S-22 -11 (24.3)

4.5.3 Tomato

QTL Mapping for RKN resistance

- ◆ All available variants of SL -120 which were found resistant in sick plot were raised in MVRS farm to identify resistant SL-120 variants.
- ◆ The visual observations of variants were made for morphological characters as per DUS characters of original SL-120 cultivar especially for fruits traits.
- ◆ At the time of harvesting, plants were uprooted for gall intensity in variants.
- ◆ To improve the purity, 10 seedlings were again sown in MVRS farm in late kharif-2023 and seeds were collected from single pure SL-120 plants and seeds of the same has been submitted to Department of Nematology, BACA, AAU, Anand
- ◆ Crosses were attempted using SL-120 as male parent and LA 4440, Roma and GAT-5 as female parent.
- ◆ F₁ were harvested and was raised in Kharif for development of F₂ mapping population.





QTL Mapping for lycopene and shelf life

- DNA was isolated from selected high lycopene containing germplasm namely *S. lycopersicum* var., cerasiforme, *S. pimpinellifolium*-IIHR-1966 and ACTL-21-15 and low lycopene containing line viz., *S. Arcanum*- LA-2157, ACTL-21-17 and one F₆ line.
- Lycopene associated with linked primers were validated through primer amplicon profiling in selected F₄ families (5 plants per family).
- The PCR amplification with linked markers namely TGS-127 and TGS-740 in known high (*S.lycopersicum* var., cerasiforme, *S. pimpinellifolium*-IIHR-1966 and ACTL-21-15) and low lycopene (F₆ generation, *S. Arcanum*- LA-2157 and ACTL-21-17) genotypes revealed that the identified linked marker was successfully able to discriminate high/low lycopene genotypes.

Tomato Breeding

- A total of 80 entries including cultivated lines, wild *spp* and exotic germplasm were evaluated for TLCV under field condition. TLCV was highest (100.0%) in Hissar Lalit followed by GT-2 (90.0%) while, GAT-5 showed resistant reaction (0.0%) against TLCV.
- The different hybrids were morphologically evaluated & hybrid purity was also confirmed by DUS traits. The selected plants of F₁ were selfed to get F₂ seeds.

Embryo rescue in distant crosses of tomato

- During the *Kharif-Rabi* season of 2023-24, crosses were attempted between GAT-5 × LA 2157 and Anand Roma × LA 2157 (*S.arcanum* L.) and F_{1s} were harvested. The resulted fruits of hybrids had limited rudimentary seeds. Further, embryo rescue process was used to advance the generation of F_{1s}.

4.5.4 Custard Apple (*Annona species*)

- A total of eight genotypes (hybrids & varieties) were evaluated for eight quantitative traits namely number of fruits/ plant, fruit length

(mm), fruit girth diameter (mm), fruit weight (g), seeds/fruit and fruit yield/plant (kg).

- New three way crosses [F₁ (*Cherimoya* × Balanagar) × Sindhan] and backcross [F₁ (*Cherimoya* × Balanagar) × Balanagar] were made and seed from crossed fruit were extracted.

4.5.5 Rice

- QTL mapping for bacterial leaf blight, a set of 400 SSR primers were screened on parental DNA TN-1 (Susceptible) and NWGR-11002 (Resistant).
- F₂ plants were raised in 2024 and leaf samples were collected followed by DNA extraction. Population was selfed and F₃ seeds were harvested.
- Genotyping of F₂ lines was performed using SSR markers.
- In Kharif 2025, F_{2,3} population will be raised in field for phenotyping for BLB reactions in two replications.

4.5.6 Potato and Sweet Potato

- Genetic diversity of 46 potatoes from different source across the country was initiated.
- DNA from all these genotypes was isolated and was tested for identification of polymorphic ISSR markers.
- Total of 15 ISSR markers were tested and the polymorphic markers will be utilized for diversity analysis.
- In sweet potato, 30 genotypes were collected from Main Vegetable Research Station comprising accession from different regions of Gujarat.
- DNA from all these genotypes was isolated and was tested for identification of polymorphic SSR markers.
- Total of 15 SSR markers were tested and the polymorphic markers will be utilized for diversity analysis.





4.5.7 Cucumber

- ◆ Four new cucumber crosses were attempted using genotypes Anand Sheetal, Iqbalgadh, DHCU-19-6, and GCU-1 to combine desirable traits yield and quality. Reciprocal crosses also have been made.
- ◆ Back crosses and Three-way crosses and Four-way crosses have been attempted using Anand Sheetal, Iqbalgadh, GCU-1 and their hybrids during *Kharif-2024*
- ◆ Different segregating generations were raised and promising lines were identified.

4.5.8 Cowpea and Yard Long Bean (*Vigna unguiculata subsp. sesquipedalis*)

- ◆ Different lines of cowpea were raised and evaluated for morphological traits under PET trail.
- ◆ Five promising lines (vegetable purpose) were identified after evaluation for YVMV resistance and yield attributing traits.
- ◆ Twenty seven yard long bean lines were evaluated for morphological and yield attributing traits and were also screened YVMV disease.

4.5.9 Mustard

- ◆ Different entries of mustard developed through interspecific hybridization were evaluated for yield and aphid interaction along with 3 checks during *rabi 2024*.

4.5.10 Mungbean and Uradbean

- ◆ Segregating materials of F_3 and F_4 generations developed through interspecific hybridization between mungbean (GAM-5) and Urdbean (GAU-4) were grown for generation advancement during summer and *Kharif 2024*. Individual plants were selected for further evaluation.

4.5.11 Ridge gourd

- ◆ Individual plants were selected from segregating generations (F_2 , BC_1F_1 , BC_1F_2 and F_3) of ridge gourd based on sex expression

developed through intercross between Garg-1 X Kashi Kushi (hermaphrodite, gynoeceum and derivative plant types).

4.5.12 Cluster bean

- ◆ F_1 hybrid between vegetable guar and gum guar were raised for generation advancement.
- ◆ New crosses were attempted between vegetable guar variety Anand Bahar and gum guar accessions DRLGA 13-2, DRLGA 13-4, DRLGA 13-23, and DRLGA 16-19 to developed variety/line for vegetable.

4.5.13 Brinjal

- ◆ Variability study was performed in 14 genotypes of brinjal using 11 ISSR markers for line by tester analysis.
- ◆ Of the 11 ISSR markers, 5 markers showed robust and polymorphic bands which discriminate the genotypes efficiently.
- ◆ A bulk segregant analysis was carried out in brinjal from the cross made between highly resistant (Dolly) and highly susceptible (Punjab Sadabahar) genotypes for *Ralstonia* wilt disease.
- ◆ A total of 200 RAPD markers were screened of which 1 RAPD marker were found specific for *Ralstonia* wilt disease.
- ◆ The same band was further sequence and SCAR marker was developed.
- ◆ The scar marker was successfully discriminated between resistant and susceptible genotypes of brinjal.
- ◆ Bulk segregant analysis for little leaf disease of Brinjal was carried out using highly resistant (Anand Dolly) and highly susceptible (Panjab Sadabahar) genotypes.
- ◆ A total of 22 ISSR marker were screened, and two were found polymorphic between the parents.
- ◆ Total of 250 F_2 mapping population was raised in field and DNA was isolated.
- ◆ Based on phenotypic disease scoring





observation, 10 plants from each resistant and susceptible genotype were selected for DNA isolation.

Proteomics analysis for Little leaf disease

- ◆ Proteomics analysis for little leaf disease in brinjal was carried out with an aim to identify the candidate gene responsible for resistance mechanism in resistant cultivar.
- ◆ Protein was extracted from both resistant (Dolly) and susceptible (Punjab sadabahar) genotypes at disease incidence.
- ◆ Protein was subjected to SDS-PAGE analysis for visualization of the differences present between the protein bands were determined
- ◆ In-solution trypsin digestion of protein extracted from both genotypes was performed.
- ◆ The digested protein was further eluted in LC-MS/MS mass spectrometry for identification of the unknown protein.
- ◆ The surveyed protein was tested for identification of defense related protein.

Hybridity testing

- ◆ In dragon fruit, 18 hybrids were developed using three parental lines by the Department of Horticulture, B.A. College of Agriculture (B.A.C.A.). These hybrids were tested for genetic trueness using ISSR markers. Out of the 18 hybrids, 4 were confirmed to be true hybrids.

DNA Fingerprinting

- ◆ DNA fingerprinting of various released and pre-released varieties of brinjal, maize, chilli, cherry tomato, lucern, bitter gourd and forage pearl millet were carried out.
- ◆ DNA fingerprinting of three wheat genotypes were carried out for registration in NBPGR, New Delhi.

GENETIC ENGINEERING

- ◆ **Tomato for Root Knot Nematode (RKN) resistance trait**
- ◆ The seeds were collected from the T₀ plants

and further used for RKN inoculation.

- ◆ Nursery was raised from the T₁ tomato seeds and plants were tested for presence of gene construct.
- ◆ Established plantlets were transplanted in pots the transgenic greenhouse.
- ◆ PCR amplification using *hpt* selectable marker was carried out for confirmation of the presence of the *Mi-1* gene cassette.
- ◆ The transformed plants in pot are currently inoculated with nematode culture.

Genetic transformation of maize for crocetin production in maize silk

- ◆ *In planta* genetic transformation were carried out in germinating seeds maize cv. GYL-9.
- ◆ A new dual construct comprising of *CCD2L* and *Aldh* genes was made.
- ◆ Initially, the pCAMBIA 1301 vector was digested with *EcoRI* and *Sall* restriction enzyme. Then the digested product was further run on agarose gel. The corresponding band of digested vector was eluted.
- ◆ The restriction digested and PCR amplified *CCD2L* gene was subjected to *In-fusion* cloning reaction.
- ◆ The cloning reaction mix was used to transform *Stellar* competent cell and positive colony was selected for plasmid isolation.
- ◆ The same final cloned construct was used to clone *Aldh* gene sequentially under CaMV 35s Promoter.
- ◆ Further the pCAMBIA 1301 harboring *CCD2L* gene was digested with restriction enzyme *NcoI* and *PmlI* and same was used to clone the *Aldh* gene as described above.
- ◆ This dual construct was transferred to *Agrobacterium* strain EHA-105 for maize transformation.
- ◆ Approximately, 5000 seeds were wounded longitudinally at the embryo axis and placed overnight in inoculating with *Agrobacterium*





EHA105 strain harboring *CCD2L-A1dh* gene cassette.

- ◆ After overnight inoculation, maize seeds were washed with cefotaxim (200 mg/ L) followed by distilled water twice.
- ◆ Afterwards seeds were transferred to pot containing cocopeat and soil in 1:1 ratio.
- ◆ These plants were watered regularly with hygromycin solution (50 mg/L) for two weeks.
- ◆ A total of 792 plants were survived under selection pressure.
- ◆ The survived plants were transferred to the transgenic greenhouse for further growth and development.
- ◆ DNA was isolated from all these plants and was subjected to PCR analysis by *Hpt* primer.
- ◆ PCR analysis of putative transformants showed that out of 792 plants, 134 plants were positive.
- ◆ Out of 134 plants 107 plants are successfully established in the greenhouse.
- ◆ The positive transformed plants are currently under selfing to obtain T₁ generation.
- ◆ Maize silk of all positive T₀ transformants were collected and used for further RPLC-MS/MS analysis for determination of the crocetin content.

Genetic transformation of tomato for heat tolerance

- ◆ Sequence of small heat shock protein gene *sHsp 23.2* of wheat was retrieved from the NCBI database.
- ◆ *sHsp23.2* CDS sequence was procured from the Eurofins in standard vector.
- ◆ The *in-fusion* primers were designed for amplification of the *sHsp 23.2* gene harboring by standard vector.
- ◆ At the same time pCAMBIA 1301 vector was digested with *NcoI* and *PmlI* restriction enzyme.
- ◆ The PCR amplified *sHsp 23.2* gene and digested

vector was subjected to in-fusion cloning reaction.

- ◆ This reaction was used to transformed stellar competent cells.
- ◆ The plasmid was isolated from positive colonies and further used to transformed *Agrobacterium* EHA 105 competent cells.
- ◆ This transformed *Agrobacterium* was used to transform cotyledon of tomato cultivar Anand Roma.
- ◆ The plants regenerated after selection on 5 mg/L hygromycin were PCR tested for successful genetic transformation.
- ◆ The putative transformants were transferred to greenhouse.

GENOME EDITING

Bio-fortification of tomato for enhancing pro-vitamin D content

- ◆ A total of 200 seeds were subjected to *In Planta* transformation using seed pricking method.
- ◆ Out of 200 seeds, only 25 were germinated.
- ◆ PCR amplification of the 25 survived plants were carryout out, of which 13 were found PCR positive for *Hpt* gene.
- ◆ The transformed true positive plants were transferred to greenhouse.
- ◆ The sterol was extracted from leaf and tomato fruit (immature green, breaker and riped) from both control and transformed.
- ◆ LC-MS/MS method was optimized for identification and quantification of 7DHC pro-vitamin D3 using analytical standards.
- ◆ Quantification was made from all the samples and was compared with the control samples.

Genome editing through CRISPR-Cas9 in tomato for heat tolerance

In vitro synthesis of sgRNA

- ◆ Gene sequence of *SIMAP3* (NM_001247431.2) was retrieved from the NCBI database.





- ◆ The nucleotide sequence of CDS region was subjected to CHOPCHOP online sgRNA detection tool.
- ◆ A total of 2 sgRNA was selected based on rank position with no off target score.
- ◆ Sequence of sgRNA was investigated for secondary structure prediction and those with no secondary structure were selected for further downstream processing.

Invitro sgRNA mutation assay

- ◆ New set of single stranded sgRNA was designed with T7 promoter sequence at 5' end of the sgRNA.
- ◆ Synthesized sgRNA was further purified by small RNA purification kit.
- ◆ The purified sgRNA was used for further mutation study using Guide-it mutation detection kit (TAKARA).
- ◆ The PCR amplicon was then mixed with *in vitro* synthesized sgRNA and Cas9 enzyme with scaffold mix for determination of sgRNA cleavage specificity.
- ◆ The sgRNA which cleaved the target gene PCR product and give only band of interest was selected for further CRISPR vector designing.

CRISPR vector construction

- ◆ In house kit for designing CRISPR vector was used to clone multiple sgRNA into the vector backbone.
- ◆ The DNA element required for synthesis of small RNA namely promoter (Arabidopsis U6-26p, U6-29p, and U6-1p) along with terminator (U6) and scaffold was synthesized.
- ◆ Overlapping extension PCR was performed to clone sgRNA in frame of promoter, scaffold and terminator as shown below in pictorial representation.
- ◆ Two sgRNA was cloned using overlap extension PCR technique.
- ◆ In fusion cloning reaction was performed to clone two sgRNA construct into the pCRISPR

1301 vector

- ◆ The ligated mixture was transformed into stellar competent cell and was screened on LB agar plate containing kanamycin as a selective antibiotic agent.
- ◆ The positive colony was further propagated and plasmid was isolated.
- ◆ DNA sequencing was performed for confirming orientation of sgRNA cassette.
- ◆ The final construct containing both sgRNA in frame was named pAAU-SIMAP3-CRISPR vector.

Genetic transformation of Tomato

- ◆ In house developed pAAU CRISPR vector was mobilized into Agrobacterium strain LBA 4404 and was utilized for transformation of tomato hypocotyle tissue.
- ◆ After transformation, explant was placed on selection medium containing 5 mg/l hygromycin as a selectable marker.
- ◆ Molecular analysis of the putative transformants
- ◆ DNA was extracted from putative tomato transformed (T_0) plants and were subjected to PCR amplification using Hpt primer. The plants found PCR positive were subjected to heat treatment.

Confirmation of the mutation in the T_0 transformants

- ◆ Sanger's DNA sequencing was performed to confirm the mutation. As the T_0 transformants are hemizygous state, DNA sequencing of raw file was subjected to TIDE online model for identification of the insertion/deletion events in the genome edited plants.
- ◆ Heat stress treatment
- ◆ Seeds of wild type (WT) and T_0 transformants were germinated in with 16 h of light and 8 h dark photoperiod transferred into pots containing soil, and vermiculite (1/1 by V). A well-established six-week-old wild type (WT) and transformants





were exposed to 42°C temperature and 60- 65% relative humidity for two days in illuminated plant growth chamber (Percival).

Whole Genome Sequencing of saffron

- ◆ For whole genome sequencing, high molecular weight (HMW) DNA is required. For that leaf sample was used to isolate HMW DNA using NucleoBond HMW DNA kit.
- ◆ Isolated gDNA quantity was measured using a Qubit 4.0 fluorometer (ThermoFisher #Q33238, ThermoFisher Scientific, Massachusetts, USA) using a DNA HS assay kit (ThermoFisher #Q32851, ThermoFisher Scientific, Massachusetts, USA).
- ◆ DNA purity was checked using NanoDrop 2000 (ThermoFisher Scientific, Massachusetts, USA).
- ◆ The integrity of DNA and SMRT library size was evaluated on 1% agarose gel and Agilent FEMTO pulse analyzer DNA size was estimated (Agilent Technologies, California, USA).
- ◆ The library was constructed using the SMRTbell Express template Preparation Kit 3.0 (Pacific Biosciences, California, USA) as per the manufacturer's protocol. The prepared library was purified using AMPure PB beads (Pacific Biosciences, California, USA).
- ◆ AMPure PB beads size selection carried to remove fragments shorter than 5 kb.
- ◆ Size Selected SMRT libraries were purified and then subjected to primer annealing, and polymerase binding was used to prepare the bound complex using Sequel II binding kit 3.2. About 90 pM of the library was loaded on SMRTcell containing 8M ZMW and sequenced in PacBio Sequel II system in CCS/HiFi mode.

Bioinformatics Analysis

QC of PacBio Hi-Fi and Illumine PE read

- ◆ Runqc-reports (8.0.4) and FastQC(v0.12.1) tools were used to do quality control on Hi-Fi and Illumina reads respectively with standard parameters.
- ◆ Conversion of subreads to CCS HiFi reads and Trimming of Illumina reads
- ◆ The subreads generated by the PacBio sequel II are converted to CCS HiFi reads using CCS (6.3.0).
- ◆ HiFi reads produced by calling consensus from subreads generated by multiple passes of the enzyme around a circularized template. This results in HiFi reads that are long, accurate, and have an accuracy of 99.9%.
- ◆ The Illumina PE reads were trimmed using FastP(0.23.4)with standard parameters.

Genome Assembly and Assessment

- ◆ Genome assembly of HiFi reads was carried out using the assembler "Hifiasm" (0.19.9-r616) which performed in three rounds of haplotype-aware error correction to correct sequence errors while keeping heterozygous alleles.
- ◆ BUSCO (5.6.1)analysis was used to assess the completeness of the assemblies generated using lineage embryophyta.
- ◆ Genome annotation was carried out using "AUGUSTUS (3.3.2)

Distant hybridization

Embryo rescue in distant crosses of tomato

- ◆ During the *Kharif rabi* 2023-24, crosses were made between Anand Roma × LA 2157 (*S. arcanum*) and GAT-5 × LA 2157.
- ◆ Due to few rudimentary seeds in fully ripened cross fruits, embryo rescue technique was initiated to get F_{1s} plants.
- ◆ Embryos from the cross Anand Roma × LA 2157 were cultured on MS medium for a total of 16 days, while those from GAT-5 × LA 2157 were cultured for 3 days. The crossed fruits used for embryo culture ranged in maturity from 25 to 49 days after pollination, with the standard maturity set at 30 days (Fig. 14)
- ◆ A total of 833 embryos were inoculated for rescue, but only 4 embryos germinated and plantlets were obtained from the Anand Roma × LA 2157 cross combination (Fig 15). In contrast, for GAT-5 × LA 2157, a total of 145 embryos were inoculated, but none of them showed a response (Table 7).





Anand Roma

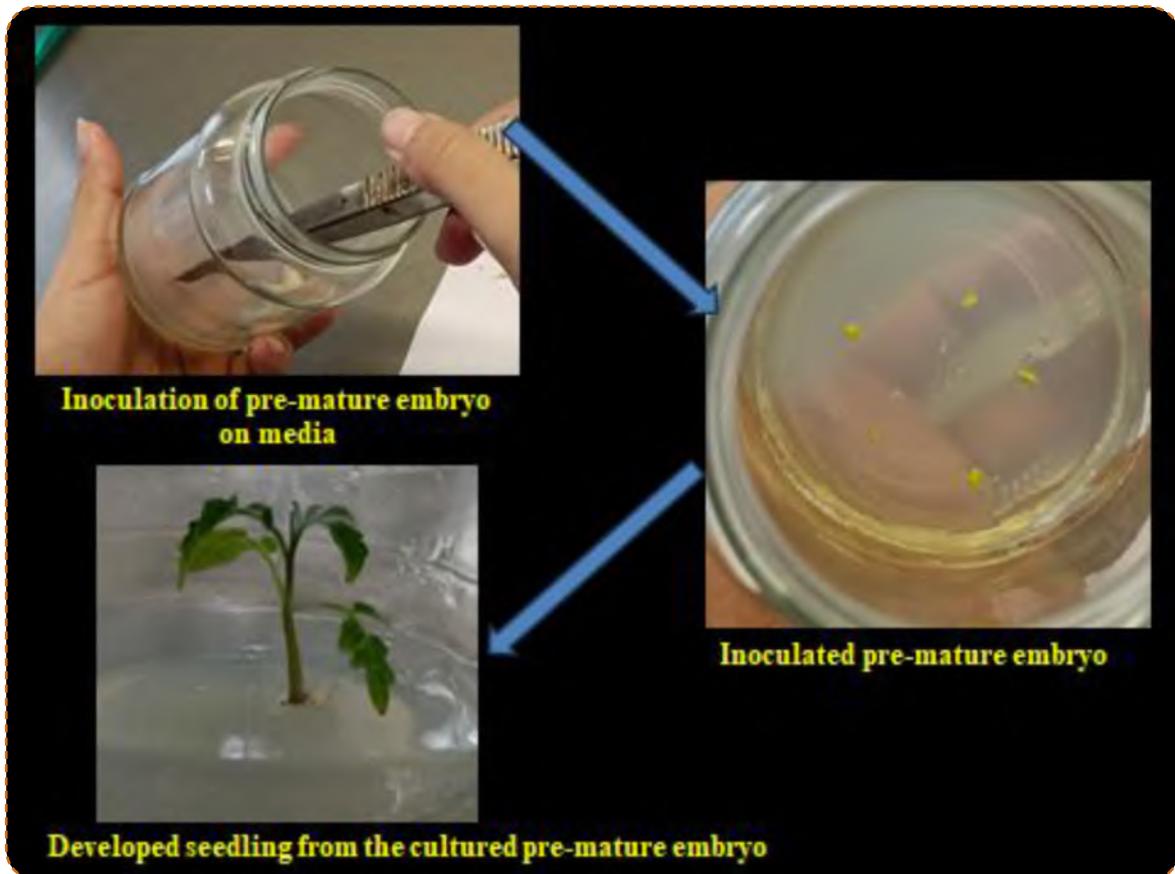


LA-2157

Representation of parent used for inter-specific hybridization in tomato



Fruits harvested from Anand Roma after 30 days of pollination by LA 2157 for embryo rescue



Inoculation of embryo and development of plantlets from pre-mature embryo in tomato





Crosses attempted in tomato during Kharif-Rabi-2023-24

Sr. No.	Cross Combination	No. of crosses attempted
1	GAT-5 × LA 2157	983
2	Anand Roma × LA 2157 (<i>S. arcanum</i> L.)	1051

New crosses attempted in cultivated & cherry tomato during Kharif-Rabi-2024-25

Sr. No.	Cross Combination	No. of crosses attempted
1	DHCT-3 × Pusa cherry tomato	308
2	Pusa cherry tomato × DHCT-3	242
3	DHCT-15 × Pusa cherry tomato	181
4	Pusa cherry tomato × DHCT-15	141
5	DHCT-17 × Pusa cherry tomato	144
6	Pusa cherry tomato × DHCT-17	304
7	Anand Roma × SL 120	372
8	GAT-5 × SL 120	175
9	LA-4440 × SL 120	242
Back crosses & Three –way crosses		
10	Anand Roma × (Anand Roma × <i>S. arcanum</i> (LA 2157))	1876
11	(Anand Roma × <i>S. arcanum</i> (LA 2157)) × Anand Roma	749
12	(DHCT-25 × DHCT-15) × Pusa cherry tomato	252
13	Pusa cherry tomato × (DHCT-25 × DHCT-15)	146
Total		5132

New crosses attempted in Cucumber (Summer and Kharif, 2024-25)

Sr. No.	Crosses	No. of Crosses attempted
Crosses (Summer, 2024)		
1	Anand Sheetal × Iqbalgadh	138
2	Iqbalgadh × Anand Sheetal	31
3	Iqbalgadh × DHCU-19-6	60
4	GCU-1 × Iqbalgadh	48
F₁ Back crosses & Three –way crosses (Kharif, 2024)		
1	Iqbalgadh × GCU-1	19
2	(Iqbalgadh × Anand Sheetal) × Iqbalgadh	47
3	(Anand Sheetal × Iqbalgadh) × Anand Sheetal	32
4	(GCU-1 × Iqbalgadh) × GCU-1	40
5	(Iqbalgadh × Anand Sheetal) × (GCU-1 × Iqbalgadh)	145
6	(GCU-1 × Iqbalgadh) × (Iqbalgadh × Anand Sheetal)	124





Representation of cucumber hybrid (GCU-1 x Iqbal-gadh) and parents grown in polyhouse

Generation advancement in *Vigna*

Sr. No.	Generation	Crosses	IPS	Bulks
Summer 2024				
1	F ₃	GAM-5 x GAU-4	28	-
2	F ₃	GAM-8 x GAU-4	49	-
3	F ₄	GAM-5 x GAU-4	30	-
4	F ₄	GAM-8 x GAU-4	1	-
Kharif 2024				
1	F ₃	GAM-5 x GAU-4	12	-
2	F ₃	GAM-8 x GAU-4	11	-
3	F ₄	GAM-5 x GAU-4	37	-
4	F ₄	GAM-8 x GAU-4	1	-

Generation advancement in Ridge Gourd

Sr. No.	Generation	Crosses
Summer 2024		
1	F ₁	Garg-1 x Kashi Khushi
2	BC ₁ F ₁	(Kashi Khushi x Garg-1) x Kashi Khushi
3	BC ₁ F ₁	(Kashi Khushi x Garg-1) x Garg-1
4	F ₂	Kashi Khushi x Garg-1
Kharif 2024		
1	F ₁	Garg-1 x Kashi Khushi
2	BC ₁ F ₁	Kashi Khushi x (Garg-1 x Kashi Khushi)
3	BC ₁ F ₁	(Kashi Khushi x Garg-1) x Garg-1
4	F ₂	Kashi Khushi x Garg-1
5	F ₂	Garg-1 x Kashi Khushi
6	BC ₁ F ₂	(Kashi Khushi x Garg-1) x Kashi Khushi
7	BC ₁ F ₂	(Kashi Khushi x Garg-1) x Garg-1
8	F ₃	Kashi Khushi x Garg-1

* **Garg-1:** *Luffa acutangula*, **Kashi Khushi(IIVR) :** *Luffa hermaphrodita*



Fruits developed from andro-monoecious plant in F2 population (Kashi Khushi x Garg-1)

Back-crosses & three-way crosses attempted in *Annona*

Sr. No.	Crosses	No. of Crosses attempted
1	F ₁ (<i>Cherimoya</i> x Balanagar) (B8, 15) x Balanagar	148
2	F ₁ (<i>Cherimoya</i> x Balanagar) (B8, 15) x Sindhan	121
3	F ₁ (<i>Cherimoya</i> x Balanagar) (B8, 16) x Balanagar	157
4	F ₁ (<i>Cherimoya</i> x Balanagar) (B8, 16) x Sindhan	147



Fruit setting in F₁ *Annona* (*Cherimoya* x Balanagar) after back-crossing and three-way crosses





New crosses attempted in Clusterbean

Sr. No.	Cross Combination	No. of Crosses attempted
1.	Anand bahar x DRLGA 13-2	438
2.	Anand bahar x DRLGA 13-14	443
3.	Anand bahar x DRLGA13-23	413
4.	Anand bahar x DRLGA 16-19	309
5.	Anand bahar x GP-1	266

Tissue culture work carried out during the year 2023-24 is summarized below

- ◆ **Development of micropropagation protocol in Ivy gourd (*Coccinia grandis* L.).**

Among the nine different media combinations along with control tried for shoot induction and multiplication, treatment M₄ (MS supplemented with 1.0 BAP mg l⁻¹ and 0.1 mg l⁻¹Kn) found superior in terms of days to shoot induction, sprouting (%), No. of shoots and shoot length followed by M₃ (MS supplemented with 0.5 BAP mg l⁻¹ and 0.1 mg l⁻¹Kn).

- ◆ **Optimization of tissue culture protocol in parthenocarpic type genotypes of papaya**

Four different plant growth regulators (BAP, Kinetin, NAA, GA₃) have been tested for sprout induction in parthenocarpic type of papaya. Treatment PE3 (MS supplemented with 0.5 BAP mg l⁻¹ and 0.2 mg l⁻¹ NAA) was superior results in terms of number of shoot and (4) and shoot length (2.5).

- ◆ **Optimization of tissue culture protocol in Oil palm (*Elaeis guineensis*)**

Total four media tested for callus multiplication has similar response for proliferation of creamy or white compact callus in one or other three cultures taken for present study. Hence, in next subculture kinetin was added and auxin concentrations were reduced in different combinations in OP52, OP 53, OP72 and OP 73 media and activated charcoal was not

added and cultures are then kept for callus proliferation. The five different inflorescences from same plant considered as different explants showing callus induction were inoculated into callus multiplication media, some of them have responded for true callus multiplication. The callus colour was creamy or white in majority of the cultures.

- ◆ **Development of micropropagation protocol for large scale multiplication of Guava (*Psidium guajava* L.)**

The surface sterilization treatment used for shoot tip and nodal segments could yield 53.33% and 66% of axenic cultures, respectively. Shoot tip reported bacterial and fungal contaminants (Bacterial - 17.78% and Fungal - 28.89%). while nodal segments reported with contamination of both the types of contaminants (Bacterial - 11% and Fungal - 23%). The contaminants were of endogenous origin.

- ◆ **Development of regeneration protocol for large scale production of Coconut (*Cocos nucifera* L.)**

The media CI1 to CI4 were used for morphogenesis from inflorescence explant and sub-cultured regularly to induce callus from explants. New elite trees from different coconut grown areas will be identified and cultures will be initiated for development of tissue culture technology in coconut.

Nanotechnology

Nanotechnology is a quickly rising invigorating multidisciplinary field of science, endowed with several potentialities and multiple applications. Nanotechnology has emerged as a technological advancement that could develop and transform the entire agri-food sector, with the potential to increase agricultural productivity, food security and economic growth for industries. The development of nanobiotechnology provides a novel method and protocol for life science. Nanoparticles as gene carriers become popular in the mammalian cultured cells, whereas its application in plant cells is still very limited. Minimizing the evaporation of soil water by





using special matrix-based material which will retain the water inside the soil and also do not interfering with the other physiological activity forming a permeable membrane. The water loss due to transpiration can also be minimize using such biological activity permeable membrane. Formulating novel nanoparticle hybrid materials to control spoilage-related microflora can significantly decreased the loss due to spoilage generally take place during long distance transportations of nutritive goods.

Nanotechnology work carried out during the year 2024-25 summarized below:

- ◆ Synthesis and characterization of urea hydroxyapatite nano hybrids and study of its growth promontory effects on wheat
- ◆ Effect of different nitrogenous fertilizer sources on morpho-physiological, molecular and greenhouse gas emissions in wheat
- ◆ Effect of different Nano urea formulation on agriculturally important microorganisms
- ◆ Evaluating the effects of various surfactant types on the properties and stability of oil-in-water *Azadirachta indicana* nanoemulsion and its potential as an antifungal agent

4.6 PLANNING AND MONITORING

Agricultural Research and Education

- ◆ The budget proposal of ongoing (section-2) and new items (section-2) of various plan schemes were proposed by project-in-charge in the budget for the year 2024-25. This budget proposal was scrutinized, compiled and put up in Planning and Development Committee, Finance committee and Board of Management. Thereafter, it was submitted to Government of Gujarat for provision in budget for the year 2024-25.
- ◆ The financial provision of Rs. 8328.00 Lakhs was approved for various plan schemes of University in budget for the year 2024-25 by Government of Gujarat. Whereas, revised budget of Rs. 7653.00 Lakhs was approved and accordingly grant was released during the year 2024-25 by Government of Gujarat.

The details of financial provision for various plan schemes are as under.

Head	Original Provision (Rs. In Lakhs)	Revised Provision (Rs. In Lakhs)	% Share
Education	5058.00	4613.00	60.28
Extension Education	239.00	259.00	3.38
Research	3031.00	2781.00	36.34
Total	8328.00	7653.00	100.00

- ◆ Review meeting for grant reallocation for various plan schemes was conducted in January, 2025 with concern scheme-in-charge. After that, correspondence review was conducted in March, 2025 and grant was reallocated as per the demand, utility and availability of fund under various plan schemes during the year 2024-25.
- ◆ Monthly and Annual progress reports of plan schemes were prepared and submitted to Government of Gujarat.

Indian council of Agricultural Research (ICAR) Development Grant:

Strengthening and Development of Agricultural Education in AUs

- ◆ Annual Progress Report of ICAR Development Grant for the year 2023-24 was uploaded on portal of Education Division of ICAR as per the activities carried out during the year.
- ◆ The demand of Rs. 2395.00 Lakhs for “Strengthening and Development of Agricultural Education in AUs” was submitted to Indian Council of Agricultural Research (ICAR) after scrutinized the demand received from University Officers and Principal/Deans of the different Colleges during the year 2024-25.
- ◆ A grant of Rs. 370.00 lakhs was released by ICAR for “Strengthening and Development of Higher Agricultural Education in India” during the year 2024-25

4.7 WATER TECHNOLOGY

Considering the importance of irrigation in Agriculture, experiments related to irrigation





management conducted at Agricultural Research Station for irrigated crops, Thasra as listed below:

- ◆ Extension and demonstration schemes for irrigation funded by Sardar Sarovar Narmada Nigam Limited at sub center of Anand Agricultural University viz. Thasra, Dhandhuka, Dabhoi and Khandha, organized **81** training programmes on campus and off campus on the subject of irrigation scheduling, method of irrigation and related aspects. In all **2161** farmers attended the training programme.

4.8 AGRICULTURAL RURAL DEVELOPMENT STUDIES

Rural development programme revolves around raising economic and social level of the rural people as the main objective.

Research in context with the above said objectives can throw some light in the direction of bringing rural development. Keeping this in view, research in extension education was conducted in the broad areas of: Adoption and diffusion of innovations, transfer of technology, role of mass media in dissemination of technology, impact of different programmes and centres on rural development, communication behavior of rural people/farmers, bench mark surveys etc.

4.9 AGRI-BUSINESS DEVELOPMENT

International Agri-Business Management Institute was established in August 2008. Institute offers MBA (Agribusiness Management) and Ph.D. (Agribusiness Management) Programmes. This post graduate programme is aimed to craft professional business leaders, entrepreneurs and academicians in the food and agri-business sectors. The institute maintains a rigorous intellectual teaching process to mold the students to the standards of international level.

Following work were completed during the year.

- ◆ Perception of farmers towards off season and seasonal cultivation of vegetables in North and South Gujarat

- ◆ Status of Nano urea usage in bidi tobacco in Middle Gujarat
- ◆ Problems and prospects of agrotourism in Middle Gujarat
- ◆ Awareness and utilization of PM Kisan Samman Nidhi Yojana among the farmers in Anand and Dahod districts of Middle Gujarat
- ◆ Supply chain and post-production losses of milk in Middle Gujarat (Ongoing)

One new research project sponsored by Government of Gujarat on "Establishment of Center for Agricultural Market Intelligence at Anand"

4.10 VETERINARY SCIENCE AND ANIMAL HUSBANDRY -----NA-----

4.11 DAIRY SCIENCE ----NA----

4.12 ENGINEERING AND TECHNOLOGY

The College was actively engaged in teaching of UG and PG students and various research activities. The six departments of the college, i.e., Soil & Water Conservation Engineering (SWCE), Irrigation & Drainage Engineering (IDE), Farm Machinery & Power Engineering (FMPE), Renewable Energy Engineering (REE), Processing & Food Engineering (PFE) and Basic Engineering & Applied Sciences (BEAS) are to develop sitespecific or areaspecific technologies for progressive farming. The department of SWCE carried out different activities and task for the development/upgradation of different laboratories, classrooms, facilitating students visit several schools from nearby talukas & districts. The department also has initiated one research project sponsored by NASF-ICAR. The IDE department continued its efforts to address challenges related to efficient irrigation, drainage solutions, and land resource management. Department of REE has been created facilities for research purpose of graduates and post graduates of agricultural engineering and its allied subjects and developing entrepreneurs for agro technical skills in renewable energy sector under RKVY, Government of India. Under this





project, the facilities for energy harvesting through solar and bio-mass energy were created as well as modernizing techniques for nursery management techniques under net house and greenhouse environment for high value fruit and vegetables crops, flower crops and ornamental plants.

During the year works in following AGRESKO research projects were carried out:

- ◆ Partial dehydration of blanched sweet potato (*Ipomoea batatas*) slices for shelf-life extension.
- ◆ Standardization of process parameters for preparation of dragon fruit leather.
- ◆ Development of battery operated inter and intra row weeder.
- ◆ Design and development of solar powered pellet machine for biogas slurry.
- ◆ Estimation of spatio-temporal surface soil moisture using multispectral remote sensing, GIS and deep learning techniques.
- ◆ Development of centrifugal fruit juice extractor.
- ◆ Analysis of land use and land cover using machine learning algorithms and Google Earth Engine for Panchmahal district.
- ◆ Design and development of multiutility foldable domestic container from agriculture residue.

4.13 FISHERIES SCIENCE ----NA----

4.14 HOME SCIENCE

Polytechnic in Food Science and Home Economics is actively involved in research work apart from teaching and extension. During the year, two ongoing research projects were carried out by the polytechnic as follows.

Ongoing projects

- ◆ Development of nutri bar using popped kodo and finger millet
- ◆ Devising food exchange list for foods prepared using cereals and millets

OTHER AREAS / LABORATORIES

◆ **Pesticide Residues**

Following trials were conducted by Pesticide Residue Laboratory during the year 2024-25.

I Other Agency Trials Routed Through ICAR

1. Residues and persistence of tebuconazole 50% + trifloxystrobin 25% WG in chickpea
2. Residue and persistence of glyphosate IPA salt 41% SL in pomegranate
3. Residue and persistence of flupyradifurone 200 g/L SL in chilli
4. Residue and persistence of glyphosate IPA salt 41% SL in chilli
5. Residues and persistence of isotianil 7% + fosetyl-AI 70% WG in pomegranate
6. Residues and persistence study of triafamone 37.5 g/L + fentrazamide 300 g/L SC and triafamone 40 g/L + oxadiazon 240 g/L SC in transplanted rice
7. Residues and persistence study of triafamone 37.5 g/L + fentrazamide 300 g/L SC and triafamone 40 g/L + oxadiazon 240 g/L SC in direct seeded rice
8. Residues and persistence study of flufenacet 24% + metribuzin 17.5% WG in potato
9. Residues and persistence study of flufenacet 24% + metribuzin 17.5% WG in soybean
10. Residues and persistence study of thiencarbazon-methyl 68 g/L + tembotrione 345 g/L SC maize
11. Residues and persistence study of fluopyram 400 g/L SC in citrus
12. Residues and persistence study of fluopyram 400 g/L SC in guava
13. Residues and persistence study of fluopyram 400 g/L SC in carrot
14. Residues and persistence study of fluopyram 250 g/L + difenoconazole 125 g/L SC, trifloxystrobin 500 g/L SC, fluopicolide 62.5 g/L +





- propamocarb hydrochloride 625 g/L SC in chilli crop
15. Residues and persistence study of beta-cyfluthrin 90 g/L + imidacloprid 210 g/L OD and Spirotetramat 150 g/L OD in banana
 16. Residues and persistence study of isotianil 120 g/L + trifloxystrobin 100 g/L SC, trifloxystrobin 500 g/L SC and propineb 70% WG in transplanted rice
 17. Residues and persistence study of isotianil 200 g/L + trifloxystrobin 80 g/L FS (as seed treatment) in transplanted rice
 18. Residues and persistence study of fluopyram 200 g/L+ tebuconazole 200 g/L SC and Spirotetramat 150 g/L OD in cucumber
 19. Residues and persistence study of beta-cyfluthrin 90 g/L + imidacloprid 210 g/L OD in cumin
 20. Residues and persistence study of tetraniliprole 200 g/L SC in chickpea
 21. Residues and persistence study of tetraniliprole 200 g/L SC in black gram
 22. Residues and persistence study of chlorantraniliprole 4.3% + abamectin 1.7% SC in pomegranate

II NABL activities (ISO/IEC 17025:2017): The NABL accreditation of the laboratory is granted up to 29.06.2025 with the revised scope of analysis.

- ◆ Studies on the estimation of pesticide residues for agricultural commodities at Anand: Plan Project, Govt. of Gujarat
- ◆ Studies on pesticide residue analysis from food, feed, water and soil for food safety in Gujarat :Plan Project, Govt. of Gujarat
- ◆ Monitoring of pesticide residues at national level : Project Sponsored by Ministry of Agriculture & Family Welfare, Govt. of India
- ◆ Monitoring of surface and ground water for pesticide residues in the SSP command Phase-I area: Project Sponsored by SSNNL

- ◆ Monitoring of surface and ground water for pesticide residues in the SSP command Phase -II area: Project Sponsored by SSNNL

(B) Agril. Ornithology

Following research work was carried out in the project of Agril. Ornithology

Blue bull in agricultural landscape of Vadodara district

- ◆ During the study of nilgai population and its distribution in the four blocks *i.e.* Dabhoi, Vadodara, Vaghodiya and Savli of Vadodara district from September, 2023 to September, 2024, out of total 464 blue bulls observed, 57, 284 and 123 were male, female and calves, respectively. Blue bull found in a mix group (49%), only male (12%) group and only female (62%) group, sub adult and juvenile prefer to remain with female individual.
- ◆ About 73 per cent of animals were distributed in fallow land, river belt and forest area while remained 27 per cent animals distributed in various crops *i.e.* Eucalyptus (22%) and agricultural crops (5%) *i.e.* castor, drumstick, pigeon pea, cucurbitaceous vegetables, cotton, pearl millet, maize and sorghum. Whereas, negligible damage was found in the paddy, flower crops and cruciferous vegetables.

Birds diversity in crop fields of Vadodara district

- ◆ Total 21 species of birds in agroecosystem were recorded from the study area during the year. The relative abundance in bird community of Vadodara district was ranging from 0.09 per cent (Comb duck) to 30.29 per cent (Rose ringed parakeet).
- ◆ The dominant species recorded in agroecosystem of were Rose ringed parakeet (30.29%), common myna (13.34%), jungle babbler (12.31%) and cattle egret (9.47%).

Assessment of damage in agricultural crops caused by wild boar

- ◆ The mean damage to rice crop (35 fields) due to wild boar was 12.00 per cent, ranged from 0 to 20.00 per cent. The mean damage to maize





crop (17) due to wild boar was 11.76 per cent. The unattended maize, sorghum and pearl millet fields were found vulnerable to boar damage and recorded higher damage.

- ♦ The majority of surveyed fields protected by various techniques. The electric fence and wire/string fencing (28.21), saree fence (23.93%), electrical shock or solar fencing (16.24) per cent was found most used techniques. Most of device used alone were reported unsatisfactory to control wild boar. All most all farmers used the manual scaring along with other protection techniques.

Development and refinement of VPM technology for wild boar

- ♦ Wild boar repellent and *Kheti Rakshak* (Model: KR-18) was installed in paddy field at Paddy Research station, AAU, Dabhoi (Vadodara). Observations were recorded for crop damage at weekly interval for four weeks and also observed entry of wild boar by foot marks and facial matter present around field and found that after installation of *khetirakshak* and repellents application wild boar entry and activity was not observed in crop or nearby field area up to 15 days.

Effectiveness of fruit bagging on Rose-Ringed Parakeet damage in guava

- ♦ The pooled data of two years (2022-23 and 2023-24) of experimentation showed that all the bagging material (Nonwoven, muslin, butter paper) were significantly effective in reducing parakeet visitation.
- ♦ Minimum average number of damaged fruit (2.32), maximum average number of healthy fruit yield 7978.71 kg/ha was recorded in treatment of butter paper bagging which was found superior with ICBR of 1:8.15.
- ♦ Finally, it is recommended to the farmers of Gujarat having guava orchard to bag fruit before maturity with butter paper bag (20 × 24 cm) to reduce the damage caused by rose ringed parakeet.

Development and evaluation of pesticides based repellent formulation application techniques to protect crop against blue bull

- ♦ The experiment was conducted by applying repellents made from indigeneous materials as treatments on identified different roost sites of blue bull for two years. The treatments were applied on nine different blue bull roost sites.
- ♦ All the members of group were return to roost site after few hours indicated that there was no olfactory repellency of tested repellents on blue bull since last two years.

Dissemination of VPM technologies

- ♦ Two *Khedutshibir* for Tribal farmers at KVK Dahod, on vertebrate pest management was organized at KVK, Dahod district. Total 100 (50-50 male and female farmers) were awared about the role of birds in agro ecosystem and problems of wild boar and blue bull. The folder 'Rodent infestation in agricultural crops and its management' was also distributed to the farmers.
- ♦ Participated in Two days *Rabikrushimahotsav* organized by GOG during 24-25th Nov. 2023 as guest lecturer and conducted exhibition at Vadodara block (Vadodara district) and Petlad block (Anand District) The Farmers Discussion's was organized in 20 villages to know the vertebrate pest problem in crop cultivation and present practices to manage it.
- ♦ The Field demonstration of *Kheti Rakshak* (Model: KR-18) was organized in paddy field at Paddy Research station, Dabhoi, Vadodara district to generate awareness for *Kheti Rakshak* and its effectiveness to scare the wild boar in maize crop during maturity stage.

Bio-ecology and management of purple moorhen in Vadodara district.

- ♦ Wetlands in the district of Vadodara, Padra, Savli, Karjan, and Dabhoi block were observed for the presence of moorhens and their effects on the surrounding agricultural land. Total 261 moorhens were found (11.86 moorhens on





average per wetland). Out of these, 30 and 70 per cent were found in marshland and pond, respectively.

- ◆ Whereas on the basis of vegetation preference 40, 32, 12, 10 and 6 per cent preferred *Eichhornia crassipes*, *Phragmites* sp, *Nali* weed, *Typha angustifolia* and *Nelumbo nucifera*, respectively. During the survey farmers were also opinionated that moorhen cause little damage to paddy crop in the initial stage after transplanting.

Effectiveness of tree cover against Rose-Ringed Parakeet damage in pomegranate

- ◆ The experiment on effectiveness of tree cover to reduce the rose-ringed parakeet depredation on pomegranate fruits was initiated in year 2023-24. The treatments, nylon anti bird net cover, fruit bagging and control were applied at the time of initiation of damage. Average 126 parakeets were recorded were ranging between 121 during morning and 131 birds in evening hours in control plot.
- ◆ Out of 40 sampled trees, 21-35 average number of total fruit, 16.79 was damaged and 11.88 numbers were healthy in control plot while in plot treated with paper bag and nylon net, damage was not recorded in which, 31.83 and 34.50 healthy fruits are recorded, respectively

(C) Micronutrients Research Project

Brief results of the work carried out during the period under report are given below.

- ◆ Delineation and reassessment in secondary and micronutrient fertility in soils of predominant cropping system based on soil and plant analyses carried out to know the depletion or build up over the years and also for updating the maps for the different nutrients in soils of Gujarat. Surface soil samples (442) were collected from different villages of Ahmedabad-district and analysis is under progress.
- ◆ Long term fertility experiment to study the depletion of micronutrients in Bajari-Mustard-fodder Cowpea cropping system in loamy soil is continue since 1980 and modified with inclusion of farm yard manure in 2004 and the

results indicated that the farmers of the middle Gujarat agro-climatic zone following pearl-millet (*kharif*) - mustard (*rabi*) - cowpea fodder (summer) cropping sequence are recommended to apply recommended dose of fertilizer (Pearlmillet: 80-40-00 NPK kg/ha, Mustard: 50-50-00 NPK kg/ha and Cowpea Fodder: 20-40-00 NPK kg/ha) alongwith 10 t FYM/ha to pearl millet for maintaining micronutrient *viz.*, Zn, Fe, Mn and Cu status in soil.

- ◆ The study on screening of wheat varieties for zinc efficiency based on yield and uptake efficiency was undertaken and screened out the efficient and responsive cultivars for Zn in wheat by agronomical bio-fortification.
- ◆ Study was undertaken to findout the effect of Nano Zn on crop growth, yield and its content in maize-wheat cropping sequence and the results showed an application of recommended dose of fertilizers (Maize: 160-60-00 NPK kg/ha and Wheat: 120-60-00 NPK kg/ha) along with different doses of Zn nano particles (500, 750 and 1000 ppm) does not affect yield attributes, grain yield, content and uptake of Zn in maize-wheat cropping sequence. However, an application of recommended dose of fertilizers (Maize: 160-60-00 NPK kg/ha and Wheat: 120-60-00 NPK kg/ha) along with foliar spray of 0.50% zinc sulphate at 30, 45 and 60 DAS gave higher grain yield, content and uptake of Zn in maize-wheat cropping sequence in comparison to Nano Zn.
- ◆ The study to find out the linkage in Soil-Plant-Animal-Human continuum was initiated in tribal area of Gujarat state with the collaboration of Pramukhswami Medical College Karamsad. After the diet recall survey in the three villages i.e. Dumka, Kotambi and Rachhava, the collection of soil and plant samples were done from the corresponding households in February 2024. After the collection of soil and plant samples from the respective household's animal milk and blood samples were collected from the same farmers of the respective households from the three villages *viz.*, Dumka, Kotambi and Rachhava during June to December 2024.
- ◆ To assess the heavy metals contamination





in agricultural produce in *peri* urban areas of Bharuch and Surat district, 36 soil, 32 water and 35 plant samples were collected. Different soil (35), plant (34), economic produce (fruit) (31) and water (29) samples were collected from *peri* urban areas from sewage effluent water irrigated fields of Vadodara district. Further, different 160 vegetable samples were also collected from vegetable markets of Anand and Padra. About 7 soil, 6 vegetable/plant/grain and 4 water samples were collected from different locations i.e. Dakor, Sevliya and Godhra taluka. The content of heavy metal in vegetable samples and millets collected from different locations was found below permissible limits of Indian Standard.

- ◆ To assess the effect of organic manure on crop, cropping system/pattern about 1532 samples viz. soil samples, various crop produce and input materials were tested for sulphur, micro-nutrient and heavy metal contents from various locations under Organic Farming as well as from Low Cost Natural Farming and Natural Farming Programs of University.
- ◆ Under Front Line Demonstrations (FLDs), 47 non-replicated FLDs program were taken up at farmers' field in wheat crop at different villages of Anand and Chhotaudepur districts. The result of the front line demonstrations suggested that the application of sulphur, iron and zinc containing fertilizer improved the grain yield of maize by about 2 to 18 %, straw yield by about 2 to 35 % and content by about 2 to 39 % in grain.
- ◆ Total 4730 soil /plant /feed /fodder /blood /effluent /fertilizers samples have been analyzed and recommended/suggested to the farmers / PG students/entrepreneurs / private agencies etc. accordingly.

(D) Entomology, BACA, AAU, Anand

- ◆ Department of Agricultural Entomology has gained a good reputation in research by carrying out adaptive research in the field of Agricultural Entomology. The research findings and recommendation on pest management have been accepted by the farmers of the state.

Foraging behaviour of pollinators fauna in coriander

Among the total 8 pollinators highest relative abundance was observed in *A. florea* (20.44 %) followed by *Trigona* spp. (17.33 %), *A. dorsata* (13.94 %), *A. mellifera* (13.90 %), Syrphid fly (11.37 %), Coccinellid (8.43 %). While the least relative abundance was observed in House fly (7.58 %) and Bug (7.01 %).

- ◆ Under *Mission MadhmakhiKaryakram* project, total six trainings were organized and approximately 210 farmers were trained for bee keeping.
- ◆ Under the government sponsored IPM & Bio-control scheme, a demonstration on the management of fruit fly in cucurbitaceous vegetable crops was carried out in the Kheda district and accordingly for its wide adoption a farmer's day was also organized on 21.03.2025 at Mankwa village, Ta. Mahemdavad, Dist. Kheda.
- ◆ Owing to the colossal loss in chilli crop due to the invasion of a new thrips species, *Thrips parvispinus* (Karny) one recommendation has also been made for the benefit of the farmers.

(E) Plant Pathology, BACA, AAU, Anand

Following research work has been carried out during the year.

- ◆ Screening of potato varieties against foliar diseases
- ◆ Bio-efficacy of ready-mix fungicides against powdery mildew of Indian mustard
- ◆ Assessment of different sawdust substrates on growth and yield of Reishi Mushroom (*Ganoderma lucidum*)
- ◆ Evaluation of ready-mix insecticide and fungicide as seed treatment against major insect pests and diseases in groundnut
- ◆ Evaluation of ready-mix fungicides for the management of major foliar diseases in *Bt* cotton





- ◆ Efficacy of botanicals against late blight of potato
- ◆ Survey of pulse crop for viral diseases and characterization of viruses infecting urdbean, mungbean, mothbean, soybean, clusterbean and pigeon pea in Kheda, Vadodara, Panchmahals and Ahmedabad districts
- ◆ Standardization of drying technology for bael leaves powder
- ◆ Technology for production of Ready to Serve green tomato beverage
- ◆ Production Technology for Kodo Millet based Idli
- ◆ Effect of Irradiation on Pearl millet & Sorghum

(F) Food processing Technology and Bio Energy

Developed production technologies/processes of premium quality powder of carom (ajwain) and black pepper by using cryogenic grinding, process of micronutrient rich powder production, extension of shelf life of bread using suitable ingredients, functional low calorie muffins, Ready-to-Rehydrate type of rice, super critical extraction of essential oil from Ajwain (Carom seed) and Black pepper, technologies for value added products from pumpkin seeds, gamma irradiation on keeping quality of groundnut and sapota fruit, antidiabetic and antioxidant rich cookies and health drink using Garden Cress Seed. Effect of edible coating on shelf-life of sapota fruit; γ -irradiation, UV radiation and Ozonation techniques were studied on decontamination of pesticides in selected crops, bio-chemical characterization of *Moringa oleifera* leaves and pods, energy use assessment in selected food processing plants and also evaluated purity of silver foil used on sweets in rural area.

Following ongoing research work has been carried out during the year.

- ◆ Production technology of ready to eat extruded snack from aonla pomace powder
- ◆ Effect of microwave on aflatoxin content of deoiled peanut cake
- ◆ Development of reduced sugar aonla beverage utilizing stevia
- ◆ Process development for nutritive farali extruded snack
- ◆ Production Technology of Popped Ready-to-Eat snacks using Kodo Millet

- ◆ Dehydration of green leaves of selected vegetables
- ◆ Bio-chemical characterization of Insulin plant
- ◆ Devising food exchange list for foods prepared using cereals and millets
- ◆ Development of Nutribar using popped kodo and finger millet

(G) Agricultural Information Technology

This institute prepares human resources in the field of Agriculture Information Technology (AIT) as a tool to sharpen the edges of the agriculture structure in the country. It takes the onus to develop and hone the sector and its changing environment. College/Faculty is equally involved in IT related agricultural research projects and carried out research as under.

- ◆ Estimation of wheat yield at different stage using ensemble regression machine learning approach for Anand/Kheda district.
- ◆ Visual classification model for procurement of maize kernel used for poultry feed.

Information Technology Center

The Information Technology Center caters the demand for the use of Information Technology at Anand Agricultural University. The Director, IT took the measures to carry forward the IT activities like hardware and software at various levels. During the year, substantive work was done related to the technical, administrative matters and also pertaining network problems at university.

Different online projects of AAU have been maintained and updated regularly by the





IT. Some of the projects are listed below:

- AAU web application (<http://www.aau.in/>)
- AAU web Mail (<http://mail.aau.in>)
- Online Tour programme (<http://tour.aau.in>)
- Online Examination System (<http://oes.aau.in>)
- Online billing system (<http://account.aau.in/>)
- Online Planning and Budget system (<http://pnb.aau.in/>)
- Payroll application and Tally
- Inward Outward Management System (<http://ioward.aau.in/>)
- Breeder Seed Management System for Government of Gujarat (<http://breederseedgog.aau.in/>)
- Seed Varietal Enrolment Portal for Government of Gujarat (<http://dusgog.aau.in/>)
- Certificate Course on Insecticides Management for Insecticide Dealers/Distributors (<http://ipd.aau.in/>)
- Seed Distribution Program (<https://seed.aau.in/>)
- AAU Charge Patrak System (<http://est.aau.in/>)
- Krushi Gau Vidhya - Subscriber Management System (<http://kgv.aau.in/>)
- Online Information Management System for Planning and Budget (<http://pnb.aau.in/>) Agricultural Meteorology

The following research work was carried out during the reporting period.

Agro-climatic resource characterization

The total dry days and longest consecutive dry days during monsoon periods of recent past timeseries (1991-2022) were considered for trend analysis. The grided data (IMD) of Gujarat state (231 grids) for period of 1961-2022 was used for the study. Datasets were prepared for reference period (1961-1990) and recent period

(1991-2022). The rainfall amount of 2.5 mm used as thresholds to identify dry days. The daily rainfall amounts lower than 2.5 mm were counted in normal monsoon period (15 June – 30 September). Linear trends of the reference 30 years and recent 32 years for dry days were computed using simple linear regression. Trend values were tested on significance level at 1% and 5%.

During reference period, statewide means of total dry days and longest dry spell showed increasing trend pattern while, in recent past trend pattern was decreasing. The years with peak values are in agreement with past droughts over large part of the state like worst drought of year of 1987 (Nathan, 2001). The most parts of the state except part of South Gujarat (regions of the Dangs, Tapi and Valsad districts) had negative change dry days and long dry spells indicating increase in wet condition during monsoon in recent past. The changes in longest dry spells were not consistent with changes in total dry days in the monsoon. Many isolated places in the state show an increase in mean length of dry spells. This shows intra seasonal variability which may lead to mid-season and terminal drought conditions. Though, increase in mean length of dry spells found in many places, the spatial trend pattern over the state agrees with the general trend pattern. In reference period, there was negative trend of longest dry spells over South Gujarat and South Saurashtra region while there were prominent positive trends in west part of Kutch. There were significant changing trends in recent periods. More locations of Saurashtra and Kutch region had significant decreasing trend of long dry spells. While a few grid locations, mostly located in eastern parts of Gujarat region had decreasing trends. It indicates that despite a long dry spell extremes recorded in recent years, the tendency of long dry spell is decreasing at most parts of the state.

- ♦ The dry days are decreasing during monsoon in most parts of the Gujarat state except part of South Gujarat (regions of the Dangs, Tapi and Valsad districts).





- ◆ Many isolated places in the state show a high mean length of dry spells, indicating mid-season and terminal drought conditions during recent past.
- ◆ It indicates that despite a long dry spell extreme recorded in recent years, the tendency of long dry spell is decreasing at most parts of the state.

Crop weather relationship and Crop growth simulation modelling of kharif pearl millet

Crop weather relationship and simulation modelling of kharif pearl millet was studied using experimental data of year 2017 to 2024 under rainfed condition. The experiment involves three cultivars of pearl millet viz; GHB 538, GHB 558 and GHB744 with three sowing dates during onset of monsoon to twenty days after monsoon onset.

- ◆ Sowing of pearl millet at onset of monsoon provides favourable growing environment for pearl millet crop compared to late sowings.
- ◆ The linear plateau model (used in CERES) is found suitable to predict emergence, anthesis and physiological maturity of pearl millet.
- ◆ Pearl millet productivity is negatively associated with temperatures. Night temperature is the most crucial parameter to influence pearl millet performance.
- ◆ The rainfed cultivation with sowing of cultivar GHB744 at onset of monsoon and high N (120 kg) is a potential choice to reduce the negative impact of climate change on pearl millet production.

Development of weather-based models for predicting outbreak of mustard aphids

Mustard aphid index and weather relation studied using experimental data of 21 years (2002-03 to 2022-24). The field experiments were conducted on cultivar Mustard GM 2 under four sowings during period of 10th October to 10th November of year.

- ◆ Flowering to seed development phase is the most crucial time for aphid infestation.
- ◆ The univariate timeseries SARIMA(1, 1, 2) (1, 1, [1], 14) model appears promising for one step ahead forecasting of weekly mustard aphid index (population) during rabi season.

Crop weather relationship of mustard

Crop weather relationship mustard was studied using field experimental data of rabi 2023-24. Three cultivars, Bio 902, GM 3 and GDM 4 were considered in experiments with four sowings during period of 10th October to 10th November in a year.

- ◆ Sowing of mustard on 10th October provides favourable growing environment for compared to late sowing.
- ◆ Maximum temperature, and morning relative humidity prevailed during early growth stages (up to flowering initiation) of mustard have strong positive association with mustard productivity.
- ◆ Long sunshine duration and high temperature during seed development affects production.
- ◆ The linear max function (used in InfoCrop model) is accurate compared to other temperature response functions, for prediction of mustard phenophases.

Crop weather relationship of mango

Five trees of 6 years age selected for each variety. The preliminary observations on phenology are initiated since January 2023.

Panicle initiation is started from about 31st January in Langda and Kesar varieties. The phase was observed up to 13th February in Langda and up to 07th February in Kesar. Opening of flower started from 13th February in lando and from 7th February in Kesar. Fruit setting is observed on 13th March in Langda and on 4th and 13th March in Kesar. In Langda all fruits were dropped after 20th March before they attain the pea size. Pea size fruits observed in Kesar on 20th February and observed in marble size on 3rd April. Mature fruits in Kesar observed in first week of June.





The production was very low per tree.

AICRP- NICRA

The project circulated the weather based micro level agromet advisory bulletins in NICRA villages i.e. Vadod and Napad villages of Anand block, Anand district, twice in a week (every Tuesday and Friday) using block-level weather forecast issued by IMD. Kashor village was kept as control. Cropping pattern of NICRA villages are same i.e. Tobacco, Banana, Wheat, Brinjal, Tomato, Chilli, Potato in Rabi season, Pearl millet, Finger millet, Cowpea in summer season and Tobacco, Rice, Banana in Kharif season. Agromet advisory bulletins were prepared based on of present crop condition, crop growth stage, the past and forecasted weather conditions and its impact on crop growth as well as insect-pest/ diseases occurrences. Advisory given on time of sowing, selection of cultivar (variety), seed rate, time of top dressing and irrigation, fertilizer, pest and disease management and other intercultural operation were documented in the bulletins. During 1 April – 2024 to 31 April - 2025 total 78 bulletins were prepared and dissemination to NICRA villages through WhatsApp Group, individual contact and Mobile call. When some unseasonal events like unseasonal rain, temperature drops and/or temperature rise etc. happen, display of bulletin on common places are used for disseminating of agromet advisory bulletin. The basic information regarding soil, crops, cropping pattern and and farmer’s feedback of agromet advisory services was collected through individual visit of farmers.

Farmer feedback of Weather based Agro-Advisory Bulletin

Farmers’ are using the weather forecast for planting and sowing of various crops, irrigation application, fertilizer dose, pest and disease management.

- ◆ In farmer’s perception rainfall, temperature and wind weather parameters are most important for agriculture.

- ◆ Most farmers believe that monsoon season is delayed and early withdrawal. They also believe that annual rainfall, winter and summer temperature has been increased in recent past years.
- ◆ Rainfall fluctuations during *kharif* season and unseasonal rainfall during *rabi* season adversely affected to *kharif* and *rabi* crops respectively.
- ◆ They assumed that fluctuations in temperature and unseasonal rainfall led to low yield of vegetables.

Centre for Weather Forecasting and Climate Change (CW FCC)

Study on rainfall climatology and its association with productivity of major crops of Gujarat

Daily records of all-weather parameters (Tmax, Tmin, RH-I, RH-II, WS, BSS and RF) for 20 stations (1994-2021) of Gujarat was collected from various Agromet observatories of Gujarat (Table1). Missing weather stations data was filled from NASA-POWER website. District wise area, production and productivity data of major perennial fruit crops (1994-2021) were collected from Directorate of Horticulture, Government of Gujarat. The districts growing fruit crop were choose based on area viz. Pomegranate and Date palm fruit crop area was found highest in the Kutch district. Junagadh district has highest area of Coconut and Sapota fruit crop. Ber, Banana, Guava, Gooseberry, Mango and Citrus fruit crop area was found highest in Sabarkantha, Bharuch, Bhavnagar, Kheda, Valsad and Mehsana respectively.

- ◆ Ber yield was significantly correlated with rainfall and minimum temperature (Tmin) of January month, significantly positive correlated with Tmin of April month, significantly negative with wind speed of May month, positively significant with Bright Sun shine of July month, significant negatively with Minimum temperature of August and October month and significant positively with September month. The most sensitive period for fruit yield sensitivity appears to be during November to





March months for the Ber crop under study.

- ◆ we can suggest September to November month minimum temperature is beneficial for flowering of Ber yield as flowering began in mid-September and ended in mid-November with the peak of the flowering period in mid-October. While the fruit setting was between the third week of September to the first week of December, but the peak fruit initiation period was the last week of September to mid-October.
- ◆ During fruit growth, development and yield attribute the percentage of fruit drop and retention also changes. Ber fruits were harvested five times and the peak yield period is observed in the first week of March.

Application of remote sensing technique in agriculture

Moisture stress detection in green gram

The experiment on summer green gram was conducted at department of Agricultural Meteorology farm to determine upper and lower baseline. Four irrigation treatments with five replications were imposed to green gram during summer 2024 season to detect moisture stress using infrared thermometer. The salient findings are as under:

- ◆ The lower baseline was derived using data collected from the different irrigated treatment plots. The linear regression relationship between $(T_c - T_a)$ and VPD is considered as lower baseline. The combined lower baseline was described by the linear equation.

$$(T_c - T_a) = -1.7582VPD + 1.0993$$

- ◆ Under well watered conditions the canopy temperature was much lower than the air temperature due to increase in transpiration rate resulted in cooling of leaves and it is also referred as non-stressed baseline. $(T_c - T_a)$ is a function of vapour pressure deficit.
- ◆ The upper baseline was derived using data collected from the fully stressed plot. The $T_c - T_a$ values for upper baseline varied from 3.6 to 5.8°C during the year. The average of $T_c - T_a$

values were computed to derive the upper baseline and the baseline was drawn parallel to VPD using these values. The upper baseline which represents the $T_c - T_a$ was relatively constant at about 5.2°C during summer 2024 when transpiration has ceased. Upper baseline for non-transpiring leaves showed there was no change in the difference between canopy and air temperature with VPD.

- ◆ Soil moisture deficit create different level of moisture stress in canopy resulted in closing of stomata causes transpiration reduction from leaves and increase canopy temperature more than air temperature.
- ◆ The CWSI showed linear relationship with moisture content in soil.

Gramin Krishi Mausam Sewa (GKMS)

Under GKMS Project funded by India Meteorological Department (IMD), New Delhi, district wise weather forecast is received on every Tuesday and Friday for five days. Based on weather forecast received from Meteorological Centre, IMD, Ahmedabad, Total 104 AAS bulletins for Anand, Kheda, Mahisagar, Dahod, Panchmahal, Chhotaudepur and Vadodara districts were prepared and disseminated through local newspapers like NayaPadkar, DivyaBhashkar, Sandesh, Gujarat Samachar, PratahKaal, SardarGurjari and through mobile via Whatsapp groups.

Farmer's awareness programme:

Department of Agricultural Meteorology, BACA, AAU, Anand organized one day Farmers Awareness Programme on "Weather based agro advisory" on 01/02/2025 at Kasor village, Anand block, Dist. Anand under GKMS project. In this programme 65 farmers were participated.

Visited farmers' village and field frequently and interacted with farmers and also collected farmers' feedback. Prepared special and impact based agromet advisories during abnormal weather condition like unseasonal rain, heat waves, cold waves, etc.





(I) Seed Production

Ensuring quality of seeds to farmers, Anand Agricultural University has registered its trademark and logo of “ANUBHAV SEED” with the Trademark Registration Authority of India. All the seed producing centres/units of Anand Agricultural University, Anand are well equipped with seed production machineries required for all operations starting from land preparation to harvesting. The total seed production of the year 2024-25 is **5832.10** quintals. The seed processes and seed testing facilities have been made available, which has boosted the efforts of seed quality assurance.

Seed production of AAU, 2024-25 (in q.)

Sr. No.	Crop	Nucleus/ Parent	Breeder	Foundation	Certified	T/L	Total (q)
Cereals							
1	Paddy	5.60	275.75	494.00	1461.90	278.70	2515.95
2	Maize (Rabi)	0.0625	36.25	0.00	0.00	54.00	90.3125
3	Wheat	1.85	424.60	67.00	542.00	614.17	1649.62
4	Kodo millet	1.20	15.75	0.00	0.00	2.36	19.31
5	Finger millet	0.00	0.00	0.00	0.00	7.05	7.05
Pulses							
6	Green gram (K+S)	3.38	39.70	0.00	0.00	30.70	73.78
7	Gram	12.25	111.76	0.00	0.00	172.22	296.23
8	Pigeon pea	1.38	26.00	–	–	–	27.38
9	Black gram	1.85	33.50	–	–	46.55	81.90
Oilseeds							
10	Castor	0.40	12.00	–	–	22.00	34.40
11	Groundnut	42.15	173.00	0.00	0.00	75.00	290.15
12	Soybean	2.00	53.00	35.00	32.75	107.75	230.50
13	Mustard	0.20	13.00	–	–	17.14	30.34
Cash/ Other Crops							
14	Cotton (Desi)	3.00	26.56	0.00	0.00	52.10	81.66
15	Tobacco (Bidi)	0.00	0.00	0.00	0.00	69.61	69.61
16	Tobacco (Rustica)	0.00	0.00	0.00	0.00	18.00	18.00
17	Sunhemp	0.00	0.00	0.00	0.00	6.00	6.00
Forage crops							
18	Lucerne	0.70	23.50	0.00	0.00	3.60	27.80
19	Oat	5.75	151.00	0.00	0.00	0.00	156.75
20	Fodder Bajra	0.00	3.50	0.00	0.00	0.00	3.50
21	Fodder Sorghum (S+K)	0.80	24.10	0.00	0.00	4.80	29.70
22	Fodder Maize (K+R)	3.25	0.00	0.00	0.00	6.75	10.00
23	Fodder Cowpea	0.00	0.00	0.00	0.00	2.00	2.00





Sr. No.	Crop	Nucleus/Parent	Breeder	Foundation	Certified	T/L	Total (q)
Spices							
24	Cumin	0.00	6.00	0.00	0.00	0.00	6.00
25	Dill seed	0.00	0.00	0.00	0.00	5.00	5.00
Total Field crops		85.82	1448.97	596.00	2036.65	1595.50	5762.94
Vegetable crops							
26	Bottle gourd	0.01500	0.04750	–	–		0.06250
27	Brinjal	0.02500	0.03750	–	–	4.47200	4.53450
28	Chilli	0.06550	0.03900	–	–	1.28000	1.38450
29	Cowpea	0.20000	–	–	–	2.10000	2.30000
30	Cucumber	0.03500	0.03000	–	–	0.14000	0.20500
31	Garlic	0.01000	0.10000	–	–		0.11000
32	Indian bean	0.10000	–	–	–	2.40000	2.50000
33	Okra	0.45000	0.65000	–	–	17.90000	19.00000
34	Onion	0.08000	0.04000	–	–	0.20000	0.32000
35	Pigeon pea	0.10000	–	–	–	1.02000	1.12000
36	Pumpkin	0.01500	0.01000	–	–		0.02500
37	Tomato	0.04200	0.02400	–	–	0.31000	0.37600
38	Guvar	0.20000	–	–	–	3.01000	3.21000
39	Muskmelon	0.01500	0.01100	–	–	0.08000	0.10600
40	Ridgegourd	0.02000	0.02750	–	–	0.26100	0.30850
41	Veg. Dill seed	0.02500	0.01000	–	–		0.03500
Total Vegetable crops		1.39750	1.02650	0.00000	0.00000	33.17300	35.59700
M & A crops (Seeds)							
42	Kalijiri	–	–	–	–	0.16	0.16
43	Kalonji	–	–	–	–	0.12	0.12
44	Black Tulsi	–	–	–	–	0.10	0.10
45	Asalio	–	–	–	–	0.58	0.58
46	Isabgul	–	–	–	–	2.70	2.70
47	Kalmegh	–	–	–	–	0.55	0.55
48	Turmeric (Aamba Haldar)	–	–	–	–	4.20	4.20
49	Basil	–	–	–	–	0.07	0.07
50	Ashwagandha	–	–	–	–	2.20	2.20
51	Turmeric	0.00	0.00	0.00	0.00	80.03	80.03
Total M & A crops (Seeds)		0.00	0.00	0.00	0.00	90.71	90.71
Grand Total		87.2200	1450.00	596.00	2036.65	1719.38	5889.25
Total of Hybrids		0.0225	0.00	0.00	0.00	57.13	57.15
Total of Varieties		87.1975	1450.00	596.00	2036.65	1662.25	5832.10





Planting material production of AAU, 2024-25

Sr. No.	Seedlings and Planting materials	Nos.
Field Crops		
1	Tobacco	2,30,000
2	Hybrid Napier/ Gajraj / Marvel	2,75,000
Total		5,05,000
Tissue culture plants		
1	Date palm	5,000
2	Parvar	5,000
3	Kankoda	10,000
4	Stevia	1,000
5	Pomegranate	1,000
6	Seedless lemon	100
7	Banana	5,000
8	Pineapple	1,000
Total		28,100
Vegetable Seedlings/ Planting materials		
1	Brinjal	5,82,500
2	Chilli	2,90,000
3	Tomato	2,60,000
4.	Onion	1,00,000
Total		12,32,500

Horticulture Seedlings/planting material production of AAU, 2024-25

Sr. No.	Horticultural Fruit Crops	Nos.
1	Kagzi Lime	9,629
2	Drumstick plant	10,526
3	Custard apple grafted	5,311
4	Phalsa plants	7,438
5	Chandan (White)	312
6	Mango grafted	2,811
7	Karmada	2,142
8	Gunda plants	2,709
9	Aonla grafted	2,701
10	Mulberry	1,520
11	Guava grafted (AS/L 49/Lal bahadur)	532
12	Sapota grafted	1,128
13	Cashewnut plants	1,124
14	Fig cutting	1,303
15	Jambu / Bijora grafted	286
16	Dragon fruit cuttings	5,859
17	Jackfruit plants	2,129
18	Khirni (Rayan) grafted	30
19	Cherry grafted	121
20	Other plants of fruits	1,304
21	Fruit plants bud sticks	130
Total		59,045
22	Drumstick Seeds	11.250 kg
23	Lime seeds	2.500 kg





Horticultural Seedlings/ Planting materials' production of AAU, 2024-25

Sr. No.	Flowers and Ornamental plants	Nos.
1	Seasonal flower seedlings	30,000
2	Ornamental plants	80,000
3	Marigold seedling	200
4	Gaillardia seedling	200
5	Chrysanthemum seedling	500
6	Forest trees	2,000
7	Hibiscus	1,200
8	Chrysanthemum (IIHR-6, Ratlam Selection, Agina purple, Dolly white, Pancho, Pusa Aditya, Mother terressa, Sunil)	3,500
9	Mogra	2,000
10	Bogainvella	1,800
11	Seasonal flower plants	800
12	Climbers	1,500
13	Rose (Deshi)	1,000
14	Ixora	600
15	Potted plants (medium earthen pot)	400
16	Potted plants (big earthen pot)	300
17	Potted plants (small earthen pot)	350
18	Ornamental plants (large Poly bag)	1,000
19	Palm	400
20	Hanging Basket	50
21	Anand Shobha	500
22	Potted plant (Plastic Pot)	300
	Total	1,28,600

Medicinal & Aromatic plants' planting materials production of AAU, 2024-25

Sr. No.	Name of Crop	Nos.	Sr. No.	Name	Nos.
1	Kalmegh Seedling	8,500	11	Fudino	700
2	Kuvarpanthu	7,500	12	Rice plant	800
3	Tulsi Seedling	8,900	13	Arjun	1,300
4	Dodi	7,000	14	Chanothi	1,800
5	Tulsi	2,000	15	Nagod	2,200
6	Nagarvel	1,500	16	Chaivs	250
7	Brahmi	400	17	Safed chitrak	500
8	Parnfuti (Big & Small)	600	18	Madhunasini	100
9	Shatavari	1,000	19	Garmado	200
10	Citronella grass	1,200	20	Kevado	100





Sr. No.	Name of Crop	Nos.	Sr. No.	Name	Nos.
21	Kanji	100	40	Lasanvel	300
22	Rajanigandha	200	41	Safed Shankhavali	200
23	Sindur	200	42	Dodi (Moti)	150
24	Closimum	200	43	Gajpipar	300
25	Lindi pipar	100	44	Hadsakal	400
26	Ashwgandha	200	45	Ankol	150
27	Radhavad	150	46	Ramfal	200
28	Damro (Basil)	500	47	Seed Sample Set	40
29	Borsalli	200	48	Dam Vel	60
30	Bhrungraj	250	49	Safed musali	100
31	Jammu lemon grass	300	50	Lajavanti	100
32	Galo	400	51	Bili	150
33	Putranjiva	450	52	Alcho	70
34	Mithi limadi	250	53	Ashok	70
35	Karmada	300	54	Gundo	80
36	Aradusi	400	55	Kanchnar	60
37	Ajama pan	500	56	Cuttings	200
38	Coleaus (Garmar)	250	57	Bijoru	50
39	Vetivar grass	2,000			
TOTAL					56,180

Total number of seedlings/ planting materials and plants: 20,09,425 Seed production summary 2024-25 (in quintals)

Crop group	In quintals
Cereals	4282.24
Pulses	479.29
Oilseeds	585.39
Cash crops	175.27
Fodder crops	229.75
Spices crops	11.00
Vegetable crops	35.60
MAP crops	90.71
Total	5889.25

Seedlings, planting materials production summary 2024-25 (in lakhs)

Particular	(₹ in lakhs)
Tissue culture plants	0.28100
Horticultural Seedlings/plants (Fruit/Flower)	1.87645
Vegetable seedlings	12.32500
Tobacco seedlings	2.30000
MAP plants	0.56180
Hybrid Napier/ Gajraj / Marvel grass saplings	2.75000
Total	20.09425



Chapter

5

EXTENSION EDUCATION

The Directorate of Extension Education has to plan, coordinate, organize, and guide the extension education program in the University and to ensure efficient working of the extension education activities in close coordination with the development departments and voluntary and private organizations. Moreover, the Directorate encourages, guides, and supports the extension education centers of the university to organize different extension education activities for the benefit of the farming community.

The committee discusses in depth the adoption and feedback on research recommendations and existing transfer of technology programs. The approved recommendations are then passed on to the concerned. The ZREAC meeting was held for the *Rabi* season on 21/10/2024

& for the *Kharif* season on 03/07/2024.

Zonal Research and Extension Advisory Committee (ZREAC)

The Committee consists of the Director of Research, Deans of the faculty, officers of line departments, Heads of centers of extension education, Heads of research stations, and progressive farmers. Meetings are conducted regularly twice a year (*kharif* and *rabi* season).

Center of Extension Education

Under the aegis of the Directorate of Extension Education, the following centers/activities are functioning :





Sr. No.	Type	Name of Centre / Training	Location
1	Certificate Courses	Training in Baking Technology	Anand
		Advanced Training in Commercial Poultry Production	
		Training in Gardening, Landscaping and Nursery Management	
		Diploma in Agricultural Extension Service for Input Dealers (DAESI)	
2	Special Training Programmes	Training Programme on Food Processing Technology	
		Training Programme on Organic Farming	
		Training Programme on Integrated Weed Management in Modern Agriculture	
		Training Programme on Integrated Pest Management	
		Training Programme on Medicinal and Aromatic Plants	
		Training Programme on Seed Production Technology	
3	Training Centres for Extension Functionaries	Extension Education Institute (EEI)	Anand
		Training and Visit System (T&V)	
4	Training Centres for Farmers/ Farm Women/ Rural Youth	Sardar Smruti Kendra (SSK)	Anand
		Krushi Vigyan Kendra (KVK)	Arnej (Dist. Ahmedabad)
		Krushi Vigyan Kendra (KVK)	Dahod
		Krushi Vigyan Kendra (KVK)	Devataj (Dist. Anand)
		Tribal Training Centre (TTC)	Dahod
		Tribal Research cum Training Centre (TRTC)	Devgadhbaria (Dist.: Dahod)
		Tribal Farm Women Training Centre (TFWTC)	





		Transfer of Technology Centre for Tribal (TOT)	Godhara (Dist: Panchamahals)
		Farm Technology Training Centre (FTTC)	Sansoli (Dist.: Kheda)
		Training Centre (TC)	Jabugam (Dist.: Chhotaudepur)
5	Advisory Services	Agricultural Technology Information Centre (ATIC)	Anand
		Transfer of Technology Centre (TOT)	Arnej (Dist.: Ahmedabad)
		Agri Polyclinic Centre (APC)	Dahod
		Publication Unit (PU)	Anand
		Sardar Patel Agricultural Educational Museum (SPAEM)	Anand
6	Others	NARP Extension Scheme (MMRS)	Godhra (Dist.:Panchmahals)
		NARP Extension Scheme (ARS)	Arnej (Dist: Ahmedabad)

Extension Education Schemes

Under the Directorate of Extension Education, nineteen plan schemes, six non-plan schemes, four ICAR schemes, and four other agency schemes are running; the details are given in Annexure 5.1.

Front Line Demonstrations, Cluster Front Line Demonstration, On-Farm Trials, Seed Production and Impact of KVK

(i) Front Line Demonstrations (FLDs)/ Cluster Front Line Demonstration/Adaptive Trials

The FLDs aim to demonstrate the production potentialities of newly released varieties and pre-released production technologies in farmers' fields. The KVKs and other extension education centers had organized a total 4664 **FLDs** (1136 FLDs, 850 CFLDs and 2678 Adaptive Trials) on various crops, farm implements, livestock and fishery during *Kharif*, *Rabi* and Summer seasons. The details of FLDs conducted during 2024-25 are stated in Tables 5.1 to 5.7.





Table 5.1 FLD conducted by KVK, AAU, Arnej

(A) Crop

Crop	Thematic Areas	Technology Demonstrated	Variety	No. of Farmers	Area (Ha)	Yield (Qt/Ha)			Check	% Increase in Yield	Economics of Demonstration (Rs./Ha)			Economics of Check (Rs./Ha)				
						Demonstration					Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Oilseed Crops																		
Castor	IDM	Wilt resistance variety	GAC11	10	4						FAIL							
Pulse Crops																		
Chickpea	IPM	Chlorantraniliprole	GJG 6	10	4	15.25	10.80	13.5	12.22	10.47	23250	74250	51000	3.19	23900	67210	43310	2.81
Chickpea	IDM	Seed, Trichoderma	GJG 6	10	4	16.25	14.50	12.25	11.46	6.89	23850	67375	43525	2.82	23950	63030	39080	2.63
Other Crops																		
Cereals																		
Wheat	IWM	Low yield of wheat due to high infestation of Phalaris minor	GW 451	10	4	46.5	40.8	43.24	39.94	8.26	24800	97290	72490	3.92	23500	89865	66365	3.82
Paddy	VI	Introduction of improved variety	GAR 22	10	4	53.1	40.8	50.88	47.17	7.87	40250	106848	66598	2.65	38200	91982	53782	2.41
Paddy	VI	Introduction of improved variety	GAR 21	10	4	51.4	40.7	48.8	47.20	3.39	39800	95160	64780	2.40	37000	92040	55150	2.48
Vegetables																		
Tomato	VI	Biological control	GAT 8	10	4	300.75	268.25	292.25	273.50	6.85	545000	1315125	770125	2.41	590225	1230750	640525	2.08
Cluster Bean	IDM	Hexaconazole	Pusa Nav Bahar	10	4						FAIL							
Okra	VI	Introduction of improved variety	GAO 8 (Anand komal)	10	4	156.0	120.0	138.0	124.0	10.15	92875	303600	210725	3.27	90850	272800	179500	3.02





Crop	Thematic Areas	Technology Demonstrated	Variety	No. of Farmers	Area (Ha)	Yield (Qt/Ha)			Check	% Increase in Yield	Economics of Demonstration (Rs. / Ha)				Economics of Check (Rs. / Ha)			
						High	Low	Average			Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Spices																		
Cumin	VI	Introduction of improved variety	GC5	10	4	9.88	8.32	9.1	6.9	24.17	26400	194740	168340	7.37	27600	147600	120060	5.34
Diliseed	ICM & VI	Introduction of new crop and variety	GAD1	10	4	10.04	8.16	9.1	7.2	14.28	15600	56420	39220	3.61	14900	44640	29740	2.99
Coriander	VI	Introduction of new variety	GDLC1	10	4													
Commercial																		
Desi Cotton	ICM	Introduction of improved variety	GADC3	10	4													
Fodder Crop																		
Sorghum	VI	Introduction of improved variety	COFS 31	5	2	630	448	539	282	40.63	8500	26950	18450	3.17	8500	14100	6100	1.76

Crop was not taken due to unavailability of GDLC-1 variety seeds

(IDM-Integrated Disease Management, ICM-Integrated Crop Management, IPM-Integrated Pest Management)





CFLD (CLUSTER FRONT LINE DEMONSTRATION)

Sr No.	Crop	Technology Demonstrated	Target		Achieved	
			Area (ha)	No. Demonstrations	Area (ha)	No. Demonstrations
1	Castor Kharif-2024	Variety: Gujarat Castor Hybrid (GCH 9)	10	25	10	25
2	Pigeon pea Kharif-2024	Variety: Gujarat Junagadh Pigeon pea 1 (GJP 1)	10	25	10	25

Results

Crop	Technology Demonstrated	Production (q/ha)	Gross Cost (Rs)	Gross Return (Rs)	Net Return (Rs)	BCR
Castor Kharif-2024	Farmer practice	20.40	30700	114750	84050	2.74
	GCH 9	24.07	31500	135394	103894	3.30
Pigeon pea Kharif-2024	Farmer practice	15.90	26950	135150	108200	4.01
	GJP 1	18.15	28300	154275	125975	4.45

(B) Livestock

Category	Thematic Areas	Technology Demonstrated	No. of Farmers	No. of Units (Animals/ Poultry Birds etc.)	Major Parameters		% Enhance in Major Parameters
					Demo	Check	
1	2	3	4	5	6	7	8
Cattle	Nutritional Management	Mineral mixture	5	5	6.6	5.2	26.92
Buffalo	Nutritional Management	Bypass fat	5	5	7.4	6.1	21.31
Buffalo Calf	Nutritional Management	Bypass protein	5	5	380	250	52.00
Buffalo Calf	Nutritional Management	Calf Starter	5	5	250	200	25.00
Sorghum	VI	Introduction of improved variety (Cofs 31)	5	--	177	113	56.64





Other Parameters		Economics of Demonstration (Rs.)					Economics of Check (Rs.)			
Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)	
9	10	11	12	13	14	15	16	17	18	
5.0 % (milk fat)	4.0 % (milk fat)	2900	20000	17100	6.89	--	--	--	--	
7.2 % (milk fat)	7.0 % (milk fat)	6800	17000	10200	2.5	--	--	--	--	
--	--	9000	--	--	--	--	--	--	--	
--	--	3500	--	--	--	--	--	--	--	
--	--	16000	70800	54800	4.42	14000	45200	31200	3.22	

(C)FLD on Women Empowerment

Category	Name of Technology	No. of Demonstration	Name of Observations	Demonstration	Check	% Reduction in Improved Over Existing
Drudgery Reduction	Revolving Milking Stool and Stand	5	1. Time of Operation (Min)	6.8	7.7	11.6
			2. Physiological Parameter			
			A.. Average working heart rate (Beats/Min)	99	108	8.3
			B.. Average peak heart rate (Beats/Min)	104	115	9.5
			C. Average energy expenditure (KJ/Min)	7.0	8.2	14.6
			D. Energy expenditure at peak(KJ/Min)	8.0	9.2	13.5
			F. Average cardiac cost of work (TCCW)	124	162	23.4
			G Average physiological cost of work (PCW)	30	44	31.8
			I. Average rated perceived exertion	1.75	2.28	23.2





(D) FLD on Farm Implements and Machinery

Name of Implement	Crop	Technology Demonstrated	No. of Farmers	Area (Ha)	Major Parameters		Farmer Practices		Filed Observation (100 Kg/Hr)
					Area (Ha)	No. of Farmers	Check	Demo	
Mini Rice Mill	Paddy	Rice Milling	5	2	Milling Capacity (Kg/Hr)		950	94-98	300
					Cost of Operation (Rs/100 Kg)		320	300	
Wheel Sprayer	Chickpea	Wheel Sprayer	10	4	Workload (m-hr/ha)		12.48	2.49	125
					Cost of operation (Rs/ha)		500	125	
					Save in time (%)		--	80 %	

Table 5.2 FLDs conducted by KVK, Dahod

(A) Crop

Crop	Thematic Area	Technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)			% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)				
						Demo		Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)	
						High	Low											Average
Maize	Varietal	Variety, Bio-fertilizer	GAYMH 3	50	10	31.60	30.20	30.90	26.10	18.39	37739	90537	58798	2.85	27985	66033	38048	2.36
Maize	Varietal	Variety, Bio-fertilizer	GAWMH 2	50	10	11.80	8.65	10.22	7.45	37.18	20564	34032	13468	1.65	14910	21828	6918	1.46
Wheat	Varietal	Variety, Biofertilizer	GW 451	25	10	29.95	28.55	29.25	25.35	15.38	28611	85410	56799	2.99	25785	74022	48237	2.87
Wheat	Weed management	Clodinafop propargyl 15% + Metsulfuron methyl 1% WP	GW 451	25	10	28.90	26.60	27.75	24.40	13.72	27161	81030	53869	2.98	29150	71248	42098	2.44
Chickpea	Varietal	Variety, Biofertilizer	JG 14	25	10	15.30	13.20	14.25	11.75	21.27	30379	95333	64953	3.14	27295	78608	51313	2.88
Chilli green	Varietal	Seedling and Bio NPK	GAVHC 1	20	4	146	110	126.5	91.3	38.55	78500	253000	174500	3.22	71300	162600	91300	2.28
Brinjal	Varietal	Seedling and Bio NPK	GABH 3	20	4	276	241	269	218.5	23.11	81250	269000	187750	3.31	76250	218500	142250	2.87
Tomato	Varietal	GAT 5, Biofertilizer	GAT 5	20	4	215	190	301.8	228	32.37	89000	301800	212800	3.39	81360	228000	146640	2.80
Okra	Varietal	GAO 8, Biofertilizer	GAO 8	20	4	110	98.00	107.2	85.4	25.53	59000	160800	101800	2.73	52250	128100	75850	2.45
Cluster bean	Varietal	GAG 11, Biofertilizer	GAG 11	20	4	112	99.00	120.4	101.7	18.39	63500	240800	177300	3.79	60450	203400	142950	3.36





(B) Livestock

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units (Animal/ Poultry/ Birds, etc)	Major parameters			% change in major parameter	Other parameter		
					Name of Parameters	Demo	Check		Name of Parameters	Demo	Check
Cattle	Health management	Deworming and Disinfection	50	1	Milk yield (FCM) kg/ani./day	7.11	6.77	5.02	Fat percent	6.73	6.49
	Fertility management	Fertility in heifers	20	1	Fertility rate %	60	25	140	Conception rate (percent)	37.04	16.67
	Feeding management	Probiotic feeding	20	1	Unit of Body weight gain is Kg/animal	36.05	33.65	7.13	Incidence of scours	2	7
Buffalo	Fertility management	Ovsynch Protocol	20	1	Fertility rate %	65	25	160	Conception rate	52.17	15.38
Poultry	Breed evaluation	Kadakhnath breed	20	20	Average body weight at 5-6 month age sale (kg/bird)	1.09	0.97	12.37	Mortality rate	11.50	8.25

Category	Thematic Area	Name of the technology demonstrated	Economics of demonstration (Rs.)				Economics of check (Rs.)			
			Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Cattle	Health management	Deworming and Disinfection	47563	61405	13842	1.29	46858	58502	11644	1.25
	Fertility management	Fertility in heifers	-	-	-	-	-	-	-	-
	Feeding management	Probiotic feeding	-	-	-	-	-	-	-	-
Buffalo	Fertility management	Ovsynch Protocol	-	-	-	-	-	-	-	-
Poultry	Breed evaluation	Kadakhnath breed	255	450	195	1.76	200	300	100	1.5

* Economics to be worked out based total co





(1) CFLD (CLUSTER FRONT LINE DEMONSTRATION)

CFLD on Oilseed crops under NMOOP

Crop	Thematic Area	Technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)			% Increase in yield	Economics of demonstration (Rs./ha)			Economics of check (Rs./ha)			
						Demo				Gross Cost	Gross Return	Net Return	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average								
Soybean	Varietal	Variety, Bio-fertilizer	NRC37	150	60	11.75	8.65	10.37	25.69	30011	49223	19211	27650	37620	9969	1.36

CFLD on Oilseed crops under model village

Crop	Thematic Area	Technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)			% Increase in yield	Economics of demonstration (Rs./ha)			Economics of check (Rs./ha)			
						Demo				Gross Cost	Gross Return	Net Return	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average								
Soybean	Varietal	Variety	KDS 726	500	200	12.30	9.90	11.10	32.14	30789	52362	21572	28428	38304	9875	1.35





Table 5.3 FLDs Conducted at KVK, Devataj (District: Anand)

(A) Crops

Crop	Thematic Areas	Technology Demonstrated	Variety	No. of Farmers	Area (Ha)	Yield (Qt/Ha)				% Increase in Yield	Economics of Demonstration (Rs. / Ha)				Economics of Check (Rs. / Ha)			
						High	Low	Avg	Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Chickpea	Varietal Introduction	New variety	JG 14	10	4.0	17.4	13.3	14.4	12.8	12.5	16430	96480	80050	5.87	14950	85760	70810	5.74
Chickpea	IPM	Management of chickpea pod borer	GG 2	10	4.0	15.7	13.5	14.6	11.4	28.07	12100	58400	46300	4.83	9870	43320	33450	4.39
Wheat	New Varietal Introduction	New variety	GW 451	10	4.0	30.5	24.5	28	24	16.7	23070	68600	45530	2.97	21900	58800	36900	2.68
Paddy	New Varietal Introduction	New variety	GR 21	10	4.0	56.0	48.8	53.20	46	15.65	35130	106400	71270	3.03	33520	87400	53880	2.61
Paddy	IPM	Management of Paddy leaf folder	Gurjari	10	4.0	61	57	59	54	9.26	40100	94400	54300	2.35	39720	81000	41280	2.04
Okra	Varietal Introduction	New variety	GOH 205	5	2.0	121	131.5	126.4	123.2	2.60	45650	174685	129035	3.83	47860	170262	122402	3.56
Mustard	Varietal Introduction	New variety	Anand Hema	10	4.0	26.4	18.6	19.2	18.4	4.3	17300	99840	82540	5.77	16550	95680	79130	5.78
Mustard	IPM	Management of Aphid	Local	10	4	14.0	17.7	15.9	13.5	17.78	13700	63600	49900	4.64	12500	54000	41500	4.32





Livestock and Fisheries

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units	Major parameters		% change in major parameter	Other parameter		Economics of demonstration (Rs.)				Economics of check (Rs.)					
					Demo	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)		
Buffalo	Feed management	Use of mineral mixture	50	50	Milk yield L/anim./day	7.5	6.1	22.95	Fat %	7.0	5.9	30860	56700	25840	1.84	34855	37210	2355	1.07
					q/ha	830	580												
	Fodder management	Use of Guinea Grass as fodder	10	10	Milk yield L/anim./day	7.1	6.0	18.33	Fat %	6.5	6.9	63310	101500	38190	1.60	51830	69600	17700	1.34
					q/ha	960	575												
	Fodder Management	Use of Hapa for Nursery rearing of Rohu fish	5	-	-	1.66	1.39	19.42	Survival %	41	29	25800	88560	62760	3.43	33250	98600	65350	2.97
Fishery	Composite fish culture	Use of mineral feed	10	-	-	32.26	28.22	14.32	Survival %	72	63	201300	290304	89004	1.44	198000	254016	56016	1.28

(C) FLD on Women Empowerment

Category	Season	No. of Demo	Yield (Kg)			Cost of Cash (critical input/Demo)	Total cost of Production of Demo (Rs./ family /Demo)	Gross Return (Rs./ family / Demo)	Net Return (Rs./ family / Demo)	BC Ratio
			Max	Min	Avg					
1	2	3	4	5	6	8	9	10	11	12
Kitchen Garden	Kharif-2024	25	68	37	55.04	143.2	385	2195.1	1810.1	5.70
	Rabi 2024-25	25	81	56	66.16	90	385.6	2883.2	2407.6	6.2





(D) CLUSTER FRONT LINE DEMONSTRATION (CFLD)

Crop	Thematic Areas	Technology Demonstrated	Variety	No. of Farmers	Area (Ha)	Yield (Qt/Ha)			% Increase in Yield	Economics of Demonstration (Rs. / Ha)				Economics of Check (Rs. / Ha)				
						Demonstration				Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)	
						High	Low	Average										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Castor	ICM	Variety+Bio fertilizer	GCH-9	150	60	31.5	26.4	27.2	24.0	13.33	42590	163200	120610	2.83	39250	144000	104750	2.67

Table 5.6: FLDs conducted by MMRS, AAU, Godhara

AICRP Project										
Crop	Thematic areas	Technology Demonstrated	Variety	No.offarmers	Area(ha)	Yield (q/ha)		% increasein yield		
						Local practices	GAWMH-2			
Maize	Panchmahals, Dahod	Scientific maize cultivation	GAWMH 2	105	42	28.38	33.31	17.42		
Rabi 2024-25										
Crop	Thematic areas	Technology Demonstrated	Variety	No.offarmers	Area(ha)	Yield (q/ha)		% increasein yield		
Maize	Panchmahals , Mahisagar	Scientific maize cultivation	GAYMH-3	20	08	32.12	40.03	24.71		
TSP Project										
Kharif-2024										
Crop	Thematic areas	Technology Demonstrated	Variety	No.offarmers	Area(ha)	Yield (q/ha)		% increase in yield		
Maize	Panchmahals, Dahod r	Scientific maize cultivation	GAWMH 2	51	20.4	28.24	33.11	17.27		
Rabi 2024-25										
Crop	Thematic areas	Technology Demonstrated	Variety	No.offarmers	Area(ha)	Yield (q/ha)		% increase in yield		
Maize	Panchmahals, Mahisagar, Dahod	Scientific maize cultivation	GAYMH-3	15	06	32.13	39.52	23.05		





Table 5.7: FLDs Conducted by Paddy Research Station, Dabhoi

Demonstration conducted at PRS, Dabhoi

Sr. No.	Crop	Technology demonstrated	Variety	No. of Demo.	Area (ha.)	Yield of Demo. (kg/ha)	Yield of check (kg/ha)	Yield Increase (%)
1	Paddy	Newly developed variety of paddy	GAR 21	1	0.10	4750	4367	8.77
2	Paddy	Use of leaf colour chart in Paddy crop	GAR 21	1	0.10	4948	4584	7.94
3	Wheat	Irrigation at critical growth stages in wheat	(GW 496)	1	0.10	3035	2878	5.45
4	Wheat	Weed management in wheat with premix broad spectrum herbicides (GW 496)	(GW 496)	1	0.10	3274	2912	1.24
5	Wheat	Irrigation scheduling through sprinkler irrigation in wheat (GW 496)	(GW 496)	1	0.10	3026	2945	2.75
6	Wheat	Canal and tube well water recommendation in wheat (GW 496)	(GW 496)	1	0.10	3020	2875	5.04
8	Green Gram	Nutrient management through organic source in summer green gram for moisture conservation	(GAM 5)	Results Awaited	-	-	Results Awaited	-

Demonstration conducted at Farmers Field

Sr. No.	Crop	Technology demonstrated	Variety	No. of Demo.	Area (ha.)	Yield of Demo. (kg/ha)	Yield of check (kg/ha)	Yield Increase (%)
1	Paddy	Newly developed variety of paddy	GAR 21	10	4.0	4513	4312	4.66
2	Paddy	Use of leaf colour chart in Paddy crop	GAR 21	10	4.0	4660	4589	1.55
3	Wheat	Irrigation at critical growth stages in wheat	GW 496	10	4.0	3220	2943	9.41
4	Wheat	Irrigation scheduling through sprinkler irrigation in wheat (GW 496)	GW 496	10	4.0	3228	2820	14.46
6	Green Gram	Nutrient management through organic source in summer green gram (GAM 5)	GAM 5	10	4.0	Results Awaited	-	-





Table 5.8 : FLDs conducted by ARS, Dhandhuka

Crop	Thematic Areas	Technology Demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)			Check Gross Cost	% Increase in Yield Gross Return	Economics of Demonstration (Rs./ ha)				Economics of Check (Rs./ ha)			
						High	Low	Average			Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Rice	Fertilizer dose	Cultivation of rice cv. GAR 13 fertilized with nitrogen 120 kg/ha with phosphorus (25 kg/ha) and without phosphorus	GAR 13	10	4.0	6950	6300	6625	6846	3.30 (Check over demonstration)	42176	152375	110199	2.61	43641	157458	113817	2.61
Rice	Variety	Demonstration of new variety of rice (cv. GR 21)	GR 21 & GAR 13	10	4.0	7200	6000	6600	6496	1.6	43641	151800	108159	2.48	43641	149408	105767	2.42
Cotton and Castor	Cropping pattern	Cotton - Castor relay cropping	Mallika and GCH 7	10	4.0	5593	4691	5142	3150	63.4	92494	366162	273668	2.96	63834	224312	160478	2.51
Castor	Cropping pattern	Late Kharif sowing of Castor cv. GCH 7 fertilized with 100-25-00 kg NPK/ha.	GCH 7	10	4.0	3910	3160	3535	3227	9.5	39242	212100	172858	4.40	39242	196320	157078	4.0
Castor	Variety	Demonstration of Different varieties of castor (viz. GCH 7 and GCH 10)	GCH 10 and GCH 7	10	4.0	3125	2583	2829	2413	17.3	39242	169740	130498	3.33	39242	144780	105538	2.69
Wheat	Irrigation	Irrigation at critical growth stages in wheat	GW 496	10	4.0	4700	3500	4100	3798	8.0	43356	99425	56069	1.29	44520	92102	47582	7.07





Crop	Thematic Areas	Technology Demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)			Check Gross Cost	% Increase in Yield in Gross Return	Economics of Demonstration (Rs./ha)				Economics of Check (Rs./ha)			
						High	Low	Average			Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Check pea	Irrigation	Demonstration of gram by application of one irrigation at branching stage	GG 5	10	4.0	2500	2000	2250	1951	15.3	23437	127125	103688	4.40	25714	110232	84518	3.29
Green Gram	Nutrient management	Nutrient management through organic sources in summer green gram (<i>Vigna radiata</i> L.) for	GAM 8	10	4.0	1500	1200	1350	1170	15.4	26443	9450	68057	2.57	27663	81900	54237	1.96

Table 5. 8: FLDs of AICRP on Weed Management

Crop	Thematic Areas	Technology Demonstrated	Variety	No. of Farmers	Area (Ha)	Yield (Qt/ha)			Check Gross Cost	% Increase in Yield	Economics of Demonstration (Rs./ha)				Economics of Check (Rs./ha)			
						High	Low	Average			Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Soybean	Weed management	Propanaizafop 2.5% + imazethapyr 3.75% w/w ME (RM) 125 g.a.i./ha	Soybean NRC 37/ JS 35	5	2	22.0	15.0	19.0	18.0	5.50	44,446	87,400	42,954	1.97	53,950	82,800	28,800	1.53





ADAPTIVE TRIALS

Table 5.8 (A) KRISHI VIGYAN KENDRA, ARNEJ

Sr No	Crop	Thematic areas	Technology demonstrated	Variety	No of farmers	Area (ha)	Yield (kg/ha)		% Increase in Yield
							Treatment / Technology	Check	
1	Desi Cotton	ICM	Effect of paired row sowing on yield and fibre quality of desi cotton under rainfed condition	GADC 3	26	15	Due to heavy rainfall, crops were failed at Goraiya and Dumana villages	-	-

(B) KRISHI VIGYAN KENDRA, DAHOD

Sr. No.	Crop	Thematic areas	Technology demonstrated	Variety	No. of farmers	Area (ha)	Yield (kg/ha)		% Increase in yield
							Treatment / Technology	Check	
1	Fodder Maize	Varietal evaluation	New Variety	GFM 1	10	3	41000	-	-
2	Maize	Varietal evaluation	New Variety and Bio NPK	GAYMH 3	10	4	2945	-	-
3	Gram	Varietal evaluation	New Variety and Bio NPK	JG 14	10	4	1570	-	-
4	Green gram	Varietal evaluation	New Variety	GAM 8	10	4	In progress	-	-

(C) MAIN RICE RESEARCH STATION, NAWAGAM

Sr. No.	Crop	Thematic areas	Technology demonstrated	Variety	No. of Farmers	Total Area (ha)	Yield (kg/ha)		% Increase in Yield
							Treatment / Technology	Check	
1	Rice	Varietal evaluation	New Variety	GAR 14	28	14.0	3969	-	-
2	Rice	Varietal evaluation	New Variety	GAR 22	74	37.0	4242	-	-





Sr. No.	Crop	Thematic areas	Technology demonstrated	Variety	No. of Farmers	Total Area (ha)	Yield (kg/ha)		% Increase in Yield
							Treatment / Technology	Check	
3	Rice	Varietal evaluation	New Variety	GAR 201	31	7.75	4297	-	-
4	Rice	Varietal evaluation	New Variety	GR 21	133	66.5	4337	-	-
5	Rice	Insect-pest management	Granular insecticide chlorantraniliprole 0.4% GR, 10 kg/ha or Chlorantraniliprole 0.50% + thiamethoxam 1.00% GR, 6.0 kg/ha, 6 kg/ha for effective management of major insect-pests of rice	Punjabs, Gurjari, 301, Motigold, GAR 13	16	04	5050	-	-
6	Rice	DSR Varietal evaluation	Direct Seeded Rice	Mahisagar	43	10.75	5631	-	-
7	Rice	Blast Disease management in Rice	Efficacy of readymix fungicide against Blast disease of Rice	Gurjari Moti Gold	7	2.0	4491	-	-



**(D) KRISHI VIGYAN KENDRA, DEVATAJ**

Sr. No.	Crop	Thematic Area	Technology Demonstrated	Variety	No. of farmers	Area (ha)	Yield (kg/ha)		% increase in yield
							Treatment/Technology	Check	
1	Greengram	New variety	High yielding and MYMV resistant	GAM-8	16	6	960	-	-
2	Mustard	New variety	Higher yield	Anand Hema	16	6	2240	-	-
3	Fodder Maize	Fodder Production	Fodder Production	GFM 1 (Anand Tall)	15	0.25	46500	-	-
4	Paddy	IPM	Chlortran iliprole 18.5 SC 0.006% (3 ml/10 liters of water) for the control of rice stem borer and leaf folder	GAR 201	15	4	5500	-	-

(E) AGRICULTURAL RESEARCH STATION, DEROL

Sr. No.	Crop	Thematic Area	Technology demonstrated	Variety	No. of farmers	Area (ha)	Yield (kg/ha)		% Increase in yield
							Treatment/Technology	Check	
1	Chickpea	Crop management	Composite variety with scientific practices	JG 14	06	2.4	1433	-	-
2	Greengram	Crop management	Variety with scientific practices	GAM 8	12	4.8	Results Awaited	-	-





(F) AGRICULTURAL RESEARCH STATION, DHANDHUKA

No.	Crop	Thematic areas	Technology demonstrated	Variety	No. of farmers	Area (ha)	Yield		% Increase in yield	Remarks
							Treatment/ Technology (kg/ha)	Check (kg/ha)		
1	2	3	4	5	6	7	8	9	10	11
1	Desi Cotton	Bhd and Coastal Agroclimatic zone-VIII	Pair row planting	GADC 3	34	34.0	1403	1274	9.19	Yield is average of 27 farmers as rest of the demonstrations were failed due to abnormal weather condition.
2	Chickpea		Effect of restricted irrigation	GG 2	9	3.0	1327	1027	22.61	-
3	Durum Wheat		Effect of nitrogen and seed rate under limited irrigation	GADW 3	10	5.0	1367	1091	20.19	-
4	Chickpea		Varietal demonstration	GG 14	3	1.0	1360	1160	14.71	-

(G) MAIN MAIZE RESEARCH STATION, GODHARA: NIII

(H) MAIN FORAGE RESEARCH STATION, ANAND

No	Crop	Thematic areas	Technology demonstrated	Variety	No of farmers	Approximate Area (ha.)	Average Yield (q/ha)		% Increase in yield
							Treatment / technology yield	Check yield	
1	Fodder Maize	Variety	Fodder variety	GFM 1	11	4.0	485	-	-





(I) AGRICULTURAL RESEARCH STATION, AAU, SANSOLI

No.	Crop	Thematic areas	Technology demonstration	Variety	No. of farmers	Area (ha)	Yield (kg/ha)		% Increase in Yield
							Treatment/Technology	Check	
1	Castor	New Variety Demonstration	New Variety	GAC 11	30	12.10	2193	-	-
2				GCH 10	18	7.20	2211	-	-

(J) AGRICULTURAL RESEARCH STATION, JABUGAM

No.	Crop	Thematic areas	Technology demonstrated	Variety	No. of farmers	Area (ha)	Yield (kg/ha)		% Increase in yield
							Treatment/Technology	Check	
1	Maize	Adoption of New Variety of Fodder maize	Newly developed fodder maize Variety	GFM-1 (Anand Tail)	16	4.0	55000	-	-
2	Black Gram (Semi rabi)	Adoption of New Variety of Black Gram	YMV resistant Variety	GAU-4 (Shyamal)	27	10.0	1200	-	-
3	Black Gram (Summer)	Adoption of New Variety of Black Gram	YMV resistant Variety	GAU-4 (Shyamal)	200	40.0	1000	-	-
4	Banana	Adoption of New Variety of Banana	Newly developed dwarf and early maturing banana Variety	GB 1 (Anand Varman)	21	10.0	-	-	-
5	Okra	Adoption of New Variety of Okra	Newly developed short stature okra hybrid	GOH-205 (Anand Kranti)	05	2.0	18000	-	-





(K) AGRICULTURAL RESEARCH STATION, THASRA

No.	Crop	Thematic Areas	Technology Demonstrated	Variety	No. of Farmers	Area (ha)	Yield (kg/ha)		% increase in yield
							Treatment/Technology	Check	
1	Castor	Cropping pattern	Late sowing of castor (GCH 10)	GCH 10	25	10.0	2987	-	-
2	Rice	Cropping Technique	Cultivation of Direct seeded rice cv. Mahisagar	Mahisagar	06	3.0	4857	-	-
3	Green Garam	Pest management	Hydropriming in summer green gram cv. GAM 8 (Haramoti) for effective control of sucking pest	GAM 8	06	3.0	1380	-	-

(L) TRIBAL RESEARCH CUM TRAINING CENTRE, DEVGADH BARIA

Sr. No.	Crop	Technology demonstrated	Variety	No. of demo.	Area (Ha)	Yield (kg/ha)		Yield increase (%)
						Demo	Local	
Kharif Season								
1	Soybean	Sowing distance and seed rate	NRC-37	5	2	1140	965	15.35%
2	Soybean	Gardle beetle management	NRC 37	5	1	1055	870	24.26 %
3	Soybean	Sucking pest management	NRC 37	5	1	1126	1005	11.04 %
4	Finger millets	Improved variety	GN 9	20	1	1030	875	17.71 %
5	Maize	Fall army worm management	GAYMH-2	10	2	2715	2368	14.65%
Rabi Season								
6	Chickpea	Effectiveness of multi micro nutrients	JG-14	10	2	1295	1125	15.11 %
Summer								
7	Black Gram	Improved variety	Shyamal	20	2	Crop is standing		





(M) Regional Research Station, Anand

No.	Crop	Thematic areas	Technology demonstrated	Variety	No. of farmers	Area (ha)	Yield (kg/ha)		% Increase in Yield
							Treatment/Technology	Check	
1.	Castor	Oilseed	Hybrid Variety	GCH 10 (Charutar Gold)	54	21.60	3088	-	-
2.	Mustard	Oilseed	Improved Variety	GM 8 (Anand Hema)	250	100.0	2098	-	-
3.	Mungbean	Higher yield and resistant in MYMV	Improved Variety	GAM 8 (Haramoti)	100	40.00	927	-	-

(N) REGIONAL COTTON RESEARCH STATION, VIRAMGAM

No.	Crop	Thematic areas	Technology demonstrated	Variety	No. of farmers	Area (ha)	Yield (kg/ha)		% Increase in Yield
							Treatment/Technology	Check	
1	Cotton	Crop Production	Demonstration of paired row in Desi Cotton Variety GADC-3 (Vagad Gaurav)	GADC-3 (Vagad Gaurav)	11	15	2068	-	-
2	Cotton	Crop Production	Demonstration of Desi Cotton Variety GADC-4 (Vagad Resham)	GADC-4 (Vagad Resham)	71	71	1330	-	-
3	Pigeon Pea	Crop Improvement	Demonstration of New Variety of Pigeon Pea GT-106	GT-106	19	19	1368	-	-

(O) SEED SPICES RESEARCH STATION, SANAND : Nil

(P) BIDI TOBACCO RESEARCH STATION, ANAND

No.	Crop	Thematic area	Technology demonstrated	Variety	No. of farmers	Area (ha)	Yield (kg/ha)		% Increase in Yield
							Treatments/technology	Check	
1	Tobacco	Variety demonstration	Higher yield	GABTH 2	5	2.29	5017	-	-
2			Resistance to Root knot nematode	ABT 10	5	2.31	3115	-	-





(Q) AICRP ON BIOLOGICAL CONTROL OF CROP PESTS, ANAND

No.	Crop	Thematic areas	Technology demonstrated	Variety	No. of farmers	Area (ha)	Yield (kg/ha)		% Increase in yield
							Treatment/Technology	Check	
1	Okra	Management of insect pest through Bio-control Agents	Biological suppression of okra fruit and shoot borer (<i>Kharif</i>)	--	60	50.5	13500	-	-

(R) NARMADA IRRIGATION RESEARCH PROJECT, KHANDHA

No.	Crop	Thematic areas	Technology demonstrated	Variety	No. of farmers	Area (ha)	Yield (Kg/ha)		% Increase in Yield
							Treatment/Technology	Check	
1	Pigeonpea	Spacing and Phosphorus management	Spacing and phosphorus management in pigeonpea (AGT 2)	AGT 2	15	3.6	925	-	-
2	Castor	Spacing and Nitrogen management	Spacing and nitrogen management in castor (GCH 10)	GCH 10	15	3.6	Result awaited	-	-
3	Pigeonpea	New variety	Pigeonpea GT 106	GT 106	09	3.6	1392	-	-

(S) PULSE RESEARCH STATION, VADODARA

No.	Crop	Thematic Areas	Technology Demonstrated	Variety	No. of Farmers	Area (ha)	Yield (kg/ha)		% Increase in Yield
							Treatment/Technology	Check	
1.	Urdbean	New Variety Demonstration	New Variety	GAU 4 (Shaymal)	20	5	1072	--	--

(R) PADDY RESEARCH STATION, DABHOI

No.	Crop	Thematic areas	Technology demonstrated	Variety	No. of farmers	Area (ha)	Yield (kg/ha)		% Increase in Yield
							Treatment/Technology	Check	
1.	Rice	New Variety Demonstration	New Variety of - Paddy GR 21 (<i>Kharif</i>)	GR 21	25	10	4167	-	-
2.	Greengram	New Variety Demonstration	Greengram - GAM 8 (Haramoti) <i>Summer</i>	GAM 8	12	3	Results Awaited	-	-
3.	Blackgram	New Variety Demonstration	Blackgram - GAU 4 (Shyamal) <i>Summer</i>	GAU 4	12	3	Results Awaited	-	-





(S) AICRP-WEED MANAGEMENT, BACA, AAU, ANAND

Sr. No.	Crop	Thematic areas	Technology demonstrated	Variety	No. of farmers	Area (ha)	Yield (kg/ha)		% Increase in Yield
							Treatment/Technology	Check	
1	Soybean	Weed management	Imazethapyr 10% 75 g a.i./ha (RM) PoE (15-20 DAS) fb HW at 30 DAS	NRC 37/ JS 335	8	4	2100	-	-
2	Rabi Maize	Weed management	Atrazine 50% WP + topramezone 336 g/l w/v SC (500+25.2 g a.i./ha) PoE (15-20 DAS)	Hybrid/ GAYMH 3	8	4	5650	-	-
3	Onion	Weed management	Propaquizafop 5% + oxyfluorfen 12% w/w EC (43.75+105 g/ha) (RM) at 20 DATP	Local	8	4	23000	-	-





(T) AGRICULTURAL RESEARCH STATION, DAHOD

Sr. No.	Crop	Thematic areas	Technology demonstrated	Variety	No. of farmers	Area (ha)	Yield (kg/ha)		% Increase in Yield
							Treatment / Technology	Check	
1	Kodo millet	New Variety	Introduction New Variety	GAK 3/CKMV 2	50	10.00	1279	-	-
2	Kodo millet	Demonstration	Introduction New Variety	GK 4	55	10.5	1311	-	-
3	Finger millet		Introduction New Variety	GN 8	50	16.66	1679	-	-
4	Finger millet		Introduction New Variety	GN 9	55	18.33	1698	-	-
5	Chickpea	Nutrient management	Effect multi micronutrient in chickpea variety JG 14	JG 14	03	1.00	2105	-	-
6	Garlic	New variety demonstration	Introduction New Variety	GG 7 (Anand Kesari)	05	0.06	42.58 (q/ha)	-	-
7	Tomato		Introduction New Variety	GAT 8 (Anand Roma)	15	0.33	339 (q/ha)	-	-
8	Chilli	Insect-pest management	Black Thrips management of Chilli variety: GAVC 141	GAVC 141 (Anand Tei)	15	0.16	135 (q/ha)	-	-
9	Summer Greengram		Effectiveness of hydropriming against sucking pests in summer Greengram: GAM 8	GAM 8: Hara Moti	11	4.33	Demonstration result is awaited due to remained threshing		
10	Urdbean	New variety demonstration	Introduction New Variety	GAU 4: Shyamal	14	5.33	Demonstration result is awaited due to crop standing in farmers field		
11	Okra		Introduction New Variety	GAO 8: Anand Komal	15	10.00	Demonstration result is awaited due to crop standing in farmers field		





(U) Training Centre for Tribal Farmer, Dahod

Sr. No.	Crop & Variety	Technology Demonstrated	No. of Farmers	Average Demo. Yield (Kg/ ha)	Average Grain Yield of Local check (Kg/ ha)	Grain yield over Local Variety (%)
1	Kodo millet (GAK 3/CKMV 2)	Introduction new variety	105	1219	979	24.51
2	Kodo millet (GK 4)	Introduction new variety	105	1311	1045	25.45
3	Finger millet (GN 8)	Introduction new variety	105	1679	1285	30.66
4	Finger millet (GN 9)	Introduction new variety	105	1698	1277	32.96
5	Chickpea (JG 14)	Effect of multi-micronutrient mixture grade on chickpea (JG 14)	03	2105	1679	25.37
6	Garlic (GG 7: Anand Kesari)	Introduction new variety	05	42.58 (q/ha)	33.19(q/ha)	28.29
7	Tomato(GAT 8: Anand Roma)	Introduction new variety	15	339 (q/ha)	273 (q/ha)	24.17
8	Chilli (GAVC 141: Anand Tej)	Black thrips management in chilli GAVC – 141 (Anand Tej)	15	135 (q/ha)	111 (q/ha)	21.62
9	Summer Greengram (GAM 8: Hara Moti)	Effect of hydro priming in sucking pest on summer greengram variety	13	Demonstration result is awaited		
10	Okra (GAO 8: Anand Komal)	Introduction new variety	15			
11	Urdbean (GAU 4: Shyamal)	Introduction new variety	14			

(V) MAIN VEGETABLE RESEARCH STATION, ANAND

No.	Crop	Thematic areas	Technology demonstration	Variety	No. of farmers	Area (ha)	Yield (kg/ha)		% Increase in Yield
							Treatment/Technology	Check	
1	Chilli	New variety demonstration	Variety	GAVC 141 Anand Tej	14	1.50	--	--	--
2	Chilli		Variety	Anand Jwala	12	1.50	--	--	--
3	Tomato		Variety	Anand Roma	07	2.00	--	--	--
4	Brinjal		Variety	Anand Harit	16	4.20	--	--	--
5	Brinjal		Variety	Anand Raj	28	8.40	--	--	--
6	Brinjal		Variety	Anand Doli	40	8.40	--	--	--
7	Okra		Variety	Anand Komal	32	18.00	--	--	--
8	Okra		Hybrid	Anand Kranti	30	7.50	--	--	--
9	Guar		Variety	Anand Bahar	25	15.00	--	--	--





(W) COLLEGE OF AGRICULTURE, VASO

No.	Crop	Thematic areas	Technology demonstrated	Variety	No. of farmers	Area (ha.)	Yield (kg/ha)		% Increase in yield
							Treatment/ Technology	Check	
1.	Okra	New Variety Demonstration	Demonstration on okra var. Anand Kranti	Anand Kranti	5	1.15	12.75	-	-

On Farm Testings (OFTs)

On Farm Testing aims to identify technologies in terms of location-specific sustainable land use systems. The KVK of AAU organized 86 **OFTs** on various crops/enterprises. The details of the OFTs conducted during the year 2023-24 are given in Tables 5.9 to 5.11.

Table 5.9 OFTs conducted by KVK, Arnej on crops

OFT - 1 (2nd Year: 2023-24)

1.	Crop / Enterprise	Tomato
2.	Farming Situation	Rabi 2023-24
3.	Problem Definition	Low productivity of Tomato in Ahmedabad district
4.	Title of OFT	Varietal assessment of Tomato
5.	No. of Trials	5
6.	Technology Assessed	T1. Local Variety T2. GAT 5 T3. GAT 8
7.	Parameters of Assessment	1.Yield (qt/ha) 2.No. of picking 3.Days to first/last picking
8.	Data on the Parameter	As shown in below table
9.	Results of Assessment	Variety gives higher production as compare to local variety.
10.	Feedback from the Farmer	Farmers are getting higher production as well as higher selling price
11.	Any Refinement Needed	No
12.	Justification for Refinement	No





Technology Assessed	Source of technology	Production (q/ha)	Please give the Unit	Net return (Profit) in Rs./ Unit	BC Ratio
13	14	15	16	17	18
T1. Local Variety	--	305	q/ha	147300	2.74
T2. GAT 5	AAU, Anand (2017)	336		180980	3.01
T3. GAT 8	AAU, Anand (2021)	386		228200	3.52

OFT - 2 (1st Year: 2024-25)

1.	Crop / Enterprise	Okra
2.	Farming Situation	Kharif 2024-25
3.	Problem Definition	Low productivity of Okra in Ahmedabad district
4.	Title of OFT	Varietal assessment of Okra
5.	No. of Trials	5
6.	Technology Assessed	T1. Local Variety T2. GOH 205 (Anand Kranti)
7.	Parameters of Assessment	1. Yield (kg/ha) 2.No. of picking 3.Days to first/last picking
8.	Data on the Parameter	As shown in below table
9.	Results of Assessment	Failure due to heavy rainfall during sowing season
10.	Feedback from the Farmer	-
11.	Any Refinement Needed	-
12.	Justification for Refinement	-





OFT - 3 (2nd Year: 2023-24)

1.	Crop / Enterprise	Chickpea
2.	Farming Situation	Rabi 2023-24
3.	Problem Definition	Low productivity of Chickpea in Bhal Region
4.	Title of OFT	Varietal assessment of Chickpea
5.	No. of Trials	5
6.	Technology Assessed	T1. Local Variety T2. GG 5 JAU, Junagadh (2017) T3. JG 14 AAU, JNKVV, Jabalpur (2008)
7.	Parameters of Assessment	1. Yield (qt/ha) 2. BCR
8.	Data on the Parameter	As shown in table below
9.	Results of Assessment	GG 5 variety gives higher production as compare with local variety.
10.	Feedback from the Farmer	Farmers are getting more production as compared to local variety as well as higher selling price
11.	Any Refinement Needed	No
12.	Justification for Refinement	No

Technology Assessed	Source of technology	Production (q/ha)	Please give the Unit	Net return (Profit) in Rs. / Unit	BC Ratio
13	14	15	16	17	18
T1. Local Variety	--	12.6	q/ha	49425	3.05
T2. GG 5	JAU, Junagadh (2017)	17.5		67240	3.64
T3. JG 14	JNKVV, Jabalpur (2008)	16.1		63610	3.44





OFT - 4 (1st Year: 2024-25)

1. Crop / Enterprise	Wheat
2. Farming Situation	Rabi 2024-25
3. Problem Definition	Low productivity of Bhaliya Wheat under limited irrigation condition and improper fertilizer dose in Ahmedabad district
4. Title of OFT	Assessment of recommended dose of fertilizer and irrigation in Bhaliya Wheat
5. No. of Trials	5
6. Technology Assessed	T1. Farmer's Practices T2. 40 kg Nitrogen in two split doses (20 kg N/ha, 40 kg/ha P2O5 and 25 kg/ha ZnSo4) as a basal with two supplementary irrigations (first at 21 days after sowing (CRI Stage) and second at 45 days after sowing) and 20 kg N/ha @ first irrigation at 21 days after sowing (CRI Stage) T3. 60 kg Nitrogen in three split doses (12 kg N as basal, 24 kg N at CRI stage and 24 kg N at 45 Days after sowing) and two irrigations (first at 21 days after sowing (CRI Stage) and second at 45 days after sowing)
7. Parameters of Assessment	1. Yield (kg/ha) 2. No. of tillers 3. BCR
8. Data on the Parameter	As shown in below table
9. Results of Assessment	Crop standing in field condition
10. Feedback from the Farmer	-
11. Any Refinement Needed	-
12. Justification for Refinement	-

OFT - 5 (2nd Year: 2024)

1. Crop / Enterprise	Cotton
2. Farming Situation	Kharif 2023-24
3. Problem Definition	Low productivity of Bt cotton in Ahmedabad district
4. Title of OFT	Effect of different insecticides against pink bollworm in Bt cotton.
5. No. of Trials	5
6. Technology Assessed	T1. Farmer's Practices T2. Emamectin benzoate
7. Parameters of Assessment	1. Yield (g/ha) 2. % damage balls/plant
8. Data on the Parameter	As shown in below table
9. Results of Assessment	Alternate spray of recommended insecticides gives better result as compared with local practices.
10. Feedback from the Farmer	Alternate sprays of recommended insecticides gives good control of pink bollworm in addition to higher yield as compared to local practices.
11. Any Refinement Needed	No
12. Justification for Refinement	No





Technology Assessed	Source of technology	Production (q/ha)	Please give the Unit	Net return (Profit) in Rs. / Unit	BC Ratio
13	14	15	16	17	18
T1. Injudicious use of insecticides	--	22.50	q/ha	96500	2.50
T2. Emamectin benzoate or Spinosad or Indoxacarb	AAU,ANAND (2017)	27.25		127650	3.56

OFT - 6 (2nd Year: 2024)

1. Crop / Enterprise	Paddy
2. Farming Situation	Kharif 2023-24
3. Problem Definition	Low productivity of paddy in Ahmedabad district
4. Title of OFT	Effect of different insecticides against stem borer in paddy
5. No. of Trials	5
6. Technology Assessed	T1. Farmer's practice T2. Chlorantraniliprole 0.4 GR@ 10 kg/Ha T3. Flubendiamide 0.7 GR, AAU
7. Parameters of Assessment	1. Yield (kg/ha), 2. % Plant damage
8. Data on the Parameter	As shown in below table
9. Results of Assessment	Both the recommended insecticides found effective against stem borer and given higher production as compare to local practice.
10. Feedback from the Farmer	Farmers are getting more production as well as effective control of stem borer.
11. Any Refinement Needed	No
12. Justification for Refinement	No

Technology Assessed	Source of Technology	Production	Please give the Unit	Net Return (Profit) in Rs. / Unit	BC Ratio
13	14	15	16	17	18
T1. Farmer's practice (No use of insecticides)	--	44.0		51800	1.43
T2. Chlorantraniliprole 0.4 GR@ 10 kg/Ha	AAU, Anand (2021)	49.5	q/ha	63150	1.76
T3. Flubendiamide 0.7 GR	AAU, Anand (2022)	50.2		64000	1.75





OFT - 7 (3rd Year: 2024)

1.	Crop / Enterprise	Vegetables
2.	Farming Situation	2024
3.	Problem Definition	Lack of practices & Unscientific preservation of vegetables
4.	Title of OFT	Assessment of low-cost preservation techniques for seasonal vegetables
5.	No. of Trials	5
6.	Technology Assessed	T1. Farmer's practice T2. Blanching T3. T2+ Steeping with Preservative (IIVR-VARANASI,2015)
7.	Parameters of Assessment	1. Sensory Evaluation and general acceptability 2. Shelf-life days
8.	Data on the Parameter	As shown in below table
9.	Results of Assessment	Use of improved technology increase the shelf-life farm women were interested to adopt the method
10.	Feedback from the Farmer	Increase the shelf-life and farm women were interested to adopt the method
11.	Any Refinement Needed	No
12.	Justification for Refinement	No

Technology Assessed	Source of Technology	Vegetables	5 Point Acceptability Test
13	14	15	16
T1. Farmer's practice	1. Cabbage IIVR-Varanasi, 2015 After 6 days After 9 days	Slightly Acceptable Not Acceptable	After 3 days Moderately Acceptable
	2. Cauliflower After 3 days After 6 days After 9 days	Moderately Acceptable Slightly Acceptable Not Acceptable	Moderately Acceptable
	1. Cabbage After 6 days After 12 days	After 3 days Slightly Acceptable Not Acceptable	Moderately Acceptable
	2. Cauliflower After 3 days After 12 days	Slightly Acceptable After 6 days Not Acceptable	Not Acceptable
	1. Cabbage After 15 days After 30days After 60days	Moderately Acceptable Moderately Acceptable Slightly Acceptable	Moderately Acceptable
	2. Cauliflower After 15 days After 30 days After 60 days	Moderately Acceptable Slightly Acceptable Not Acceptable	Moderately Acceptable
T2. Blanching			
T3.T2 +Steeping with Preservative			





1.	Crop / Enterprise	Chickpea
2.	Farming Situation	Rabi 2023-24
3.	Problem Definition	High time consumption operation and more labour requirement
4.	Title of OFT	Performance evaluation of Chickpea pod depodder
5.	No. of Trials	5
6.	Technology Assessed	T1. Farmer's Practice (Manual) T2. Pod de-podder (Dr. PDKV, Akola - 2017-18)
7.	Parameters of Assessment	1. Cost of operation 2. Time saving 3. De-podding capacity
8.	Data on the Parameter	As shown in below table
9.	Results of Assessment	Use of pod-depoder reduce the cost of operation and save in time.
10.	Feedback from the Farmer	It is suitable for small business
11.	Any Refinement Needed	No
12.	Justification for Refinement	No

Technology assessed	Source of technology	De-podding capacity (kg/hr)	Cost of operation (Rs./Kg)	Time saving (%)	Cost saving (%)
13	14	15	16	17	18
T1. Farmer's Practice (Manual)	Farmers practices	6.0	8.0	75	43.75
T2. Pod de-podder	Dr. PDKV, Akola - 2017-18	10.5	4.5		

OFT -9 (2nd Year : 2024)

1.	Crop / Enterprise	Lactating buffalo
2.	Farming Situation	-
3.	Problem Definition	Higher infestation of ecto-parasite
4.	Title of OFT	Assessment of anthelmintics to control tick infestation in Lactating buffalo
5.	No. of Trials	5
6.	Technology Assessed	T1. Application of Deltamethrine (1.25 %) solution @ 3 ml/litre of water and repeat 21 days T2. Application of amitraz 1 % + cypermethrin 1 % + Piperonylbutoxide 5 % solution @ 1ml/10 kg BW topically along the midline and repeat after 21 days T3. Use of soap Permethrine 5% + cetrimide 1% + Aloevera 1% apply and massage the leather on every part of the body and wash after 1 hour





7.	Parameters of Assessment	Milk production (kg/animal) Ecto-parasite infestation
8.	Data on the Parameter	As shown in below table
9.	Results of Assessment	Use of tropical application made easy for farmers remove ectoparasite from animal body.
10.	Feedback from the Farmer	Easy to use
11.	Any Refinement Needed	No
12.	Justification for Refinement	No

Technology Assessed		Source of Technology	Parameter 1	Unit	Parameter 2	Unit
13		14	15	16	17	18
Application of Deltamethrine (1.25 %) solution @ 3 ml/litre of water and repeat 21 days		Farmer's practice	5.4	kg/animal	60	%
Application of amitraz 1 % + cypermethrin 1 % + Piperonylbutoxide 5 % solution @ 1ml/10 kg BW topically along the midline and repeat after 21 days		IVRI, Izzatnagar	6.8	kg/animal	80	%
Use of soap Permethrine 5% + cetrime 1% + Aloe vera 1% apply and massage the leather on every part of the body and wash after 1 hour		TANUVAS, Chennai	5.8	kg/animal	70	%





Table 5.10 : OFTs conducted by KVK, AAU, Dahod on crops

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1 Soybean (Kharif 2024)	2 Rainfed	3 Higher weed population reduce crop yield and higher labor cost	4 Weed management in soybean	5 3	6 T ₁ : Imazethapyr SL 10 % (100 g a/l) spray at 15-20 DAS T ₂ : Imazethapyr 35 % + Imazamox 35 % (70 g a/l) spray at 15-20 DAS T ₃ : Propaquizafop 2.5% + Imazethapyr 3.75% ww ME (125 g a/l) spray at 15-20 DAS	7 Yield and Cost of Cultivation	8 T ₁ : 10.60 T ₂ : 11.65 T ₃ : 11.20	9 The yield increased over control (T ₁) was 9.90 and 5.66 per cent in T ₂ and T ₃ respectively.	10 Treatment with Imazethapyr 35 % + Imazamox 35 % (70 g a/l) spray at 15-20 DAS found effective control of weed in soybean	11 -	12 -
24 Wheat (2023-24)	Irrigated	Higher weed population reduce crop yield and higher labor cost	Weed management in wheat	03	T ₁ : 2:4 D (Farmers practices) T ₂ : Clodinafop propargyl 15% + metsulfuron methyl 1% WP T ₃ : Sulfosulfuron 75% + Metsulfuron methyl 5% WG	Cost of cultivation and yield	Grain yield (q/ha) T ₁ : 26.30 T ₂ : 27.75 T ₃ : 28.05	The yield increased over control (T ₁) was 5.51 and 6.65 per cent in T ₂ and T ₃ respectively.	Treatment with Sulfosulfuron 75% + Metsulfuron methyl 5% WG found effective control of weed in wheat	-	-
Okra (2024)	Irrigated	Low yield due to poor quality (local variety) seeds	Varietal Testing of Okra	03	T ₁ : Local (Farmers practices) T ₂ : GAO 5 T ₃ : GAO 8 (Anand Komal)	Yield and Cost of Cultivation	T ₁ : 87.20 T ₂ : 102.00 T ₃ : 108.50	The yield increased over control (T ₁) was 16.97 and 24.42 per cent in T ₂ and T ₃ respectively.	Okra variety Anand Komal is high yielding as well as less infestation of sucking pest	-	-





Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1 Cluster bean (2024)	2 Irrigated	3 Low yield due to poor quality (local variety) seeds	4 Varietal Testing of Cluster bean	5 03	6 T ₁ : Local (Farmer practices) T ₂ : PusaNavabhar T ₃ : GVG 11 (Anand Bahar)	7 Yield and Cost of Cultivation	8 T ₁ : 101.80 T ₂ : 109.20 T ₃ : 117.55	9 The yield increased over control (T ₁) was 7.26 and 15.42 per cent in T ₂ and T ₃ respectively.	10 Anand Bahar variety having good keeping quality and getting higher yield as compare to PNB	11 -	12 -
Animal Husbandry (2023-24)	Reproductive Management	Anoestrus or Repeat Breeding	Improving fertility in anoestrus and repeat breeding buffaloes	08	T ₁ : Protocol 1: (GnRH – day 0, PGF2a – day 6, FTAI at 24 & 72 hours) T ₂ : Protocol 2: (GnRH – day 0, PGF2a – day 7, GnRH – day 8 or 9, FTAI at 24 & 48 hours)	1) Conception % 2) Conception rate (%)	T ₁ : 50.00 T ₂ : 62.50	Conception % for Protocol 2 was 12.5 % higher over Protocol 1	Synchronization protocols are successful but need to be less expensive	-	-

Technology assessed	Source of technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net return (Profit) in Rs. / unit	BC Ratio
13 T ₁ : Imazethapyr SL 10 % (100 g a/i) spray at 15-20 DAS T ₂ : Imazethapyr 35 % + Imazamox 35 % (70 g a/i) spray at 15-20 DAS T ₃ : Propaquizafop 2.5% + Imazethapyr 3.75% ww ME (125 g a/i) spray at 15-20 DAS	14 AAU, Anand	15 T ₁ : 10.60 T ₂ : 11.65 T ₃ : 11.20	16 q/ha	17 T ₁ : 28126 T ₂ : 31786 T ₃ : 28602	18 T ₁ : 2.23 T ₂ : 2.32 T ₃ : 2.13





T ₁ : 2,4 D (Farmers practices) T ₂ : Clodinafop propargyl 15% + metsulfuron methyl 1% WP T ₃ : Sulfosulfuron 75% + Metsulfuron methyl 5% WG	AAU, Anand	T ₁ : 26.30 T ₂ : 27.75 T ₃ : 28.05	q _i /ha	T ₁ : 56608 T ₂ : 59953 T ₃ : 60513	T ₁ : 3.02 T ₂ : 3.12 T ₃ : 3.12
T ₁ : Local (Farmers practices) T ₂ : GAO 5 T ₃ : GAO 8 (Anand Komal)	AAU, Anand	T ₁ : 87.20 T ₂ : 102.00 T ₃ : 108.50	q _i /ha	T ₁ : 78550 T ₂ : 94440 T ₃ : 103750	T ₁ : 2.50 T ₂ : 2.61 T ₃ : 2.76
T ₁ : Local (Farmer practices) T ₂ : Pusa Navbahar T ₃ : GVG 11 (Anand Bahar)	AAU, Anand	T ₁ : 101.80 T ₂ : 109.20 T ₃ : 117.55	q _i /ha	T ₁ : 143150 T ₂ : 155710 T ₃ : 171600	T ₁ : 3.37 T ₂ : 3.48 T ₃ : 3.70
T ₁ : Protocol 1: (GnRH – day 0, PGF2a – day 6, FTAI at 24 & 72 hours) T ₂ : Protocol 2: (GnRH – day 0, PGF2a – day 7, GnRH – day 8 or 9, FTAI at 24 & 48 hours)	NDRI, Karnal	-	Conception Rate (%) T ₁ : 50.00 T ₂ : 62.50	-	-

Table 5.11: OFTs Conducted by KVK, AAU, Devataj (District: Anand)

1.1 Crop Production

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement					
Paddy (GR 21)	Irrigated	Difficult to control narrow & broad leaf weeds in DSR	Weed management in direct seeded rice	5	6	7	8	9	10	11	12					
												T1: Farmers practice (HW 20 & 40 DAS)	Yield (q/ha)	-	No	No
													Weed / sq. m			
							Grain /penide	308								
							T2: Pretilachlor +Pyrazosulfuron ethyl PE					Yield (q/ha)	18.2%			
												Weed / sq. m				
								Grain /penide				340				
						T3: Oxadiargyl PE+ Bispribac Sodium PoE	Yield (q/ha)	9.1%								
							Weed / sq. m									
							Grain /penide		312							
						T4: Trifamone + Ethoxysulfuron (EPoE)	Yield (q/ha)	12.7%								
							Weed / sq. m			5						
Grain /penide	320															

Contd..





Technology assessed	Source of technology	Production (q/ha)	Unit	Total cost of cultivation in Rs./ha	Gross return in Rs./ha	Net return (Profit) in Rs./ha	BC Ratio
13	14	15	16	17	18	19	20
T1: Farmers practice (HW 20 & 40 DAS)	AAU, Anand	44.00		30610	83600	52990	2.73
T2: Pretilachlor +Pyrazosulfuron ethyl PE		52.00	Yield (q/ha)	33530	98800	65270	2.95
T3: Oxadiargyl PE+ Bispyribac Sodium PoE		48.00		33770	91200	57430	2.7
T4: Trifamone + Ethoxysulfuron		49.60		33980	94240	60260	2.77

2.1 Plant Protection

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Chilli	Irrigated	Crop loss due to black thrips in chilli	Assessment of effective management of black thrips in chilli	5	T ₁ : Farmers practice T ₂ : Spray spinetoram 11.7 SC, 0.012% (10 ml/ 10 litre of water) at the time of infestation in flowering T ₃ : Spray azadirachtin 10000 ppm, 0.003% (30 ml/ 10 litre of water) at the time of infestation in flowering	Thrips/flower Yield (q/ha.) Thrips/flower Yield (q/ha.)	7.7 97 3.2 122	-- -- 25.77 % yield increase in T2	With the use of recommended technology for management of thrips in chilli gave more yield and less infestation of thrips was found	-	

Contd..





Technology assessed	Source of technology	Production (q/ha)	Unit	Total cost of cultivation in Rs./ha	Gross return in Rs./ha	Net return (Profit) in Rs./ha	BC Ratio
13	14	15	16	17	18	19	20
Farmers practice	AAU, Anand	97	Yield (q/ha)	99600	349200	249600	3.51
T ₁ : Farmers practice		122		107200	439200	332000	4.10
T ₂ : Spray spinetoram 11.7 SC, 0.012% (10 ml/ 10 litre of water) at the time of infestation in flowering		119		103100	428400	325300	4.16
T ₃ : Spray azadirachtin 10000 ppm, 0.003% (30 ml/ 10 litre of water) at the time of infestation in flowering							

2.2 Plant Protection

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Chickpea	Non Irrigated	Need of assessment of the economical and convenient method to control chickpea pod borer	Assessment of effective methods to control chickpea pod borer	5	T ₁ : Farmers practice T ₂ : Neem seed kernel powder 5%+ cow urine 10% (500g + 1L /10 L of water), 1st Spray: At appearance of <i>Helicoverpa armigera</i> , 2nd and 3rd Spray : 10 days interval T ₃ : Emamectin benzoate 5 WG 0.0025 % , 5 gm/10 lit. water, 1st spray: 50 % pod setting & 2nd spray : after 15 days of 1st spray	Infestation % Yield (q/ha.) Infestation % Yield (q/ha.)	20 11.3 6 13.5	-- -- 19.47 % yield increase in T2	With the use of recommended technology for management of pod borer in chickpea gave more yield and less infestation of pod borer was found	-	

Contd..





Technology Assessed		Source of Technology	Production	Unit	Total Cost of Cultivation in Rs. / ha	Gross return in Rs. / ha	Net Return (Profit) in Rs. / ha	BC Ratio
13	14	15	16	17	18	19	20	
T ₁ : Farmers practice			11.3		9900	42940	33040	4.34
T ₂ : Neem seed kernel powder 5%+ cow urine 10% (500g + 1L / 10 L of water), 1st Spray: At appearance of <i>Helicoverpa armigera</i> , 2nd and 3rd Spray : 10 days interval		SDAU, SKNagar	13.5	Yield (q/ ha)	10950	54000	43050	4.93
T ₃ : Emamectin benzoate 5 WG 0.0025 %, 5 gm/10 lit water, 1st spray: 50 % pod setting & 2nd spray : after 15 days of 1st spray		AAU, Anand	14.6		12100	58400	46300	4.83

3.1 Animal Science

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Livestock	Agriculture-animal husbandry (Mix farming system)	Sub-clinical mastitis in dairy animals	Assessment of different preventive measure for subclinical mastitis in dairy animals	10	Farmers' practices (No use of any antiseptic solution)	Incident of sub clinical mastitis	6		With use of muasti guard and KMNO4 solution animals found lower in sub clinical mastitis		
					Teat dip and udder wash with KMNO4 solution	Milk production (Liter/month)	157				
					Musti Guard Spray	BC Ratio	1.29				
						Incident of sub clinical mastitis	3	54.77 % (I)			
						Milk production (Liter/month)	243			No	No
						BC Ratio	1.28				
						Incident of sub clinical mastitis	1	63.06 % (I)			
						Milk production (Liter/month)	256	5.34 % (II)			
						BC Ratio	2.11				

*Extra cost over the period of 3 months calculated.

Contd...





Technology Assessed	Source of Technology	Production (Liter/month)	Unit	Total Cost of Cultivation in Rs. / unit	Gross return in Rs. / unit	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18	19	20
Farmers' practices (No use of any antiseptic solution)	-	157		4600	5942	1342	1.29
Teat dip and udder wash with KMNO4 solution	-	243	(Liter/month)	4500	5758	1258	1.28
Musti Guard Spray	TANUVAS, Tamil Nadu	256		4400	9276	4876	2.11

Table 5.12: Production of seeds by the KVKs of AAU during 2024-25

Name of KVK	Crop	Name of the variety	Quantity of seed (qt)	Value (₹)	Number of farmers
KVK, Dahod	Wheat	GW 451(T/S)	72.80	-	-
	Soybean	NRC 37 (F/S)	17.75	-	-
	Soybean	NRC 37 (C/S)	12.25	-	-
	Soybean	KDS 726 (C/S)	37.00	-	-
	Gram	GJG 6 (C/S)	0.35	-	-
KVK, Arnej	Sun hemp	Local (T/S)	5.75	-	-
	Wheat	GADW 3	70.90	278080	50
		GADW 3 (NF)	3.40	1580	-
		GW 451 (NF)	4.80	16920	-
	Paddy	Gurjari	The crop failed due to heavy rain		
KVK, Devataj	Chickpea	GJG 6	52.50	273000.00	50
		JG 14	9.20	57000.00	-
		GAD 1	0.95	7600	15
TRTC, Devgadbaria	Paddy	Gurjari	58.5	188580	176
	Wheat	GW 451	28.10	95880	50
	Chickpea	JG-14	500	-	-
	Chickpea	JG-14	1900	-	-
	Soybean (Rabi)	NRC-37	800	-	-
Castor	Soybean (Kharif)	Sl-14 (Male) GCH-10	200*	-	-
		NRC-37	200	-	-





Impact of KVKs of AAU

The details of the impact of KVKs of AAU during 2023-24 are given in Table 5.13.

Table 5.13: Impact of KVKs of AAU on Specific Technology / Skill Transferred during 2024-25

(A) KVK Arnej				
Name of Specific Technology/Skill Transferred	No. of participants	% of adoption	Change in Income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Cereals				
Introduction of improved variety in Paddy GAR 22	10	14.20	26400	29900
Introduction of improved variety in Paddy GAR 21	10	12.30	26200	29300
Use of Sulfosufuron 75% + Metsulfuron Methyl 5% WG in Wheat GW 451	05	18.60	66365	97290
Use of Flubendiamide 0.7 GR in Paddy	05	8.00	54755	64175
Pulses				
Use of Chlorantraniliprole in gram	10	14.04	24800	28900
Use of Bio-agent in gram	10	18.30	25600	28200
Oil Seed				
Wilt resistant variety, Castor GAC 11	10	25.30	64200	78600
Horticultural Crops				
Use of recommended dose of fertilizer in Cumin	05	22.00	157100	167600
Introduction of new variety GDLC1, Coriander	10			
Introduction of improved variety, Cumin GC 4	10	8.10	51250	60550
Introduction of improved variety, Cumin GC 5	10			
Introduction of new crop and variety, Dilseed GAD 1	10	19.10	44450	47300
Introduction of new variety GAO 5, Okra	10	14.22	105052	124000





(A) KVK Arnej				
Name of Specific Technology/Skill Transferred	No. of participants	% of adoption	Change in Income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Introduction of new variety GAO 8, Okra	10			
Introduction of new variety, Tomato GAT 5	10	6.10	118923	217000
Use of Bio-agent in Tomato	10			
Commercial Crop				
Introduction of improved variety, Desi Cotton GADC 3	10	12.80	68300	79200
Use of different insecticides against pink bollworm in Bt cotton.	05	8.00	118300	154400
Cattle				
Calf starter	05	22.22 % more body weight	220 gm/d/animal	180 gm/d/animal
Bypass protein	05	36.67 % more growth	410 gm/d/animal	300 gm/d/animal
Bypass fat	05	18.64 % more milk	7.0 L/d/animal	5.9 L/d/animal
Mineral mixture	05	21.42 % more milk	5.1 L/d/animal	4.2 L/d/animal
COFS 29	10	63 % more fodder	16.3 quintal	10.0 quintal
Agricultural Engineering				
Bicycle Sprayer in Chickpea	12	28	13200	16900
Mini Rice mill	10	18	45800	52600
Use of Chickpea pod depodder	09	13	25500	29400
Women Empowerment	05			
Increased cost benefit and saving of resources i.e., time and energy for milking activity helped to improve health				





(B) KVK Dahod					
Name of specific technology/ skill transferred	No. of participants	production Increase %	Change in income (Rs./ha)		Transfer of technology (horizontal)
			Before	After	
Cereals					
Varietal replacement–Wheat	25	15.38	56799	48237	45
Maize hybrid	50	37.18	13468	6918	85
Pulses					
Varietal replacement –Gram JG 14	25	21.27	64953	51313	50
Oil Seed					
Varietal replacement-Soybean NRC 37	150	25.69	19211	9969	205
Vegetables					
Varietal replacement–Tomato	20	32.37	212800	146640	55
Varietal replacement–Okra	20	25.53	101800	75850	42
Cattle					
Disease management	25	11.86	6933	9985	775
Fertility Management	20	65 % success rate			
Poultry					
Poultry birds- Kadaknath	20	12.37	100	195	55

(C) KVK, Devataj				
Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./ha)	After (Rs./ha)
Varietal Introduction GAR-13	2520	81.00	18600	51400
Varietal Introduction GW-451	1145	80.00	8000	18200
Varietal Introduction castor GCH 10	820	90.00	80000	110000
Production technology of Green gram GAM 5	760	75.00	48000	65000
Use of bio fertilizers	1810	80.00	48000	52000
Use of mineral mixture	1500	85.00	32000	44000
Composite fish culture in village ponds	180	66.00	42000	95000

NB: The data were based on the actual study, questionnaire/group discussion, etc., with ex-participants.





Extension Education Programmes

(I) Training Programmes for Extension Functionaries (A) Extension Education Institute

(A) Extension Education Institute

The Extension Education Institute, Anand caters to extension training needs of middle-level functionaries of various line departments of Western Zone States viz; Gujarat, Rajasthan, Madhya Pradesh, Chhattisgarh, Maharashtra, Goa and UTs of Diu and Daman and Dadra Nagar Haveli. The aim is to improve their job performance wherever they work in different capacities. The Management Committee of EEI approves the action plan and reviews the progress of EEI activities. A total of 122 training courses were conducted for 4288 trainees by the EEI, Anand during the year, as shown in Table 5.14.

Table 5.14: Training Programmes Conducted by Extension Education Institute during the Year 2023-24

Sr. No.	Type of programme	No. of programme	No. of participants		Total
			Male	Female	
1	On Campus	30	583	159	742
2	Off Campus	51	1221	431	1652
3	Sponsored	41	1564	330	1894
4	Other	00	00	00	00
Grand Total		122	3368	920	4288

(B) Training & Visit System

The Anand Agricultural University has taken up training for the extension personnel on the departments through the Training and Visit System at Anand.

The details about bi-monthly workshops and pre-seasonal training programs organized for the extension personnel of departments are given in Table 5.13.

Table 5.13: Training Programmes Organized by T&V during the year 2024-25

Sr. No.	Type of Programmes	No. of training programmes	No. of extension personnel
1	Pre-Seasonal Training	02	105
2	Bi-monthly workshops	04	133
Total		06	238





(2) Training Programmes for Farmers/Farm Women/Farm Youth/Extension Workers and Others

Training is essential to increase the efficiency of the farmers, farm women, farm youths and extension workers. On-campus and off-campus training programs, sponsored training programs, Extension Functionaries training programs, Natural Farming training programs, and Other training programs are organized based on the needs and interests of the stakeholders through the Frontline Transfer of Technology (ToT) Centers. A total of 942 (On-campus-195 and Off-campus-501, Sponsored Training-59, Extension Functionaries Training- 8, Natural Farming Training-9, Other Training Programme-45, Awareness Programmes 55) were organized by extension education centers of AAU for 33594 beneficiary farmers and extension workers during 2023-24. The center-wise details of the training programs and their beneficiaries are given in Tables 5.16 to 5.18

Table 5.16: Training program organized by Transfer of Technology Center of Non-tribal area of AAU

(A) On-Campus Training Programme Organized by Transfer of Technology Center (ToT) of Non-Tribal Area of AAU.

Sr. No.	Name of ToT Center	No. of training programmes	Farmers	Farm Women	Extension Workers/ Others	Total
1	Farm Technology Training Centre Nenpur	01	95	00	00	95
2	Sardar Smruti Kendra	24	720	977	34	1731
3	Agricultural Technology Information Centre	07	220	153	13	386
4	ToT, Arnej	16	239	279	10	528
Grand Total		48	1274	1409	57	2740

(B) Off-Campus Training Programme Organized by Transfer of Technology Center (ToT) of Non-Tribal Area of AAU.

Sr. No.	Name of ToT Center	No. of training programmes	Farmers	Farm Women	Extension Workers/ Others	Total
1	Farm Technology Training Centre, Nenpur	1	67	2	22	89
2	Transfer of Technology Center , Arnej	09	270	179	15	464
Grand Total		10	337	181	37	553





(C) Sponsored Training Programme Organized by Transfer of Technology Center of Non-Tribal Area of AAU.

Sr. No.	Name of ToT Center	No. of training programmes	Farmers	Farm Women	Extension Workers/ Others	Total
1	Transfer of Technology Center , Arnej	04	50	161	05	216
	Grand Total	04	50	161	05	216

(D) Natural Farming Training Programme Organized by Transfer of Technology Center (ToT) of Non-Tribal Area of AAU.

Sr. No.	Name of ToT Center	No. of training programmes	Farmers	Farm Women	Extension Workers/ Others	Total
1	Transfer of Technology Center , Arnej	26	1323	784	33	2140
	Grand Total	26	1323	784	33	2140

(E) Other Training Programs Organized by Transfer of Technology Center (ToT) of Non-Tribal Area of AAU. (Celebration of important days/week/fortnight event)

Sr. No.	Name of ToT Center	No. of training programmes	Farmers	Farm Women	Extension Workers/ Others	Total
1	TFWTC, Devgadh Baria	06	00	208	00	208
	Grand Total	06	00	208	00	208

(F) Awareness Programmes Organized by Transfer of Technology Center (ToT) of Non-Tribal Area of AAU.

Sr. No	Name of ToT Center	No. of training programmes	Farmers	Farm Women	Extension Workers/ Others	Total
1	Transfer of Technology Center , Arnej	12	290	445	13	735
	Grand Total	12	290	445	13	735





Table 5.17 Training Programmes Organized By KVks of AAU Including KVks of Tribal Area

(A) On-Campus Training Programmes Organized by KVks of AAU, Including KVks of Tribal Area

Sr. No.	Name of ToT Center	No. of training programmes	Farmers	Farm women	Extension Workers/ Others	Total
1	KVK, Dahod	41	1068	33	00	1072
2	KVK, Arnej, Ahmedabad	41	536	498	00	1034
3	KVK, Devataj, Anand	17	239	77	20	336
Grand Total		99	1843	608	20	2442

(B) Off-Campus Training Programmes Organized by KVks of AAU, Including KVks of Tribal Area

Sr. No.	Name of ToT Center	No. of training programmes	Farmers	Farm women	Extension Workers/ Others	Total
1	KVK, Dahod	23	666	137	00	803
2	KVK, Arnej, Ahmedabad	72	2132	927	23	3082
3	KVK, Devataj, Anand	45	892	161	00	1053
Grand Total		140	3690	1225	23	4938

(C) Sponsored Training Programmes Organized by KVks of AAU, Including KVks of Tribal Area

Sr. No.	Name of ToT Center	No. of training programmes	Farmers	Farm women	Extension Workers/ Others	Total
1	KVK, Dahod	36	1609	469	00	2078
2	KVK, Arnej, Ahmedabad	6	190	62	00	252
3	KVK, Devataj, Anand	11	387	09	86	482
Grand Total		53	2186	540	86	2812





(D) Extension Functionaries Training Programmes Organized by KVks of AAU, Including KVks of Tribal Area Center

Sr. No.	Name of ToT Center	No. of training programmes	Male	Female	Total
1	KVK, Dahod	03	201	19	220
2	KVK, Devataj, Anand	02	49	11	60
3	KVK, Arnej, Ahmedabad	03	134	46	170
Grand Total		08	384	76	450

(E) Natural Farming Training Programmes Organized by KVks of AAU Including KVks of Tribal Area

Sr. No.	Name of ToT Center	No. of training programmes	Farmers	Farm women	Extension Workers/ Others	Total
1	KVK, Dahod	24	1085	290	00	1375
2	KVK, Arnej, Ahmedabad	11	385	62	00	447
3	KVK, Devataj, Anand	09	182	18	60	260
Grand Total		44	1652	370	60	2082

(F) Other Training Programmes Organized by KVks of AAU, Including KVks of Tribal Area

Sr. No	Name of ToT Center	No. of training programmes	Farmers	Farm women	Extension Workers/ Others	Total
1	KVK, Dahod	17	392	73	00	465
2	KVK, Arnej, Ahmedabad	16	452	146	20	618
Grand Total		33	844	219	20	1083

(G) Awareness Programmes Organized by KVks of AAU Including KVks of Tribal Area

Sr. No	Name of ToT Center	No. of Awareness Programmes	Farmers	Farm women	Extension Workers/ Others	Total
1	KVK, Dahod	29	1404	455	00	1859
2	KVK, Arnej, Ahmedabad	12	590	610	10	1200
3	KVK, Devataj, Anand	01	31	00	00	31
Grand Total		42	2025	1065	10	3090





Table 5.18 Training Programmes Organized By Transfer of Technology Center of Tribal Area of AAU

(A) On-Campus Training Programmes Organized by Transfer of Technology Center of Tribal Area of AAU

Sr. No.	Name of ToT Center	No. of training programmes	Farmers	Farm women	Extension Workers/ Others	Total
1	Training Centre, Jabugam	1	35	00	00	35
2	Agri- Polyclinic for Tribal Farmers, ARS, AAU, Dahod	16	441	189	48	678
3	Training Centre for Tribal Farmer, ARS, AAU, Dahod	03	37	15	6	58
4	TRTC, Devgadh Baria	13	477	89	00	566
5	TFWTC, Devgadh Baria	11	321	443	00	764
6	MMRS, AAU, Godhra	04	198	09	00	207
Grand Total		48	1509	745	54	2308

(B) Off-Campus Training Programmes Organized by Transfer of Technology Center of Tribal Area of AAU

Sr. No.	Name of ToT Center	No. of training programmes	Farmers	Farm women	Extension Workers/ Others	Total
1	Training Centre, Jabugam	02	00	64	00	64
2	Agri- Polyclinic for Tribal Farmers, ARS, AAU, Dahod	12	116	39	6	161
3	Training Centre for Tribal Farmer, ARS, AAU, Dahod	03	23	8	3	34
4	TRTC, Devgadh Baria	02	49	08	00	57
5	TFWTC, Devgadh Baria	04	101	77	00	178
6	MMRS, AAU, Godhra	01	53	02	05	60
Grand Total		24	342	198	14	554

(C) Natural Farming Training Programmes Organized by Transfer Of Technology Center Of Tribal Area of AAU

Sr. No	Name of ToT Center	No. of training programmes	Farmers	Farm women	Extension Workers/Others	Total
1	Training Centre, Jabugam	04	47	84	77	208
2	TFWTC, Devgadh Baria	05	127	193	00	320
Grand Total		09	174	277	77	528





(D) Awareness Programmes Organized by Transfer of Technology Center of Tribal Area of AAU

Sr. No.	Name of ToT Center	No. of training programmes	Farmers	Farm women	Extension Workers/Others	Total
1	Training Centre, Jabugam	01	621	169	00	790
Grand Total		01	621	169	00	790

(E) Other Training Programmes Organized by Transfer of Technology Center of Tribal Area Of AAU

Sr. No.	Name of TOT Centre	No. of training programmes	Farmers	Farm womenn	Extension Workers/ Other	Total
1	TFWTC, Devgadhd Baria	06	00	208	00	208
Grand Total		06	00	208	00	208

(F) Sponsored Training Programmes Organized by Transfer Of Technology Center of Tribal Area of AAU

Sr. No.	Name of TOT Centre	No. of training programmes	Farmers	Farm Women	Extension Workers/ Other	Total
1	Agri- Polyclinic for Tribal Farmers, ARS, AAU, Dahod	02	71	21	03	95
Grand Total		02	71	21	03	95





(3) Extension Education Activities

The KVKs, ToT centers, Advisory Service Centers, and other centers of the universities have also organized various extension education activities. A total of 1,65,663 farmers and extension personnel benefited through various extension education activities conducted by various KVKs of AAU, whereas 21,64,709 beneficiary farmers benefited all the mobile advisory services (Voice and Text both) through KVKs of AAU during 2023-24. A total of 56 special trainings were organized, and 1828 farmers were benefitted. The details of the various extension education activities organized under different centers/schemes are given in Tables 5.19 to 5.21.

Table 5.19: Extension Education Activities of AAU during 2023-24

(A) Extension education activities carried out by Transfer of Technology Center of non tribal area of aaU

Sr. No	Activities	No. of Program	No. of Farmers		No. of Extension Personnel	Total
			Male	Female		
1	Field Day	04	425	00	00	425
2	Group Discussion	61	846	589	97	1532
3	Kisan Goshthis / Farmer-Scientist- Interaction	04	82	38	00	120
4	Group Meeting / Khedut Shibir /	12	368	42	08	418
5	Lecture Delivered	63	1035	1402	62	2499
6	Film Show	12	305	255	10	570
7	Method Demonstration	13	301	240	06	547
8	Celebration of Important days /Special day	04	42	158	00	200
9	Diagnosis of Sample at KVK	12	18	-	00	18
10	Digagnostic / Field Visit	35	499	717	34	1250
11	Farmer's Visit to KVK	1032	10273	8294	986	19553
12	Exposure Visit	13	304	315	21	640
13	Kisan Mela / Exhibition	02	1070	365	00	1435
14	Radio Talk	01			Mass	
15	TV Talk	00			Mass	
16	News paper Coverage	12			Mass	
17	AAU news event	11			Mass	
18	Extension Literature	1812			Mass	
19	Mobile Advisory Services	46	00	00	00	69000
21	Live Webcasting	02	562	88	15	665
22	Social Media	12	3250	65	00	3315
23	M Kisan	04	465	00	00	465
24	Workshop/Seminar	04	335	30	00	145
TOTAL		3160	20180	12598	1239	102797

Note: Figures in parentheses indicate the number of participants/beneficiaries





(B) Extension education activities carried out by the KVKs of AAU (including KVKs of tribal area)

Sr. No	Activities	No. of Programme	No. of Farmers		No. of Extension Personnel	Total
			Male	Female		
1	Field Day	14	797	158	02	957
2	Group Discussion	55	854	183	01	1038
3	Kisan Goshthis / Farmer-Scientist-Interaction	29	1899	591	61	2551
4	Group Meeting / Khedut Shibir / Khedut Meeting etc.	59	1034	150	06	1190
5	Animal Health Camp	04	95	12	00	107
6	Pahupalan Shikshan Shibir	02	300	00	10	310
7	Lecture Delivered	197	14548	6323	496	21367
8	Film Show	126	3841	1714	104	5659
9	Method Demonstration	60	2089	161	08	2258
10	Celebration of Important days/ Special day	18	1613	872	33	2518
11	Diagnosis of Sample at KVK	116	175	22	00	197
12	Diagnosic / Field Visit	251	1228	184	13	1425
13	Farmer's Visit to KVK	197	5178	2773	138	8089
14	Exposure Visit	03	53	23	00	76
15	Workshop/Seminar	07	332	00	14	346
16	Kisan Mela / Exhibition	21	9109	4717	110	13936
17	Live webcasting	07	941	562	33	1536
18	Radio Talk	03			Mass	
19	TV Talk	02			Mass	
20	Popular Article	02			Mass	
21	Newspaper Coverage	15			Mass	
22	Extension Literature	07			Mass	
23	Celebration of important week Technology week Parthenium awareness week etc	06	330	541	154	1025
	TOTAL	-	44416	18986	1183	66385





(C) Extension education activities carried out by Transfer of Technology Center of tribal area of AAU

Sr. No.	Activities	No. of Programme	No. of Farmers		No. of Extension Personnel	Total
			Male	Female		
1	Group Discussion	18	175	49	12	236
2	Kisan Goshthis / Farmer-Scientist-Interaction	08	177	390	02	569
3	Group Meeting / Khedut Shibir / Khedut Meeting etc.	12	1020	283	08	1311
4	Lectures delivered for new Technology	42	2917	2127	142	5186
5	Film Show	53	1654	1173	10	2837
6	Method Demonstration	192	238	08	00	246
7	Diagnosis of Sample at Center	16	85	17	09	111
8	Digagnostic / Field Visit	70	461	95	00	556
9	Exposure Visit	03	19	105	00	124
10	Farmer's Visit to TRTC	95	1798	818	10	2626
11	Workshop / Seminar	00	0		00	0
12	Kisan Mela / Exhibition	13	14174	5387	69	19630
13	Radio Talk	15			Mass	
14	Newspaper Coverage	05			Mass	
15	AAU news event	22			Mass	
16	Extension Literature	35	1901	508	00	2409
17	Telephonic guidance	1371	1175	196	00	1371
18	Popular Article	02			Mass	
19	Soil and Water Sample Guidance	12	65	00	00	65
TOTAL		1984	25859	11156	262	37277





(D) extension education activities organized by other centers (including research station/ academic collage etc.)

Sr. No.	Activities	No. of program	No. of farmers		No. of extension personal	Total
			Male	Female		
1	Field day	40	803	58	15	876
2	Group Meeting/ Khedut Shibir/ Khedut Meeting etc.	23	823	76	07	906
3	Kisan Goshthis / Farmer-Scientist-Interaction	01	35	05	03	43
4	Animal Health Camp	00	00	00	00	00
5	Lecture Delivered	133	4377	1492	229	6098
6	Film Show	06	118	83	00	201
7	Method Demonstration	112	444	311	09	764
8	Celebration of important days/ Special day	23	357	212	00	569
9	Diagnosis of the sample at KVK	38	00	00	00	38
10	Digagnostic/ Field Visit	329	1099	272	61	1432
11	Farmers visit to centers	209	880	03	00	8,430
12	Exposure visit	53	87	45	2034	2166
13	Workshop/ Seminar	01	0	0	00	65
14	Kisan Mela/ Exhibition	07	2240	1280	15	3535
15	TV Talk	11			Mass	
16	Radio Talk	09			Mass	
17	Popular Article	74			Mass	
18	Newspaper Coverage	24			Mass	
19	AAU news event	16				Mass
20	Extension Literature	02	5440	00	00	5440
21	Celebration of important Days/week Technology week Poshan Mah etc.	03	491	431	60	982
22	Telephonic Guidance	1347	1347	00	00	1347
	TOTAL	2461	18541	4268	2433	32789





Table 5.20 Mobile Advisory Services provided by KVKs of AAU during 2024-25

Name of KVK	Message type	Medium of communication	Type of Messages						Total Beneficiaries
			Crop	Live-stock	Weather	Marketing	Awareness	Other Enterprise	
Arnej (District: Ahmedabad)	Text Only	Social Media WhatsApp / Telegram / YouTube etc	38	00	08	00	16	08	207867
			M Kisan			04			114760
Dahod	Text only	Telephonic				3138			3138
			Social Media WhatsApp / Telegram / YouTube etc			2261			2261
Devataj (District : Anand)	Text only	Kishan Sarathi	05	00	00	00	03	00	412908
			Telephonic	28	19	0	27	11	35
SSK	-	Social Media WhatsApp / Telegram / YouTube etc	01	00	00	05	01	05	4422
			Kishan Sarathi	01	00	00	03	01	01
ATIC	-	Telephonic	284	00	00	00	00	00	284
			Telephonic	19	00	00	00	00	00
Publication Unit		Telephonic	00	00	00	00	00	1346	1346
Total								77717	





Table 5.21 : Special Training Program Conducted by Various Training Centers

Sr. No.	The subject of Training Programmes	Centre/Place	No. of Training	No. of Beneficiaries
1	Training Programme on Food Processing Technology (FPT)	College of Food Processing and Bio-Energy, AAU, Anand	1	09
2	Training Programme on Organic Farming (OF)	Department of Agronomy, BACA, AAU, Anand	05	208
3	Training Programme on Integrated Weed Management in Modern Agriculture	AICRP-Weed Management, BACA, AAU, Anand	04	135
4	Training Programme on Integrated Pest Management (IPM)	Department of Agricultural Entomology, BACA, AAU, Anand	05	167
5	Training Programme on Medicinal and Aromatic Plants (MAP)	Medicinal and Aromatic Plants Research Station, AAU, Anand	03	110
6	Training Programme Seed Production Technology	Department of Seed Science & Technology, BACA, AAU, Anand	03	78
7	AgCatalyst: Agripreneurship Mentor Development Program	AIC Anand Foundation (Date: 10.06.2024 to 16.06.2024)	1	21
8	Futurepreneur@Khoj Program	Shree Bhaikaka Government Arts and Commerce College, Sojitra, Anand	1	
		College of Agriculture, AAU, VASO	1	450
		Dharamsinh Desai University (DDU), Nadiad	1	
		B.J. Vanijya Mahavidyalaya, Anand	1	
9	"Prasoon"- Agri-Entrepreneurship Incubation Programme (AIP - Seed stage)	AIC Anand Foundation, Anand	1	17
10	"Pallav" - Agripreneurship Orientation Program	AIC Anand Foundation, Anand	1	19
11	Student-Startup-MSME Connect: Vikas Saptah Celebration	AIC Anand Foundation, Anand	1	95
12	Advanced ESDP on Drying on Dehydration	Conference Hall, College of FPTBE, AAU, Anand	1	20
13	Training Program for Credit Linked Subsidy Beneficiaries under PMFME Scheme	JAU, Junagadh	1	25
14	Training Program for District Resource Persons (DRPs) under PMFME Scheme	College of Food Processing Technology & Bio Energy, AAU, Anand	1	12
15	Awareness Program on PMFME Scheme	College of Food Processing Technology & Bio Energy, AAU, Anand	1	60
		Total	33	1426





(3) Details of the Students/Farmers/Input Dealers who completed the Certificate course During the Year 2024-25

Sr. No	Name	Center	Duration	No. of Training (Batch per year)	No. of farm youths/Farmers/Input dealers completed The course
1	Training in Baking Technology	College of FPT & BE, AAU, Anand	03 Months	02	57
2	One/Two/Three Day Training (On Campus) (Off Campus)	School of Baking, A.A.U., Anand	-	37 01	806 70
3	Others Green House Net House	Institute of Distance Education (IDEA), AAU Anand	10 days	02	111
4	Training in Gardening, Landscaping and Nursery Management	SDMPH, AAU, Vadodara	6 months	01	07
Total				43	1051





(4) Publication

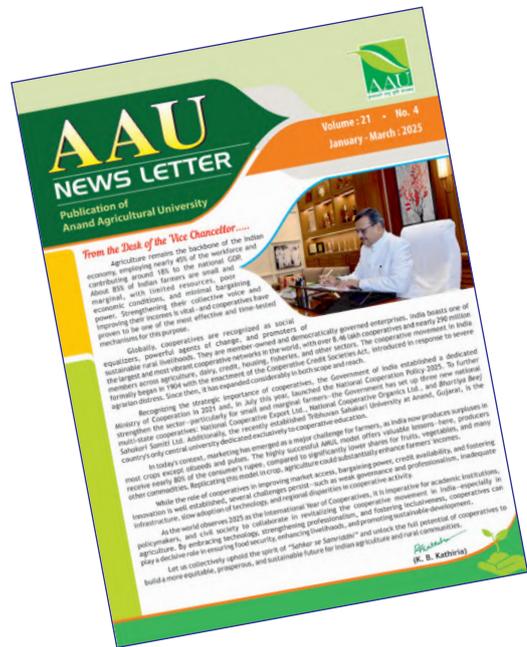
(i) Farm Magazine

The publication section publishes the monthly farm magazine 'Krushigovidya' regularly since May 1948. The main objective of this farm magazine is to disseminate and popularise improved and scientific methods of agricultural and allied subjects in a very digestible and easily understandable manner for the farming community. **87,500 copies** of *Krushigovidya* were distributed during the year **2024-25**.



(ii) AAU Newsletter

The Directorate of Extension Education regularly publishes a quarterly 'AAU News letter'. The AAU news letter gives research highlights, technical events/news, extension activities and noteworthy work done by the scientists of AAU.

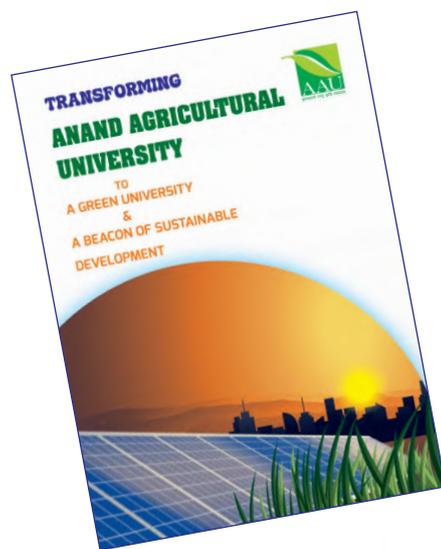


(iii) Agricultural Literature

The books, booklets, folders, brochures, reports, directories, worksheets, training and practical manuals, etc., were published by AAU's extension, education and research centers during the year. **14,700 copies of 11 books, 17,975 copies of 14 booklets, 1,03,700 copies of other 25 folders** were published and distributed to beneficiaries by AAU. The list of all publications given in Annexure 5.2

(5) Best Article Award

Every year, the AAU gives the *Uttam Lekh* Awards (Best Articles Awards) to authors whose articles have been published in *Krushigovidya* farm magazine since 2004-05. During 2023-24, awards were given to **76 authors for 28 articles published in 12 issues of the 75th volume** of *Krushigovidya* farm magazine. Among them, 42 AAU scientists (55.26%) received the *Uttam Lekh* Awards. The detail is given in Annexure 5.3





(6) Mass Media

(i) TV Programmes

32 TV programs on different aspects of agriculture, horticulture, animal husbandry, home science, etc. were telecasted through Doordarshan Kendra, Ahmedabad. The details of TV programs are given in Annexure 5.4.

(ii) Radio Talks

During the year, a total of **08 radio talks** on different topics related to agriculture, horticulture, and animal husbandry were delivered by different scientists of AAU at All India Radio. The details of the radio talks are given in Annexure 5.5.

(7) Coordination with line Departments

The AAU organized various extension education programs/activities in close coordination with line departments of the state. The structural linkages exist under the Training and Visit scheme by constituting technical committees at the district, zonal and state levels.

The functional linkages also exist under the T&V Scheme through bi-monthly workshops, pre-seasonal training, diagnostic team and state-level crop seminars/ workshops etc. The coordination exists in a follow-up program, as well as in the planning of farm trials. In AGRESKO, the officers of the line departments are the members, and they actively participate in the deliberation for the formulation of technical programs and in finalizing recommendations for the farmers.

The interface of AAU scientists with functionaries of state departments, NGOs, and other agencies was organized at the state and campus levels during the year of the report.

The agricultural programs of All India Radio and Doordarshan were finalized through coordinated efforts. To transfer technologies to the farmers, Farmer's Day, Krushi Mela, farmer-scientist interactions, group discussions etc., were organized through collaborative efforts.





Annexure 5.1

Extension Education Schemes

Sr. No.	Name of Scheme	Centre
A	Plan Schemes	
1	Training Program on Food Processing Technology	Anand
2	Training Program on Organic Farming	
3	Training Program on Integrated Weed Management in Modern Agriculture	
4	Training Program on Integrated Pest Management	
5	Training Program on Seed Production	
6	Training Program on Medicinal and Aromatic Plants	
7	Training in Gardening, Landscaping and Nursery Management	
8	Training in Baking Technology	
9	Training in Commercial Poultry Farming / Advanced Training in Commercial Poultry Technology	
10	Strengthening of Directorate of Extension Education	
11	Agricultural Technology Information Centre	
12	Upgrading of Existing <i>Sardar SmrutiKendra</i>	
13	Establishment of Technological Resource Centre and Educational Museum	
14	Establishment of Transfer of Technology Centre Arnej	Arnej
15	Establishment of Agri Poly Clinic for Tribal Farmers	Dahod
16	Establishment of Tribal Farm Women Training Centre	DevgadBaria
17	Transfer of Technology Centre	Godhra
18	Training Centre	Jabugam
19	Farm Technology Training Centre	Nenpur
B	Non-Plan Schemes	
1	Directorate of Extension Education	Anand
2	Publication Scheme	
3	Establishment of <i>Sardar Smruti Kendra</i> Museum	
4	Farm Advisory Scheme	
5	Tribal Training Centre	Dahod
6	Tribal Research cum Training Centre	DevgadBaria
C	ICAR Schemes	
1	Overseeing of KVKs through the Directorate of Extension Education	Anand
2	<i>Krushi Vigyan Kendra</i>	Arnej
3	<i>Krushi Vigyan Kendra</i>	Dahod
4	<i>Krushi Vigyan Kendra</i>	Devataj
D	Other Agency schemes	
1	Training and Visit Scheme	Anand
2	NARP Extension Scheme	Arnej
3	NARP Extension Scheme	Godhra
4	<i>Krushi Library</i>	Anand





Annexure 5.2

Agricultural Literature published during 2024-25

Sr. No	Name of publication	Publication Series No.
Books		
1	Annual Progress Report	EDU-4:66:2025:100
2	Annual Progress Report	EDU-4:68:2025:100
3	Research Accomplishment & Recommendations 2024	RES-1:25:2024:500
4	Transforming AAU to a Green University and Beacon of Sustainable Development	EXT-1:40:2024:400
5	ગુજરાતનું ગૌરવ : ગાયની નવી ઓલાદ 'ડગરી'	EXT-1:41:2024:750
6	બટાકાની વૈજ્ઞાનિક ખેતી	EXT-1:43:2024:2000
7	Approved Messages From AGRESCO Research Reports of Social Sciencs	EXT-1:49:2025:100
8	AAU at a Glance	GEN-1:57:2024:150
9	AAU at a Glance	GEN-1:59:2025:250
Booklets		
1	An Overview of Processing Tech. Developed	EDU-6:63:2025:500
2	બીજ મસાલા પાકોની વૈજ્ઞાનિક ખેતી પદ્ધતિ	RES-46:2:2025:500
3	ભાલ વિસ્તારમાં જમીન અને પાક વ્યવસ્થાપન	RES-49:8:2024:500
Practical Manuals		
1	Biofertilizer & Bio-pesticide Production	EDU-1:106:2025:500
2	Processing Technology of Liquid Milk	EDU-6:60:2025:100
3	Processing Technology of Dairy Products	EDU-6:61:2025:100
4	પોસ્ટ હાર્વેસ્ટ ટેકનોલોજી (PFE-2.2.7)	EDU-12:9:2025:100
5	એગ્રીકલ્ચરલ પ્રોસેસ એન્જિનીયરીંગ (PFE-3.1.4)	EDU-12:10:2025:100
6	એગ્રીકલ્ચરલ સ્ટકચર (PFE-3.1.5)	EDU-12:11:2025:100
7	Biofertilizer & Bio-pesticide Production	RES-12:17:2025:500
Traning Manuals		
1	મરી મસાલા શાકભાજી પાકો : વૈજ્ઞાનિક અભિગમ	RES-5:13:2025:100
Folders		
1	મધમાખી પાલનમાં વપરાતા જુદા જુદા સાધનો	EDU-1:103:2024:2000
2	વેલાવાળા શાકભાજી પાકોમાં ફળમાંથી સંકલિત વ્યવસ્થાપન	EDU-1:104:2024:2000
3	Papaya Processing	EDU-6:62:2025:1000
4	ભીંડા, રીંગણ, મરચી, ટામેટા, વેલાવાળા	RES-5:14:2025:3000
5	ઇસબગુલની વૈજ્ઞાનિક ખેતી	RES-6:5:2025:1000
6	અસાળિયાની વૈજ્ઞાનિક ખેતી	RES-6:6:2025:1000
7	કરીયાતુ વૈજ્ઞાનિક ખેતી	RES-6:7:2025:1000
8	કુવાર પાકની વૈજ્ઞાનિક ખેતી	RES-6:8:2025:1000
9	અશ્વગંધાની વૈજ્ઞાનિક ખેતી	RES-6:9:2025:1000
10	ડમરોની વૈજ્ઞાનિક ખેતી	RES-6:10:2025:1000
11	કાળી તુલસીની વૈજ્ઞાનિક ખેતી	RES-6:11:2025:1000
12	એના(મીઠી આવળ)ની વૈજ્ઞાનિક ખેતી	RES-6:12:2025:1000
13	સફેદ મૂસળીની વૈજ્ઞાનિક ખેતી	RES-6:13:2025:1000
14	ઘર ચકલી : ઓળખ અને સંરક્ષણ	RES-24:7:2025:4000
15	મકાઈ ખેતીની આધુનિક તાંત્રિકતા	RES-28:1:2025:15000





Sr. No	Name of publication	Publication Series No.
16	ટપક પિયત પદ્ધતિ દ્વારા ઉનાળુ તલની ખેતી	RES-30:1:2025:1000
17	પ્રોટીનનો રાજા સોયાબીનની વૈજ્ઞાનિક ખેતી પદ્ધતિ	RES-36:1:2024:2500
18	સોયાબીન પાકમાં સંકલિત રોગ વ્યવસ્થાપન	RES-36:2:2024:2500
19	મકાઈની વૈજ્ઞાનિક ખેતી પદ્ધતિ	RES-36:3:2024:2500
20	જમીનના ભૌતિક તેમજ રાસાયણિક પુથ્થકરણ માટે જમીનનો નમુનો લેવાની અને તૈયાર કરવાની રીત	RES-36:5:2024:2500
21	સેન્દ્રીય અને રાસાયણિક ખાતરમાં રહેલ પોષકતત્વો	RES-36:5:2024:2500
22	દેશી કપાસની નવી જાતો અને ખેતી પદ્ધતિ	RES-46:1:2025:500
23	ધાણાની વૈજ્ઞાનિક ખેતી પદ્ધતિ	RES-49:9:2025:1000
24	ઈસબગુલની વૈજ્ઞાનિક ખેતી	RES-49:10:2025:1000
25	બિનપિયત ઘઉંની આધુનિક ખેતી પદ્ધતિ	RES-49:11:2025:1000
26	દેશી કપાસની નવી જાતો અને આધુનિક ખેતી પદ્ધતિ	RES-49:12:2025:1000
27	બિનપિયત ચણાની આધુનિક ખેતી પદ્ધતિ	RES-49:13:2025:1000
28	વરીયાળીની વૈજ્ઞાનિક ખેતી	RES-49:14:2025:1000
29	સુવાની વૈજ્ઞાનિક ખેતી	RES-49:15:2025:1000
30	પ્રાકૃતિક કૃષિમાં ટામેટીના પાકમાં અગ્નિઅસ્રથી કૃમિ વ્યવસ્થાપન (ગુજરાતી)	EXT-1:42:2024:10000
31	પ્રાકૃતિક કૃષિમાં ટામેટીના પાકમાં અગ્નિઅસ્રથી કૃમિ વ્યવસ્થાપન (હિન્દી)	EXT-1:44:2024:1000
32	Convocation Address, 21 st Annual Convocation	EXT-1:45:2024:1000
33	અતિથી વિશેષશ્રીજું ઉદ્બોધન ૨૧ મોવાર્ષિક પદવીદાન સમારંભ	EXT-1:46:2024:1000
34	Welcome Address-21 st Annual Convocation	EXT-1:47:2024:1000
35	Programme and Procedure For 21 st Annual Convocation	EXT-1:48:2024:1000
36	ધો.૧૦ પછીના પોલિટેકનીક અભ્યાસક્રમોની સંક્ષિપ્ત માહિતી	GEN-1:60:2025:15000
37	ધો.૧૨ (વિજ્ઞાન પ્રવાહ) પછીના સ્નાતકકક્ષાના અભ્યાસક્રમોની સંક્ષિપ્ત માહિતી	GEN-1:61:2025:15000
Placement Brochures		
1	Placement Brochures 2024-25	EDU-1:105:2024:150
2	Placement Brochures 2024-25	EDU-4:65:2025:100
3	Placement Brochures 2024-25	EDU-6:59:2025:100
4	Placement Brochures 2024-25	EDU-7:3:2025:150
5	Placement Brochures 2024-25	EDU-9:1:2025:165
6	Placement Brochures 2024-25	EDU-10:6:2025:200
College Magazine		
1	BACA College Magazine	EDU-1:102:2024:250
2	SRC Magazine	EDU-4:67:2025:100
3	College Magazine	EDU-6:57:2024:300
4	College Magazine	EDU-6:64:2025:250
5	College Magazine Vol. 8	EDU-7:4:2025:100
6	'Vasodhara' College Magazine	EDU-10:7:2025:200
Annual Report		
1	Annual Report 2023-24	EDU-6:58:2024:250
2	Annual Report 2024-25	EDU-6:65:2025:250
3	26 th Annual Report	GEN-1:58:2024:300





Sr. No.	Name of Publication	Publication Series No.
Magazine		
1	Krushigovidhya Magazine (Monthly)	Year:76: No.12: Vol.912:7000
		Year:77: No.01:Vol.913:7000
		Year:77: No.02:Vol.914:7000
		Year:77: No.03:Vol.915:7000
		Year:77: No.04:Vol.916:7000
		Year:77: No.05:Vol.917:7500
		Year:77: No.06:Vol.918:7500
		Year:77: No.07:Vol.919:7500
		Year:77: No.08:Vol.920:7500
		Year:77: No.09:Vol.921:7500
		Year:77: No.10:Vol.922:7500
Year:77: No.11:Vol.923:7500		
News letter		
1	AAU Newsletter (Quarterly)	Vol.19 No.4:1500
		Vol.20 No.1:1500
		Vol.20 No.2:1500
		Vol.20 No.3:1500
Reports		
1	Annual Progress Report 2023-24	EDU-4:63:2024:100
2	Annual Report 2021-22	EDU-6:51:2023:300
3	Annual Report 2022-23	EDU-6:55:2023:100
4	Annual Report 2023-24	EDU-6:58:2024:250
5	19 th Annual Report	GEN-1:52:2024:300





Annexure 5.3

Details of AAU Scientist Received Best Article Award

Sr. No.	Name of Scientist	Address	Year	Issue No.	Month & Year	Page No.
1	Dr. K. B. Kathiria	Hon. Vice Chancellor, AAU, Anand	76	3	July 2023	5-14
2	Dr. H. C. Patel	Department of Agricultural Entomology, BACA, AAU, Anand	76	3	July 2023	5-14
3	Dr. D. B. Sisodiya	Department of Agricultural Entomology, BACA, AAU, Anand	76	3	July 2023	5-14
4	Dr. Ajaykumar Maru	Department of Nematology, BACA, AAU, Anand	76	7	November 2023	10-13
5	Dr. Tulika Singh	Department of Nematology, BACA, AAU, Anand	76	7	November 2023	10-13
6	Smt. Anjana B. Prajapati	Department of Nematology, BACA, AAU, Anand	76	7	November 2023	10-13
7	Dr. J. R. Talaviya	Department of Plant Pathology, Anand Agricultural University, Anand	76	1	May 2023	12-14
8	Shri S. V. Lathiya	Department of Plant Pathology, Anand Agricultural University, Anand	76	1	May 2023	12-14
9	Dr. D. S. Kelaiya	Department of Plant Pathology, Anand Agricultural University, Anand	76	1	May 2023	12-14
10	Dr. R. L. Kalsariya	AINP on Pesticide Residues, AAU, Anand	76	10	February-2023	6-8
11	Dr. P. H. Rathod	AINP on Pesticide Residues, AAU, Anand	76	10	February-2023	6-8
12	Dr. K. D. Parmar	AINP on Pesticide Residues, AAU, Anand	76	10	February-2023	6-8
13	Dr. N. R. Chauhan	AINP on Pesticide Residues, AAU, Anand	76	10	February-2023	6-8
14	Dr. N. N. Chaudhari	AINP on Pesticide Residues, AAU, Anand	76	10	February-2023	6-8
15	Dr. Miral D. Suthar	Department of Agricultural Entomology, BACA, AAU, Anand	76	1	May-2023	41-46
16	Dr. D. B. Sisodiya	Department of Agricultural Entomology, BACA, AAU, Anand	76	1	May-2023	41-46





Sr. No.	Name of Scientist	Address	Year	Issue No.	Month & Year	Page No.
17	Dr. Puja Pande	Department of Plant Pathology, Anand Agricultural University, Anand	76	2	June-2023	41-43
18	Dr. R. G. Parmar	Department of Plant Pathology, Anand Agricultural University, Anand	76	2	June-2023	41-43
19	Dr. R. R. Gajera	College of Horticulture, AAU, Anand	76	8	December-2023	22-26
20	Dr. Nikunj V. Parakhiya	ASPEE College of Horticulture, NAU, Navsari	76	6	October-2023	40-45
21	Ms Pravina P. Solanki	ASPEE College of Horticulture, NAU, Navsari	76	6	Navember-2022	41-42
22	Dr. D. K. Vyas	College of Agricultural Engineering and Technology, AAU, Godhara	76	12	April-2024	26-33
23	Dr. M. B. Patel	MMRS, AAU, Godhara	76	12	April-2024	26-33
24	Er. J. Shrivankumar	College of Agricultural Engineering and Technology, AAU, Godhara	76	12	April-2024	26-33
25	Dr. A. R. Mekvan	Department of Veterinary Surgery and Radiology, College of Veterinary Science and Animal Husbandry, Kamdhenu University, Anand	76	7	November-2023	27-29
26	Dr. G. C. Mandli	Department of Veterinary Surgery and Radiology, College of Veterinary Science and Animal Husbandry, Kamdhenu University, Anand	76	7	November-2023	27-29
27	Dr. R. N. Bhatiya	Department of Veterinary Surgery and Radiology, College of Veterinary Science and Animal Husbandry, Kamdhenu University, Anand	76	7	November-2023	27-29
28	Dr. Sneha D. Patel	College of Veterinary Science and Animal Husbandry, Kamdhenu University, Anand	76	8	December-2023	19-21
29	Dr. G. M. Chaudhari	College of Veterinary Science and Animal Husbandry, Kamdhenu University, Anand	76	8	December-2023	19-21





Sr. No.	Name of Scientist	Address	Year	Issue No.	Month & Year	Page No.
30	Dr. B. A. Pata	College of Veterinary Science and Animal Husbandry, Kamdhenu University, Anand	76	8	December-2023	19-21
31	Shri Pinak Bamaniya	College of Fisheries Science, Veraval	76	10	February-2024	40-44
32	Ishita Bamaniya	College of Fisheries Science, Veraval	76	4	February-2024	40-44
33	Dr. Dipak Vaghela	College of Fisheries Science, Veraval	76	4	February-2024	40-44
34	Dr. P. H. Agravat	Department of Live Production Management, College of Veterinary Science and Animal Husbandry, Kamdhenu University, Anand	76	6	October-2023	46-48
35	Dr. S. V. Shah	Department of Live Production Management, College of Veterinary Science and Animal Husbandry, Kamdhenu University, Anand	76	6	October-2023	46-48
36	Dr. Y. G. Patel	Department of Live Production Management, College of Veterinary Science and Animal Husbandry, Kamdhenu University, Anand	76	6	October-2023	46-48
37	Dr. Maitri Bhavsar	Animal Nutrition Research Station, Kamdhenu University, Anand	76	11	March-2024	46-48
38	Dr. Paresh P. Pandya	Animal Nutrition Research Station, Kamdhenu University, Anand	76	11	March-2024	46-48
39	Dr. K. V. Patel	Medicinal and Aromatic Plants Research Station, Anand Agricultural University, Anand	76	12	April-2024	38-40
40	Dr. R. I. Chaudhari	Medicinal and Aromatic Plants Research Station, AAU, Anand	76	12	April-2024	38-40
41	Dr. K. C. Patel	Micronutrient Research Center (ICAR), AAU, Anand	76	6	October-2022	18-20
42	Dr. Waris Ali	Micronutrient Research Center (ICAR), AAU, Anand	76	6	October-2022	18-20
43	Shri Bhavik Prajapati	Micronutrient Research Center (ICAR), AAU, Anand	76	6	October-2022	18-20





Sr. No.	Name of Scientist	Address	Year	Issue No.	Month & Year	Page No.
44	Dr. J. J. Dhruv	Department of Bio Chemistry, BACA, AAU, Anand	76	1	May-2023	15-22
45	Smt Jalpaben Dobariya	Department of Bio Chemistry, BACA, AAU, Anand	76	1	May-2023	15-22
46	Dr. Y. M. Shukla	Department of Bio Chemistry, BACA, AAU, Anand	76	1	May-2023	15-22
47	Dr. N. V. Soni	Ex-editor, Krushigovidya, AAU, Anand	76	2	June-2023	44-48
48	Dr. P. C. Patel	Editor, Krushigovidya, AAU, Anand	76	2	June-2023	44-48
49	Dr. A. P. Ninama	Associate Professor, EEI, Anand	76	2	June-2023	44-48
50	Dr. K. B. Kathiria	Hon. Vice Chancellor, AAU, Anand	76	6	October-2023	05-07
51	Dr. Dharmishtha M. Patel	KVK, NAU, Vyara	76	6	October-2023	34-39
52	Dr. T. R. Ahlawat	KVK, NAU, Vyara	76	6	October-2023	34-39
53	Dr. C. D. Pandya	KVK, NAU, Vyara	76	6	October-2023	34-39
54	Ms. Payal Makvana	College of Horticulture, AAU, Anand	76	11	February-2024	09-15
55	Dr. N. I. Shah	College of Horticulture, AAU, Anand	76	11	February-2024	09-15
56	Dr. D. B. Patoliya	Department of Horticulture, BACA, AAU, Anand	76	8	December-2023	05-06
57	Dr. H. S. Sitapara	Department of Horticulture, BACA, AAU, Anand	76	8	December-2023	05-06
58	Dr. M. J. Patel	Department of Horticulture, BACA, AAU, Anand	76	8	December-2023	05-06
59	Dr. Minesh Shah	NDDDB, Anand	76	3	July-2023	19-27
60	Dr. K. P. Patel	NDDDB, Anand	76	3	July-2023	19-27
61	Dr. D. K. Vyas	College of Agricultural Engineering and Technology, AAU, Godhara	76	12	April-2024	26-33
62	Dr. M. B. Patel	MMRS, AAU, Godhara	76	12	April-2024	26-33
63	Er. J. Shravankumar	College of Agricultural Engineering and Technology, AAU, Godhara	76	12	April-2024	26-33





Sr. No.	Name of Scientist	Address	Year	Issue No.	Month & Year	Page No.
64	Dr. K. L. Dabhi	Department of Farm Machinery and Power Engineering, AAU, Godhara	76	12	April-2024	5-6
65	Dr. R. C. Salunkhe	Department of Farm Machinery and Power Engineering, AAU, Godhara	76	12	April-2024	5-6
66	Dr. Pankaj Gupta	Department of Farm Machinery and Power Engineering, AAU, Godhara	76	12	April-2024	5-6
67	Er. Rajesh Godhani	Department of Farm Machinery and Power Engineering, AAU, Godhara	76	12	April-2024	5-6
68	Er. Sanjay Pargi	Department of Farm Machinery and Power Engineering, AAU, Godhara	76	12	April-2024	5-6
69	Dr. Savan Padaliya	Center for Agriculture Market Intelligence, NAHEP-CAAST, AAU, Anand	76	4	August-2023	44-49
70	Dr. Yash Unjiya	Center for Agriculture Market Intelligence, NAHEP-CAAST, AAU, Anand	76	4	August-2023	44-49
71	Dr. S. A. Sipai	DEE, AAU, Anand	76	7	November-2023	42-45
72	Dr. P. C. Patel	DEE, AAU, Anand	76	7	November-2023	42-45
73	Dr. J. D. Desai	DEE, AAU, Anand	76	7	November-2023	42-45
74	Dr. Rajdipsinh M. Jadeja	CP college of Agriculture, SDAU, Sardar Krushi Nagar	76	5	September-2023	27-35
75	Dr. Parul M. Patel	CP college of Agriculture, SDAU, Sardar Krushi Nagar	76	5	September-2023	27-35
76	Dr. K. P. Thakar	CP college of Agriculture, SDAU, Sardar Krushi Nagar	76	5	September-2023	27-35





Annexure 5.4

Television Programmes Telecasted during 2024-25

Sr. No.	Name of Scientist	Topic	Date
1	Shri Nikunj Soni	Innovation and Startups in Agriculture	02-04-2024
2	Dr. R. S. Parmar	Role of IT in Agriculture	14-05-2024
3	Dr. Hitiksha Parmar	Steps to Increase Groundnut Production	18-06-2024
4	Dr. Mihir Pandya	Cultivation Methods of Summer Vegetable Crops	17-04-2024
5	Dr D. J. Rangpara	Use of zero tiller in agriculture	29-05-2024
6	Dr. M. B. Zala	Integrated management of soil-dwelling pests	19-06-2024
7	Dr. M. B. Parmar	Preparation and Care of Dharuwadia in Kharif Paddy	31-05-2024
	Shri Sanju Thorat		
8	Dr. R. G. Parmar	Integrated Pest and Disease Management in Monsoon	14-06-2024
	Dr. D. B. Sisodia		
9	Shri Nikunj Soni	Innovation and Startups in Agriculture	02-07-2024
10	Dr. Ravi L. Kalsariya	Pesticide Residues In Agricultural Products And Prevention	17-09-2024
11	Dr. N. I. Shah	The Need For Hydroponics In Horticultural Crops	28-08-2024
12	Dr. Rais Rajpura	Layer Poultry Farming	04-09-2024
13	Dr. G. N. Motka	Science Of Natural Farming	18-09-2024
14	Dr. Bhavesh H. Joshi	Food Adulteration	09-08-2024
	Dr. Rashmin Dhingani		
15	Dr. R.G. Parmar	Disease And Pest Management In Various Crops	13-09-2024
	Dr. D. B. Sisodia		
16	Dr. B. H. Panchal	Protected Cultivation Of Value-Added Vegetable Crops	15-10-2024
17	Shri Girish Hadiya	Integrated Pest Management In Tur	22-10-2024
18	Dr. Vinod Mor	Best Approach To Save Water : Micro-irrigation System	15-12-2023





Sr. No.	Name of Scientist	Topic	Date
19	Dr. Keyur Gardhariya	The Importance Of Training And Leadership Capacity In Agriculture	12-11-2024
20	Dr. M. B. Zala	Integrated Pest Management in Chickpea	29-11-2024
21	Dr. Sandip Rathod	Essential Nutrients And Their Role In Crop Nutrition	18-12-2024
22	Dr. R.G. Parmar	Integrated Pest Management in Winter Crops	08-11-2024
	Dr. D. B. Sisodia		
23	Dr. K. V. Patel	Importance of Medicinal Crops In Human Health	13-12-2024
	Shri Nilesh Chavda		
24	Dr. Vinod Mor	Important Issues For Increasing Efficiency Of Irrigation Water	21-01-2025
25	Dr. Arjunsinh Rathva	Mushroom Cultivation: An Innovative Approach	28-01-2025
26	Dr. J. S. Patel	Nursery Management In Fruit Crops	04-02-2025
27	Dr. Sandip Rathod	Living soil: Healthy soil	18-02-2025
28	Dr. R. K. Thumar	Integrated Pest Management In Vegetables	08-01-2025
29	Dr. Mihir Pandya	Ideal Method of Okra Cultivation	19-03-2025
30	Dr. R.G. Parmar	Disease and Pest Management In Summer Crops	07-02-2025
	Dr. D. B. Sisodia		
31	Dr. Y. K. Jhala	Importance of Organic Fertilizers In Agriculture	14-02-2025
	Dr. H. K. Patel		
32	Shri Dharmesh Kacha	Fertilizer, Disease And Pest Management in Zaid Paddy	12-02-2025





Annexure 5.5

Radio Talks Delivered during 2024-25

Sr. No.	Name of Scientist	Topic	Date
1	Dr. H. L. Kacha	Fruit Orchard Maintenance	01-05-2024
2	Dr. P. C. Patel	Importance of Demonstration in Agriculture	15-05-2024
3	Dr. S. D. Patel	Integrated Pest Management in Pulses	31-07-2024
4	Dr. Keyur Gardhariya	Development and Importance of Leadership Capacity in Farmers	14-08-2024
5	Dr. Arjunsinh Rathva	Mushroom Farming	16-10-2024
6	Shri Vishvajit J. Patel	Importance of Farmers' Field School (FFS) in Agriculture	13-11-2024
7	Dr. Payal Vihariya	Farmer Registry	15-01-2025
8	Dr. Ravikumar Chaudhari	Importance of Agriculture Information Technology in Modern Agriculture	12-02-2025





Glimpses of Extension Activities



Chapter

6

STUDENTS' WELFARE

The office of Director, Students' Welfare, Anand Agricultural University was established with effect from 01/05/2004. This office looks after various students' activities and facilities such as housing, sports, cultural events, scholarships/fellowships, recreation, health, adventure, counseling, NSS, NCC and placement. In addition, eminent personalities from diverse fields are invited to share their thoughts, experiences and views with staff and students.

6.1 Students Representative Council

Each constituent college of the University has a Students Representative Council (SRC) constituted as per University rules by the Principal/Dean of the respective college. The Council is formed by selecting sincere and capable student leaders with the objective of representing students' issues through their elected representatives. The SRC organizes and monitors various extracurricular activities such as planning forum, sports, debate and elocution, preparation of college magazine, cultural programmes, NSS and NCC. in collaboration with Directorate of Students' Welfare.

In addition, Alumni Associations have been established in all the eight colleges. One day seminars are organized to strengthen the professional alliances and foster a sense of unity and belonging among alumni.

6.2 Students' Amenities

Hostel Facilities

Hostels play an important role in shaping the personality and character of students. Anand Agricultural University being a residential university provides good hostel facilities are provided to all polytechnic, under-graduate and post-graduate students along with mess facilities. In some hostels, student-managed messes operate independently, while in others they are run under a contract system supervised by the Rector/Asst. Rector/Asst. Warden. Additional amenities for daily needs, such as laundry, tailor, canteen, cycle store, provision store, telephone, post office, bank and ATM. are also available in the university premises. To ensure smooth functioning and to address residential issues, Rectors, Assistant Rectors and Assistant Wardens are appointed in each college.

Details of Hostels in the University including Constituent Colleges and polytechnics

Sr. No.	Name of College/ Polytechnic	Name of Hostel	Type of Hostel	Accommodation Facilities in Number			Alternative Arrangements	
			(Boys/ Girls/ Inter-national)	Rooms	Beds	Total No. of allotted Beds	Rooms	Beds
1	B. A. College of Agriculture	Vallabh UG Hostel	UG Boys	61	127	117	04	10
		Swami Vivekanand UG Hostel	UG Boys	48	144	140	00	04
		Paras UG Hostel	UG Boys	48	144	138	00	06
		Shastri Hostel	PG Boys	17	39	28	02	11



Sr. No.	Name of College/ Polytechnic	Name of Hostel	Type of Hostel	Accommodation Facilities in Number			Alternative Arrangements	
			(Boys/ Girls/ Inter-national)	Rooms	Beds	Total No. of allotted Beds	Rooms	Beds
		Subhash Hostel	PG Boys	26	56	16	16	40
		Giriraj Hostel	PG Boys	40	44	38	12	16
		Balram PG Hostel	PG Boys	96	96	87	09	09
		Urvi Hostel	UG Girls	36	108	96	04	12
		Gargi Hostel	PG Girls	25	25	25	00	00
		Megha Hostel	PG Girls	86	172	164	04	08
		Kasturba Girls Hostel	Girls	30	90	78	04	13
		International Students' Hostel	Boys & Girls	16	32	01	15	30
2	College of FPT & BE	Vishveshvaraya	Boys	33	99	99	00	00
		Maitreyee Hostel	Girls	29	110	110	00	00
3	College of AIT	Aarya Hostel	Boys	43	129	101	09	28
		Smt. Maniben Vallabhbai Patel Girls Hostel	Girls	52	156	156	00	00
4	College of Horticulture	Mahatma Gandhi Boys Hostel	Boys	45	135	133	01	02
5	College of Agricultural Engineering & Technology, Godhra	Aruni Hostel	Boys	72	144	68	38	76
		Dr. A.P.J. Abdul Kalam Hall of Residence	Boys	41	113	26	43	87
		Aditi Hostel	Girls	17	48	48	00	00
6	College of Agriculture, Vaso	Panam Hostel	Boys	48	144	142	07	21
		Narmada Hostel	Girls	50	150	99	16	32
7	College of Agriculture, Jabugam	Eklavya Hostel	Boys	28	84	62	07	22
		Nachiket Hostel	Boys	37	114	114	00	00
		Maitreyi Hostel	Girls	22	67	67	00	00
8	Polytechnic in Agriculture, Anand	GTC and Nutan Hostel	Boys	43	114	88	00	00
9	Polytechnic in Food Science & Home Economics	Urvi Girls Hostel	Girls	23	79	69	01	10





Sr. No.	Name of College/ Polytechnic	Name of Hostel	Type of Hostel	Accommodation Facilities in Number			Alternative Arrangements	
			(Boys/ Girls/ International)	Rooms	Beds	Total No. of allotted Beds	Rooms	Beds
10	Polytechnic in Agriculture, Vaso	Mahisagar	Girls	36	108	76	03	32
		Vaatrak	Boys	37	111	111	07	21
11	Polytechnic in Horticulture, Vadodara	Boys Hostel	Boys	48	144	108	09	27
		Girls Hostel	Girls	24	72	60	03	9
12	Polytechnic in Agricultural Engineering, Dahod	Eklavya Bhavan	Boys	28	100	40	00	00
		Shabari Bhavan	Girls	18	50	22	00	00
Total				1303	3348	2727	214	526

Health Facilities

Anand Agricultural University has signed an MOU with Charutar Arogya Mandal (Bhaikaka University), Karamsad, to provide better health care facilities to students, staff, labours, pensioners since April 1, 2008. In addition, the university health centre

offers specialized medical services in Physiotherapy, Ayurveda and Homeopathy.

The number of cases registered under various medical treatments at University Health Centre during the year is as follows:

Sr. No.	Test/ Treatment	No. of cases/ patients turned up
1.	Allopathic	8326
2.	Ayurveda	279
3.	Homeopathic	979
4.	Physiotherapy	457
5.	Blood Sugar BS/FBS/PP2bBS test, Lipid Profile, Creatinine, Jaundice/S.G.P.T/SGOT/Albumin, Uric Acid, Blood group & Laboratory test	1707
6.	Suvarnaprasan Camp	1242
7.	General Health Check up	12

Sr. No.	Type of Patients	No. of cases/ patients turned up for the treatment mentioned in above table
1.	University employee and family member	539
2.	Students	3551
3.	Farm labours	1238
4.	Pensioners	3455





6.3 Placement Cell

Anand Agricultural University has an excellent placement record with leading organizations in diverse sectors such as Banking, Agriculture, Irrigation, Tractor manufacturing, Dairy and Food Processing, Information Technology, Pharmaceuticals, NGOs, and Semi Government organizations. A strong and supportive alumni

network, holding key positions in reputed companies, further strengthens placement opportunities. The University not only ensures a suitable job for the deserving students but also instill in them a lifetime confidence and professional growth. Our dedicated placement cell maintains close touch with the industries. The Student Counseling and Placement Cell looks after students' overall well-being, Placement and Campus Interviews.

The details of students' placement 2024-25

Name of the Faculty	Name of the College	Name of company	No. of Candidates offered Job		
			U.G.	P.G.	Total
Agriculture	B.A. College of Agriculture	Pradhan Agro Chemicals	02	-	02
		Shri Leva Kadva Patel Samaj Mandali	02	-	02
		Agrostar Infocity Pvt. Ltd. Gandhinagar	02	-	02
		Agrovikas Agritech Pvt. Ltd	03	-	03
		Deepak Foundation	01	-	01
		Iscon Balaji Foods Pvt. Ltd.	02	-	02
		Gharda Chemicals	02	-	02
		GSFC Agrotech	02	-	02
		GNFC Ltd.	02	-	02
		Uniqlo Fast Retailing Ltd.	-	01	01
		Meghmani Pvt. Ltd.	-	02	02
		Nuva Nutrition	01	-	01
		ICICI Bank	05	-	05
		VNR Seeds Pvt. Ltd.	-	02	02
		Bayer Crop Science India, Modasa	-	02	02
	Total	24	07	31	
	College of Agriculture, Vaso	IDBI Bank	02	-	02
		Vocational Teacher In Agriculture Subject In Secondary and Higher Secondary at Model Day School	01	-	01
		Agri. Assistant (GSSSB)	01	-	01
		Department of Post, ABPM-Ranipura	01	-	01
		Gharda Chemicals Ltd.	01	-	01
		Shiv Shakti Kheti Auzaar	01	-	01
		Agriculture Apprentice at Gujarat State Civil Supplies Corporation	03	-	03





Name of the Faculty	Name of the College	Name of company	No. of Candidates offered Job		
			U.G.	P.G.	Total
		Falcon Agrifriz Foods Pvt. Ltd.	01	-	01
		Total	11	-	11
	College of Agriculture, AAU, Jabugam	Byer Crop Science	02	-	02
		Vande Biotech	01	-	01
		Ketul Trading Co.	01	-	01
		Dhruv Agro	01	-	01
		Self-Employment	02	-	02
Total	07	-	07		
Food Processing Technology	College of Food Processing Technology & Bio energy	Prova Flavours India Pvt. Ltd., Bangalore, Karnataka	01	-	01
		Iscon Balaji Foods Pvt. Ltd., Kanajiri, Nadiad, Gujarat	02	-	02
		Vimal Agro Products Pvt. Ltd., Bardoli, Surat, Gujarat	01	-	01
		Sukhadia Garbaddas Bapuji, Anand, Gujarat	01	-	01
		Arakay Food Pvt. Ltd., Ahmadabad, Gujarat	01	-	01
		Landway Beverages Pvt. Ltd., Village-Khapariya, Ta-Gandevi, Dist. Navsari, Gujarat	01	-	01
		Bilvam Jaganmaata Pvt. Ltd., Napad, Anand, Gujarat	01	-	01
		Decase Chemical Pvt. Ltd., Nairobi, South Africa	01	-	01
		Vasundhara Agri-Horti Producers Company Limited, Vasda, Dist:Navsari, Gujarat	01	-	01
		Delicious Food Pvt. Ltd., Rajkot, Gujarat	01	-	01
		Parle Products Pvt. Ltd. Bhuj, Gujarat	01	-	01
		Wholesome Foods, Nr. Palm Greens Club, Kheda, Gujarat	01	-	01
		Top notch LLP, GIDC, Anand, Gujarat	02	-	02
		Reliance Industries Ltd. Jamnagar, Gujarat	01	-	01
Deepkiran Foods Pvt. Ltd., Ahmadabad, Gujarat	-	02	02		





Name of the Faculty	Name of the College	Name of company	No. of Candidates offered Job		
			U.G.	P.G.	Total
		Shri Additives Pvt. Ltd., Santaj, Gandhiagar, Gujarat	-	01	01
		Agrotech Food Ltd., Jhagadia. Dist: Bharuch, Gujarat	-	01	01
		Akshay Patra, Surat, Gujarat	-	01	01
		Balaji Wafers Pvt. Ltd. PO-Dungari, Dist-Valsad, Gujarat	-	01	01
		P.M.Patel Science College, Vallabh Vidyanagar, Gujarat	-	01	01
		Laxmi Snacks Pvt. Ltd. Pij, Ta-Nadiad, Gujarat	-	01	01
		The Baker Dozens, Mimansa Industries Pvt. Ltd. Ahmadabad, Gujarat	-	01	01
		Hocco Industries Pvt. Ltd., Ahmadabad, Gujarat	-	01	01
		Sid's Farm Corporate Office - Madhapur, Hyderabad, Telangana	-	01	01
		Total	16	11	27
Agricultural Information Technology	College of Agricultural Information Technology	Appsaint Technology	01	-	01
		eSparkBiz	01	-	01
		FES, NDDDB	01	-	01
		INFLIBNET	04	-	04
		Innovative Engineers	01	-	01
		Kretoss Technologies	01	-	01
		LetSetGo Software	05	-	05
		NDDDB, Anand	02	-	02
		Sarjen Systems	02	-	02
		Tech Ahir Pvt. Ltd.	01	-	01
		Technoguide Infosoft	01	-	01
		The Designs Live	02	-	02
		Unistar Softech	01	-	01
		WeServe Codes Pvt. Ltd.	04	-	04
		Total	27	-	27
Horticulture	College of Horticulture	Torrent Power	03	-	03
		Godrej Agrovet	01	-	01
		Tiwana Global Pvt. Ltd.	03	-	03
		Reliance, Jamnagar	01	-	01
		AMC/ Contractual at Horticulture dept.	06	-	06
				Total	14





Name of the Faculty	Name of the College	Name of company	No. of Candidates offered Job		
			U.G.	P.G.	Total
Agribusiness Management	International Agribusiness Management Institute	PRADAN	-	06	06
		Digivridhhi Technologies Private Limited	-	01	01
		CInI- Tata Trust NGO	-	01	01
		Indian Farmer Fertilizer Cooperative limited	-	01	01
		Navadhan Capital Pvt. Ltd.	-	01	01
		Federal Bank Ltd.	-	01	01
		Reliance Retail Limited	-	07	07
		Mahadhan Agritech Limited (Deepak Fertilizer)	-	02	02
		APL Ltd.	-	02	02
		Gujarat Government (forest Dept.)	-	01	01
		Barrix Agro Science Pvt. Ltd.	-	01	01
		Narmada Bio-Chem Limited	-	03	03
		Tata Rallis Ltd.	-	02	02
		Tirth Agro Pvt. Ltd. (shaktiman)	-	01	01
		Bhoomi Agro Pvt. Ltd.	-	02	02
		Kalash seeds Pvt. Ltd.	-	01	01
Zydex Industry Ltd.	-	01	01		
		Total	-	34	34
Agricultural Engineering	College of Agricultural Engineering and Technology	Netafim Irrigation Pvt. Ltd.	06	-	06
		VST Tillers Tractors	01	-	01
		Professional Assistance for Development Action (PRADAN)	00	01	01
		Sonalika Tractors	02	-	02
		Total	09	01	10

6.4 Physical Education Programme

Physical Education and Sports play vital role in promoting health, physical fitness, personality development and overall wellbeing of the students. Along with the academic growth of the students, the university places strong emphasis on physical fitness and holistic personality development by engaging students in physical education, sports, cultural events, literary events as well as adventurous activities. This initiatives are organized at college level under the direct guidance and support of Director of Students' Welfare.

(a) Sports Activities and Cultural-Literary Events

Students of the university are encouraged and trained to develop skills and achieve excellence in various sports and extracurricular activities. Inter collegiate competitions are organized across various colleges such as Chess, Table-tennis, Badminton, Kabaddi, Volleyball, Basketball, Kho-kho and Cricket. In addition, Cultural activities such as Folk Dance, One Act Play, Mono Acting and Mime as well as Literary activities including Essay, Debate and Extempore are also conducted to nurture creativity and talent.





Outstanding students selected from inter collegiate competitions are further nominated to represent the University at Inter-University events. During the year, the following Inter collegiate competitions were held.

Inter collegiate Sports and Cultural-Literary Competitions 2024-25

Sr. No.	Game	Organizing College	Date of Tournament	Position	
				Champion	Runners-up
1	Chess	College of Horti.	12/08/2024	BACA	FPT & BE
2	Table-Tennis (M)	BACA	16-17/08/2024	FPT & BE	CoA, Vaso
3	Table-Tennis (W)	BACA	16-17/08/2024	CoA, Vaso	College of Horti.
4	Badminton (M)	BACA	16-17/08/2024	BACA	College of Horti.
5	Badminton (W)	BACA	16-17/08/2024	BACA	FPT & BE
6	Basketball	AIT	11/09/2024	BACA	IABMI
7	Volleyball (M)	BACA	12/09/2024	BACA	CoA, Jabugam
8	Volleyball (W)	BACA	12/09/2024	CoA, Vaso	BACA
9	Kho-kho	BACA	22/08/2024	BACA	CoA, Vaso
10	Mime	FPT & BE	18/09/2024	College of Horti.	BACA
11	Mono-Acting	FPT & BE	18/09/2024	IABMI	College of Horti.
12	One Act Play	FPT & BE	18/09/2024	BACA	FPT & BE
13	Folk Dance	FPT & BE	18/09/2024	FPT & BE	BACA
14	Debate (For)	FPT & BE	18/09/2024	CoA, Jabugam	FPT & BE
15	Debate (Against)	FPT & BE	18/09/2024	FPT & BE	FPT & BE
16	Extempore	FPT & BE	18/09/2024	BACA	FPT & BE
17	Football	BACA	07-08/10/2024	FPT & BE	BACA
18	Kabaddi	CoA, Vaso	10/09/2024	FPT & BE	CoA, Vaso
19	Cricket	BACA	27-30/01/2025	BACA	IABMI



Volleyball



Basketball





Cricket



Kho-kho



Table Tennis



Chess



Mime



Badminton

13th Inter Polytechnic Sports

The 13th Inter-Polytechnic Volleyball, Badminton, Table Tennis and Chess Tournament 2024-25 was organized at Sama Indoor Sports Complex, Vadodara on 04/10/2024 by Polytechnic in Horticulture, Vadodara. A total of 164 students from five Polytechnics actively participated in the

competitions.

The 13th Inter-Polytechnic Cricket and Kho-kho Tournament 2024-25 was organized at M.S. University Sports Ground, Vadodara on 31/01/2025 by Polytechnic in Horticulture, Vadodara. Students from five Polytechnics participated enthusiastically in the tournaments.





Results of the tournament are as under:

Organizing Polytechnic	Date of Tournament	Game	Position	
			Champion	Runners-up
Polytechnic in Horticulture, Vadodara	04/10/2024	Volleyball (M)	Poly. Agri. Anand	Poly. Horti. Vadodara
		Volleyball (W)	Poly. Agri. Vaso	PAE, Dahod
		Badminton (M)	Poly. Agri. Anand	Poly. Agri. Vaso
		Badminton (W)	Poly. Agri. Vaso	PAE, Dahod
		Table Tennis (M)	Poly. Agri. Anand	PAE, Dahod
		Table Tennis (W)	Poly. Agri. Anand	Poly. Food Sci.
	Chess	Poly. Agri. Anand	Poly. Agri. Vaso	
	31/01/2025	Cricket	Poly. Agri. Anand	Poly. Agri. Vaso
Kho-kho		Poly. Agri. Anand	Poly. Agri. Vaso	



Table Tennis



Kho-kho



Volleyball



Chess





Gujarat State Inter Agricultural University Cricket & Chess Tournament 2024-25

The Gujarat State Inter Agricultural University Cricket & Chess tournament was organized on March 20-21, 2025 at Sports Complex, Anand Agricultural University, Anand. The Inauguration and prize distribution ceremonies were held under the Chairmanship of Dr. K.B. Kathiria, Hon. Vice Chancellor, AAU, Anand. The Director of Research, Director of Extension Education, Registrar, Principal

and Deans, University officers, Team Managers of various teams, participants and teachers attended the programme. A total of 80 students from Anand Agricultural University, Junagadh Agricultural University, Navsari Agricultural University and Sardarkrishnagar Dantiwada Agricultural University participated in the tournament. Anand Agricultural University emerged as the Champion in Chess. The entire programme was organized by Dr. D. H. Patel, Director, Students' Welfare, under the guidance of Dr. K.B. Kathiria, Hon. Vice Chancellor.



Inauguration of the Tournament



Chess

Results of the Gujarat State Inter Agricultural University Sports, Cultural & Literary Competitions 2024-25 are as under:

Name of the host University	Date of event	Name of event	AAU Position
JAU	04/10/2024	Folk Dance	Champion
		Extempore	Champion
		One Act Play	Runners-up
		Mime	Runners-up
		Overall	Runners-up
NAU	01/02/2025	Badminton (M)	Champion
		Volleyball (W)	Champion
		Volleyball (M)	Runners-up
JAU	03/03/2025	Badminton (M)-Poly.	Runners-up
NAU	10-11/03/2025	Cricket - Poly.	Runners-up
		Kho-kho - Poly.	Runners-up
		Chess – Poly.	Runners-up
AAU	20-21/03/2025	Chess	Champion

Gujarat State Inter University Staff Tournament 2024-25

The AAU staff team participated in the Gujarat State Inter University Staff Tournament 2024-25 organized by Junagadh Agricultural

University, Junagadh during December 26-28, 2024. A total of 24 staff members from AAU participated in various games including Cricket, Volleyball, Badminton, Table Tennis and Chess. The AAU Chess team secured second and third position in Chess Tournament.





(b) National Cadet Corps (NCC)

(i) For Boys Cadet:

The NCC is a voluntary organization dedicated to nation-building. The camps organized play a pivotal role in promoting national integration through interaction among youth from diverse castes, creeds and cultures. To channelize the energy of youth in a positive direction, NCC has been included in the course curriculum. The NCC unit of BACA is attached to the 4 Gujarat Battalion, NCC, Vallabh Vidyanagar. The unit comprises of two platoons with a total strength of 100 cadets.

NCC cadets Participated in 'Ek Ped Maa Ke Naam' & 'One Cadet One Tree' Campaign

The NCC Senior Division (Boys) cadets of

B. A. College of Agriculture, AAU, Anand actively participated in a plantation drive on the occasion of the 78th Independence Day, 15th August 2024. As a part of the **Ek Ped Maa Ke Naam** (A Tree in the Name of Mother) & **One Cadet One Tree** campaign, the cadets planted 100 saplings at the back side of Paras hostel of B. A. College of Agriculture, AAU, Anand. It may be recalled that the hon'ble Prime Minister, Shri Narendra Modi launched the *Ek Ped Maa Ke Naam* campaign on World Environment Day, 5th June, 2024 urging everyone in India and across the globe to plant a tree as a tribute to the mother. The Hon'ble Vice Chancellor Dr. K. B. Kathiria inaugurated the campaign by planting a sapling along with the NCC cadets. He encouraged all cadets to contribute towards environment conservation. The entire programme was coordinated by Team AAU and NCC, BACA, AAU Anand.





NCC cadets celebrated World Tourism Day

The NCC Senior Division (Boys) cadets of B. A. College of Agriculture, AAU, Anand celebrated World Tourism Day 2024 (WTD2024) on 27/09/2024. The day highlights the importance of tourism and its social, cultural, and economic impact across the globe. The day aims to promote a more sustainable and inclusive tourism industry for future generations.

On the occasion, Lt. Dr. Ajay Kumar Maru, ANO, NCC, B. A. College of Agriculture, Anand delivered an informative talk to the cadets and students. In his address, he elaborated on the history, objectives, and themes of World Tourism Day. The entire programme was coordinated by NCC cadets of BACA, AAU, Anand.



NCC Cadets Promote Natural Farming under Mera Yuva Bharat Initiative

As part of the *Mera Yuva Bharat* registration drive (7–14 April 2025) under the national theme “Yuva Shakti – Vikshit Bharat,” the NCC cadets of B.A. College of Agriculture, Anand successfully organized an impactful outreach programme on 12 April 2025 at Village Esarama, Taluka Petlad, Anand.

The event focused on creating awareness about the National Mission on Natural Farming, and key government schemes such as the Pradhan Mantri Fasal Bima Yojana (PMFBY). Cadets highlighted financial assistance initiatives, including Rs. 900 per month (Rs.10,800 annually) to promote natural farming and Rs. 30,000 per family for adopting the Integrated Farming System.

Activities during the event included a rally, a street

play, and model demonstrations showcasing the benefits of natural farming such as water conservation, eco-friendly practices, and chemical-free crop production. The Cadets also visited two natural farming farms in the village, where they gained practical exposure to a mini neem cake production unit and a turmeric processing setup.

The programme was successfully conducted under the guidance of Dr. N. I. Shah, Principal, B.A. College of Agriculture, Anand and Lt. Dr. Ajay Kumar Maru, ANO, with valuable technical support from Dr. Rakesh Patel, Scientist (Plant Protection), KVK Devataj. Their mentorship ensured smooth execution and a meaningful impact of the programme.





Overview of the event and cadets explaining about Natural Farming and PMFBY



Rally for awareness about Natural Farming



Natural Farming Model display and demonstration





Drama performance



Visits of Natural Farming farms

(ii) For Girls Cadets

The NCC Girl unit functioning under B.A. College of Agriculture enrolls girl cadets from B.A. College of Agriculture, College of Horticulture, College of Agricultural Information Technology and College of Food Processing Technology & Bio Energy of Anand Agricultural University. In the year 2024-25, A total of 22 vacancies were allotted for first-year enrollment and all were filled. At present 53 girl cadets are enrolled for the three year training programme.

The girl cadets have enthusiastically participated in various events organized by 4 Guj Girls BN, Vidyanagar Group and B. A. College of Agriculture throughout the year.

1. Participation of Cadets in Camps:

(1) Thal Sainik Camp (TSC)

SUO Nehal Solanki was selected from the 4 Guj.

Girls Battalioan NCC and further qualified at the group and Directorate levels for the All India Thal Sainik Camp (TSC) in the Health and Hygiene domain. She was chosen from among 91 cadets from entire Gujarat Directorate to represent the state at New Delhi during 02-13/09/2024. She was appointed as the senior for the SW Troop. Notably, She is the first ever cadet to represent B. A. College of Agriculture at National level camp which is considered one of the two premier national level camps of NCC. She was felicitated by the 4 Gujarat Girls NCC, Anand and Department of Women and Child Development, Anand District for her outstanding achievements with the recognition "Bharat Ki Beti" in the presence of Member of Parliament Shri Miteshbhai Patel and the Collector of Anand District.





(2) Special National Integration Camp (SNIC) :

Cdt. Dhruvi Sharma and SGT. Forum Patel attended Special National Integration

Camp representing Gujarat Directorate during 02-13/10/2024 at Kakinada. During the camp, Cdt. Dhruvi Sharma won a prize in the poster making competition.



(3) Advance Leadership Camp (ALC)

Cdt. Mansi Pandya attended the Advance

Leadership Camp during 11/11/2024 to 22/11/2024 at Alwar, Rajasthan.





(4) Ek Bharat Shrestha Bharat Camp (EBSB) :

Cadets Margi Vaghela and Sonagara Alpa participated in Ek Bharat Shrestha Bharat Camp (EBSB) at Chhatarpur, Madhya Pradesh during 16-27/10/2024.

Cadets Mittal Chaudhary and Risi Patel

attended Ek Bharat Shrestha Bharat Camp (EBSB) at Ahmedabad, Gujarat from 16-30/09/2024.

Cadets Diya Patel and Axita Tejani attended Ek Bharat Shrestha Bharat Camp (EBSB) at Ujjain, Madhya Pradesh from 23/09/2024 to 04/10/2024.



(5) Celebration of World Environment Day:

A total of 53 girl cadets participated enthusiastically in the celebration of "World Environment Day", on 5 June, 2024 by planting rare tree species in the Botanical Garden of B. A. College

of Agriculture. On this occasion Dr. Y. M. Shukla, Principal of the college, highlighted this year's theme, "Land Restoration, Desertification and Drought Resilience," during his interaction with the NCC cadets.



Anand, Gujarat, India
GXPM+46M Botanical Garden, AAU campus, Hadgood, Anand, Gujarat 388110, India
Lat 22.535473°
Long 72.983328°
05/06/24 09:59 AM GMT +05:30

GPS Map Camera

Google





(6) Tree Plantation

Cadets participated in "Tree Plantation Programme" organized by 4 Guj. Girls Battalion, NCC at B. A. College of Agriculture, AAU on 08/02/2024 within the college premises.

(7) International Women's Day:

As a part of the International Women's Day a Self Defense Training for the cadets of BACA

was organized from 25-29/03/2025 in association with Pratibha Academy, Vidyanagar. The training was conducted by Mr. Chetan Fumakiya, Director, Pratibha Academy, who imparted practical self defence techniques to the cadets.

Additionally, a special lecture was organized on "Financial Awareness for Women" in collaboration with Women Cell of BACA on 29/03/2025. The lecture was delivered by Mr. Hitesh Dodiya, Financial Advisor.



Achievements

1. UO Helly Patel was awarded the 'Best Cadet' of BACA from Girls NCC during Annual Day Celebration of BACA for her remarkable contribution and active involvement in NCC activities throughout the year 2024.
2. Cdt. Hitesh Dusara was felicitated by BACA Alumni Association for securing highest marks in 'C' certificate exam among the girl cadets of NCC for the year 2024.
3. 13 cadets secured 'A' grade, 2 cadets secured 'B' grade. 5 cadets secured 'A' grade and 08 cadets secured 'B' grade in 'B' certificate examination conducted in 2024-25.

6.5 National Service Scheme (NSS)

The Department of Youth Affairs and Sports, Ministry of Human Resources Development, New Delhi launched the National Service Scheme in 1969-70. The primary objective of this scheme is to instill a sense of social responsibility through

community services and to foster discipline. The National Service Scheme is functioning in all the UG colleges and Polytechnics of Anand Agricultural University. During the year under report, volunteers registered for regular activities and special camps were as follows:

Sr. No.	Activity	No. of registered volunteers
1	Regular activities	1200
2	Special camp	600

During the spare time alongside academic programmes, the volunteers actively participate in the activities addressing social issues and developmental needs through various NSS initiatives. They are also motivated to work for Environment, Health, Family Welfare, Hospitals and other relief work during natural calamities in the interest of society.

The social activities undertaken by NSS are categorized into two groups.





(A) Regular activities

The regular activities carried out by the university during the reporting year include :

- ◆ Celebration of Independence day
- ◆ Celebration of Republic Day
- ◆ Celebration of NSS Day
- ◆ Tree Plantation Programme
- ◆ Celebration of International Day of Yoga
- ◆ Celebration of International Women's Day
- ◆ Celebration of Swachchhta Pakhwada
- ◆ Celebration of Rashtriya Poshan Maah
- ◆ Celebration of Teacher's Day
- ◆ Voter Awareness Programme
- ◆ Celebration of Agricultural Education Day
- ◆ Celebration of Gandhi Jayanti
- ◆ Celebration of World Soil Day
- ◆ National Voters Day
- ◆ Celebration of Shaheed Diwas
- ◆ Celebration of National Youth Day
- ◆ Celebration of Constitution Day
- ◆ Celebration of National Science Day
- ◆ Participation in Pariksha pe Charcha
- ◆ Plastic Waste Free Campus Drive
- ◆ Blood Donation Camp
- ◆ Thalassemia Awareness-Cum-Screening Test Camp
- ◆ Celebration of World Sparrow Day
- ◆ Celebration of National Unity Day
- ◆ Celebration of World Environment Day
- ◆ Eye Check-up Camp
- ◆ Fire Safety Training
- ◆ Celebration of Food Safety Day
- ◆ Organ Donation Pledge
- ◆ Celebration of National Girl Child
- ◆ E-pledge against drug
- ◆ Parthenium Awareness Programme
- ◆ Celebration of National Milk Day
- ◆ Celebration of No Tobacco Day
- ◆ Celebration of Hindi Divas
- ◆ Celebration of Engineering Day
- ◆ Celebration of Cyber Crime Awareness Programme
- ◆ Har Ghar Tiranga Abhiyan
- ◆ World Bicycle Day
- ◆ Beti Bachao Beti Padhao Abhiyan
- ◆ Road Safety Awareness Programme
- ◆ Self Defence Training
- ◆ Fit India Freedom Rally
- ◆ Ek Ped Maa ke Naam
- ◆ Run for Unity
- ◆ Tiranga Rally
- ◆ Nashamukti Programme
- ◆ Gynecological Problems Awareness Programme
- ◆ Kidney Awareness Programme
- ◆ Swatchta Hi Seva Campaign





Tree Plantation



Ek Ped Maa ke Naam



Plastic Waste Free Campus Drive



Run for Unity



Tiranga Rally



Nashamukti Programme



Celebration of NSS Day



Road Safety Awareness Programme





Celebration of Constitution Day



Celebration of Environment Day



Gynaecological Problems Awareness Programme



Kidney Awareness Programme



International Day of Yoga



Thalassemia Test Camp

(B) Special Camp

The Special Camp is an integral component of National Service Scheme. It holds a special appeal for the youth as it provides unique opportunities to the students for group-living, collective experience sharing and constant interaction with community. Special Camps are organized generally on various developmental issues of national importance. Every

year, 50 per cent from the volunteers from each NSS unit are expected to participate in special camps. Various NSS units of Anand Agricultural University adopt a village or group of villages/urban slum areas for intensive social development, where special camps are organized to create tangible and durable community assets.





Sr. No.	Name of College	Duration	Village	Total Volunteers
1.	B. A. College of Agriculture	22/02/2025 to 28/02/2025	Kankapura	123
2.	College of Food Processing Technology and Bio Energy	07/02/2025 to 13/02/2025	Sundarana	59
3.	College of Agricultural Information Technology	20/03/2025 to 26/03/2025	Bochasan	49
4.	College of Horticulture	24/02/2025 to 02/03/2025	Pandoli	70
5.	College of Agricultural Engineering and Technology, Godhra	01/03/2025 to 07/03/2025	Moti Sarsi	25
6.	College of Agriculture, Vaso	17/03/2025 to 23/03/2025	Run	53
7.	College of Agriculture, Jabugam	17/03/2025 to 23/03/2025	Chichod	52
8.	Polytechnic in Agriculture, Anand	24/02/2025 to 02/03/2025	Vadtal	40
9.	Polytechnic in Food Science and Home Economics, Anand	07/02/2025 to 13/02/2025	Sundarana	17
10.	Polytechnic in Agriculture, Vaso	17/03/2025 to 23/03/2025	Run	23
11.	Polytechnic in Horticulture, Vadodara	24/02/2025 to 02/03/2025	Dharmaj	42
12.	Polytechnic in Agricultural Engineering, Dahod	01/03/2025 to 07/03/2025	Moti Sarsi	29

Several activities were carried out during special camps, viz.

- ◆ Prabhatpheri
- ◆ Different kinds of Shram-yagnas
- ◆ Surveillance of villagers to know their social, educational, economical and health status along with the epidemiological surveillance of important diseases in animals
- ◆ Writing of slogans on walls
- ◆ Creative painting
- ◆ Indoor and outdoor games
- ◆ Tree plantation
- ◆ Distribution of sparrow nest
- ◆ Collection of Plastic under plastic free village drive
- ◆ Drama on Andhashradha and Nashabandhi
- ◆ Bhajan Sandhaya
- ◆ Village Cleanliness drive
- ◆ Visit of progressive farmer's field, green house, poultry farm and anganvaadi
- ◆ Rangoli, Poster making, Musical chair, Quiz, Cartooning competitions
- ◆ School sports programme to motivate students for being fit and healthy
- ◆ School cultural programme
- ◆ Jagruti Abhiyan Rally
- ◆ Demonstration for preparing of Bakery products like biscuits and other products
- ◆ Demonstration of dairy products
- ◆ Panel discussion on 'Women Empowerment' among NSS volunteers
- ◆ Beti Bhachavo, Beti Padhavo Rally
- ◆ Vyasank Mukti Rally
- ◆ Food Rally to create awareness about waste of food





- ◆ Awareness for cashless transaction, Net banking
- ◆ A lecture on 'Gandhian Philosophy and NSS'
- ◆ Visit to old age home
- ◆ Lecture on Disaster Management
- ◆ Eye check-up camp for school students
- ◆ Distribution of mineral mixture powder to needy people
- ◆ Demonstration of Deworming in animals

- ◆ Lecture on 'Water Conservation'

The villagers also participated actively and benefited from these programmes. The students, in turn, gained valuable knowledge on various aspects such as health, development of spiritual and cordial relationship, preservation of natural resources and conservation of cultural/historical heritage, animal health, dairy products etc. and thereby enhanced their creativity.



Special Camp at Moti Sarsi Village



Special Camp at Bochasan



Special Camp at Chichod Village



Special Camp at Dharmaj Village



Fire safety training during special camp



Special Camp at Run Village





6.6 Adventure Activities

1. Basic Rock Climbing camp

A basic rock climbing camp was organized at Swami Vivekanand Mountaineering Institute, Mount Abu during 24/09/2024 to 03/10/2024 for boys. A total of 80 boys from Anand Agricultural University participated in the camp.

Similarly, another camp was held from 15/10/2024 to 24/10/2024 in which a total of 60 girls from Anand Agricultural University participated.

The students were trained in various aspects of rock climbing by expert instructors to inculcate an adventurous approach as well as develop disaster management skills. In the camp, training was given for various types of climbing and descending techniques on the rock. Apart from this, the students also received hands on training on ice tracking equipment, artificial wall climbing, rappelling, etc. The entire camp was organized by the Director, Students' Welfare Dr. Dinesh H. Patel under the guidance of the Hon'ble Vice-Chancellor, Dr. K.B. Kathiria.



6.7 Student Magazine

Student magazine is published by each college with an aim of bringing out the hidden talents and creativity of students. Teachers, staff members and students contribute through various articles, poems and informative write-up on agriculture useful to students, farmers and scientific community. The detailed report on extra-curricular activities along with educational activities is also included in the magazine.

6.8 Educational Tour

Educational tour is considered as forms an integral part of academic curriculum of the degree courses of this university. The duration of educational tour is generally of 2-3 weeks, including the visits of reputed institutes of Gujarat and other states.

The primary objective of the tour is to provide knowledge and information regarding the concerned institutes, industries, organization, farms, research centers etc. The students acquire important and interesting information regarding the latest developments in agriculture and allied sciences by visiting the research centers of Agricultural Universities and other relevant institutions.

6.9 Student Discipline

The value of discipline is being inculcated in students through Sports, NCC, NSS, Adventure activities, Cultural and Literary activities etc. to maintain cordial atmosphere among students, teachers and staff members of the university. No serious case of student misbehaviour was reported during the year under review.





6.10. Donation received for Gold Medal/Gold Plated Silver Medal

Sr. No.	Donation Received (Rs.)	Name of the Donor	Name of the Medal and Criterion
College of Agriculture, Anand Agricultural University, Jabugam			
1	2,00,000/-	Shri Ramsinhji Dipsinhji Vansadia Shivam, 18/Seema Society, Nr.Saurabh Society, Navrangpura, Ahmedabad-390008	Shri Ramsinhji Dipsinhji Vansadia (Jabugam) Gold Plated Silver Medal for a girl student of the year based on academic performance and co-curricular activities at the end of 8 th semester of B.Sc. (Hons.) Agri. degree programme in College of Agriculture, Anand Agricultural University, Jabugam.
B. A. College of Agriculture, Anand Agricultural University, Anand			
2	2,00,000/-	Dr. R. V. Vyas Shri Shivang R.Vyas and Bhargav Vyas A/18, 'Shiv', Gate No.7, Akruti Nagar, Jitodiya Road, Anand-388001	Dr. R. V. Vyas, Ex. Vice – Chancellor (I/c) and Yoginiben Gold Plated Silver Medal for Securing highest OGPA in the discipline of Microbiology in M.Sc. (Agri.) degree in B. A. College of Agriculture, Anand Agricultural University, Anand.
3	2,00,000/-	Dr. P. N. Upadhyay Retd. Ex-Principal (NMCA, Navsari), 17, Vaibhav Society, Near IRMA Gate, B/h. Ganesh Chokdi, Anand-388001	Dr. P. N. Upadhyay sponsored Matru Pitru Run Krushi Gold Plated Silver Medal for Best Research Work in the discipline of Agronomy in Ph.D degree in B. A. College of Agriculture, Anand Agricultural University, Anand.
College of Food Processing Technology & Bio-energy, Anand Agricultural University, Anand			
4	2,00,000/-	Mr. Abid Deraiya The Managing Director, Relish Agro Food Pvt. Ltd., 778/1, Sadanapura Bus Stand, Samarkha, District- Anand-388360	Relish Agro Food (India) Pvt. Ltd. Sponsored Jamalbhai Adambhai Deraiya Gold Plated Silver Medal for a student securing highest CGPA in all the subjects of Food Business Management and Basic Science & Humanities at the end of the eighth semester examination of the B.Tech. (FT) degree programme in College of Food Processing Technology & Bio-energy, Anand Agricultural University, Anand.
College of Horticulture, Anand Agricultural University, Anand			
5	2,00,000/-	President The Horticultural Society of Gujarat, ASPEE College of Horticulture, Navsari Agricultural University, Navsari -396450	The Horticultural Society of Gujarat Gold Plated Silver Medal for a best student of the year based on academic performance and co-curricular activities at the end of 8 th semester of B.Sc. (Hons.) Horti. Degree programme in College of Horticulture, Anand Agricultural University, Anand.

The university appreciated and noted the kind gesture of the donors and heartily thanked the donors for their generous donation.





6.11 Financial Assistance to the Students

University provides scholarship and financial assistance to the students on merit basis. Moreover, Government Scholarship and Fellowship etc. are also provided to the students of all the faculties on merit basis as under:

1. AAU U. G. Fellowship Rs.6,000/- per year to the students of all faculties
2. Merit Scholarship Scheme for Economically Poor UG Scholarship Rs.6,000/- per year to the students of all faculties
3. National Talent Scholarship (ICAR) Rs. 36,000/- per year to UG students of the faculties of Agriculture, Horticulture, Agricultural Engineering & Technology, Food Processing Technology & Bio-energy
4. National Talent Scholarship (ICAR) Rs.60,000/- per year to PG students of the faculties of Agriculture, Agricultural Engineering & Technology, Food Processing Technology & Bio-energy and International Agri Business Management Institute.
5. AAU Merit fellowship Rs.18,000/- per year for the first rank holder from the faculties of Agriculture, Food Processing Technology & Bio-energy, Agricultural Engineering & Technology and International Agri Business Management Institute for Master studies
6. AAU Merit fellowship Rs.24,000/- per year for the first rank holder from the faculties of Agriculture, Food Processing Technology & Bio-energy, Agricultural Engineering & Technology for Ph.D. studies

Number of NTS, UG and PG Fellowship awarded is as under

College Name	NTS Scholarship		UG Fellowship	UG Economic Poor Scholarship	PG Fellowship
	UG	PG			
B. A. College of Agriculture, Anand	51	35	29	0	-
College of Agriculture, Vaso	20	0	26	20	-
College of Agriculture, Jabugam	07	0	14	07	-
College of Food Processing Technology & Bio-Energy, Anand	18	0	26	0	05
College of Horticulture, Anand	08	0	12	04	-
College of Agricultural Information Technology, Anand	0	0	21	12	-
College of Agricultural Engineering & Technology, Godhra	22	03	05	02	01
International Agri Business Management of Institute, Anand	0	01	0	0	05
Total	126	39	133	45	11

6.12 Other Activities of Directorate of Students' Welfare

(1) Yoga Camp

The United Nations has declared June 21 as 'International Day of Yoga'. As part of the public awareness of Yoga and celebration of the 10th International Day of yoga a 2-day yoga camp was organized on 19-20/06/2024 at the University Bhavan, Anand Agricultural University, Anand. The camp was organized by Dr. Dinesh H. Patel, Director,

Students' Welfare under the guidance of Hon'ble Vice-Chancellor Dr. K.B. Kathiria. In the camp, Dr. K.B. Kathiria, Hon'ble Vice-Chancellor, University Officers, employees, students, volunteers of the National Service Scheme and NCC Cadets participated in large numbers. Shankarbhai Rathod, yoga instructor of Anand district of Gujarat State Yoga Board, conducted the sessions to create awareness about yoga including asanas, pranayama and meditation etc. During the camp, all participants took a pledge to make Yoga a part of their daily life.





(2) Celebration of International Day of Yoga

Yoga is an invaluable gift of India's ancient tradition. It harmonizes mind and body; thought and action; patience and fulfillment; fosters unity between man and nature; It embodies a holistic approach to health and well-being. Yoga, the best of Indian culture, has been included in the global heritage by the United Nations and June 21 has been declared and celebrated as 'International Day of Yoga'. In pursuance of this, the celebration of the 10th International Day of Yoga was organized on 21/06/2024 at the University Bhavan, Anand Agricultural University, Anand. The programme was organized by Dr. Dinesh H. Patel, Director,

Students' Welfare under the guidance of Hon'ble Vice-Chancellor Dr. K.B. Kathiria. Yoga Instructor Shankarbhai Rathod of Gujarat State Yoga Board demonstrated yoga as per the Common Yoga Protocol of the Ministry of AYUSH, Government of India with various asanas and guided people about Yoga asanas, pranayama and meditation etc. In this programme, University Officers, all unit/sub-unit officers, employees, students, volunteers of National Service Scheme and NCC Cadets participated. The president of the programme, Dr. M.K. Zala, Director of Research and PG Studies spoke about the importance of Yoga in human life and appealed to practice it regularly. A large number of people participated in the event.



(3) Celebration of Independence Day

Anand Agricultural University, Anand celebrated 78th Independence Day on August 15, 2024 at University Bhavan, AAU, Anand. The flag was hoisted by Hon'ble Vice-Chancellor Dr. K.B. Kathiria. All University Officers, employees, pensioners, students, NSS volunteers and NCC Cadets, women of Khetiwadi mahila mandal and farm labourers etc. remained present in the celebration of the national festival,.

On this occasion, Dr. K.B. Kathiria, Hon'ble Vice-Chancellor in his introductory address paid homage to the freedom fighters who sacrificed their lives for the independence of nation. He spoke about the Prime Minister Shri Narendra Modi's vision of developed India-2047 and appealed everyone to contribute towards achieving this goal. He also highlighted the Hon'ble Prime Minister's recent launch of 109 crops varieties, which are high yielding and climate resilient as well as bio-fortified.





He also expressed that this will greatly benefit the farmers as well as useful for food security and food nutrition security. He also informed that new dimensions of agriculture such as natural farming, artificial intelligence and precision farming are being adopted and research is being done on such innovative technologies at the university.

He further stated that Anand Agricultural University has secured 23rd position in the NIRF rankings and congratulated all for this achievement. He also informed that Anand Agricultural University has developed 6 new crop varieties and 42 new agricultural technologies and has also realized the concept of green energy by installing solar panels on nearly almost every building of the university. He also stated that Fifty-two donor gold medals and gold plated silver medal have been added in the last two years for the students. This will encourage the students and there will be a huge benefit in their academic as well as professional career. Intensive efforts are being made by Anand Agricultural University to strengthen the start-up eco-system. The work of NAHEP-CAAST and the University has

been appreciated by the World Bank. The placement of students in various colleges of the university is increasing progressively. Anand Agricultural University has received 4 new schemes from the Government of Gujarat. He called upon all officers, staff and students of the University to make further effort for rapid growth of the University in the field of education, research and extension.

After the completion of the flag hoisting programme Hon'ble Vice Chancellor, Dr. K.B. Kathiria and all University Officers paid tribute to the statues of Shri Sardar Vallabhbhai Patel, Shri Kanhaiyalal Munshi and Dr. M.D. Patel.

Along with the celebration of the national festival, a tree plantation programme was organized in the university under the government of India's 'Ek Pad Maa Ke Naam' campaign. The Vice-chancellor as well as all University Officers planted trees. Total 1000 saplings were planted at various colleges and research centres of Anand Agricultural University. This programme was organized by Dr. Dinesh H. Patel, Director, Students welfare under the guidance of Hon. Vice-Chancellor, Dr. K.B. Kathiria.







(4) Health Awareness Camp

Anand Agricultural University in collaboration with G. J. Patel Institute of Ayurvedic Studies and Research & S.G. Patel Ayurved Hospital & Maternity Home, Vallabh Vidyanagar jointly organized a free diagnosis and treatment camp for Health Awareness and Screening (Diabetes and Hypertension) for officers, employees, pensioners,

farm labourers and campus residents on 11/10/2024 at the Health Centre of Anand Agricultural University. Diabetes, blood pressure and other diseases were diagnosed free of charge. 7 days of medicines were also distributed free of cost in the camp. The camp was organized by Dr. Dinesh H. Patel, Director, Students' welfare under the guidance of Hon'ble Vice-Chancellor, Dr. K.B. Kathiria. A large number of employees benefited from this camp.



(5) Celebration of Agricultural Education Day

On December 3, 2024, the Agricultural Education Day was celebrated at B. A. College of Agriculture, College of Horticulture and College of Food Processing Technology & Bio Energy in honour of the birth anniversary of Dr. Rajendra Prasad, the first President of Independent India and the country's first Union Minister of Agriculture. This significant day, recognized by the Indian Council of Agricultural Research (ICAR), emphasizes on promoting agricultural education, research and practical applications of agricultural knowledge. A Total of 287 undergraduate students participated in the celebration.

The objectives of Agricultural Education Day were highlighted during the event, which included:

- ◆ Inspiring students to develop an interest in agriculture and related fields
- ◆ Encouraging students to pursue agriculture as a professional career
- ◆ Promoting engagement in agriculture-related activities
- ◆ Advancing agricultural research and its practical applications
- ◆ Strengthening the educational framework in agriculture and bridging the gap between theory and practice





This day served as an opportunity for students to reflect on the importance of agriculture in India's development and its critical role in global food security. It also served as a

reminder of Dr. Rajendra Prasad's vision for a self-reliant and prosperous agricultural sector, which continues to remain central to India's progress.



(6) Celebration of Republic Day

The 76th Republic Day was celebrated at Anand Agricultural University, Anand on 26/01/2025. The national flag was hoisted by the Hon'ble Vice-Chancellor Dr. K.B. Kathiriya. In this celebration, all university officers, heads of units and sub-units, employees, students, pensioners, labourers, campus residents and members of the khetiwadi mahila mandal remained present.

On this occasion, Hon'ble Vice Chancellor Dr. K.B. Kathiriya extended greetings to all and delivered an inspiring address. While explaining how the constitution was formed after the independence, he remembered and paid homage to the freedom fighters and to the martyrs who sacrificed their lives for the protection of Mother India.

He also informed that the Government of India has launched the National Mission for Natural Farming. Under this, 1 crore farmers will be encouraged to adopt natural farming on 7.5 lakh hectares of land in the first 2 years. Six new varieties of crops and 133 new technologies have been developed by Anand Agricultural University. 2 patents of Anand Agricultural University have also been approved.

Anand Agricultural University has realized

the Government of India's green energy initiative. As part of this, solar panels have been installed on 174 buildings of the university. This allows Anand Agricultural University to meet 95% of its electricity needs through solar panels. It is a matter of pride for Anand Agricultural University that the university has received the International Green University Award by Cornell University, New York.

Anand Agricultural University has achieved 23rd position in the NIRF ranking at national level. The university has received a five-star rating from the Gujarat State Institutional Ratings Framework (GSIRF), which is also a matter of pride for Anand Agricultural University.

He urged the university officers, employees, and students to continue striving for excellence education, research, and extension.

Following the flag hoisting ceremony, Hon'ble Vice Chancellor along with all university officers, offered floral tributes to the statues of Shri Sardar Vallabhbhai Patel, Dr. M.D. Patel, and Shri Kanaiyalal Munshi. The entire programme was successfully organized by Director of Student Welfare, Dr. Dinesh H. Patel under the guidance of Hon'ble Vice Chancellor, Dr. K.B. Kathiriya.





Chapter

7

UNIVERSITY LIBRARY

Dr. M. D. Patel Regional e-Library is functioning independently as a separate unit with great pride as "University Library". Presently, the library is in possession of 13000+ foreign journals (ONOS), 33 Indian journals, 69 Indian e-journals, 43 popular magazines, 13 newspapers, 84194 barcoded books, 2513 e-books, 12566 reports, 13935 back volumes, 6629 M.Sc. and Ph.D. theses, 280 DVDs, 230 digitized rare books, and several e-resources for the utility of the users. Moreover, library activities like acquisition, circulation, searching etc. are carried out with Koha Library Software integrated with RFID System, which has fortified the library system. Cyberary, a hub of e-activities, is also a part of library providing internet services to users with 36 computers and 1.5 Gbps internet connectivity. This year, more efforts

were put in by the library for the development of learning resources, infrastructure, library service innovations, information and communication technology and human resource from the grant given by the state government and the ICAR.

Library Management

The University Library functions under the overall supervision of the University Librarian, who is one of the Statutory Officers of the University, directly answerable to the Vice Chancellor. The Library Committee of the University consisting of the following members is constituted under Section-20(4) of the Act to manage the library and render suggestions to the Board of Management on any matter related to the library.

Library Committee

1. The Vice Chancellor - Chairman
2. The Director of Research and Dean of Post Graduate Studies
3. The Director of Extension Education
4. The Deans of Faculties
5. Five Heads of the University Departments of different faculties nominated by the Vice Chancellor
6. The Registrar
7. The Accounts Officer of the University
8. The Director of Students' Welfare
9. One P.G. Student from each faculty nominated by the Vice Chancellor
10. The University Librarian - Secretary





Library Services

<ul style="list-style-type: none"> ◆ Circulation ◆ Reprographic ◆ Reference ◆ Document Delivery Request (CeRA) ◆ Inter Library Loan ◆ Internet Access (Web Surfing) ◆ Online Catalogue ◆ News Clipping (via e-mail) ◆ Question Papers (online) 	<ul style="list-style-type: none"> ◆ Food For Thought (via e-mail) ◆ New Arrivals ◆ News Papers and Periodicals ◆ Digitization (<i>Krishikosh</i>) ◆ Electronic Resources (Databases, Journals, e-Books etc.) ◆ Technical Support ◆ Teaching and Training ◆ Plagiarism Detection Service
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Grant allotted and expended during the year of report

Sr. No.	Type of Grant	Allotment (Rs. Lakh)	Expenditure (Rs. Lakh)
1.	State Government	46.00	45.85
2.	ICAR Development	00.00	00.00
Total		46.00	45.85

Resources available during the year of report

Resource Type	Number added during the year	Total										
Text Books/Reference Books	274	84194										
e-books	00	2513										
Periodicals Foreign (ONOS)	13000+	13158										
Indian	33											
Indian e-journals	69											
Popular Magazines	43											
Newspapers	13											
Back volumes	-		13935									
Theses	216	6629										
DVDs	-	280										
Online Resources	<ol style="list-style-type: none"> 1. Indianjournals.com 2. Indiatat.com 3. Indiaagristat.com 4. CMIE (Commodities) 5. <i>Krishikosh</i> 6. J-Gate 7. Consortium of e-Resources in Agriculture (CeRA) 8. e-Books and Encyclopedias 9. Online Question Papers 10. DELNET 											
<i>Krishikosh</i> Repository (http://krishikosh.egranth.ac.in)	<table style="width: 100%; border: none;"> <tr> <td>M.Sc./Ph.D. Dissertations</td> <td style="text-align: right;">: 5600+</td> </tr> <tr> <td>Digitized Rare Books</td> <td style="text-align: right;">: 230</td> </tr> <tr> <td>Digitized Questionpapers</td> <td style="text-align: right;">: 5100+</td> </tr> <tr> <td>Practical Manuals</td> <td style="text-align: right;">: 64</td> </tr> <tr> <td>Annual Reports</td> <td style="text-align: right;">: 16</td> </tr> </table>	M.Sc./Ph.D. Dissertations	: 5600+	Digitized Rare Books	: 230	Digitized Questionpapers	: 5100+	Practical Manuals	: 64	Annual Reports	: 16	
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Annual Reports	: 16											





Library activities during the year of report

◆ User Statistics

During the year of report text books/reference books are issued to the students/faculties/scientists. There were 9388 library transactions.

◆ CeRA

Consortium for e-Resources in Agriculture is a repository of e-resources provided by the ICAR. The DDS service is being provided on time by Dr. M. D. Patel Regional e-Library. This year, the CeRA user statistics indicate 10424 hits and 20 Document Delivery Requests are catered to different CeRA member libraries.

◆ *Krishikosh*

'*Krishikosh*'- an Institutional Repository has been created under the National Agricultural Innovation Project (NAIP) to provide online access to researchers and scientists all over the world. Since the launching of the Project, AAU has been actively contributing vast material to this repository. Total 5600+ M.Sc./Ph.D. Dissertations are uploaded on *Krishikosh*. In addition to that historical photographs, digitized rare books (230), digitized question papers (5100+), Marketable technologies, Instructional manuals (64), Convocational addresses, Annual Reports (16), *Krishimahotsav* model and other institutional publications of AAU are available for open access.

◆ Plagiarism Detection System

Plagiarism Detection System (DrillBit) has been set up in the university backed with Anti Plagiarism Policy to maintain higher academic

integrity standards in the academic and research. Total 805+ theses/dissertations have been tested for plagiarism to ensure quality in research publications.

◆ MoU with Shodhganga – INFLIBNET

Shodhganga – A repository of PhD theses, which is hosted and maintained by the INFLIBNET is used for theses data in NIRF Ranking. Anand Agricultural University has signed MoU with Shodhganga for theses submission on this repository. Total 196 Ph.D. theses uploaded on Shodhganga for public access.

◆ Workshop cum Training

Library has organized two Workshops cum Training programs for post graduate students and library users.

1. CMIE Training (Date: 22.11.2024, 133 participants)
2. JGate Awareness Training (Date: 29.11.2024, 151 participants)

◆ Library Committee Meeting

The Fourteenth Library Committee meeting after implementation of common statutes for Agricultural Universities of Gujarat was held on 30.09.2024 in the EEI Institute, AAU, Anand and various library related issues were discussed at length.

◆ Digital Library Services

Presently, the Library successfully renders following services to the users:

1. **News Clipping:** This library service is now provided as an attachment in e-mail.





2. **Food For Thought:** Library has started to circulate good reading articles to the library users as an attachment in e-mail.
3. **Online Question Papers:** Students and Faculties can access old question papers in pdf format.
4. **AAU in Media:** Total 258 News Clippings and Coverage of Anand Agricultural University from different print and electronic media are uploaded in the media section of AAU website.

Learning and Infrastructure Facilities

- ◆ Printed text books and reference books were procured for the benefit of the scientists and students of the University to keep them updated with current developments in agricultural sciences.
- ◆ CD-ROM Library Section has been developed in the library to display different CD-ROMs available in library. The users can issue-return CD-ROM and view contents in viewing room.

- ◆ Cloud based KOHA library management system has been extended to sub libraries of Anand Agricultural University. Libraries of different centers namely Library of Agriculture College-Vaso and Library of Agriculture Engineering College-Godhra were integrated in existing KOHA LMS, which enables them to use library management system in different library related activities.
- ◆ RFID (Radio Frequency Identification) is the latest technology to be used in library theft detection systems. RFID system has been implemented in the library which simplifies patron's self check-in/check-out, anti theft detection etc., making it virtual digital library.
- ◆ Library has become DELNET member. DELNET is a largest network of libraries in South Asia and provide various library related services like interlibrary loan, document delivery services, reference services, professional services, software development and training.

PHOTOGRAPHS



University Library



Cyberary (AC)





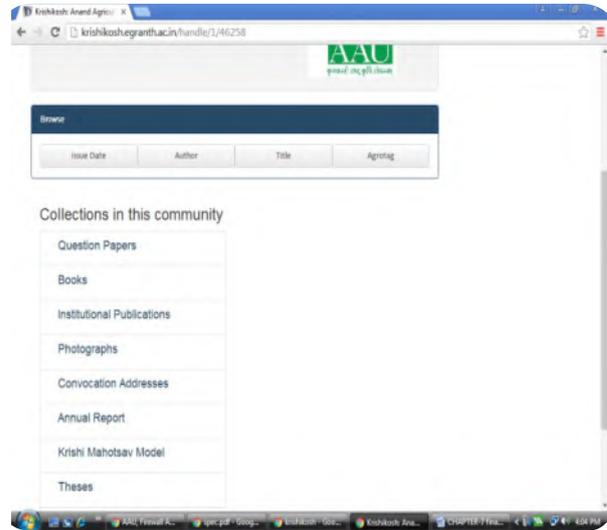
Periodical Room (AC)



Theses Room (AC)



Library Committee Meeting



Krishikosh Repository



Reading Room (AC)

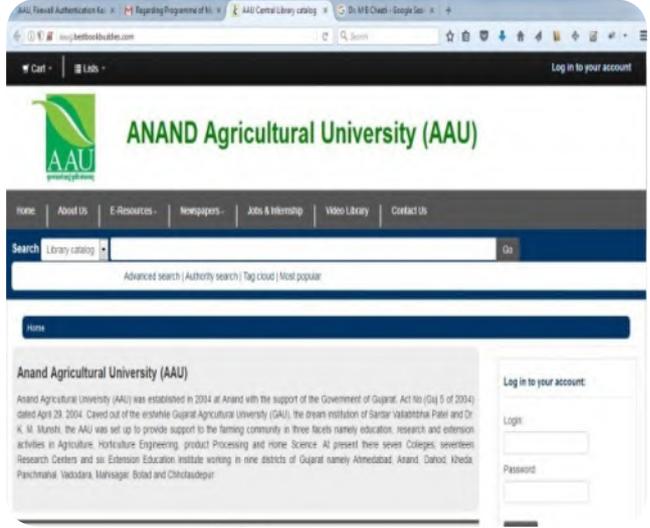


e-Resources





RFID based self check-in/check-out kiosk



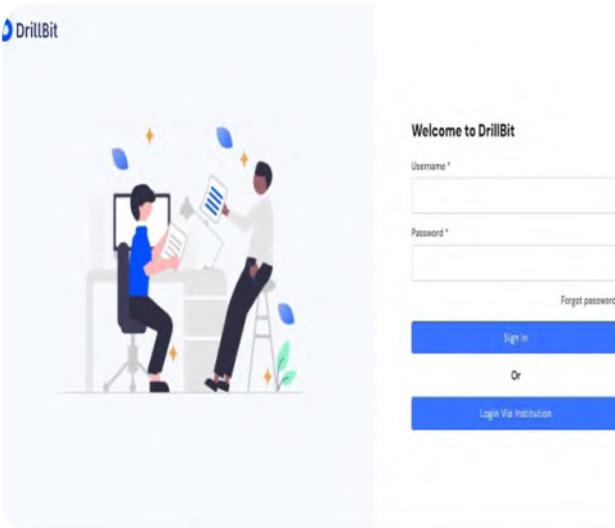
Library KOHA OPAC



CD-ROM Library



Workshop cum Training (CMIE)



DrillBit – Plagiarism Detection System



Workshop cum Training (J-Gate)



Appendix

1

CIVIL WORKS COMPLETED

Sr. No	Name of Work
1	Renovation of Post office at A.A.U., Anand.
2	Construction of chain link fencing to boundary near Railway track of Paddy Research Station under RKVY at AAU, Dabhoi
3	Providing bore well at Agricultural Research Station, AAU, Sansoli
4	Repair and replace pipe line for main water works at different premises in AAU campus, Anand
5	Construction of farm protection wall at block No.244 paiky east side at newly allotted farm under RKVY at ARS, AAU, Sansoli.
6	Construction of farm protection wall at block No.244 paiky south side at newly allotted farm under RKVY at ARS, AAU, Sansoli.
7	Construction of farm protection wall at Block No.244 paiky west side at newly allotted farm under RKVY at ARS, AAU, Sansoli
8	Construction of RCC new approach & new entrance at Main Rice Research Station, AAU, Navagam
9	Construction of pump room at Agricultural Research Station, AAU, Sansoli
10	Renovation of Toilets at Registrar office, D.E.E. office and Yagyavalkya hall of University bhavan, AAU, Anand.
11	Extension of canal and water inlet system in pond under RKVY at AAU, Arnej
12	Construction of exam hall for IABMI College at AAU, Anand
13	Repairing and renovation of Aniket Hostel at AAU, Anand
14	Repairing and renovation of ASQ Flat at AAU, Anand
15	Construction of compound wall at Agriculture Research Station, AAU, Kansari, Khambhat
16	Construction of protection wall to boundary of Paddy Research Station under RKVY at AAU, Dabhoi
17	Construction of Crop and Soil Monitoring Laboratory under RKVY at Dept. of Basic Science, BACA, AAU, Anand
18	Construction of different Laboratories and Training hall at F.F. of "E" wing under RKVY at CAET A.A.U., Godhra.
19	Repairing and renovation of dome at International Hostel at AAU, Anand
20	Repairing & renovation of dome at University Bhavan, at AAU, Anand
21	Repairing and renovation of storeroom near CBI at AAU, Anand





Sr. No	Name of Work
22	Construction of Spilway at AAU, Vaso
23	Repairing and replacement of water pipeline at Medicine Farm to New Colony at AAU, Anand
24	Construction of RCC Sump at University Guest House at AAU, Anand
25	Construction of the new farmers training hall at first floor of M&AP, ICAR Unit-9, AAU, Anand
26	Labour charge for internal & external wall paint at University Bhavan, AAU, Anand.
27	Construction of Methylotrophs and Algal Bio Fertilizer Production Laboratory under RKVY at Dept. of Microbiology, BACA, AAU, Anand
28	Providing and applying plastic emulsion paint at exam hall of IABMI, AAU, Anand.
29	Labour work for furniture repairing and renovation of Legal Branch, Assistant Registrar Administration room, Board room, P.A. room & Gender Committee room of Registrar office at AAU, Anand
30	Construction of Seed Processing Complex and Seed Storage Godown under RKVY at RRS, AAU, Anand.
31	Repairing of compound wall near Vallabh Hostel of BACA at AAU, Anand
32	Repairing & extension of shed on passage of Common Girls Hostel, AAU, Anand
33	Expansion of existing building of Agricultural Information Technology College at AAU, Anand
34	Resurfacing of existing asphalt road in Horticulture Farm at AAU, Anand



Appendix

2

CIVIL WORKS ON HAND

Sr. No	Name of Work
1	Construction of Farmers Hostel under RKVY at KVK, AAU, Devataj
2	Construction of protection wall with fencing and gate for staff quarters of Main Rice Research Station, AAU, Navagam
3	Repairing & renovation of flooring and toilet of 4 no. old B type staff quarters at AAU, Anand
4	Repairing & renovation of flooring, toilet & water proofing at terrace of 3 no. New B type staff quarters at AAU, Anand
5	Raising of compound wall with razor wire fencing at ARS, AAU, Arnej
6	Repairing & renovation of bank building at AAU, Anand
7	Construction of compound wall with razor wire fencing at AAU, Kansari
8	Construction of compound wall and fencing under RKVY at Nenpur (Nizampura) Farm, AAU, Sansoli
9	Construction of farm pond under RKVY at Paddy Research Station, AAU, Dabhoi
10	Approach road for Horticultural farm area (remaining work) at AAU, Khambholaj
11	Construction of fencing with mesh and razor wire near Railway side at AAU, Kansari
12	Construction of chain link fencing at Navli Farm plot no. 786, RRS, AAU, Anand
13	Renovation & extension of otta, wall, c.c. block at different places of University, AAU, Anand
14	C.C. block at New Exam hall IABMI AAU, Anand



Appendix

3

DETAILS OF UNIVERSITY SCHEMES

Sr. No.	Budget Head	Name of the Scheme	Center
(1) Plan Schemes			
(I) EDUCATION			
(a) Education schemes in Normal Area			
(i) Agriculture			
1	12134-00	Expansion of Planning & Evaluation Cell	Anand
2	12136-00	Library facilities at AAU	Anand
3	12711-00	Project for Library	Anand
4	12712-02	Landscaping at AAU	Anand
5	12712-03	Creating of the Computer & Communication facilities	Anand
6	12926-00	Modernization of Department of Agriculture Colleges	Anand
7	12929-01	Strengthening of the facility of bio-agents at Department of Plant Pathology.	Anand
8	12930-00	Addition of the facilities for organizing Rural Agricultural Work Experience (RAWEX) programme	Anand
9	12931-00	Strengthening facilities for Sericulture, Apiculture and Mushroom cultivation	Anand
10	12931-01	Strengthening of Modern Green house facilities	Anand
11	12946-00	Strengthening of WTO Cell	Anand
12	12947-00	Strengthening of new Department of Seed Science and Technology	Anand
13	12947-01	Strengthening of Department of Nano Technology	Anand
14	12947-02	Centre for weather forecasting and climate change	Anand
15	12948-00	Strengthening of College of Agricultural Information Technology	Anand
16	12949-00	Strengthening of College of MBA (International Agri. Business)	Anand
17	12950-00	Strengthening of College of Food Processing Technology and Bio-energy	Anand
18	12957-00	Strengthening of Polytechnic in Food Science and Home Economics	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
19	12957-01	Strengthening of Polytechnic in Agriculture	Anand
20	12957-02	Strengthening of Polytechnic in Horticulture	Vadodara
21	12958-00	Strengthening of Institute of Distance Education	Anand
22	12969-01	Strengthening of Students Training Centre for food processing	Anand
23	12969-02	Strengthening of Student's Training cum Coaching Centre (STCC)	Anand
24	12969-03	e-Education Solution	Anand
25	12984-00	Strengthening of Polytechnic in Agriculture	Vaso
26	12986-00	Strengthening of Teaching in Agricultural Economics	Anand
27	12987-00	Vocational Course of Land Scape Gardening	Vadodara
28	12987-02	Strengthening of Horticulture Wing	Anand
29	12987-03	Strengthening of Agriculture Wing	Vaso
30	12987-07	Certificate Course of Soil and Water Testing for Sustainable Agriculture	Anand
31	12987-08	Strengthening of Department of Animal Science	Anand
32	12987-10	Strengthening of Department of Plant Physiology	Anand
33	12987-11	Establishment of Department of Food Safety and Testing	Anand
34	12987-14	Establishment of Instructional Processing facilities for students	Anand
35	12987-15	Upgrading of the Agriculture wing to College of Agriculture	Anand
36	12987-16	Upgrading of the Horticulture wing to College of Horticulture	Anand
37	12987-18	Strengthening of Agricultural Engineering Department at BACA	Anand
(ii) Common and Student facilities			
38	12703-00	Scheme for the award of GAU fellowship for PG studies in various faculties	Anand
39	12865-00	Upgrading of the student facilities at different colleges of AAU	Anand
40	12967-00	Modernizing the student facilities at different colleges of AAU	Anand
41	12967-01	Scheme for fellowship for UG students of various faculties	Anand
42	12967-02	The schemes for strengthening of office of the Directorate of Students Welfare, Counseling and Placement Cell	Anand
43	12967-03	Strengthening of Health Centre	Anand
44	12968-00	Strengthening of Central Instrument Centre with heavy duty generator set	Anand
45	12987-12	Student and faculty exchange programme under national and international collaboration	Anand
46	12987-13	Merit Scholarship Scheme for economically poor under graduate student at Anand Agricultural University	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
(b) Extension Education Schemes in Tribal Area			
47	12975-00	Strengthening of College of Agricultural Engineering and Technology	Godhra
48	12976-00	Strengthening of Agricultural Engineering Polytechnic	Dahod
49	12987-01	Vocational Courses on Agricultural Engineering and Technology	Godhra
50	12987-04	Strengthening of Agriculture Wing	Jabugam
51	12987-17	Upgrading of the Agriculture wing to College of Agriculture	Jabugam
(II) Extension Education			
(a) Extension Education Schemes in Normal Area			
(i) Agriculture			
1	12505-00	Strengthening of the Directorate of Extension Education	Anand
2	12507-00	Upgrading of Existing Sardar Smruti Kendra	Anand
3	12508-00	Strengthening of Mali Training Centre at AAU	Anand
4	12942-01	Strengthening of Transfer of Technology Centre	Arnej
5	12943-00	Agricultural Technology Information Centre (ATIC)	Anand
6	12988-00 to 12988-05	Training Programme (Weed Management, Seed Production, Organic Farming, Integrated Pest Management, Medicinal & Aromatic Plants and Food Processing Technology)	Anand
7	12993-00	Strengthening of Farm Technology Training Centre	Sansoli
8	12994-01	Strengthening of Technological Resource Centre and Educational Museum	Anand
(a) Extension Education Schemes in Tribal Area			
9	12977-00	Strengthening of Tribal Women Training Centre	Devgadhbaria
10	12978-00	Strengthening of Agro-Polyclinic for Tribal Farmers	Dahod
11	12987-05	Strengthening of Training Centre	Jabugam
12	12993-02	Strengthening of Transfer of Technology Centre for Tribal	Godhra
(III) Research			
(a) Research Schemes in Normal Area			
(i) Agriculture			
1	12002-00	Strengthening of Research in Millet	Anand
2	12003-00	Strengthening of Research in Rice	Nawagam & Dabhoi
3	12004-00	Strengthening of Research in Wheat	Anand & Dhandhuka





Sr. No.	Budget Head	Name of the Scheme	Center
4	12006-00	Strengthening of Research in Sorghum	Viramgam
5	12007-00	Strengthening of Research in Pulses	Vadodara
6	12008-00	Strengthening of Research in Oilseed (Groundnut)	Anand
7	12009-00	Strengthening of a centre of excellence for Cotton Research	Dhandhuka & Viramgam
8	12010-00	Strengthening of Research in Tobacco	Anand & Dharmaj
9	12012-00	Strengthening of Research in Forage crops	Anand
10	12016-01	Strengthening of Research in Medicinal & Aromatic Plants	Anand
11	12018-00	Expansion of Research in Agricultural Economic	Anand
12	12027-00	Scheme for management of salt affected soil & poor quality of underground water	Thasra
13	12027-04	Application of Remote Sensing Technique	Anand & Nawagam
14	12041-00	Statistical evaluation of experimental variability and strengthening research in Agricultural Statistics	Anand
15	12075-00	Development of various bio-gas plants to use vegetative wastes	Anand
16	12078-00	Strengthening of Research in Dry-farming	Dhandhuka
17	12092-00	Strengthening of Tissue Culture Research & Development at AAU	Anand
18	12131-00	Research on Eco-friendly Biological Fertilizer	Anand
19	12906-00	Centre of Excellence for Soil & Water Management Technology	Anand
20	12907-00	Strengthening of Agro meteorology at AAU	Vadodara
21	12011-00	Centre of Excellence on Argil. Biotechnology	Anand
22	12933-00	Research on hybrid development in paddy	Nawagam
23	12937-00	Strengthening Adaptive Research in Agro-climatic zones of AAU	Anand
24	12938-00	Monitoring of heavy metal contamination in agricultural produce in peri urban areas of Gujarat	Anand
25	12959-00	Research on horticultural fruit and flower crops	Anand
26	12960-00	Post harvest management of some important crops of middle Gujarat.	Anand
27	12962-00	Strengthening of intellectual property rights cell	Anand
28	12963-00	Genetic enhancement and production technologies of Pulses, Oilseeds and Cereals	Anand
	12963-01	Genetic enhancement and production technologies of Pulses, Oilseeds and Cereals	Vadodara





Sr. No.	Budget Head	Name of the Scheme	Center
	12963-02	Genetic enhancement and production technologies of Pulses, Oilseeds and Cereals	Derol
29	12963-03	Research and enhancement of quality seed production of major crops of middle Gujarat	Anand
30	12964-00	Insect Pest Management through Bio-control Agents	BACA, Anand
31	12964-01	Insect Pest Management through Bio-control Agents	Dept. of Bio-control
32	12965-00	Establishment of Organic Farm at different centres	Anand
	12965-01	Establishment of Organic Farm at different centres	Vadodara
	12965-02	Establishment of Organic Farm at different centres	Arnej
	12965-03	Establishment of Organic Farm at different centres	Dhandhuka
	12965-04	Establishment of Organic Farm at different centres	Khambholaj
33	12966-00	Strengthening of Centres of Excellence - Medicinal & Aromatic Plants	Anand
34	12969-00	Development of irradiation technology for Agricultural, Animal, Dairy and Food products	Anand
35	12970-00	Studies on the estimation of pesticides residues for agriculture commodities	Anand
36	12985-00	Development of potato varieties and its agro technologies for middle Gujarat	Khambholaj
37	12985-01	Research on papaya crops	Khambholaj
38	12989-00	Establishment of research centre of Seed Spices for development of production technology	Sanand
39	12989-02	Varietal development of Chickpea in residue moisture condition of <i>Bhal</i> region	Arnej
40	12989-06	Allele mining for fragrance and colour principles from Saffron and Sandal Wood	Anand
41	12993-04	Study on pesticides residues analysis from Food, Feed, Water and Soil for food safety in Gujarat	Anand
42	12993-05	Development of varieties in vegetable crops	Anand
43	12993-07	Research centre for Distant Hybridization in field and fruit crops	Anand
44	12993-08	Development of early maturing and high yielding Castor Hybrids /Varieties suitable to cropping systems in irrigated area of middle Gujarat	Sansoli
45	12993-09	Evolving suitable rice genotypes for <i>rabi</i> & summer cultivation for enhancing the production and productivity in middle Gujarat of Agro-climatic Zone-III	Nawagam
46	12993-15	Screening and management of root-knot nematodes in important crop of Gujarat	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
47	12993-16	Genetic enhancement and production technologies of cluster bean (Guar) for yield and quality	Derol
48	12993-17	Centre for advance research in Plant Tissue culture	Anand
49	12993-18	Centre for advanced research on Plant Viruses	Anand
50	12993-19	Research on Organic Farming	Anand
51	12993-20	Advanced research on Pest Management through birds	Anand
52	12993-21	Development of food decontamination technology for safety and quality of fresh and minimally processed fruits and vegetables	Anand
53	12993-22	Research on supply chain and market integration for key agro commodities for farmer's awareness and income enhancement in middle Gujarat	Anand
54	12993-31	Establishment of natural farming research centre at Kansari	Anand
55	12993-32	Establishment of Center for Agricultural Market Intelligence at Anand	Anand
(b) Research Schemes in Tribal Area			
(i) Agriculture			
56	12005-00	Improving research facilities for Maize	Dahod
57	12007-00	Strengthening of research in Pulse	Dahod
58	12917-00	Research and demonstrations of bio-fertilizers in tribal areas of Gujarat	Anand & Godhra
59	12979-00	Genetic enhancement and production technologies of major crops grown in tribal areas	Dahod
60	12979-01	Genetic enhancement and production technologies of major crops grown in tribal areas	Devgadhbaria
61	12979-03	Development of garlic and ginger varieties suitable for value addition and its production and protection technologies	Dahod
62	12979-04	Maize productivity enhancement through single cross hybrid(s)	Godhra
63	12979-05	Varietal development in chickpea for tribal area	Dahod
64	12987-06	Production potential and value addition of banana grown in tribal area of Chhota Udaipur region of middle Gujarat through multiple approaches	Jabugam
65	12993-10	Advanced centre for research and trainers training on agricultural engineering based interventions	Godhra
66	12993-11	Developing a watershed based conclave for experimental learning at kakanpur	Kankanpur
67	12993-13	Tailoring maize for specific uses thereby nutritional enrichment and security-A better alternatives for rain fed farming, particularly Tribal Areas of Gujarat State	Godhra





Sr. No.	Budget Head	Name of the Scheme	Center
68	12993-24	Research and development on novel nano formulations and its application in agriculture and allied sectors	Anand
69	12993-25	Computer vision and artificial intelligence techniques for pest and disease detection and grain quality of various crops	Anand
70	12993-26	Development of early maturing and high yielding varieties of various fruit crops	Anand
71	12993-27	Research and Demonstration centre for terrace gardening and soilless cultivation	Anand
72	12993-28	Research on integrated approaches for pest and disease management in horticultural crops	Anand
73	12993-29	Evaluation and identification of food adulteration and validation of its detection methods	Anand
74	12993-30	Development of hybrid varieties in Cucurbit Crops	Anand
(2) Non-Plan Schemes			
(I) Education			
1	1311-00	Zonal Engineering Construction Unit	Anand
2	1312-0A	North Cattle Breeding Farm	Sansoli
	1312-0A	North Cattle Breeding Farm	Jabugam
	1312-0C	North Cattle Breeding Farm	Vegetable
3	1317-00	Institute of Programme Extension Education	Anand
4	3126-02	B. A. College of Agriculture	Anand
	3126-2L	B. A. College of Agriculture-Library	Anand
5	3248-00	Establishment of Extension Wing	Anand
6	4280-00	Strengthening of Under Graduate Teaching	Anand
7	4500-00	Vice Chancellor Office & Registrar Section	Anand
8	4501-00	Director of Research	Anand
9	4502-00	Comptroller Section	Anand
10	4504-00	Director of Student Welfare	Anand
11	4504-01	Director of Information Technology	Anand
12	4505-00	Director of Extension Education	Anand
13	4571-03	Executive Engineer & Guest House	Anand
14	4571-3D	Executive Engineer & Guest House	Devataj
15	4571-04	Medical Unit Centre	Anand
16	4807-00	Inter University Cultural Activities (FPT&BE College)	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
17	4808-00	Inter University Cultural Activities (DSW)	Anand
18	4862-00	Inter University Cultural Activities (DSW)	Vaso
19	4862-00	Inter College & Inter University Sports & Quiz (BACA)	Anand
20	4862-0A	Inter Colleges & Schools Sports & Student Welfare	Vaso
21	4862-0B	Planning of Sports Game, Maintenance of Ground and Students DA, etc. (IABMI, Veterinary College & Agri. Engg. College, Godhra)	Anand
22	4864-00	Parvatarohan (DSW)	Anand
23	5106-00	Strengthening of department by providing additional equipment in view of Semester System	Anand
24	5116-00	Establishment of Sardar Smruti Kendra, Museum, Information Centre	Anand
25	5228-00	Polytechnic in Agriculture	Anand
	5228-00	Polytechnic in Horticulture	Vadodara
	5228-00	Polytechnic in Agricultural Engineering & Technology	Dahod
	5228-0A	Horticultural Research Station (Vegetable)	Khabholaj
	5228-0B	Polytechnic in Agriculture	Vaso
	5228-0C	Agricultural Research Station	Jabugam
26	5229-00	Establishment of Polytechnic in Home Science & Economics	Anand
27	5711-0L	Establishment of Library	Anand
28	5810-00	Project for Health Centre	Anand
29	6110-01	Strengthening of P.G. Teaching	Anand
30	6119-00	Scheme for Instructional Farm	Anand
31	6502-03	Department of Agricultural Product Process Engineering	Anand
32	6503-02	Department of Nematology	Anand
33	6503-03	Department of Horticulture	Anand
34	6503-04	Department of Bio-chemistry	Anand
35	7712-01	Establishment of Meteorology department	Anand
(II) Extension			
36	7228-01	School of Baking	Anand
(III) Research			
37	3226-00	Scheme of Design Experiment	Anand
38	5002-00	Scheme for Research in Bajara	Anand
39	5003-00	Scheme for Research in Paddy	Nawagam, Dabhoi, Derol & Vadodara





Sr. No.	Budget Head	Name of the Scheme	Center
40	5004-00	Scheme for Research in Wheat	Dhandhuka
41	5006-00	Scheme for Research in Jowar	Viramgam
42	5007-00	Scheme for Research in Pulses (Cereals)	Vadodara, Dahod & Arnej
43	5008-00	Scheme for Research in Oilseed	Derol
44	5009-00	Strengthening Research in Cotton	Anand, Thasra, Dhandhuka & Viramgam
45	5010-00	Research in Tobacco	Anand & Dharmaj
46	5010-00	Research in Castor & Seed Spices	Sanand
47	5011-00	Scheme for Research in Sugarcane	Thasra
48	5012-00	Scheme for Research in Grasses	Anand
49	5013-00	Scheme for Research in Vegetable Tuber (Tomato)	Anand
50	5014-00	Scheme for Research and Improvement in Fruit Crops	Anand
51	5018-00	Strengthening of Research in Agricultural Economics	Anand
52	5020-00	Scheme for Research in Agriculture Chemistry & Soil Science	Anand
53	5025-00	Scheme for Expansion Mechanical Commercial Farm	Anand
54	5026-00	Scheme for Research in Pest Control & Plant Disease	Anand
55	5026-01	Project for Research in Pest Control & Plant Disease	Anand
56	5042-00	Strengthening of Dry Farming Research Station	Dhandhuka
57	5044-00	Project for Expansion of Plant Pathology Research	Anand
58	5046-0B	Study of Biology Inteer control of White Gurb	Anand
59	5073-00	Establishment of Agricultural Product Process Engineering	Anand
60	7078-00	National Agricultural Research Project	Arnej
61	8091-0A	National Agricultural Research Project	Anand
	8091-AB	National Agricultural Research Project(Bio-technology)	Anand
	8091-0B	National Agricultural Research Project	Godhra
	8091-0C	National Agricultural Research Project (RRS, UNIT-5)	Anand
	8091-0C	National Agricultural Research Project	Derol
62	9091-10	National Agricultural Research Project (Scheme Phase-II)	Anand, Sansoli & Khambholaj
	9091-10A	National Agricultural Research Project (Scheme Phase-II)	Jabugam and Vadodara





Sr. No.	Budget Head	Name of the Scheme	Center
63	5002-03	Strengthening of Research in Hill Millet	Dahod
64	5704-00	Tribal Research-cum-Training Centre	Devgadhbaria
65	6005-00	Strengthening Research in Maize	Devgadhbaria
66	6009-00	Strengthening Research in Budded Cotton	Devgadhbaria
67	6704-06	Training of Tribal Farmer Women & Farm Youth	Dahod
68	7007-00	Strengthening of Research in Pulses	Dahod
(3) I.C.A.R.			
(a) I.C.A.R. CO-ORDINATED SCHEMES (25:75%)			
1	2003-00	All India Coordinated Research Project on Rice	Nawagam
2	2005-00	All India Coordinated Research Project on Maize	Godhra
3	2010-04	All India Network Research Project on Tobacco	Anand
4	2012-00	All India Coordinated Research Project on Forage Crops and utilization	Anand
5	2020-00	All India Coordinated Research Project on Micro & Secondary Nutrients & Pollution Elements in Soil & Plants	Anand
6	2025-00	All India Coordinated Research Project on Integrated Farming System: On Farm Research	Devgadhbaria
7	2026-01	All India Coordinated Research Project on Nematode Agriculture	Anand
8	2043-00	All India Coordinated Research Project on Medicinal & Aromatic Plants	Anand
9	2044-00	All India Coordinated Research Project on Biological Control of Crop Pests	Anand
10	2046-00	All India Coordinated Research Project on Weed Management	Anand
11	2080-00	All India Coordinated Research Project on National Seed Project (crops) - Seed Technology Research	Anand
12	2084-00	AINP on Agricultural Ornithology	Anand
13	2093-00	All India Coordinated Research Project on Agro-meteorology	Anand
(b) I. C. A. R. AD-HOC SCHEME (100%)			
1	2002-02	Need based contingency for conducting coordinated trials of Finger Millet	Dahod
2	2003-01	Insecticide Testing Fee for cooperative centre	Nawagam, Derol & Dabhoi
3	2003-04	FLD Promote Non-Hybrid Rice Technology	Nawagam
4	2004-01	Frontline Demonstration in Wheat	Anand, Arnej & Dhandhuka





Sr. No.	Budget Head	Name of the Scheme	Center
5	2005-01	FLD's Training programme under accelerated maize improvement	Godhra
6	2005-02	Frontline Demonstration on Maize	Godhra
7	2005-07	AICRP on Maize Contingencies for TSP Project	Godhra
8	2005-08	AICRP on Maize Contingencies for Testing Fee	Godhra & Dahod
9	2005-09	AICRP on Maize operational expenses for NICRA (National Initiative on Climate Resilient Agriculture) Project	Godhra
10	2005-10	Climate Resilient Maize for Asia	Godhra
11	2005-11	AICRP on Maize-SCSP	Godhra
12	2006-01	District Agriculture Contingency plans for Gujarat State	Anand
13	2007-01	Need based contingency for conducting coordinated trials of Soybean	Devgadbaria
14	2008-1H1	Frontline Demonstration on Oilseeds Castor	Anand
15	2008-02	Conducting the Co-ordinated Trials of AICRP on Castor	Anand, Sanand, Derol & Sansoli
16	2008-03	AICRP on Spices for Voluntary Centre	Sanand
17	2008-04	AICRP on Sorghum Voluntary Centre	Anand & Viramgam
18	2008-16	AICRP on Rapeseed - Mustard	Anand
19	2008-17	AICRP on Pearl-Millet / Bajra	Anand
20	2008-20	AICRP on Groundnut conducting trials	Anand
21	2009-02	Conducting trials on Cotton crops	Anand & Viramgam
22	2010-4 A	AINP on Tobacco TSP Project	Anand
23	2010-4 B	XXIV Tobacco Workshop of All India Network Project on Tobacco	Anand
24	2012-02	Barley AICW & BIP trials	Anand
25	2012-07	Forage Technology Demonstrative for <i>Kharif</i> 2010-11	Anand
26	2020-01	AICRP on Micro & Secondary Nutrients & Pollution Elements in Soil & Plants for TSP Project	Anand
27	2020-02	AICRP on Micro & Secondary Nutrients & Pollutant Elements in Soil & Plants for SCSP Project	Anand
28	2020-03	SPAH Study in Tribal Area	Anand
29	2025-02	AICRP on Integrated Farming System (TSP & FLD)	Devgadhbaria
30	2026-1B	AICRP on Nematode Pest TSP	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
31	2026-1A	AICRP on Nematode Pest	Anand
32	2028-18	Organization of 21 days Summer/Winter school on "Agri-business & marketing information system".	Anand
33	2028-19	New frontiers in hybrid seed production & genetic purity testing	Anand
34	2028-20	Numerical Technique & its Application to Agricultural & Food Engineering Problems	Anand
35	2028-21	Techniques for estimation of nutraceutical properties form crops	Anand
36	2030-10	Seed Production in Agricultural Crops and Horticulture Crops (Field Crops)	Sanand, Vadodara, Derol & other Farms
37	2030-19	National Initiative on Climate Resilient Agriculture (NICRA)	Anand
38	2032-00	Production & demonstration of tissue culture raised plants under three location & collection & Maintenance of elite germplasm of date palm	Anand
39	2033-00	NFBSFARA project-Development of solar-hybrid refrigeration technology for on-farm (or in production catchment) safe transient storage of horticultural produce	Anand
40	2034-00	Establishment of Agro Processing Centre for Gourd, Aloe-Vera etc.	Anand
41	2036-00	Development of Non Thermal Plasma (NTP) Decontamination Technology for Fruits & Vegetables	Anand
42	2037-00	Establishing Centre for Agricultural Market Intelligence	Anand
43	2037-01	NAHEP Component 2, AAU	Anand
44	2044-01	AICRP on Biological Control of Crop Pests (TSP)	Anand
45	2044-15	Emeritus Scientist Scheme-Calibration & validation of CROPGRO-Cotton, CROPGRO-Pigeon pea, SUBSTOR-Potato & CANEGRO-sugarcane models for different crops of Gujarat for climate change impact studies & yield forecasting	Anand
46	2044-16	ICAR-Emeritus Professor Scheme	Anand
47	2046-01	Development of Integrated pest management (IPM) packages under selective crop conditions, Anand (Tribal Sub Plan)	Anand
48	2076-03	Central Sector Special Food grains Production of Breeder Seed	Godhra, Nawagam
48	2076-03	Central Sector Special Food grains Production of Breeder Seed	Godhra, Nawagam
49	2076-05	Research & Development efforts on Hybrids in selected crop (Millet, Cotton, Castor)	Anand
50	2080-02	AICRP on National Seed Project (TSP)	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
51	2080-03	ICAR Seed Project-Development of serological & molecular diagnostic kit for seed health assessment of rice & cotton (Crops)	Anand
52	2084-01	AINP on Agricultural Ornithology (TSP)	Anand
53	2093-01	AICRP on Agro-meteorology TSP	Anand
54	2095-02	AINP on Pesticide Residue (SCSP)	Anand
55	2096-00	All India Coordinated Vegetable Improvement Project (Voluntary Centre)	Anand
56	2374-01	Conducting the Co-ordinated Trials under AICRP on Chickpea	Anand
57	2704-10	Kisan Sammelans, Krishi Melas, Kisan Ghosties, Group Meeting & Displaying Exhibitions & Demonstrations of Technologies during pre-Kharif	Devataj, Dahod & Arnej
58	2704-25	Cluster Frontline Demonstrations of <i>Rabi</i> Pulses 2016-17	Dahod, Devataj & Arnej
59	2704-26	Organizing trainings for creation of awareness among the farmers & other stakeholders about the provisions of the protection of plant varieties & Farmers Right Act 2001	Dahod & Arnej
60	2704-27	Soil Testing Kit (International Soils Day)	Dahod, Devataj & Arnej
61	2704-28	Kisan Sammelans, Krishi Melas, Kisan Ghosties, Group Meeting & Displaying Exhibitions & Demonstrations of Technologies during pre- <i>Rabi</i>	Dahod, Devataj & Arnej
62	2704-29	Exposure visits for the Farmers & Extension Workers of Gujarat State under National Food Security	Godhra & Devataj
63	2704-32	Strengthening & setting up of Tissue culture facilities for Date palm and other tissue culture protocols for its commercial cultivation	Anand
64	2704-33	Farmers Fair/Programmes on Pradhan Mantri Fasal BimaYojna	Dahod, Devataj & Arnej
65	2704-34	Annual Zonal Workshop of KVKs of Zone VI	Anand
66	2704-34A	Cluster frontline demonstrations of <i>rabi</i> oilseeds for 2016-17	Anand
67	2704-35	Conducting at least two Skill Development Training courses of 200 hours duration through KVK for pulse Cultivator & Micro Irrigation Technician	Anand
68	2704-36	Creation of Seed-Hubs for increasing indigenous production of pulses in India	Anand
69	2704-37	Pandit Deen Dayal Upadhyay Unnat Krishi Shiksha Yojana	Anand, Derol & Devataj





Sr. No.	Budget Head	Name of the Scheme	Center
70	2704-38	Paramparagat Krishi Vikas Yojna (PKVY)	Anand
71	2704-51	Trial During <i>Kharif</i> under AICRP (Mullarp)	Vadodara
72	2704-52	Production Oriented survey	Nawagam
73	15121-00	Strengthening & Development of Agricultural Education (AUs)	Anand & Godhra
74	15124-00	Strengthening & Development of Agricultural Education (AUs)	Anand & Godhra
75	15132-00	Strengthening & Development of Agricultural Education (AUs)	Anand & Godhra
76	15133-00	Strengthening & Development of Agricultural Education (AUs)	Anand & Godhra
77	15211-00	Strengthening & Development of Agricultural Education (AUs)	Anand & Godhra
78	15231-00	Strengthening & Development of Agricultural Education (AUs)	Anand & Godhra
79	15711-00	Strengthening & Development of Agricultural Education (AUs)	Anand & Godhra
80	15911-00	Strengthening & Development of Agricultural Education (AUs)	Anand & Godhra
81	15912-00	Strengthening & Development of Agricultural Education (AUs)	Anand & Godhra
82	15913-00	Strengthening & Development of Agricultural Education (AUs)	Anand & Godhra
83	15921-00	Strengthening & Development of Agricultural Education (AUs)	Anand & Godhra
84	15922-00	Strengthening & Development of Agricultural Education (AUs)	Anand & Godhra
85	15923-00	Strengthening & Development of Agricultural Education (AUs)	Anand & Godhra
86	18311-04	ICAR-Merit-Cum-means	Godhra
87	18311-07	ICAR-PG Scholarship	Anand & Godhra
88	18457-35	ICAR-Senior Research Fellowship for Ph.D. Student	Anand
89	15630-00	Library Strengthening in Agricultural Universities	Anand & Godhra
90	15657-00	Student READY Programme	Anand & Godhra





Sr. No.	Budget Head	Name of the Scheme	Center
91	15658-00	National Talents Scholarship	Anand & Godhra
92	2008-21	ICAR Verification Centre on AICRP on Groundnut	Anand
93	2037-02	ICAR Development of Soft Skill for entrepreneurship among Agri-Graduates	Anand
94	2374-03	Voluntary Centre of Arid Legumes	Derol
(c) Krushi Vigyan Kendra at AAU			
1	2704-04	Krushi Vigyan Kendra	Dahod
2	2704-07	Krushi Vigyan Kendra	Devataj
3	2704-08	Krushi Vigyan Kendra	Arnej
4	2704-09	Director of Extension Education Office	DEE, Anand
(4) Other Agency Scheme			
(a) Government of India			
1	18005-01	Experimental Agro. Met. Advisory Services.	Anand
2	18005-03	Scheme for Modelling of impact of dynamic environment on population of crop pests in middle Gujarat Zone, Anand	Anand
3	18043-05	Central Sector Scheme for Micromanagement of Agriculture-Development of Medicinal and Aromatic Plants.	Anand
4	18246-04	Training Programme on Kissan Call Centre	Anand
5	18246-05	Green House / Net house Training to Farmers	Anand
6	18246-94.1	Scheme of Jatropha Plantation and Nursery (Tree Borne Oilseeds) (TC Lab). APPE Unit	Anand
7	18246-94.2	Scheme of Jatropha Plantation and Nursery (Tree Borne Oilseeds), APPE-Unit, Anand.	Anand
8	18246-97	Experimental Agro met Advisory Services (EAASU) Unit at Arnej	Arnej
9	18246-98	Centrally Sponsored Scheme for National Horticulture Mission.	Arnej, Viramgam, Anand
10	18248-00	National Agricultural Extension Project-I (Non-plan)	Anand
11	18310-00	Monitoring of Pesticide Residue at National Level.	Anand
12	18311-07J	Indo-Afghanistan Fellowship Programme	Anand
13	18311-07H	Indo-Africa Fellowship Programme	Anand
14	18311-07I	NAARC Fellowship (Nepal Aided Programme)	Anand
15	18311-7B	Rajiv Gandhi National Fellowship for SC candidates	Anand
16	18311-7C	Implementation of Award of INSPIRE Fellowship at BACA	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
17	18311-7E	C. V. Raman International Fellowship for African Researchers - Dr. Gabriel Habiyaramye, Rwanda	Anand
18	18382-01	Online Pest Monitoring and Advisory Services (OPMAS) under NFSM-Commercial Crops-Cotton	Anand
19	18454-28	Evaluation of IIHR Bio-pesticides in Okra	Anand
20	18454-29	Bioefficacy Studies of Bio-Nematicide, Actinovate STP against Root-knot Nematodes in Tomato	Anand
21	18454-30	Nutraceutical importance and molecular characterization of Okra	Anand
22	18454-31	Identification, Molecular Characterization and Documentation of Crops specific efficient and agrochemical to lerantstraits of trichoderma spp. For sustainable and eco-friendly management of Plant Pathogens/Diseases	Anand
23	18454-32	Evaluation of Bio-efficacy and Phytotoxicity of Movento 150 OD (Spirotetramat 15% w/w OD) against Sucking Pest Complex of Cotton	Anand
24	18454-32.1	Bio-efficacy and Phytotoxicity of Imidacloprid 200 SL (Imidacloprid 17.1% w/w SL) against sucking insect pests of Cotton	Anand
25	18454-32.2	Bio-efficacy and Phytotoxicity of Solomon 300 OD (Betacyfluthrin 9% w/w + Imidacloprid 21% w/w OD) against sucking insect pests in Cotton	Anand
26	18454-32.3	Bio-efficacy and Phytotoxicity of Combi Product SLR-525 against sucking insect pests in Cotton	Anand
27	18461-00	Conservation and Resource Maintenance of Jatropha Germplasm at Deptt. of Agril. Biotechnology	Anand
28	18486-00	Metabolic and molecular profiling of aromatic rice germplasm of India for gaining insights about aroma	Anand
29	18488-00	Sustainability of Sarus Crane of Western India : Evaluation of with habitat-based meta-population model	Anand
30	18495-00	Fortified formulations of PGPR consortium and PGPR metabolites with humic acid and micronutrients followed by efficacy on okra, tomato & chilli crops	Anand
31	18497-00	FASAL-R&D area estimation of sugarcane and cotton in gujarat using AWIFS and RISAT data	Anand
32	18502-00	Sensor System Studies for the GISAT	Anand
33	18502-01	Calibration and Validation of SMAP Soil Moisture Over Semi-Arid Agricultural Patches in Gujarat	Anand
34	18311-7G	Royal Govt. of Bhutan Fellowship	Anand
35	18802-0K	Conducting Training-cum-Awareness Programme on PPV and FR Act, 2001	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
36	18802-0P	Communication & Extension Work Services	Anand
37	18457-30	Magnitude of residues of Cyantraniliprole 10.26 10% OD in Chilli	Anand
38	18457-33	Evaluation of efficacy of Sulphur and Zinc containing complex fertilizers for maximizing yield through balanced nutrition of different crops in India	Anand
39	18457-39	Development of pearl millet forage hybrids and pearl millet napier (PN) hybrids for high biomass and quality suited for different agro climatic zones of India	Anand
40	18096-00	Measurement to Management M2M : Improved Water Use Efficiency& Agricultural Productivity Through Experimental Sensor Network	Anand
41	18457-81	Organize one training programme	Anand
42	18457-82	Directorate and sameti	Anand
43	18457-85	Forecasting sugar cane Production at mill catchment in Bharuch, Gujarat with remote sensing and ancillary information	Anand
44	18457-86	Development of a Decision Support System (DSS) Planning storage infrastructures and supply chain logistics	Anand
45	18457-87	SCATSAT-1 Utilization project on Rice Productivity from Scatsat-1 Data	Anand
46	18457-92	Efficacy of Fumigator (a sorghum variety with high HCN content) on tomato against root-knot nematode (Meloidogyne spp.)	Anand
47	18457-94	Land surface albedo retrieval using GISAT data	Anand
48	18457-95	Gross Primary Productivity from Agriculture using GISAT data	Anand
49	18457-96	Crop discrimination& soil fertility assessment using AVIRIS-NG data	Anand
50	18557-06	Native methanotrophic bacterial consortium for mitigation of methane flux from rice ecosystems	Anand
51	18557-07	To study the residue and dissipation of Tebuconazole 430SC (Folicur) on Tomato"	Anand
52	18557-08	To study the persistence & residues of Mancozeb 52.6% + Hexconazole 2.4%WG(UFP 209b) on Chilli	Anand
53	18557-10	Nutrient & management to Increase efficiency in Crops & Animal	Anand
54	18557-11	(1) Study the residues of lifenuron 5.4 % EC on cotton (2) Study the residues of flubendiamide 20 %WG on tomato (3) Study the residues of lifenuron 5.4 %EC on chillies (4) Study the residues of flubendiamide 20 % WG on on paddy	Anand
55	18557-12	(1) Study the persistence & residues of Acetamiprid 25% + Bifenthrin 25% WG on (GPI 515) Soybean crop	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
56	18557-13	(1) Study the persistence & residues of Novaluron 9.45 % + Lambda cyhalothrin 1.9 % ZC(GPI 1316) on red gram (2) Study the persistence & residues of Zoxystrobin 8.3 % + Mancozeb 66.7 % WG (Avancer glow) on soybean	Anand
57	18557-14	Training Programme of Animal Husbandry Department of Jaspur District (CG) at EEI	Anand
58	18557-17	Evaluating L & S band SAR data for estimation of crop biophysical parameters and soil moisture	Anand
59	18557-18	Hydrological & crop simulation modeling in the arena of climate change	
60	18557-20	ASPEE Scholarship	Anand
61	18557-21	Bio-Efficacy of Vellum Prime 400 SC against root-knot nematode infecting Brinjal	Anand
62	18557-22	Bio-Efficacy of Vellum Prime 400 SC against root-knot nematode infecting Chilli	Anand
63	18557-23	(1) To Study the persistence & residues of Pendimethalin 38.7% CS (Dost Super) on Cumin (2) To Study the persistence & residues of Pendimethalin 38.7% CS (Dost Super) on Chick Pea	Anand
64	18557-26	Study the persistence & residues of Ipfencarbazone 25% SC (w/v) on Rice	Anand
65	18557-29	Skill Development Training Programmes	Anand
66	18557-31	Study the residue of Azoxystrobin 18.2% + Difenoconazole 11.4% w/w SC on Banana	Anand
67	18557-32	Study the persistence and residues of Oxyfluorfen +Clonidafop Propargyl (UPH 716) on Onion	Anand
68	18557-33	Study the persistence and residues of Azoxystrobin 4.7% + Mancozeb 59.7% + Tebuconazole 5.6% WG (GPF 215) on Cucumber	Anand
69	18557-34	Study the persistence and residues of Metalaxyl-M 3.9% + Mancozeb 64% WG (GPH 616) on Potato	Anand
70	18557-50	Study the residues and dissipation of ME 5382 (10% Suspension Concentrate) on Paddy (Rice)	Arnej
71	18557-51	Study the residues and dissipation of ME 5382 (2% Granular) on Paddy (Rice)	Arnej
72	18557-52	Krusha Kalyan Abhiyan	Dahod
73	18557-55	Study the residues and dissipation of Metalaxyl-M 31.8% ES on Maize and Chilli	Anand
74	18557-60	Evaluation of existing plantation, establishment of agro forestry trials and capacity building to promote Sandal wood (<i>Santalum album</i>) cultivation in Gujarat and Rajasthan	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
75	18557-61	Skill Development Training Programs 2018-19	Dahod, Anand
76	18557-62	Evaluation of Bt cotton hybrids and varieties received through CICR Coimbatore under AICAR on Cotton	Anand
77	18557-66	Quality Seed Production Technology of Arid Crops	Anand
78	18557-73	Biotechnological approaches for conservation and Eco-restoration of Paris Polyphylla and Kaempheriaparviflora-A highly traded endangered medicinal plant species in Arunachal pradesh	Anand
79	18557-77	Green energy initiatives in agricultural to combat climate change training	Anand
80	18557-82	(1) To study the residue and dissipation of Fluopyram 200g/L + Tebuconazole 200g/L SC (Luna experience) on Rose (2) To study the residue and dissipation of Fluopyram 200g/L + Tebuconazole 200g/L SC (Luna experience) on Banana (3) To study the residue and dissipation of Fluopyram 250g/L + Trifloxystrobin 250g/L SC (Luna sensation) on Chilli (4) To study the residue and dissipation of Fluopyram 250g/L + Trifloxystrobin 250g/L SC (Luna sensation) on Onion (5) To study the residue and dissipation of Spirotetramat 150g/L OD (Movento) on Cabbage (6) To study the residue and dissipation of Beta-cyfluthrin 90g/L + Imidacloprid 210g/L OD (Solomon) on Cucumber (7) To study the residue and dissipation of Fosetyl AI 80 % WP (Aliutte) on Bengal gram (8) To study the residue and dissipation of Fosetyl AI 80 % WP (Aliutte) on Banana (9) To study the residue and dissipation of Fluopyram 400 g/L (Valum prime) on Chilli (10) To study the residue and dissipation of Fluopyram 400 g/L (Valum prime) on Brinjal	Anand
81	18557-83	(1) To study the persistence and dissipation of Cyantraniliprole 8% + Diafenthiuron 40% W/W SC on Brinjal (2) To study the persistence and dissipation of Cyantraniliprole 8% + Diafenthiuron 40% W/W SC on Okra and (3) To study the persistence and dissipation of Cyantraniliprole 8% + B369Diafenthiuron 40% W/W SC on Tomato	Anand
82	18557-84	Demonstration of efficacy of Nimitz 2GR in different crops (Tomato, Guava and Pomegranate)	Anand
83	18557-85	Validation and promotion of sustainable and adaptable IPM technology for Brinjal crop	Anand
84	18557-86	XXV meeting of ICAR Regional Committee No. VI	Anand
85	18557-87	To Study the persistence and dissipation of insecticide Acephate 75% SP in cotton	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
86	18557-88	Establishment of demonstration units on micro irrigation systems (Drip/Sprinkler)	Dahod
87	18557-89	District Kisan Mela at KVK Dahod	Dahod
88	18557-90	Atmosphere and Climate Research - Modelling Observing Systems and Services (ACROSS) (0335)	Dahod
89	18557-94	INSA FELLOWSHIP	Anand
90	18557-95	Creation of mass production facility of bio-pesticides for plant disease management	Anand
91	18557-97	स्वच्छ भारत अभियान	Devataj
92	18557-98	R-ABI, College of FPT & BE, AAU, Anand	Anand
93	18558-02	Development of active-passive algorithm for high resolution soil moisture over bare and vegetation covered soil	Anand
94	18558-03	Spectral Library Development and Spectral Sensitivity Analysis for Multi Crops and Growth Stages	Anand
95	18558-11	Evaluation of premix herbicide RIL-202/F1 35.9% SE for its bio-efficacy and phytotoxicity on soybean as pre-emergence and its effect on succeeding crop	Anand
96	18558-12	Evaluation of premix herbicide RIL-202/F1 35.9% SE for its bio-efficacy and phytotoxicity on soybean as pre plant incorporation and its effect on succeeding crop	Anand
97	18558-13	Evaluation of RIL-165/F1 (30% SE) against Spodoptera litura, Helicoverpa armigera, semilooper and girdle beetle infesting Soybean	Anand
98	18558-14	Evaluation of RIL-173/F1 (22.5%SC) against sucking pests (aphid, jassid, whitefly, thrips and mealybug) in cotton	Anand
99	18558-20	Renewable Energy for Environmental Protection and Energy Conservation	Godhra
100	18558-21	1. To Study the residue and dissipation of Vayego (Tetraniliprole 200g/L SC) in/on Maize 2. To Study the residue and dissipation of Larvin (Thiodicarb 75% WP) in/on Maize	Anand
101	18558-43	1. To Study the residue and dissipation of Fluopyram 400g/L SC (Velum Prime) in/on Pomegranate (Two Season-Soil Drenching) 2. To Study the residue and dissipation of Fluopyram 400g/L SC (Velum Prime) in/on Pomegranate (Two Season-Drip) 3. To Study the residue and dissipation of Tetraniliprole 120 g/L + Thiacloprid 360 g/L DC in/on Brinjal (one Season) 4. To Study the residue and dissipation of Tetraniliprole 120 g/L + Fipronil 240 g/L FS (Reatis Plus) in/on Maize (One Season)	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
102	18558-44	1 To Study the residue and dissipation of Fluopyram 400g/L SC (Velum Prime) in/on Cucumber (Two Season-Drip), 2. To Study the residue and dissipation of Fluopyram 400g/L SC (Velum Prime) in/on Tomato (Two Season-Drip) 3. To Study the residue and dissipation of Spirotetramat 30 g/L + Difenthiurom 120 g/L Chilli (One Season) SC in/on	Anand
103	18558-48	Animal Disease Control	Devataj, Arnej
104	18558-49	Fertilizer Application Awareness Campaign	Dahod, Devataj, Arnej
105	18558-50	Microbial based Agricultural Waste Management using Vermi composting under SWAACHHTA ACTION PLAN (SAP)	Dahod, Devataj, Arnej
106	18558-51	Tree Plantation Campaign	Dahod, Devataj, Arnej
(b) Government of Gujarat			
1	18023-00	Narmada irrigation Research Project (Khandha)	Khandha
2	18023-11	Sardar Sarovar Narmada Irrigation Research Project. Thasra	Thasra
3	18023-11	Sardar Sarovar Narmada Irrigation Research Project, Dabhoi.	Dabhoi
4	18023-12	Sardar Sarovar Narmada Irrigation Research Project at Dhandhuka.	Dhandhuka
5	18027-07	Payment of TA/DA to experts of GAU for work done for Sardar Sarovar at Anand.	Anand
6	18053-00	Cost of Cultivation Scheme at BACA, AAU, Anand	Anand
7	18246-00	T. & V. Benor Scheme(Plan), Anand.	Anand
8	18246-00	T. & V. Benor Scheme(Plan), Vadodara.	Vadodara
9	18246-03	T. & V. Scheme under Benor System, Anand	Anand
10	18252-07	Brain storming workshop on vegetable and forage crops seed production	Anand
11	18258-01	Krushi Mahotsav at DEE, Anand	Anand
12	18275-03	Assessment, Refinement, Validation and Adoption of Frontline Technologies and other Short term Researchable Issue through KVK & other local Research Centres	Anand
13	18283-05	Small Nursery under NHM at Vaso	Vaso
14	18300-00	Right to Information Act-2005	Anand
15	18396-00	Pesticide residues sample testing charges, ICAR U-9.	Anand
16	18396-00	Monitoring of Surface and Ground Water for Pesticides Residue in SSP Command Phase-I Area	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
17	18396-01	Monitoring of Surface and Ground Water for Pesticides Residue in SSP Command Phase-II Area	Anand
18	18405-00	Soil Health Card programme for state farmers, Anand (Plan)	Anand
19	18406-00	Soil Health Card programme for state farmers, Anand (Non-Plan)	Anand
20	18409-00 to 18409-12	Analysis of Soil Sample and to prepare Soil Health Card.	Anand
21	18467-00	Whole Genome Sequencing of Isabgol (<i>Plantago ovata F.</i>) at Agril. Biotech Unit	Anand
22	18471-00 to 18471-18	CSS-Development andstrengtheing of infrastructure facilities for production and distribution of quality seeds	Anand
23	18473-00	Modelling for estimation of incident photogynthetically Active Radiation (IPDR) using INSAT 3D Data at BACA	Anand
24	18475-00	Establishment of Mashroom Cultivation Laboratory & Training at MVRS &Devghadbaria	Anand
25	18477-00 to 18477-07	C-Dap Project	Anand
26	18490-00	Accelerated Fodder Development Programme	Anand
27	18491-00	Development of EST-SSR Markers for Fibre Quality in Diploid Cotton (<i>Gossypium herbaceum</i>)	Anand
28	18492-00	Incubation Centre-cum-Excellence Centre in Food Processing Technology at AAU Anand Campus	Anand
29	18493-00	Biochemical and Molecular Characterization of T. durum Cultivars for its product processing quality	Anand
30	18494-00	GPS Enabled Tablet PC based Application - Tablet	Anand
31	18482-00	Large scale multiplication of indigenous date palm trees through Tissue Culture	Anand
32	18484-00	Establishment of Centre for DNA Fingerprint in Crops and other Bio-inputs in Agriculture - RKVY	Anand
33	18275-04	"Kharif Pako ni Adhunik Kheti Padhhati"	Anand
34	18802-0Q	(1) Image Building & Skill enhancement for Panchayti Raj System & (2) Mainstreaming Gender in Agriculture & Allied Sectors	Anand
35	18457-28	Quality Seed Production in fodder crops under fodder development programme	Anand
36	18457-29	Evaluation of performance of Maize Hybrids	Derol





Sr. No.	Budget Head	Name of the Scheme	Center
37	18457-31	Bioefficacy and phytotoxicity evaluation of Tebuconazole 10% + Sulphur 65% WG (XLC 750) against powdery mildew (<i>Oidium mangiferae</i> Bert.) of mango (<i>Mangifera indica</i> L.)	Anand
38	18457-36	To promote assistance to State Farmers for Organic Farming-2015-16	Anand
39	18457-37	Bagayat khedut sammelan	Anand
40	18802-0L	Seminar on Land Scaping and Nursery Management" under NHM	Anand
41	18802-0M	Training Prog. on Value Addition & Marketing on Chilli, Cauliflower & other crops at EEI, Anand	Anand
42	18802-0N	All India Survey on Higher Education (AISHE) at BACA	Anand
43	18457-75	Genetic diversity analysis and development of molecular Markers for drought tolerance in Teak (<i>Tectona grandis</i> L.F) populations of Gujarat	Anand
44	18457-83	મહિલા સંબંધિત કાયદાકીય જાગૃતિ શિબીર	Anand
45	18457-42	Development of resource model cum demonstration farm for Organic Farming at MVRS	Arnej
46	18457-42-1	Establishment of Model Organic Farm cum Training Centre	Devataj
47	18457-42-2	Establishment of Model Organic Farm cum Training Centre	Sansoli
48	18457-42-3	Establishment of Model Organic Farm cum Training Centre	Arnej
49	18457-88	Development, validation & technology transfer of microbial consortium of bioagents in sustainable management of biotic & abiotic stresses in crops	Anand
50	18557-16	Student Start-up and Innovation Policy	Anand
51	18557-25	બાગાયત પાકોમાં સંવર્ધન અને નર્સરી વ્યવસ્થાપન વર્કશોપ	Anand
52	18557-28	Science based Agriculture & Climate Change	Anand
53	18557-59	Doubling the farmers income by 2022-A Strategic Initiative	Anand
54	18557-63	સેન્દ્રીય ખેતીની પ્રદર્શન સામગ્રી માટે	Anand
55	18557-69	Demonstration on Hydroponics and Soil Less Culture	Anand
56	18557-70	Experiential Learning Unit on " Plant propagation and demonstration of nursery management techniques under greenhouse environment	Vaso
57	18557-71	Green House facility for mass multiplication and demonstration of interspecific hybrid of fruits and vegetables	Anand
58	18557-93	Strengthening of Commercial Tissue Culture Laboratory	
59	18557-96	ARYA Project at KVK Anand	Devataj





Sr. No.	Budget Head	Name of the Scheme	Center
60	18557-99	Hi-Tech Demonstration for propagation and production of quality planting materials of Horticulture plants under protected condition	Vadodra
61	18273-00	National Service Scheme	Anand
62	18273-01	AGRIUNIFEST-2011	Anand
63	18558-31	Hi-tech Demonstration Unit for Management of Plant Parasitic Nematodes under Protected Condition	Anand
64	18558-34	(SPNF)	Anand
65	18558-41	Crop Protection in Horticultural Crops" under NHM	Anand
(c) RKVY Project (GOG)			
1	18557-38	Strengthening of Pesticide Residue Laboratory as per NABL-17025 requirement	Anand
2	18557-76	Integrated Farming System Model for sustainable livelihood for tribal farmers	Dahod
3	18557-75	Establishment of mass production laboratory of native biocotrol for insect pest management	Anand
4	18557-79	Minimal Processing unit to enhance quality of fruits and vegetables	Anand
5	18557-91	Facility Creation at Pulse Research Station, Vadodara	Vadodara
6	18557-92	Strengthening of Krishi Vigyan Kendra, Arnej	Arnej
7	18558-08	Creation of Seed Storage Go down Facility at Khandha	Khandha
8	18558-09	Establishment of Advanced Laboratory in Nano technology for Evolving Novel Applications in Agricultural Sciences	Anand
9	18558-10	Establishment of infrastructure for seed processing and abiotic stress screening of desi Cotton	Viramgam
10	18558-23	Pesearch infrastructure for modernization of Main Vegetable Research Station, Anand	Anand
11	18558-24	To develop the model farm at Thasra in Kheda district of middle Gujarat	Thasra
12	18558-25	Facility creation at Agricultural Research Station Derol	Derol
13	18558-26	To develop the model farm in Vadodara district of middle Gujarat	Derol
14	18558-27	Creation of Facilities for Farmers Training Under WTO Cell	Anand
15	18558-28	Development of Horticultural Research Station, Khambholaj	Khambholaj
16	18558-29	Ceration of infrastructure facilities at AAU, Khandha in Vadodara district of middle Gujarat	Vadodara
17	18558-30	Strengthening of infrastructure facilities for seed production at Main Rice Research Station, AAU, Navagam, Ta. & Dist. Kheda (Gujarat)	Nawagam





Sr. No.	Budget Head	Name of the Scheme	Center
(d) NGO & Private Agencies			
1	18014-19	Testing of <i>Bt.K.</i> & Fenproathrin 30% EC against pest of Cabbage, Cauliflower, Chillies & Okra at Anand.	Anand
2	18035-00	Professor on IFFCO chair.	Anand
3	18284-00	Mahila Pashupalan Talim Karyakrm	Anand
4	18299-00	<i>Bt.</i> Cotton Hybrid Trials (approved by GEAC)	Dhandhuka, Viramgam
5	18299-03	<i>Bt.</i> Cotton Hybrid Trials (approved by GEAC) at RRS & Dhandhuka	Dhandhuka
6	18309-00	Monitoring Cell : MLT & LST trials Monitoring charges	Anand
7	18379-01	To evaluate performance of Maize hybrid against their check hybrids	Anand
8	18411-00	Project proposal for efficacy of Treeplan 48 E.C. against weeds in onion & cumin at Anand.	Anand
9	18411-00	Performance trial of Hybrid Maize	Anand
10	18411-01	Evaluation of Performance of Maize Hybrids at Jabugam and Vadodara	Jabugam, Vadodara
11	18411-01 (1)	Evaluation of Performance of Maize Hybrids at Jabugam and Vadodara	Jabugam, Vadodara
12	18411-01 (2)	Evaluation of Performance of Maize Hybrids at Jabugam and Vadodara	Jabugam, Vadodara
13	18411-01 (3)	Monsanto Corn Hybrid Evaluation Trials at Jabugam	Jabugam
14	18411-02 (2)	Evaluation of Performance of Rice Hybrids at Nawagam	Nawagam
15	18411-05	Testing Fees for Hybrid of Maize at Nenpur/Sansoli	Sansoli
16	18411-06	Testing Fees for Hybrid Paddy at Nawagam	Nawagam
17	18411-07	Testing Fees for Hybrid Paddy at Dabhoi	Dabhoi
18	18431-03	Testing fee for Evaluation of Efficacy of Transgenic Corn hybrid with stacked events of TC 1507 x NK 603 in 3rd season of Bio Safety Research Level-I at BTRS	Anand
19	18437-01	Multilocation supervised field trial for residue study of Nativo 75WG (Trifloxystrobin 25% + Tebuconazole 50%-75 WF) on Mango at ICAR U-9	Anand
20	18437-03	Testing of bioefficacy and phytotoxicity of Carbosulfan 25% EC against Sucking Pests of Cumin	Anand
21	18437-05	Residue studies of Chlorothalonil 75 WP applied as Foliar Spray in Chilli Crop	Anand
22	18437-06	Testing bio-efficacy and phytotoxicity of Indoxacarb 15.8 EC against <i>Helicoverpa armigera</i> in Tomato	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
23	18443-01	Development of micropropagation technology in Opuntia (<i>Opuntia Ficus Indica</i>)	Anand
24	18443-02	Mapping of QTL Associated with drought tolerance related traits during the seedlings stage in Maize	Anand
25	18443-03	Large scale diagnosis of sex in papaya (cv. Madhubindu) by Loop Mediated Isothermal Amplification (LAMP) and its comparison with routinely used PCR Technique	Anand
26	18447-02	Evaluation of fodder beet for its yield and quality to different dates of harvesting at ICAR Unit-9	Anand
27	18447-05	Bio-efficacy of <i>Metarrhizium anisopliae</i> based Bio-insecticides Met 52 EC for the control of sucking pests complex in Chilli	Anand
28	18447-06	Bio-efficacy of <i>Metarrhizium anisopliae</i> based Bio-insecticides Met 52 EC for the control of sucking pests complex in Brinjal	Anand
29	18447-07	Evaluation of Sulphur and Zinc containing complex fertilizer, efficacy in Groundnut-Wheat and Maize-Mustard cropping system	Anand
30	18447-08	(i) Testing the bio-efficacy of Jump Start in soybean; (ii) Testing the bio-efficacy optimize 400 in Soybean; and (iii) Testing the bio-efficacy Taegro in soybean	Anand
31	18447-11	Supervised Field Trial on Residue and Persistence Study Ipoconazole + Metalaxyl (Rencona dimension) on Maize	Anand
32	18447-12	Supervised field trial on residue & persistence study of Triazophos on Brinjal	Anand
33	18447-13	Supervised field trial on residue & persistence study of Phosphamidon on Mustard	Anand
34	18447-14	Supervised field trial on residue & persistence study of Phenthoate on Cotton	Anand
35	18447-15	Supervised field trial on residue & persistence study of Monocrotophos on Castor	Anand
36	18447-16	Supervised field trial on residue & persistence study of Monocrotophos on Pigeon pea	Anand
37	18447-17	Supervised field trial on residue & persistence study of Monocrotophos on Mustard	Anand
38	18447-18	Supervised field trial on residue & persistence study of Penflufen + Trifloxystrobin 308 FS on Bengal Gram	Anand
39	18447-19	Study on the Detoxification of Pesticide Residues in/on Tomato and Chilli at Field as well as in House Environment Using Agroclean	Anand
40	18447-20	Supervised field trial on residue & persistence study of Fluopyram 200 + Tebuconazole 200-400 SC in Chilli	Anand
41	18447-20.1	Supervised field trial on residue & persistence study of Fluopyram 400 SC in Tomato	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
42	18447-20.2	Supervised field trial on residue & persistence study of Deltamethrin 2.8% EC (Decis 2.5 EC) on Chickpea	Anand
43	18447-20.3	Supervised field trial on residue & persistence study of Imidacloprid 350 WG on Chilli, Tomato & Brinjal	Anand
44	18447-20.4	Supervised field trial on residue & persistence study of UPI 1810 on Cotton	Anand
45	18447-20.5	Supervised field trial on residue & persistence study of "Fluopyram 200+ Tebuconazole 200-400 SC on Onion"	Anand
46	18447-20.6	Supervised field trial on residue & persistence study of Flubendiamide 24% + Thiacloprid 24%-480 SC on Redgram	Anand
47	18447-20.7	(1) Evaluation of residues of Fosetyl 80 WP in Tomato & (2) Evaluation of residues of Fluopyram (200) + Tebuconazole (200)-400 SC in Mango at ICAR Unit-9	Anand
48	18447-21	Evaluation of performance of Pearl millet Hybrids	Anand
49	18447-22	Supervised field trial on residue & persistence study of Dimethoate 30% EC on Cotton	Anand
50	18447-23	Evaluation of performance of Makkhani Grass Hybrid	Anand
51	18447-24	Residues and persistence studies of "Pyraclostrobin 25g/L + Fipronil 250g/L + Thiophanate Methyl 225g/L in Groundnut (STANDAK TOP 500G/L FS)	Anand
52	18447-25	Residues and persistence studies with Afidopyropen 50g/L DC in Cotton (BAS 440 01 L)	Anand
53	18447-26	Residues and persistence studies with Afidopyropen 50g/L DC in Brinjal (BAS 440 01 L)	Anand
54	18447-27	Residue and persistence studies of Pyraclostrobin 25g/L + Fipronil 250g/L + Thiophanate Methyl 225g/L in Soybean (STANDAK TOP 500G/L FS)	Anand
55	18447-28	Evaluation of performance of Pearl Millet Hybrid	Anand
56	18449-00	(i) Evaluation of bio-efficacy and phytotoxicity of propamocarb 530 + Fosetyl 310-840 SL (Previcur energy 840 SC) against Damping-off of Chilli, Tomato and Cabbage Seedlings in Nursery Bed; (ii) Evaluation of phytotoxicity of Propamocarb 530 + Fosetyl 310-840 SL (Previcur Energy 840 SL) against Damping-off of Tobacco Seedlings in Nursery Bed; (iii) Evaluation of residues and persistence (Dissipation) of Tiadimeton (Baleton) 25 WP in Chilli and soil; and (iv) Evaluation of bio-efficacy of Trifloxystrobin 25% + Tebuconazole 5% - 75 WG against Anthracnose, Grey Mildew, Leaf spots and Root-knot of cotton at BACA	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
57	18454-00	Evaluation of RIL-021/F2 (70% SF) for bio-efficacy against sucking insect pests, phytotoxicity and its safety to natural enemies on Cotton at BACA	Anand
58	18454-01	Bio-efficacy of Hexaconazole 4% +Zineb 68% WP against disease complex in Cumin at BACA	Anand
59	18454-07	Effect of Rhizomyx and Rhizonyco on yield and its attributes of Bt.Cotton at BACA &Thasara	Anand
60	18454-08	Evaluation of bio-efficacy and phytotoxicity of BYI02960 SL 200 against sucking pests complex of cotton at BACA	Anand
61	18454-09	Evaluation of bio-efficacy and phytotoxicity of Fipronil 200 SC against insect pests of cotton at BACA	Anand
62	18454-11	Bio-efficacy of UpF-509 against major diseases of Chilli at BACA	Anand
63	18454-12	Evaluation of bio-efficacy of Diafenthriuron 50 WP from new source against cotton insect pests at BACA	Anand
64	18454-13	To study the bio efficacy of Shriram Agrinos product HYT-A, HYT-B & HYT-C on Tomato at BACA	Anand
65	18454-16	Study the performance of Bio Gold and Power gold as a manure and soil conditioner in improving the Cotton (Bt.) Yield and fertilizer use efficacy	Anand
66	18454-17	Evaluation of bio-efficacy and phytotoxicity of Antracol 70 WP (propineb 70% WP) against leaf Spot diseases of Cotton	Anand
67	18454-18	Testing of Zineb 68% + Hexaconazole 4% WP (AVTAR) against Diseases of Cotton and Maize	Anand
68	18454-19	Evaluation of Carbendazin 25% + Mancozeb 50% WS (SPRINT) against Diseases of Maize and Onion Bulb	Anand
69	18454-20	Bioefficacy and phytotoxicity of Agro-clean, a Bio-product against sucking insect pests of Bt. Cotton	Anand
70	18454-21	Bioefficacy and phytotoxicity evaluation of CHA1322 (Flutriatol 250 g/L SC) against Tikka Disease (Early & Late Leaf Spot) of Groundnut	Anand
71	18454-22/ 22.1/22.2	Development of Agro-technologies for utilization of treated effluent water for cultivation of crops	Anand
72	18454-23 & 18454-23.1	Payment of Research Study Assignment	Derol
73	18454-24	Evaluation of efficacy of DPX-Q8U80 500 SC against Root-knot Nematodes in Brinjal and Tomato	Anand
74	18454-25	Genetic characterization of emerging newcastle disease virus variations in India	Anand
75	18454-26	Evaluation of MCW-2 (2% GR) against Root-knot Nematodes in okra and cucumber	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
76	18454-27	Bio-safety Research Trial-1 (BRL-1) for insect Resistant Transgenic Corn Hybrid (MON-89034)	Anand
77	18457-ABCD	Evaluation of Syngenta GM Corn Hybrids in BRC-I trial in <i>Rabi</i> 2011-12 at BACA & Godhra	Anand
78	18457-03	Bio-efficacy of Diafenthiuron 50WP against Brinjal Whitefly at MVRS	Anand
79	18457-04	Bio-efficacy of Diafenthiuron 50WP against Chilli Mites at MVRS	Anand
80	18457-05	Evaluation of bio-efficacy of Thiamethoxam 12.6% + Lambadacyhalothrim 9.5% ZC (Alika 247 ZC) against Corn pests at Derol	Anand
81	18457-07	Bioefficacy and phytotoxicity of Flubendiamide (Takumi) 20% WG against Borer pests of Chilli at MVRS	Anand
82	18457-08	To study the bioefficacy of Privi's Nutrivit/Trypto/ Super Gold on various Crops at MVRS	Anand
83	18457-09	Evaluation of transgenic stackedcorn (MON 89034 x NK 603) against Lepidopteron pests, Bioefficacy, Phytotoxicity and Carryover of Roundup formulation (MON 76366) at Derol & BACA	Anand
84	18457-10	Diatomaceous earth as source of in different crops of India	Anand
85	18457-11	Effect of application of different sources of phosphorus on growth and yield of crops under cropping sequence-Maize-Mustard-Wheat-Greengram	Anand
86	18457-12	Response of Greengram (<i>Kharif</i>) and Maize (<i>Rabi</i>) to the foliar application of Kappaphycus Cell Sap (Sea Weed) Organic Fertilizer	Anand
87	18457-13	(i) Testing the bio-efficacy & phytotoxicity of Chloronutriniliprote 35% WG against Lepidopteran pests of okra; and (ii) Testing the bio-efficacy and phytotoxicity of Chlorantrimiliprole 35% WG against Lapidopteran pests of Tomato	Anand
88	18457-14	Testing of Agro Charger and Agro Clean in Tomato	Anand
89	18457-15	Testing of Agro Charger and Agro Clean in Chilli	Anand
90	18457-16	Bioefficacy and phytotoxicity of Bio-pesticides (Brahmastra, Agniastra & Neemastra) against sucking insect pests of cotton and okra	Anand
91	18457-17	Evaluation of polymer coated urea in transplanted paddy at Thasra and Anand	Anand
92	18457-18	Testing bio-efficacy and phytotoxicity of HGW 86 10% OD (Cyantranilipole) against Sucking and Lepidopteran Pests of Potato	Anand
93	18457-19	Testing of Cumacin and Florigen in Chilli at MVRS, Anand	Anand
94	18457-20	Evaluation of performance of Maize (Corn) Hybrid at Derol	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
95	18459-00	To Study the bio-efficacy of Silixol (Stabilized Silicic acid in Liquid form) on Okra, Brinjal, Tomato and Chilli at MVRS	Anand
96	18802-0B	Organizing workshop-SEWA, Ahmedabad	Anand
97	18802-0C	Training-cum-Exposure visit programme of milk cooperative system Anand pattern for extension functionaries and group leaders at EEI	Anand
98	18802-0E	Training programme on communication skill and propagation methods of forest & Horticultural Crops at EEI	Anand
99	18802-0F	Diploma in Agril. Extension Services for Impact Dealer at Dir of Res.	Anand
100	18802-0G	Training programme on Special Training on Soil Health Card Project (e-Krishi Kiran) at EEI	Anand
101	19200-00	To avail financial assistance from the Private Corperative Institutions, Anand.	Anand
102	18399-01	Evaluation of performance Rice Hybrid K-2015-01 during <i>Kharif</i> -2015	Anand
103	18457-21	Bioefficacy of RDS63 35% WG against <i>Helicoverpa armigera</i> in tomato	Anand
104	18457-21 (1)	Bioefficacy of RDS63 35% WG against <i>Spodoptera litura</i> in chilli	Anand
105	18457-21 (2)	Bioefficacy of RDS63 35% WG against lepidopteran pests of cabbage	Anand
106	18457-21 (3)	Efficacy of RDS63 20SC (Dicloromezotiaz) against lepidopteran pests of pigeonpea	Derol
107	18457-22	Hybrid Rice Coded SAU trial	Nawagam
108	18457-24	Evaluation of MAIRM-08 (Difenthrin 47% + Bifenthrin 9.4% SC) against sucking pests (Jassid, Whitefly, Aphid & Thrips) & bolloworms in Cotton	Anand
109	18457-24 (1)	Evaluation of Buprofezin 15% +Acephate 35% WP against suking pests in Cotton	Anand
110	18457-25	Bioefficacy & phytotoxicity evaluation of carboxin 75% WP against angular leaf spot [<i>Xanthomonas axonopodis</i> pv-malvacearum (smith) Dye] of Cotton	Anand
111	18457-27	Bioefficacy & phytotoxicity of Flonicamid 50% WG against sucking pests of Brinjal	Anand
112	18457-27 (1)	Bioefficacy & phytotoxicity of Flonicamid 50% WG against sucking pests of okra	Anand
113	18457-27 (2)	Bioefficacy & phytotoxicity of Flonicamid 50% WG against sucking pests of okra	Anand
114	18457-32	Field evaluation of fungicide Pyraclostrobin 20% WG on early blight disease of tomato crop	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
115	18457-40	Bayer Fellowship Program	Anand
116	18457-41	Providing expert services regarding agriculture crops / Fodder in setting up of 1 MW Grid Connected Distributed Solar PV Pilot Project at Village: Amrol Dist: Anand- Gujarat at Director of Research	Anand
117	18457-43	Bioefficacy evaluation of new insecticide moderule PII 8007 20% SC on insect pests of Pomegranate	Anand
118	18457-44	Feasibility study for enrichment of hygienised dry sewage sludge with Plant Growth Promoting Bacterial consortium (Anubhav Bio-NPK) and to assess its efficacy in potato, tomato and Wheat	Anand
119	18457-45	To study the persistene and dissipation of Chlorpyrifos 20 % EC ON Groungnut	Anand
120	18457-46	Management of pink bollworm, <i>Pectinophora gossypiella</i> (Saunders) using PB Rope Land its impact on sucking insect pestsand beneficial Fauna in Bt cotton	Anand
121	18457-47	Bio-efficacy evaluation of a combination product PCT-16 for seed treatment in Cotton crop.	Anand
122	18457-48	Bio-efficacy evaluation of a combination product PCT-16 for seed treatment in Groundnut crop.	Anand
123	18457-49	Identification of "Molecular Protraits" in Squamous Cell Carcinoma of Horn in Kankrej (<i>Bos indicus</i>) Bullocks	Anand
124	18457-50	Effects of Novozymes products on yield and its attributes in chilli	Anand
125	18457-51	Bio-efficacy and phytotoxicity of Flonicamid 50% WG against sucking insect pests in Bt. Cotton	Anand
126	18457-52	Bio-efficacy and phytotoxicity of Spiromesifen 22.9% SG against whitefly and mites in Bt. Cotton	Anand
127	18457-53	Bio-effocacy cum phytotoxicity study of Spiromesifen 22.9% SG against brinjal mite	Anand
128	18457-54	Agronomic field studies with various products of novozymes Pvt. Ltd. on yield of cotton.	Anand
129	18457-55	સેન્દ્રીય ખેતીના પ્રોત્સાહન માટે સહાય પુરી પાડવાની યોજના	Anand
130	18457-56	Evaluation of bio-efficacy and phytotoxicity of Thiocyclam HydrogenOxalate 4% Gr (New source) against major insect pests of Rice	Anand
131	18457-57	Field bio-efficacy cum phytotoxicity evaluation of Pyraclostrobin 20%WG against Soybean-Cercospora (frog eye) & Alternaria leaf spot	Anand
132	18457-58	Evaluation of bio-efficacy and phytotoxicity of Pyraclostrobin 20%WG against Alternaria leaf spot/blight disease of cotton	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
133	18457-60	Bio-efficacy evaluation of Pyraclostrobin 20%WG against <i>Turcicum</i> leaf blight (<i>Exserohilum turcicum</i>) of Maize	Anand
134	18457-59	Evaluation bio-efficacy and phytotoxicity of Pyraclostrobin 20%WG against early blight disease of tomato	Anand
135	18457-61	Field evaluation of herbicide. Atrazine 50% WP against weeds of Maize	Anand
136	18457-62	Evaluation of in-vitro and in-vivo efficacy of a formulation containing nanotechnology based alkyl polyglycosides of herbs against mastitis pathogens and its post-exposure effect on gene expression of certain bacteria	Anand
137	18457-63	To study the persistence and dissipation of the (1) Flonicamid 50% WG on Cotton, (2) Flonicamid 50% WG on Paddy. (3) Spiromesifen 22.9% SC on Cotton, (4) Spiromesifen 22.9% SC ON Brinjal and (5) Thiocyclam Hydrogen Oxalate 4% G on Paddy	Anand
138	18457-64	Chlorothalonil 40% +Difenoconazole 4% w/w SC (Bravo Top 550 w/v SC) against Groundnut disease	Anand
139	18457-65	Evaluation of Pydiflumetofen 7.5% + Difenoconazole 12.5 w/v (200 sc) against Groundnut diseases	Anand
140	18457-66	Bio-efficacy and phytotoxicity of power oil Garnet AG (2.5% v/v) against sucking pests and pink bollworm in Bt. Cotton	Anand
141	18457-68	Certificate in agricultural extension services for input dealers	Anand
142	18457-69	To study the residue and dissipation of (1) Flupyrad 400 SC (Velum) in Banana (2) Imidacloprid 600 FS (Gaucho) in Bengal Gram, (3) Flupyrad 400 SC (Velum) in Cucumber, (4) Spirotetramat 150 OD (Movento) in Citrus, (5) Fluopicolide 4.44% + Fosetyl AL 66.67% WG (Profiler) in Citrus, (6) Betacyfluthrin 90 + Imidacloprid 180 SC WS (Solomon) in Citrus, (7) Fosetyl AL 80 WP (Aliette) in Tomato	Anand
143	18457-70	Innovative approaches value addition in dairy products and future prospects in dairy industry	Anand
144	18457-71	Bioprospecting of oxalate degrading lactic acid bacteria to develop a functional product with potential in preventing kidney stone disease	Anand
145	18457-72	To study the persistence and residues of (1) Carbendazim 12% + Mancozeb 63% WP in cotton and (2) Carbendazim 12% Mancozeb 63% WP in Soyabean	Anand
146	18457-73	Efficacy of Q8U80 500 SC for the management of root knot nematodes on multiple crops (Tomato, Brinjal, Cucumber and Capsicum)	Anand
147	18457-76	Evaluation of different organic products in Moong crop	Anand
148	18457-78	Mission for Sustainable Agriculture	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
149	18457-80	To study the persistence and dissipation of (1) Spinetoram + 36% Scin chickpea and (2) Mancozeb 75 WP on potato"	Anand
150	18457-84	Evaluatuion of performance of pearl millet viz PB 1728 (9428) and 9461	Anand
152	18457-89	Field bio-efficacy & phytotoxicity evaluation of Sulfentrazone 39.6% SC against weed complex of Soybean	Anand
153	18457-90	Field bio-efficacy & phytotoxicity evaluation Diclosulam 84% WG against weed complex of Soybean	Anand
154	18457-91	Field bio-efficacy & phytotoxicity evaluation Diclosulam 84% WG against weed complex of Groundnut	Anand
155	18457-97	Bio-efficacy cum phyto-toxicity fieldevaluation of insecticide Lufenuron 5.4% EC against American bollworm, <i>Helicoverpa armigera</i> (Hubner) Hardwick in cotton	Anand
156	18457-98	Bio-efficacy & phyto-toxicity study of Flubendiamide 20% WG tomato fruit borer	Anand
167	18457-99	Bio-efficacy & phytotoxicity study of Lufenuron 5.4% EC against chilli fruit borer	Anand
158	18557-00	Evaluation of bio-efficacy and phytotoxicity of Flubendiamide 20 WG (New Source) against stem borer and leaf folder infesting rice	Sansoli
159	18557-03	Integrated nutrient and water management in crops & animals	
160	18557-05	Standardzation of PB Rope L required for the management of pink ballorm [<i>Pectinophoragossypiells</i> (Saunders)] in BT cotton	Anand
161	18557-09	Evaluation MCW-2 (2%GR) against Root Knot Nematode (<i>Meloidogyne incognita</i>) in Capsicum (under polyhouse condition)"	Anand
162	18557-27	Evaluation of bio-efficacy of Thiamethoxam 12.6% + Lamda cyhalothrin 9.5% ZC (Alika 247 ZC) against cumin pests	Anand
163	18557-36	Bio-efficacy and phytotoxicity of BAS 325 01 I 150 SC against insect pests of tomato	Anand
164	18557-37	Bio-efficacy and phytotoxicity of BAS 325 01 I 150 SC against insect pests of chilli	Anand
165	18489-00	Upgradation/Setting of Food Testing Laboratory	Anand
166	18444-05	Testing of Spinetoram 12% SC w/v (11.7% w/w) against Lepidopteron Insectpests of Transplanted Rice at Nawagam	Anand
167	18454-14	Testing performance of new Nematicide Mew-2 (10% GR) (Fluensulfone) against Root-knot Nematodes in Tomato at BACA	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
168	18367-00	Strengthening of Agricultural Extension Activities of Agricultural Technology Information Centre (RKVY stream-II)	Anand
169	18368-00	Master Trainer Training on Agricultural Extension Activities (RKVY stream-II) - D.E.E.	Anand
170	18370-00	Strengthening of Mass Multiplication of Tissue Culture Datepalm and Jetropha (RKVY stream-I)	Anand
171	18371-00	Maximization of Crop Productivity in Saline & Water Logged Area (RKVY stream-I) - Arnej	Anand
172	18372-00	Genetic enhancement of rainfed and irrigated rice yield through conventional and molecular approaches (RKVY stream-I)	Anand
173	18373-00	Diversified cultivation for value added maize (RKVY stream-I) - Godhra	Anand
174	18374-00	Development of Integrated Farming System (RKVY stream-I) ARS, Anand (Nenpur / Sansoli / Minawada)	Anand
175	18374-01	-do- ARS, Anand (Nenpur/Sansoli)	Anand
176	18376-00	Innovative Approach for Agricultural Extension Activities by Village Adoption (RKVY stream-I) D.E.E.	Anand
177	18377-00	Agricultural Extension Activities for Specialized Agricultural Innovations (RKVY stream-I) - D.E.E.	Anand
178	18415-00	Centre of Organic Farming - RKVY Stream-II	Anand
179	18421-00	Enhancing productivity of Rice in favourable and frangible ecosystem of the Gujarat state through transfer of technology - RKVY Stream-I	Anand
180	18422-00	Referral laboratory for Food Testing and Quality Control - RKVY stream-I	Anand
181	18439-00	Transfer of mass production technology of efficient and pesticides tolerant bio-control agents <i>Trichoderma</i> spp. to farmers for sustainable management of plant diseases (RKVY stream-I)	Anand
182	18483-00	Establishment of Liquid Bio-fertilizer mass production unit (Bio-fertilizer Plant)	Anand
183	18557-41	Evaluation of sulphur and zinc based fertilizers on periodic availability and leaching of sulphur and zinc in soils and its effect on yield, nutrients content and quality parameters in <i>kharif</i> paddy and summer Green gram	Anand, Thasra
184	18557-42	Center for Development of Advance Computing (C-DAC), Hyderabad	Anand
185	18557-43	Bio-efficacy of Glufosinate Ammonium 13.5% SL against major weeds, its effect on succeeding crop and its phytotoxicity on cotton	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
186	18557-44	Bio-efficacy and phytotoxicity evaluation of Myclobutanil 10% WP against Alternaria blight in Cotton	Anand
187	18557-45	Bio-efficacy and phytotoxicity of Cyantraniliprole 200 g/l SC against insect pests of Chilli when applied as Nursery Tray Drench Application	Anand
188	18557-46	Bio-efficacy and phytotoxicity of Cyantraniliprole 200 g/l SC against insect pests of Capsicum when applied as Nursery Tray Drench Application	Anand
189	18557-47	Bio-efficacy and phytotoxicity of Cyantraniliprole 200 g/l SC against insect pests of Tomato when applied as Nursery Tray Drench Application	Anand
190	18557-48	Bio-efficacy and phytotoxicity of Cyantraniliprole 200 g/l SC against insect pests of Cucumber when applied as Nursery Tray Drench Application	Anand
191	18557-49	Bio-efficacy and phytotoxicity of Cyantraniliprole 200 g/l SC against insect pests of Watermelon when applied as Nursery Tray Drench Application	Arnej
192	18557-53	Effect of krishisol on growth, yield and quality of Chikpea (<i>Cicer arietinum</i> L.)	Derol
193	18557-56	Evaluation of bio-efficacy of SYN 547407 100 DC against pests complex in Redgram	Vadodara
194	18557-57	Evaluation of bio-efficacy of SYN 547407 10 % w/v DC against pests complex in Cotton	
195	18557-58	Evaluation of bio-efficacy of Spiropidion 30% + Acetamipride 24% WG against Cotton pests	Arnej
196	18557-64	Recent Agricultural Practices for Cereal & Spice Crops	Anand
197	18557-65	Value addition and marketing of Tomato, Chili, Cauliflower & other Cereal & Spice Crops	Anand
198	18557-67	Bhutan Students Hostel Fees	Anand
199	18557-68	Swadeshi Science Movement	Anand
200	18557-74	Recent managemental practices for crops and animals	Anand
201	18557-80	Effect of krishisol on growth, yield and quality of Onion (<i>Allium cepa</i> L.)	Anand
202	18557-81	Evaluate the efficiency of potassium thiosuphate and calcium thiosulphate on yield, nutrient uptake and quality of potato and cabbage and changes in soil properties under middle Gujarat conditions	Anand
203	18558-00	Efficacy of Fluazaindolizine (Q8U80) 500SC for the management of root knot nematode on Bitter gourd	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
204	18558-01	Efficacy of Fluazaindolizine (Q8U80) 500SC for the management of root knot nematode on multiple crops (Okra, Water melon and Ridge gourd)	Anand
205	18558-05	Bio-efficacy of DAH-307 17.18% EC against weeds, its phytotoxicity on Groundnut and effect on succeeding crops	Anand
206	18558-06	Bio-efficacy field trial of insecticide against fall armyworm, <i>Spodoptera frugiperda</i> (J.E.Smith) infesting maize	Anand
207	18558-07	Evaluation of performance of Maize Hybrids	Godhra
208	18558-15	Evaluation of bio-efficacy of SYN 547407 10% w/v DC against pests complex in Groundnut	Anand
209	18558-16	Effect of organic product Denicotinised Tobacco Dust (DTD) on plant growth and fruit yield of Okra in <i>Kharif</i> season	Anand
210	18558-17	Efficacy of Fluazaindolizine (Q8U80) 500SC for the management of root knot nematode on Bitter gourd	Anand
211	18558-18	Bio-efficacy of ULALA (Flonicamid 50% WG) against insect pest of Soybean	Devagadhbaria
212	18558-19	Bio-efficacy of ATABRON (Chlorfluzuron 5.4% EC) against insect pest of Soybean	Devagadhbaria
213	18558-35	Effect of YUSA crystal on growth and yield of crops and soil properties	Anand
214	18558-36	Assessment of trace any heavy metal buildup in soil and plant using treated effluent water	Anand
215	18558-37	Effect of blow down STP treated water of thermal power station on crop yield and soil properties	Anand
216	18558-38		Anand
217	18558-39	(1) To Study the residue and dissipation of Flubendiamide 480 g/L SC (Fame) in/on Mentha (One Season) (2) To study the residue and dissipation of Fluoxapiprolin 30 g/L + Fluopicolide 200 g/L SC in/on Potato (One Season) (3) To Study the residue and dissipation of Iprovalicrb 8.4% + Copper Oxy Chloride 40.6% WG in/on Cucunber (One Season)	Anand
218	18558-40	Improving rainfed <i>Kharif</i> maize productivity	Godhra
219	18558-42	Crop Protection in Horticultural Crops under NHM	Anand
220	18558-52	Effect of biogas slurry based Su-dhan product on growth and yield of wheat (<i>rabi</i>) and maize (<i>kharif</i>) crops	Anand
221	18558-53	Workshop of S.P.N.F trainer	Anand
222	18558-55	Evaluation of performance of Rice Hybrids	Nawagam





Sr. No.	Budget Head	Name of the Scheme	Center
223	18558-56	Feasibility of processed biomass sludge as Organic manure and its effect on crops yield and soil properties	Anand
224	18558-57	Evaluation of bio-efficacy of Cyantraniliprole 20% + Lufenuron 20% w/v SC (400SC) against cotton pests	Anand
225	18558-58	Evaluation of performance of Rice Hybrids-1	Nawagam
226	18558-59	Building a network of researchers with expertise in molecular diagnostics to monitor and investigate antimicrobial resistance (AMR) in South Asia	Anand
227	18558-60	To study the persistence and dissipation of Fluxapyroxad 167g/l + Pyraclostrobin 333g/l SC in/on Cumin regarding-(ST-406)	Anand
228	18558-61	Evaluation of Rallis Fungicide Pre-Mixture, Ayaan 48% WG (Kresoxim Methyl 40% + Hexaconazole 8%) for Bio-efficacy and Phytotoxicity on Soybean	Devgadhbaria
229	18558-62	Effect of nano fertilizers on growth and yield of maize and soil properties	Anand
230	18558-64	To study the persistence and dissipation of Zineb 75% WP in/on Chilli (One season) regarding...(ST-386) and To study the persistence and dissipation of Zineb 75% WP in/on Potato (One season) regarding...(ST-388)	Anand
231	18558-65	Development of irrigation facilities by rainwater harvesting through farm pond at College of Agriculture, AAU, Vaso, Dist. Kheda	Vaso
232	18558-66	To study the residue and persistence of Tetraniliprole 120 g/L + Spirotetramat 240 g/L SC (Vayego Care) in/on Chilli and Soil (One season) Tetraniliprole 120 g/L + Spirotetramat 240 g/L SC (Vayego Care) in/on Tomato and Soil (One Season) regarding...(ST-400)	Anand
233	18558-67	Evaluation of insecticide, Dimethoate 30% EC for bio-efficacy (against pests) in Potato, its safety to natural enemies and phytotoxicity effect on the crop	Anand
234	18558-68	Testing fee to study the residue and persistence of UPH 616 (Propanil 60% + Propyrisulfuron 2.0% WG) in/on Rice (Direct seeded) regarding (ST-408)	Anand
235	18558-69	1.Study the residue and dissipation of Tetraniliprole 480 g/L FS (Reatis) in/on Maize and Soil (One season) regarding...(ST-409) (2) Study the residue and persistence of Fluopyram 400 g/L SC (Velum Prime) in/on Potato (Soil Drenching) (Two seasons) regarding...(ST-410) and (3) Study the residue and persistence of Isoxaflutole 225 g/L + Thien carbazonemethyl 90 g/L SC in/on Maize (Two seasons) regarding...(ST-411)	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
236	18558-70	Assessment of farmers chilli variety AMP-R for Food Processing Chutney & Sauce Production	Anand
237	18558-71	Evaluation of performance of chicklet variety	Anand
238	18558-72	ગુજરાત ઓર્ગેનીક કૃષિ યુનિવર્સિટીના સ્ટાફની બેઠક વ્યવસ્થાની કામગીરી	Anand
239	18558-79	Testing fee to study the residue and dissipation of Pyrethrin Sodium+ Bifenthrin Sodium in/on Rice (Two Seasons) regarding...(ST-413)	Anand
240	18559-22	Testing fee to study the residue and persistence of Flufenacet 24% + Metribuzin 17.5% WG in/on Potato and Soil (One Season) Regarding ... (ST-447)	Anand
241	18559-23	Workshop on Nursery Management in Horticulture Crops	Anand
242	18559-24	Organizing Annual Zonal Workshop of KVKs (Zone-VIII) at Anand Agricultural University, Anand	Anand
243	18559-25	Evaluation of bio-efficacy of Chlorantraniliprole 4.3% + Abamectin 1.7% w/w SC against Cotton Pests	Anand
244	18559-26	Bio-efficacy and phytotoxicity of BCS-CW64991 20% SC against mites in Chilli	Anand
245	18559-27	Bio-efficacy and phytotoxicity of BCS-CW64991 20% SC against mites in Brinjal	Anand
246	18559-28	Evaluation of fertilizers i.e. TZ-708 and T-90 on Groundnut	Anand
247	18559-29	Certificate Course on Integrated Nutrient Management for Fertilizer Dealers	Anand
248	18559-30	Evaluation of Performance of Corn Hybrids	Godhra
249	18559-31	Crop safety evaluation of Betacyfluthrin 90 g/L + Imidacloprid 210 g/L (Soloman) on Cotton crop applied through Drone	Anand
250	18559-32	CSIR-JRF Fellowship	Anand
251	18559-33	Isolation, Multiplication and Invitro testing of entomopathogenic fungi and bacteria against insect pest	Anand
252	18559-34	Agri-Drone Project under Sub Mission on Agricultural Mechanization	Arnej/Anand
253	18559-35	Efficacy evaluation of Fluopyram 400 G/L SC (Velum Prime) on Citrus	Anand
254	18559-36	AICTE Training & Learning (ATAL) Academy FDPs/CPDPs (1649738413-High Pressure Processing of Food Products)	Anand
255	18559-37	MISSION MADHMAKHI' TRAINING PROGRAMME	Anand
256	18559-38	PMFME Scheme	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
257	18559-39	To study the residues/persistence of Chlorantraniliprole 4.3% + Abamectin 1.7% SC in/on Watermelon regarding (ST-451), To study the residues/persistence of Chlorantraniliprole 4.3% + Abamectin 1.7% SC in/on Pomegranate regarding (ST-452), To study the residues/persistence of Chlorantraniliprole 4.3% + Abamectin 1.7% SC in/on Cotton regarding (ST-453), To study the residues/persistence of Azoxystrobin 4.8% + Chlorothalonil 40% SC in/on Pea regarding (ST-455)	Anand
258	18559-40	To study the residue and persistence of Triafamone 37.5 g/L + Fentrazamide 300 g/L SC in/on Direct Seeded Rice (One Season) regarding... (ST-457), To study the residue and persistence of Triafamone 37.5 g/L + Fentrazamide 300 g/L SC in/on Transplanted Rice (One Season) regarding (ST-458), To Study the residue and persistence of Triafamone 40 g/L + Oxadiazon 240 g/L SC in/on Direct Seeded Rice (One Season) regarding... (ST-459), To Study the residue and persistence of Triafamone 40 g/L + Oxadiazon 240 g/L SC in/on Tranplanted Rice (One Season) regarding (ST-460), To Study the residue and persistence of Isotianil 200 g/L + Trifloxystrobin 80 g/L FS in/on Rice (One Season) regarding (ST-461), To sturdy the residue and persistence of Isotianil 120 g/L + Trifloxystrobin 100 g/L SC in/on Rice (One Season) regarding (ST-462), To study the residue and persistence of Trifloxystrobin 500 g/L SC in/on Rice (One Season) regarding (ST-463), To Study the residue and persistence of Propineb 70% WG in/on Rice (One Season) regarding (ST-464)	Anand
259	18559-41	To Study the residue and persistence of Spirotetramat 150 g/L OD in/on Pomegranate (One Season) regarding (ST-465), To Study the residue and persistence of Spirotetramat 150 g/L OD in/on Banana (One Season) regarding (ST-466), To Study the residue and persistence of Spirotetramat 150 g/L OD in/on Cucumber (One Season) regarding (ST-468), To study the residue and persistence of Thiencarbazon-methyl 68 g/L + Tembotrione 345 g/L SC in/on Maize (One Season) regarding (ST-469), To study the residue and persistence of Flufenacet 24% + Metribuzin 17.5% WG in/on Soybean (One Season) regarding (ST-470), To Study the residue and persistence of Tetraniliprole 200 g/L SC (Vayego) in/on Groundnut (One Season) regarding (ST-473), To study the residue and persistence of Tetraniliprole 200 g/L SC (Vayego) in/on Blackgram (One Season) regarding (ST-474)	





Sr. No.	Budget Head	Name of the Scheme	Center
260	18559-42	To study the residue and persistence of Fluopyram 400 g/L SC (Velum Prime) in/on Carrot (Two Seasons) regarding...(ST-475), To study the residue and persistence of Fluopyram 400 g/L SC (Velum Prime) in/on Ginger (Two Seasons) regarding...(ST-476), To study the residue and persistence of Fluopyram 400 g/L SC (Velum Prime) in/on Citrus (Two Seasons) regarding...(ST-477), To study the residue and persistence of Fluopyram 400 g/L SC (Velum Prime) in/on Guava (Two Seasons) regarding (ST-478)	Anand
261	18559-43	Capacity Building on Production of Biocontrol Agents	Anand
262	18559-44	Out Scaling of Natural Farming through KVKs	Dahod/Arnej/ Devataj
263	18559-45	Evaluation of hybrid entry for fruit yield and its attributing characters in Chilli	Anand
264	18559-46	Testing of Biovita Gr. Product on growth, fruit yield and its attributing characters in Chilli	Anand
265	18559-47	Evaluation of bio-Efficacy and phytotoxicity of GPF 215 against powdery mildew and Alternaria blight of Cumin	Anand
266	18559-48	Evaluation of bio-efficacy and phytotoxicity of UPF 1317 against powdery mildew and Alternaria blight of Cumin Crop	Anand
267	18559-49	Evaluation of bio-efficacy and phytotoxicity of GPF 1215 against powdery mildew and Alternaria blight of Cumin Crop	Anand
268	18559-50	Development of clonal seed garden through mass multiplication of high yielding elite oil palms using tissue culture	Anand
269	18559-51	Efficacy of Thiamethoxam 30% FS as seed treatment against early crop stage insect-pests in Cumin	Anand
270	18559-52	Bio-efficacy and phytotoxicity of PII 301 10% SC against black thrips in Chilli	Anand
271	18559-53	Training under Mission Madhmakhi	Anand
272	18559-54	To study the residue and persistence of Betacyfluthrin 90 g/L + Imidacloprid 210 g/L OD in/on Banana (ST-502), To study the residue and persistence of Tetraniliprole 200 g/L SC in/on Chickpea (ST-505), To study the residue and persistence of Fluopicolide, 62.5 g/L + Propamocarb hydrochloride 625 g/L SC in/on Chilli (ST-499). To study the residue and persistence of Trifloxystrobin 500 g/L SC in/on Chilli (ST-503), To study the residue and persistence of Fluopyram 250 g/L + Difenconazole 125 g/L SC in/on Chilli (ST-506), To study the residue and persistence of Flubendiamide 90 g/L + Deltamethrin 60 g/L SC in/on Mango (ST-498), To study the residue and persistence of Fluopyram 200 g/L SC + Tebuconazole 200 g/L SC in/on Cucumber (ST-501)	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
273	18559-55	Efficacy evaluation of 400 G/L SC (Velum Prime) on Ginger	Anand
274	18559-56	Bio-efficacy of Spidoxamat 9.6% + Spinetoram 12% WG against Pink bollworm in Cotton	Anand
275	18559-57	Effect of Amul organic manures and liquid biofertilizer products on growth and yield of Maiz (<i>Kharif</i>) and Wheat (<i>rabi</i>) crops	Anand
276	18559-58	Evaluation of Spidoxamat 9.6% + Spinetoram 12% WG against thrips and whitefly in Cotton	Anand
277	18559-59	Efficacy of SA-23-24 (Bio-stimulant) application on yield quality and soil properties under Vegetable Cluster Bean (Guar)	Anand
278	18559-60	Evaluation of Performance of Corn Hybrids	Godhra
279	18559-61	Dhirubhai Ambani Institute of Information and Communication Technology, Gandhinagar and Indian Institute of Remote Sensing, Daheradun-M.sc (Agriculture Analytics) Syllabus	Anand
280	18559-62	Microbial Bio-formulations: Sustainable utilization approaches for cotton plant health management	Anand
281	18559-63	Study on efficacy of Nano-DAP fertilizer on growth, yield and nutrients content in Maiz and Pearl millet	Anand & Jabugam
282	18559-64	Efficacy study of liquid urea on growth, yield & grain quality of Rice	Nawagam
283	18559-65	Horticulture related training programme for Department Officers	Anand
284	18559-66	Evaluation of bio-efficacy of PIX 20002 20% SC against bollworms in Cotton	Anand
285	18559-67	Improving Animal Health Practices of Veterinarians and Livestock Farmers to contain Antimicrobials Resistance and Promote One Health (Bangladesh, India, Nepal and Sri Lanka) at EEI	Anand
286	18559-68	Mahila Kisan Diwas-2023	Anand
287	18559-69	Study on determining storage losses of pulses stored in warehouses and to recommend norms for loss/gain during long term storage	CAET, Godhra
288	18559-70 SPSSP	Entrepreneurship and Skill Development Programmes (ESDP) Scheme	Anand
289	18559-71	Residue and persistence studies of Chlorantraniliprole 9.3% + Lambda cyhalothrin 4.6% ZC in Chilli (ST-511), Residue and persistence studies of Chlorantraniliprole 9.3% + Lambda cyhalothrin 4.6% ZC in Green gram (ST-512), To study the residue and persistence studies of Pydiflumetofen and Difenconazole in Pomegranate Whole Fruit, seeds juice and soil after foliar spray of Pydiflumetofen 6.89% + Difenconazole 11.49% SC (ST- 513), Residue and persistence studies of Oxathiapiprolin 3% + Metaiaxyl-M	





Sr. No.	Budget Head	Name of the Scheme	Center
		18% DC in Tomato (St-514), Residue and persistence studies of Oxathiapiprolin 3% + Metaiaxyl-M 18% DC in Cucumber (ST-515), Residue and persistence of Sedaxane 15% Azoxystrobin 3.75%+ Thiamethoxan 26.25% FS in/on Soyabean as Seed treatment, Residue and persistence Pydiflumetofen + Fludioxonil in/on Pomegranate, Residue and persistence of Cyantraniliprole 20% + Lufenuron 20% SC in/on Chilli, Residue of Pydiflumetofen 13.6% + Propiconazole 11.4% SE in/on Cotton, Residue of Pydiflumetofen 13.6% + Propiconazole 11.4% SE in/on Soybean, Residue and persistence of Oxathiapiprolin 1.4% Azoxystrobin 14.46% SC in/on Tomato, Residue and persistence of Oxathiapiprolin 1.4% Azoxystrobin 14.46% SC in/on Cucumber, Residue and persistence of Pydiflumetofen 13.6% + Propiconazole 11.4% SE in/on Wheat, Residue and persistence of Oxathiapiprolin 3.0% + Metalaxyl-M 18% DC in/on Citrus	Anand
290	18559-72	Effect of Krushi Balam on growth and yield of Wheat	Anand, Vaso, Thasra
291	18559-73	Gender budgeting and sensitization in agriculture and allied sectors	Anand
292	18559-74	Student Training Program under the DBT Support Skill Vigyan Program	Anand
293	18559-75	Residues and persistence studies of Trifloxystrobin 100 g/L + Tebuconazole 200g/L SC in/on Maiz (ST-516), Residues and persistence studies of Spirotetramat 150 g/L OD (Movento) in/on Tomato (ST-519), Residues and persistence studies of Spidoxamat 9.6% + Spinetoram 12% WG in/on Tomato (ST-521), Spindoxamat 9.6% + Spinetoram 12% WG in/on Chilli (ST-522), Betacyflithrin 90 g/L + Imidacloprid 210 g/L OD (Solomon) in/on Pomegranate (ST-518), Residues and persistence studies of Betacyfluthrin 90 g/L Imidacloprid 210 g/L OD (Solomon) in/on Potato (ST-520), Residues and persistence studies of Fluopicolide 62.5 g/L + Propamocarb hydrochloride 625 g/L SC (Infinito) in/on Pomegranate (ST-517)	Anand
294	18559-76	Natural Farming for the Master Trainers	Anand
295	18559-77	Brainstorming Session of IAUA	Anand
296	18559-78	Bio-efficacy of AgroSatva Gr bio stimulant on growth and yield of Greengram (<i>Vigna radiata</i> L.)	Anand
297	18559-79	Residues and persistence of Fipronil 15% + Flonicamid 15% WG in Cumin, Residues and persistence of Fipronil 15% Flonicamid 15% W Gin Okra, Residues and persistence of Flonicamid 18.50% + Spinosad 13.76% SC (GPI-0322) in Cotton	Anand
298	18246-97 MP	"Gramin Krishi Mausam Sewa"	Arnej
299	18005-01 MP	Agro. Met. Advisory Services renamed as "Gramin Krishi Mausam Sewa"	Anand





Sr. No.	Budget Head	Name of the Scheme	Center
300	18559-80	Evaluation of performance of Bajra Hybrids	Anand
301	18559-81	Energy conservation workshop for farmers through Krishi Vigyan Kendras (KVKs)	Anand
302	18559-82	Study on efficacy of nano input products on growth, yield and nutrients content in Maiz and Pearl millet	Anand, Jabugam, Anand
303	18559-83	Training programme on seed production of fodder crops	Anand
304	18559-84	Development of Taluka scale precise crop yield prediction application for selected districts of Gujarat using remote sensing, AI and machine learning	Godhra
305	18559-85	Evaluation of the effect of FLUMETRALIN 125 SC on the sucker control of tobacco	Anand
306	18559-86	Evaluation of premix CIX-4116 for bio efficacy and phytotoxicity on Soyabean as pre-emergence and its effect on succeeding crop	Anand
307	18559-87	Evaluation of Pydiflumetofen 7.5% + Difenconazole 12.5% w/v (200 SC) against Cumin diseases	Anand
308	18559-88	Utilization of processed biomass sludge as organic manure and its effect on crops yield and soil properties	Anand
309	18559-89	Various horticultural aspects for farmers/entrepreneurs of various districts of the Madhya Pradesh state	Anand
310	18559-90	Creation of Seed Infrastructure Facilities under Sub-Mission on Seed and Planting Materials	Anand, Dabhoi, Thasra, Derol, Sansoli,
311	18559-91	Azadika Amrit Mahotsav and Amrit Mahotsav par Yuva Sankalp, Shresth Bharat or Panch Prakalp	Anand
312	18559-92 SP	Entrepreneurship and Skill Development Programmes (ESDP) Scheme	Anand
313	18559-93	Various Agricultural Aspects for Farmers/Entrepreneurs	Anand
314	18559-94	Deputy Director Agriculture Cum Project Director (ATMA), Jhalawar, Rajasthan	Anand
315	18559-95	Deputy Director Agriculture Cum Project Director (ATMA), Dungarpur, Rajasthan	Anand
316	18559-96	Deputy Director of Agriculture (ATMA), Badmer, Rajasthan	Anand
317	18559-97	Deputy Director of Agriculture (ATMA), Bhilwara, Rajasthan	Anand
318	18559-98 NP	Policy on Promotion of Organic Fertilizers	Anand
319	18559-99	Evaluation of efficacy of sulphur, magnesium and micronutrients containing complex fertilizers for maximizing yield through balanced nutrition of important crops grown in India	Devataj



Appendix

4

LIST OF RESEARCH PAPERS PUBLISHED

1. FACULTY OF AGRICULTURE/ HORTICULTURE

A. International Journal

1. Acharya R. R., Pandya M. M., Patel N. A. and Patel A. L. (2024). Breeding *Capsicum annum* L. 'Anand Tej' for Enhanced Yield, Quality and Leaf Curl Virus Tolerance. ***Agriculture Association of Textile Chemical and Critical Reviews Journal***, 12(4): 515-521.
2. Acharya V. R., Kumar S., Acharya Z. R., Gor Dimple, Patel N. B. and Parihar A. (2024). Modification of the sex expression and maintenance of gynoeocious parthenocarpic line in cucumber (*Cucumis sativus* L.) ***International Journal of Advanced Biochemistry Research***, 8(11): 928-931.
3. Adbhai A., Talati J. G., Kumar S., Sakure A., Acharya R. R. and Patel N. J. (2025). Study of galactomannan content, gum viscosity and rheological properties and diversity analysis through biochemical traits and simple sequence repeat (SSR) markers in cluster bean. ***Genetic Resources and Crop Evolution***, 72:6361-6373. DOI: 10.1007/s10722-025-02404-0.
4. Adhikari V., Dabhi M. V., Gangwar R. K. and Kalola A. D. (2024). Morphological Correlation Study of Wheat Varieties Against *Rhizopertha dominica* (Fabricius). ***Progressive Research: An International Journal***, 19(7): 348-350.
5. Akbari D., Patel R., Barad A. H. and Mohapatra A. (2024). Evaluation of different ready-mix insecticides against the insect pest of sesame. ***Plant Archives***, 24(2): 2674-2678.
6. Anitha V., Kalasariya R. L., Shudeer, Shravya S. K. and Ramya R. (2024). Impact of increasing atmospheric carbon dioxide on insect pests and natural enemies. ***International Journal of Advanced Biochemistry Research***, SP-8(8): 1244-1250.
7. Asari P.S., Panchal B. H., Macwan S. J. and Barot T.S. (2024). Effect of organic nutrients on growth, yield and quality of beetroot (*Beta vulgaris* L.) var. crimson globe. ***International Journal of Advanced Biochemistry Research***, 8(8): 976-981.
8. Babariya R., Das A., Mamidipalli H., Chavadhari R. M., Satapathy A. and Mistry J. G. (2025). Trait association with respect to floral morphology and agro-morphology in selected cultivars and wild genotypes of Brassicaceae. ***Plant Archives***, 25(1): 2053-2059.
9. Babu B., Mathur R., Suresh K., Ravichandran G., Susanthi B., Patil G., Ruthweek N. and Mahesh M. (2025). Efficient regeneration protocol for producing true-to-type oil palm (*Elaeis guineensis* (Jacq.) through somatic embryogenesis from immature male inflorescence. ***Heliyon***, 11(1): e41479. DOI: 10.1016/j.heliyon.2024.e41479.





10. Bagadia I. K., Parmar A. B., Kathad S. V. and Vitthalapar M. K. (2024). Standardisation of different levels and split application of nitrogen on growth and yield of sweet orange [*Citrus sinensis* (L.) OSBECK] cv. Phule Mosambi. **International Journal of Advanced Biochemistry Research**, 8(8): 383-387.
11. Bagadia I. K., Parmar A. B., Masu M. M. and Solanki Jyotiraditya (2024). Standardisation of different levels and split application of nitrogen on quality of sweet orange [*Citrus sinensis* (L.) osbeck] cv. PhuleMosambi. **International Journal of Advanced Biochemistry Research**, 8(9): 969-972.
12. Bansal R. and Shaikh A. S. (2024). Export status of pomegranate in India and Gujarat. **Journal of Agricultural Research and Technology**, 49(1): 172-178.
13. Barad A. H., Prajapati H. N., Parekh D. D. and Trivedi N. P. (2024). Efficacy of organic inputs against aphid, *Lipaphisps eudobrassicae* Davis infesting broccoli. **International Journal of Advanced Biochemistry Research**, 8(7): 92-95.
14. Bhagora D. P., Chaudhary C. S., Makwana S. N. and Patel S. L. (2024). Effect of inorganic and organic nutrients on quality and yield parameters of fodder sorghum under south Gujarat condition. **International Journal of Research in Agronomy**, 7(12): 680-682.
15. Bhattacharjee P., Patel M. J., Warang O., Jadav N. J. and Debbarma S. (2024). Impact of integrated nutrient management on yield, soil and plant nutrient status in sweet orange (*Citrus sinensis* L.) cv. Phule Mosambi. **Communications in Soil Science and Plant Analysis**, 55(16): 2379-2392.
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17. Bhuva S., Prajapati H. N., Barad A. H. and Patel D. (2024). Evaluation of efficacy of fungicides against purple blotch of onion in field conditions. **Plant Archives**, 24(2): 2440-2444.
18. Birla D., Patel R. A., Makwana S. N. and Yadav S. L. (2024). Effect of integrated nitrogen management practices on growth and yield of *kharif* maize. **Journal of Experimental Agriculture International**, 46(12): 58-65.
19. Chandan G. Y. and Khokhar A. N. (2025). A comparative study of deep learning models for cotton price forecasting in Gujarat, India. **International Journal of Agriculture and Environmental Research**, 11(01): 246.
20. Chaudhari J. H., and Mishra A. (2025). Effects of Spacing and Nitrogen on Castor (GAC 11) Grown in Heavy Black Soil. **Journal of Experimental Agriculture International**, 47(2): 417-424.
21. Chaudhari J. H., Zala M. B., Hajari R. V., Patel B. N., Machhar R. G., Jhala Y. K. and Mishra A. (2025). Response of castor (GCH 10) to spacing and nitrogen under irrigated condition. **International Journal of Research in Agronomy**, 8(2): 245-251.
22. Chaudhari U. C., Shah N. I., Maheriya P. A. and Rathva V. D. (2024). Effect of different growing condition with growing media on growth, flowering and yield *Asiatic liliium*. **International Journal of Advanced Biochemistry Research**, 8(8): 764-770.
23. Chaudhari U. C., Shah N. I., Maheriya P. A., Makwana R. J. and Rathva V. D. (2024). Impact of varied growing conditions and media on the growth and yield of *Asiatic liliium*. **International Journal of Research in Agronomy**, 7(9): 496-501.





24. Chaudhari V. D., Viridia H. M. and Chaudhari P. R. (2024). Impact of planting methods, spacing and intercropping on yield, nutrient content and uptake by sugarcane under south Gujarat conditions. ***International Journal of Research in Agronomy***, 7(1): 230-235.
25. Chaudhari V. K. and Sisodiya D. B. (2024). Population dynamics of pink bollworm in *Bt* cotton at middle Gujarat. ***International Journal of Advanced Biochemistry Research***, 8(8): 515-519.
26. Chaudhari V. K., Patel V. B., Patel M. P. and Bhanvadia A. S. (2024). Field Efficacy of a Combination of Seed Treatment and Foliar Spray against Pest Complex in Green Gram. ***Legume Research: An International Journal***, 47(2): 268-276.
27. Chaudhary A., Gangwar R. K. and Thorat S. S. (2024). Status of Bacterial Leaf Blight in Major Rice Growing Districts of Gujarat. ***Journal of Rice Research***, 17(2): 106-112.
28. Chaudhary B. M. and Yadav S. B. (2024). Investigating the impact of climate change on direct seeded rice production in middle Gujarat using the InfoCrop-rice model. ***International Journal of Environment and Climate Change***, 14(9): 351-359.
29. Chaudhary C. S., Bhagora D. P., Makwana S. N. and Patel S. L. (2024). Evaluation of herbicide efficacy and combinations for weed management in non-crop situation. ***International Journal of Research in Agronomy***, 7(12): 683-686.
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31. Chaudhary J. H., Zala M. B., Hajari R. V., Patel B. N., Machhar R. G., Jhala Y. K. and Mishra A. (2025). Response of castor (GCH 10) to spacing and nitrogen under irrigated condition. ***International Journal of Research in Agronomy***, 8(2): 245-251.
32. Chaudhary P. M., Leua H. N., Patel P. D., Makwana S. N. and Gohil V. M. (2024). Impact of different seed treatments on germination of chironji (*Buchanania lanzan* Spreng.). ***International Journal of Research in Agronomy***, 7(8): 572-574.
33. Chaudhary P. M., Rathva A. D., Patel P. D., Makwana S. N. and Lunagariya R. J. (2024). Effect of different seed treatments on germination and seedling growth of Chironji (*Buchanania lanzan* Spreng.). ***International Journal of Research in Agronomy***, 7(8): 564-568.
34. Chauhan A. H., Shinde R. D., Kumar D. and Parmar P. M. (2024). Effect of potassium and zinc on soil properties and fraction of potassium and zinc in soil. ***International Journal of Plant and Soil Science***, 36(9): 668-676.
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38. Chauhan Z. Y., Shah S. N., Patel K. C., Shroff J. C. and Patel H. K. (2024). Optimizing integrated nutrient management for sustainable maize–sesame cropping in Gujarat Plains: A soil health perspective. ***Soil Science Society of America Journal***, 88(3): 846-857. <https://doi.org/10.1002/saj2.20664>
39. Chavda J. D., Raval C. H., Rathod P. H. and Patel H. K. (2024). Growth, yield, quality, nutrient content, uptake and economics of fenugreek affected by levels of phosphorus and Sulphur in alluvial soil. ***International Journal of Research in Agronomy***, 7(7): 559-563.
40. Chavda K., Suthar J. V., Patel H. K., Kurkutiya S. R. and Patel A. J. (2024). Bio-efficacy of herbicides on weed growth, yield and economics of *kharif* sorghum. ***International Journal of Research in Agronomy***, 7(7): 936-938.
41. Chawra U., Kacha H. L., Rani R. R., Bhabhor G. K. and Makwana N. D. (2024). Rainfall Variability and Crop Planning of Dahod: A Case study from Tribal District in Gujarat, India. ***International Journal of Environment and Climate Change***, 14(4): 259-266.
42. Choudhary P., Patel K. C., Choudhary V. K., Kumawat S. L. and Makwana S. (2024). Exploring the Potential of Sulphur Nanoparticles in Soybean (*Glycine Max*) Cultivation. ***International Journal of Plant & Soil Science***, 36(12): 645-650.
43. Choudhary, P., Patel K. C., Lakshman S. R., Singh P and Yadav S. L. (2024). Influence of Soil Texture on the Mineralization of Sulphur Nanoparticles under Incubation. ***International Journal of Environment and Climate Change***, 14(12): 621-31.
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45. Dabhi, M. R., Italiya J. V., Barot, R. C., Chaudhary, K. V. and Singh, N. A. (2024). Species composition of grasshopper fauna in different habitats of Jabugam in Gujarat, India. ***Plant Archives***, 24(2): 838-846.
46. Damor A. S., Patel J. N. and Parmar H. K. (2024). Heterosis studies for grain yield and its component traits in pearl millet hybrids [*Pennisetum glaucum* (L.) R. Br.]. ***International Journal of Advanced Biochemistry Research***, 8(10): 35-44.
47. Damor A. S., Patel J. N., Patil K., and Mungra K. D. (2024). Combining ability analysis for grain yield and its component traits in pearl millet (*Pennisetum glaucum* L. R. Br.). ***Plant Archives***, 24(2): 621-627.
48. Damor C. B., Patel M. R. and Rathod D. M. (2024). Motivational factors and Constraints faced by beneficiary tribal farmers in obtaining benefits of Agricultural Technology Management Agency. ***International Journal of Agriculture Extension and Social Development***, 7(9): 573-575.
49. Damor C. B., Patel M. R. and Rathod D. M. (2024). Relationship between psychological characteristics of beneficiary tribal farmers and their socio-techno-economic change. ***International Journal of Agriculture Extension and Social Development***, 7(9): 125-130.
50. Damor C. B., Rathod D. M., Hadiya G. D. and Pate M. B. (2024). Relationship between the profile of FIGs members and their cohesiveness of ATMA project. ***International Journal of Agriculture Extension and Social Development***, 7(6): 259-263.





51. Damor C. B., Rathod D. M., Hadiya G. D. and Patel M. B. (2024). Constraints and suggestions faced by the farmers in adoption maize cultivar GAYMH 1. **International Journal of Agriculture Extension and Social Development**, 7(6): 127-130.
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53. Damor C. B., Rathod D. M., Hadiya G. D. and Patel M. B. (2024). Training needs of chickpea growers in Panchmahals district. **International Journal of Agriculture Extension and Social Development**, 7(6): 269-275.
54. Damor C. B., Rathod D. M., Hadiya G. D. and Patel M. B. (2024). Training needs of chickpea growers in Panchmahals district. **International Journal of Agriculture Extension and Social Development**, 7(6): 269-275.
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56. Dave P. B., Mistry J. G., Amin B. A. and Patel K. V. (2024). Estimates of genetic components for yield and its related traits in pearl millet hybrids (*Pennisetum glaucum* L. R.Br.). **International Journal of research in Agronomy**, 7(8): 667-671.
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63. Devi G., Raju N. and Kar S. (2025). Environmental Sustainability through Green Economy in Context to Indian Scenario: A Review. **Medicon Agriculture and Environmental Sciences**, 8(2): 16-27.
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- on growth and yield of *kharif* maize. **Journal of Experimental Agriculture International**, 46(12): 58-65.
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71. Dodiya R. D., Haldhar S. M., Mitra D. and Barad A. H. (2024). New host plant records of rugose spiralling whitefly, *Aleurodicus rugioperculatus* Martin (Hymenoptera: Sternorrhyncha: Aleyrodidae) in diverse habitats. **Journal of Agriculture and Ecology**, 19: 66-76.
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77. Ghetiya R. and Kalola A. (2024). Comparison of selection indices using equal weight, standard deviation and heritability weight methods in finger millet. ***International Journal of Statistics and Applied Mathematics***, 9(1): 15-19.
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A. International Journal

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B. National Journal

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4. FACULTY OF AGRICULTURAL INFORMATION TECHNOLOGY

A. International Journal

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5. FACULTY OF AGRICULTURAL BUSINESS MANAGEMENT

A. International Journal

431. Aambaliya P., Dudhagara C. R. and Mahera A. B. (2024). Perception and Problems of Kitchen Gardening in Jamnagar District of Gujarat, India. **Journal of Experimental Agriculture International**, 46(7): 631-637.
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445. Kumar M. S., Singh P. K., Lad Y. A. and Guatam R. S. (2025). Factors Influencing Farmers to Adopt Potato Contract Farming in Gujarat. ***Potato Research***, 10(25): 9850-9863.
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447. Kumar R., Lad Y. A. and Singh P. K. (2024). Forecasting Potato Prices in Agra: Comparison of Linear Time Series Statistical vs. Neural Network Models. ***Potato Research***, 10(25): 9638-9855.
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452. Patel H. D. and Mahera A. B. (2024). Natural farming: A sustainable path for modern agriculture. ***International Journal of Research in Agronomy***, 7(12): 642-647.
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- B. National Journal**
463. Dubey H., Panigrahy S. R. and Pundir R. S. (2024). Agritourism Policies in India. **The Agriculture Magazine**, 3(10): 17-22.
464. Mohapatra A. and Panigrahy S. R. (2025). Hydroponic fodder production technology for sustainable animal feed production. **Indian Farming**, 74(12): 11-14.
465. Panigrahy S. R. (2024). Effective Cow Dung Disposal Pattern: A Need of the Hour. **Vigyan Varta**, 5(11): 244-246.
466. Patel S. R., Mishra S. and Panigrahy S. R. (2025). Technological Gap Analysis: A Case Study of Anand, Gujarat. **Asian Journal of Dairy and Food Research**, DOI: 10.18805/ajdfr.DR-2230.
467. Prajapati D. and Panigrahy S. R. (2024). Segmented Organic Fertilizer Market in Kutch District, Gujarat. India. **Journal of Scientific Research and Reports**, 30(7): 810-816.
468. Vahoniya D. R., Savaliya F. P., Mahera A. B., Pundir R. S., Rajwadi A., Garval A. and Halpati J. (2024). Economic and Marketing Analysis of Commercial Goat Farms in Gujarat. **Indian Journal of Economics and Development**, 20(3): 457-467.

*** 2024-25 ***



Appendix

5

LIST OF THESIS SUBMITTED

Sr. No.	Thesis Title	Degree	Name of Student	Major Guide
(A) FACULTY OF AGRICULTURE				
1	Stability analysis in rice (<i>Oryza sativa</i> L.)	M. Sc.(Agri.)	Nareshkumar R. Makwana	Dr. D. B. Prajapati
2	Combining ability and heterosis for root yield and its component traits in Ashwagandha [<i>Withania somnifera</i> (L.) Dunal]	M. Sc.(Agri.)	Rakesh Kumar Saini	Dr. R. Nagaraja Reddy
3	Effect of sowing time on varieties of summer groundnut	M. Sc.(Agri.)	Patoliya Dharmik Babulal	Dr. G. L. Kadam
4	Environmental risk literacy about the use of agrochemicals among the vegetable growers	M. Sc.(Agri.)	Mehnaz Mehfuza	Dr. J. K. Patel
5	Biology and management of aphid, <i>Lipaphis pseudobrassicae</i> (Davis) infesting broccoli	M. Sc.(Agri.)	Khyati Mathur	Dr. A. H. Barad
6	Response of zinc and iron on yield and quality of single cut oat	M. Sc.(Agri.)	Dudhat Dineshbhai Hardasbhai	Dr. Hiren K. Patel
7	Genetic analysis for fruit yield and its contributing traits in tomato (<i>Solanum lycopersicum</i> L.)	M. Sc.(Agri.)	Chaudhary Yash Jagdishbhai	Dr. D. A. Patel
8	Studies on leaf blight complex of cotton and its management	M. Sc.(Agri.)	Bhadani Monik Nandlal	Dr. Ranganathswamy Math
9	Efficiency of lattice design relative to RCBD in blackgram [<i>Vigna mungo</i> (L.) Hepper]	M. Sc.(Agri.)	Kothiya Darshan Lalitbhai	Dr. D. J. Parmar
10	Statistical modeling for area, production and productivity of millets in Gujarat	M. Sc.(Agri.)	Parmar Jignesh Kishanbhai	Dr. A. D. Kalola
11	An economic analysis of production and marketing of soybean in middle Gujarat	M. Sc.(Agri.)	Hirpara Bhargaviben Amishkumar	Dr. B. L. Dudhat





Sr. No.	Thesis Title	Degree	Name of Student	Major Guide
12	Response of fenugreek (<i>Trigonella foenum-graecum</i> L.) to phosphorus and sulphur fertilizers	M. Sc.(Agri.)	Chavda Jinkubhai Dehabhai	Dr. Chintan. H. Raval
13	Influence of irrigation and hydrogel on transplanted summer pearl millet [<i>Pennisetum glaucum</i> (L.) R. Br.]	M. Sc.(Agri.)	Kiran Jitarwal	Dr. V. J. Patel
14	An economic analysis of production and marketing of inland fisheries in middle Gujarat	M. Sc.(Agri.)	Bagda Bhautik Prakashbhai	Dr. A. S. Shaikh
15	Effect of split application of nitrogen levels on <i>Kharif</i> fodder sorghum	M. Sc.(Agri.)	Patel Anjuben Jagadishbhai	Dr. Hiren K. Patel
16	Studies on the variability of <i>Xanthomonas oryzae</i> pv. <i>oryzae</i> causing bacterial leaf blight in rice and its management	M. Sc.(Agri.)	Ajaykumar Raghubhai Chaudhary	Dr. R. K. Gangwar
17	Appraisal of genetic variability and character association in fodder oat (<i>Avena sativa</i> L.)	M. Sc.(Agri.)	Jani Bhautikbhai Kanaiyalal	Dr. D. P. Gohil
18	Bio-efficacy of herbicides against complex weed flora in <i>Kharif</i> sorghum	M. Sc.(Agri.)	Krishnaben Chavda	Dr. J. V. Suthar
19	Functional and molecular characterization of Flowering locus-T gene of saffron (<i>Crocus sativus</i> L.) and evaluation of its effect on flowering behaviour in transgenic <i>Nicotiana tabacum</i>	M. Sc.(Agri.)	Kristi George Vilson	Dr. Amar Sakure
20	Molecular characterization, seasonal incidence and management of castor capsule borer, <i>Conogethes punctiferalis</i> Guenee	M. Sc.(Agri.)	Kaneriya Kushkumar Mukeshbhai	Dr. M. B. Zala
21	Bio-efficacy of different herbicides in summer pearl millet	M. Sc.(Agri.)	Abhishek Inaniya	Dr. Vinod B. Mor
22	Nitrogen management through different organic sources in <i>kodo</i> millet under organic condition	M. Sc.(Agri.)	Kurkutiya Shivaniben Rajeshbhai	Dr. C. H. Raval
23	Isolation of lignocellulolytic bacteria for decomposition of spent mushroom substrates and evaluation of enriched compost on wheat	M. Sc.(Agri.)	Adiveshwara Reddy B	Dr. Sneha J. Mistry
24	Integrated crop management by the banana growers in Vadodara district of Gujarat	M. Sc.(Agri.)	Parvadiya Rajkumar Mukeshbhai	Dr. G. N. Thorat





Sr. No.	Thesis Title	Degree	Name of Student	Major Guide
25	Utilization behaviour of farmers for information and communication technologies	M. Sc.(Agri.)	Ganvit Tanvikumari Devchandbhai	Dr. K. U. Chandravadia
26	Evaluation of finger millet (<i>Eleusine coracana</i> (L.) Gaertn) genotypes based on morphological, molecular and nutraceutical profiling	M. Sc.(Agri.)	Hansalia Mihir Ajaykumar	Dr. Vikas Pali
27	Comparative analysis of millets consumption on rural and urban area of middle Gujarat	M. Sc.(Agri.)	Karmur Alpaben Bhurabhai	Dr. Ganga Devi
28	Native algal consortium formulations' effect on growth of paddy and greenhouse gas emission	M. Sc.(Agri.)	Patel Juhiben Sureshbhai	Dr. Y. K. Jhala
29	Biostimulatory potential of bacterial endophytes from macro-algae <i>Ulva</i> species and their cell-free fortified formulation	M. Sc.(Agri.)	Patel Mihir Rameshbhai	Dr. Raghunandan B. L.
30	Genetic analysis of green fruit yield and exploration of molecular markers associated to genetic male sterility in chilli (<i>Capsicum annum</i> L.)	M. Sc.(Agri.)	Vimit Prabhatbhai Patel	Dr. M. M. Pandya
31	Generation mean analysis for yield traits and marker trait association for bacterial wilt in brinjal (<i>Solanum melongena</i> L.)	M. Sc.(Agri.)	Ahwan Sanket Pradhan	Dr. M. M. Pandya
32	Effect of different nutrient management practices on growth, yield and quality of groundnut	M. Sc.(Agri.)	Bhavsar Arjun Nalinbhai	Dr. G. N. Motaka
33	Management of major sucking insect-pests in <i>Bt</i> cotton	M. Sc.(Agri.)	Rank Vrutiben Hareshbhai	Dr. J. G. Dulera
34	Genetic analysis for yield and its contributing traits in Indian mustard [<i>Brassica juncea</i> L. (Czern & Coss)]	M. Sc.(Agri.)	Babariya Rutvi Jentibhai	Dr. Arna Das
35	Climate change impact assessment on direct seeded rice in middle Gujarat condition using Infocrop model	M. Sc.(Agri.)	Chaudhari Bhargav Manjibhai	Dr. S. B. Yadav
36	Effect of PROMs on soil properties and performance of fodder sorghum	M. Sc.(Agri.)	Halpati Ashwiniben Amitbhai	Dr. N. J. Jadav
37	Effect of pre-sowing seed treatments on germination, seedling establishment, growth and seed yield of durum wheat (<i>Triticum durum</i> Desf.)	M. Sc.(Agri.)	Ramani Nisha Hareshkumar	Dr. Kalyanrao Patil





Sr. No.	Thesis Title	Degree	Name of Student	Major Guide
38	Stability analysis and molecular characterization of <i>kodo</i> millet (<i>Paspalum scrobiculatum</i> L.)	M. Sc.(Agri.)	Mamidipalli Hadassah	Dr. Arna Das
39	Bioefficacy of insecticides against brinjal shoot and fruit borer, <i>Leucinodes orbonalis</i> Guenee and their residues in brinjal fruits	M. Sc.(Agri.)	Kadivar Prit Navinbhai	Dr. R. L. Kalasariya
40	Biology, seasonal occurrence and management of fruit borer, <i>Helicoverpa armigera</i> (Hubner) Hardwick infesting okra	M. Sc.(Agri.)	Patel Purviben Mukeshbhai	Dr. C. B. Varma
41	Profiling, pathogenicity and management of pathogen causing bacterial wilt of brinjal	M. Sc.(Agri.)	Yukta H Mehta	Dr. Puja Pandey
42	Morpho-biochemical characterization, fruit ionomics and population structuring of brinjal (<i>Solanum melongena</i> L.) germplasm	M. Sc.(Agri.)	Akanksha Tripathi	Dr. Sushil Kumar
43	Genetic analysis of seed yield and its component characters in pearl millet [<i>Pennisetum glaucum</i> (L.) R. Br.]	M. Sc.(Agri.)	Jambukiya Ravi Maheshbhai	Dr. B. C. Patel
44	Effect of potassium and gypsum application on growth, yield and quality of <i>Kharif</i> groundnut	M. Sc.(Agri.)	Parmar Mansi Kanubhai	Dr. P. V. Mehta
45	Generation mean analysis in cotton (<i>Gossypium hirsutum</i> L.)	M. Sc.(Agri.)	Ghanghar Vishnubhai Kamleshbhai	Dr. K. V. Patel
46	Comparative economics of contract and non-contract papaya farming in middle Gujarat	M. Sc.(Agri.)	Twinkle Ram	Dr. Rachana K. Bansal
47	Evaluation of statistical and supervised deep learning models for cotton price forecasting in Gujarat	M. Sc.(Agri.)	Chandan G Y	Dr. Prity Kumari
48	Effect of ascorbic acid on physiological and biochemical attributes of tomato (<i>Solanum lycopersicum</i> L.) under saline condition	M. Sc.(Agri.)	Rajesh R	Dr. J. J. Dhruv
49	Estimation of soil properties using microwave remote sensing and visible near infrared spectroscopy	M. Sc.(Agri.)	Ravi	Dr. P. H. Rathod





Sr. No.	Thesis Title	Degree	Name of Student	Major Guide
50	Nitrogen management through different organic sources in finger millet under organic condition	M. Sc.(Agri.)	Prajwal C S	Dr. P. M. Patel
51	Impact of foliar application of growth retardants and detopping on growth parameters and yield attributes in soybean (<i>Glycine max</i> L. Merrill)	M. Sc.(Agri.)	Rajadhivya K S	Dr. Sunilkumar J. Macwan
52	Estimation of combining ability and heterosis in corn (<i>Zea mays</i> L.)	M. Sc.(Agri.)	Sunil Kumar Kumawat	Dr. P. K. Parmar
53	Inclination of women towards millet consumption	M. Sc.(Agri.)	Bantupalli Meghana	Dr. Hemlata Saini
54	Determination of insecticidal resistance in chilli thrips, <i>Scirtothrips dorsalis</i> Hood and compatibility of entomopathogenic fungi with insecticides	M. Sc.(Agri.)	Kakadiya Jayantkumar Mansukhbhai	Dr. H. C. Patel
55	Pest succession in okra and impact of adjuvants on efficacy of insecticides against its sucking insect-pests	M. Sc.(Agri.)	Deepak C	Dr. H. C. Patel
56	Attitude of the papaya growers towards contract farming	M. Sc.(Agri.)	Patel Rutvi Maheshbhai	Dr. B. M. Christian
57	Epidemiology and management of leaf blight of sunflower caused by <i>Alternaria helianthi</i> (Hansford) E. G. Simmons	M. Sc.(Agri.)	Vasava Dipali Dalsukhbhai	Dr. N. M. Gohel
58	Endophytism of <i>Beauveria bassiana</i> (Balsamo) Vuillemin and <i>Metarhizium anisopliae</i> (Metchnikoff) Sorokin for the management of diamondback moth, <i>Plutella xylostella</i> Linnaeus in cabbage	M. Sc.(Agri.)	Jayalekshmi J	Dr. N. B. Patel
59	Biology, population dynamics and evaluation of poison baits for melon fruit fly, <i>Bactrocera cucurbitae</i> (Coquillett) infesting cucumber	M. Sc.(Agri.)	Thummar Soham Maheshbhai	Dr. H. S. Varma
60	Epidemiology and management of purple blotch [<i>Alternaria porri</i> (Ellis) Cif.] of onion	M. Sc.(Agri.)	Bhuva Sahil Pareshkumar	Dr. H. N. Prajapati
61	Willingness of farmers to adopt precision agriculture in middle Gujarat	M. Sc.(Agri.)	Monpara Drashti Prafulbhai	Dr. M. R. Patel





Sr. No.	Thesis Title	Degree	Name of Student	Major Guide
62	Response of nano DAP on yield and nutrient content of wheat (<i>Triticum aestivum</i> L.) grown in loamy sand soil	M. Sc.(Agri.)	Parmar Gaurangkumar Shambhubhai	Dr. M. B. Viradiya
63	Carbon sequestration and changes in pools of organic carbon in soil under long term experiment in typic haplustepts soil	M. Sc.(Agri.)	Sunil Kumar	Dr. Dileep Kumar
64	Adoption dynamics of the farmers for the reclamation of problematic soil in Bhal region	M. Sc.(Agri.)	Kalariya Bhautik Sureshbhai	Dr. K. D. Gulkari
65	Line × tester analysis of yield and yield contributing traits in sweet corn (<i>Zea mays</i> L. saccharata)	M. Sc.(Agri.)	Bhutiya Vijaykumar Bhanubhai	Dr. M. B. Patel
66	Line × tester analysis and validation of molecular markers associated with S-cytoplasm and Rf gene in chilli (<i>Capsicum annum</i> L.)	M. Sc.(Agri.)	Vagadoda Suhagkumar Dhudabhai	Dr. N. A. Patel
67	Characterization and management of common scab [<i>Streptomyces scabies</i> (Thaxt.) Lambert and Loria] in potato	M. Sc.(Agri.)	Dhiren Patel	Dr. H. N. Prajapati
68	Detection, molecular characterization and management of Potato mosaic virus infecting potato	M. Sc.(Agri.)	Sejalben	Dr. R. G. Parmar
69	Effect of micronutrients on morpho-physiological parameters, yield and yield attributes of black gram (<i>Vigna mungo</i> L.) cv. GAU 4 (Shyamal)	M. Sc.(Agri.)	Chaudhary Jaimina Chandrakantbhai	Dr. Sunilkumar J. Macwan
70	Characterization and potentiality of fungal endophytes isolated from banana plant against pathogens causing post-harvest diseases in banana	M. Sc.(Agri.)	Chinmayee Sahoo	Dr. N. B. Pawar
71	Population dynamics and management of pest complex of Indian bean	M. Sc.(Agri.)	Parekh Shruti Anilbhai	Dr. S. D. Patel
72	Genetic variability, correlation and path analysis for fruit yield, its attributes and quality traits in tomato (<i>Solanum lycopersicum</i> L.)	M. Sc.(Agri.)	Patel Kunj Chandrakantbhai	Dr. D. R. Patidar
73	Identification of promising grain sorghum [<i>Sorghum bicolor</i> (L.) Moench] genotype(s) for semi <i>rabi</i> season	M. Sc.(Agri.)	Banoth Maheshwari	Dr. Sneha Macwana





Sr. No.	Thesis Title	Degree	Name of Student	Major Guide
74	Nesting, colony organization and foraging behaviour of stingless bees, <i>Tetragonula</i> spp.	M. Sc.(Agri.)	Lunagariya Minaxiben Vitthalbhai	Dr. D. B. Sisodiya
75	Effect of long - term fertilization on soil productivity in typic haplustepts soil	M. Sc.(Agri.)	Tanya D Brahmbhatt	Dr. Dileep Kumar
76	Stability analysis and molecular studies in little millet (<i>Panicum sumatrense</i> L.)	M. Sc.(Agri.)	Vasala Sanjith Kumar	Dr. Jigar G. Mistry
77	Population dynamics and management of red spider mite, <i>Tetranychus urticae</i> Koch in marigold (<i>Tagetes erecta</i> L.)	M. Sc.(Agri.)	Patel Henil Kanaiyalal	Dr. N. B. Patel
78	Water production function and radiation use efficiency of brinjal under different irrigation scenarios	M. Sc.(Agri.)	Chudasama Amishaben Dhirubhai	Dr. B. I. Karande
79	Effect of different plant spacing and time of pinching on growth and flower yield of chrysanthemum (<i>Chrysanthemum morifolium</i> L.) cv. Ratlam Selection	M.Sc.(Horti.)	Kathad Shraddha Vajubhai	Dr. M. M. Masu
80	Effect of different growing condition and seed treatment on germination and growth of Bismarck palm (<i>Bismarckia nobilis</i>)	M.Sc.(Horti.)	Kachhad Parasben Gunvantbhai	Dr. N. I. Shah
81	Effect of biostimulants and bioformulations on growth, yield and quality of guava cv. Allahabad Safeda	M.Sc.(Horti.)	Jyotiraditya Solanki	Dr. J. S. Patel
82	Standardisation of different levels and split application of nitrogen on sweet orange (<i>Citrus sinensis</i> (L.) Osbeck) cv. Phule Mosambi	M.Sc.(Horti.)	Bagadia Isha	Dr. Amita B. Parmar
83	Effect of organic nutrients on growth, yield and quality of beetroot (<i>Beta vulgaris</i> L.) var. Crimson Globe	M.Sc.(Horti.)	Asari Pinkalbaben Sukabhai	Dr. B. H. Panchal
84	Effect of nitrogen management through organic sources on growth and flower yield of chrysanthemum (<i>Chrysanthemum morifolium</i> R.) var. IIHR-6	M.Sc.(Horti.)	Vruti Satodiya	Dr. D. D. Parekh





Sr. No.	Thesis Title	Degree	Name of Student	Major Guide
85	Effect of plant growth regulators on growth, yield and quality of okra (<i>Abelmoschus esculentus</i> L. Moench) cv. Anand Komal	M.Sc.(Horti.)	Gajera Viraj Laljibhai	Dr. A. V. Kotecha
86	CRISPR/Cas9 mediated targeted mutagenesis to elucidate parthenocarpy in cucumber (<i>Cucumis sativus</i> L.)	Ph. D. (Agri.)	Dimple Vasant Gor	Dr. Akarsh Parihar
87	Perception of farmers towards organic farming in Gujarat	Ph. D. (Agri.)	Desai Jaydip Dipakbhai	Dr. S.R. Patel
88	Exploring genetic variation, stability and marker-trait associations in rice (<i>Oryza sativa</i> L.)	Ph. D. (Agri.)	Bagadiya Parth Ghanshyambhai	Dr. J. N. Patel
89	Response of integrated nutrient management on Bt. cotton-groundnut cropping sequence	Ph. D. (Agri.)	Rahevar Hemrajsinh Dilipsinh	Dr. A. S. Bhanvadia
90	Heterosis, combining ability and stability analysis for yield and yield attributing traits in pearl millet [<i>Pennisetum glaucum</i> (L.) R. Br.]	Ph. D. (Agri.)	Azadchandra S. Damor	Dr. J. N. Patel
91	Influence of biostimulants on nutraceutical potential of brinjal (<i>Solanum melongena</i> L.)	Ph. D. (Agri.)	Dobaria Jalpaben Dhirajlal	Dr. J. J. Dhruv
92	Effect of liquid nano urea fertilizer on yield and nutrient content of summer pearl millet	Ph. D. (Agri.)	Patel Dikshitkumar Jethabhai	Dr. M. B. Viradiya
93	Effect of growing methods, micronutrients and seed tape with polymer seed coating and nanoparticles on seed yield and quality in tomato Var. GAT 5	Ph. D. (Agri.)	Ravat Anilkumar Lalitchandra	Dr. Kalyanrao
94	Improving precision of field experimentation through design and analysis	Ph. D. (Agri.)	Vekariya Prashantbhai Rameshkumar	Dr. V. B. Darji
95	Effect of plant geometry and plant growth regulators on cotton under high density planting system	Ph. D. (Agri.)	Kotadiya Rushita Hirajibhai	Dr. A. S. Bhanvadia
96	Identification of molecular markers linked to chilli leaf curl virus resistant in chilli (<i>Capsicum annum</i> L.)	Ph. D. (Agri.)	Solanki Urja Bharatsinh	Dr. Y. M. Shukla





Sr. No.	Thesis Title	Degree	Name of Student	Major Guide
97	Bio-efficacy of herbicides against <i>Phalaris minor</i> in wheat and their residual effect on blackgram	Ph. D.(Agri.)	Patel Harsh Kamleshbhai	Dr. V. J. Patel
98	Agriculture credit utilization and its impact on rice farmers- a critical analysis	Ph. D.(Agri.)	V. V. S. S. Anusha	Dr. S. R. Patel
99	Identification of marker linked with little leaf resistance in brinjal (<i>Solanum melongena</i> L.)	Ph. D.(Agri.)	Chauhan Bhakti Pareshbhai	Dr. Y. M. Shukla
100	Total factor productivity and returns to investment on research of agricultural crops in middle Gujarat	Ph. D.(Agri.)	Mohit Kumar	Dr. Ganga Devi
101	Effect of seed hardening and foliar application of growth substances on morpho-physiology, yield and yield attributes in different seasons and gene expression analysis in hardened seeds of groundnut (<i>Arachis hypogaea</i> L.)	Ph. D.(Agri.)	Patel Krishna Sanjaykumar	Dr. Sunilkumar J. Macwan
102	Toxicological and remedial study of zinc nanoparticles and bulk zinc on seed vigour, microbial activity and performance of wheat	Ph. D.(Agri.)	Prajapati Bhavikkumar Jayantibhai	Dr. K. C. Patel
103	Standardization of sowing time, days to fruit maturity, seed extraction method and effect of ageing on seed quality parameters in brinjal var. Anand Raj	Ph. D.(Agri.)	Bera Komal Meramanbhai	Dr. Kalyanrao Patil
104	Calibration and validation of CROPGRO-tomato model for sensitivity analysis under middle Gujarat region	Ph. D.(Agri.)	Vasani Mehulkumar Jayantilal	Dr. M. M. Lunagaria
105	Exploration of novel indigenous Trichoderma isolates and their biocontrol potentials against <i>Fusarium oxysporum</i> f. sp. ciceri in chickpea	Ph. D.(Agri.)	Suthar Yogendra Mahendrabhai	Dr. N. M. Gohel
106	Consequences of agricultural technology management agency on tribal farmers of middle Gujarat	Ph. D.(Agri.)	Damor Chiragkumar Bachubhai	Dr. M. R. Patel
107	Agricultural information technology (AIT) association of the young practicing farmers	Ph. D.(Agri.)	Rathod Dhirendrasinh Madhavsing	Dr. J. B. Patel





Sr. No.	Thesis Title	Degree	Name of Student	Major Guide
108	Diversity of beneficial insects in field margin vegetation and its conservation	Ph. D.(Agri.)	Senthilraja N	Dr. C. K. Borad
109	Diversity and characterization of fungal endophytes associated with medicinal plants and their antagonistic potential against <i>Macrophomina phaseolina</i> (Tassi) Goid. of chickpea	Ph. D.(Agri.)	Manjari	Dr. N. M. Gohel
110	Effect of seed priming and foliar spray of PGRs on morpho-physiological, biochemical and herbage yield of kalmegh (<i>Andrographis paniculata</i> Wall. ex Nees) under salinity condition	Ph. D.(Agri.)	Saumya Shruti	Dr. Ashwin P. Trivedi
111	Integrated nutrient management in maize-chickpea cropping sequence under middle Gujarat conditions	Ph. D.(Agri.)	Devilal Birla	Dr. R. A. Patel
112	Generation mean analysis using ten parameter model and molecular diversity of parents in brinjal (<i>Solanum melongena</i> L.)	Ph. D.(Agri.)	Mahla Jagrutiben Salubhai	Dr. R. R. Acharya
113	Genetic diversity, population dynamics and management of pink bollworm, <i>Pectinophora gossypiella</i> (Saunders) in Bt cotton	Ph. D.(Agri.)	Chaudhari Vaibhavkumar Kanubhai	Dr. D. B. Sisodiya
114	Succession of major insect-pests of rice and their management	Ph. D.(Agri.)	Thorat Sanjubhai Somabhai	Dr. D. B. Sisodiya
115	Gender sensitivity towards effect of climate change on cereal crops and capacity to respond: A Critical Analysis	Ph. D.(Agri.)	Parikh Nehaben Lavjibhai	Dr. J. B. Patel
116	Biodiversity, taxonomic description, molecular characterization and behaviour of predatory coccinellids in middle Gujarat	Ph. D.(Agri.)	Solanki Bhavikkumar Jashvantbhai	Dr. M. R. Dabhi
117	Effect of multi-micronutrients mixture on yield and quality of sapota [<i>Manilkara achras</i> (Mill.) Fosberg] cv. Kalipatti	Ph.D.(Horti.)	Savdhariya Sejalben Janakray	Dr. M. J. Patel
118	Effect of bagging and plant growth regulators on yield and quality of date palm (<i>Phoenix dactylifera</i> L.) cv. Local	Ph.D.(Horti.)	Makavana Payalben Chandubhai	Dr. M. J. Patel





Sr. No.	Thesis Title	Degree	Name of Student	Major Guide
119	Effect of mulching materials and organic sources of nutrients on growth, yield and quality of turmeric (<i>Curcuma longa</i> L.) var. Sugandham	Ph.D.(Horti.)	Solanki Pravinaben Pareshkumar	Dr. H. H. Sitapara
120	Effect of spacing and INM on growth, yield and quality of okra cv. Anand Komal	Ph.D.(Horti.)	Patel Pavan Kiranbhai	Dr. B. N. Satodiya
121	Influence of different growing condition with media on growth and yield of Asiatic liliium	Ph.D.(Horti.)	Chaudhari Urmil Chhotubhai	Dr. N. I. Shah
122	Effect of bio-stimulants and method of application on growth, yield and quality of onion (<i>Allium cepa</i> L.) under middle Gujarat condition	Ph.D.(Horti.)	Rathva Vijaykumar Dharamsinh	Dr. K. M. Patel
(B) FACULTY OF FOOD PROCESSING TECHNOLOGY AND BIO-ENERGY				
123	Development of <i>kodo</i> millet based mushroom enriched extruded snack product	M. Tech.	Deepak Kumar	Dr. B. H. Joshi
124	Optimization of oil extraction process from jamun leaves (<i>Syzygium cumini</i> L.) using carbon dioxide	M. Tech.	Ankita Jukaria	Dr. Gayatree R. Jadeja
125	Development of vegan smoothie adopting high pressure processing technology	M. Tech.	Bhayani Harsh Dilipbhai	Dr. H. Pandey
126	Development of value added products from dragon fruit	M. Tech.	Vadhel Sumitbhai Pratapbhai	Dr. S. H. Akbari
127	Development of drying and storage technique for shisham (<i>Dalbergia sissoo</i>) leaves	M. Tech.	Gediya Vatsal Kamleshbhai	Dr. V. B. Bhalodiya
128	Development of spinach puree using non-thermal processing technology	M. Tech.	Penugonda Harshitha Venkata Sai Lakshmi	Dr. Samit Dutta
129	Technology for drying of beetroot pomace and its utilization	M. Tech.	Jansari Riddhiben Manishkumar	Dr. Ameer Ravani
130	Effect of gamma irradiation on functional properties of finger millet and foxtail millet	M. Tech.	Patel Kevinkumar Ashokbhai	Dr. K. V. Vala
131	Development of browntop millet based probiotic fermented beverage	M. Tech.	Patel Dhruvkumar Bharatbhai	Dr. J. K. Momin
132	Development of technology for fiber enriched cake using carrot pulp	M. Tech.	Prajapati Chintankumar Somabhai	Dr. K. B. Kamaliya





Sr. No.	Thesis Title	Degree	Name of Student	Major Guide
133	Development of production technology for dietetic sweet Boondi	M. Tech.	Prajapati Hitkumar Jasubhai	Dr. G. P. Tagalpallewar
134	Development of foxtail and barnyard millet flour based functional multigrain muffins	M. Tech.	Pethani Kashyap Nileshbhai	Dr. S. R. Bhise
135	Development of clarified sapota (<i>Achras zapota</i> L.) juice using non-thermal preservation technique	Ph. D.	Pathiam Srilatha	Dr. Samit Dutta
(C) FACULTY OF AGRICULTURAL ENGINEERING AND TECHNOLOGY				
136	Characterization of ginger slices using solar and mechanical dryers	M. Tech.	Jijnasha Bal	Dr. D. K. Vyas
137	Development of potato and rice based bioplastic as a by-product utilisation	M. Tech.	Nikhilesh A	Dr. K. R. Jethva
138	Rainfall-runoff modeling using deep learning models	M. Tech.	Asare Joseph	Dr. M. K. Tiwari
139	Assessment of crop acreage estimation techniques using remote sensing and GIS	M. Tech.	Gavit Priyanka Laxman	Dr. G. R. Patel
40	Development of a battery operated remote controlled mini planter	Ph. D.	Ghanshyam Panwar	Dr. Raghunandan Swarnkar
141	Design and development of a battery operated maize harvester	Ph. D.	Pargi Sanjaykumar Jeetsinh	Dr. Pankaj V. Gupta
142	Quantification of irrigation uniformity based on water distribution patterns resulting from surface drip irrigation	Ph. D.	Kunapara Arvindbhai Nathabhai	Dr. R. Subbaiah
143	Development of drying technology for preparation of jamun leaves powder	Ph. D.	Rathod Jaydipsinh Pravinsinh	Dr. Neeraj Seth
144	Spatio-temporal patterning of evapotranspiration using contemporary ground and remote sensing data for judging crop water productivity in middle Gujarat	Ph. D.	Thakor Devrajsinh Indrajitsinh	Dr. M. L. Gaur
(D) FACULTY OF AGRIBUSINESS MANAGEMENT				
145	Study of cattle feed dealers and market potential of cattle feed industry in Junagadh, Rajkot and Amreli districts of Gujarat	MBA	Balas Mukeshkumar Jilubhai	Dr. M. R. Prajapati





Sr. No.	Thesis Title	Degree	Name of Student	Major Guide
146	An analysis of acid lime (nimbu) marketing channels in Gujarat	MBA	Baldaniya Rushik Himmatbhai	Dr. R. S. Pundir
147	Socio-economic impact assessment of salinity prevention structure-Salaya- Goinj reclamation scheme in Devbhumi Dwarka district of Gujarat	MBA	Chaudhary Malabhai Masungbhai	Dr. Y. A. Lad
148	Economics of shrimp farming in the coastal region of Navsari district of Gujarat	MBA	Dedaniya Akshaykumar Aniruddhbhai	Dr. R. S. Pundir
149	Awareness of date value added products among wholesaler/retailer and customer satisfaction of tissue culture date palm plants in Navsari, Bharuch and Dang districts of Gujarat	MBA	Garasia Ritik Jagdishbhai	Dr. Y. A. Lad
150	Supply chain analysis of grapes in Navi Mumbai region of Maharashtra	MBA	Lunagariya Kevin Rajanibhai	Dr. R. S. Pundir
151	Market potential and farmers' buying behaviour towards cumin seeds in Rajkot district, Gujarat	MBA	Olakiya Romitbhai Ghughabhai	Dr. Y. A. Lad
152	Price forecasting of potato in major markets of India	MBA	Rohit Kumar	Dr. Y. A. Lad
153	Marketing of vegetables in Sardar Patel market yard in Ahmedabad city	MBA	Vishesh Panicker	Dr. Y. A. Lad
154	Market potential and farmers' purchasing behaviour towards Azoxystrobin 23% SC and Copper Oxychloride 50% WP for cumin in Surendranagar district of Gujarat	MBA	Zala Arjunsinh Vanrajsinh	Dr. Y. A. Lad
155	Perception and problems of kitchen gardening in Jamnagar district of Gujarat	MBA	Aambaliya Paresh Davubhai	Dr. Chetan Dudhagara
156	Understanding farmers' perceptions and constraints in biogas slurry use in Anand district of Gujarat	MBA	Baflipara Dharmik Mukeshbhai	Dr. M. R. Prajapati
157	Awareness and farmers' perception towards organic fertilizers in Kutch district of Gujarat	MBA	Chauhan Tejas Tulsidas	Dr. Chetan Dudhagara
158	Marketing channels of grapes in Pune region of Maharashtra	MBA	Dashant Dhoriyani	Dr. M. R. Prajapati





Sr. No.	Thesis Title	Degree	Name of Student	Major Guide
159	Supply chain analysis of pomegranate in Navi Mumbai region of Maharashtra	MBA	Galani Deep Shailesh	Dr. Shakti Ranjan Panigrahy
160	Remote sensing approach to assess the impact of heatwave on wheat crop health in Ludhiana district	MBA	Godvani Raj Kiritbhai	Dr. Chetan Dudhagara
161	Purchasing behaviour and constraints faced by farmers in the adoption of organic fertilizer in the Kutch district of Gujarat	MBA	Prajapati Dhrumilkumar Rakeshbhai	Dr. Shakti Ranjan Panigrahy
162	Marketing Channels of pomegranate in Pune region of Maharashtra	MBA	Umeshbhai Tamboli	Dr. M. R. Prajapati
163	Buying behaviour of organic fertilizer vis-à-vis chemical fertilizer in Dwarka region of Gujarat	MBA	Varotariya Jigneshbhai Meramanbhai	Dr. Shakti Ranjan Panigrahy
164	A comprehensive market analysis of honey and its by-products	MBA	Ashutosh Kumar	Dr. Dilip Vahoniya
165	Perception of agricultural input dealers and challenges faced by them for selling kitchen garden pouch in Anand district of Gujarat	MBA	Chavda Karshan Nagabhai	Dr. D. B. Patel
166	Marketing of fruits and vegetables in the Agricultural Produce Marketing Committee, Vashi, Navi Mumbai	MBA	Bhadani Samirkumar Rameshbhai	Dr. Snehal Mishra
167	Market integration and price forecasting of soybean in India	MBA	Gangani Dixitkumar Ashokbhai	Dr. Snehal Mishra
168	Analysis of marketing channels of papaya in middle Gujarat	MBA	Viraj Shekhaliya	Dr. Snehal Mishra
169	Banana supply chain in Navi Mumbai	MBA	Chavda Vimal Karamshibhai	Dr. Dilip Vahoniya
170	Predicting wheat crop yield through satellite data analysis	MBA	Mitali Sinha	Dr. Shakti Ranjan Panigrahy
171	Farmers' purchasing behaviour and satisfaction level about groundnut seeds in Dhoraji taluka of Rajkot district, Gujarat	MBA	Paghdar Shrutiben Jayeshbhai	Dr. Chetan Dudhagara
172	A comprehensive study of Indian honey market	MBA	Pronab Jyoti Powrel	Dr. Snehal Mishra





Sr. No.	Thesis Title	Degree	Name of Student	Major Guide
173	Designing of digital farm score prediction for crop loan disbursement	MBA	Vishnu S U	Dr. M. R. Prajapati
174	An analysis of community based biogas plant in Saatordi area of Anand, Gujarat	MBA	Barad Ajaykumar Manubhai	Dr. Shakti Ranjan Panigrahy
175	Buying behaviour and problems faced by farmers using organic fertilizer in Deesa and Palanpur talukas of Banaskantha district, Gujarat	MBA	Joshi Jaiminkumar Devchandbhai	Dr. D. B. Patel
176	Analysis of agrochemical industry in selected districts of North Gujarat	MBA	Joshi Sagarbhai Shrirambhai	Dr. Dilip Vahoniya
177	Socio-economic impact assessment of salinity prevention structure-Bardasagar scheme in Porbandar district of Gujarat	MBA	Parmar Vatsalyakumar Kiritbhai	Dr. D. B. Patel
178	Exploring retailer's grocery purchasing behavior through online platforms in Bengaluru city	MBA	Abhishek S	Dr. D. B. Patel
179	A comprehensive study on distribution of apple in India	MBA	Sristi Sharma	Dr. D. B. Patel
180	Awareness of date value added products among wholesaler/retailer and customer satisfaction of tissue culture date palm plants in Valsad, Surat and Tapi districts of Gujarat	MBA	Patel Jigarkumar Jayeshbhai	Dr. Dilip Vahoniya
181	Assessing the influence of shrimp farming on rice growers and analyzing policy implications in Navsari district of Gujarat	MBA	Patil Dhruvkumar Hasmukhbhai	Dr. M. R. Prajapati
182	Impact of solar water pumping system on farmers income: A comparative study of conventional irrigation system Vs. micro irrigation system	Ph. D.	Sathish Kumar M	Dr. Y. A. Lad
183	Production, marketing and value chain analysis of soybean in Gujarat	Ph. D.	Patel Janakiben Harshadbhai	Dr. Y. A. Lad



Appendix

6

LIST OF SEMINARS, SYMPOSIA, CONFERENCE AND WORKSHOP ORGANIZED

Faculty of Agriculture

Sr. No.	Title	Duration	Sponsored Authority
1	One day Training programme conducted Under "Better Cotton Initiative Project- Microbial Bio-pesticide based use of Biocontrol agents in cotton crop	12-07-2024	Better Cotton Initiative, New Delhi
2	"Nematode Awareness Day" for Tribal Farmers at Krishi Vigyan Kendra, Dahod	31-07-2024	AICRP on Nematodes in Agriculture
3	"Nematode Awareness Day" for Tribal Farmers at Krishi Vigyan Kendra, Dahod	23-08-2024	AICRP on Nematodes in Agriculture
4	"Seed Production of Fodder Crops" for NDDDB officers at MFRS, AAU, Anand	04-09-2024 to 06-09-2024	Jointly organized by NDDDB, Anand, EEI and MFRS, AAU, Anand
5	Tribal farmer training program under Scheduled Tribe Component (STC) erstwhile TSP on "Management of fungi and pests during storage of seeds" under AICRP on Seed (Crops) TSP at KVK, AAU, Dahod	23-09-2024	ICAR-National Institute of Seed Science & Technology, Mau
6	Better Cotton Initiative Project- Microbial Bio-Formulation: Sustainable Utilization Approaches for Cotton Plant Health Management	24-09-2024 to 25-09-2024	Better Cotton Initiative, New Delhi
7	Webinar on Employability Skills	11-10-2024	Knowledge Consortium of Gujarat, Department of Education, GOG
8	The 32 nd Annual Review Meeting of All India Network Project on Pesticide Residues has been organized by Anand Centre of AINP-PR at Anand Agricultural University, Anand	11-11-2024 to 13-11-2024	ICAR, New Delhi and Anand Agricultural University, Anand
9	Tribal farmer training program under Scheduled Tribe Component (STC) erstwhile TSP on "Management of fungi and pests during storage of seeds" under AICRP on Seed (Crops) TSP at TRTC, AAU, Devgadha baria	28-11-2024	ICAR-National Institute of Seed Science & Technology, Mau



Sr. No.	Title	Duration	Sponsored Authority
10	Bio-agents Awareness Week	28-11-2024 to 29-11-2024	Biological Control Research Laboratory, ICAR Unit-9, AAU, Anand
11	Bio-agents Awareness Week	13-12-2024	Biological Control Research Laboratory, ICAR Unit-9, AAU, Anand
12	"Nematode Awareness Day" for Tribal Farmers at Tribal Research cum Training Centre, Devgarh baria, Dist. Dahod	31-12-2024	AICRP on Nematodes in Agriculture
13	IPS Western Zone e-Conference on "Natural Farming: A Unified Approach to Plant Health" organized by AAU, Anand	09-01-2025	AAU, Anand
14	Tribal farmer training program under Scheduled Tribe Component (STC) erstwhile TSP on "Management of fungi and pests during storage of seeds" under AICRP on Seed (Crops) TSP at College of Agriculture, AAU, Jabugam	16-01-2025	ICAR-National Institute of Seed Science & Technology, Mau
15	One day training on "WTO Na Paripekshya Ma Adarsh Pshupalan Vavsaya"	29-01-2025	WTO cell, AAU, Anand
16	Workshop on Energy Conservation, combining theoretical and practical awareness	15-02-2025	Gujarat Energy Development Agency (GEDA), Gandhinagar and Anand Agricultural University, Anand
17	One day training on "WTO Na Paripekshya Ma Adarsh Pshupalan Vavsaya"	07-03-2025	WTO cell, AAU, Anand
18	One day training on "WTO Na Paripekshya Ma Adarsh Pshupalan Vavsaya"	12-03-2025	WTO cell, AAU, Anand
19	Farmer training program on "Importance of Renewable Energy Sources in Horticultural Crops"	18-03-2025 to 19-03-2025	GoG and AAU, Anand
20	Farmer's Day on "Velavala Shakhaji Pakoma Sankalit Jivat Vyavasthapan"	21-03-2025	GoG and AAU, Anand
21	Training programme on "Madhya Gujarat na mukhya pakoma Biyanan utpadan, processing ane sangrah"	27-03-2025 to 28-03-2025	Regional Research Station, AAU, Anand





Faculty of International Agri Business Management

Sr. No.	Title	Duration	Sponsoring Authority
1	FPO Vibrant Summit: 2024 "MANTHAN"	21-08-2024 to 22-08-2024	SAMP India Consortium of FPCL, Ahmedabad

Faculty of Agril- Engineering and Technology

Sr. No	Title	Duration	Sponsoring Agency
1	Tribal farmer training program under Scheduled Tribe Component (STC) erstwhile TSP on "Management of fungi and pests during storage of seeds" under AICRP on Seed (Crops) TSP at College of Agriculture, AAU, Jabugam	16-01-2025	ICAR-National Institute of Seed Science & Technology, Mau
2	Workshop on Energy Conservation, combining theoretical and practical awareness	15-02-2025	Gujarat Energy Development Agency (GEDA), Gandhinagar and Anand Agricultural University, Anand
3	Farmer training program on "Importance of Renewable Energy Sources in Horticultural Crops"	18-03-2025 to 19-03-2025	GoG and AAU, Anand
4	Training session on "Fitness for Women"	29-03-2025	CAET, AAU, Godhra



Appendix

7

LIST OF UNIVERSITY TEACHERS/ SCIENTISTS PRATICIPATED IN SEMINAR, SYMPOSIA, CONFERENCES, WORKSHOPS AND TRAINING PROGRAMMES ORGANIZED BY THE OTHER INSTITUTE

1) FACULTY OF AGRICULTURE

Sr. No.	Name of Teacher/ Scientist	Participated	Duration	
			From	To
1	Dr. M. B. Patel Dr. P. K. Parmar Shri. K. H. Patel	67 th Annual Maize Workshop at Hyderabad	11-04-2024	13-04-2024
2	Dr Y.C. Lakum	Annual Action Plan and Natural Farming Workshop of KVKs in Gujarat at AAU, Anand	16-05-2024	17-05-2024
3	Dr. H. K. Patel Dr. M. P. Patel	One-week training programme on "NEP Orientation and Sensitization Programme" organized by UGC-MMTTC, Sardar Patel University, Vallabh Vidyanagar, Gujarat	20-05-2024	31-05-2024
4	Dr. M.B. Parmar Dr. R.K. Gangwar Dr. S.S.Thorat	59 th Annual Rice Research Group Meeting held at ICAR- Indian Agriculture Research Institute, New Delhi	24-05-2024	26-05-2024
5	Dr. V. J. Patel Shri D. D. Chaudhari	5 th QRT meeting of AICRP-Weed Management	07-06-2024	09-06-2024
6	Dr. H. C. Patel	Workshop on "Atmanirbhar Bharat" held at SDAU, SKNagar, Dantiwada	08-06-2024	09-06-2024
7	Dr. Amarjeet Singh	18 th Annual Review Meeting of Centrally Sponsored Scheme-Mission for Integrated Development of Horticulture Held at SKUAST- Kashmir	10-06-2024	11-06-2024
8	Dr. Vinod B. Mor	7-day certificate program on "AgCatalyst Agripreneurship Mentor Development Program" at AAU, Anand	10-06-2024	16-06-2024
9	Dr. V. J. Patel Shri D. D. Chaudhari	XXXI Annual Review Meeting of AICRP-Weed Management	19-06-2024	21-06-2024
10	Dr. Tulika Singh Ms. Anjana B. Prajapati	Webinar on 'Human Rights' organized by AAU, Anand	20-06-2024	20-06-2024
11	Dr. G. L. Kadam	Short course on "Agronomic research for food security and environmental stewardship in changing scenarios" organized by The Indian Society of Agronomy, ICAR-IARI, New Delhi	20-06-2024	29-06-2024





Sr. No.	Name of Teacher/ Scientist	Participated	Duration	
			From	To
12	Dr. D. B. Sisodiya Dr. H. C. Patel Dr. R.G. Parmar Dr. N.M. Gohel Dr. N. B. Patel Dr. Raghunandan B. L. Dr. Ravi L. Kalasariya Dr. Kaushik D. Parmar Dr. Nirmal R. Chauhan Dr. M. B. Zala Dr. Vinod B. Mor Dr. C. B. Varma Dr. Y. B. Chauhan Dr. S.S.Thorat Dr. R.K. Gangwar	Training of “ <i>Marimasala, Aushadhiya ane krushivaneey pakoma pak sanrakshan</i> ” organized by the plant protection Association Gujarat, PPAG at Sardarkrushinagar Dantiwada Agricultural University, Sardarkrushinagar, Gujarat	25-06-2024	25-06-2024
13	Dr. H. K. Patel Dr. Raghunandan, B. L	The 9 th Asian PGPR National Conference on Beneficial Microbes as Integrated Approach for Sustainable Agriculture: Opportunities and Challenges’ Organized by Bharathiar University, Coimbatore, Tamil Nadu	29-07-2024	30-07-2024
14	Dr. D. P. Gohil, Dr. H. K. Patel Dr. N. S. Litoriya	National Group Meeting <i>Kharif</i> - 2024 organized by Project Coordinator (FC), AICRP on Forage crops, Jhansi, held at Birsa Agricultural University, Ranchi	30-07-2024	31-07-2024
15	Dr. Jigar Mistry Dr. K. V. Patel	Training Programme on “Agri Business Management Promotion and Development” at Extension Education Institute, AAU, Anand	05-08-2024	10-08-2024
16	Dr. D. B. Sisodiya Dr R. M. Patel	Workshop on “ <i>Prakrutik Kheti</i> ” organized by ATMA Directorate and SAMETI at Gandhinagar, Gujarat	07-08-2024	07-08-2024
17	Dr. Paresh H. Rathod Dr. Kaushik D. Parmar Dr. Ravi L. Kalasariya Dr. Nidhi N. Chaudhary	16 th National Level Annual Workshop of “Monitoring of Pesticide Residues” held at NASC, New Delhi.	08-08-2024	08-08-2024
18	Dr. S. B. Yadav Dr. Y. B. Chauhan	21 days summer school training through online mode on “Emerging Challenges and Opportunities in Biotic and Abiotic Stress Management” organized by the Astha Foundation, Meerut, U.P.	10-08-2024	30-08-2024





Sr. No.	Name of Teacher/ Scientist	Participated	Duration	
			From	To
19	Dr. Kaushik D. Parmar Mr. N. R. Bumbadiya	21 days Summer School cum Training on "New advancements in Agricultural Sciences: From the Green Revolution to Viksit Bharat 2047" Jointly organized by Agri-Meet Foundation Bharat in Collaboration with ICAR-DCR Puttur Karnataka, SKLTSHU Telangana, GUVV Durg Chhattisgarh and ICAR NIBSM, Raipur.	15-08-2024	04-09-2024
20	Dr. G. L. Kadam Dr. Ranganathswamy Math Dr. Arjunsinh Rathava Dr. R.D. Shinde	Short course on hands on training on statistical analysis and exploring the role of Agriculture in Industry domains organized by Indian Society of Agronomy, IARI, New Delhi	22-08-2024	31-08-2024
21	Dr.V. D. Chaudhari	National level Training on Integrated Weed Management Strategies under Changing Agricultural Scenario jointly organized by Indian Society of Weed Science & ICAR-Directorate of Weed Research, Jabalpur, India through virtual mode.	26-08-2024	06-09-2024
22	Mr. R. M. Chavadhari Dr. N.M. Gohel	Awareness-Training program on National Intellectual Property Awareness Mission, Intellectual Property Office, India	28-08-2024	28-08-2024
23	Dr. V. J. Patel D. D. Chaudhari	10 days National training programme on "Integrated Weed Management Strategies under changing climate Scenario" organized by Indian Society of Weed Science and ICAR-Directorate of Weed Research, Jabalpur	28-08-2024	06-09-2024
24	Dr. N. B. Pawar Dr. Pushpa S. Parmar Mr. M. P. Dohat	International conference on "Current Innovations and Technological Advances in Agriculture and Allied Sciences" organized by Faculty of Agriculture, Guru Kashi University, Talwandi Sabo in collaboration with Department of Agriculture and Farmer's Welfare, Department of Horticulture, Govt. of Punjab and ISASTR, Noida and Just Agriculture Edu. Group.	29-08-2024	31-08-2024
25	Dr. M. M. Pandya	14 th Annual Group Meeting of All India Network Research Project on Onion and Garlic at ICAR-CITH, Srinagar	29-08-2024	31-08-2024
26	Dr. J. C. Shroff Dr. P. M. Patel Dr. G. N. Motka Dr. A. P. Patel Dr. V. J. Patel D. D. Chaudhari	One day Seminar on "Amrutkal maa krushi pedasshoni prakriya ane muly vardhan" organized by GAAS, Ahmedabad chapter at Ahmedabad during August 31, 2024	31-08-2024	31.08.2024





Sr. No.	Name of Teacher/ Scientist	Participated	Duration	
			From	To
	Dr. N. J. Jadav Dr. J. K. Parmar Dr. P. V. Mehta Dr. J. S. Patel Dr. H. H. Sitapara Dr. Sneha Macwana Dr. Jigar Mistry Mr. R. M. Chavadhari Dr. Sunil J. Macwan Dr. D. B. Sisodiya Dr. M. D. Suthar Dr. R.G. Parmar Dr. N.M. Gohel Dr. M. B. Zala Dr. Vinod B. Mor Dr. P. S. Panchal, Dr. C. B. Varma Dr. Pushpa S. Parmar Dr. Hiren K Patel			
27	Dr. C. B. Damor	Workshop on AICRPR Experiments and Intranet functionalities (www.aicrip-intranet.in)	03-09-2024	05-09-2024
28	Dr Y.C. Lakum	Annual Zonal Workshop of KVKs Zone VIII 2024 at JAU Junagadh	04-09-2024	06-09-2024
29	Dr. R.G. Parmar Dr. N.M. Gohel Dr. Ajay Kumar Maru Dr. Tulika Singh Ms. Anjana B. Prajapati Dr. Paresh H. Rathod Dr. Kaushik D. Parmar Dr. Ravi L. Kalasariya Dr. Nidhi N. Chaudhary Dr. Nirmal R. Chauhan Dr. Hiren K Patel	15 th Late Dr. Diwaker R. Patel Memorial Lecture on "Ayurveda for management of lifestyle and diseases" organized by BACA Alumni Association, Anand at BACA, AAU, Anand	09-09-2024	09-09-2024





Sr. No.	Name of Teacher/ Scientist	Participated	Duration	
			From	To
30	Dr. Hitiksha Parmar Dr. J. G. Dulera Dr. Vaibhav Chaudhary Dr. B. M. Christian	One week training programme on “Communication and motivation skills for effective extension services” at EEI, Anand organized by EEI, Anand and MANAGE, Hyderabad	09-09-2024	14-09-2024
31	Mr. J. H. Bhatt Dr. I. N. Bhabhor	Faculty Development programme on “Recent Advances in Agricultural Technology for Sustainable Development of Agriculture, Veterinary, Fisheries and Allied Sectors” organized by ATARI, Zone-VIII, Pune & National Agriculture Development Cooperative Ltd. (NADCL), Baramulla, J & K through Online Mode	10-09-2024	30-09-2024
32	Dr. K. J. Suthar	63 rd All India Wheat and Barley Research Workers’ meet held at ANDUAT, Kumarganj, Ayodhya (AP)	11-09-2024	13-09-2024
33	Dr. Nisha B. Patel Dr. Pushpa S. Parmar	15 days short course training on “Climate Change Scenario: Impact on Agriculture and Allied Sciences” organized by Astha Foundation, Meerut, U.P., India	16-09-2024	30-09-2024
34	Dr. Nidhi N. Chaudhary	Webinar on “Carbon credits in Agriculture: Unravelling the Enigma” Organised by UAS, Bangaluru	19-09-2024	19-09-2024
35	Dr. H. K. Patel	One-day workshop on “Exploring Innovations and Funding Opportunities in Biotechnology” organized by GSBTM, Gandhinagar in collaboration with DBT, Gol at IIT, Gandhinagar	21-09-2024	21-09-2024
36	Dr. Raghunandan, B. L	International Conference on Plant Protection in Horticulture: Advances and Challenges (ICPPH 2024)	25-09-2024	27-09-2024
37	Dr. Aakash Mishra	National Seminar on “Developments in Soil Science - 2024” Organized by ISSS, New Delhi at ICAR, New Delhi	03-10-2024	06-10-2024
38	Dr. Ajay Kumar Maru Dr. Tulika Singh Ms. Anjana B. Prajapati	Online webinar on “Debunking Mythology” under the initiative TEERTH organized by Knowledge Consortium of Gujarat, Department of Education, Government of Gujarat	04-10-2024	04-10-2024
39	Dr. Hemlata Saini	Online webinar on “Data Analysis Using SPSS Statistics 29.0 and Modules” Organized by m-s SPSS South Asia Private Limited Bangalore	04-10-2024	04-10-2024
40	Dr. R. K. Thumar	PI Meeting of review of research progress of All India Network Project on Vertebrate Pest Management held at PJTSAU, Rajendranagar, Hyderabad	07-10-2024	10-10-2024





Sr. No.	Name of Teacher/ Scientist	Participated	Duration	
			From	To
41	Dr. Kaushik D. Parmar Dr. Vinod B. Mor Dr. V. I. Joshi Dr. N. S. Litoriya	One-week training on "Promotion of organic farming and sustainable agriculture" organized by Extension Education Institute, Anand Agricultural University, Anand	14-10-2024	19-10-2024
42	Dr. R. M. Rajpura	39 th Annual Conference & National Symposium on "Shaping the Indian Poultry Sector for Sustainable Growth" (IPSACON – 2024) at Nagpur Veterinary College, MAFSU, Nagpur	16-10-2024	18-10-2024
43	Dr. Sunil J. Macwan Dr. Sneha J. Mistry Dr. K. V. Patel Dr. Amarjeet Singh Dr. V. D. Chauduri	National Seminar on Medicinal and Aromatic Plants in Perspective of Health and Wealth jointly organized by MAPAI, Anand and ICAR-DMAPR, Boriavi	22-10-2024	23-10-2024
44	Dr. Azadchandra S. Damor Dr. Arjunsinh Rathava Dr. R.D. Shinde	2 nd International conference on "Natural farming innovations: Enhancing soil health and seed quality with AI and drones for a greener agricultural future" held at Hansraj college, University of Delhi (Hybrid mode)	03-11-2024	05-11-2024
45	Dr. Paresh H. Rathod Dr. Kaushik D. Parmar Dr. Ravi L. Kalasariya Dr. Nidhi N. Chaudhary	32 nd Annual Review Meeting of All India Network Project on Pesticide Residues, held at AAU, Anand.	11-11-2024	13-11-2024
46	Prof. (Dr.) A. K. Sharma	58 th Annual Convention of Indian Society of Agricultural Engineers –at Vasant Rao Naik Marathwada Krishi Vidyapeeth, Parbhani, Maharashtra	12-11-2024	14-11-2024
47	Dr. Nisha B. Patel Dr. Pushpa S. Parmar	Online webinar on "Empowering Educators in AI and IoT" organized by Knowledge Consortium of Gujarat, Department of Education, Government of Gujarat	13-11-2024	13-11-2024
48	Dr. K. C. Patel Dr. Paresh H. Rathod Dr. P. S. Panchal Mr. M. P. Dohat Dr. Pushpa S. Parmar Mr. S. V. Rathod	Global Soils Conference 2024 on 'Caring Soils beyond food security: Climate change mitigation & ecosystem services' at ISSS, New Delhi	19-11-2024	22-11-2024





Sr. No.	Name of Teacher/ Scientist	Participated	Duration	
			From	To
49	Dr. Arjunsinh Rathava	8 th International conference on “Recent trends in advancement of Agriculture, Horticulture, Livestock and allied Sciences” (RTAAAS-2024) Jointly organized by Shri Guru Ram Rai University, Dehradun & Just Agriculture Education Group & SABSR, Noida	21-11-2024	22-11-2024
50	Dr. Nisha B. Patel	Online national workshop on “Statistical Data Analysis using R and Python” organized by Amiruddaula Islamia Degree College, Lucknow	24-11-2024	30-11-2024
51	Dr. R. K. Thumar Dr. Tulika Singh Ms. Anjana B. Prajapati	Annual Review Meeting of AICRP on Nematodes in Agriculture at CCS HAU Hisar	26-11-2024	27-11-2024
52	Dr. V. J. Patel D. D. Chaudhari Dr. Vinod B. Mor Dr. Hiren K Patel	Biennial Conference on “Climate - smart Weed Management for Global Food Security” organized by ISWS and ICAR - DWR, Jabalpur to be held at Banaras Hindu University (BHU) Varanasi, Uttar Pradesh	28-11-2024	30-11-2024
53	Dr. Tulika Singh Ms. Anjana B. Prajapati	10 days short training programme on Sampling, Survey, Extraction, Identification and Nematode Disease Diagnostics at CCS HAU, Hisar.	28-11-2024	07-11-2024
54	Dr. Y. B. Chauhan	VIII (XXXVI of project) Biennial workshop of AICRP on Integrated Farming Systems organized by Farming Systems Research and Development Association, Ludhiana Chapter, Ludhiana	02-12-2024	05-12-2024
55	Dr. Hitiksha Parmar Dr. J. G. Dulera Dr. Vaibhav Chaudhary	One week training programme on “Time and Stress Management Skills for Better Performance among the Extension Functionaries” at EEI, AAU, Anand	02-12-2024	07-12-2024
56	Dr. Hemlata Saini Mr. A.G. Pampaniya	International online Winter School on “Navigating Agricultural Transformations for Upliftment of Rural Excellence”(NATURE:2024) jointly organised by Agri Meet Foundation Bharat in Collaboration with Southern Federal University Russia, CIMMYT Mexico, ICRISAT Hyderabad, Visva-Bharati University West Bengal, ICAR-NDRI Karnal, MGUVV Durg, ICAR-ATARI Jabalpur and SKLTSHU Telangana	02-12-2024	31-12-2024
57	Dr. Ajay Kumar Maru	IX International Conference in Hybrid Mode on Global Research Initiatives for Sustainable Agriculture & Allied Sciences (GRISAAS-2024) held at SKNAU-RARI, Durgapura, Jaipur	10-12-2024	11-12-2024





Sr. No.	Name of Teacher/ Scientist	Participated	Duration	
			From	To
58	Shri. K. J. Vekariya	Training programme on Hybrid seed production of cucurbits organized by IIHR, Bangalore	10-12-2024	11-12-2024
59	Shri. K. J. Vekariya	Mid Term Review Workshop of Vegetable Component under CRP-AB	12-12-2024	12-12-2024
60	Dr. M. M. Lunagaria Dr. N. J. Chaudhari	XVII Biennial Workshop of AICRP on Agrometeorology (AICRPAM) and XII Annual Review Meeting of NICRA-AICRPAM at Dr Rajendra Prasad Central Agricultural University (RPCAU), Samastipur, Bihar	11-12-2024	14-12-2024
61	Dr. C. B. Varma	Online webinar on "Stress Management and Work Life Balance" under the initiative TEERTH organized by Knowledge Consortium of Gujarat, Department of Education, Govt. of Gujarat	18-12-2024	18-12-2024
62	Dr. Ajay Kumar Maru	2 nd National Conference and Webinar on Farmers Orientation Towards Climate Change and Upgradation to Sustainability, FOCUS-2024 organized by GAPS, Dhanbad.	23-12-2024	24-12-2024
63	Dr. Jigar Mistry	SPIPA training at Regional Center, Vadodara	23-12-2024	24-12-2024
64	Dr. J. S. Patel Dr. M. D. Suthar Dr. Hemlata Saini Dr. J. B. Patel Dr. Ganga Devi Mr. V. B. Patel Dr. J. G. Dulera Dr. M. B. Zala Dr. S. R. Patel Dr. N.M. Vegad Dr. Ranganathswamy Math Dr. R.D. Shinde Mr. M. P. Dohat Dr. Pushpa S. Parmar Dr. N. D. Makwana Dr Y. C. Lakum Mr. J. H. Bhatt Dr. D. M. Rathod Dr. Chirag J. Patel	National level seminar on "Agricultural Extension for Viksit Bharat: Innovations and Strategies for Sustainable Development" jointly organized by SEEG and NAU, Navsari, Gujarat.	27-12-2024	28-12-2024





Sr. No.	Name of Teacher/ Scientist	Participated	Duration	
			From	To
65	Dr. R. M. Rajpura Dr. Vinod B. Mor	One-week training programme on "Promotion of Nutrition Management in Livestock & Dairy Sectors" at Extension Education Institute, Anand Agricultural University, Anand.	30-12-2024	04-01-2025
66	Dr. Hitiksha Parmar Dr. J. G. Dulera	National Training Cum Refresher Course on "Emerging employment in agriculture, sericulture, horticulture, fisheries, animal husbandry, dairy and Allied sectors for economic development of India	01-01-2025	21-01-2025
67	Dr. B. S. Divekar Dr. A. P. Ninama Dr. Keyur Gradhariya Sh. V. J. Patel Dr. Payal Vihariya Dr. Ravikumar Chaudhari Dr. A. C. Jatapara Dr. Raj Rathod Dr. Neeta Kalsariya Mr. G. D. Hadiya Dr. N. D. Makwana Dr. G. K. Bhabhor	Training on "Application of ECHO Project in Training and Capacity Building of Extension Functionaries" at EEI, Anand	07-01-2025	08-01-2025
68	Dr. D. J. Kacha Dr. S. S. Thorat	21 Days Winter school training on Fostering Environmental Sustainability through Food Security, Agricultural and Modern Science Innovations organized by AFTEFS & Vital Biotech Education Group, Kota, Rajasthan	07-01-2025	27-01-2025
69	Dr. R. K. Thumar Dr. Jalpa J. Dand	Annual Review Meeting of All India Network Project on Vertebrate Pest Management held at ICAR-CAZRI, Jodhpur	08-01-2025	09-01-2025
70	Dr. R.G. Parmar Dr. N.M. Gohel	IPS Western Zone e-Conference on "Natural Farming: A Unified Approach to Plant Health" organized by AAU, Anand	09-01-2025	09-01-2025
71	Dr. Arna Das	21 day training programme on "Breeding Modernization to Enhance Substantial Genetic gain in Crop Plants" at ICAR-Central Rice Research Institute, Cuttack, Odisha"	09-01-2025	29-01-2025
72	Dr. H. K. Patel	'MBSI National Conference on Microbial Biotechnology: Pioneering Green Solutions for Global Challenges (MBPGSGC 2025)' Organized by Dolat-Usha Institute of Applied Sciences, Valsad, Gujarat, India in association with Microbiologist Society of India (MBSI)	11-01-2025	12-01-2025





Sr. No.	Name of Teacher/ Scientist	Participated	Duration	
			From	To
73	Dr. R.G. Parmar Dr. N.M. Gohel	IPS National Conference on “Emerging Issues and Sustainable Strategies in Plant Health Management: A Global Perspective”, at ICAR-CICR, Nagpur, Maharashtra.	19-01-2025	21-01-2025
74	Dr. Arjunsinh Rathava	Online webinar on “Time management and Increasing Productivity” under the initiative FEERTH organized by knowledge consortium of Gujarat, Department of Education, Government of Gujarat	21-01-2025	21-01-2025
75	Dr Y.C. Lakum	National workshop of ARYA project at ATARI, Patna, Bihar	22-01-2025	23-01-2025
76	Dr. Y. K. Jhala	Online faculty development program on Environment and Sustainability Science organized by Malaviya Mission Teacher Training Centre, Tezpur University, Assam	23-01-2025	29-01-2025
77	Dr. Y. K. Jhala	International Conference on Environmental Microbiology organized by Department of Botany & IQAC, on ST. Xavier’s College, Ranchi, Ranchi University	25-01-2025	25-01-2025
78	Dr. N. D. Makwana Dr. G. K. Bhabhor Dr Y.C. Lakum Dr R. M. Patel	Natural farming training at Halol organized by Gujarat Natural Farming Science University, Halol	28-01-2025	31-01-2025
79	Mr. J. H. Bhatt	National Training Programme on “Freshwater Pearl Culture for Entrepreneurship Development” organized at ICAR- Central Institute of Freshwater Aquaculture, P.O.-Kausalyaganga, Bhubaneswar.	03-02-2025	07-02-2025
80	Dr. Ajay Kumar Maru	Online webinar on “Life Skills” under the initiative TEERTH organized by Knowledge Consortium of Gujarat, Department of Education, Government of Gujarat	04-02-2025	04-02-2025
81	Dr. N. B. Pawar	3 rd Asian Congress on “Plant Pathology: Plant and Soil Health Management for a Better Tomorrow” at SDAU, SK Nagar	07-02-2025	10-02-2025
82	Dr. Y. K. Jhala	International Symposium (Online) on Recent Trends in Microbiology organized by Department of Botany & IQAC, on ST. Xavier’s College, Ranchi, Ranchi University	08-02-2025	08-02-2025
83	Dr. M. M. Lunagaria Dr. S. B. Yadav	National Conference on “Frontier Technologies for Weather and Climate Based Decisions in Agriculture and Allied Sectors” at Assam Agricultural University, Jorhat - 785013, Assam	13-02-2025	15-02-2025





Sr. No.	Name of Teacher/ Scientist	Participated	Duration	
			From	To
84	Dr. R. K. Thumar Dr. Jalpa J. Dand	5-day online training on "Risk Assessment and management of vertebrate pests in agriculture and horticulture ecosystem" organized by NIPHM, Hyderabad	17-02-2025	21-02-2025
85	Dr. Ajay Kumar Maru	Online webinar on "Science of Happiness" under the initiative TEERTH organized by Knowledge Consortium of Gujarat, Education Department, Government of Gujarat.	19-02-2025	19-02-2025
86	Dr. K. V. Patel, Dr. Amarjeet Singh Dr. V. D. Chauduri	32 nd Annual Group Meeting of AICRP on Medicinal and Aromatic Plants & Betelvine held at ICAR-DMAPR, Boriavi	24-02-2025	26-02-2025
87	Dr. Raghunandan, B. L.	2 nd International Conference on Biological Control: Biocontrol Contributions to One Health	25-02-2025	28-02-2025
88	Dr. M. N. Jegoda	XXXI Annual convention and National Conference on "Precision Livestock Management Technology towards Strengthening Farming Efficiency and Animal Welfare" of ISAPM 2025 held at Rajasthan College of Agriculture, Udaipur	26-02-2025	28-02-2025
89	Dr. K. V. Patel, Dr. Amarjeet Singh Dr. V. D. Chauduri	One-Day Workshop on Betelvine Cultivation organized by MAPAI, Anand held at ICAR-DMAPR	27-02-2025	27-02-2025
90	Dr. J. G. Dulera	National seminar on "Poshan Utsav-2024" at FPT college, AAU, Anand	28-02-2025	28-02-2025
91	Dr. N. M. Gohel	Nurturing Future Leadership Programme (NFLP) on 'Building Impactful Leadership' under Malaviya Mission Teacher Training Programme organized by Institute of Rural Management Anand (IRMA), Anand	03-03-2025	03-03-2025
92	Dr. R. R. Acharya	43 rd Annual Group Meeting of AICRP (VC) at PAU, Ludhiana	03-03-2025	05-03-2025
93	Dr. Y. C. Lakum Mr. J. H. Bhatt Dr. R. M. Patel Dr. I. N. Bhabhor	Annual Action Plan Workshop of KVKs 2025 at AAU, Anand	05-03-2025	05-03-2025
94	Dr. Kaushik D. Parmar Dr. Ravi L. Kalasariya	National Conference on Pesticide Residues in Agril. Commodities, organized by NIPHM, Hyderabad	05-03-2025	06-03-2025
95	Er. Vishal Mehra	Refresher Course on "Data science" organized by Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram	17-03-2025	29-03-2025





Sr. No.	Name of Teacher/ Scientist	Participated	Duration	
			From	To
96	Dr. Vinod B. Mor	National Conference on "Nutri-cereals and Smart-Foods for Transforming Resources, Innovations and Technology for Optimal Nutritional Security" held at Agriculture University Jodhpur (Raj.), India	18-03-2025	19-03-2025
97	Dr. R. A. Patel Dr. J. C. Shroff Dr. P. M. Patel Dr. G. N. Motka Dr. A. P. Patel Dr. N. J. Jadav Dr. J. K. Parmar Dr. Aakash Mishra Dr. P. V. Mehta Dr. Sneha Macwana Dr. Arna Das Dr. Jigar Mistry Mr. R. M. Chavadhari Dr. Sunil J. Macwan Dr. R.G. Parmar Dr. N.M. Gohel Dr. M. B. Zala	10 th Convention of BACA Alumini Association AAU, Anand at B.A. College of Agriculture, AAU, Anand	20.03.2025	20.03.2025
98	Dr. K. J. Suthar	Annual Group Meeting of AICRP on cotton 2023-24 held at ANGRAU, Lam, Guntur (AP)	21.03.2025	23.03.2025
99	Dr. R.G. Parmar Dr Y.C. Lakum Dr R. M. Patel	One day Regional Mega <i>prakrutik kheti</i> consultation cum workshop held at S. D. Agricultural University, Sardarkrushingar	25-03-2025	25-03-2025
100	Dr. Hitiksha Parmar Dr. J. G. Dulera Dr. Vaibhav Chaudhary	Training programme on "Madhya Gujarat na mukhya pakoma Biyaran utpadan, processing ane sangrah" programme	27-03-2025	28-03-2025

2) FACULTY OF HORTICULTURE

Sr. No.	Name of Teacher/ Scientist	Participated	Duration From	Duration To
1	Dr. D. R. Paradva	Paradigm and Dynamics of Digital Horticulture for Food, Nutrition and Entrepreneurship	28-05-2024	31-05-2024
2	Dr. Amita Parmar	Training programme on "AgCatalyst-agripreneurshipMentor development Programme "Organized by AIC, Anand.	10-06-2024	16-06-2024





Sr. No.	Name of Teacher/ Scientist	Participated	Duration From	Duration To
3	Dr. H. N. Prajapati	Training of "Marimasala, Aushadhiya ane krushivaneey pakoma pak sanrakshan" organized by the plant protection Association Gujarat, PPAG at SDAU, Sardarkrushinagar, Gujarat	25-06-2024	25-06-2024
4	Dr. D. R. Paradva Dr H N Prajapati Dr. B. L. Dudhat	One day Seminar on "Amrutkal maa krushi pedasshoni prakriya ane muly vardhan" organized by GAAS, Ahmedabad chapter at Ahmedabad during August 31, 2024	31-08-2024	31-08-2024
5	Dr. A. H. Barad Dr. B. L. Dudhat	Training on "Time and Stress Management Skills for Better Performance Among the Extension Functionaries" (one week) Organized by EEI, AAU, Anand	02-12-2024	07-12-2024
6	Dr. S.B. Katole	National level seminar on "Agricultural Extension for Viksit Bharat: Innovations and Strategies for Sustainable Development" jointly organized by SEEG and NAU, Navsari, Gujarat.	27-12-2024	28-12-2024
7	Dr. S.B. Katole	World animal nutrition conference on "Newer vistas to animal nutrition research towards climate resilient animal production for livelihood, food an nutritional security"	20-01-2025	22-01-2025
8	Dr. S.B. Katole	21 Days international training programme on "Advanced nutritional strategies for enhancing farm efficiency and eco friendly poultry, fish and animal production"	01-03-2025	26-03-2025

3) FACULTY OF FOOD PROCESSING TECHNOLOGY AND BIO-ENERGY

Sr. No.	Name of Teacher/ Scientist	Participated	Duration From	Duration To
1	Er. Tanmay H Bhatt Dr S. R. Bhise	Workshop on 'Atmanirbhar Bharat' held at SDAU, SKNagar, Dantiwada	08-06-2024	09-06-2024
2	Dr S. R. Bhise Dr.G. P. Tagalpallewar	Training on "AgCatalyst- Agripreneurship Mentor Development Program", a 7-day, 42-hour certificate course at AAU Incubation Center, College of FPT&BE, Anand Agricultural University, Anand	10-06-2024	16-06-2024
3	Dr. Gayatree R. Jadeja	National Workshop on Nano-technological Applications in Food Packaging organized by the Department of Food Safety & Quality at the DSLD college of Horticultural engineering and food technology, Devihosur, Haveri, Karnataka	16-07-2024	16-07-2024





Sr. No.	Name of Teacher/ Scientist	Participated	Duration From	Duration To
4	Dr. Samit Dutta	Deans' Research & Innovation Meet at iHub Gujarat, Ahmedabad org. by Ministry of Education's Innovation Cell, Government of India	20-09-2024	20-09-2024
5	Dr. Rashmin Dhingani Dr. Akashamrut Patel	Training program on "Unveiling Protein Biology: Wet & Dry Lab Approach" organized by GBRC, Gandhinagar in collaboration with NIPER Ahmedabad (11-22, November 2024) held at Gandhinagar, Gujarat	11-11-2024	22-11-2024
6	Minaxi R. Prajapati	Online webinar on "Empowering Educators in AI and IoT" organized by Knowledge Consortium of Gujarat, Education Department, Government of Gujarat	13-11-2024	13-11-2024
7	Dr. Gayatree R. Jadeja	Pre-Conference Workshop on – Navigating Health Through Precision: Advancing clinical nutrition assessment for adults and paediatrics, Organised by NSI, held at Symbiosis International (Deemed University) SIU, Pune, Maharashtra, India	13-11-2024	13-11-2024
8	Dr. Gayatree R. Jadeja	56 th Annual National Conference of the Nutrition Society of India (NSI), held at Symbiosis International (Deemed University) SIU, Pune, Maharashtra, India	14-11-2024	15-11-2024
9	Mrs. Minaxi R. Prajapati	Online training programme on Statistical Learning Techniques, organised by ICAR, NAARM, Hyderabad	18-11-2024	27-11-2024
10	Dr. Gayatree R. Jadeja	One week Training programme on "Competency Enhancement Programme on Soft Skills and Personality Development", organized by Extension Education Institute, Anand, Gujarat, India	09-12-2024	14-12-2024
11	Mrs. Minaxi R. Prajapati	Strengthening public extension through Agril-Clinics and Agri-Business centres scheme, Jointly organised by EEI Anand Agricultural University, Anand and MANAGE	10-12-2024	12-12-2024
12	Dr. Gayatree R. Jadeja	Online Webinar on "Stress Management and work life balance" organized by Knowledge Consortium of Gujarat, Education Department, Government of Gujarat	18-12-2024	18-12-2024
13	Dr. Samit Dutta	National Level Agri-Startup Expo-2024 Organised by KRISHIK RKVY-Agri Business Incubator, University of Agricultural Sciences, Dharwad	27-12-2024	28-12-2024





Sr. No.	Name of Teacher/ Scientist	Participated	Duration From	Duration To
14	Dr. Samit Dutta	State level conclave on the Centrally sponsored schemes in Agri and Food Processing sector in the Session on Building High-Quality Supply Chains in Agri & Food Processing Sector: Shifting Paradigms with Innovative Value Chain Interventions at i-Hub, Ahmedabad org. by GAIC, GoG	11-03-2025	11-03-2025
15	Dr. Samit Dutta	Industry-Academia Meet for redesigning the Undergraduate Food Technology Syllabus organized by S. G. Institute of Dairy Technology, Patna in online mode	18-03-2025	18-03-2025
16	Dr. Ameer Ravani Er. Tanmay H Bhatt	International conference on "Trailblazing Trends in Sustainable Climate Resilient Precision Agriculture through Artificial Intelligence and Remote Sensing	23-01-2025	24-01-2025

4) FACULTY OF AGRIL ENGINEERING AND TECHNOLOGY

Sr. No.	Name of Teacher/ Scientist	Participated	Duration From	Duration To
1	Dr. K. R. Jethva	10 days online training on Food and Nutritional Security through Nutri Cereal (Shree Anna) organized by Department of Agriculture, 360 Research Foundation.	20-06-2024	30-06-2024
2	Dr. K. R. Jethva	5 days online workshop on Advanced food analytical techniques: Theory and practical applications organized by Dept. of Food process engineering, NIT Rourkela.	08-07-2024	12-07-2024
3	Dr. R. C. Salunkhe Dr. K. L. Dabhi Ms. S. K. Modi Dr. Neeraj Seth	8 days online NEP Orientation & Sensitization Program organized by Indian Institute of Science, Education and Research (IISER), Bhopal under UGC-Malaviya Mission Teacher Training Programme.	27-08-2024	05-09-2024
4	Dr. A. N. Kunapara	Massive Open Online Course (MOOC) on Digital Evaluation and Evaluation Methodologies organized by NAARM, Hyderabad	01-09-2024	30-09-2024
5	Dr. K. R. Jethva	5 th International Conference on 'Innovative Academic Studies' organized by All sciences Academic press (Online Mode)	10-10-2024	11-10-2024
6	Er. Chiragkumar Jadav	NEP 2020 Orientation & Sensitization Program	08-11-2024	20-11-2024





Sr. No.	Name of Teacher/ Scientist	Participated	Duration From	Duration To
7	Er. R. S. Godhani Dr. R. C. Salunkhe	58 th Annual Convention of Indian Society of Agricultural Engineers (ISAE) on 'Engineering Innovations for Next-gen Digital Agriculture' & International Symposium held at VNMKV, Parbhani, Maharashtra	12-11-2024	14-11-2024
8	Dr. K. R. Jethva	2 nd International Conference on 'Pioneer and Innovative Studies ICPIIS 2025 organized by All Sciences Academic Press (Online Mode)	30-01-2025	31-01-2025

5) FACULTY OF AGRICULTURAL INFORMATION TECHNOLOGY

Sr. No.	Name of Teacher/ Scientist	Participated	Duration From	Duration To
1	Dr. J. V. Suthar	Short course on "Agronomic research for food security and environmental stewardship in changing scenarios" organized by The Indian Society of Agronomy, ICAR-IARI, New Delhi	20-06-2024	29-06-2024
2	Dr. X. U. Shukla	Communication and Motivation Skills for Effective Extension Services by EEI, Anand	09-09-2024	14-09-2024
3	Er. Vishal Mehra	Refresher Course on "Data science" organized by Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram	17-03-2025	29-03-2025
4	Dr. J. V. Suthar	One day Regional Mega <i>prakrutik kheti</i> consultation cum workshop held at S. D. Agricultural University, Sardarkrushingar	26-03-2025	26-03-2025

6) FACULTY OF AGRICULTURAL BUSINESS MANAGEMENT

Sr. No.	Name of Teacher/ Scientist	Participated	Duration From	Duration To
1	Dr. C. R. Dudhagara Dr. A. B Mahera	Workshop on 'Atmanirbhar Bharat' held at SDAU, SKNagar, Dantiwada	08-06-2024	09-06-2024
2	Dr. Snehal Mishra	Seven-day certificate course on, "AgCatalyst: Agripreneurship Mentor development program" organized by AAU Incubation Center (AIC), Anand Agricultural University, Anand in collaboration with CCS, National Institute of Agricultural Marketing, Jaipur	10-06-2024	16-06-2024
3	Dr. S. R Panigrahy	Training as an Invitee in IWMI-Tata Water Policies Research Programme at National Dairy Development Board, Anand, Gujarat	18-09-2024	20-09-2024





Sr. No.	Name of Teacher/ Scientist	Participated	Duration From	Duration To
4	Dr. M. R. Prajapati	International conference on Empowering Tomorrow's business landscape: Navigating the intersection of entrepreneurship, AI, Financial inclusion and sustainability organized by ST. JOSEPH'S DEGREE & PG COLLEGE, Dept of Commerce, Osmania University, Hyderabad. Telangana	20-09-2024	22-09-2024



Appendix

8

NAME & DETAILS OF THE DIGNITARIES VISITED

Sr. No.	Name of dignitaries	Date of visit
1	Dr. C. H. Babaria, Ombudsperson for redressal of Grievances of Students of the Anand Agricultural University, Anand and Prof. & Head, (Retd.), Gujarat Ayurved University and Director, G. J. Patel Institute of Ayurvedic Studies and Research, CVM, V. V. Nagar	09-05-2024
2	Dr. G. P. Singh, Director ICAR-NBPGR	05-06-2024
3	Dr. Sushil Pandey, Principal Scientist, ICAR-NBPGR	to07-06-2024
4	Dr. P. L. Patil, Vice Chancellor, UAS, Dharwad	10-07-2024
5	Dr Bekzod Shamseiv, Senior Agriculture Economist, World Bank, New Delhi	06-08-2024
6	Dr. G S Sidhu and Scientist team, Panjab Agricultural University, Ludhiana	28-08-2024
7	Dr. Sarvanana Raj, Director MANAGE, Hyderabad	19-09-2024
8	Dr. B. Singh, Hon. Vice Chancellor, NDAUT, Ayodhya	18-10-2024
9	Dr. Satish N. Chavan, ICAR-IIORR, Hyderabad	28-10-2024
10	Dr. Tilak Raj Sharma, DDG (Crop Science), ICAR	11-11-2024
11	Dr. Poonam Jasrotia, ADG PP & B, ICAR, New Delhi	12-11-2024
12	Dr. T. R. Sharma, DDG (CS), ICAR	
13	Dr. Vandana Tripathy, PC, AINP-PR&C, New Delhi	
14	Dr. Punam Jasrotia, ADG, PP&B, ICAR, New Delhi	
15	Ms. Ankita Patel Assistant Manager, H. R., GSFC, Vadodara	25-11-2024
16	Ms. Priyan Singh, Assistant Manager, H. R., GSFC, Vadodara	25-11-2024
17	Shri. Rasesh Desai, Managing Director, Wagh Bakri Tea Group	10-12-2024
18	Dr. Manish Das, Director, DMAPR, Boriavi	03-01-2025
19	Shree Acharya Devvrat, Hon'ble Governor, Gujarat State	04.01.2025
20	Mr. Hitendra Mor, SO, Agri. Department, GoG	04-01-2025
21	Dr. Ram Pd Poudel, Agriculture and Forestry University, Nepal	11-02-2025



Sr. No.	Name of dignitaries	Date of visit
22	Dr. Sheshu Madhav Maganti, Director ICAR-National Institute for Research on Commercial Agriculture, Rajahmundry, Telangana	
23	Dr. Virgu Rishi Duwadi, Agriculture and Forestry University, Nepal	
24	Dr. Anil Tiwari, Agriculture and Forestry University, Nepal	12-02-2025
25	Dr. Sharughan Shah, Agriculture and Forestry University, Nepal	
26	Mrs. Shruti Bhosle, Agriculture and Forestry University, Nepal	
27	Mr Chandra Maya Dura, Agriculture and Forestry University, Nepal	
28	Dr. Jagadish Rane, Director, ICAR-CIAH, Bikaner, Rajasthan	24-02-2025
29	Dr. Sanjay Kuar, Chairman, ASRB	
30	Dr. Sudhakar Pandey, ADG(FVSM), ICAR-New Delhi	25-02-2025
31	Dr. B. K. Pandey, Ex.-ADG	
32	Dr. Mohan Lal, Princiapl Scientist, CSIR-NEIST, Jorhat	
33	Dr. Anju Sharma (IAS), Additional Chief Secretary, Agriculture, Farmers Welfare & Co-operation Department, Government of Gujarat	04-03-2025
34	Shri K K Nirala, , IAS Secretary, Expenditure (Finance Department), GoG,	10-03-2025
35	Dr. Bakul Joshi, President, T. Stanes & Co. Ltd.	20-03-2025



21th Annual Report 2024-25

Publication year	:	2025
Publication Series No.	:	GEN-1:63:2025:300
ISBN	:	978-93-5592-861-0
Copies	:	300
Technical Guidance	:	Dr. K. B. Kathiria Hon. Vice Chancellor, AAU, Anand
Editorial Panel	:	Dr. D. H. Patel Dr. Samit Datta Dr. J. B. Patel Dr. D. B. Sisodiya Dr. Rajnibhai A. Patel Dr. D. D. Parekh Dr. Bhavin Ram Dr. Pinakin C. Patel Dr. A. P. Ninama Dr. N. M. Chavda
Publisher	:	Dr. G. R. Patel Registrar Anand Agricultural University Anand - 388 110
©	:	Anand Agricultural University, Anand



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Publication Series No. : GEN - 1 : 63 : 2025 : 300



ISBN : 978-93-5592-861-0