

Kishorbhai Institute of Agriculture Sciences and Research Centre

UKA TARSADIA UNIVERSITY



Summary of Report

**Student READY Programme (2025–26) Consolidated
Phase-Wise Report**

(ICAR 5th DEAN'S RECOMMENDATION)

7th Semester, Final Year

B. Sc. (Hons.) Agriculture

Kishorbhai Institute of Agriculture Sciences and Research Centre

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Academic Staff Committee

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Staff			
Name	Specialisation	Name	Specialisation
Dr. Nikunj Sohaliya	Plant Pathology of Tropical crops	Dr. Ankit Chaudhary	Plant Breeding, Seed Production and Quality
Dr. Kala Chaudhary	Extension Education, Student and Farmer Entrepreneurial Skills	Dr. Mallika Sindha	Floricultural Technology at National and Global
Dr. Hemangini Rathva	Horticultural Technology of Tropical Plants	Dr. Ravi Dodiya	Entomology, Plant Protection and Tropical Crops Quality
Dr. Agrata Vadhel	Agri and Environmental Botany, Agro-Chemicals and Plant and Soil Health	Dr. Upasana Patel	Agronomy-Agrotechnology and Crop Production
Dr. Karunaben Chaudhri	Agronomy-Agrotechnology and Crop Production	Dr. Snaa Mistry	Agro-Waste Management, Processes and Products Development
Dr. Nikita Patel (RA-Giri Project)	Agro-Technology, Value Addition in Medicinal and Food Plants		
Field and Laboratory Supporting Staff			
Mr. Keyurgiri Goswami	Field Crops	Mr. Ripal Patel	Nursery and Laboratory

Hands-On Learning: Student Practical Training



Student READY Programme (2025–26)

About Uka Tarsadia University (UTU)

- **Location:** Bardoli, South Gujarat, India
 - **Campus Size:** 150 acres
 - **Student Strength:** Over 10,000
 - **Faculty Members:** 550+ across 23 institutes
 - **Affiliation:** Established under Bardoli Pradesh Kelavani Mandal
 - **Accreditation:** Approved by UGC and NAAC
 - **Environment:** Dynamic, research-driven, and student-centric
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About Kishorbhai Institute of Agriculture Sciences and Research Centre (KIASRC)

- **Established:** 2022
- **Affiliated to:** Uka Tarsadia University, Bardoli
- **Campus Features:**
 - Experiential learning demonstration and crops cultivation farm

- 13 specialized agricultural and farm-related laboratories
 - PhD-qualified faculty team
 - Research scholars conduct field experiments on exotic and medicinal plants
 - Books, book chapters, research articles, and papers have been published by our staff and research scholars.
 - **Programmes Offered:**
 - B.Sc. (Hons.) Agriculture
 - Diploma to Degree (D2D)
 - Specialized certificate programmes support entire entrepreneurial skills.
 - **Mission:** Advancing agriculture through **education, research, and technology**
 - **Focus:** Practical learning, local relevance, and innovation in agricultural sciences, food security—both national and global.
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About Student READY Programme

READY stands for **Rural Entrepreneurship Awareness Development Yojana**

- **Launched by:** Hon'ble Prime Minister of India on **25 July 2015**
- **Recommended by:** 5th Dean's Committee
- **Implemented by:** ICAR (Indian Council of Agricultural Research)
- **Purpose:**
 - Equip students with **entrepreneurial skills**

- Provide **practical exposure** to rural agriculture
 - Promote **Indigenous Technical Knowledge (ITK)**
 - Encourage students to become **job providers**
 - **Implementation:** Final year of **B.Sc. (Hons.) Agriculture**
 - **Key Components:**
 - Rural Awareness Work Experience (RAWE)
 - Agro-Industrial Attachment (AIA)
 - In-Plant Training
 - Educational Tour
 - Student Projects
 - Experiential Learning
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Rural Entrepreneurship Awareness Development Yojana

Implemented in: 7th Semester of B.Sc. (Hons.) Agriculture

Duration: 18 August 2025 – 28 February 2026

Credit Hours: 0 + 20

Number of Students: 33

Main Objectives

- Prepare students for **real-life agricultural challenges**.
 - Promote **self-employment** and **entrepreneurial mindset**.
 - Build **confidence, communication skills, technical and technological competence**.
 - Provide exposure to **rural settings, agro-industries, and extension activities**.
 - Encourage students to become **job providers** rather than job seekers.
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SUMMARY REPORT

Phase–I Rural Agricultural Work Experience (RAWE) – Orientation Programme

B.Sc. (Hons.) Agriculture, Semester VII

Kishorbhai Institute of Agriculture Sciences and Research Centre (KIASRC),
Uka Tarsadia University, Bardoli

Introduction

Phase–I of the Rural Agricultural Work Experience (RAWE) Programme, titled **On-Station Training Programme (Orientation)**, was conducted at Kishorbhai Institute of Agriculture Sciences and Research Centre (KIASRC), Uka Tarsadia University, Bardoli, from **18 August to 03 September 2025** for a duration of **14 days (excluding Sundays and holidays)**.

The programme was organized in accordance with the **ICAR 5th Dean Committee Curriculum for B.Sc. (Hons.) Agriculture** and aimed to provide a structured academic orientation to students prior to their exposure to field-based RAWE phases. Phase–I served as a foundational component of the RAWE programme, strengthening students' conceptual understanding, academic preparedness, and professional outlook.

Objectives of Phase–I RAWE

The main objectives of the Phase–I Orientation Programme were to:

- Introduce students to the structure, objectives, and expectations of the RAWE programme
- Provide an integrated overview of all major and allied agricultural disciplines
- Strengthen conceptual clarity in core subjects of agriculture
- Guide students regarding standard **reference books and learning resources**
- Create awareness about **competitive examinations** and higher education pathways
- Prepare students for effective participation in subsequent RAWE phases

Programme Structure and Implementation

The Phase–I RAWE Orientation Programme was implemented through **discipline-wise orientation sessions**, each conducted for one full day. Faculty members from different departments delivered focused academic sessions highlighting the scope, relevance, and practical application of their respective subjects.

The orientation followed a systematic schedule covering:

- General Orientation and RAWA guidelines
- Agronomy and Soil Science
- Genetics & Plant Breeding and Seed Science & Technology
- Horticulture and Animal Science
- Basic Sciences and Agricultural Economics
- Agricultural Extension
- Agricultural Statistics
- Plant Pathology and Nematology
- Biochemistry, Biotechnology, Plant Physiology, and Agricultural Microbiology
- Agricultural Entomology and Agricultural Engineering
- Agricultural Meteorology and Agricultural Chemistry

Each session emphasized **conceptual understanding, interdisciplinary linkages, and relevance to field conditions**, ensuring a holistic academic approach.

Academic and Competitive Examination Orientation

Special focus was given to:

- Identification of core and high-weightage topics in each discipline
- Mapping undergraduate syllabus with **ICAR and other competitive examinations**
- Guidance on subject-wise **standard reference books**
- Study strategies for concept building and revision

This component enhanced students' preparedness for **future academic pursuits, research careers, and competitive examinations**, strengthening their long-term professional goals.

Overall Learning Outcomes

By the completion of Phase-I RAWA Orientation Programme, students were able to:

- Understand the scope and application of major agricultural disciplines
- Integrate theoretical knowledge with future field-based learning
- Develop academic discipline and professional ethics
- Identify appropriate learning resources and reference materials
- Gain clarity on competitive examinations and higher studies
- Approach subsequent RAWA phases with improved confidence and clarity

Conclusion

Phase-I of the RAWE Programme was successfully conducted and effectively fulfilled its academic objectives. The structured orientation strengthened students' conceptual foundations, enhanced interdisciplinary understanding, and prepared them for experiential learning in later RAWE phases.

The programme reflects the commitment of **KIASRC, Uka Tarsadia University** to deliver quality agricultural education aligned with **ICAR standards**, contributing to the holistic academic and professional development of undergraduate agriculture students.

Report prepared and summarized by Dr. Ankit Chaudhary and Dr. Snaa Mistry, Phase-I RAWE Coordinators.

SUMMARY REPORT

Phase–III Rural Agricultural Work Experience (RAWE)–one day visit to ZRS/KVK/NGO

B.Sc.(Hons.)Agriculture, Semester VII

Kishorbhai Institute of Agriculture Sciences and Research Centre (KIASRC),

Uka Tarsadia University, Bardoli

Introduction

ThePhase–III Rural Agricultural Work Experience (RAWE) one day visit to ZRS/KVK/NGO was conducted in accordance with the **ICAR 5th Dean Committee recommendations** for the B.Sc. (Hons.) Agriculture curriculum. The 10 days visits south Gujarat from 29th October to 8th November, 2025 was designed to provide experiential learning through direct exposure to different research stations, KVK and NGO of south Gujarat.

The 10 days visit covered 5 KVK, 6 research station, 2 resource centers, SSK, Educatorium and NGO of Navsari Agricultural University enabling students to understand region- specific agricultural practices, crop systems, and climate-resilient technologies.

Objectives of the Educational Tour

The primary objectives of the Phase–III RAW E one day visit to ZRS/KVK/NGO were to:

- To understand the functioning and role of KVK in agricultural extension services.
- To study the contribution of NGOs in rural development and farmer empowerment.
- To observe ongoing research activities at the research station relevant to South Gujarat.
- To learn the process of technology transfer from research to farmers.
- To gain practical field exposure and relate theoretical knowledge with real farming situations.

Visit and Field Exposure

During the phase, students visited a wide range of KVK and research stations of NAU, NGO, SSK, resource centres and educatorium. These visits provided insights into:

- Natural farming of rice, The "Gangamma Mandal",Panchstariy model farm

- History of Sardar Vallabhbhai Patel and his work after independence related agriculture
- Display of ancient and modern history of agriculture
- Potential of value addition and efficient use of agricultural residues
- Different bamboo species and its creations
- Research farms of millets, cotton, sorghum, rice
- Production unit of banana pseudostem

Exposure to **agricultural museums and SSK** further strengthened students' understanding of India's agricultural research heritage, technological milestones, and institutional contributions to national food security.

In addition to academic exposure, **site-seeing visits** enhanced students' socio-cultural awareness, environmental sensitivity, and appreciation of indigenous knowledge systems relevant to agriculture.

Training, Internships and Institutional Linkages

During interactions with various centers, discussions were held regarding:

- Training at Bamboo Resource Centre
- Training/Internship at KVK, Ambheti on Mashroom Cultivation
- Training at Banana Pseudostem Unit
- Internship opportunities at Post Harvest Technology

These discussions opened avenues for future academic collaboration, skill development, and student placement, strengthening industry–academia linkages.

Overall Learning Outcomes

By the end of the Phase–III RAWWE one day visit to ZRS/KVK/NGO, students were able to:

- Understand agricultural practices of south Gujarat zone of Gujarat
- Apply scientific principles of crop production, horticulture, livestock management and Post Harvest Technology
- Recognize the role of ZRS, KVK and NGO in agricultural development
- Develop skills in observation, documentation, analysis and technical reporting
- Appreciate sustainability, climate resilience and farmer-centric technologies

Conclusion

The Phase–III RAWE one-day visit to ZRS, KVK and NGO was carried out successfully and effectively achieved its academic as well as practical learning objectives. The programme played a vital role in the overall development of students by strengthening their technical knowledge, professional values, teamwork abilities, leadership skills and practical understanding of Indian agricultural systems.

The field exposure gained during this phase has provided a solid base for students' future involvement in agriculture, research, extension, agribusiness and rural development, in accordance with the ICAR-recommended national standards of agricultural education.

*Report prepared and summarized by Dr. Upasana Patel and Dr. Karuna Chaudhri,
Phase–III RAWE Coordinators*

Photographic Evidence of Phase–VI RAWE Educational Tour

(Photographs documenting institutional visits, field and farm activities, museum exposure and student participation are attached as documentary proof in accordance with ICAR guidelines.)



Agro-Ecosystem Diagnostic Analysis and Institutional Visit Phase–III Training Programme

Uka Tarsadia University, Bardoli

Duration: December 2025

Introduction

The Agro-Ecosystem Diagnostic Analysis and Institutional Visit initiative was meticulously executed as an integral component of the Phase–III training programme for B.Sc. (Hons.) Agriculture students at Uka Tarsadia University, Bardoli. This programme adhered strictly to the guidelines outlined by the Indian Council of Agricultural Research (ICAR), emphasizing experiential learning to foster practical expertise in agricultural sciences. Designed with a multifaceted approach, the training aimed to equip students with essential diagnostic competencies, interdisciplinary insights, and a comprehensive grasp of institutional frameworks that underpin agro-ecosystem dynamics.

By seamlessly blending theoretical classroom sessions, immersive field-based diagnostic exercises, and strategic visits to key institutions, the programme empowered participants to conduct systematic evaluations of crop production systems. This included in-depth analyses of pest and disease interactions, soil fertility assessments, meteorological influences, and innovative crop improvement methodologies—all observed and applied under authentic field conditions. Such an integrated methodology not only reinforced academic concepts but also cultivated a nuanced appreciation for the complexities of sustainable agriculture in diverse ecological settings.

Objectives of the Programme

The Agro-Ecosystem Diagnostic Analysis and Institutional Visit was strategically structured to achieve the following primary objectives:

- **Foster a Holistic Understanding of Agro-Ecosystem Components and Interactions:** Enable students to comprehend the intricate interdependencies among biotic and abiotic factors, including crops, soils, climate, and biological agents, within agricultural landscapes.
- **Impart Specialized Training in Diagnostic Disciplines:** Equip participants with proficiency in meteorological forecasting, agronomic evaluations, entomological surveillance, pathological diagnostics, and soil science analyses to identify and mitigate agro-ecosystem challenges.
- **Enhance Problem-Solving Capabilities Through Empirical Observations:** Develop critical thinking and decision-making skills by engaging students in real-time field assessments, encouraging them to derive actionable insights from observed data.
- **Provide Exposure to Key Agricultural Institutions:** Introduce students to the operational mechanisms of research, extension, and development organizations, highlighting their roles in technology transfer, policy implementation, and community outreach.

- **Bridge Theoretical Knowledge with Practical Applications:** Facilitate the translation of classroom-learned principles into tangible agricultural practices, thereby preparing students for professional challenges in farming, research, and extension services.

These objectives were pursued with a focus on promoting sustainability, innovation, and resilience in agro-ecosystems, aligning with global and national priorities for food security and environmental stewardship.

Phase-Wise Training Focus

The programme was methodically divided into two principal phases, spanning a total of 10 days (with allowances for travel and reflection periods), to ensure progressive skill development and comprehensive coverage. This structured progression allowed for a balanced integration of diagnostic fieldwork and institutional engagements.

I. Agro-Ecosystem Diagnostic Analysis (5 Days)

This phase concentrated on discipline-specific diagnostics, conducted in selected agricultural fields to simulate real-world scenarios. Each day was dedicated to a core aspect of agro-ecosystem analysis, promoting an interdisciplinary perspective that underscored the synergistic relationships among various components:

- **Day 1: Meteorology and Agronomy** Students explored key weather parameters—such as temperature, humidity, rainfall, wind speed, and solar radiation—and their profound influence on crop phenology, growth stages, and overall productivity. Practical sessions delved into cropping systems, including intercropping and crop rotation strategies, alongside agronomic practices like irrigation scheduling, fertilizer application, and weed management. Emphasis was placed on identifying yield-limiting factors, such as abiotic stresses and suboptimal cultural practices, through hands-on measurements and data interpretation.
- **Day 2: Entomology** The focus shifted to insect pest identification, encompassing morphological characteristics, life cycles, and behavioral patterns of common agricultural pests. Participants learned advanced surveillance techniques, including pheromone traps, light traps, and scouting methods, to monitor population dynamics and assess economic thresholds. Diagnostic exercises involved evaluating pest damage symptoms and recommending integrated pest management (IPM) strategies to minimize chemical interventions and promote ecological balance.
- **Day 3: Plant Pathology and Agricultural Chemistry** This day addressed disease diagnostics, with students trained in recognizing symptomatology, etiology, and epidemiology of fungal, bacterial, viral, and nematode-induced diseases. Concurrently, agricultural chemistry components covered soil and plant tissue sampling for nutrient profiling, utilizing tools like pH meters, spectrophotometers, and rapid test kits to detect deficiencies or toxicities. The integration of these disciplines highlighted the role of balanced nutrition in enhancing plant immunity and disease resistance.
- **Day 4: Soil Science** Dedicated to comprehensive soil health assessments, sessions included evaluations of physical properties (e.g., texture, structure, and porosity), chemical attributes (e.g., pH, electrical conductivity, and organic matter content), and biological indicators (e.g., microbial activity and earthworm populations). Students conducted field tests and laboratory analyses to diagnose soil degradation issues, such as erosion, compaction, or salinity, and explored remedial measures like organic amendments and conservation tillage for long-term soil sustainability.

- **Day 5: Plant Breeding and Genetics** The final diagnostic day emphasized crop improvement strategies, including varietal identification, hybrid vigor assessment, and genetic diversity evaluations. Participants examined breeding techniques for traits like drought tolerance, pest resistance, and high yield potential, using tools such as pedigree analysis and marker-assisted selection. This culminated in discussions on adapting crop genetics to local agro-climatic conditions, fostering an understanding of biotechnology's role in modern agriculture.

Through this phased diagnostic framework, students gained a profound insight into the interconnectedness of agro-ecosystem elements, enabling them to formulate holistic management plans.

II. Institutional Visits (3 Days)

Complementing the diagnostic phase, this segment involved curated visits to a spectrum of agricultural institutions, providing exposure to cutting-edge research, extension services, and developmental initiatives. These visits were designed to illustrate the practical translation of scientific knowledge into farmer-centric solutions:

- **Core Institutions Visited:**
 - Uka Tarsadia University Agricultural Research & IT Centre, Bardoli: Focused on innovative technologies and digital tools for precision agriculture.
 - Krushi Vigyan Kendra (KVK), Bardoli, and Agricultural Technology Management Agency (ATMA), Surat: Emphasized on-farm demonstrations, farmer training, and technology dissemination.
 - Farmer Training Centre (FTC), Bardoli, and Science Centre, Saputara: Highlighted educational outreach and interactive science exhibits tailored to rural audiences.
- **Additional Specialized Visits:** To broaden perspectives, excursions were made to research stations and non-governmental organizations (NGOs), including:
 - Regional Research Station, UTU Campus: Insights into adaptive research for local crops.
 - Tribal Development Centre, Vyara: Strategies for sustainable farming in tribal regions.
 - Fruit Research Station, Gandevi: Advances in horticultural breeding and post-harvest technologies.
 - Agricultural Experimental Station, Paria: Field trials on crop agronomy and soil management.
 - Millet, Cotton, Sorghum, and Rice Research Stations: Crop-specific innovations and varietal development.
 - Aga Khan Rural Support Programme (AKRSP), Netrang: Community-driven approaches to rural development and agro-forestry.

These visits facilitated direct interactions with experts, offering students a glimpse into collaborative efforts between academia, government, and civil society.

Learning Activities and Student Engagement

Throughout the programme, students were immersed in a variety of interactive and participatory activities to maximize engagement and knowledge retention:

- **Expert Lectures and Interactive Sessions:** Delivered by institute directors, senior scientists, and extension specialists, these sessions covered emerging trends in agriculture, case studies of successful interventions, and policy frameworks.
- **Field Diagnostics and Data Collection:** Hands-on exercises involved systematic surveys, sample collection, and on-site analyses, encouraging collaborative problem-solving.
- **Institutional Surveys and Information Gathering:** During visits, students conducted structured interviews, reviewed official documents, and documented operational workflows to compile comprehensive reports.
- **Work Diary Maintenance and Continuous Evaluation:** Participants maintained detailed journals of observations, reflections, and learnings, which formed the basis for attendance tracking and performance assessments.

To optimize efficiency, students were grouped to visit at least two institutions daily, honing skills in time management, teamwork, and professional etiquette. This active involvement ensured that theoretical foundations were reinforced through practical immersion.

Overall Learning Outcomes

Upon successful completion of the programme, students demonstrated marked proficiency in several key areas:

- **Interdisciplinary Diagnostic Expertise:** Ability to diagnose and address agro-ecosystem imbalances using integrated approaches across meteorology, agronomy, entomology, pathology, soil science, and genetics.
- **Constraint Identification and Mitigation:** Skilled recognition of pest infestations, disease outbreaks, soil deficiencies, and crop genetic limitations, with strategies for sustainable remediation.
- **Institutional Role Comprehension:** In-depth understanding of how research stations, KVKs, ATMA, and NGOs contribute to agricultural innovation, extension, and community empowerment.
- **Practical Application of Theory:** Proficiency in applying academic concepts to field scenarios, enhancing adaptability in diverse agricultural contexts.
- **Professional Skill Development:** Enhanced capabilities in observation, data analysis, documentation, and reporting, essential for careers in agriculture and allied sectors.

These outcomes were evaluated through feedback sessions, diaries, and group presentations, confirming the programme's efficacy in building competent agricultural professionals.

Conclusion

The Agro-Ecosystem Diagnostic Analysis and Institutional Visit Phase–III Training Programme was executed with exemplary precision and achieved all its stipulated academic and experiential goals. By significantly augmenting students' diagnostic acumen, analytical prowess, and institutional acumen, the initiative has

effectively prepared them for impactful contributions in agriculture, research, extension services, and rural development.

This comprehensive exposure to diagnostic methodologies and institutional ecosystems has deepened participants' commitment to sustainable agricultural practices and ecosystem-oriented management. Fully compliant with ICAR's educational benchmarks, the programme stands as a testament to Uka Tarsadia University's dedication to nurturing forward-thinking agriculturists equipped to tackle contemporary challenges in food production and environmental conservation.

Photographic Evidence of Phase–VI RAWE Educational Tour

(Photographs documenting institutional visits, field and farm activities, museum exposure, and student participation are attached as documentary proof in accordance with ICAR guidelines.)



SUMMARY REPORT

Phase-4 PRA+ Stay around ZRS/ KVK/NGO

B.Sc. (Hons.) Agriculture, Semester VII

Kishorbhai Institute of Agriculture Sciences and Research Centre (KIASRC),

Uka Tarsadia University, Bardoli

Introduction

The **Phase-4** PRA+ Stay around ZRS/ KVK/NGO was conducted in accordance with the ICAR 5th Dean Committee recommendations for the B.Sc. (Hons.) Agriculture curriculum. The 10 day educational tour was designed to provide experiential learning through direct exposure to diverse agro-climatic regions, extension systems, and farmer-oriented technologies across India.

The tour covered agriculturally significant states and regions, and climate-resilient technologies.

Objectives of the Educational Tour

The primary objectives of the **Phase-4** PRA+ Stay around ZRS/ KVK/NGO were to:

- Bridge the gap between Traditional knowledge and real-field agricultural practices
- Expose students to rural activity, NGO activity and foundation activity
- Understand research, extension, and technology transfer mechanisms
- Study climate-resilient agriculture, arid horticulture, dairy farming, and value addition
- Develop professional skills such as observation, documentation, analytical thinking, and teamwork

Institutional and Field Exposure

During the tour, students are divided into two groups, one group goes to kukma,bhuj and other group goes for BAIF, Lachkdi. These Phase provided insights into:

- Rural exposure to students
- Rural Industries
- cow-based natural farming
- Agricultural real time exposure
- skill-building programs for self-reliance.
- Sustainable and climate-smart agricultural practices

Exposure to BAIF which is development Research Foundation is a leading non-governmental organization working towards sustainable rural development in Lachkadi Campus.

Ram Krushn Trust, Kukma, this trust promotes indigenous cow-based natural farming which helping farmers reduce chemical dependency and improve soil health. They also focuses on rural development by supporting education, healthcare, and infrastructure, while empowering local communities with skill-building programs for self-reliance. Through its sustainable initiatives, the trust fosters long-term positive change, preserving both the environment and livelihoods for future generations. This phase provide the strengthened students' understanding of India's agricultural real time exposure, traditional knowdelge.

Day-wise Learning Highlights of BAIF

Each day of the phase was systematically planned with clearly defined sustainable objectives. Field visits, farmers interactions, farm observations and guided discussions with activists helped students gain hands-on understanding of:

- Sustainable livelihood and carbon neutrality
- Climate-smart and sustainable natural resources management through adoption of region-specific approaches with active participation of the local communities.
- Sustainable soil health management
- Climate change adaptation and mitigation strategies

In addition to rural exposure that helps them to understand, environmental sensitivity and appreciation of indigenous knowledge systems relevant to agriculture.

Day-wise Learning Highlights of Ramkrushna Trust

- Natural farming demostartion
- “Shree Ram Krushna Prakritik Krishi Niwas” Agro Eco Tourism
- Nurturing Cows, Sustaining Life
- Rural Industries
- Gobarcraft, where create artistic and useful items from cow dung, such as torans, wall clocks, idols, dhoop batti, hair oil, adhya and flower pots.
- Holistic development—mental, emotional, and physical, fosters a sense of community and ethical values.

Overall Learning Outcomes

By the end of the **Phase-4 PRA+** Stay around ZRS/ KVK/NGO Students were able to:

- Understand agricultural practices across different agro-climatic zones like Lachkdi and kukma.
- Sustainable Livelihood & Carbon Neutrality
- Climate-Smart Natural Resource Management
- Climate Change Adaptation & Mitigation
- Rural Exposure & Agro-Eco Tourism
- Nurturing Cows, Sustaining Life
- Rural Industries & Gobarcraft
- Holistic Development

Conclusion

The **Phase-VI RAWE Educational Tour** was successfully completed and fulfilled all its academic and experiential objectives. The programme significantly contributed to the holistic development of students, enhancing their technical competence, professional ethics, teamwork, leadership qualities, and real-world understanding of Indian agriculture.

The exposure gained during this educational tour has laid a strong foundation for students' future careers in agriculture, agribusiness and rural development, fully aligning with ICAR-prescribed national agricultural education standards.

*Report prepared and summarized by Dr. Hemangini Rathva and Dr. Nikunj Sohaliya,
Phase-4 PRA+ Stay around ZRS/ KVK/NGO*

Photographic Evidence of Phase-4 PRA+ Stay around ZRS/ KVK/NGO

(Photographs documenting field and farm activities and student participation are attached as documentary proof in accordance with ICAR guidelines.)



RAWE Agro-Industrial Attachment Phase

B.Sc. (Hons.) Agriculture – Semester VII

Academic Year: 2025–26

Organized by: Kishorbhai Institute of Agriculture Sciences and Research Centre
Uka Tarsadia University, Bardoli

RAWE Phase: Agro-Industrial Attachment

Duration: 19 September 2025 to 16 October 2025

Number of Students: 33

Programme Coordinator: Dr. Nikunj Sohaliya and Dr. Mallika Sindha

INTRODUCTION

The Rural Agricultural Work Experience (RAWE) programme is a vital component of undergraduate agricultural education, designed to provide students with experiential learning through exposure to real-life agricultural and industrial environments. The Agro-Industrial Attachment phase of RAWE aims to acquaint students with the functioning of agro-based industries, agribusiness organizations and modern agricultural enterprises, thereby enhancing their practical understanding of agricultural value chains.

The implementation of the RAWE programme, including the Agro-Industrial Attachment phase, is in accordance with the **recommendations of the Fifth Deans' Committee of the Indian Council of Agricultural Research (ICAR)**, which emphasizes experiential learning, industry exposure and skill-oriented training as essential elements of the undergraduate agricultural curriculum.

For the first time, **Kishorbhai Institute of Agriculture Sciences and Research Centre, Uka Tarsadia University**, successfully conducted the Agro-Industrial Attachment phase for its **first batch of B.Sc. (Hons.) Agriculture students (Semester VII)** during the academic year **2025–26**. This landmark initiative represents a significant step towards strengthening **industry–academia collaboration** and promoting **skill-based agricultural education** in line with the vision of ICAR.

During the programme, students were placed in diversified agro-industrial and agribusiness organizations, including **seed companies, fertilizer and micronutrient industries, hydroponics enterprises, cattle feed manufacturing units, mushroom production units, food processing and post-harvest technology units, paper mills and plantation units, Farmer Producer Organizations (FPOs), Horticulture nursery and Non-Governmental Organizations (NGOs)**. This diversified exposure enabled students to gain comprehensive insight into modern agro-industrial operations and emerging agricultural technologies.

OBJECTIVES OF THE PROGRAMME

The Agro-Industrial Attachment phase was organized with the following objectives, in accordance with the **ICAR Fifth Deans' Committee guidelines**:

1. To provide students with hands-on exposure to agro-industrial working environments.
2. To develop an understanding of the role of agro-industries in the agricultural value chain.
3. To familiarize students with modern agricultural technologies and industrial practices.
4. To enhance technical, managerial and communication skills among students.
5. To bridge the gap between classroom learning and practical field and industrial application.
6. To promote employability and entrepreneurship orientation among agriculture graduates.
7. To create awareness about sustainable, hi-tech and value-added agricultural systems.
8. To strengthen industry–academia linkage as recommended by ICAR.
9. To inculcate professional competence, discipline and work ethics among students.

ORGANIZATIONS COVERED

Students were placed in the following types of organizations:

- Seed industries
- Fertilizer and micronutrient manufacturing units
- Hydroponics and protected cultivation industry
- Cattle feed manufacturing units
- Mushroom production units
- Food processing and post-harvest technology units
- Paper mill and plantation/nursery units
- Farmer Producer Organizations (FPOs)
- Non-Governmental Organizations (NGOs)
- Horticulture Nursery

DETAILED SECTOR-WISE ACTIVITIES

1. JK Paper Ltd. – Plantation & Nursery Management

Students were trained in nursery and plantation management practices related to industrial forestry. Major learning components included:

- Selection of elite mother plants
- Preparation of stem cuttings
- Hormone treatment for rooting
- Use of coco peat as growing medium
- Operation of mist chambers
- Nutrient management
- Hardening and shifting of rooted plants
- Field plantation practices
- Distribution of plants to farmers

This exposure helped students understand the role of industrial plantations in sustainable raw material supply and rural employment generation.



2. BAIF / FPO / NGO (Vandsa Region)

Students gained exposure to institutional and organizational aspects of agriculture:

- Concept and formation of Farmer Producer Organizations (FPOs)
- Objectives and functioning of FPOs
- Carbon farming and climate-smart agriculture
- Digital market linkages
- National Agriculture Market (e-NAM)
- Farmer data collection and surveys
- Government schemes related to FPOs

This training enhanced students' understanding of farmer institutions and agribusiness development models.



3. Shanti Agro Products – Micronutrient Industry

Students were trained in micronutrient fertilizer production with emphasis on zinc sulphate manufacturing:

- Raw material handling
- Chemical reaction process
- Filtration and crystallization
- Drying and grinding
- Packaging and labelling
- Quality control procedures
- Industrial safety practices

Students understood the importance of micronutrients in crop production and industrial quality standards.

4. Atul Ltd. – Agro-Industrial Unit

Students were exposed to large-scale agro-industrial operations:

- Agro-chemical manufacturing
- Processing and packaging systems
- Quality assurance
- Industrial safety measures
- Waste management
- Large-scale production planning

This visit provided insight into corporate agro-industry management and industrial discipline.

5. Croptek Agri Grower Pvt. Ltd. – Hydroponics Industry

Students were trained in hi-tech soilless cultivation:

- Concept of hydroponics
- Design of hydroponic systems
- Nutrient solution preparation
- Water and nutrient management
- Protected cultivation
- High-value crop production
- Sustainable and resource-efficient farming



This exposure introduced students to future-oriented farming systems and smart agriculture.

6. Drashti Organics – Mushroom Production Unit

Students were trained in commercial oyster mushroom cultivation:

- Selection and preparation of substrate
- Spawn handling
- Bag preparation and incubation
- Environmental management
- Pinhead formation
- Harvesting techniques
- Drying and packaging
- Marketing of fresh and dried mushrooms

This training promoted understanding of mushroom cultivation as a low-cost income-generating enterprise.

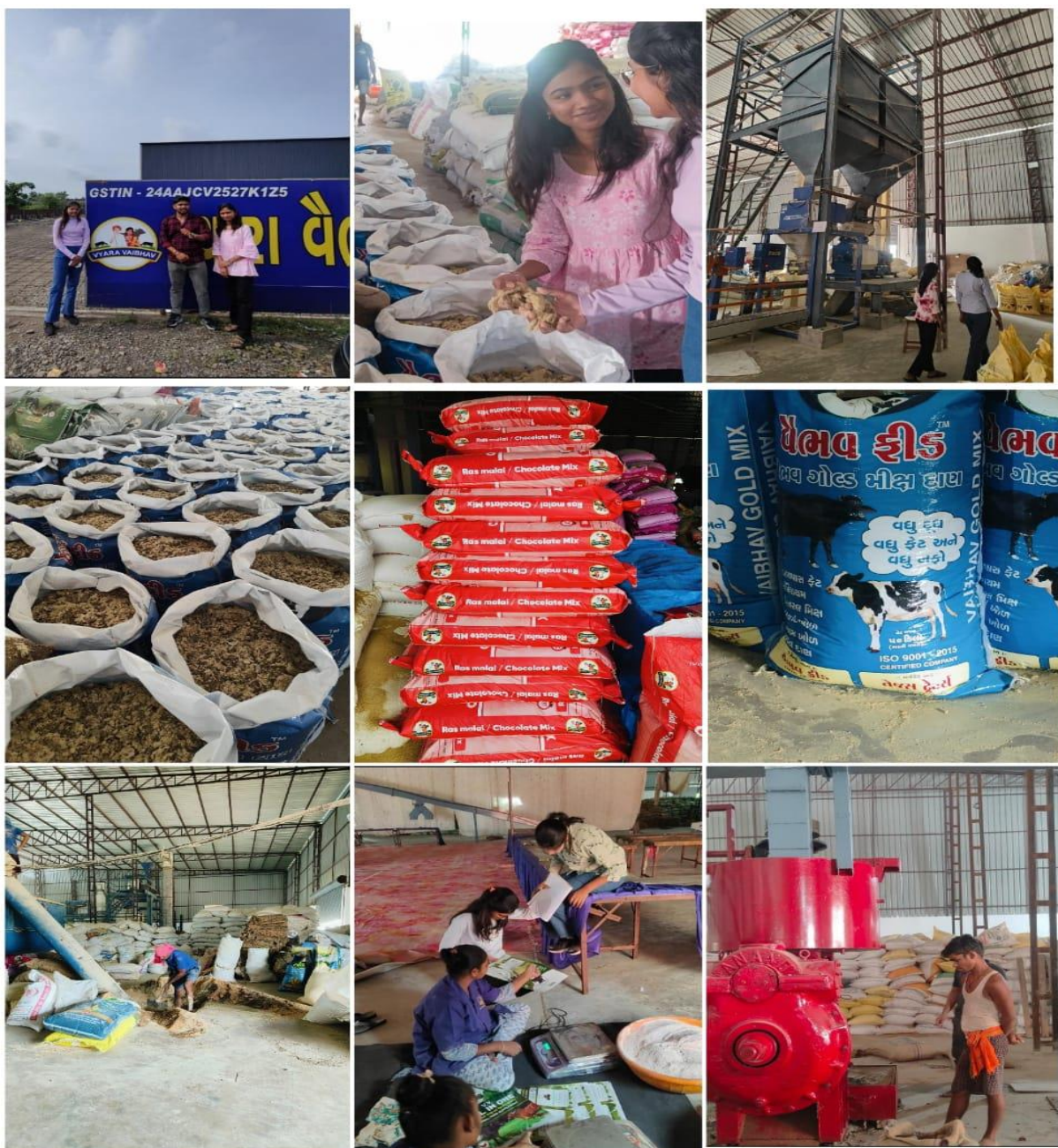


7. Vaibhav Cattle Feed – Feed Manufacturing Unit

Students learned about livestock feed production and animal nutrition:

- Raw material grinding
- Feed formulation
- Mixing and pelleting
- Quality control
- Specialty feed products
- Livestock nutrition management

This exposure strengthened knowledge of the livestock input industry and dairy sector support.



8. Jyoti Agri Bio-Tech – Seed Industry

Students were exposed to seed industry operations:

- Seed cleaning and grading
- Moisture testing
- Germination testing
- Packaging and labelling
- Seed quality standards
- Farmer interaction and seed marketing

Students gained insight into seed as a critical agricultural input and certification norms.

9. NAU – Post Harvest Technology Unit

Students were trained in post-harvest handling and value addition:

- Grading and sorting
- Drying and preservation
- Preparation of value-added products
- Packaging
- Storage
- Cost of production
- Marketing strategies

This training highlighted the importance of post-harvest management in reducing losses and increasing farmer income.

10. Shiv Priya Nursery: Horticulture & Nursery Management Unit

Students were trained in commercial nursery production and horticultural plant propagation with emphasis on greenhouse and open-field nursery management:

- Seedling production under greenhouse conditions
- Tray filling and growing media preparation
- Potting and transplanting of nursery plants
- Plant care and maintenance (watering and mulching)
- Pest and disease management in seedlings
- Grafting and air layering techniques
- Propagation of ornamental plants
- Greenhouse temperature and shade net management
- Seedling transportation and logistics
- Nursery accounting and record keeping





STUDENT PLACEMENT TABLE

Sr. No.	Student Name	Enrollment No.	Organization
1	Patel Sejal V.	202203105510001	FPO (Vansda)
2	Patel Dhruvi J.	202203105510002	FPO (Vansda)
3	Chaudhari Nidhi J.	202203105510003	NAU Post Harvest Technology
4	Patel Jaykumar H.	202203105510004	BAIF
5	Vasava Shrutikumari	202203105510005	Vaibhav Cattle Feed
6	Kevat Pranchiben S.	202203105510007	Shanti Agro Products
7	Gangoda Anjali S.	202203105510008	Atul Ltd.
8	Kanat Nikunj S.	202203105510009	BAIF
9	Rathod Urviben A.	202203105510010	Shanti Agro Products
10	Chaudhari Khushi A.	202203105510011	Croptek Hydroponics
11	Patel Devang G.	202203105510012	BAIF
12	Chaudhari Devanshikumari H.	202203105510013	Drashti Organics (Mushroom)
13	Patel Hetashvikumari M.	202203105510014	FPO (Vansda)
14	Varma Yash U.	202203105510015	Shiv Priya Nursery
15	Bhakta Mahi M.	202203105510016	Croptek Hydroponics
16	Khant Dhaval B.	202203105510017	Jyoti Agri Bio-Tech (Seed)
17	Gamit Viral V.	202203105510018	JK Paper Ltd.
18	Chaudhari Muskankumari M.	202203105510019	Vaibhav Cattle Feed
19	Pagi Nilesh A.	202203105510020	Jyoti Agri Bio-Tech (Seed)
20	Patel Bhumika S.	202203105510021	Atul Ltd.
21	Gamit Mandip A.	202203105510022	JK Paper Ltd.
22	Patel Prachi B.	202203105510023	Croptek Hydroponics
23	Patel Bhumika G.	202203105510024	NAU Post Harvest Technology
24	Tadvi Dhrupali N.	202203105510025	NAU Post Harvest Technology
25	Patel Krutarth D.	202203105510026	Vaibhav Cattle Feed
26	Chaudhari Maitri Y.	202203105510027	Atul Ltd.
27	Salat Max R.	202203105510028	BAIF
28	Patel Devang H.	202203105510029	Shiv Priya Nursery
29	Vahiya Bhumi K.	202203105510030	Croptek Hydroponics
30	Patel Khushi V.	202203105510031	Atul Ltd.
31	Patel Dev R.	202203105510032	Shiv Priya Nursery
32	Gamit Hardikbhai N.	202303105520001	Drashti Organics (Mushroom)
33	Patel Jillkumar K.	202303105520002	Croptek Hydroponics



KEY ACHIEVEMENTS OF THE PROGRAMME

- First successful implementation of Agro-Industrial Attachment phase
- Industry exposure to 33 students
- Collaboration with multiple agro-industries
- Promotion of skill-based learning
- Strengthened industry–academia linkage
- Enhanced institutional visibility



LEARNING OUTCOMES

The programme enabled students to:

- Gain practical industrial knowledge
- Understand agro-industrial value chains
- Learn quality control and safety practices
- Develop professional behaviour
- Understand scope of agribusiness
- Enhance employability skills
- Develop awareness about modern and sustainable agriculture



CONCLUSION

The RAWA Agro-Industrial Attachment Phase (2025–26) was successfully conducted for the first batch of B.Sc. (Hons.) Agriculture students of Kishorbhai Institute of Agriculture Sciences and Research Centre, Uka Tarsadia University. The programme provided meaningful exposure to diverse agro-industries and modern agricultural enterprises. It played a crucial role in strengthening students' practical skills, industrial understanding and professional competence. This programme will serve as a foundation for future batches and contribute significantly to the development of skilled agricultural professionals.

SUMMARY REPORT

Phase–VI Rural Agricultural Work Experience (RAWE) – Educational Tour

B.Sc. (Hons.) Agriculture, Semester VII

Kishorbhai Institute of Agriculture Sciences and Research Centre (KIASRC),
Uka Tarsadia University, Bardoli

Introduction

The Phase–VI Rural Agricultural Work Experience (RAWE) Educational Tour was conducted in accordance with the **ICAR 5th Dean Committee recommendations** for the B.Sc. (Hons.) Agriculture curriculum. The 14-day educational tour was designed to provide experiential learning through direct exposure to diverse agro-climatic regions, research institutions, extension systems, and farmer-oriented technologies across India.

The tour covered **agriculturally significant states and regions**, representing **arid, semi-arid, sub-humid, and temperate agro-climatic zones**, enabling students to understand region-specific agricultural practices, crop systems, and climate-resilient technologies.

Objectives of the Educational Tour

The primary objectives of the Phase–VI RAWE Educational Tour were to:

- Bridge the gap between theoretical classroom learning and real-field agricultural practices
- Expose students to ICAR institutes, State Agricultural Universities, KVKs, and research farms
- Understand research, extension, and technology transfer mechanisms
- Study climate-resilient agriculture, arid horticulture, seed systems, dairy farming, and value addition
- Develop professional skills such as observation, documentation, analytical thinking, and teamwork

Institutional and Field Exposure

During the tour, students visited a wide range of **premier agricultural and research institutions**, including ICAR institutes, SAUs, KVKs, experimental farms, dairy production units, horticultural research centres, and potato research farms. These visits provided insights into:

- Crop improvement and varietal development
- Germplasm conservation and genetic resource management
- Seed spice research and value addition
- Arid and semi-arid farming systems
- Dairy production, processing, and marketing
- Sustainable and climate-smart agricultural practices

Exposure to **agricultural museums and national museums** further strengthened students' understanding of India's agricultural research heritage, technological milestones, and institutional contributions to national food security.

Day-wise Learning Highlights

Each day of the tour was systematically planned with **clearly defined scientific objectives**. Field visits, museum interactions, farm observations, and guided discussions with scientists helped students gain hands-on understanding of:

- Crop production systems under diverse agro-climatic conditions
- Horticultural crop management in arid and water-scarce regions
- Extension education models and farmer training programmes
- Role of ICAR, SAUs, and KVKs in technology dissemination
- Agribusiness potential, value addition, and rural entrepreneurship

In addition to academic exposure, **site-seeing visits** enhanced students' socio-cultural awareness, environmental sensitivity, and appreciation of indigenous knowledge systems relevant to agriculture.

Certificate Courses, Internships, and Institutional Linkages

During interactions with various institutes, discussions were held regarding:

- **Certificate courses** offered by ICAR institutes and allied organizations
- **Faculty training programmes** and capacity-building initiatives
- **Institutional tie-ups and MoUs** for academic collaboration
- **Paid and unpaid internships** for undergraduate students
- **Residential internship opportunities** under research and extension projects

These discussions opened avenues for future academic collaboration, skill development, and student placement, strengthening industry–academia linkages.

Overall Learning Outcomes

By the end of the Phase–VI RAWE Educational Tour, students were able to:

- Understand agricultural practices across different agro-climatic zones of India
- Apply scientific principles of crop production, horticulture, and livestock management
- Recognize the role of ICAR institutes, SAUs, and KVKs in agricultural development
- Develop skills in observation, documentation, analysis, and technical reporting
- Appreciate sustainability, climate resilience, and farmer-centric technologies

Conclusion

The Phase–VI RAWE Educational Tour was successfully completed and fulfilled all its academic and experiential objectives. The programme significantly contributed to the **holistic development of students**, enhancing their technical competence, professional ethics, teamwork, leadership qualities, and real-world understanding of Indian agriculture.

The exposure gained during this educational tour has laid a strong foundation for students' future careers in **agriculture, research, extension services, agribusiness, and rural development**, fully aligning with ICAR-prescribed national agricultural education standards.

Photographic Evidence of Phase–VI RAWE Educational Tour

(Photographs documenting institutional visits, field and farm activities, museum exposure, and student participation are attached as documentary proof in accordance with ICAR guidelines.)



Beyond the Classroom: Learning Through Workshops, Industry & Field Visits





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