SDG 2: Zero Hunger
Report 2023-24

2.1 Research on Hunger

K.R. Mangalam University demonstrates its strong commitment to addressing global food security challenges through impactful research aligned with SDG 2 – Zero Hunger. Out of the total 1,042 Scopus-indexed publications during 2014–2024, 29 research papers directly contribute to the themes of sustainable agriculture, nutrition, and food security. These works highlight the university's interdisciplinary approach involving the fields of biotechnology, environmental science, and public health to develop innovative and sustainable solutions for eradicating hunger and malnutrition.

2.1.2 Zero Hunger – CiteScore

The cumulative CiteScore of SDG 2-aligned publications in 2024 stands at **8.7**, reflecting the university's consistent output in high-quality journals. This performance underlines the strong academic influence of K.R. Mangalam University's research in food and nutritional sciences. The high CiteScore indicates that the publications are being recognized and cited by scholars globally, reaffirming the scholarly impact and the quality of contributions made under this SDG.

2.1.2 Zero Hunger – FWCI

The **Field-Weighted Citation Impact (FWCI) of 1.85** demonstrates that research under SDG 2 has been cited nearly twice as often as the global average for similar publications. This metric validates the relevance and quality of the research outputs, emphasizing that K.R. Mangalam University's work in the field of hunger eradication is not only regionally significant but also globally competitive and influential in advancing sustainable food systems.

2.1.3 Zero Hunger – Publications

With **29 publications** receiving **365 paper views** and a **citation index of 28.52**, the university's contribution to SDG 2 reflects a focused and growing body of research addressing food insecurity, agricultural innovation, and nutritional health. The upward trajectory of both citation and engagement metrics signifies a robust and continuing institutional effort toward achieving the goal of Zero Hunger through impactful scientific inquiry and global collaboration.

2.2.1 – Campus Food Waste Tracking

By tackling the problem of food waste on campus, K.R. Mangalam University is demonstrating its strong commitment to achieving SDG 2: Zero Hunger. The university has taken initiative by putting in place a methodical procedure to monitor and quantify food waste produced in the dining areas on campus. According to data, there is an average of 5100 kg of food waste per month, or 20 grams per person per day. The university can evaluate consumption trends and develop efficient waste reduction initiatives thanks to this data-driven approach.

Through a number of campaigns and visual communication, the university focuses on raising awareness and changing behaviour. In cafeterias and dining areas, digital displays, posters, and signboards serve as a constant reminder to employees and students to respect food as a valuable resource and to refrain from overserving. Phrases like "Serve What You Can Eat" and "Zero Food Waste, Food Mantra" promote social responsibility and mindful eating. By lowering waste, increasing awareness, and making a significant contribution to the worldwide endeavor to eradicate hunger, K.R. Mangalam University cultivates a sustainable food culture on campus.

2.2.2 Campus Food Waste

K.R. Mangalam University has implemented several measures to address food waste on campus. University has taken the initiative to turn organic waste into renewable energy by using food waste from the campus to power a biogas plant. In addition to lowering food waste, this sustainable practice encourages clean energy production and environmental stewardship on campus. K.R. Mangalam University's Biogas Plant converts hostel food waste into renewable energy and organic manure, promoting food resource optimization and sustainable agriculture. The initiative processes about 3.8 tons of food waste annually, generating 5–7 m^3

of biogas per day and saving approximately ₹2–2.5 lakh per year. It directly supports SDG 2 (Zero Hunger) by producing nutrient-rich fertilizer for campus and community gardens.

Campus biogas plant converting food waste into clean energy, replacing LPG & generating organic fertiliser

Food waste inlet chamber demonstrating closed-loop waste-to-energy system

Biogas outlet & slurry discharge used as organic manure for campus horticulture sustainability

Integrated Report on Utilization of Food Waste through Biogas Plant

Through menu design, quantity management, and promoting conscious student consumption, dining establishments and cafeterias are actively attempting to reduce waste. The institution seeks to reduce food waste by providing a range of serving sizes and encouraging a balanced diet.

Digital displays, posters, and signboards in cafeterias and eating rooms act as a continual reminder to staff and students to treat food with respect as a valuable resource and to avoid overserving. Phrases like "Zero Food Waste, Food Mantra" and "Serve What You Can Eat" encourage conscious eating and social responsibility.

Awareness signboards and digital displays placed across campus cafeterias remind students and staff to avoid food wastage. Messages such as "Serve What You Can Eat" and "Zero Food Waste, Food Mantra" foster mindful eating habits and social responsibility within the campus community.

Waste Management Systems

The separation of organic and inorganic trash is part of the university's integrated waste management systems. Dining establishments collect and handle their organic waste using composting techniques. The compost produced is frequently put to use in campus gardens, supporting sustainable practices on campus and fostering a circular economy.

The University implements a structured food waste management system that segregates organic and inorganic waste. Organic waste is collected from dining facilities and converted into compost, which is then used in campus gardens—promoting circular economy and sustainable resource use.

The scientific process of creating compost with earthworms is called vermicomposting. They typically live in soil, consume biomass, then expel it after digesting it.

Nutrient-rich organic fertilizer produced through the university's vermicomposting process. The compost, used in the university's gardens and farms, enhances soil fertility and reduces dependence on chemical fertilizers, advancing sustainable agricultural practices.

2.3.1 Student Food Insecurity and Hunger

K. R. Mangalam University recognizes that access to nutritious and affordable food is essential for students' well-being, academic performance, and overall quality of campus life. To address issues related to **student food insecurity and hunger**, the University has implemented a series of **supportive initiatives and welfare programmes** ensuring that no student faces food-related challenges during their academic journey.

In **2024,** the following initiatives taken:

- **Subsidized Meal Plans:** The University provides **nutritious and affordable meals** at the campus cafeteria and hostels through a subsidized meal plan system, ensuring that all students, especially those from low-income backgrounds, have regular access to balanced food options.
- **Free Meal Coupons for Needy Students:** Under the **Student Welfare Fund**, economically weaker students are provided with **free meal coupons** redeemable at designated food outlets within the campus.

- **Community Kitchen and Food Donation Drives:** In collaboration with student clubs and NGOs, the University organizes **community kitchens and "No Food Waste" campaigns** to distribute surplus food to students and nearby underprivileged communities, fostering social responsibility and compassion.
- **Nutritional Awareness and Health Campaigns:** Regular workshops and seminars on **healthy eating habits, food hygiene, and nutrition** are conducted to promote awareness and prevent malnutrition among students.

Through these sustained efforts, K. R. Mangalam University ensures that no student suffers from food insecurity or hunger, reinforcing its commitment to student welfare, equity, and holistic development.

2.3.2 Students staff hunger interventions

K. R. Mangalam University(KRMU) is deeply committed to promoting food security, nutritional well-being, and social equity across its campus community. Recognizing that both students and staff may occasionally face food-related challenges, the University has instituted comprehensive hunger intervention programmes to ensure that no member of the KRMU family experiences food scarcity or nutritional deprivation.

Initiatives and Interventions (2024):

- **Campus Food Assistance Programme:** The University operates a structured food assistance system that provides free or subsidized meals to students and staff in need, supported by the Student Welfare Fund and the Employee Support Cell.
- **Community Meal Initiative ("KRMU Ann Seva"):** Under this initiative, faculty, staff, and student volunteers organize periodic community meals on campus and in nearby areas. The programme promotes inclusivity and compassion while ensuring that nutritious meals reach those facing temporary food insecurity.
- **Zero Food Waste Campaign:** Partnering with local NGOs and student clubs, KRMU has implemented a **zero food waste policy** in hostels and cafeterias. Surplus food from the campus dining facilities is systematically collected, repackaged hygienically, and distributed to students and staff members who may require assistance.

- **Nutritional and Well-being Drives:** The University regularly conducts nutrition awareness, health check-ups, and dietary guidance sessions for both students and staff, promoting healthy lifestyles and preventing malnutrition-related concerns.
- **Emergency Food Support System:** A confidential emergency food support mechanism has been set up under the Dean Student Welfare Office, where any student or staff member facing urgent food needs can request assistance without stigma or administrative delay.

The university made sure that students always had access to reasonably priced, healthful food on campus in order to prevent and reduce hunger. Breakfast and meals were made available for all students at reasonable rates, while additional measures were taken to support lower-income groups. For instance, guards, sweepers, and other support staff could access breakfast at a nominal charge of less than 5 US dollars per month. Such initiatives reflected the University's inclusive approach to eradicating hunger within its community.

Students dining in the KRMU hostel mess, where healthy and affordable meal plans promote balanced nutrition. The university ensures food quality through sustainable

sourcing and transparent menus, reinforcing its commitment to food security and well-being for all students.

2.3.3 Sustainable Food Choices on Campus

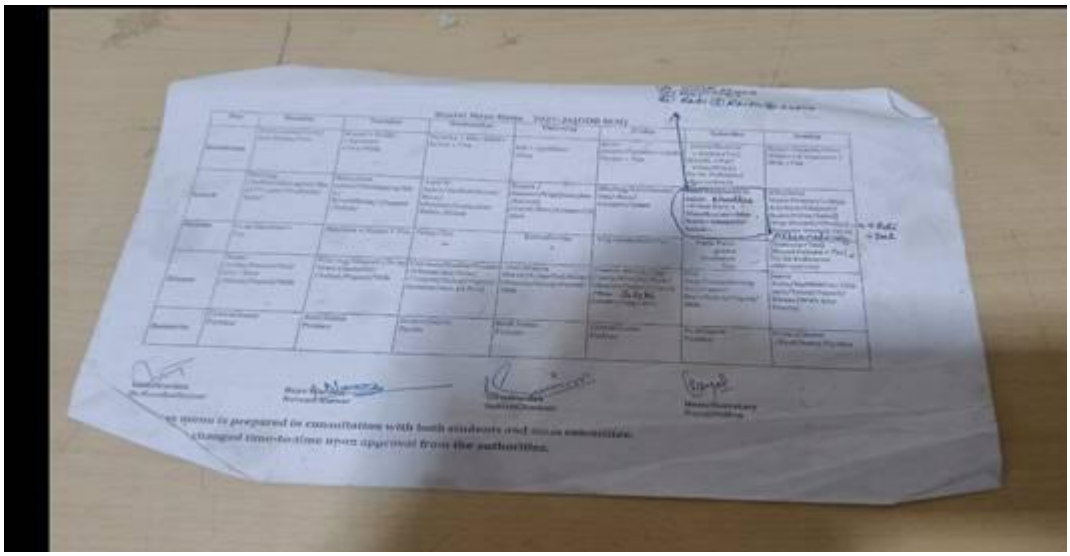
K. R. Mangalam University is strongly committed to promoting sustainable, healthy, and environmentally responsible food practices across its campus. Recognizing the importance of sustainability in food systems, the University has implemented multiple initiatives to encourage eco-friendly dining, waste reduction, and conscious consumption among students, faculty, and staff.

Sustainable Food Initiatives (2024):

- **Promotion of Plant-Based and Balanced Diets:** The University cafeteria and hostel mess menus include a wide range of plant-based and vegetarian options to reduce the carbon footprint associated with food production while ensuring balanced nutrition for all.
- **Locally Sourced and Seasonal Produce:** KRMU promotes the use of locally grown and seasonal food items procured from nearby farms and suppliers, reducing transportation emissions and supporting local agricultural communities.
- **Ban on Single-Use Plastics:** The University has completely banned single-use plastic packaging, bottles, and cutlery in food outlets and dining facilities, replacing them with eco-friendly and biodegradable alternatives.
- **Composting and Food Waste Management:** A campus composting unit has been established to convert organic food waste from cafeterias and hostels into compost, which is then used in the University's gardens and green zones, promoting a circular waste management system.
- **Awareness and Behavioural Change Campaigns:** Regular workshops, poster campaigns, and awareness drives are organized by the School of Agricultural Sciences and Environmental Club to educate the campus community on sustainable eating habits, mindful consumption, and food waste minimization.

- **Hydration and Refill Stations**: To reduce plastic waste, the University has installed filtered water refill stations across the campus, encouraging the use of reusable water bottles and sustainable hydration practices.

The University actively promotes sustainable and ethical food choices. Menus in hostels and canteens include vegetarian, vegan, and balanced meal options. Sustainable procurement practices ensure food quality and ethical sourcing.



Mess Menu Chart Displayed

2.3.4 Healthy and Affordable Food Choices

The University ensures healthy and affordable meal options for all through transparent hostel dining plans and published rate charts.

The KRMU hostel menu showcases a diverse range of nutritious vegetarian and vegan meal options, reflecting the university's commitment to offering healthy, affordable, and ethically sourced food choices to all students.

2.3.5 Staff hunger interventions

The University is committed to fostering a supportive and equitable campus environment that prioritizes the welfare of its faculty and staff. Recognizing that access to nutritious food is essential for employee health, well-being, and productivity, the University has introduced a range of staff-centric hunger intervention initiatives to ensure that every member of the KRMU community has access to affordable and healthy meals without financial or social barriers.

Initiatives and Interventions (2024):

- **Subsidized Meal Program for Staff:** The University offers nutritious and subsidized meals just Rupees 50 at its cafeterias and dining facilities for all non-teaching and support staff.
- **Free Meal Support for Economically Weaker Staff:** Under the Employee Welfare Scheme, KRMU provides free meal coupons or meal allowances for staff members from lower income groups, ensuring that no employee experiences food insecurity.
- **Community Kitchen and Shared Meals:** The "KRMU Ann Seva" programme extends beyond students to include staff participation. Regular community meal events are organized to foster unity, respect, and mutual care among all employees.
- **Health and Nutrition Awareness for Staff:** The University Health Centre, in collaboration with the Human Resource Department, conducts awareness sessions on

balanced diets, food safety, and nutrition, promoting long-term health and reducing lifestyle-related health risks.

- **Zero Food Waste Collaboration:** Leftover food from dining halls and events is safely redistributed to staff members in need through a controlled and hygienic redistribution system, aligning with the University's Zero Food Waste Policy.

2.4.1 Proportion of graduates in agriculture and aquaculture including sustainability aspects.

School of Agricultural Sciences at K.R. Mangalam University provides specialized programs that incorporate sustainability into agricultural education.

Nine students completed the B.Sc. (Hons.) Agriculture program in 2024. The curriculum places particular emphasis on:

- Systems of sustainable agriculture
- Soil management and precision farming
- Crop production that is climate resilient
- Combining traditional knowledge with technology

The University helps create a generation of professionals who are prepared to guarantee sustainable resource management and food production through these academic programs.

2.5.1 Access to food security knowledge

In India, where a sizable section of the population still faces difficulties in obtaining enough wholesome food, hunger remains a serious problem. Higher education is one of the sectors that must work together to address this issue. Under the direction of its dedication to community welfare and social responsibility, K.R. Mangalam University (KRMU) has launched a number of programs to help end hunger in the country.

University provides training and workshops to local farmers on food security, sustainable agriculture, and aquaculture. In order to increase productivity while preserving natural resources, these capacity-building programs give farmers hands-on training in contemporary cultivation methods, crop diversification, water-efficient irrigation techniques, and organic farming methods.

The School of Agricultural Sciences (SOAS) at K.R. Mangalam University actively promotes sustainable agricultural practices by eliminating the use of chemical fertilizers and pesticides in both field and horticulture farming.

K.R. Mangalam University, in collaboration with the National Service Scheme (NSS), organized a Workshop on Post-Harvest Technology at Shikohpur to promote sustainable agricultural practices and reduce food loss. The workshop focused on training local farmers and students in modern techniques for crop handling, storage, and value addition to enhance the shelf life and market value of agricultural produce.

2.5.2 Events for local farmers and food producers

The University conducted 7 events, workshops, Kisan Melas, and extension activities aimed at empowering local farmers. These programs facilitate technology transfer, promote best practices in farming, and build resilience against climate and market challenges.

Events Organized:

S. No	Name of the Event	Links
1	Vriksha Ropan celebration in village Lakhuwas in collorarbation with NSS	Report
2	Kisan Mela pdf	Report
3	Collection of Diversified insects Species From Sultanpur Lake Forest	Report
4	Workshop on Post-Harvest Technology at Shikohpur in collaboration with NSS	Report
5	Field Visit for the Collection and Survey of the Weed Flora Diversity in Cultivated and Non-cultivated Lands of the nearby area of Sohna	Report
6	Exploring the Practices of Organic Production	Report
7	Case Study on Regulatory Barriers to the Acceptance of Bio-pesticides among Farmers for Sustainable Agriculture in Gurgaon and Nuh Districts of Haryana	Report

Variksha Ropan

The *Variksha Ropan* (tree plantation) program was successfully organized on 29th October 2023 at Lakhuwas Village, Sohna, near Shiv Mandir, by the School of Agricultural Sciences (SOAS), K.R. Mangalam University, under the coordination of Ms. Prianshu and Dr. Parita. The event, attended by 30 students and 15 villagers, aimed to promote environmental conservation and increase green cover in the village. Participants planted over 100 native tree

saplings, including neem, peepal, and jamun, along roadsides and community areas to enhance ecological balance and improve air quality. The program emphasized the importance of trees in combating pollution, preventing soil erosion, and conserving groundwater. Villagers actively participated and pledged to take care of the saplings, reflecting strong community engagement toward a sustainable and greener environment.

Faculty and students planting the sapling to enhance the air quality

Kisan Mela

The School of Agricultural Sciences, K.R. Mangalam University, in collaboration with the Department of Agriculture and Farmers' Welfare, Gurugram, organized a District Level Kisan Mela on November 29, 2023, at the university campus. The event was inaugurated by Mr. Hitesh Kumar Meena (ADC Gurugram) and aimed to promote innovative agricultural technologies and sustainable practices among farmers and students. Over 800 participants attended, including farmers, entrepreneurs, and agri-industrialists. The mela featured around 25 stalls showcasing agro-inputs, farm machinery, millet-based food products, and student-led innovations like hydroponics and liquid tree models. The event successfully served as a platform for knowledge exchange, awareness of government schemes, and promotion of sustainable farming practices.

Mr. Hitesh Kumar Meena, ADC Gurugram, along with university officials, visits the exhibition stalls during the District Level Kisan Mela at K.R. Mangalam University, appreciating the innovative organic and processed farm products displayed by students and entrepreneurs.

Field Visit to Sultanpur Lake

A field visit to Sultanpur Lake, Gurugram was organized on 14th September 2023 by the School of Agricultural Sciences (SOAS), K.R. Mangalam University, for the IV and VI semester students, under the guidance of Dr. Parita and Dr. Taranjeet. The visit aimed to provide practical exposure to the ecological and biodiversity aspects of the wetland ecosystem. Students explored the rich flora and fauna of Sultanpur National Park and gained insights into the role of wetlands in groundwater recharge, climate regulation, and habitat conservation. The faculty facilitated interactive sessions on bird identification, ecosystem mapping, and the challenges of wetland degradation. The visit enhanced students' understanding of environmental conservation, strengthened their analytical and observational skills, and inspired them to contribute to sustainable ecosystem management and biodiversity preservation.

Students of the School of Agricultural Sciences, K.R. Mangalam University, during a field visit to Sultanpur National Park, exploring biodiversity and understanding the ecological significance of wetland ecosystems.

Students of K.R. Mangalam University during a Field Visit to Sultanpur National Park, actively engaging in the collection and identification of insect species to study biodiversity and understand ecosystem dynamics.

Workshop on Post-Harvest Technology at Krishi Vigyan Kendra (KVK)

The School of Agricultural Sciences (SOAS) in collaboration with NSS organized a Workshop on Post-Harvest Technology at Krishi Vigyan Kendra (KVK), Shikohpur on 20th November 2023, under the guidance of Dr. J.S. Yadav. The session aimed to raise awareness among students and villagers about scientific post-harvest management and value addition of fruits and vegetables. Dr. Kavita Bisht demonstrated practical techniques to preserve perishable produce, including processing of Indian gooseberry (amla) for extended shelf life. Experts also highlighted the significance of millets and their applications in bakery products. Participants gained hands-on experience in handling, processing, and preservation methods while understanding causes of post-harvest losses and the benefits of processing in improving quality, food safety, and farmers' income. The workshop enhanced participants' knowledge of sustainable agricultural practices and encouraged continued community-based learning and entrepreneurship in post-harvest technology.

Dr. Bharat interacting with students during the industrial visit, explaining the benefits and techniques of post-harvest management for improving the quality and shelf life of agricultural produce.

Students during workshop of post-harvest techniques reduce microbial risks and ensure healthy consumption.

Training on "Production of Organic Farm Produce and Supply Chain" in Collaboration with Dharuhera Organic Agro Farm

The School of Agricultural Sciences, K.R. Mangalam University, in collaboration with Dharuhera Organic Agro Farm Pvt. Ltd., Haryana, organized a one-month project-based training program from 27th March to 30th April 2024 on *"Production of Organic Farm Produce and Supply Chain."* The program aimed to equip students with practical knowledge and skills in organic farming, sustainable crop management, and supply chain operations. Guided by experts including Mr. Sanjay Yadav (Owner, Dharuhera Agro Pvt. Ltd.), Dr. J.S. Yadav (Dean, SOAS), Dr. Anjali Tomar, and Dr. Deepak Loura, students learned about organic inputs such as *Jeevamrit, Beejamrit, Neemastra, and Agniastra*, alongside crop cultivation techniques for wheat, mustard, and vegetables. The training also covered marketing, processing, and certification of organic produce. Students actively participated in field activities, interacted with local farmers, and demonstrated their learning through quizzes and discussions. The program enhanced their understanding of sustainable agriculture, soil health

management, and eco-friendly farming practices, providing valuable exposure to real-world organic production and supply chain systems.

Students of the School of Agricultural Sciences, K.R. Mangalam University, during the Training on "Production of Organic Farm Produce and Supply Chain" at Dharuhera Organic Agro Farm, receiving appreciation for their active participation and learning in sustainable and eco-friendly farming practices.

Field Visit for the Collection and Survey of Wild Flora Diversity in Cultivated and Non-Cultivated Lands of Sohna

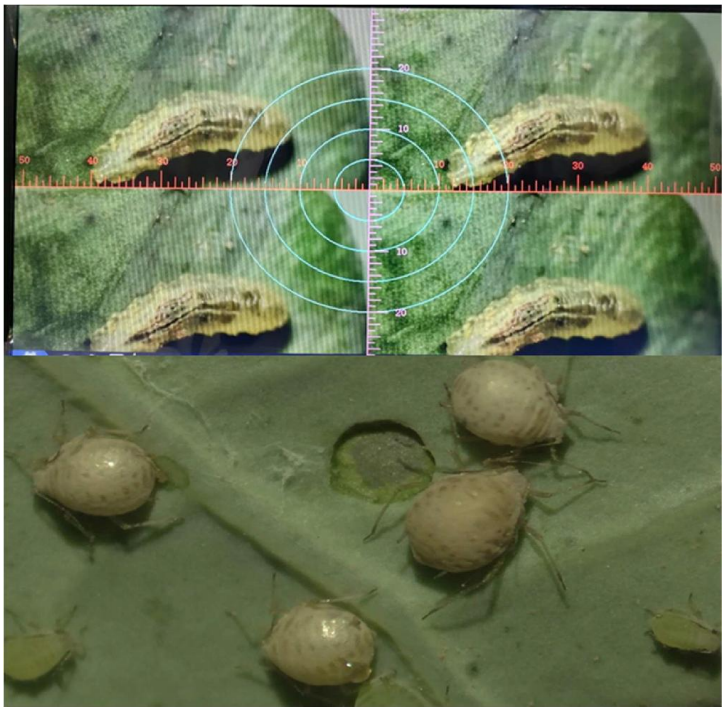
The School of Agricultural Sciences, K.R. Mangalam University, Gurugram, organized a field visit on 7th March 2024 to study the diversity of weed flora in the cultivated and non-cultivated lands near the KRMU campus, Sohna. The visit, coordinated by Dr. Parita with support from Dr. Neha Sharma, Dr. Anjali Tomar, and Dr. Deepak Loura, aimed to help students identify various weed species, understand their ecological impact, and learn management practices. Students documented species such as *Cirsium arvense*, *Convolvulus arvensis*, *Cyperus rotundus*, and *Parthenium hysterophorus* in cultivated lands, and *Chenopodium album* and *Amaranthus spp.* in non-cultivated areas. The visit emphasized the importance of weed identification for crop protection, ecological balance, and research applications. It provided hands-on exposure to biodiversity assessment and weed management, concluding with students preparing a consolidated herbarium of the collected specimens.

Students of the School of Agricultural Sciences, K.R. Mangalam University, during a Field Visit for the Collection and Survey of Weed Flora Diversity in cultivated and non-cultivated lands of Sohna region, aimed at studying plant diversity and promoting sustainable agricultural practices

Students of the School of Agricultural Sciences, K.R. Mangalam University, engaged in on-field identification and documentation of weed flora during a Survey of Cultivated and Non-Cultivated Lands near the university campus, Sohna, under the guidance of faculty members

Case Study: Regulatory Barriers to the Acceptance of Bio-Pesticides among Farmers

The case study investigates the regulatory and practical obstacles that impede the adoption of bio-pesticides in the Gurgaon and Nuh districts of Haryana. Although bio-pesticides present an environmentally friendly alternative to chemical pesticides, their utilization remains limited due to various factors, including insufficient awareness, elevated costs, absence of subsidies, and inadequate market availability. Surveys indicated that the majority of farmers in Gurgaon continue to depend on chemical pesticides, while a portion in Nuh has started to implement bio-pesticides and integrated pest management (IPM) strategies. Extension initiatives such as expert consultations, field demonstrations, and awareness programs have notably enhanced farmers' understanding and adoption rates, resulting in a 15% increase in bio-pesticide usage and a decrease in chemical reliance from 25% to 16.7%. The results underscore the pressing necessity for policy reforms, enhanced accessibility, and governmental support to foster sustainable pest management. Streamlining regulations and ensuring local market availability can expedite the shift towards sustainable agriculture.



Predator of aphid, maggots of syrphid fly (above), parasitized aphid known as mummified aphid (below)

2.5.3 University access to local farmers and food producers

University ensures direct access for local farmers to university resources and facilities. Events like Kisan Melas and seed distribution programs (Mustard and Bajra) enable farmers to benefit from research outcomes, expert guidance, and quality inputs. These interactions strengthen university-community partnerships for sustainable agriculture.

2.5.4 Sustainable food purchases

University prioritizes purchasing locally sourced food materials, including wheat, rice, and vegetables for the campus mess. Additionally, cow dung is purchased from local farmers for organic fertilizer production. These practices: Support the local economy Promote sustainable procurement Reduce the environmental footprint of university operations. The integrated approach of education, research, and community outreach in K.R. Mangalam University shows the best ways in which higher education can meaningfully contribute toward the achievement of SDG 2: Zero Hunger. KRMU fosters a generation of environmentally conscious leaders by reducing food waste, promoting sustainable agriculture, and empowering local farmers through training and innovation. Its efforts underline a belief at KRMU that achieving food security and sustainable nutrition is not only a goal but rather a shared responsibility toward a healthier, hunger-free future.