# SDG 2: Zero Hunger

Safe food, responsible food waste management, rural enterprise, research and startups

INTRODUCTION

## Nourishing the campus and the community

SDG 2 calls for an end to hunger, food security and improved nutrition, and the promotion of sustainable agriculture. At SRM University-AP, this goal is pursued through four connected areas of work: safe and nutritious campus dining with responsible management of food waste; training for rural women entrepreneurs in the food-processing sector; research on agriculture, food systems and nutrition; and startups working in food production and agri-technology.

The University provides a dedicated mess facility in every hostel, serving nutritious and hygienic meals throughout the day. Students are offered a balanced menu for breakfast, lunch and dinner, catering to diverse tastes and dietary preferences, in a clean and safe environment that maintains high standards of quality and hygiene.

The campus is certified as an **Eat Right Campus** under guidelines established by the Food Safety and Standards Authority of India (FSSAI), for the period 27 December 2023 to 26 December 2025.




FSSAI "Eat Right Campus" certification, SRM University-AP (27 Dec 2023 – 26 Dec 2025).

HIGHLIGHTS

**131,285 kg** total food waste generated on campus

**21,050 kg** food waste converted into biogas energy

**2** food-sector training events (55 and 57 participants)

**49** SDG 2 publications, 2024–2025 (Scopus)

**2** startups in agriculture and food production

FOOD WASTE DATA AND ANALYSIS

## Measuring and processing campus food waste

**131,285 kg**
Total food waste generated in campus

**21,050 kg**
Volume of food waste converted into biogas energy
**16.0% of the total generated**







ANALYSIS

- Of the **7,500 kg** of food waste generated each month, **2,270 kg (30.3%)** is processed into biogas and **541 kg (7.2%)** is composted: **2,811 kg (37.5%)** in total.
- Biogas is the larger route, handling about **4.2 times** the volume that is composted.
- The remaining **4,689 kg (62.5%)** is not covered by the composting or biogas figures reported in the data (monthly generated minus composted minus biogas).
- **5 food waste collection points** are available on campus.

CAMPUS FOOD-SERVICE INFRASTRUCTURE

| | | | |
|---|---|---|---|
| **3** Mess halls | **2,042** Mess seating capacity | **1** Food court | **6** Canteens |
| **4** Night canteens | **4** Cafeterias | **12** Refreshment areas | **5** Food waste collection points |

FOOD WASTE DATA AND ANALYSIS · CANTEEN AREA

# Dining facilities on campus

SRM University – AP provides a dedicated mess facility in every hostel, serving nutritious and hygienic meals throughout the day. Students are offered a balanced menu for breakfast, lunch, and dinner, catering to diverse tastes and dietary preferences.

The mess ensures food is prepared and served in a clean and safe environment, maintaining high standards of quality and hygiene. With spacious dining areas and a focus on healthy eating, the mess aims to provide a comfortable and satisfying dining experience for all residents.

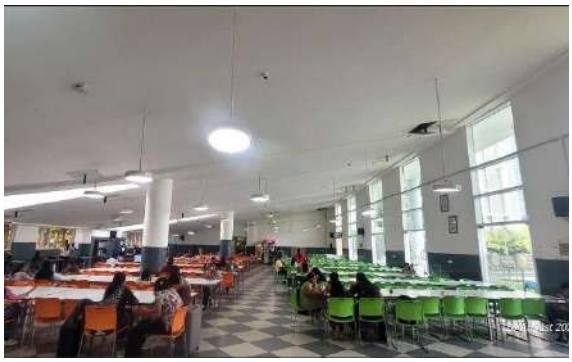
**3** mess halls · **2,042** seating capacity in mess



Annapurna Mess entrance.



Dining hall.



Mess dining area.



Food counter and seating area.



Dining area.



Dining area.

EVENTS AND INITIATIVES

# Training rural women entrepreneurs in food processing

Two training sessions on quality and compliance for the food-processing sector were hosted by the Directorate of Entrepreneurship & Innovation (CSR ADITRI Team), aimed at rural women building micro-enterprises. Event photographs are geo-tagged.

### Training Session – CSR ADITRI: Quality Analyst Training for the Food Processing Sector

**9 Jan 2025 · Offline**

| 55 | 48 | 7 | 0 |
|---|---|---|---|
| total participants | external | staff | PhD / PG / UG |

**Time** 9:30 am – 1:30 pm

**Venue** SRM AP, X Lab 303, Student Corner

**Host** Directorate of Entrepreneurship & Innovation, CSR ADITRI Team

**Resource person** Mr. MSV Phani Prakash, founder of Smart Food Lab (est. April 2021, Hyderabad)

KEY ACTIVITIES

- One-on-one interactions between the resource person and each entrepreneur on key aspects of the food industry
- Food safety standards and robust quality-control measures
- Hygiene and sanitation to ensure product integrity
- Labeling and packaging guidelines; testing and certification to build credibility
- Consumer trust and marketing impact, with strategies to help entrepreneurs scale their businesses



Event flyer







EVENTS AND INITIATIVES

# Training rural women entrepreneurs in food processing

## Training Session – CSR ADITRI: Quality Analyst Training for the Food Processing Sector

**20–27 Feb 2025 · Online**

| 57 | 47 | 10 | 0 |
|---|---|---|---|
| total participants | external | staff | PhD / PG / UG |

**Time** 9:30 am – 4:30 pm

**Venue** Online

**Host** Directorate of Entrepreneurship & Innovation, CSR ADITRI Team

**Resource person** Mr. MSV Phani Prakash, founder of Smart Food Lab (est. April 2021, Hyderabad)

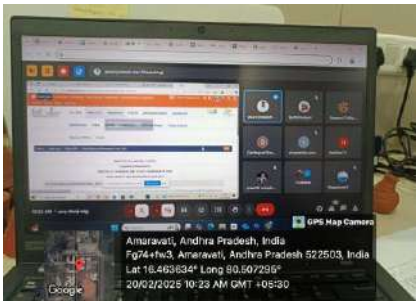
**Objective** To equip rural women with knowledge of the licences, regulations and procedures required to operate food-related businesses



Event flyer (Telugu): virtual training.

KEY ACTIVITIES

- Briefing on licences and procedures essential for running food-related ventures, including FSSAI certification, labeling requirements and compliance measures
- Sessions on FSSAI and product testing
- Afternoon one-on-one sessions with individual ventures







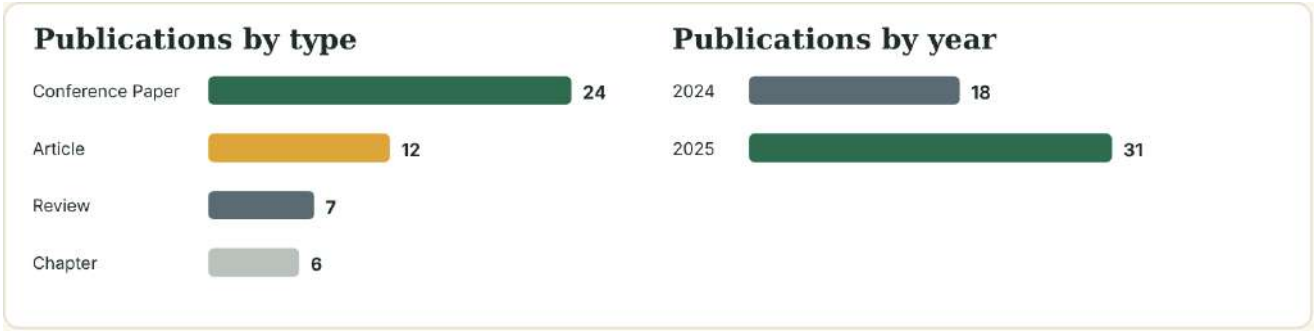



RESEARCH AND PUBLICATIONS

# SDG 2 research output, 2024–2025

Scopus and SciVal classify **49 publications** by SRM University-AP (2024 to 2025) under SDG 2: Zero Hunger. Research spans precision agriculture, plant disease detection, food security, unmanned aerial vehicles, soil nutrients, food supply and water resources.

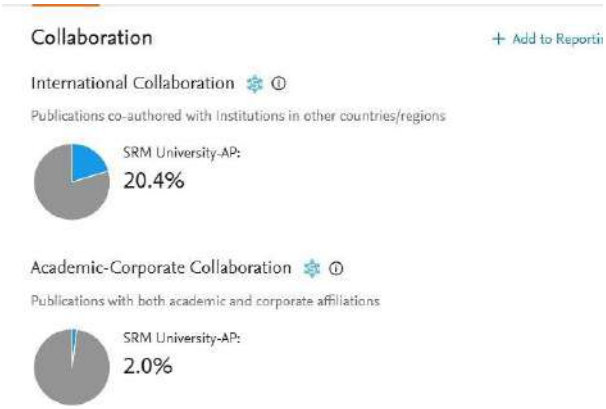
| 49 | 1.09 | 278 | 999 | 10 | 2.0% |
|---|---|---|---|---|---|
| scholarly output | field-weighted citation impact | citation count | views count | international collaboration (20.4%) | academic–corporate collaboration |




SCIVAL: ACTIVITY OF SRM UNIVERSITY-AP WITHIN SDG 2: ZERO HUNGER (2025)




Performance summary, 2024–2025.




**Top keyphrases (by relevance)**

| | |
|---|---|
| Precision Agriculture | Food Supply |
| Plant Disease Detection | Machine Learning |
| Food Security | Water Resources |
| Plant (Botany) | Development |
| Unmanned Aerial Vehicle | Deep Neural Network |
| Object Detection | Random Forest |
| Soil Nutrient | Deep Learning Method |
| Agricultural Machinery | Plants (Botany) |

International and academic–corporate collaboration.

*Source: Scopus / SciVal, all publication types, 2024–2025.*

RESEARCH AND PUBLICATIONS

# Selected SDG 2 publications

Twelve of the 49 publications are highlighted for direct relevance to food, nutrition, agriculture and sustainable food systems. Metrics are as exported from Scopus (CiteScore for the publication year; FWCI = Field-Weighted Citation Impact; "–" = not available).

| # | Title and authors | Year / type | CiteScore | FWCI | DOI |
|---|---|---|---|---|---|
| 1 | **Biochar for ameliorating soil fertility and microbial diversity: From production to action of the black gold**<br>Ighalo, J.O. et al. **[Soil health]** | 2025 Review | 7.4 | 8.13 | 10.1016/j.isci.2024.111524 |
| 2 | **Leaf disease detection and classification in food crops with efficient feature dimensionality reduction**<br>Syed, K. et al. **[Crop disease detection]** | 2025 Article | 4.8 | 1.61 | 10.1371/journal.pone.0328349 |
| 3 | **Microalgae-based nutritional supplements: Sustainable applications for high-nutritional-value food production**<br>Rajamanickam, R. et al. **[Nutrition]** | 2025 Review | 8.9 | 0.47 | 10.1016/j.procbio.2025.07.009 |
| 4 | **Environmental impacts and effects on greenhouse gas emissions in shrimp feed production system for aquaculture – A case study in India**<br>Ramesh, P. et al. **[Aquaculture]** | 2024 Article | 14.7 | 1.25 | 10.1016/j.envres.2023.117348 |
| 5 | **Unlocking the potential of small-scale irrigation for small farmers in Northwestern Ethiopia**<br>Gebrehiwet, D.L., Pandey, G. **[Irrigation]** | 2025 Article | 7.1 | 2.46 | 10.1108/JADEE-05-2024-0157 |
| 6 | **Nanochitin: Green nanomaterial for sustainable applications in agriculture and environmental remediation**<br>Manoj, N. et al. **[Agri-nanomaterials]** | 2025 Review | 18.8 | 0.45 | 10.1016/j.scitotenv.2025.178607 |
| 7 | **Advances on characteristics and valorization of food waste towards the sustainable production of bio-methane and purification**<br>Sethupathy, A. et al. **[Food waste]** | 2024 Review | 14.2 | 0.37 | 10.1016/j.fuel.2024.131388 |
| 8 | **Forecasting Milk Production in India: Strategic Insights for Policymakers and Farmers**<br>Pachava, V. et al. **[Dairy / policy]** | 2025 Article | 2.2 | 0.38 | 10.48165/IJEE.2025.61203 |
| 9 | **Comparative Analysis of YOLOv11 and YOLOv12 for Automated Weed Detection in Precision Agriculture**<br>Shaik, A.B. et al. **[Precision agriculture]** | 2025 Conference Paper | – | 9.15 | 10.1109/ICPCSN65854.2025.11036078 |
| 10 | **Securing Agricultural Communications: Blockchain Integration in UAV Networks for Smart Farming**<br>Peddibhotla, U. et al. **[Smart farming]** | 2024 Conference Paper | – | 3.81 | 10.1109/ICCWorkshops59551.2024.10615542 |
| 11 | **Supply Chain Management for Sustainable Food Production Using the Analytic Hierarchy Process**<br>Sravanthi, P.N., Meriga, K.K. **[Food supply chain]** | 2025 Chapter | – | 3.05 | 10.4018/979-8-3693-8789-4.ch003 |
| 12 | **Addressing Nutrition Gaps: An In-depth Study of Child Undernutrition**<br>Panchumarthi, L.Y. et al. **[Child nutrition]** | 2024 Conference Paper | – | 0 | 10.1109/OCIT65031.2024.00103 |

STARTUPS AND INNOVATION FOR SUSTAINABLE FOOD SYSTEMS

# Incubated startups in agriculture and food production

Two startups supported through the University's entrepreneurship ecosystem work directly on food production and agriculture, one on sustainable poultry farming and one on drone-based crop and irrigation monitoring.

## Greencrest Farms India Private Limited

Provides farm-based country chicken while promoting sustainable practices for better health and community growth.

**ACTIVITIES**

- Farm-based country chicken production
- Promotion of sustainable practices
- Focus on better health and community growth

| | |
|---|---|
| **Sector** | Health monitoring device – poultry |
| **Social impact focus** | Sustainability |
| **Founder** | Mr. Chaithanya (student) |
| **Legal entity** | Pvt Ltd |
| **Incorporated** | 15 January 2025 |
| **Incubation** | 21 Jan 2025 – 21 Jan 2026 |
| **Funding** | Rs. 50,000 (Others), Directorate of Entrepreneurship |
| **Patents** | Filed: Nil · Granted: Nil |
| **Tech transfer** | No |

## Secenai Semiconductors & Test Solutions Private Limited

Develops autonomous drones for agriculture.

**ACTIVITIES**

- Crop monitoring
- Irrigation management
- Yield estimation
- Efficient monitoring

| | |
|---|---|
| **Sector** | Drone technology |
| **Social impact focus** | Sustainability |
| **Founder** | Dr. Ramesh Vaddi (faculty) |
| **Legal entity** | Pvt Ltd |
| **Incorporated** | 30 September 2024 |
| **Incubation** | 11 Mar 2025 – 11 Mar 2026 |
| **Funding** | Rs. 5,00,000 (Grant), MeitY GENESIS |
| **Revenue** | No |
| **Patents** | Granted: Nil |
| **Tech transfer** | No |

CONCLUSION

# Progress towards zero hunger

SRM University-AP's contribution to SDG 2 combines everyday food services with enterprise support and research. A dedicated mess in every hostel and the FSSAI Eat Right Campus certification underpin safe, nutritious dining, while campus food waste is measured and part of it is processed into biogas (21,050 kg) and compost.

Beyond the campus, two CSR ADITRI training sessions reached 55 and 57 participants on food safety, licensing and quality for food businesses run by rural women. The University's research output on SDG 2 stands at 49 publications for 2024–2025, concentrated on precision agriculture, plant disease detection and food security, and two startups carry agricultural and food-production innovation towards practice.