



**2** ZERO  
HUNGER



# Sustainability Report 2022-23

( Goal - 2 )







# ZERO HUNGER

End hunger, achieve food security and improved Nutrition and promote sustainable agriculture

## Introduction to SDG – 2

Galgotias University throws its weight behind Sustainable Development Goal 2 (SDG 2), pulling out all the stops to eliminate hunger and ensure food security by 2030. With education as its trump card, the university digs deep into the roots of malnutrition and poverty, nurturing sustainable solutions. Flagship initiatives like a state-of-the-art food waste monitoring system, expertly designed meal plans, and an experimental farm—serving as a fertile hub for organic farming—plant the seeds for a revolutionary shift in food sustainability.

The School of Agriculture spearheads the effort, equipping local farmers with advanced crop experimentation facilities and soil diagnostics to ensure they can reap rich harvests. Meanwhile, the School of Hospitality plays a pivotal role by emphasizing sustainable food practices, minimizing kitchen waste, and promoting efficient meal preparation methods. The School of Nursing and Pharmacy chips in by educating communities on nutrition and health, particularly addressing malnourishment and dietary deficiencies. Through workshops and outreach programs, they provide critical insights into balanced diets and preventive healthcare.

Galgotias also fosters collective action, collaborating with village networks and stakeholders to spread awareness about organic farming and sustainable techniques. With multiple departments rowing in the same direction, the university crafts a roadmap to a hunger-free future where innovation, education, and community effort pave the way for equity and abundance.

## G-SCALE

Galgotias Student-Centered  
Active Learning Ecosystem.

No More Benches, Only Benchmarks.



Rural Development

Food Security

Nutrition

Sustainable Agriculture



Study @GalgotiasUniversity  
Campus Collaborative Classroom

**Programs Offered –**  
Doctor of Philosophy (Ph.D.) in Environmental Sciences  
M.Sc. in Sustainability

**Courses Offered –**  
Fundamentals of Horticulture – BSc Hons. (AIUA101B)  
Entrepreneurship Development and Business Communication  
– BSc (Hons.) (AIUA507B)

## Initiatives for SDG – 2

### Valorization of Crop Residues A Sustainable Path to Zero Hunger

The innovative transformation of crop residues into high-value products is revolutionizing sustainable agriculture, aligning with SDG 2: Zero Hunger. By repurposing agro-wastes such as straw, husks, and biomass through cutting-edge techniques like bioconversion, pyrolysis, and microbial fermentation, this initiative addresses environmental challenges while enhancing agricultural productivity. Residual biomass is transformed into biofertilizers, bioplastics, renewable energy sources, and eco-friendly packaging, promoting a circular economy in agriculture. The production of nutraceuticals and animal feed further boosts food security and economic sustainability. This approach mitigates harmful practices like stubble burning, improves soil health through carbon sequestration, and reduces waste accumulation. By integrating research-driven solutions with practical implementation, the valorization of crop residues fosters sustainable economic growth, environmental stewardship, and agricultural resilience. This paradigm shift demonstrates the potential of agro-waste utilization in achieving food security, sustainability, and environmental harmony—key pillars of SDG 2.



Crop Residues Product of GAFPF

This innovative approach tackles agro-waste challenges

- Innovative Waste Utilization
- Eco-Friendly Alternatives
- Sustainable Livelihoods
- Environmental Impact
- Research-Driven Solutions

### Innovative Research on Millets for Food and Nutritional Security

A transformative training program highlighted the potential of millets

A transformative training program highlighted the potential of millets in addressing global food and nutrition security. The initiative emphasized developing resilient millet varieties capable of withstanding abiotic stress, pests, and diseases. It promoted modern agronomic practices, including crop rotations and value-added processing techniques, to elevate millet cultivation. The program explored millet-based innovations such as nutrient-enriched snacks, beverages, and ready-to-eat products, enhancing consumer appeal and market demand while ensuring economic sustainability for farmers. By bridging tradition and modernity, millets were reimagined as vital components of global food systems to foster dietary diversity. Through advancements in genetic research, innovative cultivation strategies, and product diversification, this initiative demonstrated how millets could transform food systems to enhance nutrition and mitigate environmental impacts, paving the way for a resilient and sustainable agricultural future.



### Maximizing Vegetable Production

Empowering Sustainable Farm-to-Table Practices

An Awareness Programme held in Kanarsa Kanarsi Village focused on revolutionizing vegetable cultivation and supply chain management. The initiative covered advanced agronomic techniques like soil optimization, precision crop selection, integrated pest control, and sustainable irrigation practices to enhance productivity.

Post-harvest protocols were a key highlight, ensuring nutritional preservation and freshness through innovative storage, packaging, and transportation methods.

Hands-on workshops introduced cutting-edge approaches such as hydroponics, organic farming, and advanced food processing, providing participants with practical expertise. The program also explored market dynamics, consumer preferences, and strategic marketing frameworks to strengthen the link between producers and consumers.

By integrating agricultural innovation with value chain sustainability, this program empowered stakeholders to boost productivity, maintain food safety standards, and build a resilient farm-to-table system, ensuring a sustainable and efficient approach to vegetable production.



SoAg Faculty Interaction with Villagers  
Kanarsa Kanarsi Village, Greater Noida

### Hands-On Training on Sustainable Agricultural Practices

Empowering Students and Farmers with Practical Solutions

A hands-on training program was conducted to equip students and farmers with practical skills for eco-friendly and resource-efficient farming techniques. This initiative aimed to enhance agricultural sustainability, optimize resource use, and boost economic viability. The training focused on:

- Soil health management through organic amendments, composting, and crop rotation.
- Water conservation techniques, including micro-irrigation and rainwater harvesting.
- Integrated pest and disease management using biological control and natural pesticides.
- Renewable energy applications, such as solar-powered irrigation and agroforestry, to improve climate resilience.
- Post-harvest management workshops to minimize losses through better storage and value-added processing.

By bridging theory and practice, the program raised awareness about environmental conservation and empowered participants with sustainable solutions to enhance productivity and profitability. This initiative is a pivotal step toward fostering sustainable agriculture and promoting environmental stewardship for a resilient future.

### Startups working in with Sustainable Development Goal – 2

#### Farmers' Friend

Consultancy for farmers and entrepreneurs

Farmers' Friend empowers farmers and agripreneurs with tailored consultancy services to adopt sustainable agricultural practices. By offering guidance on efficient resource management, crop selection, and value-added processing, it boosts productivity, improves food security, and enhances farmers' economic resilience, aligning with SDG 2 for zero hunger and sustainable agriculture.

#### Hindustan AI

Waste Food & Nutrition Food Detection using Artificial Intelligence

Hindustan AI harnesses the power of artificial intelligence to reduce food waste by detecting expired or compromised nutrition in food products. By identifying potential waste and improving food safety, it helps optimize food distribution, supports sustainable food systems, and contributes to SDG 2 by improving access to nutritious food.

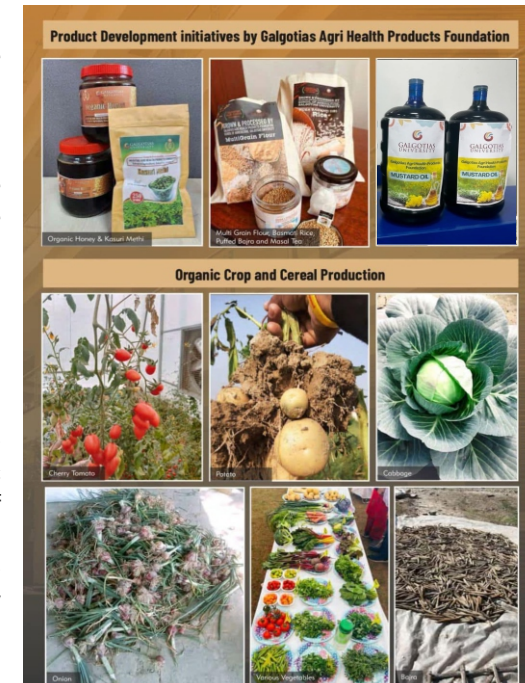


“True food security goes beyond ending hunger; it empowers communities, nurtures sustainable practices, and creates a ripple effect of health, resilience, and prosperity for generations to come.”

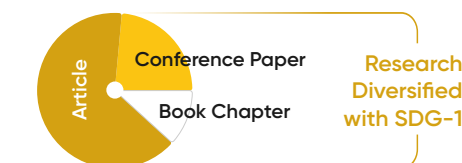
## Galgotias Agrihealth Products Foundation

A Testament to Quality and Sustainability

The Galgotias Agrihealth Foundation, launched by the School of Agriculture at Galgotias University, is championing sustainable food systems in alignment with the United Nations Sustainable Development Goals (SDGs). Through innovative agricultural practices, the Foundation has made significant strides in promoting food security and environmental sustainability. Key accomplishments include the sale of 480 kg of organic potatoes, the production of 174.5 liters of mustard oil from harvested mustard, and the creation of sauce from locally grown cherry tomatoes. Additionally, the Foundation has distributed 1,400 kg of campus-grown wheat, black wheat, and barley, alongside processed products like organic honey, dried fenugreek, multigrain flour, and jaggery.



## Research Focused with SDG – 2



- Adafruit IO Based **Smart Irrigation System using MQTT Protocol** for Urban Farming
- Blockchain Integration with end-to-end traceability in the Food Supply Chain
- Programmed **Dribble Water System Framework (ADIS)** to identify soil moisture by using a Dirt Adhesive Sensor
- **Agriphotovoltaic System** to Improve Land Productivity and Revenue of Farmer
- Crop Recommendation System For **Intelligent Smart Farming Technology**
- Inspecting **Briquette Machine** with Different Faults
- Food Laws on Implementation of Safety and Standards along with the
- Regulatory Systems: A Qualitative Investigation
- Role of organic crop production system in **biological diseases as a control agents**
- Ecosystem of Technologies for Smart Agriculture to **Improve the Efficiency and Profitability of Indian Farmers**
- **Locust Bean Gum**: Processing, Properties and Food Applications

