Food Security Knowledge for Local Farmers

Access to Food Security, Sustainable Agriculture and Aquaculture Knowledge, Skills and Technology

Centurion University of Technology and Management (CUTM), Odisha, supports sustainable rural development by connecting academic and scientific expertise with practical training, community engagement, and knowledge transfer for local farmers and food producers. Through agricultural extension, village outreach, farmer training, and fisheries and aquaculture initiatives led by the MS Swaminathan School of Agriculture and the School of Fisheries, the University helps rural communities strengthen production practices, resource efficiency, food security, and livelihood resilience.

CUTM's outreach combines field-based training, demonstrations, expert engagement, and access to sustainable production technologies across agriculture and aquaculture. Initiatives such as the Aqua Village approach, alongside training in sustainable farming, fisheries management, aquaculture, and post-harvest practices, help translate research and technical knowledge into practical applications for farmers and rural communities.

Together, these activities contribute to **SDG 2 (Zero Hunger)** by supporting sustainable food production, building the capacity of farmers and food producers, and strengthening resilient rural livelihoods. They also complement CUTM's wider contributions to **SDG 12 (Responsible Consumption and Production)** and **SDG 14 (Life Below Water)** through more efficient resource use and responsible management of agricultural and aquatic production systems.

University Outreach Context

Centurion University of Technology and Management (CUTM), Paralakhemundi, has been actively engaged in transforming local agriculture and aquaculture through its extensive farmer outreach programmes and village adoption initiatives. The university has adopted several villages including Badapadu, Kharling, and Nuagada under its Unnat Bharat Abhiyan programme, with regular Kisan Melas demonstrating innovative agricultural technologies and aquaculture practices to farmers.

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Shaping Lives... Empowering Communities...

📌 **Unnat Bharat Abhiyan: Adopted Villages**

CUTM has adopted 5 villages including* Badigam, Engersingh, Jampiguda, Barlanda and Routpur*, implementing integrated rural development programmes with demonstration plots, soil testing, distribution of quality inputs, irrigation initiatives, and market linkage facilitation. Additionally, five more villages Badigam, Engersingh, Jampiguda, Barlanda, and Routpur are served through the University's outreach model.

Free Farmer Training & Outreach Programmes

The following free programmes are conducted regularly by CUTM to provide local farmers and food producers with practical knowledge, skills, and technology. Total farmers trained were 5,017+ beneficiaries.

Programme	Frequency / Season	Target Group	Key Knowledge Transferred
Utkal Krishi Melas (1987+ Farmers)	Annually (Feb-Apr)	All farmers	Modern farming, seeds, pesticides, agri-innovation
OLM Farmers Training: Mushroom Cultivation (730 Farmers of SHGs)	2 batches: Jan & Jul	Women farmers & SHGs	Low-cost, high-profit mushroom production
Women Farmers Training on Apiculture (214 Women Farmers)	Annual (near Women's Day, Mar)	Women farmers	Beekeeping, pollination, organic honey production
Organic Fish Farming Training (713 Farmers)	Ongoing	Local aquaculture producers	Chemical-free aquaculture; ecosystem balance
Training on RAS Fish Production Technology (23 Farmers)	Feb–Mar & Jul–Aug	Fish farmers	Recirculating Aquaculture Systems; water efficiency
Sustainable Aquaculture for Adopted Villages (33 Farmers)	Annual	Adopted village communities	Eco-friendly fish farming; livelihood improvement
Livelihood Development via Organic Farming (1140 Farmers through ORF)	Year-round	Small & marginal farmers	Organic practices; premium market access
Food Production & Management for Women SHGs (77 Farmers of NGOs)	Quarterly	Women SHG members	Eco-friendly food production & storage

Programme	Frequency / Season	Target Group	Key Knowledge Transferred
Integrated Crop Protection: Harsha Trust (73 Farmers)	Annual	Harsha Trust farmers	Natural pest control; reduced chemical use
Commodity & Food Storage Training (27 Farmers)	Biannual	Women farmers	Post-harvest storage; food loss reduction

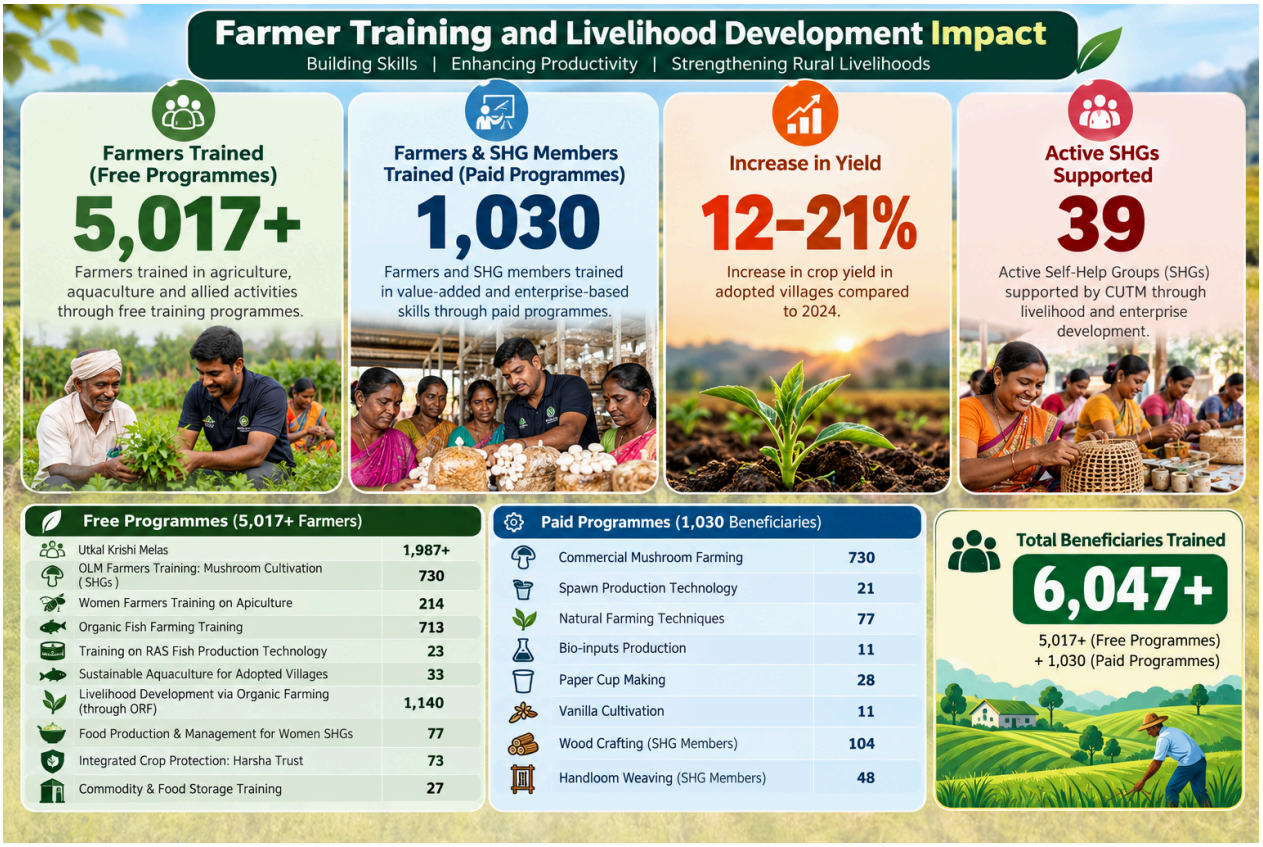


Paid Vocational Programmes

Centurion University, through the JC Kumarappa Rural Technology Park and allied campus units, offered affordable paid vocational programmes that include hands-on training, course materials, certification, and entrepreneurial guidance. Total farmers and SHG members trained were 1,030 beneficiaries which included 878 farmers and 152 SHG members.

Programme	Duration	Fee/ Session	Conducted By	Outcome
Commercial Mushroom Farming (730 Farmers)	7 Days	₹650	Mushroom Unit, CUTM	Market-ready mushroom production skills
Spawn Production Technology (21 Farmers)	7 Days	₹650	Plant Pathology Dept.	Mushroom spawn preparation & QC
Natural Farming Techniques (77 Farmers)	7 Days	₹650	Organic Farming Unit	Chemical-free cultivation; soil health
Bio-inputs Production (11 Farmers)	7 Days	₹650	Plant Pathology & Entomology	Biopesticides & biofertilizers making
Paper Cup Making (28 Farmers)	7 Days	₹650	JC Kumarappa Rural Tech Park	Eco-friendly small enterprise skills
Vanilla Cultivation (11 Farmers)	18 Days	₹1,800	Smart Agriculture Unit	Vanilla propagation, processing, value addition
Wood Crafting (104 SHG Group Members)	18 Days	₹1,800	JC Kumarappa Rural Tech Park	Traditional woodworking & furniture design
Handloom Weaving (48 SHG Group Members)	18 Days	₹1,800	JC Kumarappa Rural Tech Park	Traditional textile weaving & design

Outreach Programme Impact



Initiative	Farmer Coverage
Yield increase: adopted villages through better Agri Inputs	12-21%
Post-harvest loss reduction (SHGs) Through Commodity and Food Storage Domain	11%
Input cost reduction (Lab to Land Programme) Reach of Superio and Other CUTM bred Seeds and Agri Inputs from CUTM labs to Farmers Land through RAWE Students	~10%

Knowledge Areas Covered

Agriculture Knowledge Transfer	*Aquaculture & Fisheries Transfer*
• *Organic farming & certification* • *Soil health & nutrient management* • *Integrated pest management* • *Climate-smart crop production* • *Post-harvest storage & processing* • *Bio-inputs & biopesticide production*	• *Recirculating Aquaculture Systems (RAS)* • *Organic fish farming methods* • *Biofloc technology* • *Aquaponics & water management* • *Sustainable coastal aquaculture* • *Fish post-harvest processing*



Centurion University of Technology and Management (CUTM), through its School of Fisheries and rural outreach programmes, promotes sustainable aquaculture as a means of strengthening rural livelihoods, improving food production, and expanding income opportunities for local communities. The Aqua Village initiative reflects this approach by encouraging farmers to adopt improved fish farming practices, efficient water management, and environmentally responsible aquaculture technologies. Through village-based engagement, farmer training, and practical demonstrations, the university seeks to connect scientific knowledge with the needs of rural fish producers.

Intervention and Implementation

The initiative focuses on building the technical capacity of local farmers through training in sustainable aquaculture, organic fish farming, and Recirculating Aquaculture Systems (RAS). These knowledge transfer activities introduce farmers to efficient production methods, improved resource utilisation, and practices that support the long-term health of aquatic ecosystems. CUTM's wider farmer outreach programmes also cover biofloc technology, aquaponics, water management, fish post-harvest processing, and sustainable coastal aquaculture. Practical training and demonstrations help farmers understand how these approaches can be applied under local conditions. The university's adopted village programmes further strengthen rural engagement by connecting communities with technical guidance, quality inputs, and livelihood development opportunities.

