



## ICRISAT, Odisha Livelihood Mission to strengthen millet value chain in India's Odisha state



Photo: Surendra S, ICRISAT

Participants and the project team in the capacity building.

A survey carried out in the finger millet (ragi)-growing Koraput district of Odisha, India, showed a large unmet demand for value-added millet products owing to absence of millet processing units in the area. ICRISAT's [Agribusiness and Innovation Platform \(AIP\)](#) took this as an opportunity to propose the establishment of millet processing units to create new entrepreneurial avenues for the predominantly tribal communities in the area, especially for women and youth.

The survey showed: a) Finger millet is the most commonly cultivated and consumed millet in Koraput district, b) Local processing is limited to household-level dehulling/cleaning and at the most, grinding to a flour, c) The whole grain is more commonly marketed, with limited value adding due to the lack of processing infrastructure, d) Though consumers have high preference for millet-based products, they have limited access to value-added products such as millet flakes or millet-based Ready-to-cook (RTC) or Ready-to-eat (RTE) products.

With support from the [Odisha Livelihoods Mission \(OLM\)](#), AIP is aiming to strengthen the millet value chains in the state to improve rural livelihoods by establishing millet processing units that can in turn foster sustainable local entrepreneurship and promote health and nutrition of the local communities.

These processing units licensed by the Food Safety and Standards Authority of India (FSSAI) will have efficient processing equipment (RTC dry mix processing line and a bakery line) to enable localized production of "Nutri-Food products". AIP-ICRISAT's first unit is being established in the Semiliguda block of Koraput district. Similar millet processing units are being planned for other millet-growing districts of the state.

Ms Susmita Samantaray, District Project Manager (DPM), OLM, Koraput, said, "High nutritional value is hidden in millets, especially finger millet grown in the tribal areas of Koraput. To attract the younger generations to continue growing finger millet and other millets, this initiative of OLM to strengthen the finger

millet value chain in Koraput is a very significant initiative.”

AIP’s first-hand experience [with similar interventions in southern India](#) has shown that local enterprises are effective forces of change as they work hand-in-hand with public sector agencies to organize and channel resources to smallholder farmers. In the best of cases, local enterprises have proven to shape the trajectory of an entire industry. With some creative thinking, collaborative partnerships and a great deal of hard work, better livelihood opportunities can be a reality for thousands of beneficiaries in the target districts of Odisha. Thus, the proposed intervention is aimed at enhancing the sustainability and resilience of tribal households to: realize optimum price for their produce without the compulsion of selling immediately at meager rates, enhanced income through access to technology value adding and market linkages.

In addition, a capacity building program “Nutrition and value addition to Ragi (Finger Millet) grown in Koraput” was conducted by AIP-ICRISAT on 8 October 2021 for 35 members of the local “Viswa Durgeswar” self-help group from Rajput gram panchayat. These members will be involved in managing and operating the processing unit being established at Koraput.

“This is the first of a series of trainings to be conducted as part of the OLM-funded initiative to enhance tribal farmers’ incomes by establishing small business enterprises and linking them to markets,” said Dr Saikat Datta Mazumdar, COO, NutriPlus Knowledge Program. He also highlighted that ICRISAT is recognized by the Ministry of Tribal Affairs, Government of India, as a Center of Excellence for Tribal Development.

The training program focused on following aspects: Importance of nutrition and dietary diversity; concept and principles of health, hygiene and food safety; value addition to ragi through product development and local processing; details on plan and layout of the ragi processing unit being established by AIP-ICRISAT at Koraput; key aspects of processing of ragi-based food products and FSSAI regulations; nutritional quality and marketing aspects of ragi-based food products.

The trainees learned about the nutritional importance of ragi-based products such as upma mix, khichdi mix, sweet mix, malt powder, idli mix, dosa mix and cookies

developed by NutriPlus Knowledge Program of AIP- ICRISAT. The program also included a demonstration of RTC food products, followed by a tasting. All participants were provided detailed training manuals on the above aspects and hands-on training on preparation of the products as per the FSSAI protocols. Feedback from the group was positive, including that from mothers who appreciated the health benefits and convenience of cooking of the ragi-based RTC products.



*A participant trying out a preparation.*

Ms Priyanka Durgalla, Senior Scientific Officer, and Mr Harshvardhan Mane, Officer-Partnership Development, from ICRISAT, conducted the training program. The district project team of Dr Aviraj Datta, District Project Coordinator, Koraput; Ms Sucharita, Scientific Officer, ICRISAT; Mr Manoj Kumar Lima, Research Technician, ICRISAT; OLM officials Mrs Mansi Batra, Ms Bindya Guntha, MBK, Rajput; Mr Divyendu (YP), Mr Amit, Mr Karunakar, BPM, Semiliguda; Mr Pradip Kumar Mishra and his team from Foundation for Ecological Security (FES); Mr Abhisek Pradhan, Scientific Officer, AVRDC, participated actively in the program.

For more on value chains and market access, click here: <http://exploreit.icrisat.org/profile/market%20access%20and%20value%20chains/84>

**Project:** Sustainable improvement of rural livelihood and restoration of coconut-based livelihood through specific science-based interventions

**Component 7:** Establishment of FSSAI licensed Food Processing Unit to foster localized value addition of local produce leading to local Entrepreneurship

**Funder:** Odisha Livelihood Mission (OLM)

**Partners:** Foundation for Ecological Security (FES), Odisha

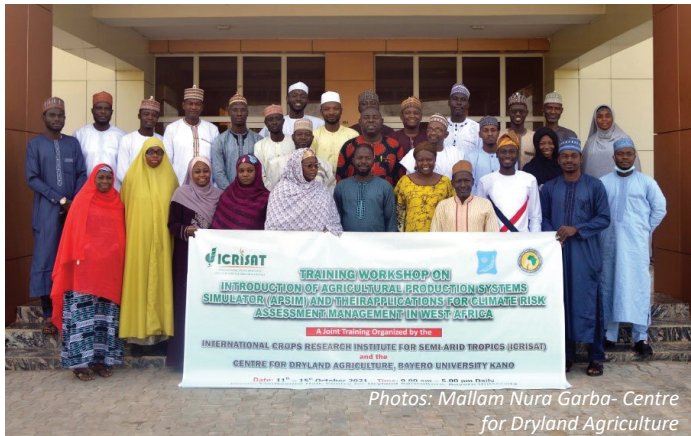
**CRP:** Grain Legumes and Dryland Cereals.

This work contributes to UN SDGs





# Building capacity in modelling for robust, resilient crop systems in West Africa



*The workshop's participants.*



*Participants using the APSIM tool.*

To enhance skills in modelling of crop systems by the agricultural research community in West Africa, a five-day workshop was recently conducted. The workshop trained researchers in the use of the Agricultural Production Systems Simulator (APSIM) platform. The workshop was organized by ICRISAT-Nigeria and the Centre for Dryland Agriculture, Bayero University Kano (CDA-BUK), Nigeria, where it was also held.

New and intermediate users to the platform attended the workshop titled “Introduction to APSIM and its applications for climate risk assessment/management in West Africa”. The workshop focused on the concept and analytical capacity of crop modelling through APSIM to determine a plant’s growth considering soil, water and nitrogen balances in environment against the backdrop of challenging climatic conditions. The instructors held topical discussions to demonstrate the workings of the individual components of modelling systems and how they can be linked for the best results.

Participants said that the workshop will help them design new cropping systems or ex-ante analysis of altering technology on resource constraints and adaptation to changing climate. The understanding of crop systems modelling and its applications as well as the ability to interpret outputs will be improved. Participants added that the knowledge gained will also help them design efficient and effective climate-smart and market-oriented interventions for farmers.

The welcome address was made by Professor Jibrin M Jibrin, Director, CDA. Dr Hakeem A Ajeigbe, ICRISAT’s Country Representative in Nigeria, who encouraged the participants to utilize their training to enhance their research skills. “Crop models are decision support tools for 21<sup>st</sup> century agricultural practices,” he said.

Dr Anthony Whitbread, Director for ICRISAT’s Resilient Farm and Food Systems Research Program, summarized the workshop’s activities and urged the trainees to continuously use APSIM until they master it.

The five-day training workshop was held from the 11 to 15 October 2021. Thirty six trainees participated in the workshop of which 33 people (25 Men and 8 women) were physically present with three joining virtually. The training was coordinated by Dr Akinseye Folorunso, Scientist, Agronomy and Agroclimatology, ICRISAT-Nigeria.

**Project:** Understanding the climate and market risks farmers face in SSA and SA to co-design better farm-level interventions.

**Funder:** CGIAR

**Partners:** Centre for Dryland Agriculture (CDA), Bayero University Kano (BUK) Nigeria

**CRP:** Grain Legumes and Dryland Cereals (GLDC)



# Policymakers witness landscape and livelihood transformation in India's Bundelkhand region



Photo: ICRISAT

The workshop participants at Birdha village in Uttar Pradesh's Lalitpur.

A group of policymakers and officials from across India recently experienced ICRISAT's sustainable research-for-development practices being implemented in the country's Bundelkhand region which are benefitting 30,000 families reliant on farming.

A travel workshop-cum-exposure visit was organised for the group during 9-11 October 2021 where the knowledge generated was shared. Participants got to observe climate-smart agriculture technologies being adopted at farm and landscape level for building system level resilience. The workshop involved visits to sites in Lalitpur, Jhansi, Mahoba and Chitrakoot districts, where site specific climate resilient interventions (e.g., *haveli* cultivation, agroforestry, community ponds, large scale field bunding, field drainage structures, state-of-the-art instrumentation) have been implemented and engaging with farmers as well as other stakeholders. More than 35 senior level officials and representatives from Karnataka, Odisha, Rajasthan, Uttar Pradesh and Madhya Pradesh states took part in the workshop.

With the support of the Government of Uttar Pradesh state in India, ICRISAT has been able to implement these climate-resilient practises under the "Doubling Farmers' Income in Bundelkhand region of Uttar Pradesh" project since 2018. The project covers nearly 40,000 ha in eight pilot sites across seven districts.

The initiative has enhanced water resources, crop productivity, crop intensification and improved the well-being of the farming community. Other outcomes observed in the pilot sites include a reduction in rural-urban migration with increasing employment opportunities leading to livelihood improvements.



The officials expressed interest in collaborating with ICRISAT to replicate similar model sites in their states to build climate resilience while rejuvenating watersheds for agriculture.

The event was organised by Drs Sreenath Dixit, Ramesh Singh, Kaushal K Garg, KH Anantha and Venkataradha along with Scientific Officers of the ICRISAT Development Center and field staff based at project locations.

**Project:** Doubling farmers' income in Bundelkhand Region, Uttar Pradesh

**Funder:** Government of Uttar Pradesh

**Partners:** Central Agroforestry Research Institute (CAFRI), Indian Grassland and Fodder Research Institute (ICAR-IGFRI), Banda University of Agriculture and Technology, BAIF, Bharat Agriculture, Lakshya Seva Samiti, Gram Unnati, Samarpan, Jan Kalyan Samiti, Samarth Foundation, Gram Unmesh Sansthan, Gramin Vikas Kendra, Upman Mahila Samsthan

This work contributes to UN SDGs





# Online International Expert Training on Pigeonpea Diseases – Detection, Phenotyping & Management

24-26 November 2021

Jointly organized by

ICRISAT, Patancheru; VNMKV, Parbhani; ICAR-AICRP - Pigeonpea

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In the media



## Why Augmentative Biological Control Holds Promise for Advancing Agriculture in Developing Countries



A sustainable agricultural system could make the economies of developing countries more stable and self-dependent, and augmentative biological control provides such an opportunity. The aim of augmentative biological control is to manage a crop pest through inoculation and inundation of biological control agents, or natural enemies of the pest. These can include predator or parasitoid insects or microbial organisms.



தினை உட்கொள்வது இதய நோயை கட்டுப்படுத்துமா?  
ஆய்வு சொல்வது என்ன?- Explainer

A story in Tamil based on the findings of an  
ICRISAT-led study



தினை உட்கொள்வது மொத்த கொலஸ்ட்ரால், ட்ரையசில்கிளிசரால்ஸ் (triacylglycerols) மற்றும் பிளம்ஐ ஆகியவற்றைக் குறைக்கும் என்பது ஆய்வில் தெரியவந்துள்ளது. இது சுமார் 900 பேரை உள்ளடக்கிய 19 ஆய்வுகளின் தரவை பகுப்பாய்வு செய்யும் ஒரு புதிய ஆய்வாகும். International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) என்ற சர்வதேச பயிர் ஆராய்ச்சி நிறுவனம் தலைமையில் 5 நிறுவனங்களால் இந்த ஆய்வு மேற்கொள்ளப்பட்டது.

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ICRISAT's scientific information: [EXPLORE/it.icrisat.org](http://EXPLORE/it.icrisat.org)

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