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APAARI Newsletter

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Contents

1. Editorial

The Asia-Pacific Association of Agricultural Research Institutions (APAARI) continues to strengthen agricultural research, innovation, and capacity development across the region in close collaboration with its members and partners. Our work supports national agricultural research systems (NARS), higher education institutions, government agencies, and non-governmental organizations (NGOs) through targeted initiatives and vibrant communities of practice.

APAARI's thematic focus areas—including pesticide residue mitigation, phytosanitary development, agroecology, biotechnology and bioresources, and agricultural innovation systems (AIS)—remain central to addressing regional priorities.

As we advance the development of APAARI's new Strategic Plan, we are also deepening our engagement at the global level through platforms such as the Global Forum on Agricultural Innovation and Resilience (GFAiR), CGIAR-led dialogues, and other international fora. These efforts aim to ensure that Asia-Pacific perspectives continue to shape global agricultural research and innovation agendas.

This edition of the newsletter captures significant progress across our thematic work—featuring event reports, research insights, success stories, and institutional updates from APAARI and its partners.

We hope you find the content informative and inspiring, and we warmly welcome your feedback to help make future editions even more relevant and impactful.

Dr. Ravi Khetarpal
Executive Director,
APAARI

2. Highlights from the APAARI Secretariat

Institutional updates

APAARI 18th General Assembly Meeting:

The Asia-Pacific Association of Agricultural Research Institutions (APAARI) held its 18th General Assembly Meeting (GAM) in Bangkok, Thailand, in a hybrid format.

The meeting brought together representatives from 11 member countries and 6 associate members, under the chairmanship of Prof. Lindsay Falvey, Commissioner for International Agricultural Research, ACIAR, Australia. The Assembly reviewed progress, endorsed key governance decisions, strengthened partnerships, and elected new leadership to guide the organization through 2026.

Newly elected member countries and institutions and New Executive Committee leadership include:

Bangladesh, Sri Lanka, Samoa, Papua New Guinea, South Korea, The Philippines, and from the higher education sector – Vignan University, India.

- Chairperson: Dr. Reynaldo Ebora, Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (PCAARRD). He is leading leading national R&D for the AANR (Agriculture, Aquatic, and Natural Resources) sectors, with expertise in entomology, biotech, and tech transfer.

- Vice Chairperson: Dr. Prabhath Wimal Kumara, Secretary / Director, Sri Lanka Council for Agricultural Research Policy (SLCARP) , a key figure in Sri Lankan agricultural research coordination, and involved in various national committees and initiatives for sustainable agriculture and library networks.

For More Information: Visit here
Visit here to read the full proceeding

New Ex-Officio member of the APAARI Executive Committee

Dr. Bosibori Bett, Director of Multilateral and Strategic Partnerships, will now represent ACIAR and serve as an Ex-Officio member of the APAARI Executive Committee.

APAARI Meets MAFF Leadership to Advance Plans for Establishing Headquarters in Cambodia

On 6 October 2025, APAARI leadership—Dr. Ravi Khetarpal, Executive Director, and Mr. Manish Rai, Head of Operations—met with H.E. Dith Tina, Minister of Agriculture, Forestry and Fisheries of Cambodia, along with senior officials from MAFF, to discuss legislative options for establishing APAARI's headquarters in Cambodia. The bilateral meeting also focused on strengthening regional cooperation, enhancing research collaboration, and promoting innovation to support sustainable agricultural development across the Asia-Pacific region.

APAARI expresses its sincere appreciation to the Royal Government of Cambodia for the warm welcome and its strong commitment to hosting APAARI and advancing regional agricultural research partnerships

A key meeting with Ambassador of Bangladesh to Thailand

Dr. Ravi Khetarpal, Executive Director of APAARI, met with H.E. Mr. Faiyaz Murshid Kazi Ambassador of Bangladesh to Thailand, on 15 September 2025. The fruitful discussion focused on strengthening the APAARI–Bangladesh partnership to enhance SPS compliance and boost Bangladesh's agricultural exports.

APAARI at GCHERA 2025 General Assembly

As a valued member of the Global Confederation of Higher Education Associations for Agricultural and Life Sciences (GCHERA), APAARI actively participated in the GCHERA 2025 General Assembly, held at UniLaSalle Institut Polytechnique, Beauvais, France, from 9–11 September 2025.

The Assembly, themed "Leadership for Educational Innovation and University Transformation", focused on:

- Visioning the future of GCHERA
- Strengthening institutions through policies, governance, and partnerships
- Conducting regular business, including the election of new officers

APAARI remains committed to engaging in these global discussions to strengthen higher education in agriculture, ensuring it continues to be relevant, innovative, and impactful in addressing the evolving challenges of today's world.

Digital Learning and Communities of Practices (CoPs)

APAARI's digital learning program initiative, developed with CABI, recorded steady progress in 2025. Key activities included strengthening the long-term sustainability of the e-learning platform, planning a skills gap assessment using the CABI Global Skills Framework, exploring funding models, and discussing co-development of new courses. A joint concept note was prepared to mobilize donor support for scaling this initiative.

Communities of Practice continued to serve as effective platforms for knowledge exchange.

- **Asia-Pacific Biopesticides CoP (ABCoP)** expanded to 495 members from Asia, Africa, and Europe, holding 14 sessions on research and developments, regulatory challenges, innovations and private sector insights.
- The **Public–Private Partnership CoP (PPP-CoP)**, launched in January 2025, held seven sessions focused on market access, seed trade, and phytosanitary implementation, and is now being considered for development into a regional PPP mechanism with STDF.
- The **Food Loss and Waste CoP (FLAW-CoP)**, launched in Q2 FY 2025, grew rapidly to over 476 members and facilitated exchanges on food loss reduction, waste valorization, and climate-resilient value chains.

3. Highlights from the Network

1.Japan International Research Center for Agricultural Sciences (JIRCAS) *,Advancing global agricultural research and innovation*

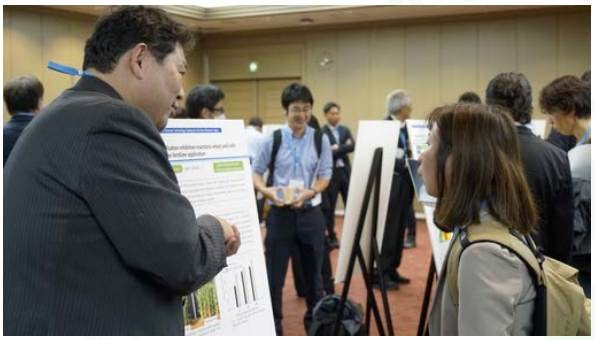
Event: JIRCAS International Symposium 2025 Highlights

The JIRCAS International Symposium 2025, themed "Accelerating Application of Agricultural Technologies in the Asia-Monsoon Region: Taking Stock and the Way Forward for Enhancing Production Potentials and Sustainable Food Systems", was successfully held on 27 October 2025 in a hybrid format at Hitotsubashi Hall, Tokyo, and online.

The symposium took place against the backdrop of major shifts in the global food system since the 2021 UN Food Systems Summit (UNFSS) and Japan's MIDORI Strategy for Sustainable Food Systems. Discussions reflected on how global uncertainties—including the COVID-19 pandemic, geopolitical conflicts, and rising input prices—had strained food security, while climate change continued to push average global temperatures to record highs.

Speakers highlighted the momentum gained through global and regional commitments such as the Emirates Declaration on Sustainable Agriculture,

Resilient Food Systems, and Climate Action (COP28, 2023), the ASEAN Regional Guidelines for Sustainable Agriculture (2022), the Japan-ASEAN MIDORI Cooperation Plan (2023), and Japan's MIDORI Infinity Initiative (2025), which promotes scaling greenhouse gas reduction technologies and attracting decarbonization investment in the agri-food sector.



A key focus was the Green Asia Project, led by the Japan International Research Center for Agricultural Sciences (JIRCAS) in collaboration with regional partners, which is set to conclude in March 2026.

The symposium showcased its achievements and identified lessons for advancing food systems transformation across the Asia-Monsoon region and beyond.

By bringing together experts, policymakers, and research institutions, the event reinforced the importance of accelerating innovation, fostering collaboration, and ensuring sustainable and resilient agri-food systems in the face of growing global challenges.

For More information: https://www.jircas.go.jp/en/symposium/2025/e20251027_jircas

2.Department of Science and Technology – Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (DOST–PCAARRD): Advancing research-driven solutions for agriculture, aquatic, and natural resources innovation

Article : Genomics Centers Agri-Aqua R&D in the Philippines.

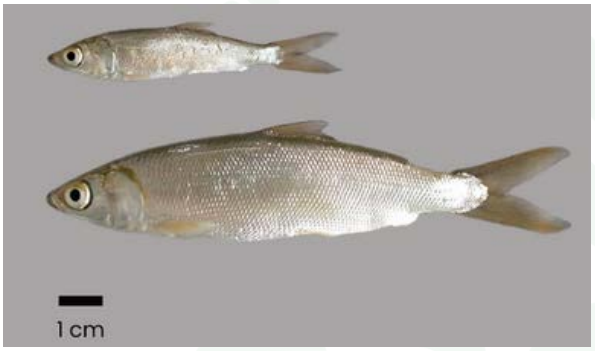
Researchers in the Philippines are harnessing genomics to improve food production, crop protection, and aquaculture. Spearheaded by the Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (DOST-PCAARRD), these initiatives aim to strengthen the agriculture, aquatic, and natural resources (AANR) sector through advanced genetic research.

A male wild-caught sample from Dagupan used for the generation of the reference genome (Image credit: UP Diliman project team)

In aquaculture, scientists at the University of the Philippines Diliman (UPD) are using genetic markers to enhance tiger shrimp (Penaeus monodon) growth and disease resistance. Nineteen growth-associated single-nucleotide polymorphisms (SNPs) have been identified, along with markers linked to resistance against White Spot Syndrome Virus (WSSV) and important morphological traits.

These discoveries pave the way for faster-growing, more resilient shrimp, improving productivity and efficiency.

Similarly, UPD researchers are applying **marker-assisted selection** to milkfish to accelerate broodstock development. By integrating transcriptome and genome sequence data, they identified SNPs and genes associated with superior growth, metabolism, and immune response, offering a pathway to faster, more efficient breeding programs.



Milkfish juveniles after pond rearing (80 days post-hatch), showing a comparison of small and large size phenotypes. (Image credit: UPD Project team)

In crop protection, the University of the Philippines Los Baños (UPLB) team is exploring RNA interference (RNAi) to control sweetpotato weevils, a pest causing severe root crop losses. By silencing key genes responsible for insect development, this approach has the potential to serve as a biopesticide for safer and targeted pest management.

Sweetpotato weevils being reared in the laboratory of NCPC-CAFS, UPLB. (Image credit: CRD, DOST-PCAARRD

These genomics-based interventions demonstrate the Philippines' commitment to leveraging cutting-edge science to enhance agricultural and aquaculture productivity, sustainability, and resilience.

(Source: Rizza B. Ramoran, Dr. Rachel June Ravago-Gotanco, John Aaron Mark V. Macaraeg, DOST-PCAARRD S&T Media Services)

3.International Crops Research Institute for the Semi-Arid Tropics (ICRISAT): Driving research and innovation for resilient dryland agriculture

Advancing South–South Cooperation

To mark the UN International Day for South–South Cooperation, ICRISAT convened a high-level global webinar where leaders committed to sharing scalable innovations for food system transformation. Complementing this event, an opinion piece by Dr. Himanshu Pathak, Director General, ICRISAT, highlighted the critical importance of collaborative action to build resilient agri-food systems for vulnerable communities.

Breakthroughs in Crop Research

ICRISAT researchers, along with global partners, announced major scientific achievements, including the discovery of a new gene conferring resistance to Sterility Mosaic Disease in pigeonpea, a long-standing challenge for smallholder farmers.

Another groundbreaking study offered renewed hope for managing a devastating groundnut disease, opening pathways for more resilient varieties and improved farmer incomes.

Tech-Enabled Climate Resilience

In a step toward digital transformation in agriculture, ICRISAT and partners launched an AI-powered climate advisory initiative aimed at strengthening farmers' ability to adapt to climate variability.

Additionally, the institute unveiled a scalable soil degradation assessment solution, enabling governments and development partners to better track land health and plan restorative actions.

Recognition of Scientific Excellence

Two ICRISAT scientists received international honors for their impactful contributions:

- Dr. Padmaja Ravula was awarded the World Food Prize Foundation's "Inspiring the Next Generation Award" for her leadership in empowering women and youth.

- Dr. Mamta Sharma received the M.S. Swaminathan–Grow Further Award for her pioneering work on crop disease diagnostics and management.

Together, these achievements reflect ICRISAT's continuing leadership in serving dryland farmers, promoting innovation, and advancing global agricultural development.

4.Asian NGO Coalition for Agrarian Reform and Rural Development (ANGOC): Strengthening civil society engagement for agrarian reform and sustainable rural development

Event: Roundtable on Land and Resource Governance in the Philippines

On 11 August 2025, the Asian NGO Coalition for Agrarian Reform and Rural Development (ANGOC) and the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA), with support from Fair Finance Philippines, convened a Roundtable Discussion on Land and Resource Governance at Joy Nostalg Hotel and Suites, Manila.

The event brought together government leaders, civil society, academe, and grassroots representatives to deliberate on persistent governance challenges affecting agricultural modernization, inclusive rural development, and peacebuilding in the Philippines.

Key recommendations emphasized the urgent passage of a National Land Use Act (NLUA), ensuring inclusive participation, enhancing institutional coherence to resolve land conflicts, and promoting responsible investments.

Participants agreed that secure land tenure and coherent governance frameworks are vital to transforming land and resource management into a foundation for equitable growth and stability.

More information: Summary Report

5.Bureau of Agricultural Research (BAR), Philippines: Strengthening research-based innovations for a more productive and sustainable agriculture sector

Article : CLSU Forage Pellets Boost Goat Production and Farmer Income,

The Central Luzon State University – Small Ruminant Center (CLSU-SRC) has developed a forage-based pelleted feed specifically for goats, providing an affordable, nutritionally balanced solution to seasonal feed scarcity. Developed through years of research led by Dr. Edgar A. Orden and implemented by Associate Professor Leny Lyn Manalili-Del Rosario, the technology was transferred to four farmers during a DA-BAR seminar in August 2025.

The pellets use legume species such as Leucaena leucocephala and Indigofera zollingeriana, grown on uncultivated land to avoid competing with food production. Feeding trials showed improved milk production in lactating goats and better growth for kids. Farmers received comprehensive training on forage cultivation, pellet production, financial management, and business skills, along with essential equipment like pelletizing machines, hammer mills, and mixers.

This initiative demonstrates how research-generated feed technologies can support sustainable livestock production while providing additional income for smallholder farmers.

Reference: bureau's official publication, the BAR Chronicle.

6.Bureau of Agricultural Research (BAR), Philippines:

Department of Agriculture (DA) and International Partners Strengthen Climate Action in Agriculture

To strengthen climate resilience in the agriculture and fisheries sector, the **Department of Agriculture (DA)**, in partnership with international institutions and national agencies, held an inception workshop for the **Climate Change Action Program (CCAP)** on 10 July 2025. Funded by the **Asian Development Bank (ADB)** and supported by a Technical Assistance team from EcoSecurities, UP Los Baños Foundation, Inc., and SEAMEO-SEARCA, the program focuses on operationalizing climate-smart technologies and improving access to climate information and financial risk management tools.

Key DA agencies involved include the **Climate Resilient Agriculture Office (CRAO)**, **National Organic Agriculture Program**, **Bureau of Agricultural Research (BAR)**, and the **Philippine Crop Insurance Corporation (PCIC)**. DA-BAR aims to increase budget allocations for climate-smart R&D, develop an R4D Knowledge Hub, and document climate-smart technologies while supporting policy reforms. This collaboration underscores the Philippines' commitment to evidence-based climate action in agriculture, strengthening the sector's capacity to adapt and thrive under changing conditions.

Reference: bureau's official publication, the BAR Chronicle.

7.Bureau of Agricultural Research (BAR), Philippines:

NIAHS Executive Committee Moves Forward with Developing Heritage Site Guidelines

The **DA-BAR**, as interim secretariat, convened the third **Executive Committee (ExeCom) meeting of the Nationally Important Agricultural Heritage Systems (NIAHS)** on 15 July 2025 at the NCCA Metropolitan Theater, Manila. Chaired by Agriculture Secretary Francisco T. Laurel Jr., with DA Assistant Secretary U-Nichols A. Manalo and DA-BAR OIC-Director Joell H. Lales, the meeting reviewed amendments to **Joint Memorandum Circular No. 1, Series of 2023**, which guides the recognition and conservation of NIAHS sites.

Discussions focused on developing sub-criteria and indicators for identifying heritage sites. Technical Working Groups from member agencies, including **DENR-BMB**, **NCIP**, and **NCCA**, will support the implementation. The NIAHS initiative aims to preserve unique agricultural systems that reflect traditional knowledge, biodiversity conservation, and sustainable land use, contributing to agrobiodiversity and empowering local communities.

By institutionalizing protection for culturally and ecologically significant agricultural landscapes, NIAHS supports national goals of maintaining ecosystems that provide food, water, and clean air for future generations.

Reference: bureau's official publication, the BAR Chronicle.

8.Vietnam's National Plant Genebank Strengthens Agrobiodiversity Conservation (2020–2024)

Pham Hung Cuong, Plant Resources Center, VAAS

Vietnam's National Plant Genebank, managed by the Plant Resources Center under the Vietnam Academy of Agricultural Sciences, has made remarkable progress in safeguarding the country's agricultural biodiversity between 2020 and early 2025.

The genebank expanded its collections, strengthened digital databases, and successfully restored traditional varieties to local farming systems, supporting both conservation and rural livelihoods.

Key Achievements

- Collection Expansion: Conserved 28,790 seed accessions, 3,041 clonal, and 659 in-vitro accessions, a 55% increase since 2020.
- Regeneration & Evaluation: Over 3,460 accessions were regenerated, while 28% underwent field characterization or detailed trait evaluation, including agronomic performance, stress tolerance, and quality.
- Digitization: More than 118,000 characterization and evaluation records were integrated into the national database (prc.org.vn), improving access for breeders and researchers.
- Revival of Local Varieties: Traditional rice, vegetable, and tuber varieties were reintroduced into local farming systems, increasing farmer incomes by 10–15%.

Conservation of genetic resources in the cold rooms and in the field

Highlights and Innovation

- Rapid growth of ex-situ collections across over 100 crop species.
- Adoption of biotechnology tools such as molecular markers and preliminary genome-wide association studies (GWAS).
- Tangible socioeconomic impact through restoration and use of traditional varieties.

Challenges and Future Priorities

- Despite these successes, the genebank faces challenges in advanced biotechnology use, detailed genotype evaluation, and infrastructure gaps in cold storage and automated seed handling. Future priorities include:
- Upgrading infrastructure with smart storage and automated management.
- Expanding molecular and genomic characterization tools.
- Strengthening community-based conservation and linking genetic resources with rural livelihoods.
- Accelerating Vietnam's accession to the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) for global collaboration benefits.

Conclusion

- Vietnam's National Plant Genebank has evolved from passive storage to active conservation through use, linking biodiversity preservation with farmer livelihood by expanding collections, digitizing data, and returning traditional varieties to production systems, the genebank reinforces Vietnam's leadership in regional and global efforts to secure agricultural biodiversity and build resilient food systems.

9.ILRI Activities in Vietnam

The **International Livestock Research Institute (ILRI)** has been actively supporting livestock development and market systems in Vietnam through a series of collaborative initiatives.

These efforts aim to strengthen farmer capacities, improve biosecurity, and inform evidence-based strategies for the livestock sector.

- SAAF CGIAR Science Program Co-Design Workshop

ILRI hosted a co-design workshop for the Southeast Asia Animal Feed (SAAF) CGIAR Science Program in Vietnam, bringing together researchers, practitioners, and policymakers. The workshop focused on co-developing research priorities and strategies to enhance sustainable livestock systems, promote innovation, and ensure alignment with national and regional agricultural development goals.

Read more

- ICT4Health Training on FarmVetCare App

As part of efforts to empower livestock farmers, ILRI conducted training on the FarmVetCare mobile application, which supports biosecurity and livestock health management. Farmers received practical

guidance on using digital tools to monitor animal health, access veterinary support, and improve overall farm productivity and resilience.

Read more

- **SAAF Market Assessment Workshop**

ILRI organized a market systems analysis workshop to assess livestock value chains under the SAAF program. The workshop engaged stakeholders from government, research institutions, and private sector actors to identify market opportunities, constraints, and interventions that can enhance competitiveness and inclusivity in Vietnam's livestock sector.

Read more

Through these initiatives, ILRI continues to strengthen capacity development, digital innovation, and market-oriented strategies in Vietnam's livestock sector, contributing to resilient and sustainable agricultural systems in the region.

10.CABI Launches Free 'Primer on Evidence Synthesis' Course

CABI has introduced a new free online course, 'Primer on Evidence Synthesis', developed with the Juno Evidence Alliance as part of the Evidence Synthesis Skills Framework. The self-paced course offers a clear introduction to essential concepts, terminology, and standards in evidence synthesis, making it ideal for beginners or anyone needing a quick orientation.

Using agrifood examples, the course explains what evidence synthesis is, why it is important, the different types available, and what defines a high-quality synthesis. It aims to build a shared understanding and common language to strengthen research and decision-making across sectors. Learners can access the course along with the press release and contributor information through CABI.

11.Article Title: Driving Sustainable Crop Protection: Policy Directions for Biopesticides in Bangladesh

Bangladesh is at a pivotal moment in transforming its pest management system toward sustainability by promoting biopesticides and bio-rational alternatives. Over the past decade, the country has made notable strides, with 110 registered biopesticide brands based on 42 active ingredients and 44 private firms engaged in production and marketing. Despite this growth, the sector remains underdeveloped due to regulatory, fiscal, and institutional hurdles. High import duties, lack of dedicated registration frameworks, restrictive field-trial requirements, and limited financial incentives continue to slow adoption and innovation.

Recent policy dialogues under the Zero Draft Pesticide Policy Brief (2024),

facilitated by the Department of Agricultural Extension and USAID's Policy LINK Activity, have charted a forward-looking reform agenda.

Recommendations include reducing import duties and taxes, introducing separate registration and labeling guidelines, lowering efficacy thresholds for biopesticides, and supporting local R&D and production facilities. Exempting pheromones and sticky traps from registration and providing export and investment incentives could further accelerate uptake.

These measures go beyond technical adjustments—they signify a strategic shift toward sustainable, health-conscious, and environmentally responsible agriculture.

By integrating biopesticides into national policy, Bangladesh can reduce chemical dependency, protect pollinators and biodiversity, and improve food safety for domestic and export markets.

This policy momentum positions the country as a regional leader in eco-friendly crop protection and aligns with global commitments under the FAO–WHO Code of Conduct and Sustainable Development Goals 2, 3, and 12.

12.Article: Tackling Food Loss and Waste: A Regional Priority for Asia-Pacific

On 29 September, the International Day of Awareness of Food Loss and Waste highlighted a sobering reality: Asia-Pacific wastes food worth nearly USD 1 trillion each year, even as 390 million people remain hungry.

Globally, one-third of food produced—1.3 billion tons—is lost or wasted, with significant impacts on climate, water, and energy resources.

Food loss starts on farms due to climate shocks, pests, and limited storage, and continues across fragmented supply chains. At the consumer level, overstocking, over-ordering, and confusion over labels drive waste. While countries such as Japan, China, India, and Singapore have launched initiatives to reduce waste, critical gaps remain, particularly in reliable data, systemic coordination, and integration into national strategies.

Experts emphasize that prevention, redistribution, and resilience-building at the farm and community levels must take precedence over end-stage waste management. Linking regenerative farming, new technologies, consumer education, food banking, and circular economy approaches is essential to turning waste into resilience.

APAARI is committed to making food loss and waste a regional priority. By fostering dialogue, advocating its inclusion in national agendas, and supporting community-driven and science-based solutions, APAARI is working to align food waste reduction with climate action,

nutrition security, and sustainable development goals.

For More information:
7th International Conference on Biopesticides (BIOCICON 2025)

13. Success Story from Cambodia

MASC: Growing Markets, Climate Resilience, and Farmer Prosperity

The Melon Association Siem Reap Meanchey (MASC) stands today as one of Cambodia's most inspiring farmer-led success stories.

Supported by the Cambodian Farmer Federation Association of Agricultural Producers (CFAP) through the IFAD–EU APFP-FO4A project, MASC is implementing a strategic business plan (2023–2025) that strengthens collective marketing, enhances production quality, and expands market opportunities for its members.

Driving Quality and Market Competitiveness

Through hands-on technical training and strict production protocols, MASC has significantly improved the quality of its produce—especially melons and vegetables—to meet the standards of supermarkets and export buyers. Collaboration with large companies has also ensured faster payments, helping farmers maintain cash flow and increase production in line with cropping calendars.

Expanding Production and Innovation

MASC has transformed into a dynamic enterprise with strong growth indicators:

- Capital increased from 8.1M to 160M KHR
- Cultivated land expanded to 260 hectares
- A new collection center now manages around 28 tons of produce per month

The association has diversified into new high-demand crops, including yellow watermelon, onion, garlic, cherry tomatoes, bell peppers, and asparagus. Alongside, it has initiated small but impactful enterprises such as seed sales, agri-credit services, and regular study visits and training for members.

Enhancing Market Access and Visibility

By actively participating in domestic and international trade fairs, MASC has successfully promoted new crops and accessed higher-value markets. Improved crop rotation practices and a structured cropping calendar now allow the association to supply markets year-round, meeting consumer demand while enhancing climate and soil resilience.

Impact on Farmer Livelihoods

With approximately 25 new households joining each year, MASC's growth reflects strong trust among smallholders. Members report higher incomes, greater confidence in adopting new crops, and increased interest in expanding farm sizes to meet market demand. The association's business model has become a pathway for inclusive

growth—especially empowering women producers.

Challenges and the Road Ahead

Despite its progress, MASC continues to navigate challenges including limited revolving funds, seed quality issues, transportation constraints, inconsistent member reporting, competition with imports and technical skill gaps among new members. Addressing these areas will be essential for sustaining growth.

Call for Continued Support

CFAP recommends that greater direct funding from development partners and government be channelled to farmers' organizations to strengthen:

- Technical capacity and extension services
- Processing, packaging, and cold storage infrastructure
- Market linkages and transport systems
- Access to climate finance
- Revolving funds for scaling collective enterprises

MASC's journey demonstrates how strong farmer organizations, supported by strategic investment and capacity building, can drive climate-smart agriculture, improve livelihoods, and build resilient market systems. It is an inspiring model for farmer-led transformation across the Asia-Pacific region.

14.Success Story:

Research–Extension Partnerships Drive Smallholder Sugarcane Success – The Kwalenkume Experience

The Kwalenkume Cooperative in Kwamadlala, UGu District, KwaZulu-Natal, South Africa, illustrates how improved crop varieties and farmer capacity building can transform rural livelihoods. Established in 2017 through a land redistribution programme, the cooperative initially faced challenges, including limited resources, knowledge gaps, and low-yielding sugarcane varieties. In 2018, the South African Sugarcane Research Institute (SASRI), in collaboration with the Department of Agriculture and Rural Development (DARD), launched a strategic intervention. A 3.6 ha demonstration plot was established to introduce the high-performing sugarcane variety N58, accompanied by farmer training and governance support.

The results were remarkable. By 2024, production expanded from 19 ha to 69 ha, yields increased from 47 to 76 tons/ha, and revenue grew nearly tenfold, exceeding R5 million in the 2023/24 season. The cooperative also created 15 part-time harvest-season jobs, enhancing local employment.

Beyond financial gains, the initiative strengthened farmer knowledge, introduced on-farm varietal trials, improved decision-making, and enhanced cooperative resilience. The Kwalenkume experience highlights the impact of research–extension partnerships, farmer training, and access to improved varieties in driving sustainable growth for smallholder farming communities.

15.7th International Conference on Biopesticides (BIOCICON 2025)

The **7th International Conference on Biopesticides (BIOCICON 2025)** was held on **26–27 September 2025** at the YMCA

International Guest House, Kanyakumari, Tamil Nadu organized by the Indian Academy of Biopesticides. The event attracted 64 abstract submissions from researchers across India, Nigeria, Benin, Bulgaria, and Algeria.

The Conference was inaugurated by Dr. R. Murugeswaran (National Medicinal Plants Board, Ministry of Ayush), with felicitation by Dr. M. Theradimani (TNAU, Killikulam) and a keynote by Dr. Abraham Verghese (ICAR–NBAIR) on Biointensive Integrated Pest Management.
BIOCICON 2025 featured seven invited lectures and 48 research presentations organized into four technical sessions:

1. Insect Diversity – Biodiversity across agroecosystems and forests
2. Botanicals & Indigenous Pest Control – Bioactive compounds and formulation research
3. Advanced Technologies – GM crops, genomics, nanotechnology
4. Biopesticide Production & Regulation – Mass production, quality, and registration challenges

The event brought together national and international experts, fostering collaboration and highlighting strategies for sustainable pest management, biopesticide innovation, and eco-friendly crop protection.

16.Workshop on New Breeding Technology in Bali

CropLife Indonesia, in collaboration with IPB University, organized a workshop on New **Breeding Technology** on 21 September 2025 at Bali, as part of the **International Conference on Latest Technology in Agriculture**. The event brought together participants from **Southeast Asia**, including Malaysia, the Philippines, and Vietnam, to explore genome editing, plant breeding innovations, and regulatory frameworks.

Key presentations included **Michael Leader** on global regulatory landscapes, **Valasubramanian Ramaiah** on gene editing for sustainable agriculture, **Shivendra Bajaj** on adaptive policies, **Tri Joko Santoso** on Indonesia's innovation ecosystem, and **Mahaletchumy Arujanan** on capacity building and regional collaboration.

Participants gained substantial knowledge and expressed strong interest in further regional engagements. The workshop marked a significant step toward **harmonizing regional efforts, strengthening regulatory understanding, and advancing sustainable agricultural solutions** in Southeast Asia.

17.Keystone Communities Project Empowers Himalayan Rural Populations

Technokreshy Montanus Pvt Ltd, in collaboration with the Global Ecovillage Network (GEN), has launched the Keystone Communities project through the establishment of the Krishi Updates Learning Centre in Kaisdhar, Kullu District. Supported by the Himalayan Institute for Learning and Leadership (HILL) and the Society for Technology and Development, this initiative is designed to strengthen community resilience and empower local populations

in the Himalayan region.

The Learning Centre provides a replicable model of integrated rural resilience, acting as a hub for innovation, co-creation, and demonstration of sustainable agricultural and livelihood practices. With a robust ICT infrastructure, the Centre enables blended learning, knowledge sharing, and skill development, addressing the digital capability gaps in marginalized mountain communities

Key objectives of the project include enhancing community resilience and offering sustainable livelihood opportunities for youth, fostering self-reliance and inclusive development. By combining technology, education, and participatory approaches, the Keystone Communities project is paving the way for sustainable rural development in the Himalayas.

A dedicated session titled "Digital Agriculture for Climate Resilience in the Himalayas" was curated and presented at the Digital United Nations General Assembly (UNGA) 2025. The session highlighted the transformative role of digital technologies in strengthening resilience, improving livelihoods, and enabling climate-adaptive decision-making for Himalayan farming communities.The presentation received strong recognition from the United Nations Development Programme (UNDP) and the International Telecommunication Union (ITU), who shared a Letter of Appreciation acknowledging the contribution and global relevance of the efforts showcased.

The event also featured in the UNDP CoFSA Newsletter, media platforms, and international mountain development networks, reaffirming global interest in digital agriculture models emerging from the Himalayan region.

Learn more about the initiative: Krishi Updates Learning Centre Video

FEEDBACK & SUGGESSIONS

We welcome your feedback and suggestions

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