



CABI News Bulletin Asia

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Welcome to this edition where we feature some of CABI's work across the region through a selection of news, stories and project highlights. In October, CABI and partners highlighted [Pakistan's new biopesticides registration guidance](#) at the 19th Annual Biocontrol Industry Meeting (ABIM) 2024.

The event allowed us to show how Pakistan is moving towards more sustainable agricultural practices while linking international biocontrol manufacturers with the Department of Plant Protection. You can read the full story [here](#).

[CABI's BioProtection Portal](#) is now available in Malaysia - the resource helps users worldwide identify suitable biocontrol and biopesticide products. It covers over 900 crops and 2200 pests in the 40 countries featured.

I hope you enjoy reading this edition.

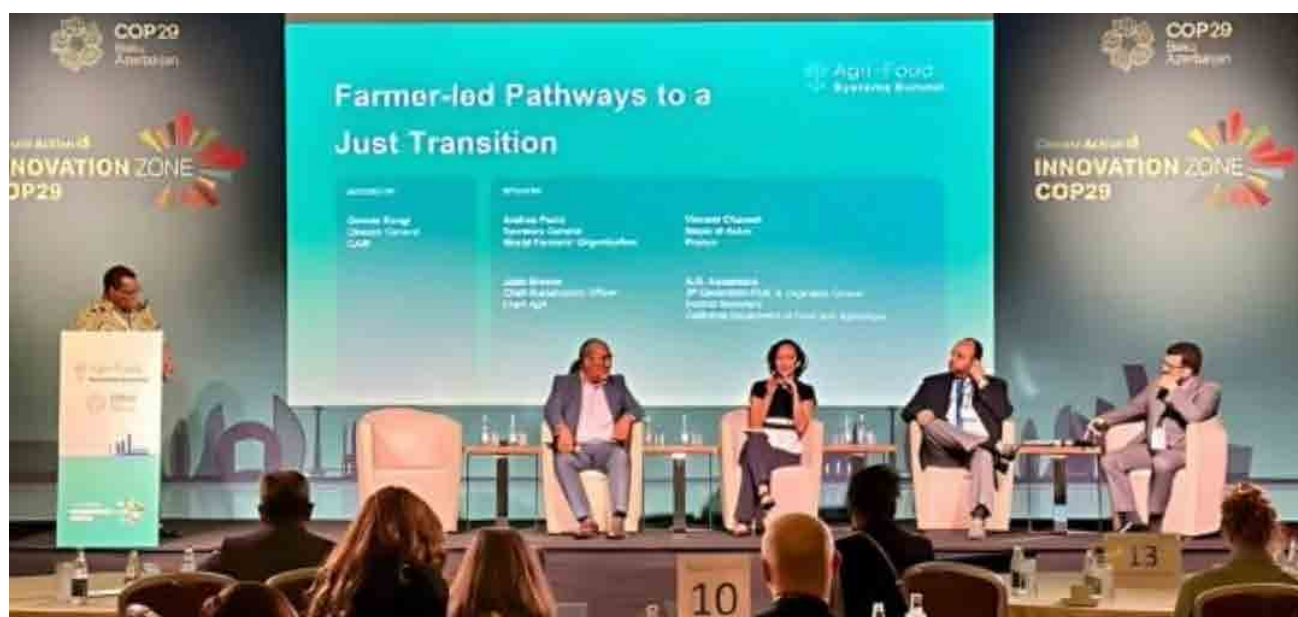
With best wishes,

Dr Babar Bajwa

Senior Regional Director, Asia

News and Stories

CABI highlights support for just and inclusive transition to sustainable food systems at COP29



CABI was delighted to be part of COP29 in Baku, Azerbaijan, during which we highlighted our support for a just and inclusive transition to sustainable food systems.

CABI participated in a number of events, including the Agri-Food Systems Summit and other side events, where we highlighted our commitment to share skills, knowledge

and technical expertise in helping vulnerable countries around the world to build the capacity of their plant health systems threatened by climate change.

CABI has highlighted its support for a just and inclusive transition to sustainable food systems at the [2024 UN Climate Change Conference](#) (COP29) held in Baku, Azerbaijan.

This included commitments to share skills, knowledge and technical expertise on helping vulnerable countries around the world to build the capacity of their plant health systems threatened by climate change-induced crop pests and diseases.

This transition to a low emission and resilient agrifood systems is vital to stabilize the rapidly changing climate and ensure that the most vulnerable communities receive adequate support to adapt to the new agricultural realities.

CABI participated in a number of events including the Agri-Food Systems Summit (15 Nov), a UNFCCC official side event on 'Just Transition Pathways to Achieve Paris Agreement Goals in the Agri-Food Sector' with the [CGIAR](#), Ban Ki Moon Centre, PIK and Fairtrade, and a CABI led side event on 'Bridging the Gap: Farmer-Centric Solutions for Effective NDC Implementation with the [Adaptation of African Agriculture](#) (AAA).

Just transition to sustainable agriculture

At the Agri-Food Systems Summit, Dr Dennis Rangi, Director General, Development, moderated a session on farmer-led pathways to a just transition to sustainable agriculture that addressed the social, economic, and environmental aspects of changing the food system in a fair way.

Dr Rangi highlighted that smallholder farmers are our main allies in the fight against climate change. He said the transition to more sustainable practices can risk harming farmer livelihoods, reducing farming diversity, and threatening regional food traditions if

not managed inclusively and with sufficient market and financial support. This is, therefore, a collaborative effort involving all actors from 'farm to fork.'

[Srijita Dasgupta](#), CABI's Climate Change Expert, moderated a session during the food systems hackathon on the topic of 'Scaling adaptation for resilient food systems.' She used CABI's Plant Clinic Network in Pakistan as an example of how scaling solutions needs to be community-centred, evidence-based, aligned with country priorities, equitable and lastly, endorsed by the government for sustainability.

Just Transition for Increased Adaptive Capacities and Resilience

At the UNFCCC side event on 'Just Transition Pathways to Achieve Paris Agreement Goals in the Agri-Food Sector', [Dr Daniel Elger](#), CEO, CABI, demonstrated how CABI is leveraging on the national extension systems to empower smallholder farmers with tools and knowledge that aid resilience, adaptation and sustainable output, and can be inclusive and address gender and other inequities at the community level.

He also stressed that the [CABI BioProtection Portal](#) advocates the use of safer-to-use and more environmentally friendly biocontrol agents to tackle crop pests and diseases, while data from earth observation, models and fields, have been combined to advise farmers, via SMS, when to intervene against pests.

Bridging gaps between smallholders and policy makers for achieving the Paris Agreement goals



Ms Dasgupta moderated a CABI-led event on 'Bridging the gap: Farmer-centric solutions for effective Nationally Determined Contributions implementation' – in partnership with AAA. Dr Elger gave a keynote speech at the event on 'Bridging evidence, policy practice' highlighting how CABI is using science and evidence for informed decision making in its programmes such as [PlantwisePlus](#) and the [Juno Evidence Alliance](#).

Dr Lydiah Gatere, CABI's Climate Change Expert, was a panellist during the event speaking on CABI's digital tools and technologies and how they are made accessible to farmers for improving productivity.

She mentioned how CABI is using innovations in technology for pest risk management through the [Pest Risk Information Service](#) (PRISE), [Horizon Scanning Tool](#) and the [Pest Risk Analysis Tool](#) to help extension and farmers address imminent pest and disease threats, which are likely to worsen with climate change.

Ms Dasgupta further moderated two other events focusing on the enabling conditions to scale climate smart agriculture for improved resilience, and need for adaptation metrics for better planning, resource allocation, and policy refinement to support farmers more effectively.

Commitment to smallholders to adapt through better plant health management approaches

Dr Rangi also delivered a plenary statement, on behalf of CABI, given by intergovernmental organizations.

He said, "Ensuring that agricultural support systems, particularly in developing countries, work well, is a critical step in enabling adaptation to on-going and future changes in climate.

"The ability of farming systems to sustainably grow more and lose less to pests will be a major contribution to addressing this greatest of global challenges."

He further highlighted that the PlantwisePlus global programme aims to strengthen national extension and plant health systems, and to help smallholder farmers build resilience to climate change.

"Key to this is the ability to predict, prepare and prevent crop pests and diseases using climate-smart digital technologies such as those used by the CABI-led Pest Risk Information Service in sub-Saharan Africa," Dr Rangi added.

Last month (October), Ms Dasgupta attended a pre-COP29 workshop aimed at helping countries enhance their NDC implementation processes through joint actions and collaboration with countries in Asia and Pacific region.

The workshop in Bangkok sought to better understand monitoring, reporting and verification (MRV) systems for the agriculture sector under the Paris Agreement.



Left to right: Dr Lydiah Gatere, Dr Dennis Rangi and Srijita Dasgupta.

CABI-led project aims to promote greater sustainable practices to enhance Pakistan's agricultural trade

CABI-led project promotes greater sustainable practices to enhance Pakistan's agricultural trade Working in partnership with the USDA and USAID, the new project will increase livelihoods and food security through stringent Sanitary and Phytosanitary measures.



CABI is leading a new project aimed at promoting greater sustainable practices to enhance Pakistan's agricultural trade including safer-to-use and more environmentally friendly biopesticides to fight devastating crop pests and diseases.

Together in partnership with the [Pakistan Agricultural Research Council \(PARC\)](#), the [United States Department of Agriculture \(USDA\)](#) and the [United States Agency for International Development \(USAID\)](#), the project will increase livelihoods and food security by enhancing trade with more stringent Sanitary and Phytosanitary (SPS) measures.

Sanitary and Phytosanitary (SPS) measures are rules, measures and regulation designed to protect human, animal, and plant life, and health from risks arising from additives, contaminants, toxins or disease-causing organisms. Essentially, they ensure food is safe for consumption.

Launch event for the project in Islamabad

Senior scientists from [CABI's centre in Pakistan](#) attended a launch event for the project in Islamabad along with representatives from PARC, USDA, USAID, the [Environmental Protection Agency – Ministry of Climate Change \(EPA – MOCC\)](#), and the [Department of Plant Protection – Ministry of National Food and Security and Research \(DPP – MNFS&R\)](#).

Others in attendance included Provincial Departments of Agriculture and Livestock, [CropLife Pakistan \(CLP\)](#), Pakistan [Crop Protection Association \(PCPA\)](#), private industry and academia.

[Dr Babar Bajwa](#), Senior Regional Director, Asia, said, "Contaminated feed poses risks to animal and human health and CABI, along with its partners is working to strengthen feed safety regulations, promote bio-pesticides, and harmonize standards to support livestock health and productivity.

"The overarching goal of the project, entitled 'Trade and SPS Regulatory Harmonization in Pakistan,' is to assist Pakistan in adopting a biopesticide registration process and capacity building across the country's livestock feed sector.

"The work includes engagement of provincial livestock and dairy development departments and associated industry and will build upon the biopesticide registration process, recently approved by the government of Pakistan, which is seen as a major step towards the promotion of safer plant protection products."

Importance of collaborative working



Participants at the launch of the project 'entitled 'Trade and SPS Regulatory Harmonization in Pakistan.'

Dr Ghulam Muhammad Ali, Chairman of PARC who chaired the launch event, emphasized the importance of collaborative working and said that while the country has numerous policies in place, it is crucial that they are implemented in "true spirit."

He further stated Pakistan's crop and livestock sectors, intensive research and continuous funding support is crucial for capacity building among stakeholders. Meanwhile, Mr Saqib Ateel, Secretary Livestock, Punjab, highlighted the contribution of livestock to Pakistan's

economy and the special focus that the sector needs to be accorded.

Dr Tariq Khan, Plant Protection Advisor and Director General of Department of Plant Protection gave a brief orientation on biopesticide registration in Pakistan. He asserted that as we move forward, the insights and learnings from our previous engagement will play an important role in shaping the future of biopesticide regulation in Pakistan.

The collaboration between DPP, CABI, USDA & USAID sets a strong foundation for ongoing efforts to enhance the regulatory framework and promote sustainable agricultural practices.

Furthermore, Christopher Rittgers, Agricultural Counsellor at USDA-FAS recognized collaboration with CABI and PARC and hoped that the current initiative will continue to improve livestock efficacy and enhance profitability for farmers.

Similar views were shared by Ian Winborne, Deputy Director Climate and Sustainable Growth at USAID, who expressed pride within the US government for the work that CABI, PARC and partners are carrying out in Pakistan.

CABI has collaborated on over 150 projects

Since 1957, CABI has collaborated on over 150 projects to address agricultural and environmental challenges in Pakistan. Since 2018, for example, CABI in collaboration with PARC, USDA and USAID, had led on the projects 'Aflatoxin control in Pakistan' and 'Regulatory harmonization in Pakistan on MRLs and biopesticides.'

These initiatives have focused on developing a biopesticide registration framework in Pakistan.

In 2019, CABI initiated formal discussions with DPP, in collaboration with experts from USDA and PARC. CABI also convened workshops for the regulatory authorities to enhance their understanding of biopesticide regulation development in Pakistan.

In July 2020, CABI formally submitted the biopesticide registration guidance document to the DPP for its incorporation into the legal system. The submission was followed by various consultations with stakeholders and a due review process. In 2024, Ministry of National Food Security and Research (MNFS&R) approved the biopesticide registration guidelines.

Furthermore, in 2023, CABI conducted a Rapid Needs Assessment across the livestock feed sector, identifying priority topics through consultations with stakeholders in production, manufacturing, distribution, and regulation.

Support engagement with key stakeholders

It is expected that this initiative will also support engagement with key stakeholders—policymakers, feed processors, and farmers, through a capacity-building program aimed at improving livestock nutrition and feed practices.

This cooperation seeks to enhance protein production per unit and reduce greenhouse gas emissions.

During the Rapid Needs Assessment on livestock feed sector, an expert on the livestock feed regulatory affairs stated that the livestock feed regulatory system was found fragmented. Most regulations are focused on livestock diseases and breeding while neglecting the feed sector.



Dr Bajwa, Mr Rittgers, Dr Ghulam Muhammad Ali and Mr Winborne.

CABI and partners focus on pesticide registration and Maximum Residue Limits in ASEAN member states



CABI and partners have discussed ways to better align pesticide registration systems and the harmonization of Maximum Residue Limits (MRLs) for greater food security in [Association of Southeast Asian Nations](#) (ASEAN) member countries.

The [United States Department of Agriculture's Foreign Agricultural Service](#) (USDA FAS) and CABI facilitated talks with ASEAN member countries in collaboration with [CropLife Asia](#), [AgAligned Global](#), [Bryant Christie Inc.](#), and Minor Use Foundation.

Back in March 2023, [CABI signed an agreement with USDA-FAS](#) to work in partnership towards greater harmonization and collaboration on regulatory systems in ASEAN member countries.

Greater science-based regulations on pesticide management

This included launching regional cooperation with ASEAN member countries to promote work towards greater risk- and science-based regulations on pesticide management to tackle a range of crop pests and diseases.

There is a shared desired to ensure MRLs on crops are set based on risk- and science-based principles and international standards and facilitate the wider use of biopesticide products to control pests confronting farmers in ASEAN countries.

As part of the four-day engagement in Jakarta, Indonesia, almost 60 representatives from relevant technical and policy authorities attended in person and online with observers from Timor-Leste, Pakistan, and Bangladesh.

The delegates sought to share experiences in setting import tolerances, harmonizing MRL standards and promoting biopesticide registration to facilitate trade in the region and with the United States.

The workshop highlighted successes from work the previous year and set future priorities for individual countries within ASEAN and as a regional body aligning with the ASEAN Expert Working Group on harmonization of MRLs (EWG-MRLs).

Next steps for an import MRL pilot program to address existing trade barriers

Participants have now agreed the next steps to advance an Import MRL Program to address existing trade barriers for US and ASEAN products in their respective markets. Priorities and next steps from the Global Minor Use Summit IV were also discussed leading to agreement on a plan for conducting residue studies for priority crops in the region.

The event launched a new initiative to support policy frameworks for pesticides of minimum risk. There were a series of technical discussions on Pesticide Risk Management, Good Agricultural Practices, MRL setting, and Minimum Risk Pesticides (MRPs).

The workshop also advanced regional discussions on how to utilize the Sustainable Pesticide Management Framework (SPMH) to support ASEAN objectives on Highly Hazardous Pesticides (HHPs) and incorporation of lower risk pest management tools in Integrated Pest Management (IPM).

Region must follow international food safety standards

In the welcome remarks, Satvinder Singh, Deputy Secretary General for ASEAN

Economic Community, spoke about ASEAN's growing focus on sustainable agriculture and food safety. ASEAN member countries, now the world's fifth-largest economy, with a GDP of \$3.6 trillion, are expected to grow by 4.6% this year, outpacing global trends.

He emphasized that for ASEAN's agricultural products to stay competitive on the global stage, the region must follow international food safety standards, especially when it comes to pesticide regulations.

One of his key points was the need to harmonize pesticide limits (MRL) across ASEAN countries to facilitate trade and improve food security. Singh highlighted the potential of eco-friendly alternatives like biocontrol agents to reduce the environmental impact of traditional chemical pesticides.

He called on governments, businesses, and farmers to work together, stressing that collaboration and innovation are crucial for building a sustainable and resilient future. Mr Singh ended by encouraging everyone involved to actively contribute their ideas and work towards creating a safer, greener, and more competitive agriculture sector in the ASEAN region.

Systems that enhance opportunities for agriculture production and trade

Thao Anh Tran, Acting Deputy Chief of Mission of the U.S. Mission to ASEAN, also took part in the opening of the event. She noted that USDA brings to bear unparalleled technical experience and expertise in supporting ASEAN Secretariat and ASEAN member states in developing policies and systems that enhance opportunities for agriculture production and trade.

"Streamlining and harmonizing our respective regulations in these technical areas, governing our food products, helps us achieve the right balance between food safety and food security," she said. "When ASEAN member states, the United States, and other countries around the world work together on food safety at this deeply

technical level, we learn from each other, trade with each other, and benefit from each other's expertise."

Jasmine Osinski, the Agricultural Attache from the U.S. Embassy to Indonesia, expressed gratitude for the ASEAN Secretariat's continued support for this important MRL program for almost a decade now.

"USDA-FAS can't do this outreach without its wonderful partners who keep up with these issues on a daily basis," she said.

Strong agricultural trade links between the US and ASEAN member states

USDA Agricultural Counselor, Lisa Ahramjian, closed the event thanking the participants for joining the meeting and highlighted the strong agricultural trade links between the US and ASEAN member states. "The USDA FAS office in Jakarta works not only on establishing new contacts and opportunities for trade through business connection, but also on supporting the adoption of policies that will help streamline international trade and make it more predictable for all trading partners."

In 2023, the U.S. imported \$14.3 billion of agricultural products from ASEAN member countries, including \$2.7 billion in fruit, vegetables, juices, and nuts. The U.S. also exported \$13 billion of agricultural products to ASEAN member countries – about \$1 billion of which came from fruits, vegetables, juices, and nuts.

[Dr Sabyan Faris Honey](#), CABI's Deputy Director Business Development, said, "Following this engagement, USDA and its partners will work with countries and the region on the technical topics which were identified and prioritized with ASEAN member states for future collaboration."



CABI staff, partners, and delegates at the workshop in Jakarta, Indonesia.

Celebrating Rural Women's Day: Stories from the fields

Stories of empowerment, entrepreneurship and resilience from Bangladesh and Nepal Maryam and Deveka, two rural women, are breaking social norms and embracing entrepreneurship to become rural business leaders.

We celebrated Rural Women's Day (15 October) – an important opportunity to mark women's valuable contribution to agriculture. The [UN states](#) that women make up, on average, over 40% of the agricultural labour force. In some countries in Africa and Asia, this figure is much higher. In Ghana, for example, [women produce 70% of all of the country's food crops.](#)

However, despite their contribution, rural women are much more likely to live in poverty than their male counterparts. Social norms that emphasize women's domestic responsibilities, limit mobility. They are often paid less and spend more time in unpaid care work. Traditionally, it is much more difficult for rural women to own land or access credit. Furthermore, gender norms keep them from travelling to buy agricultural inputs or sell produce to local markets. This means rural women can struggle to achieve their potential.

But change is taking place. Rural women in Bangladesh and Nepal are breaking social norms and embracing entrepreneurship. Women like Maryam and Devaka have transcended challenges to become rural business leaders. In this blog, we look at their stories of resilience and transformation.

Maryam cultivates change in Bangladesh

As a housewife, Maryam Khatun from Bangladesh used to grapple with financial challenges. Girls living in rural communities often lack access to education. Later in life, this makes it all the more difficult for them to achieve their economic potential. As a consequence of limited access to resources,

many rural women like Maryam face gender-based wage disparity.

However, women are breaking the mould and lifting themselves out of poverty, for example, Maryam. Maryam's garden was once unused. Yet, with a little 'seed' support, she transformed it into a full-scale agricultural business. Under [PlantwisePlus](#), CABI conducted a baseline study focusing on the enhancement of women's economic empowerment in the agricultural sector, the baseline study was conducted at Asia level (Pakistan and Bangladesh). Maryam was one of the participants in a focus group discussion that fell under this study. Here, she shared her story. In 2018, she was provided 'zinc rice' through extension services. This type of rice – fortified with zinc – can speed up germination and improve crop yields. Maryam was able to sell the seeds at twice the market rate.

This opportunity not only multiplied her earnings, but also drew her attention to the economic potential of selling specialized agricultural products at the local market. Empowered by her initial success, she took part in seed training programmes. She learned valuable skills about the production, processing and packaging of seeds, broadening her skillset as well as her business acumen.



Maryam Khatun from Bangladesh. Image: CABI

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The seeds of a business are born

She obtained a business license and accessed other farming inputs such as mustard seeds, which led to the birth of her business, Rabi Seeds. Her diverse collection of high-quality crop seeds started to gain attention in local markets. Rabi Seeds became synonymous with quality and reliability. Maryam's venture did more than cultivate seeds; it cultivated hope and prosperity. Her successful foray into the world of agriculture shaped her family's future. From constructing new houses, to purchasing agricultural land, Maryam's success manifested into tangible results. It also enabled her to send her child to school to gain a good education.

Moreover, selling her superior seeds helped other farmers to increase their crop yields and profitability. She shared her knowledge in seed cultivation with smallholders, giving them the opportunity to learn about entrepreneurship. Throughout her community, her dedication to quality seed production earned her widespread recognition and even agricultural awards.

Sharing her success with rural women

Maryam now plans to scale Rabi Seeds even further, making it a beacon for agricultural excellence and women's empowerment. She aims to employ more women, fostering an environment of economic empowerment and gender equality in her community. She also hopes to collaborate with financial institutions to boost local farmers' profits and meet the

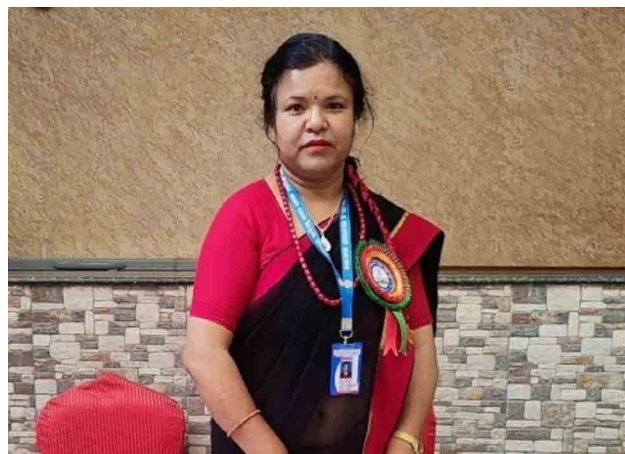
community's nutritional needs through the use of quality seeds. Maryam envisions a future where her enterprise serves as the cornerstone for a sustainable, thriving agricultural community.

A sweet venture for Devaka in Nepal

Getting into business as a woman living in a rural community is not always straightforward. Agricultural support organizations can focus on specific subjects, preferring to partner exclusively with women in a particular area. Securing finances can often deter women from taking the first steps towards setting up a business, so it stalls before it has begun. Idea incubation can be challenging. A viable business plan for farm produce can often be elusive, leaving potential entrepreneurs at a crossroads without a map.

However, on the outskirts of a village in Nepal, Devaka Shrestha saw potential in untapped resources. CABI met with Devaka in Bhaktapur in March 2023 when conducting a PlantwisePlus gender analysis study. She was one of the participants of the focus group discussions organized under the study.

She charted a course not just for herself but for the female farmers around her. She attended an enterprise training session where she realized that the very fruits and vegetables that flourished in her neighbours' fields could be transformed into candy – a treat that was growing in demand throughout the urban centres of Nepal.



Devaka Shrestha from Nepal. Image: CABI

Boosting opportunities for rural women

The family-run Champak Candy Industry, led by Devaka, now employs six women full-time and more during peak seasons. She created and now leads the Jagaruk Farmers Group, which holds farmer field schools for the community. Devaka currently serves as President of the Women Entrepreneur Committee under the Bhaktapur Association of Cottage and Small Industries.

Her story shows how a vision that came during a training session has led to a thriving small business and greater employment and empowerment opportunities for rural women. Devaka also helped PlantwisePlus to organize further gender focus group discussions in the community.

PlantwisePlus – prioritizing women’s empowerment

PlantwisePlus tackles the challenges facing smallholder production. Delivered through gender-sensitive and climate-resilient approaches, the programme focuses on women’s empowerment. This is critical as women form a significant portion of the agricultural workforce, but often face inequality. Wage disparity, limited access to resources and societal norms hinder their economic potential.

However, stories like Maryam’s and Devaka’s show how rural women can overcome these challenges. They are taking an entrepreneurial approach to transform their lives and communities, and become role models for others in the process. Supporting rural women in agriculture is important. With access to knowledge, resources and training, these women can confidently build their business ventures, transforming not only their lives, but also the lives of others around them.

Strengthening Agricultural Advisory Services with Generative AI

The Generative Artificial Intelligence for Agriculture Advisory (GAIA) project aims to strengthen agricultural advisory services in Kenya and India. Running from 15 April to 31 December 2024, this pilot project brings together partners to leverage the power of Generative AI to enhance the support available to agricultural extension advisors. The initiative, funded by the Bill & Melinda Gates Foundation, initially focuses on Kenya and India, where farmers face significant pest and disease challenges.



Participants at the GAIA workshop in India (Source: MSSRF).

Strengthening Agricultural Advisory Services with Generative AI A new project is using a transformative approach to agricultural advisory services to enhance the overall productivity and sustainability of smallholders in India and Kenya.

The power of Generative AI in agriculture

Generative AI (or GenAI) is a group of artificial intelligence systems designed to create new content based on the information and patterns it has learned from existing data. GenAI is being integrated into industries around the globe. It offers a transformative approach to agricultural advisory services, helping to overcome traditional barriers of accessibility, and providing localised and customised advice often based on complex scientific data. By harnessing AI, the project aims to make digital advisory messages

more accessible, facilitating the widespread dissemination of context-specific information tailored to the unique challenges faced by farmers in different regions. Find out more about the project [here](#).

PlantwisePlus Use Case

Farmers face ongoing threats from pests and diseases that can severely impact their yields. This pilot initially focuses on the opportunities for GenAI to support tomato farmers in Kenya and rice farmers in India. Currently, agricultural advisors (including plant doctors trained through the [PlantwisePlus programme](#)) rely on a variety of information resources, including CABI's [PlantwisePlus Knowledge Bank](#) (PWKB), to support decision-making when they are offering advice. However, some sources of information vary in reliability, often coming from a mix of verified and unverified sources. Through the GAIA project, CABI seeks to address this by developing innovative AI-based solutions that provide consistent, reliable, and localised advice through a streamlined user interface, enhancing the ability of advisors to offer actionable management advice to farmers.

Stakeholder Engagement Workshops

CABI organised a series of workshops in Kenya and India to gather insights on agriculture advisors' perceptions of AI. This feedback will help to refine the development of AI-based tools.

India

In conjunction with the M.S. Swaminathan Research Foundation (MSSRF), a workshop was held on 21 May 2024 at Pudukkottai in Tamil Nadu. The workshop aimed to understand the needs of agricultural advisors regarding GenAI tools. It also intended to identify use cases and explore dissemination channels for crop-related information. The workshop featured 41 participants (28 male and 13 female), including plant doctors and

other stakeholders. "We aimed to explore the delivery of CABI's existing content in more accessible ways and defined GenAI user requirements. Testing outputs with our network of agriculture advisors in India further emphasized the importance of GenAI in agriculture, especially for pest and disease advisories," says Dr Vinod Pandit, Regional Director-South Asia, CABI.

"It was clear that a significant portion of participants were unfamiliar with AI and its applications in agriculture, but everyone agreed that GenAI has the potential to provide immediate responses to farmer queries, particularly regarding pest and disease management," says Ganeshamoorthy Rajendran, Crop Health Advisor at CABI who helped facilitate the workshop. "However, participants raised concerns about the trustworthiness and relevance of AI-generated information." This highlights the need for AI tools to provide accurate and reliable advice with cited sources. Participants emphasised the importance of local languages and multimodal access methods, such as text-to-speech and visual aids, for effective communication.



Key stakeholders interacting during the GAIA workshop in India (Source: MSSRF).

Kenya

In Kenya, CABI organized workshops in Nakuru and Taita Taveta on June 4th and 13th, 2024. Agricultural extension officers, plant doctors, and other key stakeholders gathered to explore how AI could be integrated into CABI's advisory services.

The workshops in Kenya highlighted several challenges currently faced by agricultural advisors. “Stakeholders in Kenya are asking for up-to-date management advice for new and invasive pests, which is currently hard to access. They are also keen to see location-specific, weather-based information, as well as more reliable information on bioprotection products and indigenous technologies,” says Lucy Karanja, Content Manager at CABI, who facilitated the Kenya workshops. Whilst some agriculture advisors were already familiar with GenAI tools such as advisory chatbots, they were wary of the risks of hallucinations and were cautious about using such tools at face value without checking the source of information.

Looking Ahead with AI

The feedback from both workshops is invaluable in shaping the development of AI-driven solutions and ensuring they meet

the real-world needs of agricultural advisors and, ultimately, the farmers they serve. The GAIA project represents a significant step forward in leveraging AI to enhance CABI’s agricultural advisory services.

Katherine Cameron, Head of Digital Advisory Tools at CABI, acknowledges the potential of GenAI-based solutions to address user requirements for agriculture advice, but they must be thoroughly tested for accuracy and transparent about the nature of the tool and its sources. “By focusing on user needs and actively involving stakeholders in the development process, the project aims to explore AI solutions that are not only technically advanced but also practical and trusted by those who will use them most,” she says. “As the pilot progresses, the lessons learned in Kenya and India will pave the way for broader applications of GenAI in agriculture advisory tools, potentially transforming how advice is delivered globally.”



Participants at the GAIA workshop in Taita Taveta, Kenya (Source: CABI).

PlantwisePlus News and Stories

How PlantwisePlus and Grameen Foundation are driving change for women farmers in India



Rice farmer, India. Image: CABI

How PlantwisePlus and Grameen Foundation are driving change for women farmers in India Access to agricultural advisory services in India is limited for rural women. CABI and the Grameen Foundation are responding to this challenge and more.

In India, women farmers play a crucial role in agriculture, contributing significantly to activities like seed production, sowing, weeding, transplanting, threshing, and harvesting. Despite making up a substantial portion of the agricultural workforce, their access to advisory services is limited. Many agricultural services do not cater to their specific needs, resulting in a gap between their efforts and their potential productivity.

Social norms and women's additional household responsibilities exacerbate the situation, restricting mobility and time. As such, it is difficult for women farmers to access timely support and information. Increasing the number of female extension workers can help advisory services be more inclusive. However, the current number of women in such roles is insufficient.

Technological advances can help farmers access agricultural information and improve farming practices. However, women farmers and advisors are missing out on these

benefits due to challenges caused by the digital divide, such as access to digital devices, language, and digital illiteracy.

In response to these challenges, [PlantwisePlus](#) has partnered with the [Grameen](#) Foundation to provide support and resources to rural women through focused training and capacity-strengthening initiatives.

Who is the Grameen Foundation?

The Grameen Foundation is a nonprofit organization dedicated to helping women and girls break the cycle of poverty and hunger. Its mission is to enable marginalized communities—especially women—to access resources and opportunities that support a better future. By leveraging technology and innovation, the Grameen Foundation creates ecosystems that support women's entrepreneurship, fostering sustainable economic growth.

Addressing barriers faced by women farmers in India

Grameen Foundation addresses the challenges of women farmers and advisors by working directly with them and their communities to create entrepreneurial opportunities that align with their needs and circumstances. Through these efforts,

women gain skills and support to increase their income, send their children to school, and improve their families' overall well-being. The foundation helps women create lasting change that lifts entire communities out of poverty.

PlantwisePlus and Grameen Foundation partnership

PlantwisePlus recognises that women farmers and rural advisors in India encounter unique challenges when accessing agricultural training and technology. To help address these issues, PlantwisePlus partnered with the [Grameen Foundation](#) to train a group of Women Entrepreneurs in Rajahmundry District, Andhra Pradesh. Madhu Manjari, Agri-Digital Tools Coordinator for South Asia, led the three-day training focused on CABI's online learning platform, [CABI Academy](#). The aim was to support participants in delivering science-based plant-health advisory services.

The training covered skills for diagnosing plant health issues and offering targeted solutions to local farmers. In addition to the CABI Academy, the participants learned about other digital advisory tools, including the [CABI BioProtection Portal](#) and Crop Sprayer app. Both platforms are available in the local Telugu language. The training on the tools will support the Women Entrepreneurs in their advisory roles, where they will provide data-driven guidance on crop management and pest control to farmers in their communities.

Venkatalakshmi, from Rajahmundry district in Andhra Pradesh, attended the three-day training. Venkatalakshmi said, "I will use the skills I have learned from the training to advise farmers in my village on managing plant health so they can improve their yields."



Training attendee, Venkatalakshmi. Image: CABI

Creating sustainable impact for women farmers

The PlantwisePlus and Grameen partnership is not just about providing training; it's about creating sustainable pathways for women to become leaders in agriculture. The new knowledge and resources will support these women as trusted farmer-advisors within their communities.

As Women Rural Advisors, they serve as role models, inspiring other women to participate more actively in agriculture. Not only do they challenge traditional social norms, but they reinforce women are farmers.

Looking ahead

PlantwisePlus and the Grameen Foundation will continue to work together to build a robust support system for women in agriculture. With the right training, tools, and opportunities, women farmers and advisors have the potential to transform their communities by strengthening food security and driving economic growth.

It is hoped that more women will be trained as Women Entrepreneurs, reaching new areas in rural India and providing a reliable source of income for those trained.

Supporting women in taking on agricultural advisory roles strengthens the agricultural sector. Collaborations such as the one between PlantwisePlus and the Grameen Foundation can help drive change so that women are not just participants in agriculture but leaders, change-makers and role models driving progress.

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Meetings and Events

Meetings and events CABI colleagues have recently attended or will be attending:

- COP29 | 11-22 November | Baku, Azerbaijan | CABI's CEO, Director General Development, Dennis Rangi and Climate Change Experts attended this major event as moderators, speakers and panellists. [Read the full story.](#)
- Biopesticides and IPM workshop | 3-4 December | Malaysia | Delivered in partnership with MARDI, this workshop will cover these key areas with presentations from CABI, MARDI and IPPCAAS.
- CABI Asia-Pacific Regional Meeting | 18-20 February 2025 | Malaysia | CABI Member Countries will join together for discussions and knowledge sharing.

Recent Publications

- [Strengthening the system for invasive species preparedness and management: Bangladesh](#)
- Bunny, S.M., Umar, A., Bhatti, H.S. et al. [Aflatoxin risk in the era of climatic change-a comprehensive review](#). CABI Agric Biosci 5, 105 (2024)
- Lin L., Xie M., Zhong Y., Zhang G., Zhang F., Chen H., 2024. [Demographic analysis of the biological parameters of Spodoptera frugiperda after sublethal exposure to insecticides](#), Crop Protection, Volume 180, 106647
- Zhong Y., Tang R., Lin L., Zhao W., Wei S., Zhang F., Uddin M.K., Xie M., Chen H., 2024. [RpedOBP1 plays key roles in aggregation pheromones reception of the Riptortus pedestris](#). [Pesticide Biochemistry and Physiology](#), Volume 204, 106073

Products and Resources

CABI supports study, practice and professional development through our array of publishing products, research services and support tools.

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