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IN THIS ISSUE

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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.

For Pakistan, a milestone has been reached - a new beginning for green plant protection. Through CABI's support, the registration of biopesticides has been legalized. This important step promotes the uptake of safer-to-use and more environmentally friendly biopesticides in an effort to improve food quality and to protect livelihoods and food security.

I hope you enjoy reading this edition.

With best wishes,

Dr Babar Bajwa
Senior Regional Director, Asia

News and Stories

Three decades of China's membership of CABI celebrated at 2nd International Symposium on Plant Biosafety

Three decades of successful partnership between China and CABI towards sustainable food security and development in China and beyond has been celebrated at the 2nd International Symposium on Plant Biosafety (ISPB-2) in Guangzhou, China.

CABI was one of the co-organizers of ISPB-2, together with the Chinese Academy of Agricultural Sciences (CAAS) and Guangdong Academy of Agricultural Sciences (GAAS). CABI's attendance at the symposium was followed by a series of high-level meetings in Beijing, led by CABI's CEO, Dr Daniel Elger.

China joined CABI as a Member Country 30 years ago, This led later to the creation of the Chinese Ministry of Agriculture and Rural Affairs (MARA)-CABI Joint Laboratory for Biosafety and five subcentres, which work towards sustainable management of crop pests and diseases. Collaboration under the Joint Laboratory has included work on pests such as the fall armyworm and promotion of south-south co-operation and technology transfers.

30 years of achievements from China-CABI cooperation

A commemorative event held as part of the ISPB-2 included a video presentation of the achievements made under China's collaboration with CABI over the past 30 years.

The event featured a panel discussion including Dr Xia Jinyuan, Senior Adviser to the Director General of the Food and Agriculture Organization of the United Nations (FAO), Professor Sun Tan, Vice President, CAAS, and Dr Deng Yiqun, Secretary of Party, GAAS, as well as Dr Elger.

Domestic and international collaboration

The panel, moderated by CABI's Director of Memberships, Dr Qiaoqiao Zhang discussed collaboration in China to combat domestic and transboundary pest threats, as well as the alignment of the China-CABI partnership with FAO. In 2024 CABI received an FAO Partnership Award while Institute of Plant Protection of CAAS (IPPCAAS) received an FAO Achievement Award. Dr Elger and Prof Tan noted CABI's involvement in the China-Africa Agricultural Science and Technology Innovation Alliance (CAASTIA), which aligns with CABI's commitment to promote South-South collaboration among its Member Countries.

The panel discussion to mark the 30th anniversary of China-CABI strategic cooperation.

The panel discussion also explored the lessons GAAS has learned from its international cooperation projects, particularly in tropical agriculture, and potential areas of collaboration with the MARA-CABI Joint Laboratory programme.

To accelerate, widen and deepen collaboration, IPPCAAS, CABI and other partners launched the Belt and Road Initiative International Alliance of Science and Technology Innovation in Plant Protection (BRIAPP) at the ISPB-2 meeting.

CABI research featured

Various scientists from CABI shared with delegates the outcomes and impact of their research and international development projects, while Dr Zhang Feng, Regional Director, CABI East and Southeast Asia, chaired a plenary session.

Dr Stefan Toepfer, Integrated Crop Management Advisor, at CABI's Swiss Centre, spoke about getting Europe prepared for the invasion of fall armyworm, considering experiences from other world regions.

Dr Zhang Jinping, Senior Project Scientist, CABI East & Southeast Asia Centre, highlighted CABI's research into biological control solutions for the brown marmorated stink bug (Halyomorpha halys).

Muhammad Faheem, Integrated Crop Management Advisor, CABI East & Southeast Asia Centre, presented on the uptake of Integrated Pest Management practices through the CABI-led PlantwisePlus programme in Southeast Asia.

Meanwhile, Wan Min, Senior Project Coordinator, CABI East & Southeast Asia Centre, and Lai Wai Ching, Regional Sales Manager, CABI, highlighted the benefits of the CABI Digital Library in helping to bridge the gap from research to actionable agricultural solutions.

In other presentations, Professor Chen Jianping, Academician, Ningbo University, spoke about remolding the plant bio-safety management system, and Yuan Shankui, Division Director, ICAMA, MARA, addressed the development, regulation and use of biopesticides in China.

Dr Elger said, "I am confident that the close partnership between China and CABI will continue to contribute to the realisation of domestic objectives under the new (15th) Five-Year Plan and to international co-operation initiatives such as south-south co-operation among CABI Member Countries.

"CABI is delighted to be involved in the new CAASTIA initiative, led by CAAS and the African Academy of Sciences, and designed to share expertise and technology between China and Africa for mutual benefit."

CABI also celebrated the 30th anniversary of China's accession through a series of high-level meetings in China, discussing areas for expanded collaboration and mobilisation of supporting resources.

The CABI Delegation met with senior officials of MARA, Chinese Ministry of Science and Technology, CAAS, GAAS, Institute of Zoology, Guangdong Academy of Sciences, as well as representatives from the Ministry of Agriculture and Environment of the Lao PDR and the British Embassy in Beijing.

Delegates of the 2nd International Symposium on Plant Biosafety (ISPB).

Sowing the seeds of success: How CABI and Better Cotton are transforming cotton farming in Pakistan

CABI's ongoing partnership with the Better Cotton Initiative (BCI) is paying dividends in helping to transform agricultural practices in Pakistan's cotton sector. This article highlights the progress of this work as part of World Cotton Day today (Tuesday 7 October 2025).

With funding from the Better Cotton Growth & Innovation Fund (BC GIF), the "Producing Better Cotton in Pakistan" project is empowering farmers in Sindh and Punjab to adopt sustainable practices and improve cotton productivity, quality, and livelihoods.

Cotton is Pakistan's largest industrial sector, yet poor traditional agricultural practices are costing the industry around 10–15% of its value. Misuse of pesticides and water, improper fertilizer application, inefficient storage, and limited knowledge all take a toll on productivity and quality. CABI's project, grounded in the Better Cotton Standard System (BCSS) and Good Agricultural Practices (GAP), seeks to reverse that trend.

A Lifeline for Pakistan's Cotton Industry

With a focus on participatory training and field-based demonstrations, the initiative is not only improving cotton yields but also supporting the social and environmental sustainability of cotton production. In Sindh, over 31,000 male and 50 female farmers have been trained, while 17,990 male and 12 female farmers in Punjab have been equipped with the tools and knowledge to embrace sustainable cotton practices.

CABI has introduced practical and impactful methods to help farmers tackle common challenges in cotton cultivation. Farmers now benefit from hands-on training in soil testing and fertility management, including the use of compost instead of synthetic fertilizers. A new Soil Testing Laboratory established in CABI's Centre in Pakistan in August 2024 supports this effort by offering localized, science-backed solutions.

Demonstration plots — 1,920 in total — serve as living laboratories where farmers can observe the benefits of environmentally friendly practices such as yellow sticky traps for pest control, light traps for monitoring, attractant crops to encourage biodiversity, and composting techniques for soil enrichment.

Samina Batool, a women trainer teaches best practices for cotton picking to the local female cotton pickers during a training session at the village Haji Nabi Bux Hingoro in Sanghar, Sindh, Pakistan (Credit: CABI).

Uplifting Women in Cotton Communities

Empowering women remains a central pillar of the initiative. In regions where women often lack access to land or income-generating opportunities, the project is creating meaningful change.

Twenty-five sewing centres were set up across 12 producer units (which consist of different numbers of hectares), benefiting 96 women, 90 women received goats to initiate small-scale livestock ventures, 40 women farmers gained access to land through a land rental support program, 1,826 women began kitchen gardening, boosting household food security and income and 10 women established self-help businesses through entrepreneurship training.

Buying a sewing machine is a major cost in Pakistan. However, the project is bearing the cost of procurement and provided sewing machines to female farm worker so that they can support their livelihood.

These interventions are not only improving women's earnings but also contributing to children's education and overall family welfare. Several women have also been connected to government social support schemes to ensure long-term security.

Specialized training in cotton-picking techniques, workplace safety, child labour prevention, and female empowerment has also equipped women to work more safely and effectively in the fields.

Ensuring Decent Work and Workers' Rights

In line with Better Cotton's Decent Work Strategy roadmap, CABI is taking comprehensive steps to protect farm workers' rights and welfare.

Key components include:

- **Labour Compliance:** All activities follow national and provincial labour laws, ensuring fair wages, reasonable working hours, and occupational safety.
- **Labour Monitoring & Remediation:** Regular workplace assessments help identify issues and drive corrective actions to improve worker well-being.
- **Grievance Mechanism:** A free, confidential system is available for workers to report complaints regarding conditions, promote fair wages, discrimination, or harassment.
- **Child and Forced Labour Prevention:** Awareness campaigns and community engagement stress the importance of education and safe labour practices.
- **Women's Safety:** Sensitization sessions and clear protocols foster a respectful and secure working environment for women.

Local Capacity Building and Sustainable Growth

The training of 77 local male and female agricultural graduates in Punjab has created a cadre of field experts who support farmers with advice on crop science, pest management, soil health, and sustainable resource use. These professionals serve as vital links between scientific research and everyday farming practices.

In Punjab alone, over 18,000 farmers and 4,887 workers have been trained in Better Cotton principles. Supporting this, 70 compost units were established, along with 2,220 yellow sticky traps, 1,500 pheromone traps, and 400 light traps to reduce pest pressure sustainably.

To enhance women's economic empowerment further, three additional sewing centres were established in Punjab, providing training and income opportunities for more than 25 women.

A Model for Sustainable Agriculture

CABI's success with Better Cotton demonstrates a scalable, impactful model for transforming agriculture in Pakistan. The project now covers 41,231.5 hectares of cotton fields, contributing not only to higher yields and better-quality cotton but also to healthier communities and a safer environment.

With an extended timeline – another three years in Sindh (reaching 33,000 more farmers) and one more year in Punjab (supporting 18,202 additional farmers) – the future of cotton in Pakistan looks promising. This collaboration stands as a testament to the power of innovation, inclusion, and sustainability in agriculture.

By sowing the seeds of better practices today, CABI and Better Cotton are cultivating a stronger, more resilient cotton sector for tomorrow — one that sustainably works for farmers, for workers, and the environment.

CRRI-CABI collaboration seeks inclusive solutions for crop loss assessment in rice farming systems

CABI has launched a landmark collaboration with the Central Rice Research Institute (CRRI) to assess the socio-economic impact of crop losses in rice ecosystems in Odisha, India with a special focus on how these losses affect men and women differently. This initiative is part of CABI's Global Burden of Crop Loss programme, which aims to generate robust evidence to inform better decision-making and promote more resilient agricultural systems.

The collaboration, launched on 15 September 2025 in Cuttack, seeks to assess crop losses in Odisha's rice ecosystems, with a particular focus on how these losses impact men and women farmers differently. This initiative brings a wide range of stakeholders ranging from policymakers, researchers, academia, NGOs, private sector representatives and other development partners together to understand the magnitude and factors of crop loss in rice ecosystems in Odisha.

The activities will also involve mapping relevant data sources, facilitating access to critical datasets and engaging stakeholders in co-developing practical solutions. By combining research, data-driven modelling and participatory approaches, this work supports ICAR (Indian Council of Agricultural Research)-CRRI's goal of developing farmer-centric strategies that build resilience in rice-based farming systems while contributing to national objectives on food and nutritional security. The project will create consistent methods and practical tools to measure losses, locate problem areas and guide timely actions.

Building on shared strengths

This collaboration with CRRI builds upon the longstanding partnership between ICAR and CABI, established under an MoU signed in 1988 and broadened through successive and ongoing joint work plans. ICAR-CRRI's mandate of sustainable rice research aligns closely with CABI's mission and experience in plant health, socio-economic research and tools that help turn data into practical guidance. CRRI brings deep-rooted expertise in rice ecosystems across the country, including Odisha.

This collaboration would seek to leverage expertise of both organizations to understand and map crop loss patterns across different rice-growing zones in Odisha and capture the human stories behind the losses, focusing on resilience, adaptation and impact. Further, a comprehensive Odisha Rice Case Study would be co-created with farmers, scientists, administrators and field practitioners.

Understanding the Global Burden of Crop Loss

Every year, up to 40% of crops are lost before harvest owing to both biotic and abiotic factors. These losses not only threaten food security but also farmer livelihoods.

Faced with the twin challenges of climate change and food insecurity, minimizing crop loss on existing cultivated land presents a critical opportunity to boost productivity whilst limiting the environmental footprint of agriculture. While post-harvest losses and food waste are increasingly acknowledged, in-field crop losses, especially those caused by pests and diseases, remain underexplored and poorly quantified

The Global Burden of Crop Loss is an initiative led by CABI that seeks to close this knowledge gap by providing reliable, actionable estimates of crop loss and its drivers. These insights are envisaged to help governments, researchers and practitioners design interventions that can improve agricultural productivity and contribute to stronger food systems.

Under this collaboration, we will systematically collect and analyse data across 10 agroecological zones of Odisha of rice crop, integrating biotic and abiotic stressors. The proposed initiative represents a strategic and gender-responsive collaboration that leverages global expertise in plant health management, social research, data policy and development communications alongside ICAR-CRRI's specialized capabilities to assess and articulate crop losses in rice within Odisha. This collaboration would further advance scientific tools, global best practices and cross-cultural insights that will help in taking better and timely decisions on crop protection measures.

A gender-responsive approach

In India, women are central to rice cultivation right from seed selection and transplanting to weeding and harvesting. However, their labour, knowledge, and challenges often remain less visible. Further, their experiences and vulnerabilities remain underrepresented in research and policy planning. By integrating a gender lens, this collaboration aims to:

- Understand how crop losses affect women and men farmers differently
- Identify gender-specific access to knowledge, resources and markets
- Support more equitable and inclusive policies and interventions

A detailed field study will gather both qualitative and quantitative data across diverse agroecological zones in Odisha. CRRI and CABI will jointly train data collectors and support enumerators from partner institutions to ensure rigorous and ethical data collection. India faces increasing production pressures from climate change and land constraints. With high on-field crop losses and pressure on natural resources, reducing crop loss presents a cost-effective and immediate opportunity to increase food supply. Further, enhanced understanding of gendered impacts enable better efficiency and interventions that uplift whole communities.

Way forward

The CRRI–CABI collaboration marks an important step toward farmer-centric, data-driven and gender-responsive agricultural transformation. By bringing scientific insight and community voices together, the CRRI–CABI partnership aims to support rice farming communities in Odisha to build greater resilience and improve livelihoods.

By combining local research strengths with global knowledge networks, this initiative will support more informed policy decisions, targeted crop protection strategies and improved resilience in rice-based farming systems.

Reducing crop loss is one of the most immediate and cost-effective ways to improve productivity without expanding land or increasing pressure on natural resources. Understanding crop loss enables sounder decision making, both at farmer as well as policy levels. Ultimately, the initiative seeks to ensure that no farmer whether woman or man is left behind in the effort to reduce crop loss and safeguard food systems for the future.

Beyond India, the issue of crop loss is a global concern affecting food systems in both low- and middle-income countries. As climate variability increases and pest pressures intensify, the risk of widespread crop failure becomes more acute. Strengthening our understanding of where, how and why these losses occur is essential for anticipating and combating these emerging threats and designing scalable, long-term solutions.

The Global Burden of Crop Loss initiative provides a common evidence base that supports countries and development partners in prioritizing interventions, directing resources where they are most needed and strengthening global agricultural resilience. It is envisaged that over the long run, this initiative would support investments whether from governments, donors or private sector actors translate into meaningful improvements for farmers and food systems worldwide.

CABI supports efforts towards greater sustainable agriculture in Vietnam through new partnership agreement

CABI has joined forces with the Plant Production and Protection Department (PPPD) of the Ministry of Agriculture and Environment in Vietnam to support sustainable agriculture in the country amid threats of crop pests exacerbated by climate change.

A Memorandum of Understanding (MoU) has been signed which will see both parties working to provide farmers and plant health advisory teams with practical, safe, climate-smart solutions that protect crops, boost yields, and safeguard the environment.

In 2023, Vietnam produced around 8 million tonnes of rice, alongside substantial coffee and pepper harvests. Coffee exports reached approximately 1.6 million tonnes, contributing to a total agricultural and aquatic export turnover of roughly USD 32.5 billion, with rice exports at USD 4.7 billion, coffee at USD 4.2 billion, and pepper at USD 1.3 billion.

These figures highlight the critical role agriculture plays in Vietnam's economy, supporting millions of smallholder farmers and contributing substantially to rural development and global food supply. Strengthening sustainable farming practices is therefore essential for both local communities and international markets.

Building capacity and digital solutions

Through the MoU, CABI and PPPD will work together to strengthen the sustainable management of key agricultural pests and diseases. This collaboration covers pest diagnosis, monitoring and forecasting, integrated pest management, rational pesticide use, pesticide risk reduction, and landscape management.

Fresh agricultural commodity exportation plays a significant and growing role in Vietnam's economy. Improving the diagnosis capacity for plant quarantine and technical colleagues through training and standardising pest inspection protocols is crucial to support the Sanitary and Phytosanitary Standards (SPS) toward ensuring the international trade of fresh commodity products for Vietnam.

Integrated Plant Health Management is a holistic approach focused on maintaining and improving plant health by combining sustainable biological, cultural, physical, genetic, and chemical methods to manage pests, diseases, and other threats, while also addressing soil health, environmental sustainability, and human well-being with an emphasis on economic viability, and social acceptability.

In the Vietnamese context, this can include preparedness to pest and disease, integrated pest management, pesticides risk reduction, improve irrigation efficiency, and restoring and maintaining soil health for long-term productivity and the health of the ecosystem. By integrating these practices, farmers can adapt more effectively to pest and disease and climate variability while protecting their livelihoods and the environment.

Ms Chin Sing Yun, CABI Malaysia's Country Director, said, "Through this MoU, we aim to translate research into practical agricultural practices that help to support national plant health system, protect crops from pests and diseases, develop plant resilience through healthy soil, improve farmers' livelihoods and strengthen Vietnam's food systems. By working together, we can create lasting impact for both people and the environment."

Central to this partnership is capacity building. Farmers and technical staff will have access to CABI's BioProtection Portal, PlantwisePlus knowledge platforms and digital tools, and CABI Academy e-learning courses covering crop pest diagnosis, pest management, bioprotection products, water and sustainable soil management. The MoU also enables the promotion and application of biological control agents, supporting nature-based solutions that are both effective and environmentally sustainable.

Muhammad Faheem, Integrated Crop Management Advisor for CABI, highlighted the role of PlantwisePlus digital tools. He said, "The digital tools and knowledge platforms developed by CABI will continue to be widely applied in Vietnam to accurately diagnose and manage crop health problems, promote safe practices, and strengthen decision-making for sustainable farming.

"Updating the list of bioprotection products on the Bioprotection portal, organizing workshops, connecting partners, and transferring new technologies in pest management, and smart agriculture practices will be the focus of cooperation in the coming time."

A partnership for bioprotection and sustainable agriculture

Dr Nguyen Quy Duong, Deputy Director of PPPD, emphasized the practical benefits for farmers. He said, "Cooperation with CABI brings not only scientific expertise but also hands-on support and training that will help our farmers and plant health teams adopt sustainable solutions. Healthy plants and green practices are crucial toward food security and stable yields. This partnership is an important step toward a resilient and sustainable agricultural and food system in Vietnam."

Over the next five years, CABI and PPPD will conduct joint workshops, training programs, and other collaborative activities. The partnership aims to strengthen a transparent and sustainable food system, helping smallholder farmers—particularly women and youth—adopt safer practices and connect to local and regional value chains. All research outputs and project outcomes will be shared responsibly, ensuring both parties' contributions are recognized.

Towards a climate-smart future

This collaboration exemplifies CABI's commitment to empowering farmers, building local capacity, and promoting climate-smart, nature-based solutions that benefit both people and the environment. By combining scientific expertise, local knowledge, and innovative tools, CABI and PPPD are taking concrete steps toward a greener, more resilient future for agriculture in Vietnam.

PlantwisePlus News and Stories

CABI and Government of Nepal collaborate to strengthen country's plant health system through PlantwisePlus

CABI and the Government of Nepal have taken a significant step towards sustainably strengthening the country's plant health system threatened by pests and diseases by agreeing to collaborate more through the PlantwisePlus programme.

Pests of concern include brown plant hopper, bacterial leaf blight and rice blast on rice, fall armyworm and stalk rot of maize, thrips in chilli, tomato pinworm, potato tuber moth, late blight, fusarium wilt, mosaic virus, anthracnose on vegetables, citrus greening and fruit sucking moth in citrus.

A partnership agreement has been signed that will see both parties implementing PlantwisePlus activities together with Plant Quarantine and Pesticide Management Centre (PQPMC), Ministry of Agriculture and Livestock Development (MoALD).

Dr Vinod Pandit, Regional Director, South Asia, CABI, and Mr Bhoj Raj Sapkota, Chief, PQPMC, signed the agreement with senior officials from the Government of Nepal, including Dr Dipak Kumar Kharal, Secretary, MoALD, Dr Hari Bahadur, K.C., Joint Secretary, MoALD, and other senior officials from the Ministry and PQPMC.

Partnership comes at a crucial time

Dr Dipak Kumar Kharal, MoALD, emphasized the partnership comes at a crucial time when the country urgently needs interventions aimed at tackling the impacts of climate change, particularly those related to insect pests and diseases that threaten Nepal's plant health system.

"This collaboration marks a promising step towards safeguarding food security and promoting sustainable farming for the future of Nepal," he said.

There are 60 plant clinics in Nepal and CABI and partners have trained 300 extension officials as plant doctors. Smallholder farmers take their crops to a clinic for diagnosis of plant health issues where advice is then given to remedy them.

Sustainable and resilient agriculture practices

MoALD officials extended their support to both CABI and P QPMC to go beyond the PlantwisePlus activities, ensuring sustainable and resilient agriculture practices in the face of increasing environmental challenges.

During the signing ceremony, the Chief, PQPMC and Secretary, MoALD, Government of Nepal, expressed their deep appreciation for CABI's continued support in strengthening the country's plant health framework.

They highlighted the importance of addressing critical areas such as pest preparedness, invasive species, pest risk, market access, pesticide risk reduction, safe food production, biodiversity conservation, climate change, and sustainable agriculture to safeguard Nepal's plant health system.

PlantwisePlus sought to promote the use of CABI digital tools in Nepal

In July 2025, PlantwisePlus sought to promote the use of CABI digital tools in Nepal where it was noticed that many smallholder farmers, particularly women, lacked the digital skills needed to access and use information on smartphones.

For many, this was the first structured opportunity to interact with smartphones beyond basic use, and to experience tools designed specifically for agricultural learning and support.

After learning the basics of smartphones, the trainees then went onto explore tools including the PlantwisePlus Factsheets app, CABI BioProtection Portal, Crop Sprayer App, PlantwisePlus Knowledge Bank, and the CABI Academy.

Through small-group action planning, every participant left with a clear plan: to reach at least 1,000 more women farmers and IPM facilitators collectively across their provinces (Gandaki, Koshi, Bagamati, and Madhesh) by November 2025.

Ensure greater yields and profitability and sustainable food security

Dr Pandit said, "Farmers in Nepal face many threats to their livelihoods, from crop pests to plant diseases, and the lack of timely expert advice only worsens these challenges. This is especially true for smallholder and women farmers in rural areas.

"This partnership agreement strengthens our ability to ensure that the activities of the PlantwisePlus programme – including the plant clinics and plant doctors – bring practical diagnostics and advice directly to smallholder farmers.

"Since its inception in 2008, the plant clinic programme in Nepal has played a crucial role in assisting farmers by diagnosing crop issues and providing management recommendations to help increase their livelihoods and local and food security."

The agreement signing ceremony (Credit: CABI).

Meet Shahadul Islam: the rice farmer using digital tools to improve yield and quality

Meet Shahadul Islam, a farmer from Jhenaidah District, Bangladesh. Shahadul is now a local role model for sustainable rice production, having adopted the PlantwisePlus digital tools and transformed his farming practices.

For nearly a decade, Shahadul cultivated rice on his one-acre land. He regularly faced pest and disease challenges such as rice blast and brown planthopper, which damaged his yields. In an effort to minimize damage, he relied heavily on chemical pesticides. As a result, Shahadul's cultivation costs, including fertilizers, labor, and irrigation, increased. Despite the investment, yields did not grow, and his grain often sold at lower prices due to inconsistent quality.

Before using digital tools

Previously, Shahadul spent a lot on his rice fields, with the majority of the money going towards fertilizers and pesticides.

Things began to change in mid-2024. Hafizur, another farmer from the area, attended a training organized by the Department of Agricultural Extension (DAE) and CABI. There, he learned about three useful digital tools developed under the PlantwisePlus programme. The tools were the PlantwisePlus Factsheets App, the CABI BioProtection Portal, and the Crop Sprayer App.

With the support of an agricultural officer, Shahadul started using these tools in his farming. The PlantwisePlus Factsheets App helped him identify crop problems quickly and adopt integrated solutions such as balanced fertilizer application, timely irrigation, proper field sanitation, and careful seed selection. As such, Shahadul was able to reduce unnecessary input use and, over time, ultimately cut down on costs.

Shahadul Islam in his field, using the PlantwisePlus Factsheets app. Image: CABI

"I was always worried about rice blast. Every season, my paddy was damaged, and I didn't know what to do," Shahadul said. "After I started following the Factsheets App, the situation changed. Pests became less of a problem, fertilizer use was smarter, and my expenses went down. The next season, my harvest was even better."

Reducing harmful pesticide use

For Shahadul and many farmers in his area, finding bioprotection products has always been a significant challenge. However, the CABI BioProtection Portal provided him with available options. By using less harmful products, he was able to control brown plant hopper without harming beneficial insects in his field.

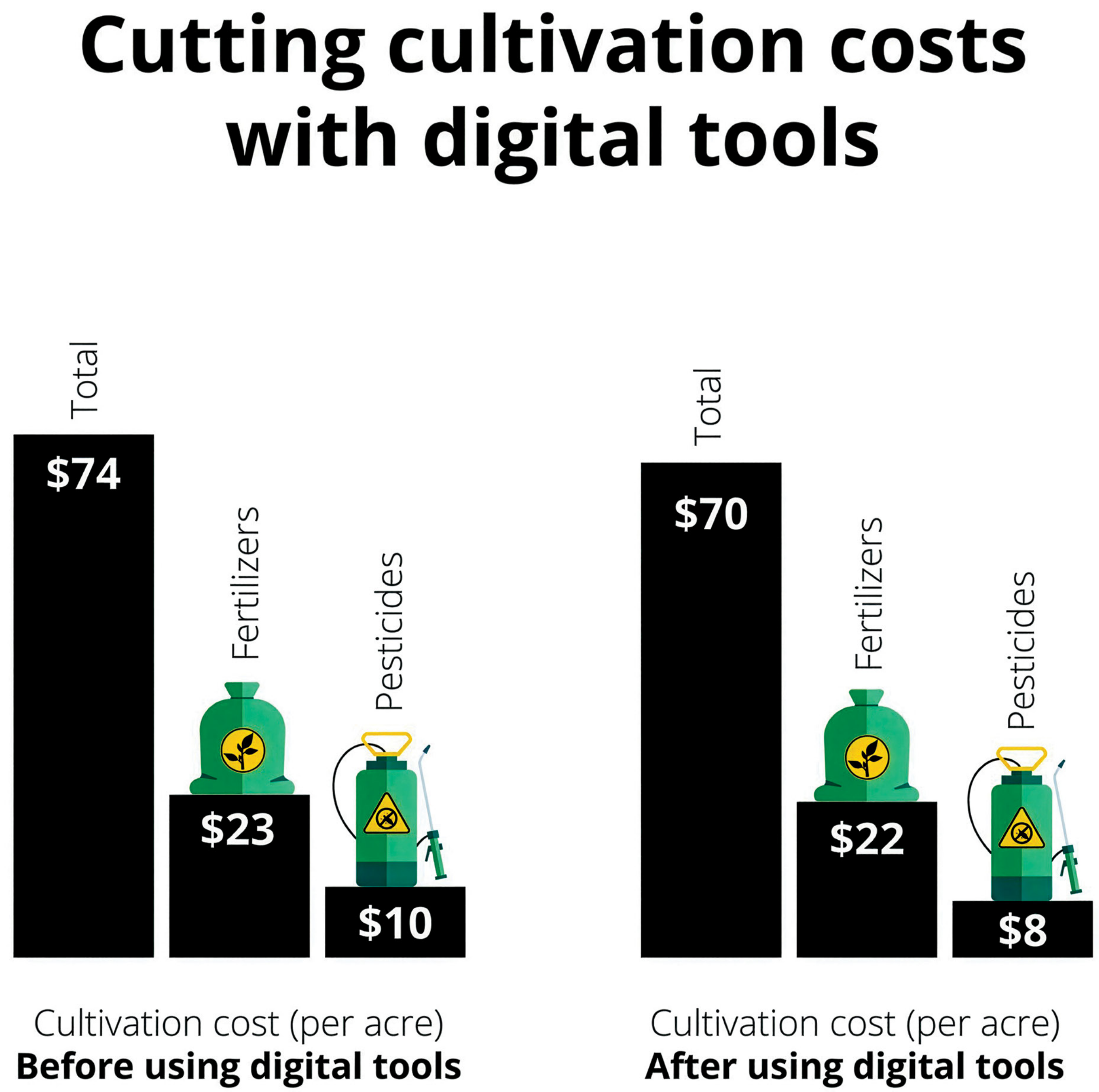
The Crop Sprayer App also helped him to change his farming practices. Previously, Shahadul struggled to apply the correct dose of pesticides.

"I didn't know how to use the right dose with my 16-liter spray tank for my 1 acre of land. Most of the pesticide sellers used to tell me to use a 'cocktail dose,' mixing three to six pesticides together. This cost a lot of money and was harmful to my field and crops. Later, I started using the Crop Sprayer App to measure the correct dose. Now I feel confident and happy applying the right amount."

Within just two seasons, Shahadul saw remarkable improvements. His costs went down, his yields went up, and his grain quality improved so much that he could sell nearly all of his harvest at premium prices.

The impact of using digital tools

Shahadul's overall cultivation costs have decreased by approximately 5–6%. This included fertilizer and pesticide costs as Shahadul reduced unnecessary chemical use.



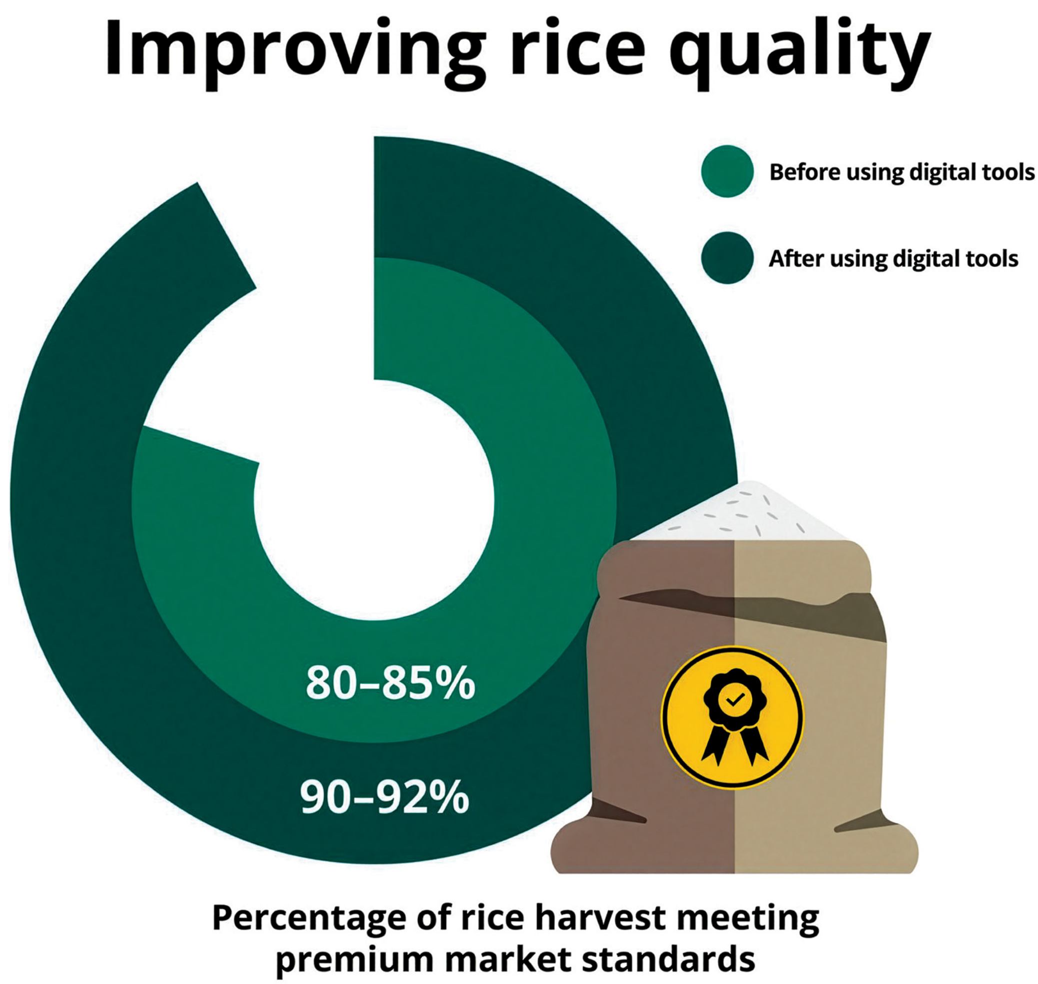
Shahadul's overall cultivation costs have decreased by approximately 5–6%. Image: CABI

At the same time, his rice yields increased by 10–15%. Most importantly, the quality of his rice improved, with 90–92% of his harvest meeting premium market standards, compared to only 80–85% before.

Shahadul said, “Before, I sprayed too much, spent a lot of money, and still had pest problems. Now, with digital tools and bioproducts, I grow rice at lower costs, get better yields, and the quality is much higher. The money I save can be used to support my family and improve my farm. It gives me confidence to keep farming sustainably.“

Sharing his experience

Encouraged by his success, Shahadul is now sharing his experience with other young farmers in his village. Shahadul’s story demonstrates how digital innovations, improved input management, and less harmful biocontrol products can reduce costs, enhance yields and grain quality, and promote sustainable rice production in Bangladesh.



The percentage of rice reaching premium standard increased after using digital tools. Image: CABI

Trichogramma rearing facilities

In the face of rising pesticide use, farmers in Pakistan are turning to nature for help.

This video explores how TRFs are transforming pest management through mass production and helping farmers.

Watch the Video

CABI Resource spotlight

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