CABI BioProtection Portal

Success story: Hafizur Rahman

Farmer increases rice yield and quality using CABI Digital Tools

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Image: A farmer holding his threshed rice © CABI

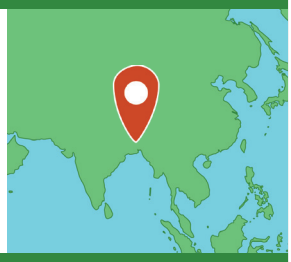
Overview

Who

Hafizur Rahman, a farmer cultivating rice

Where

Kotchandpur upazila, Jhenaidah district, Bangladesh



Highlights

- Hafizur adopted three PlantwisePlus digital tools, the Factsheet Library, the CABI BioProtection Portal, and the Crop Sprayer App, after attending a training programme
- The Portal guided him to biological products, helping reduce brown planthopper infestations without harming beneficial insects
- Within two seasons, he cut costs, boosted yields by 10–15%, improved grain quality, and gained confidence to farm sustainably while inspiring other young farmers

Farmer increases rice yield and quality using CABI Digital Tools

Hafizur Rahman, a farmer from Kotchandpur upazila of Jhenaidah district, has become a model for smart and sustainable rice farming by adopting digital tools. This initiative was supported by CABI.

For nearly a decade, Hafizur has been cultivating rice on approximately **1 acre** of land, regularly facing challenges such as rice blast and the brown planthopper (BPH). Overreliance on chemical pesticides increased his cultivation costs, including fertilizers, labor, and irrigation. On average, he spent around **69–74 USD per acre**, with **22–23 USD for fertilizers** and **7–11 USD for pesticides**, yet his yields remained low at **2.04–2.49 tonnes per acre**, and the grain quality was inconsistent, which affected market prices.

In mid-2024, Hafizur attended a training program jointly organized by the Department of Agricultural Extension (DAE) and CABI. He was introduced to three PW+ digital tools: PlantwisePlus Factsheet Library, CABI Bioprotection Portal, and Crop Sprayer App.

He immediately began applying what he learned. The Factsheet Library allowed him to identify crop problems quickly and adopt integrated solutions such as balanced fertilizer application, timely irrigation, proper field sanitation, and careful seed selection, which helped reduce unnecessary input use.

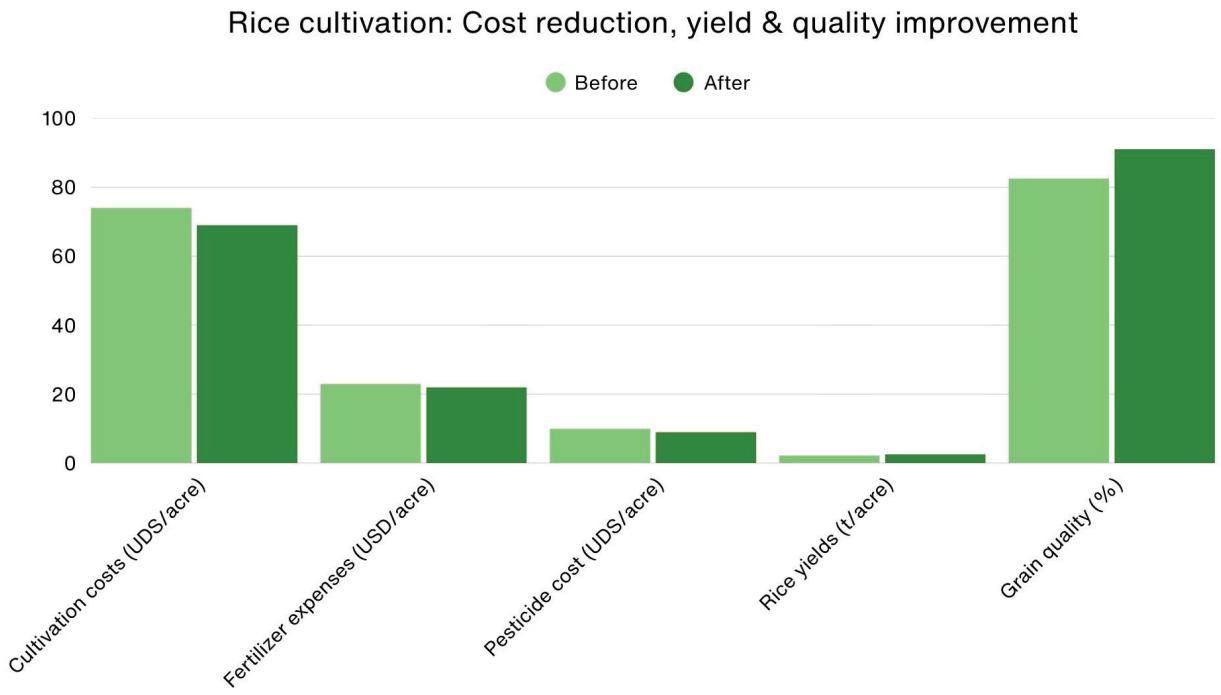
“I was always worried about rice blast. Every season my crops suffered, and I had no clear guidance,” Hafizur recalled. “After the training, I followed the Factsheet app recommendations. Pest infestations became less severe, fertilizer use became more efficient, and cultivation costs dropped. The next season, results were even better.”

The CABI Bioprotection Portal guided him to **eco-friendly bio-products** like **Bio-Chamak** and **Neemazal 1.2 EC**, which helped reduce BPH infestations without harming beneficial insects. Using the Crop Sprayer App, Hafizur optimized his spraying practices, reducing chemical waste and ensuring accurate coverage.

Within two consecutive seasons, the benefits were clear:

- Overall cultivation costs decreased by **5–6%**, from ~74 USD per acre to ~69–70 USD per acre.
- Fertilizer expenses were reduced by **4%**, from ~23 USD per acre to ~22–22.5 USD per acre.
- Pesticide costs decreased by **5%**, lowering unnecessary chemical use, from ~7–11 USD per acre to slightly lower.

- Rice yields increased by **10–15%**, from 2.04–2.49 tonnes per acre to 2.38–2.72 tonnes per acre.
- Grain quality improved, with **90-92%** of harvested paddy meeting premium market standards, compared to 80–85% previously.



Graph showing before and after results of rice cultivation

Hafizur said:

"Before, I sprayed excessively, spent more money, and still faced pest problems. Now, with digital tools and bio-products, I produce rice at lower costs, achieve higher yields, and the quality is better. With the money I save, I can invest in my family's needs and improve my farm. It gives me confidence to continue farming sustainably."

Encouraged by his success, Hafizur is now sharing his experience with other young farmers in his village. Tipu Sultan, an agricultural extension officer in Jhenaidah, believes stories like Hafizur's show how digital innovations, better input management, and eco-friendly bio-products can significantly reduce costs, improve yield and quality, and promote sustainable rice production in Bangladesh.

About the CABI BioProtection Portal

The CABI BioProtection Portal is the largest, free global resource for biological pest management. The Portal's mission is to raise awareness and encourage the adoption of bioprotection among growers and advisors. It offers a comprehensive, searchable directory of nationally registered biocontrol and biopesticide crop protection products, along with detailed guidance to help agricultural advisors and growers source and effectively incorporate these sustainable natural products into integrated pest management programmes.