



CSISA-MI

The USAID-funded Cereal Systems Initiative for South Asia – Mechanization and Irrigation (CSISA-MI) Project

For nearly six months every year, approximately 634,000 hectares of arable land in Southern Bangladesh lay fallow. This is because over half of the region's farmers can neither access nor afford the technology needed to produce a crop during the dry season. The CSISA-MI project works through three strategic objectives to unlock the potential of farmers in the South to produce more food during the dry season, while conserving that land's ability to produce quality crops in the long-term.

Strategic Objective 1 To sustainably intensify and diversify agricultural production in Southern Bangladesh through surface water irrigation to increase household income.

CSISA-MI promotes Axial Flow Pumps (AFPs), highly efficient irrigation machines, into local markets by building public private partnerships that address key components of the supply chain.

- **Agri-machinery importers** are encouraged and equipped to make AFPs available Feed the Future (FtF) zones.
- **Local machinery dealers** are linked with government and private agricultural services to stock and service the equipment independently.
- **Local Service Providers (LSPs)** are local entrepreneurs who purchase the equipment and provide services to farmers; they are trained to use and market the technology to local farmers.

CSISA-MI also partners with the Government of Bangladesh and the International Water Modeling Institute to identify priority fallow areas, so that both supply and demand interventions are based on accurate crop and technology information.

Strategic Objective 2 To sustainably transform agriculture in Southern Bangladesh through broad-based access to agricultural mechanization services.

Following the same comprehensive supply chain approach as in Strategic Objective 1, CSISA-MI harnesses the power of private sector investment to introduce efficient technologies that enable farmers to cultivate successful dry season crops.

What is CSISA-MI?

The CSISA-MI project is a partnership between CIMMYT and iDE and funded by the USAID Mission in Bangladesh under President Obama's Feed the Future (FtF) Initiative. **CSISA-MI seeks to transform agriculture in southern Bangladesh by unlocking the potential productivity of the region's farmers during the dry season through surface water irrigation, efficient agricultural machinery and local service provision.** CSISA-MI is an initiative of the wider CSISA program in Bangladesh (CSISA-BD), which links CIMMYT and iDE to partnerships with IRRI, and WorldFish.

Improving Irrigation with Axial Flow Pumps (AFP)

The **AFP** is an inexpensive surface water irrigation technology that reduces fuel consumption – and thus irrigation costs – by up to 60%. Mounted on a two-wheeled tractor (2WT), AFPs give 2WT owners increased business opportunities during the dry season.



Implementing Partners

CIMMYT (www.cimmyt.org) works with partners worldwide to reduce poverty and hunger by sustainably increasing the productivity of maize and wheat cropping systems.

iDE (www.ideorg.org) is a non-profit, non-governmental organization incorporated in 1982 in the USA, with affiliated non-profit organizations in Canada and the UK. iDE employs business principles, appropriate technologies, and agricultural science to facilitate market systems in which the rural poor can participate effectively. iDE employs a M4P methodology and works to strengthen the position and options of the rural poor within the markets that they engage in.

CSISA-MI further supports the supply chain for agricultural mechanization products by facilitating the development of targeted financial services, and by working with local dealers and manufacturers to make sure that the farmers who would benefit most from the technologies know where and how to purchase them.

Strategic Objective 3 Conservation agriculture principles and best agronomic practices adopted by farmers through access to resource-conserving agricultural machinery services.

To assure the durability of strategic objectives 1 and 2, CSISA-MI works with public and private sector partners to promote their familiarity with machinery engineering, manufacturing, sales, distribution, and use in the field. CSISA-MI works with key government stakeholders such as the Bangladesh Agricultural Research Council (BARC), the Bangladesh Agricultural Development Corporation (BADC), and the Department of Agricultural Extension (DAE).



Through these partnerships, Farm Business Advisors and DAE Sub Assistant Agricultural Officers, both respected local agricultural resource persons, are trained on operation, maintenance, and benefits of the improved technologies. Mechanics and their workshops are outfitted to handle maintenance and repairs, and are certified through BADC-approved certification schemes.

CSISA-MI is funded by **Feed the Future**, USAID's food security initiative that works hand-in-hand with partner countries to develop their agriculture sectors and break the vicious cycle of poverty and hunger.

Driving Conservation Agriculture through Precision Equipment

Each of the following technologies helps boost yields through maximizing the productive use of soil moisture, fertilizer, and seed, while saving farmers' time, labor, and money.

Seeder Drills till, plant, and fertilize simultaneously and with greater precision.

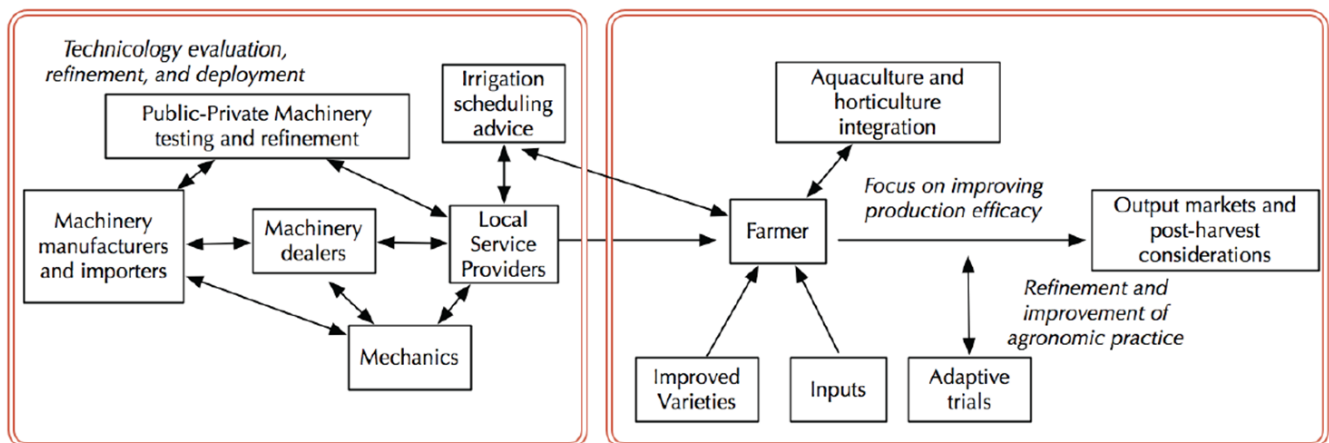
Bed-planters (below, second) form fields into beds and furrows, for more efficient dry season irrigation, while decreasing the crop's risk of arsenic contamination.

Reapers (below) allow farmers to clear fields cheaply and on time without waiting for scarce and expensive manual labor, while freeing up women's time for other productive activities.



CSISA-MI and CSISA-BD

CSISA-MI builds on lessons learnt and opportunities identified by the pre-existing USAID-funded CSISA project in Bangladesh. While CSISA focuses on adaptive technology testing, deploying new crop varieties, training farmers, and facilitating output markets, CSISA-MI goes beyond this to focus on upstream market interventions to ensure that technologies needed for agricultural intensification are sustainably available through local markets.



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Core CSISA-Bangladesh

