CLIMATE & CLEAN AIR COALITION
TO REDUCE SHORT-LIVED CLIMATE POLLUTANTS

Press Release

Farmers in North-western Bangladesh learn to grow climate friendly rice

The International Rice Research Institute is working with the CCAC to introduce Alternate Wetting and Drying, a planting technique that can reduce methane emissions from rice paddies by almost half.

Paris, February 15, 2018: Farmers in North Western Bangladesh are changing the way they grow rice, and by doing so are increasing production, saving money, and protecting the climate.

Growing rice in flooded paddies produces methane, a greenhouse gas many times more powerful than carbon dioxide at warming our atmosphere. The warm, waterlogged soil of rice paddies provides ideal conditions for microbes that produce methane as they breakdown and decay any flooded organic matter.

For many rice growing countries the methane produced by rice paddies is a significant portion of their total greenhouse gas emissions. In Vietnam, for example, rice cultivation is responsible for up to 17% of the country's greenhouse gas emissions. Rice cultivation is responsible for 10% of all agricultural greenhouse gas emissions globally.

Since 2014, the International Rice Research Institute (IRRI) has implemented a Climate and Clean Air Coalition Agriculture Initiative to provide technical and policy guidance to governments to help reduce greenhouse gas emissions from rice production.

In Vietnam and Bangladesh IRRI introduced Alternate Wetting and Drying (AWD) rice cultivation as an effective alternative to traditional paddy rice farming. This planting method has the potential to reduce paddy rice emissions by half. Instead of keeping their fields continuously flooded, farmers drain rice paddies two to three times during the growing season. This limits the amount of methane that is produced, does not compromise yield, and saves money for farmers, as it requires a third less water.

Alternate Wetting and Drying in Rangpur, Bangladesh

Alternate Wetting and Drying technology is not new to Bangladesh. Since 2004, it's been promoted to small groups of farmers for testing, evaluation, and adoption. However, the total benefit, in terms of amount of water conserved and GHG emissions reduced, will only be significant if Alternate Wetting and Drying is adopted at scale.

"The Bangladesh government promoted Alternate Wetting and Drying to reduce irrigation water use in flooded rice systems, reducing methane emissions in the process," said Bjoern Ole Sander, Climate Change Expert at IRRI. "The government now wants to scale up AWD rice production to 20% of total rice cultivation by 2030 as part of its Nationally Determined Contributions (NDCs)."

The Rangpur Division in Northwestern Bangladesh is one of the country's most vulnerable areas due to increasing ground water scarcity and periods of drought. Most farmers experience difficulty in producing dry season irrigated rice (known as Boro rice) because irrigation water is in short supply. Boro rice accounts for over half the country's rice production, and the problem needs to be dealt with deliberately. The rising cost of fuel to power irrigation pumps also affect these resource-poor farmers.

These issues spurred Rangpur farmers to turn to AWD as a viable option to manage their water resource more efficiently and equitably, while maintaining or even increasing their yield and their income through savings on irrigation cost.

The Coalition worked with IRRI to support the spread of AWD practices in Rangpur Division by working with the Northwest Focal Area Network (FAN) - a multi-sectoral network of stakeholders working on rice-based systems. Network partners work together, carry out different roles, and share expertise and resources. They all have a shared interest to help farmers in the region increase their incomes to pull them out of poverty.

"Projects are often managed in a way where donors and the project implementers focus on project-driven functions rather than producing sustainable outcomes that benefit the community," Akram Hossain Choudhury, chairman of the Barind Multipurpose Development Authority, said at one of the network meetings. "The Northwest FAN is different. It focuses on sustainable transformation."

In 2017 FAN worked with hundreds of farmers and shallow-tube well owners in 8 districts and 17 locations on testing and adopting AWD technology. The Network's inclusive approach promotes active involvement and concerted efforts by all actors. It also brings out a deep sense of ownership.

To facilitate the adoption and spread of AWD technology across the region, farmers and private owners of shallow-tube wells formed collective irrigation groups. These groups consist of 10-25 farmers and cover roughly 15-20 acres of paddy fields. Each group is trained in AWD techniques, data collection and record-keeping. To enhance learning, information and communication materials like videos, fact sheets, brochures, flyers, and training supplements are produced and distributed. Sub groups also participate in training the trainer activities.

IRRI and the Bangladesh Rice Research Institute provides technical inputs about AWD and other production concerns. Sharing and learning about the benefits of AWD and technology outscaling, and initiatives to influence policy (upscaling) is carried out at the community level, district sub-unit (Upazila), regional, and national levels.

Moving forward the project plans to widen knowledge across the region to drive an effective extension and communication campaign.

"Sharing AWD knowledge and actual experiences motivates other potential actors and helps duplicate the initiative," said Ahmad Salahuddin, IRRI Consultant and Representative to Northwest FAN. "We are preparing for a region-wide general network meeting to bring together framers, well owners, and high-level decision makers from government, NGOs and involved stakeholders to futher promote this work."

Network members

Northwest FAN Network members are involved in concept development, capacity development, implementation, monitoring, reporting, sharing, and dissemination of technology. Members include:

- Bangladesh Rice Research Institute, Rangpur – provides the technical know-how through training of agricultural extension officers and local materials for the AWD tube.
- Bangladesh Agricultural Research Institute, Rangpur - provides the technical know-how
- Department of Agricultural Extension, Rangpur and Dinajpur Region – trains agriculture extension officers to train farmers
- Agriculture Information Services – shows IRRI video on AWD; currently producing an AWD video through a farmers' lens (in Bangla)
- Barind Multipurpose Development Authority, Mithapuur, Rangpur –information dissemination
- Northbengal Institute of Development Studies – conducted the baseline survey and is responsible for data management
- Hajee Mohammad Danesh Science and Technology University - conducted the baseline survey and is responsible for data management
- Rangpur Dinajpur Rural Service (RDRS) Bangladesh – network secretariat and coordinator for farmer mobilization
- SKS Foundation, Gaibandha
- Solidarity, Kurigram
- Udayankur Seba Sangstha, Nilphamari

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