



## Blue Gold Program success story

### Cropping Intensity Initiative (CII): Rudhaghara WMG increasing production of crops by effective water resources management

#### Context

Agricultural productivity in coastal regions of Bangladesh is significantly lower than the rest of the country. Most farmers in Rudhaghara cultivated local variety T-Aman rice, with a handful cultivating BR 23 as the Kharif II crop and boro rice BR 28 as the rabi crop.

Farmers mostly cultivated crops that are:

- low productivity
- of long duration to harvest
- comparatively high value local rice varieties: Balam, Morishal, Rani Shalut, Jotai Balam, Kumri and Chapal
- single harvest crops with T-Aman being a priority crop

#### Challenges

Waterlogging is the principal challenge to increasing crop production in polders. This is attributed to internal water management related to unequal water distribution and insufficient drainage facilities. Other problems include:

- salinity intrusion in canal water
- insufficient usage and availability of modern agricultural technology
- absence of modern agricultural techniques
- limited access to market information
- traditional cultivation mentalities of farmers

#### Blue Gold Program (BGP) interventions

The Rudhaghara WMG implemented a pilot CII phase with 16 farmers on five acres of land in polder 25. They followed

all recommended techniques under this initiative and were rewarded with short harvest periods of the following crops:



BRRRI Dhan 49 rice within 130 days



BARI Shorisha 14 mustard as relay crop requiring no tillage



BRRRI Dhan 58 rice as third-cycle crop



Short duration leafy vegetables as fourth-cycle crops: red amaranth, Indian spinach, data

#### CII activities and support from the Blue Gold Program

- Learning visits: four farmers from the Rudhaghara WMG visited polders 30 and 31 in a learning visit
- The Blue Gold Program trained farmers on CII and facilitated creation of market linkages
- Trial input supplies: BGP distributed crop inputs four times during the pilot phase of the CII in Rudhaghara
- Farmer's Field Day for crop cutting: members of the Rudhaghara WMG organised three horizontal learning events
- BGP invested BDT 31,245 to encourage farmers to adopt new cropping patterns
- Demonstrations were set with farmers to show potential for enhanced production and income generation

The idea of CII was formulated, in the context of waterlogging, with consultation of extension agency and

The Blue Gold Program aimed to increase production of crops in the Rudhaghara WMG through effective management of water resources in the area. The Cropping Intensity Initiative (CII) engages the community to better manage available water infrastructures in order to increase production of crops.



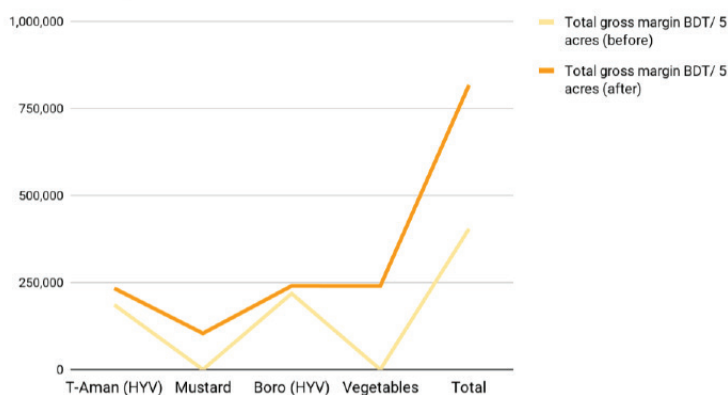


TA consultants for increased production and incomes for polder dwellers.

## Impact and results analysis

- Improved drainage systems.
- Readily available irrigation facilities.
- Increase in cropping intensity from 200% to 300% with new cropping patterns.
- Early harvests: BGP data indicates that the BRR1 Dhan 49 rice was harvested 40 - 45 days before the local and BR 23 varieties. This allowed farmers to cultivate mustard before entering into T-Aman and robi crop production.
- Introduction of HYV rice: farmers cultivated short- duration HYV BRR1 Dhan 49 this year, thereby allowing for the cultivation of crops throughout the year.
- Increased production: average production of BRR1 Dhan 49 is 54.7 monds per acre. The average production of BRR1 Dhan 58 is 72.57 monds per acre in comparison to 65 monds of BRR1 Dhan 28.

### Increase in profits due to CII



- Increased work opportunities: November had traditionally meant no work for farmers in the field with previous cropping patterns. This meant a lack of job opportunities for day labourers who then had to migrate to other regions to find work. But the production of early variety crops has now created new

opportunities for them. This generates an income of BDT 16,000 at BDT 400 per labourer.

- Employment generation: introduction of additional crops and shifting of the T-Aman season creates additional employment and incomes.

Crop grown in rabi (16 Oct-15 March) Kharif - I (16 March-15 July) Kharif - II (16 July-15 Oct)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Crop Season	Rabi		Kharif - I				Kharif - II			Rabi		
Present crop calendar-1			HYV boro Rice						HYV T-Aman			
Present crop calendar - 02			Sesame						Local T-Aman			
Present crop calendar - 03			Watermelon						HYV/Local T-Aman			
Proposed crop calendar- 01			HYV boro Rice						HYV T-Aman		Mustard	
Proposed crop calendar-02			Hybrid boro Rice			Vegetable			HYV T-Aman		Mustard	

▾ Seed bed     
 ▬ Production     
 ▴ Harvesting

BARI dhan49 : 15 July - 15 August (Kharif - II)

Mustard : 07 November - 20 November (rabi)

BARI dhan58 : 01 January -15 January (rabi)

## Lessons learnt

- Unusual and early heavy rains can be problematic
- Early monsoon seasons can disrupt early planting of T-Aman, making planting mustard difficult
- Standalone trials often attract rats and birds, making bloc demonstrations more effective
- Success of CII is reliant on location selection. Medium to high lands near canals, where drainage is possible, are good for implementing CII

