70 Crop Production through Integrated Management in DTW Areas
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a) Researchers' Identity

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b) Objectives

The objectives of this study are given below:

i. To find out the Boro rice cultivation in dry season by selected farmers in DTW installed areas; especially the method of cultivation, doses of fertilizers and the productivity of soil; and

ii. To take initiatives for increasing production through modern agricultural technologies

c) Executive summary

The goverment has given due importance for irrigated agriculture in its various five year plans. For this, the areas to be brought under irrigation were targeted in the different plans. There were 30% in the Third Five Year plan and 60% in the Fourth Five year Plan. To fulfill the targets, many irrigation equipments like DTW, STW and LLP have been distributed among various farmers, co-operative societies, relevant organizations and individuals. But the command areas brought under those irrigation equipments were not at satisfactory level. Likewise crop production per acre was also not increased as expected.

To increase the command area, some key activities and irrigation networks (like buried pipe) were developed in some DTW areas at Kahaloo and Bogra sadar Thana under Irrigation Management Programme (a national programme implemented by BRDB with the cooperation from DAE, BADC

and LGED). Later on, an action research was carried out in two of those DTWs installed (i.e. Satghoria and Eruil) as to how the yield of crops could be increased.

At the beginning, a base line survey was conducted which mainly included the doses of fertilizers, the age of seedlings, the space between rows and heels of seedlings, and the yields. After the survey, several activities under the action programme were introduced. These were:

(1) identification of proper dose of fertilizers for the crops,
(2) accurate age of seedlings to be planted,
(3) method of line transplantation to be followed, and
(4) space to be maintained for row to row and heel to heel in line transplantation of seedlings.

To implement these activities, a series of discussions and meetings were held at the villages and soil samples were collected from different sites of the command areas of the DTWs with the help of the soil Resources Development Institute, Bogra. The chemical analyses of soils were done at the Bangladesh Agricultural University, Mymensingh. Beside that, the method of line transplantation of seedlings was practically shown to the farmers in one of their plots.

Boro rice was only the major crop cultivated in dry season. The selected farmers of the study followed many of the above mentioned activities during cultivation of Boro rice but they had not followed those accurately. However, they became aware of the accurate doses of fertilizers and they increased it, which were near to the recommended ones. They applied sulphur which was not a practice of farmers previously. Many of them planted the seedlings in appropriate age.

Although the line transplantation was followed in the first year but it was not continued in the following years. Instead of this, they tried to maintain the requisite space for transplantation with eye estimation. As a whole, the activities were better than base line year of the study. The yield per acre of Boro rice was increased from 1871 Kg (base line year) to 2059 Kg (average of 3 years of activities under the action programme). The gross income of the farmers was increased from Tk. 3,358.89 (base line year) to Tk. 4,017.94 (average of 3 years of activities under the action programme). This indicates that there are possibilities to increase the yield of crops to attain self sufficiency in food. This needs only more contacts to and dissemination of new information among the farmers. As our land is limited, more attention is to be paid to increase yield per acre of crops. Command areas under the DTWs or other irrigation equipments are the areas where we can fix target and achieve it easily.