Water Saving Technology for Rice Production

Background

Boro rice in Bangladesh, whether HYV or traditional varieties covering more than 4 million ha, is entirely irrigated, mostly with underground water. Because of increasing cost of fuel, irrigation has become a very costly input in rice production. Farmers pay about 25-30% of the rice outlet for irrigation. For producing 1 kg of paddy, it is estimated that a farmer has to use 3,000-5,000 liters of water for keeping ponded water during the growing stage of plants. Therefore, farmers irrigate quite frequently and keep the field flooded all the times.

International Rice Research Institute conducted research on reducing frequency of irrigation. Recent research at IRRI demonstrated that ponded water all the time in rice field is not necessary. A simple device has been designed to observe water level in the ground to decide on the time of irrigation. It involves installation of a perforated water tube in the field to allow observation of water table. Irrigation is provided when the water table reaches 15 cm below the surface. With the use of this device, irrigation frequency can be brought down by 30-50% of traditional irrigation practice without affecting yield. Bangladesh Agricultural Development Corporation has also tested this technology during 2006 boro season in Madhupur farm successfully. Only 4 irrigations were needed as against 8 irrigations. During 2007 boro season, 5 irrigations were needed following the new practice as compared to 9 irrigations as per conventional practice. Bangladesh Rice Research Institute and Rural Development Academy, Bogra are conducting research on this technique, with technical assistance from IRRI, for validation and scaling up. The technology has far reaching implication apart from direct cost-savings for the farmers. It will save burning of imported disel fuel, which in turn will save money for the nation. It will also greatly reduce over-pumping of ground water and, therefore, reduce ground water depletion. All these benefits will have positive impact on the environment and natural resources conservation.

For detailed information on the technology, please visit:

http://www.foshol.org/index.html/Technology/AWD_technology.pdf

For more information, please contact:

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