

# Irrigation and Water Management Division

BARI Head Office, Gazipur

## Activities

Irrigation and Water Management (IWM) division, established in 1990, is one of the 16 research divisions of Bangladesh Agricultural Research Institute (BARI). The main objective of IWM division is to conduct research on sustainable development and management of water resources for irrigation to increase water as well as crop productivity consistent with the need of the country. IWM division has so far developed 45 promising Irrigation and Water Management technologies. Most of them are being practiced at farmer's level in different areas of the country.

## Major promising technologies

- Optimum crop water scheduling for BARI mandated major crops
- Fertigation for high value crops such as Tomato, Brinjal, Strawberry, Capsicum, Papaya, Summer Tomato etc.
- Water and fertilizer management of fruit crops
- Lysimetric study for the determination of crop coefficient (Kc) values for Mustard, Maize, Tomato, Wheat, Brinjal, Onion, Garlic, Chickpea, Lentil etc.
- Development of Flow Diversion Device for Shallow Tubewells
- Use of Plastic Hose-Pipes for irrigation to crops
- Manually Operated Pumps for the Marginal Poor Farmers
- Conjunctive Use of Local Ponds for Irrigation and Fish-cum-Duck Culture
- Introduction of Sprinkler Irrigation in onion and garlic cultivation
- Alternate furrow irrigation technology for tomato and maize
- Rain water harvesting in saline and drought prone areas for irrigating upland crops
- Soil and Water Management technology (Raised bed, Mulching, Drip Irrigation) for cultivation of high value horticultural crops in saline coastal areas of Bangladesh
- Utilization of domestic wastewater as an alternate source of irrigation water in dry prone areas
- Buried Pipe Distribution System for irrigation
- Pattern based water management technologies for crop production in saline and drought prone areas under changing climate

## Research Areas of IWM Division

- Crop Water Requirement and Irrigation Scheduling
- Water Application and Distribution Methods
- Wastewater Management for irrigation
- Climate change
- Micro-irrigation for high value crops

- Saline soil and water management
- Development of hill irrigation system
- Groundwater management

### **Activities of IWM Division**

- Effective utilization of crop-based irrigation technologies (cereal crops, horticultural crops, spices, pulses, oilseeds etc.)
- Development of new technologies for water-saving irrigation techniques
- Research for reduction of the consequences of climate change on agricultural water management as well as crop production systems
- Micro-irrigation i.e., Drip, Sprinkler for high value crops
- Cropping pattern based water management research in saline and drought prone areas under changing climate
- Dissemination of developed technology through training, field demonstration, seminar, publication, workshop etc. to the end users.

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