

ECO-FRIENDLY PRACTICES

➤ *Alternate wetting and drying (AWD) method of water management for enhancing water use efficiency in transplanted Paddy*

Technology: Alternate wetting and drying method of water management viz., 5 cm irrigation at 3 days after disappearance of impounded water up to panicle initiation (PI) and 3 ± 2 cm standing water after PI recorded average 6.0 to 11.0 per cent higher paddy grain yield and 37 per cent water saving as compared to flooding throughout crop growth (3 ± 2cm).

Cost of Technology: No additional cost involved, but save labour for irrigation

Impact

- ✓ Lower total water used for irrigation (1165 mm) and higher water use efficiency (4.92 kg/ha-mm)
 - ✓ Saves 37% total water used as compared to conventional irrigation
 - ✓ 70% higher water use efficiency
 - ✓ Reduces 25% greenhouse gas emission in transplanted paddy
- ***Reduced Run-Off Farming***
- ✓ Conceptualizing drylands with rainfall above 750 mm as irrigated ecosystem, a water and energy secured polyhouse based rainwater harvesting and sustainable production system.
 - ✓ Module supports commercial crop under protected cultivation for 220-250 days annually with only harvested rain water.
 - ✓ Components : Complete Rain Water Harvested Polyhouse, Storage Sump (Capacity: 50% harvestable water), Solar Green Energy System, Precision Protected Cultivation- Sensor-based Automation and Weather Control and others
- ***Sugarcane Trash Management Using Microbial Consortium***

Spread the trash after the harvest in alternate rows and irrigate the field. Spread 10kg/acre of urea and microbial consortium (10 per cent cowdung + 4 kgs/acre of microbial consortium: *Phanerochete* + *Aspergillus* + *Pleurotus* + *Trichoderma* + *Pseudomonas* + *Bacillus* + *Cellulomonas* in 400 l of water) over the irrigated trash. After 30 days, turn the trash and repeat the same application. Within 75-90 days of application, the trash decomposes and supplies nutrients to the ratoon crop. This saves 25-30 per cent of chemical fertilizer application and enhances soil fertility.