

Automatic Irrigation System for Rice

Utility

This is automatic irrigation system for rice to maintain optimal water levels in rice fields under AWD technique. It uses float sensors and microcontroller based wireless system to detect ponding water at rice fields above and below the soil surface and send signal to operate the pump accordingly. The maximum ponding water limit has been set as 5 cm above the soil surface beyond this the irrigation stops automatically. The irrigation starts automatically when minimum threshold limit of water level (10 cm) below the soil surface is reached.



Controller unit is programmed for different stages of crop growth. Approximately, 35% of water saved under AWD method using this system apart from saving labour, as compared to conventional irrigation practices (continuous flooding) in rice cultivation.

Specification and Performance		
Yield/productivity	:	4.8 ± 0.189 t ha ⁻¹
irrigation water productivity	:	6.15 kg ha ⁻¹ mm ⁻¹
Water saving	:	36%
Capacity	:	one sensor it is suitable for 1 acre rice field.

Design: ICAR-CIAE, Bhopal

Commercialization Status: Ready for Commercialization

Proposed stakeholders: Small and marginal farmers, irrigation companies, etc.

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