

Modified System of Rice Intensification for Enhancing Productivity for Irrigated Systems



Modified System of Rice Intensification at IWM research farm

Developed by _____

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RELEVANCE

- The sustainability of rice production raises concerns due to high demand, water scarcity and climate change.
- The conventional flooded paddy production system is the largest consumer of water in agriculture and a major source of GHG emissions.
- The system of rice intensification (SRI) method, along with alternate wetting and drying irrigation systems is a promising water-saving and eco-friendly alternative to conventional puddled rice production systems.
- Modified SRI, which suits local conditions involves several modifications than the conventional flooded rice cultivation method.

DESCRIPTION

- The modified SRI included 20 x 20 cm plant and row spacing, using a single seedling of 14 days old.
- Mechanical weeding was undertaken three times *i.e.* 10, 20, and 30 days after transplanting.
- Irrigation was applied 3-DAD (days after the disappearance of ponded water) throughout the crop growing season before 10-15 days of harvest.
- Integrated nutrient management was adopted.

BENEFITS

- Grain yield enhancement: 36-49%; water savings: 22-35%; labor savings: 14%; seed savings: 90%.
- In modified SRI, only 1,571 litres of water are required to produce 1 kg of grain, while 2,801 litres are needed with the conventional flooded method.
- This system significantly enhances grain yield and water productivity by saving water and is promising for irrigated rice production.