Paired-row Planting and Irrigation Water Saving for Dry-season Crops

Paired-row planting of groundnut at ICAR-IIWM research farm

Developed by

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RELEVANCE

- The increasing scarcity of irrigation water necessitates improved planting and irrigation methods to save water and increase yields of crops during the *rabi* season.

DESCRIPTION

- During the post-rainy (*rabi*) season, paired-row planting for summer groundnut at 45 x 15 cm spacing (paired row at 15 cm on raised beds with 45 cm furrow spacing) and paired-row planting of potato at 75 x 20 cm spacing (paired row at 25 cm on raised beds with 75 cm furrow spacing) saved irrigation water and increased crop water use efficiency (WUE) over flat-bed and normal planting for groundnut and potato, respectively.

BENEFITS

- Paired-row planting on raised beds showed a pod yield advantage of 13-20% over flat-bed planting of groundnut, irrigation water savings of 27-41%, and enhancement of crop WUE by 40-45%.
- This technique in potatoes saved irrigation water by 18-20% and increased crop WUE by 18-20% over normal planting without significantly reducing tuber yield.
- B:C ratio of paired-row groundnut planting (45 x 15 cm) improved to 2.10 and in potatoes (75 x 20 cm) to 2.15.
- Paired-row planting and furrow irrigation could save water in post-rainy season crops.