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Optimizing Greenhouse Rice Production: What Is the Best Plant Spacing?

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Purdue Methods: Optimizing Greenhouse Rice Production

What is the best plant spacing?

We did not formally compare differing plant spacing, but can recommend a density of no more than 40 plants per square meter (about 4 plants per square foot). If researchers use the same 10x50-cm sub-irrigation tray as we did, this is 4-6 plants per tray. Proper spacing will depend on pot size and vigor of plants, the goal being to provide suitable light for flowering and maintaining air circulation around the plants to prevent disease. Another advantage of properly spaced plants is to make pest control easier using water sprays or applications of pesticides.

In our study comparing pot sizes, small pots (9-cm diameter) in a high density configuration exhibited non-uniform growth and flowering compared to the same sized pots at a lower planting density. The photographs suggest that yield was improved.



Figure 1. Representative plants grown in 9-cm pots spaced approximately 4 pots/tray (left) and 10 pots/tray (right). The 4 pots/tray plants were extra plants, not a part of the controlled study.