

Introduction

Planting good quality seed into a well prepared seedbed will help produce a fast growing, uniform crop that will have higher yields and will be better able compete with weeds and pests. While rice can be transplanted or direct seeded the yield potential is the same.

Seeding rates and plant populations

- One kg/ha of seed is equivalent to 40,000 seeds
- Desired number of seedlings that are established range from 50-70
- Seeding rates vary between 40-60 kg/ha.
- For wet season crops, 300-400 panicles/m² are desired
- For dry season this will increase to 500-600 panicles/m²

Planting Techniques:

Direct Seeding



Seedlings in a well prepared seed bed



Dry broadcasting



Wet broadcasting



Drum seeding



Seeding with drill



Wet seeding

Dry broadcast seeding

In many rainfed and deep water ecosystems, dry seed is still manually broadcasted onto the soil surface and then incorporated by plowing or harrowing while the soil is still dry. Seeding rates are normally very high, 40-60 kg /ha, and yields are generally quite low at 1-1.5 t/ha.

Wet broadcast seeding

In many irrigated and more favorable rainfed areas, pre-germinated seed is broadcast into 2-5 cm of standing water. Seeding rates vary from 40-60 kg/ha and 1 person can sow 1 ha/day.

Dibble planting and line seeding

In many upland environments, rice is established using dibbling or line sowing. Planting rates will vary from 60-80 kg/ha.

Drum seeding

Manually operated drum seeders are used for direct seeding in rows. Dry or pre-germinated seed is planted at 50-60 kg/ha, in 20-25 cm rows.

Machine seeding

In many parts of the world rice is now planted using a seed drill especially in rice areas where labor scarcity is emerging as a major constraint. Seeding rates of 40-60 kg /ha should be sufficient to give the desired plant stand. Most seed drills can plant at 20-25 cm row spacing. A good plant stand has 35-40 plants established per meter of drill row after permanent water is applied to the field. There are seed drills available that can plant into wet and puddled soils.

Transplanting

Manual transplanting

Depending on soil type, one hectare of rice requires 30-40 person days to establish. Seedlings are normally hand transplanted 20-25 cm apart. The range is normally 15-30 cm with 2-3 seedlings placed in each hill.



Manual transplanting

Mechanical transplanters

Machines range in size from a two-row, walk-behind models to eight-row, ride-on models. Most mechanical transplanters place seedlings in rows either 20-30 cm apart with in-row spacing determined by ground speed or head speed of the transplanter.



Mechanical transplanting

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