

## What is wet direct seeding

In wet direct seeding, seed is normally pre-germinated prior to broadcasting onto recently drained, well-puddled seedbeds or into pre-standing water in the fields. Wet direct seeding more commonly used in irrigated areas.

## Why use wet direct seeding

- Easier (less drudgery) and more timely crop establishment
- Reduced labour costs for crop establishment
- Possible savings in water use

## How do you wet direct seed

Ensure the field is well levelled, well puddled and weed free

- Plant the field within 2-5 days after the final puddling. At this point the soil has settled to be solid enough to hold seed on or near the surface and weeds have not yet established. If seed is planted more than 1 cm deep, it will usually have problem of emergence.
- In drained fields, small canals can be made across the field a couple of days after puddling to further help drain the field and avoid snail damage and seed emergence problems in areas with standing water.
- Pre-germinate the seed (soak for 24 hours in water, cover and drain for 24 hours). In this time the seedling root will emerge 2-3 mm. If the seed is left longer it can become entangled making it difficult to separate seed and thus causing damage to the seed when planted.
- Use sufficient seed - of a variety suited for direct seeding - to achieve a plant population of 75-100 plants/m<sup>2</sup>. This will usually require around 80 kg seed/ha. Use an extra 10-20% because of poor field levelling, poor seed and seed losses to birds and rats).
- If water in the fields is muddy following the last working, allow the field to dry for a time period of at least 24 hrs (preferably 48 hrs) before broadcasting commences.
- Sow the seed uniformly: Mark the field in 5 m wide strips (the typical distance over which seed can be uniformly distributed by hand). Divide the seed into uniform lots to allow the person sowing to sow up the field and back (i.e., a 10 m long strip) before getting the next seed lot.
- Broadcast the seed into 2-5 cm of standing water or onto the drained field. If the field is drained the soil should hold a "v" shape when a stick is run through the mud. This indicates a soil consistency that will prevent seed sinking too deep. Let the water drain before flash flooding after 2-3 days to keep seed moist and to reduce soil crusting (this is especially important in the dry season) In some irrigation areas, seedlings are broadcast post-germination with seedlings 100 to 300 mm in length.

## Limitations

- Good land preparation, leveling and water management are needed for uniform crop establishment.
- Weeds are very serious in dry seeding and serious in wet seeding.
- Snails (in wet seeded fields), and rats and birds can severely reduce plant stands.
- Heavy rainfall at the time of crop establishment can result in crop establishment failure (especially in heavier clay soils), and if water sits over seed still germinating below the soil.
- Longer occupation of main field by 5-15 days, compared to transplanted rice.
- High water and nutrient use in dry seeding (due to high percolation especially on light soils).

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