

RECOMMENDED RICE SEEDLING PRODUCTION PRACTICES

1 SEMI-DRY BED METHOD

Good for areas where irrigation is not assured, where shochum is common, and in areas where low temperature is a problem at the seedling stages.

- Prepare a well-levelled field with fine pulverized soil.
- Apply well-rotten FYM and thoroughly mix with the soil. About 3 kg will be enough for a seedbed of 1 m x 3 m.
- Make raised beds 10-13 cm high, 1 m wide, and any convenient length.
- Broadcast unsoaked dry seeds uniformly on the seedbeds. One "Drey" or 1.2 kg seed will be sufficient for an area 1 m x 6 m.
- Cover the seeds using a thin layer of fine soil mixed with well-decomposed FYM.
- Irrigate the bed immediately after sowing. The beds should be just soaked. Never flood.
- Check the moisture of the seedbed and irrigate when necessary.

The seedlings will be ready to transplant 40-60 days after sowing, depending on altitude and temperature.

2 DRY BED METHOD

This method is commonly practised by farmers. It is similar to the semi-dry bed method, but without raised beds. Farmers broadcast seeds very thinly and do not irrigate. Sowing with closer spacing and light irrigation can produce good seedlings.

3 WET BED METHOD

This method is good for areas where irrigation is assured, and where low temperature is not a problem. This method is not desirable where shochum is very common.

Plough, puddle and level a conveniently located plot. Apply enough FYM before puddling. Make slightly raised beds, 10-13 cm high, 1 m wide and any convenient length.

Soak the seeds in clean water for 24-36 hours. Then rinse the seeds, drain and incubate them for 36-48 hours. During incubation keep them moist and warm in half-filled, loosely-tied sacks. Every 12 hours drench the sacks and turn them upside down to even out the temperature.

Broadcast the pre-germinated seeds uniformly on the beds. One Drey of seeds will be enough for a seed bed of 1 m x 6 m.

Maintain just enough water to continuously saturate the beds for the first week. Thereafter gradually increase the water level as the seedlings grow. Never let the beds dry out.

The seedlings will be ready to transplant 20-25 days after sowing depending on the temperature.

4. POLYTUNNEL METHOD

A polytunnel cover is used over the bed to protect seedlings from cold and provide higher seedbed temperatures for seed germination and growth while raising seedlings for first crop in rice double cropping. Minimum temperature required for the germination of rice seed ranges from 9-13°C. Normal air temperature during the first week of Feb. in Wangdi Punakha Valley averages only 4-8°C. A polytunnel cover increases the temperature to 10-12°C, making seed germination and growth possible.

- Prepare a well levelled field with fine pulverized soil.

- Make raised beds 4 to 5 inches high, 1m wide, and of any convenient length.
- Sow seeds evenly on the seed bed as in a semi-dry bed nursery.
- Cover the seeds with fine soil mixed with FYM (1 : 1 mixture)
- Irrigate the beds to ensure sufficient moisture for seed germination. Sprinkle water or give light irrigation through the channels to soak the beds. Never flood the seed beds.
- Bamboo or "Kempah" hoops should be placed over the beds 80 cm apart down the length of the bed, pushing the ends firmly into the soil.
- Medium weight transparent polythene sheet should be placed over the hoops long and wide enough to cover the beds. The edges of the polythene should be covered with soil to hold them down to the ground.
- Check the moisture frequently to ensure that there is enough supply and, whenever necessary, irrigate by raising the polythene sheet.
- After seedling emergence, the plastic tunnel should be opened every morning (9 to 10 a.m.) to let in more sunlight and prevent day temperatures from getting too high. The tunnel should be closed again in the evening (3 to 4 p.m) every day to keep the seedlings warm at night.
- Irrigate the nursery as and when required preferably during the day.
- Seedling vigour will depend upon the soil temperatures and growing conditions. Normally, seedlings should attain 3-4 leaf stage after 40-45 days of sowing.

For further information contact

Field Crops Sector, RNR-RDC, Bajo