

Taking out Seedlings

Seedlings should be lifted out of the seedbed gently and with a trowel, rather than being pulled up. It is important that the seed sac remain attached to the infant root. Seedlings should always be transplanted from the nursery into the field within half an hour, and preferably within 15 minutes. The roots should never be allowed to dry out.



Transplanting

In SRI the most important is to avoid shock or trauma while transplanting the seedlings. Wide spacing gives individual plants more space to spread and to end down roots. Seedlings are planted at least 25 centimeters from each other and in a square pattern, which facilitates weeding. Careful transplanting reduces shock and increases the plant's ability to produce numerous tillers and roots during its vegetative growth stage.

Water control and Management

Alternate wetting and drying should be maintained to give aerobic and anaerobic soil conditions. The water management strategy changes once flowering begins, with a thin layer of water (1-2 cm) being maintained continuously on the field. It is recommended that farmers drain their fields about 25 days before harvesting, to let the soil dry out and encourage the plant to transfer as much nutrient supply to the grains.

Weeding

First weeding should be done in 10-12 days after transplanting. Subsequent weeding is done in 10 days interval. Use of rotary weeder or cono weeder gives best effect for both weed removal and for soil aeration.

Pest and Disease Control

Pest and disease problems appear to be less with SRI method. It is known that healthier, more vigorous plants have more capacity to resist pest and disease attacks.

Harvest

SRI rice is harvested just like any other rice, however there is an increase in yield of 28.6 % as compared to conventional paddy cultivation.



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SYSTEM OF RICE INTENSIFICATION



कृषि विज्ञान केन्द्र-फेक

राष्ट्रीय मिथुन अनुसंधान केन्द्र
(भारतीय कृषि अनुसंधान परिषद)

पोरबा, फुटसीरो, फेक, नागालैण्ड - ७९७१०७

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Introduction

The system of rice intensification (SRI) was developed in Madagascar. In this system inputs used is very less as compared to other systems of paddy cultivation. It uses less seed, less water, less plant protection, chemicals and fertilizer but uses more of organic matter.

Tips to produce more tillers

- Transplanting seedlings before they are 15 days old, and as early as 8 or 10 days when only the first small root and tiller, with two tiny leaves, have emerged from the rice seed.
- When you plant older seedlings 3, 4, 5 or 6 weeks old they have already lost much of their potential to produce a large number of tillers. It is especially necessary to promote strong root growth.
- Once removed from their seedbed, seedlings should be replanted in the field within half an hour, and preferably within 15 minutes.



Tips to grow stronger roots

- To plant single seedlings, one by one, rather than to plant them together in bunches of 3 or 4 seedlings.
- The seedlings should be spaced wide apart, usually at least 25 centimeters from each other, and in a square pattern. This facilitates weeding and it gives the rice more access to sunlight and air.

Nursery and transplanting

1. Rice seeds should first be soaked in water for 24 hours.
2. Put the seeds in a sack and place it in a warm compost. Cover the sack completely with either compost or soil and leave it for 24 hours for slow warming of the seeds.
3. The seedbed should be prepared as close to the main field, so as to minimize transport time between seedlings' removal from the seedbed and their transplanting in the field.
4. Water the seedbed every day in the late afternoon, or as needed to maintain a moderate level of soil moisture. The soil should not be saturated or kept continuously wet.
5. Transplanting should be done when the seedlings have just two leaves.



Two methods of transplanting

1. Farmers can stretch strings across their field, tied to sticks stuck into the bund at the edge of the field, spaced at 25, 30 or more centimeters, with the strings marked.
2. A kind of rake (row marker) that has teeth the desired distance apart (25, 30 or more centimeters) can be made from bamboo or wood. It is pulled across the surface of the prepared muddy field, scratching lines onto the surface at desired intervals.



Field Preparation

The land preparation does not require special steps, though the soil should be well ploughed as it would be to get the best results from any method for growing rice. Leveling the field is important. It is important to ensure that the soil is well drained, by constructing channels or furrows within the field.