

RICE ESTABLISHMENT - TRANSPLANTING

Introduction

There are many different ways to establish a rice crop. The technique selected will depend on the variety, locality, soil type and water availability. Seedlings are transplanting of seedlings into puddled fields is the most widely practiced establishment technique in Asia. Transplanting gives better in crop weed control than direct seeding, requires less seed but needs more labor. The crop growth period is longer than direct seeded crops as the seedlings take time to recover after transplanting. Seedlings can be transplanted manually or by machine.



Manual Transplanting



The majority of rice fields in Asia are still manually transplanted. Seedlings are grown for varying lengths of time in the nursery.

Many traditional varieties are left in the nursery for 40 to 80 days while improved varieties are transplanted within 20 days. Nurseries often take up to 10-15% of the growing area.



Seedlings are normally transplanted 20-25 cm apart, but this will vary depending on soil fertility and water supply. 2-3 seedlings are planted in each hill.

Pulling and transplanting of seedlings is very labor intensive. Depending on soil type, one hectare of rice transplanting will require 30 to 40 person days.

Mechanical Transplanting

Mechanical transplanters are widely used in China, Japan, and South Korea. Machine transplanted seedlings are transplanted 15 days after establishment.



Most mechanical transplanters plant seedlings in rows 30 cm apart with the in-row spacing determined by the forward speed. 2-3 seedlings are placed in each hill or location. Most machines have the capacity to apply fertilizer at the time of planting.

Seedlings are grown either in mat nurseries or in trays which make handling and transportation easier. Most transplanters are 6 rows wide and can plant from 0.5-1.0 ha per hour. Care needs to be taken with the seedbed preparation as it should be no

deeper than 75mm and firm enough that seedlings do not float or move.



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