Development and Performance Evaluation of Paddy Seeding Device for Mat Nursery

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ABSTRACT

Rice transplanting is accomplished mainly by the manual method. Manual transplanting is a labour intensive operation comprising of nursery rising, uprooting of the seedlings, transporting and transplanting them in the main field, with a total labour requirement of about 280 to 350 man-h/ha. High labour demand during peak transplanting period adversely affects the timeliness of this operation, thereby reducing the crop yield. To correct the problem, mechanical transplanting could be considered as the most promising option. The major constraint in the adoption of mechanical transplanters is the complex and labour intensive technique of raising mat type nursery in perforated plastic trays. Another constraint is unevenness of plant population in the mat. With a view to reduce the drudgery in raising mat type nursery, a paddy seeding device was developed and tested. The developed device performed satisfactorily and gave desired density of 100 to 120 g seed per mat with two passes (one forward and one backward) of the device over soil filled plastic tray of size 280 X 580 mm at 1.02 mm sprout length. Uniformity of seed obtained was as recommended 50-75 seed per 25 cm^2 area in the mat. No mechanical damage to the seed was observed.

Key words : Mat type nursery, Paddy seeding device ,Seed density, Seed uniformity per cm^2.