

Research Paper :

Performance evaluation of paddy drum seeder

SUMATI P. CHAVAN AND SHWETAMBARI M. PALKAR

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ABSTRACT

Direct seeding and transplanting are the two general methods of planting rice. The traditional method followed from many years in Konkan region is transplanting of seedlings raised in nursery. Transplanting method involves seedbed preparation, nursery growing, care of seedlings in nursery, uprooting of seedlings, hauling and transplanting operations. The preparation of seedbed and sowing are done 30 days before planting. The rice farmers practicing transplanting are facing problems like shortage of labour during peak time, hike in labour charges, small and fragmented land holdings etc. direct seeding is becoming increasingly popular now days in India. The wet seeding of rice is generally followed in irrigated areas. For wet drum seeding the paddy seeds are soaked in water for 24 hours and incubated for 24-48 hours. These sprouted seeds are sown in puddled field 1-2 days after puddling using perforated drum seeder. Eight-row paddy seeder is manually operated low cost equipment. Drum seeder can be used in the Konkan region for seeding in both *Kharif* and *Rabi* season with proper irrigation practices. Drum seeder tested was manually operated. The laboratory calibration was carried out with different combinations of drum fills viz., 90, 75, 50 per cent, and travel speed viz., 1 km/h, 1.2 km/h, and 1.5 km/h. From the laboratory calibration test the combination of 75 % drum fill and 1 km/h speed were selected for field evaluation of drum seeder. The drum seeder was tested on puddled field. The theoretical field capacity was calculated as 0.2 ha/h. while effective field capacity of the drum seeder was observed to be 0.11 ha/h. The field efficiency of the seeder was found to be 55 per cent. The cost of operation of drum seeder is Rs. 32.73/- per hour and Rs.297/- per hectare.

See end of the article for authors' affiliations

Correspondence to:
SUMATI P. CHAVAN
Dr. Budhajirao Mulik College
of Agricultural Engineering
and Technology, Chiplun,
RATNIGIRI (M.S.) INDIA

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