

RESEARCH ARTICLE :

Performance and evaluation of tractor operated semi-automatic onion bulb planter

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SUMMARY : The experiment was carried out at Department of Farm Machinery and Power, Mahatma Phule Krishi Vidyapeeth, Rahuri (M.S.) during September to July in year 2012-13 to check the performance and evaluation of tractor operated semi-automatic onion bulb planter. The field performance of onion bulb planter was tested. Mistubishi (18.5 HP) tractor was used for carrying out the field operation. The test was conducted at an average forward speed 1.3 km.h⁻¹. The draft required by the planter was 206.61 kgf. Wheel slippage was found to be 20.85%. The average row to row distance was observed as 600 mm and average plant to plant distance was observed as 181 mm. The actual field capacity was found to be 0.042 ha.h⁻¹. The field efficiency of planter was found to be 53.85 per cent. The missing percentage was found to be 8.12 per cent. The seed rate obtained was 2833 kg.ha⁻¹ against recommended 3000 kg.ha⁻¹. Total cost required for operation was found to be ₹ 166.82 per hour. The total cost of operation obtained per ha was ₹ 3971.90 per hectare. Whereas cost of operation observed in conventional method was ₹ 8880 per hectare.

KEY WORDS:

Onion bulb planter,
Field efficiency, Cost
of operation

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