

Assessment of manual paddy transplanters for drudgery reduction of farm women in Mayurbhanj district of Odisha

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■ **ABSTRACT :** Transplanting of paddy is very tedious job mostly done by female workers. Manual hand transplanting consumes a lot of energy, time and fatigue, but the poor socio-economic condition of the farmers does not allow them to adopt power operated transplanter. Different manual transplanters have been developed by different research centres as 2 row, 3 row and 4 row paddy transplanter. Keeping this in view KVK, Mayurbhanj-1 has undertaken OFT on different transplanters in drudgery aspect and compared with manual transplanting. Seven female subjects were selected in the age group 17-45 years in the farmer's field. The mean value of age, weight, height, VO_2 max and body surface area was found to be 29.1 years, 50.7 kg, 152.5 cm, 1.68 l/min and 1.49 m². The mean value of working heart rate was observed to be maximum of 130.6 beats/min in 3 row paddy transplanter followed by 126.7 beats/min in 2 row transplanter and 112.4 beats/min in local transplanting, respectively. The Oxygen consumption rate and relative cost of workload were observed to be maximum 1.01 l/min and 59.6 per cent in 3 row transplanter followed by 0.8 l/min and 57.8 per cent in 2 row transplanter and lowest in local practices, i.e. 0.5 l/min and 33.4 per cent. The field capacity was observed to be maximum 0.066 ha/day in 3 row transplanter followed by 0.03 and 0.054 ha/day in 2 row and local method of transplanting. The 3 row paddy transplanter was observed to be the best among all manual operated paddy transplanters.

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■ **KEY WORDS:** Transplanter, Working heart rate, Oxygen consumption rate, Relative cost of workload

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