

Cost analysis of mechanized paddy cultivation operations in Konkan region of Maharashtra

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ABSTRACT : The mechanization in the paddy cultivation can reduce the labour requirement and drudgery involved during various operations. The most energy consuming operations amongst all major operations in paddy cultivation considered for the analysis are land preparation (primary tillage including puddling), transplanting, weeding, harvesting threshing and winnowing which requires immense labor force. Therefore, for effective utilization and use of machines available in the market to perform main operations viz., Tractor (40 HP), M. B. Plough (Single bottom), Power Tiller (12 HP), Eight Row Self Propelled Transplanter, Four Row Manual Transplanter, Hand Cranked Transplanter, Cono Weeder, Two Row Finger Type Paddy Rotary Weeder, Japanese Weeder, Reaper, Reaper Binder, Pedal Operated Wire Loop Thresher, Power Operated Wire Loop Thresher, Axial Flow Thresher, Hand Operated Winnowing Fan, Power Operated Winnowing Fan were selected and nine combinations of these machines were made on the basis of suitability to comparatively large land holding and small and fragmented fields. Cost economics of different combinations of machines selected for paddy production in comparison with traditional method was done. The study revealed that, among the methods T-1 to T-4 (suitable for comparatively large land holding) and T-5 to T-9 (suitable for small and fragmented fields), the method T-4 and T-8 required the least cost and it was 24.30% and 43.37% of the cost required for traditional method. Maximum 69.46% and minimum 50.39% cost of production of paddy can be saved by following the combination T-4 and T-5, respectively in comparison with traditional methods.

Key Words : Cost analysis, mechanized paddy cultivation.