



RESEARCH PAPER

Development of pedal operated chaff cutter

Rajesh Jadhav, Sumedh Karmarkar*, Gayatri Donadkar and Saish Raut

Department of Farm Machinery and Power Engineering, Dr.Budhajirao Mulik College of Agriculture Engineering and Technology, Mandki, Palvan, Chiplun (M.S.) India (Email : sumedhkarmarkar1@gmail.com)

Abstract : For chaff cutting there are numbers of traditional methods as well as there are various machines available .Chaff cutting is a tedious process. For carrying out the chaff cutting hand operated, electrically operated and PTO operated chaff cutters are available in market. The hand operated chaff cutter involves continuous cranking which is very hectic and cannot be done for long period of time. The electrical and PTO operated chaff cutters are costly and are not affordable to small and marginal farmers. To overcome the problem and to bridge the gap between hand operated and electrically operated chaff cutter, the development of pedal operated chaff cutter was thought. The developed pedal operated chaff cutter had the pedalling unit as a power source and cutting unit involve blades and flywheel assembled on the frame. Two s type blades were mounted over the flywheel for cutting of chaff. The performance evaluation of developed machine was carried out by following the standard test code. The long duration half an hour duration test was carried out with three replications with two different varieties of grasses viz.elephant grass and rottboellia grass. For elephant grass average output capacity was found to be 53.6 kg/hr against the average feed rate of 55.15 kg/hr. while for rottboellia grass the output capacity was observed to be 89.02 kg/hr with respect to the average feed rate of 92.4 kg/hr. While the cutting efficiency was observed to be 88.4 % for elephant grass while for rottboellia grass it was found to be 85.8 % .

Key Words : Pedal operated, Chaff cutter

View Point Article : Jadhav, Rajesh, Karmarkar, Sumedh, Donadkar, Gayatri and Raut, Saish (2025). Development of pedal operated chaff cutter. *Internat. J. agric. Sci.*, 21 (1) : 63-67, DOI:10.15740/HAS/IJAS/21.1/63-67. Copyright@2024: Hind Agri-Horticultural Society.

Article History : Received : 30.07.2024; Revised : 21.10.2024; Accepted : 23.11.2024