

Performance evaluation of high capacity multi crop thresher on 'gram' crop

ABHISHEK PANDEY AND R. M. STEVENS

Received : 22.05.2015; Revised : 10.03.2016; Accepted : 22.03.2016

See end of the Paper for authors' affiliation

Correspondence to :

ABHISHEK PANDEY
Department of Farm
Machinery and Power
Engineering, Mahatma Gandhi
Chitrakoot Gramodaya
Vishwavidyalaya, Chitrakoot,
SATNA (M.P.) INDIA
Email : abhishekage@gmail.com

■ **Abstract** : The present study was undertaken on high capacity multicrop thresher for threshing gram crop at three different speeds of 550 rpm, 600 rpm and 650 rpm at corresponding feed rate of 16q/h, 18q/h, 20q/h. Performance of the experimental thresher was evaluated with respect to threshing efficiency, cleaning efficiency, grain loss, grain breakage and the output capacity. In threshing gram, the maximum threshing efficiency was found to be 98.98 per cent at cylinder speed of 600 rpm and feed rate 20q/h. Similarly cleaning efficiency was found 97.30 per cent at cylinder speed of 600 rpm and feed rate 20q/h while the maximum total grain loss was found 3.3 per cent at cylinder speed 550 rpm and maximum feed rate 20q/h. The grain breakage was found 1.70 per cent at cylinder speed of 650 rpm and feed rate 20q/h. The output capacity was found 9.62q/h at cylinder speed of 600 rpm and feed rate 20 q/h. The net saving with multicrop thresher in threshing cost compared to traditional threshing method was found to be 31per cent for gram crop.

■ **KEY WORDS** : Concave clearance, Feed rate, Tachometer, Threshing efficiency, Depreciation, Straw-grain ratio

■ **HOW TO CITE THIS PAPER** : Pandey, Abhishek and Stevens, R.M. (2016). Performance evaluation of high capacity multi crop thresher on 'gram' crop. *Internat. J. Agric. Engg.*, **9**(1) : 94-101.