World Academy of Science, Engineering and Technology
International Journal of Agricultural and Biosystems Engineering
Vol:14, No:08, 2020

# Performance Evaluation of Iar Multi Crop Thresher

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**Abstract :** Threshing efficiency and mechanical grain damages are among the important parameters used in rating the performance of agricultural threshers. To be acceptable to farmers, threshers should have high threshing efficiency and low grain. The objective of the research is to evaluate the performances of the thresher using sorghum and millet, the performances parameters considered are; threshing efficiency and mechanical grain damage. For millet, four drum speed levels; 700, 800, 900 and 1000 rpm were considered while for sorghum; 600, 700, 800 and 900 rpm were considered. The feed rate levels were 3, 4, 5 and 6 kg/min for both sorghum and millet; the levels of moisture content were 8.93 and 10.38% for sorghum and 9.21 and 10.81% for millet. For millet the test result showed a maximum of 98.37 threshing efficiencies and a minimum of 0.24% mechanical grain damage while for sorghum the test result indicated a maximum of 99.38 threshing efficiencies, and a minimum of 0.75% mechanical grain damage. In comparison to the previous thresher, the threshing efficiency and mechanical grain damage of the modified machine has improved by 2.01% and 330.56% for millet and 5.31%, 287.64% for sorghum. Also analysis of variance (ANOVA) showed that, the effect of drum speed, feed rate and moisture content were significant on the performance parameters.

**Keywords :** Threshing Efficiency, Mechanical Grain Damages, Sorghum and Millet, Multi Crop Thresher
**Conference Title :** ICAAMPHL 2020 : International Conference on Advances in Agriculture Mechanization and Post Harvest Losses
**Conference Location :** Moscow, Russia
**Conference Dates :** August 27-28, 2020