

DESIGN AND DEVELOPMENT OF A FINGER MILLET THRESHING, DEHUSKING AND CLEANING MACHINE

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Finger millet contains large amount of nutrients, tradition and at the same time finger millet has increasing demand in the society because of most of diabetic patients are recommended to include finger millet in their diet. Currently, finger millet processing is done manually and it is difficult, timeliness, laborious, expensive and yields low quality out put. Mechanization of this process line is a suitable solution to over come above drawbacks. But no machine has been developed yet to improve the efficiency of process line of finger millet. This study was to design and develop finger millet threshing, dehusking and cleaning machine. It was fabricated and tested at the workshop of Farm Mechanization Research Center, Mahailuppallama. The machine performance parameters were machine capacity 32kg/hr, total grain input 29.92kg/hr, percentage of damaged grain at all outlets 0.58 %, percentage of blown grain 0.83%, percentage of grain losses 1.41%, threshing efficiency 94.3%, cleaning efficiency percentage 92.47%, threshing recovery percentage 93.69%, percentage of grain with husk 5.08% and dehusking efficiency 94.91%. These result revealed that the developed machine is suited to improve the efficiency of process line of finger millet.

Key words: Threshing, Cleaning, Dehusking, Efficiency