

### **Development of process line for Finger millet flour using existing machinery**

Mechanization of threshing, cleaning and flour milling process is one of the most important requirement in the grain flour milling industry in Sri Lanka to increase recovery levels and improvement of its quality. Therefore, this study was conducted to identify and evaluate the suitability of existing rice milling machinery for the development of finger millet flour process line.

Existing rice milling and flour processing machinery, namely, friction type polisher, compartment separator and disk mill were identified as suitable machinery for threshing and de-husking, removal of sand and grinding of finger millet respectively. Friction type polisher (N-70) can be used for the threshing of finger millet with threshing efficiency of 98% and the capacity 100 kg/hr. The same machine can be used for de-husking of finger millet seeds with the efficiency of 98 % and the capacity 150 kg/hr. The compartment separator used for paddy is suitable to remove sands and other stones which have the same size of finger millet seed with the cleaning efficiency of 99%.

In addition, a cleaning machine with of 170 kg/hr and the cleaning efficiency of 96.8 % was designed and developed to clean the light particles such as straw, seed hull etc. obtained after threshing.

Disk type grinding machine gave the best performance for processing of finger millet flour to obtain particle sizes of flour less than 200 $\mu$ .