

Grain Picker

The importance of grain storage as part of the marketing, distribution and food security system is well recognized.

In India, about 70% of farm produce is stored by farmers for their own consumption. Farmers store grains in bulk using different types of storage structures made from locally available material. In majority of cases at commercial level, the grain are stored in jute sacks whereas the grain storage structures in rural areas are mud, bamboo, stones and plant materials apart from jute sacks.

Buying agencies often collect the bagged grain from the farm or market and the producer has to store the sacks of grain for some time before they are sold

Grain picking is the activity which is done after the threshing of the crop. Nowadays with the improved thresher grain is directly collected in trolley. Storing of grain in drum or sac at the household level as well as bagging of grain at commercial level is done with *supra* (a traditional tool use for picking and bagging of grains). To minimize the incidences of occupational health hazards and discomfort while performing grain picking and filling of jute sacks, a improved tool called grain picker was developed, tested for its performance evaluations and disseminated at commercial and household.

Advantages:

1. Grip diameter of the grain picker comfortably fit the palm of the respondents.
2. Rectangular shaped avoids wrist deviation, allowing the hand and fore arm to remain in alignment during forceful grip exertion.
3. The weight of tool is not much heavy thus it is easy to use and the center of gravity is in alignment with the center of gripping hand.
4. The grip surface is non slippery and edges are rounded to prevent cuts.
5. Adequate clearance of 25 mm. is provided around the handle for easy access which avoids finger damage on aperture edges.
6. Rate of picking of grain was more while performing the activity using grain picker with picking efficiency of 6.38 percent
7. Maximum reduction in body part discomfort score while using grain picker was found in hands (17.9%) followed by fingers and upper back (12.8% each).