

Performance evaluation of manually operated drumstick harvester

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■ **ABSTRACT** : Harvesting of drumstick pods by traditional methods such as use of hook and bamboo, climbing labour on tree is difficult task. In order to reduce losses during harvesting of drumstick and to maintain fruit quality, a manually operated drumstick harvester was developed at K. K. Wagh College of Agricultural Engineering and Technology, Nashik. The testing of harvester was taken at Mr. Narayan Shelar drumstick farm and Puriya park farm. This harvesting machine includes four components namely shearing device, operating mechanism, supporting structure and collector bag. The working of this manually operated drumstick harvester is based on the principles of simple brake mechanism. During operation, it was observed that force required to cut the drumstick stalk was 5-15N and shearing strength was 0.33-0.75 MPa. The actual field capacity of harvester was 0.01323 ha/hr. Drumstick harvester become multipurpose to harvest sapota, mango, custard apple etc. by using of movable scissor which rotated in 180° for that holder is used.

■ **KEY WORDS** : Drumstick pod, Hook and bamboo, Drumstick harvester, Shearing strength, Multipurpose, Actual field capacity

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