

Performance evaluation of developed manual nutmeg (*Myristica fragrans* Houtt.) harvesting system

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■ **ABSTRACT** : Nutmeg (*Myristica fragrans* Houtt.) is an important tree spice which produces two different spices namely nutmeg and mace. The Konkan region is well regarded as fruit belt of Maharashtra. Presently, the method adopted for harvesting nutmeg in Konkan region is by manual means *i.e.* by hand picking, by shaking the tree branches or by using bamboo stick having a curved hook. It was, therefore, necessary to develop harvesting system with simple design, easy for operation, low cost but with higher working efficiency. In view of the present investigation was carried out at Department of Farm Machinery and Power, College of Agricultural Engineering and Technology, DBSKKV, Dapoli. The developed nutmeg harvesting system consists of fruit harvester, telescopic pole, harvesting platform and fruit collecting basket. The performance of developed nutmeg harvesting system was evaluated in field and it's harvesting capacity and damage fruit per cent was found to be 8.15 kg/h and 1.33 per cent, respectively and only one person was required for harvesting operation. The harvesting capacity and fruit damage per cent was found to be 4.37 kg/h and 10.92 per cent for hook method also 1.74 kg/h and 14.85 per cent for beating of fruits by bamboo stick method, respectively and two person were required for harvesting operation in traditional method. The cost of harvesting nutmeg with developed manual nutmeg harvesting system, hook method and beating of fruits by bamboo stick was found to be Rs./kg 5.93, 17.16 and 43.10, respectively. The developed nutmeg harvesting system proved to be superior, efficient and economical over traditional harvesting method.

■ **KEY WORDS** : Nutmeg, Harvesting methods, Performance evaluation, Cost economics

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