

AGRICULTURAL ENGINEERING

INTEGRATED TURMERIC PROCESSING UNIT



Integrated turmeric processing unit

Turmeric rhizomes, after harvesting, need to be washed in water to remove the adhering earth. Thereafter it is boiled in water to achieve desired softness, and sun dried. Subsequently it is polished to remove the outer dirty skin and to improve the appearance and colour of the rhizome. A hand operated Integrated Turmeric Processing Unit has been fabricated by the AICRP on Post Harvest Technology, CIPHET, Ludhiana to perform all the three operations—washing, curing and polishing in the same unit.

TECHNICAL SPECIFICATIONS

A hexagonal drum (30 cm side of hexagon and 60 cm length) is rested on a stand with movable bush arrangement. The drum is made with replaceable washing and polishing plates. Perforated aluminum plates are used for washing. Plates made of inner expanded wire mesh and outer oven wire mesh is used for polishing operation. The drum is rotated inside a water tank placed below the drum for washing. The bottom portion of the drum is submerged inside the water in the tank.

WORKING

When the drum is rotated manually by means of a handle, the adhering earth on the rhizomes is washed away and collected in the water tank, which has a provision for discharge of the mud water through an extended pipe at the bottom of the tank connected with gate way valve. After necessary washing, the tank is placed over fire and covered with a hood during curing operation so that turmeric in the drum is cured. During curing, the drum needs to be rotated 3 to 4 times to achieve uniform curing of the rhizomes. The same drum by simply changing the plates is also used for polishing of dried turmeric. Turmeric is loaded in the drum by opening one of the plates working as door. After the operation the drum is tilted vertically side wise by opening the bush lock and rested on another stand. Drum needs to be rotated 3 to 4 times. Turmeric is discharged by opening the door plate.

Capacity	200 kg/hour for washing, 50 kg/batch for curing, and 100 kg/hour for polishing
Power	Manually operated
Cost	Rs 6000.00 approximately

The drum is then loaded and the bush is locked with the stand for operation of next batch. This unit can also be used for washing and peeling of ginger by connecting wooden planks, which are corrugated inside in the drum.

AVAILABILITY

The machine is available from the Central Institute of Post Harvest Engineering and Technology, Ludhiana as per the requirements of the user.

For more details contact:

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