

Extension Folder No. 7

Pedal Operated Arecanut Dehusker
(Scissors type)

CENTRAL PLANTATION CROPS RESEARCH INSTITUTE
Kasaragod 670 124, Kerala, India

INTRODUCTION

The most popular trade type of arecanut in our country is the ripe nuts dried and dehusked and marketed as whole nuts. In trade this is known as *chali* or *kottapak*. *Kalipak* is another important form of processed arecanut. Processing of *kalipak* consists of dehusking nuts of 6-7 months maturity, cutting, boiling and drying. Traditionally dehusking of ripe and tender arecanut is done by skilled labour with the aid of knives fixed on horizontal wooden planks. There is a shortage of such skilled labour of late and hence a manually operated simple device for dehusking arecanuts has been developed at the Central Plantation Crops Research Institute, Kasaragod.

DESCRIPTION OF THE DEVICE

The device as shown in Figure 1 comprises essentially (i) scissors mechanism, (ii) frame and platform and (iii) pedal operated lever mechanism.

The scissors are made of hard steel and are mounted on the frame with a guide and compression spring. The frame and platform are made of mild steel rods and plates. Two guide rods with suitable mild steel bushes are provided on the frame. The scissors mechanism with the links is mounted on the guide rods. The compression spring around the bush brings back the scissors to normal position after each operation. A bowl (Half-cut-G-I pipe) with slot is fixed on the platform to guide the positioning of the nut.

The pedal mechanism is made of mild steel rod, sheet and angle iron. The lever rod is pulled down when the pedal is pressed and is brought back to its original position by the tension spring fixed to the lever arm and frame.

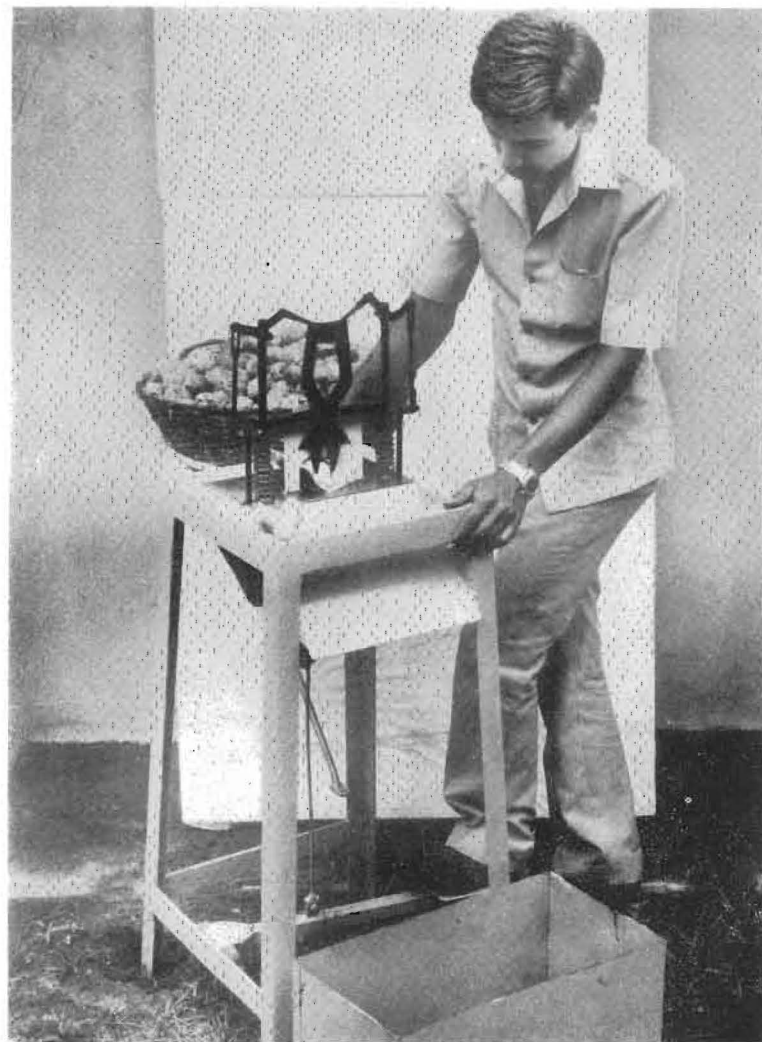


Fig. 1. Pedal operated arecanut dehusker

OPERATION

The device can be operated by one unskilled person. The nuts are taken from the basket on the right side of the device and fed one by one by right hand below the scissors point. The nut is positioned in such a way that its peduncle faces the left side. The pedal is pressed down. The scissors while moving downwards, pierce the husk and then open up splitting the husk into two parts. Pressure on the pedal is released which facilitates the return of the scissors to original position. The nut is taken out by left hand and husk is then removed with the hands separating the nut. While dehusking tender nuts, the immature nut remains attached to one of the split halves of husk which can be scooped out with the help of a simple knife.

PERFORMANCE

An unskilled worker in a day of 8 working hours can dehusk about 60 kg of ripe and dried nuts. Dehusking of tender nuts requires more time and one unskilled worker can dehusk about 30 kg of nuts in a day. Damage to arecanuts while dehusking in this device is negligible.

ADVANTAGES

1. The device can be easily operated by any unskilled person.
2. It requires less effort to dehusk the arecanuts in this device compared to the conventional method.
3. It does not cause any damage or scratch on the nuts.
4. It can be fabricated locally.
5. It is very handy for small growers.
6. It costs about Rs. 600 only.

Published by

K. V. AHAMED BAVAPPA
Director, Central Plantation Crops Research Institute
Kasaragod 670 124, Kerala, India

Text prepared by

BANGALI BABOO and S. J. K. ANNAMALAI
