

LOW COST "CHIP HOE" FOR WEED CONTROL ON COCONUT NURSERY SEED BEDS

A versatile cheap and light weight implement ("chip hoe") has been introduced for weed control on the coconut nursery seed beds. It prevents any damage to growing seedlings and can conveniently replace the mamoty. This implement was tried out in the nurseries at Bandirippuwa, Attavillu and Medamulana and was found to have preference over the conventionally used mamoty. The cost of the implement is only one fourth of that of a mamoty.

Introduction

Weeds are a major problem on coconut nursery seed beds, particularly prior to sprouting and up to the stage when the ground is fully covered by the growing seedlings. Water is the major determining (limiting) factor for successful nursery management. With changing weather patterns, water has become a scarce resource which has to be made use of in the most efficient manner. Most weeds, particularly those which are shallow rooted, compete with coconut seedlings for moisture. Where limited irrigation facilities are available, there is more reason to keep the seed beds free of weed to prevent the wasteful loss of water.

In conventional nurseries, seed nuts are laid in rows spread about 45 cm apart on the seed beds. The mamoty used is about 25 cm wide, made of cast iron with a stout short handle and often quite heavy. It has been observed that very often emerging sprouts hidden in the mulch (of coir dust, paddy straw) are damaged as a result of this operation. These seedlings, depending on the severity of damage may still grow, but develop fan-like leaves due to the damage and finally are rejected at the stage when seedlings are issued for planting. In using the mamoty, one has to

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always bend the back to work the soil between the rows of seed which is also a painful operation.

The Chip Hoe

The implement introduced recently is referred to as the "chip hoe" and has a blade of about 10 cm wide (see figure) and gradually tapers towards the other end of the blade to form a somewhat pointed edge. While the broad edge is used to 'chip' the weed, the narrow end can be used to dig-in for any roots of weeds that are difficult to remove by chipping alone. The blade has a handle of about 1.25 m which makes it easy for the operator who does not have to bend the back and therefore makes it an efficient operation. It is also lighter than the conventional mamoty.

Cost savings

It was found that on the average for every seedling damaged in the use of this implement, fifteen seedlings were damaged when the mamoty was in use. The cost saving advantage through the issue of a large number of selected seedlings could be substantial. The operation was also found to be cost efficient with a time saving of about 25% compared to using the mamoty.

The local blacksmith will turn out the implement in cast iron for around Rs. 75/=. The wooden handle will cost another Rs. 10/=. It is also possible to turn it out with less costly iron for about Rs. 15/= each, but the durability will be low. The current market price of a good mamoty is about Rs. 270/=.

Worker preference

The implement was tried out in the coconut nurseries at Bandirippuwa, Attavillu, and Medamulana. Worker preference was related to the fact that it was light and involved no

bending of the back. Workers were able to move faster between the rows of seeds than when they were using the mamoty. A greater efficiency of labour could be expected when the operation becomes less cumbersome.

