



Bamboo Rhizome Propagation and Planting

Ethiopia | Madagascar | Tanzania



INTRODUCTION: Bamboo offset (or rhizome propagation) is a traditional method practiced by farmers across the world. An offset consists of underground rhizome with roots and bottom portion (3 to 5 internodes) of bamboo culm. The separated portion or offset contains all the necessary elements required to establish itself as a new plant. The best time to undertake rhizome propagation in nurseries is pre-monsoon as during this period the food reserves and growth hormones in bamboo culms or poles are high.

HOW TO OBTAIN OFFSETS



Identify young bamboo culms (1-2 years) from a healthy bamboo clump with desirable qualities.



Cut down identified bamboo poles at 3-5 nodes above from ground. Check for prominent culm buds at nodes. If buds are not available, cut after node locations with buds and/or branches.



Excavate the surrounding covering soil without damaging rhizome and buds and identify rhizome neck.



Cut the neck portion with a saw or sharp knife without harming the rhizome buds or emerging shoots.



Detach the rhizome with roots and culm from the clump. Immediately cover the rhizome portion with wet rice sacks or any locally available material and store the offset in shade and transfer the offsets to the plantation field or nursery.

TEMPORARY MAINTENANCE IN NURSERY:

Offsets or rhizomes can be temporarily maintained in nurseries (sand beds or in bags) for a period of 1-2 months. The sand beds or bags must be established under partial shade and be regularly watered. With the onset of monsoon, offsets can be transferred to the plantation fields.



PLANTING:



Early monsoon is the best time for direct offset planting as the rhizome buds are elongated during this time. It is advised to avoid damaging the rhizome buds during excavation. For planting, the pit size varies with the size of the rhizome. For small bamboos such as *Oxytenanthera* spp, the pit size is 30 cm X 30 cm X 30 cm, whereas medium sized bamboo like *ambusa* spp and *Dendrocalamus* spp needs a pit of 50 cm X 50 cm X 50 cm.



Thumb rule is to dig a planting pit which is twice as deep and wide as the size of the rhizome. During planting (both in nursery and field), use cow dung/soil cap or polythene bags to cover the top cut end of bamboo offset in order to prevent drying. The offsets must always be planted vertically on the pits and should be made to stand firm.

The survival and growth rate of plantations using Rhizome propagation method is very high. This method is destructive to the bamboo clump. It is not suitable for large scale plantations considering the cost and availability of planting material.

If the ideal season for plantation has passed, “part clump method” can be adopted, wherein two or three interconnected rhizomes have to be collected. This method is most suitable method for thin-walled bamboo species.



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