

4 PROPAGATION METHODS

4.1 Introduction

New bamboo plants can be obtained in two ways; by means of seeds and by cloning. Both are discussed hereafter.

Seed propagation



Bamboo seeds...

This method has a serious limitation, which is unreliable seed availability. This is due to the rather peculiar flowering habits of bamboo. Many species only flower once in 30 to 70 years, other species don't flower at all and many that do die as a consequence. Only few bamboos flower and produce seed frequently.

We refer to section 4.9 for a list of species that can be propagated by seeds. For the majority of species bamboo growers can only rely on cloning methods for propagation.

Cloning

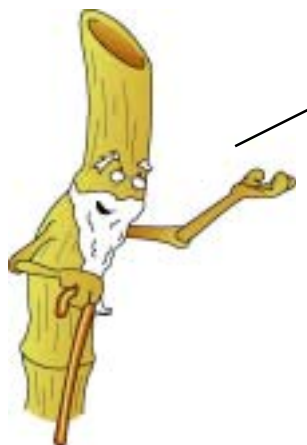


Culm cutting...

In cloning one relies on the bamboo's ability to grow plantlets with roots from rhizome, branch or culm buds. This naturally occurs when plant parts with buds are brought in contact with soil.

The new plants will be exact copies -or clones- of the mother plant. The advantage of cloning is that the selected motherplant's qualities are always present in the offspring.

In addition to the traditional method of 'clump division', several new cloning methods have been developed.



Hereafter six cloning methods as well as seed propagation are described in detail.

4.2 Offsets

4.2.1 General

Method description:	This is a conventional method of clonal propagation and much followed in communities for raising a few clumps in homesteads. A bamboo culm with rhizome attached -called 'offset'- is separated from a clump and transplanted.
Advantages:	With the offset method a bamboo plant is established much quicker than with other methods.
Disadvantages:	Offsets can be bulky and heavy and therefore expensive in labour and transport. Moreover, offsets have a comparatively low survival rate and their availability is limited. Collecting offsets may also cause injury to the clump.
Stages & Planning	
Collecting offsets:	In areas with a pronounced growing season, offsets should be collected just before. Harvesting during the growth season may cause damage to elongated buds.
Planting offsets:	Planting with offsets should be done in a season with sufficient rainfall. Offsets harvested in dry periods should be temporarily kept in a nursery until the next rainy season.
Harvesting mature clumps:	In two years after planting, mature culms can be harvested from the new clump.



The offset method is not very suitable for large-scale plantations !

4.2.2 Offsets - Step by Step



1. Select a 1 to 2 year old culm of a healthy clump.



2. Make a slant cut at 1 to 2.5 meters above the ground.



3. Remove the soil with care from around the rhizome.



4. Check whether the rhizome has healthy buds.



5. Detach the rhizome by cutting the rhizome neck of each connection with other rhizomes.





6. Wrap the offset in moist organic material for transport to the planting site.



7. Dig a planting hole twice as deep as the rhizome.



8. Plant the rhizome and firm in well.



9. Apply mud on the cut end or water it to prevent drying out.



10. Keep the soil moist but not waterlogged.



11. Watch the first new culm growing after three months...