LABONG

Scientific Names: *Bambusa spp., Dendrocalamus spp., Schizostachyum spp.*
Common Names: Bamboo shoots, Spiny bamboo, Thorny bamboo
Local Names: Labong (Tagalog
Batakan (Bisaya)
Rabong (Ilokano)
Dugian, Marurugi, Rugian lambo (Bikolano)

BOTANICAL DESCRIPTION

Bamboos are perennial giant grasses that belong to the family *Graminae.* They have woody parts or culms arising from the rhizomes. The culms are cylindrical with a series of nodes and internodes. The thickness of the culms wall varies, some thin while others nearly solid inside.

ADAPTABILITY AND AVAILABILITY

Bamboo occurs in the wild. It grows at up to 300 m altitude, often on heavy soils and marginal land. It grows well along riverbanks, hill slopes and freshwater creeks and tolerates flooding. Optimum pH is 5-6-5; it does not tolerate saline. Bamboo grows everywhere throughout the country, except in areas of high elevation.

USES/IMPORTANCE

Young shoots are eaten as vegetable, usually boiled and shredded. The culms are for construction, basketry, furniture, parquets, concrete reinforcements, kitchen utensils, chopsticks, musical instruments, hats, and toys. These are also used as firewood, if wood is scarce, and are suitable for making paper. Bamboo is often planted along water courses to prevent soil erosion. It is planted around farmhouses as windbreaks, and in living fences or to mark boundaries.

NUTRIENT VALUE

One hundred grams of edible shoots (7-15 days old) contain water (89 g), protein (4 g), fat (0.5 g), carbohydrates (4 g), fibre (1 g), ash (1 g), Ca (37 mg), P (40 mg), Fe (1.5 mg), vitamin B_1 (0.1 mg), and vitamin c (10 mg). The energy value is about 120 kJ/100 g.

PROPAGATION

Bamboo can be propagated vegetatively by culm cuttings, branch cuttings, layering, marcotting and tissue culture. Propagation by culm cuttings is most common. Cuttings about 50 cm long (with 2-3 nodes), are taken from the middle portion of 1-2 year old culms with a relatively large diameter. These are planted horizontally at 10 cm depth. Application of growth hormones, e.g 200-600 ppm alpha-naphthalene acetic acid (ANAA) or 100 ppm indole acetic acid (IAA) gives a better rooting rate and longer roots.

Cuttings should be planted immediately in a nursery or directly into the field with full sunlight. The field is cleared before planting preferably at the beginning of the rainy season. Cuttings or rooted cuttings are planted at a distance of 8-10 m at all sides, resulting in 100-150 culms/ha. After planting, mulch is distributed around the plant.

CULTURAL PRACTICES

During the first two years after planting, the farm should be weeded whenever necessary. If rainfall is not sufficient, watering irrigation is necessary during the initial period of development.

On poor soils, application of fertilizer e.g compost or nitrogen, phosphorus-potassium (NPK) mixture, is recommended. The recommended rate per ha is 20-30 kg N, 10-15 kg K and 20-30 kg silica applied twice, one month and four months after planting. Removal of spiny branches and old culm production and improve access.

PEST AND DISEASE MANAGEMENT

In the Philippines, tar spot (*Phyllacora shiriana)* and leaf rust (*Phakopsora louditiae)* are common diseases. Mites (*Schizostatranycus floresi)* are the most prevalent on the leaves. Young plantations should be protected against animals which eat young shoots. Harvested culms are prone to attack fuingi (brown, white and soft rot) and insects (beetles and termites).

The simplest method of controlling mites in the plantation is stripping and burning all affected leaves as soon as the pest appears. This should be done on the affected area to avoid further spread of mites.

For fungal diseases, removing and burning the affected culms is the primary control measure. Bamboos need to be protected from animals including man. Cattle and carabao may feed on the young shoots of the growing bamboos. It is best to put up a fence around the plantation particularly during the first three years of establishment to keep out stray animals. Fences will also serve as protection against intruders.

HARVESTING

Bamboo shoots emerge during the rainy season and can be harvested for food 7-15 days after emergence.

POSTHARVEST HANDLING

Labong should be consumed soon after harvest to prevent the development of bitter taste. Bitterness is also reduced by minimizing exposure of shoots to sunlight. Labong easily absorbs oil and hence, should not come in contact with diesel/gasoline to avoid contamination. Shoots are washed, after which, 2-3 layers of husk as well as the hardened base are removed. To remove the hydrocyanic acid which is toxic, shoots are boiled.

Wrap and store the shoots at 2 ^{0}C for 6-10 days.

Pack them in 5-Kg cartons and vacuum pack in polyethylene plastic.