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Pterocarpus macrocarpus Kurz

Taxonomy and nomenclature

Family: Fabaceae (Papilionoideae)

Vernacular/common names: Burma padauk (trade name); pradu (Thailand); Giang hurong qua to (Vietnam); mai doo (Laos).

Distribution and habitat

Native to Indochina, northern Thailand and Myanmar; introduced to India and the Caribbean.

Within the natural area of distribution it is found at 100-800 m altitude in areas with 1000-2000 mm rain/year and a mean annual temperature of 23-27°C. It is a light-demanding, frost sensitive species that requires good drainage and prefers sandy loam.

Uses

The padauk is a strong, valuable timber and one of the main export timbers from Thailand. Most timber is harvested from natural forests and the species is suffering from overexploitation and agricultural expansion.

Foliage and fruits. From: Vietnam Forest Trees.

Botanical description

Medium to large tree, 10-25 m tall, sometimes up to 35 m. The bark is grey/brown and flaking, exuding a bright red gum. Leaves compound, over 20 cm long, with about 11 leaflets. Flowers yellow, fragrant, in 5-9 cm long racemes.

Fruit and seed description

Fruit: flat, rounded, winged pod, 4.5-7 cm in diameter. There are normally two seeds per fruit.

Seed: flat, red-brown, 0.8-1 cm long with leathery seed coat. There are 1400-2000 seeds/kg.

Flowering and fruiting habit

Deciduous tree that is leafless for a period during the dry season. In Vietnam it flowers in February-April and ripe fruits are available from December. In Myanmar flowers appear March-May. The ripe fruits remain on the tree for several months.

Harvest

The seeds are mature when the fruit has turned brown and dry. In most places the fruits are collected from the ground after shaking the branches.

Processing and handling

To reduce bulk the wings are removed in the field. The dewinged fruits are dried in the sun. Seed extraction is very labour intensive and in most places not performed. In Laos the dewinged fruits are left for two weeks near a termite mound, covered with leaves and watered. After the two weeks the fruits are cleaned with water, sun dried and stored.

Storage and viability

Seeds are orthodox and stores well at 9-10% moisture content in air-tight containers, in cold store or at room temperature.

Dormancy and pre-treatment

Soaking in warm water 35-40°C.

Sowing and germination

A trial in Puerto Rico showed that if the seeds are extracted, germination is faster and maybe also higher. Extracted seeds started to germinate after 5 days and final germination was 70% compared to 11 days and 64% when sowing unit was the dewinged fruit.

In Vietnam seedlings are planted out after 8-12 months when they are about 30 cm. Natural regeneration is best in dry, open forest, and in disturbed areas. Vegetative propagation by cuttings is possible.

Natural stand of *P. macrocarpus* used for seed collection. Laos. Photo: Dorthe Jøker, DFSC.

Selected readings

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