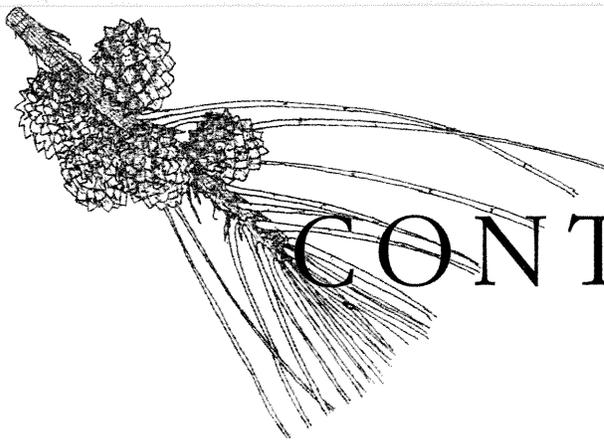


# *Tropical Tree* SEED MANUAL

J.A. VOZZO, EDITOR

United States Department of Agriculture

Forest Service



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# *Lonchocarpus rugosus* Benth.

NADIA NAVARRETE-TINDALL and HUGO ARAGÓN

Forestry Sciences Laboratory, USDA Forest Service  
(Department of Biology, New Mexico State University) and  
Dirección de Urbanismo y Arquitectura (DUA), El Salvador

## FABACEAE (BEAN FAMILY)

*No synonyms*

Arripin, black cabbage bark, canansin, canasin, catzin, chaperno, chapulaltapa, masicarán, masicarón, matabuy, and matachalpul (Lagos 1977, Witsberger and others 1982)

*Lonchocarpus rugosus* is native to southern Mexico and Central America. Other *Lonchocarpus* species reported in El Salvador are *L. atropurpureus* Benth., *L. minimiflorus* Donn. Smith, *L. peninsularis* (Donn. Smith) Pittier, *L. phaseolifolius* Benth., and *L. salvadorensis* Pittier (Berendsohn 1989, Witsberger and others 1982).

*Lonchocarpus rugosus* is a slow-growing, medium-sized tree that may reach 15 m in height. The tree with its broad and dense crown may reach maturity when it is only 2 m tall. *Lonchocarpus rugosus* grows from sea level to 1400 m and is adapted to dry conditions. In El Salvador, it is found only on dry and steep sites, especially in hot, subtropical, humid forests (Witsberger and others 1982).

*Lonchocarpus rugosus* produces high quality wood used in construction and wooden wagons (Witsberger and others 1982). In Guatemala, a purple dye used to color fabrics is obtained from the bark. This species grows slowly but its round and dense crown could be useful in silvopastoral systems, parks, or other urban areas.

*Lonchocarpus rugosus* blooms in June and July. The purple-reddish flowers measure 1.1 to 1.3 cm in racemes 7 to 13 cm long, and the fruits are flat legumes or pods 5 to 14 cm long with one to three seeds (Witsberger and others 1982). The indehiscent pods mature from October through December and are very abundant in full-grown trees.

Pods are collected by hand directly from the tree. Seeds from pods collected from the ground are usually infected by weevils. Seeds are extracted by hand and average 6,000 per kg. Seeds kept dry at 5 °C are viable for at least 3 years.

Pregermination treatments may be necessary for fast germination. Only 17 percent of nonscarified 6-month-old seeds germinated 30 days after planting, while more than 30 percent of fresh nonscarified seeds germinated within 10 to 15 days (Navarrete-Tindall and Aragón, unpublished data). Placing seeds in boiling water for 1 to 5 seconds did not improve germination and seeds exposed for 10 to 15 seconds died. Germination was higher in loam soils than in sand, perlite, and fine red basalt. Future research should investigate other scarification treatments including use of lower water temperatures.

In nursery production, one seed is planted in a polyethylene bag containing soil with 10 to 15 percent organic matter. Seedlings vary in growth; 5-month-old seedlings from a single tree reached 8 to 40 cm in height after outplanting at 3 months. The longest leaves were 32 cm and had 9 to 13 leaflets (Navarrete-Tindall and Van Sambeek, unpublished data). Outplanting 6-month- to 1-year-old seedlings should occur during the rainy season. Mechanical weed control is required during the first two years.

## ADDITIONAL INFORMATION

Nodulation was observed recently in 3-month-old *L. rugosus* seedlings (Navarrete Tindall and Van Sambeek, unpublished data) suggesting that like other *Lonchocarpus* species the tree is a nitrogen fixer (Allen and Allen 1981). Additional research will determine nitrogen fixation efficiency of the rhizobial bacteria symbiotic to the species.

