Pouteria campechiana (Kunth) Baehni

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SAPOTACEAE (SAPODILLA FAMILY)

No synonyms

Canishte, k'anixté, mamey de Campeche, zapote amarillo, zapuyul

Pouteria campechiana is native to America. It is distributed naturally in Mexico and Central America, where it forms part of the wet and subhumid tropical forests.

Pouteria campechiana is an evergreen tree that reaches 30 m in height and 30 cm at d.b.h. The trunk is straight with an irregular and dense crown, made up of thin and horizontal branches. The leaves are simple, alternate, gathered at the tips of the branches, oblanceolate to oblanceolate-oblong, 6 to 25 cm long, and 2.5 to 8 cm wide. In the Yucatan Peninsula, the tree grows in calcareous soils with outcropping rocks, forming part of the tropical forest. The regions where the tree grows have an average annual temperature of 26 °C, with a maximum temperature of 36.7 °C and a minimum temperature of 14.9 °C. The maximum temperatures correspond to the months of April and May, the minimum temperatures to the months of December and January. Average annual precipitation is approximately 1288 mm, ranging between 900 and 1800 mm. The species grows at elevations near sea level.

Because the tree is appreciated for its edible fruits, it is planted in yards and orchards. The wood is hard and resistant, and it is used for firewood and in rural construction (Barrera 1981, Cabrera and others 1982, Chavelas and González 1985, Escalante 1986, Flores 1993).

The tree begins to yield flowers and fruits between 4 and 5 years of age. In southeastern Mexico, *P. campechiana* blooms May through June, and fruits between July and November (Juarez and others 1989). The flowers are light green, sweet-smelling, and arranged in small axillary fascicles. The fruits are pyriform or subglobose berries, up to 7 cm long, 2.5 to 5 cm in diameter, yellow when ripe, and pulpy, with a thin peel and a yellowish, sweet-tasting pulp. Each fruit contains 3 to 5 seeds (Cabrera and others 1982, Miranda 1975, Pennington and Sarukhan 1968). The seeds are ovoid to globose, terete in cross section, and 2 to 4 cm in diameter. The seedcoat is light brown in color, smooth, shiny, and osseous. It has a long and large lateral hilum scar that is white or yellowish-cream in color and occupies part of the body of the seed.

From August through October, the fruits are collected either directly from the ground or by climbing the trees and using poles with metal hooks. The pulp is removed from the pulpy fruits by hand inside a bucket of water. Resulting impurities float and are gathered with a strainer. Good seeds sink. Subsequently, the seeds are dried in the sun in ventilated places for 1 or 2 hours, depending on the lighting conditions. Seeds average 490 per kg. Seeds remain viable for approximately 9 months when stored under ambient conditions (24 to 30 °C). With longer storage seed viability quickly diminishes (Vega and others 1981).

The germination of the seeds is cryptocotylar. To improve germination, the seedcoat should be broken before sowing. The fresh seeds germinate at 18 percent. A heterogeneous sample of seeds germinated 68 days after sowing (Vega and others 1981).

ADDITIONAL INFORMATION

The seed hilum is subbasal. The micropyle is indiscernible. The embryo has a straight axis; is relatively symmetrical and cream-colored with pink hues; and fills the seed cavity. The two massive cotyledons are pulpy, shaped like the seed, plano-convex in cross section, and strongly attached to one another, with smooth surfaces, sinuous contact surfaces, and latex. The plumule is undifferentiated. The radicle is small and conical or puntiform (Cronquist 1946, Eyma 1966, Guil 1967, Pennington and Sarukhan 1968, Pilz 1981, Reitz 1968, Wood and Channel 1960).


2 cm