

Talisia oliviformis (Kunth) Radlk.

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SAPINDACEAE (SOAPBERRY FAMILY)

No synonyms

Cotoperiz, guaya, huaya, keneb uayum, uayab, wayam

Talisia oliviformis is native to America. It is distributed naturally from Mexico, across Central America, to northern South America, and in the West Indies. The plant is an important component of wet and subhumid tropical forests.

Talisia oliviformis is a deciduous, dioecious tree up to 20 m in height and 50 cm d.b.h. The tree grows slowly and has a long life (Hoyos 1979). The trunk is straight, slightly grooved, and has small spurs at the base. The crown is pyramidal, very dense, and made up of rising branches. The leaves are generally paripinnate, 5 to 15 cm long, and made up of 1 to 2 pairs of elliptic, oblanceolate or obovate leaflets, 3 to 8.5 cm long and 1.5 to 4.5 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 tree grows from sea level to 150 m.

Talisia oliviformis is a tree with multiple uses. Its bitter-sweet, edible fruits are sold in markets. The leaves serve as forage for domestic animals, and the wood is used for firewood and in rural construction. The flowers are honey bearing. *Talisia oliviformis* is planted in backyards and orchards. It is also cultivated as an ornamental and a shade tree in streets, parks, and gardens (Aguilar 1966, Barrera 1981, Cabrera and others 1982, Chavelas and González 1985, Escalante 1986, Flores 1993, Hoyos 1979, Rico-Gray and others 1991).

Because its geographical distribution is extensive, *T. oliviformis* blooms at different times of the year. Trees begin to yield flowers and fruits between 5 and 6 years of age. In south-eastern Mexico, the plant blooms from February to May and

fruits from April through June (Cabrera and others 1982, Juárez and others 1989, Pennington and Sarukhan 1968). The flowers are sweet smelling, yellow-cream or yellowish green in color, and arranged in panicles. The fruits are globose berries, 1.5 to 2.5 cm long, and yellowish green when ripe, with a fleshy, thin, and sweet pulp. Each fruit contains one seed (Cabrera and others 1982, Pennington and Sarukhan 1968). The seeds range in shape from ovoid to globose or ellipsoid and are 1 to 1.5 cm long and in diameter. They are surrounded by a pulpy, whole, succulent aril that is yellow in color. The seed coat is light brown, smooth, opaque, and crustaceous.

The fruits are collected in April and May 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 locations for 1 or 2 hours, depending on the lighting conditions. Seeds average 355 per kg and remain viable for approximately 9 months when stored under ambient conditions (24 to 30 °C). Longer storage quickly diminishes seed viability (Vega and others 1981).

The germination of the seeds is cryptocotylar. Under humid conditions, fresh seeds germinate at 80 percent without pretreatment. A heterogeneous sample of seeds germinated approximately 12 days after sowing (Vega and others 1981).

ADDITIONAL INFORMATION

The hilum is basal and vaguely elliptic or circular. The micropyle is indiscernible. The embryo has a curved axis and is asymmetrical, white or cream in color, with expanded cotyledons. There are two massive, unequal, pulpy cotyledons. The plumule is undifferentiated. The radicle is ligulate (Pennington and Sarukhan 1968, Standley and Steyermark 1949, Vittien 1937).

