

Spanish Plum (*Spondias purpurea*)

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Source: <http://www.infotortuga.com/2014/11/la-ciruela-de-huesito-spondias-purpurea.html>

Introduction

Spanish plum (*Spondias purpurea*), is also known as hog plum, red or purple mombin, and is locally known as siniguelas. It is a small/medium sized tropical fruit tree that can grow up to about 25 ft in height. It is native to southern Mexico to northern Peru and Brazil and is widely cultivated in many tropical areas around the world. The plant is commonly grown on Guam and can be found around homes and gardens throughout the island. Its time of introduction to Guam is unknown (Scully and Null, 1988).

There are many related species of *Spondias purpurea* with similar characteristics. Within *Spondias purpurea*, there are at least 20 known varieties (Cuevas, 1998). The names of varieties in Guam are unknown. Local varieties consists of trees that produce red, purple, or yellow fruits when mature.

Growing Spanish Plum

General plant characteristics

Spanish plum grows best in temperatures ranging from 72- 82°F. It can grow on many soil types, but fertile well-draining soils are preferred. The tree develops spreading

canopies with branches that tend to extend horizontally. Its wood is very brittle and prone to breaking and rotting. Leaves are compound, deciduous and alternate with bright red or purple color when young eventually turning green (Morton 1987). The flesh of mature fruits is yellow containing one seed.

Propagation and planting

Spanish plum can be propagated by seed and vegetative propagation methods, particularly stem cuttings. Plants grown from seed generally fruit in about 4-5 years, while cuttings may fruit within 2-3 years. Plants grown from seeds have a lower success rate than cuttings, which can be low due to poor pollen formation (Morton 1987). Cuttings is the preferred method of growing Spanish plum and is highly successful. Sections of cuttings should be at least 4 feet long and 2 inches thick with a horizontal cut. Individual cuttings can be grown in pots before transplanting (Figure 1), or directly planted into the ground. Like most tropical fruit trees, Spanish plum prefer growing under full sunlight for maximum production. The recommended orchard spacing for Spanish plum is 15-20 ft. (Bamba, personal communication, March 26, 2021).



Figure 1. Stem cutting of Spanish plum

Source: <https://picclick.com/2-Fresh-Hog-Plum-Tree-Cuttings-UN-ROOTED-272435655321.html#&gid=1&pid=1>

Plant Care and Maintenance

Pruning

Pruning up to 3 times a year is recommended to control the tree to a desirable size. Ensure that during a pruning event, not more than 25% of plant material is removed from the tree. It has been documented that pruning enlarges the size and weight of the fruit (Crane and Wasielewski, 2019). The Cooperative Extension & Outreach Service of UOG can be contacted for further advice on proper pruning of trees.

Irrigation

It is recommended that Spanish plum plants be watered every two days for several weeks for newly planted trees. Watering should be done at least once or twice a week for thereafter. Avoid over-watering/saturation of soils. During high rain events, watering can be stopped or reduced (Crane and Wasielewski, 2019).

Plant nutrition

Small amounts of fertilizer can increase fruit yields and size. Young trees are recommended to be fertilized every two to three months during the first year, beginning with a 4oz. application of a complete fertilizer such as 10-20-20 (N-P-K) per plant, and gradually increasing to 1lb. as trees increase in size. Apply no more than 10 to 12 lbs of complete fertilizer per plant per year per plant for mature trees (Crane and Wasielewski, 2019).

Flowering and fruiting

Spanish plum produces pink or red to purple complete flowers held along the branches (Figure 2). In Guam, Spanish plum begins flowering in February or March and begins fruiting from April to July. The peak production season of the plant is in May and June then starts declining to its average rate in July (Bamba et al, 2009). Fruits, depending on variety, mature from green to red, purple, orange, or yellow (Morton, 1987) (Figure 3).



Figure 2. Spanish plum flowers emerging from a branch
<https://www.backyardnature.net/mexnat/spondias.htm>



Figure 3. Immature and mature Spanish plum fruits
<https://www.prlog.org/10748564-jocote-spondias-purpurea-drabhay-kumar-pati-best-nutrition-usa.html>

Common pest and diseases

Common insects known to attack Spanish plum include thrips and scales. Mites and fruit flies are also known to infest plants (Crane and Wasielewski, 2019).

Root rot of Spanish plum plants can occur as a result of flooded soils or over-watering. Other known diseases of include a fungal fruit disease (stem-end rot) and fungal wood disease (gummosis) (Crane and Wasielewski, 2019).

For proper control measures on pest and diseases on plants, please contact Cooperative Extension & Outreach of UOG.

Harvest and Post-Harvest Storage

For best quality, it is recommended that Spanish plum be harvested on plants when fruits are close to fully ripening or fully ripe. Because the fruits are thin skinned, they must be carefully picked by to avoid damaging the fruit. When ripen or close to ripen on the tree. To extend shelf life, freshly harvested mature fruits can be stored in a chiller for several days at 31-32°F with a relative humidity of 90-95% (Gast 1914).

Uses and Nutrition

Spanish plum is commonly consumed raw as a ripe fresh fruit. Fruits are also used as ingredients in a variety of beverages and dishes including smoothies, jams, desserts, and soups. Spanish plum contains essential nutrients and vitamins such as Vitamins A, B, and C, calcium, phosphorus, and iron that help boost the immune system (Morton, 1987).



Figure 3. Immature and mature Spanish plum fruits
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Medicinal Uses

Spanish plum plants provide as medicine in several countries. In Mexico, the fruits are regarded as diuretic and antispasmodic. The fruit decoction is used to bathe wounds and heal sores in the mouth. The astringent bark decoction is a remedy for mange, ulcers, dysentery and for bloating caused by intestinal gas in infants. In the Philippines, the sap of the bark is used to treat stomatitis in infants (Morton, 1987).

Other Uses

Spanish plum trees discharge a gum that is used as a glue in Central America. Leaves can provide as forage for livestock and food for swine (Morton, 1987). Spanish plum can be a multi-purpose agroforestry fruit tree providing food for people and forage for livestock. The tree can be used as a hedgerow species and can also be incorporated in agroforestry systems that practice multi-story cropping.

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