

Jojoba—*Simmondsia chinensis* (Link) S.¹

James M. Stephens²

While jojoba is not used primarily as a vegetable, its soft-skinned nuts have long been eaten by Indians as food. It is a wild desert shrub that produces oil-rich nuts. It is for this oil that the plant is most prized.

Jojoba is native to the Sonoran Desert of northwestern Mexico and to neighboring regions in Arizona and southern California. Within this region it is often scattered in dense stands, over 100,000 square miles of arid lands. Owing to its climatic requirements, it is unlikely that jojoba would grow well in Florida's humid, subtropical conditions.

However, there have been many who have been interested in trying it in the state, especially on the sandy, well-drained soils of the central scrubs. So far, no conclusions have been reported.

Description

Jojoba is an unspectacular looking shrub that may reach 15 feet in height. Its flat gray-green leathery leaves and deep root system make it well adapted to withstand desert heat and drought. It lives a long time, perhaps to 200 years.

These shrubs are either male (staminate), producing pollen, or female (pistillate), producing flowers. The flowers have no odor or petals to attract insects. When pollinated, usually by wind in late March, the pistillate flowers develop into fruit in August. In the summer's heat the green fruit dries, and its outer skin shrivels and peels back, exposing a wrinkled brown soft-skinned nut the size of a small olive.



Figure 1. Jojoba

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The nuts contain a vegetable oil that is clear and odorless but feels less oily than traditional edible oils. Half the weight of the nut is oil. The oil is important because its chemical structure is unique among all known vegetable oils. Jojoba oil is a polyunsaturated liquid wax of a type not easily synthesized commercially. The only other source has been the sperm whale, which has been killed in great numbers to supply the demand for quality oil.

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Culture

The nut (seed) can be germinated soon after harvesting. At about 77°F, germination occurs in less than a week. Stem cuttings have produced roots within 8 weeks in mist propagation at 72°F.

Jojoba shows its best growth in areas with 10-18 inches of annual rainfall and where temperatures seldom fall below 25°F for more than a few hours at night. It grows on a diversity of soil, from porous rocks to clays, in slightly acid to alkaline soils, on mountain slopes and in valleys. But it is always found on well aerated soils.

Use

Some of the potential uses for jojoba nuts and plants are as follows: lubrication, cosmetics, pharmaceuticals, salad oil, vegetable oil, shortening, waxes, animal feed supplement (20-30% protein content of oilless meal), animal browse food, ornamental plant, and human food. The roasted nuts smell and taste like roasted coffee beans.