

Simmondsia chinensis

[Synonyms : *Buxus chinensis*, *Simmondsia californica*, *Simmondsia chrysophylla*, *Simmondsia pabulosa*]

JOJOBA (English, Finnish, German) is an evergreen shrub. Native to Middle America (particularly Mexico) and to the south-western United States, it has small yellow flowers. It is also known as Goat-nut, and Pig nut.

Oil can be extracted from the seeds.

Chinensis means ‘of or from China’.

Jojoba which is the Mexican name for the plant is usually pronounced ‘hohoba’.

Local American Indian tribes including the North American Cahuilla, Cocopa and some of the Tohono O’Odham tribes ate the oily seeds raw. The Cocopa also boiled them, and the Yavapai dried and ground the small egg-shaped green fruit into a kind of butter. Cahuilla Indians also roasted the dried and ground seeds which were then used to make a coffee-like drink.

Some Indian tribes used jojoba for hairdressing.

The shrub seems to have had limited local medicinal interest although records do show that the Yavapai, and some of the Tohono O’Odham tribes used the fruit to heal skin sores.

This unprocessed seed is one of the few known plant equivalents of sperm whale oil. Its commercial advantage was appreciated initially only in the mid-1960s as a high temperature and high pressure lubricant and it was another ten years before commercial cultivation was begun. (No doubt one catalyst for this was the recognition of sperm whales as a protected species after the Endangered Species Act was passed in 1969.) This seed oil (referred to by some chemists as a ‘liquid wax’) is required for many diverse uses ranging from feeding leather goods, the manufacture of printing inks, and polishes, or an ingredient in cosmetics, hair shampoos and conditioners to engine lubricants and military applications (for example the production of ballistic missiles). In 2003 it was reported that the oil’s suitability as a vehicle fuel was being researched in the Middle East and that laboratory tests in engines had already begun. Results at that time appeared to be favourable and to show that engines could run longer and more quietly on jojoba than on diesel fuel (with the added advantage that far fewer pollutants were emitted. Certainly it was noted that Egyptian farmers were enthusiastic about such prospects as they were starting to cultivate the plant specifically as a fuel crop. As the seed oil will pass, largely unused, through the digestive tract it has also been employed as a dietary oil and research continues on its suitability as a general food oil (not least for slimming foods).

Jojoba’s cultivation has had a chequered history. In the 1920s the first experimental planting was carried out in Arizona (United States) and this led to the identification of its seed oil content. Little further progress was made however until the 1960s when various small-scale experimental plantations were planted in California. The largest commercial enterprise emerged in the 1970s at the San Carlos Apache Indian Reservation. By 1978 the harvest from the Reservation was to reach a peak of 30 tons. To this point it was not only generating income for the Reservation but also providing a source of jojoba seed for research. Then the San Carlos Apache Tribal Council was faced with disaster. At the end of the 1970s it decided to increase the size of its plantation to meet anticipated demand –

but 85% of the crop was lost when the area experienced record low temperatures and the introduction of its own seed processing facility on site coincided with successive severe Winters that were also detrimental to the crop. (This experience of jojoba did not deter other American plantations however and it is being grown commercially in the United States today.) Jumping to the early 1980s jojoba was targeted as an investment commodity in Australia. Prospective investors were looking at a minimum stake of £3,000 for half an acre in return for an estimated \$20 per lb. on a possible yield of 1,500 lb. per half acre. Obviously prices will drop as more and more is grown – but this does illustrate of the crop's magnetism at the beginning of the 21st Century.

Jojoba has environmental use as it is planted in desert reclamation schemes and is also valued for erosion control. Some authorities have noted that it has a taproot that can penetrate to 90 ft. which counters irrigation arguments in desert areas.

Although the residue from the oil extraction is high in protein, until ways of neutralizing its poisons are found, it cannot be used for animal feed.