



Vanilla

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Name: *Vanilla fragrans* (Orchidaceae).

Origin: Indigenous to south-eastern Mexico, Guatemala, and Central America.

Distribution: Vanilla is grown in most tropical island countries including Madagascar, Reunion and the Comoro Islands and tropical regions of the South Pacific and the West Indies. Although the plant grew well in the old-world tropics it did not produce fruit because there were no natural pollinators in these regions. A practical means of hand pollination was developed in 1841 and it is still used today for commercial production.

Australian Distribution: In Australia, vanilla can be grown in North Queensland and the Northern Territory. There are no commercial plantations in Australia at present.

Preferred Climate and Soil Types: Prefers a hot, moist climate with frequent rain with an average temperature of 27°C. A short dry period is required to induce flowering. Soils should be light and friable with adequate drainage. A thick layer of humus material or mulch and light shade is also required.

Description: Vanilla is a fleshy, herbaceous perennial vine, climbing by means of adventitious roots up trees to a height of 10-15 m. Stems are dark green and photosynthetic. The leaves are large, flat and alternate with an aerial root opposite. They are narrow oblong shaped, tapering at both ends with numerous parallel veins.

Flowers are borne on short axillary bunches, with one to three flowers open at one time. They are large, pale greenish-yellow, fragrant, waxy and orchid like. The fruit is a long cylindrical capsule, called a bean. Due to the structure of the flower and the lack of vectors pollination must be carried out by hand.

Varieties: There are very few, if any cultivars of *V. fragrans* as most introductions around the world are from cuttings. Therefore very little clonal variation can be expected. There are two other species sometimes grown commercially, *V. pompona* (West Indian vanilla) and *V. tahitensis* (Tahitian vanilla) but they yield an inferior product.

Culture: Commercial vanilla is always grown from cuttings taken from healthy vigorous plants. They can be from anywhere on the plant and can be from 30 cm to 3 m long.

Short cuttings may take up to three to four years to flower, where long cuttings will flower in one to two years. Remove the lower two to three leaves from the stem and push into the humic layer and mulch. The stem should be tied to the support until the aerial roots have taken hold, and the end of the stem draped over the top of the support to hang.

Supports can be a small tree with low branches and light chequered shade or a trellis with partial shade. Some form of wind shelter is also recommended, as plants can be damaged by strong winds.

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Pests and Diseases: There are no recorded pests of vanilla in Australia except the green vegetable bug which may cause some damage.

In overseas countries, bugs, weevils and caterpillars are known pests.

Anthraxnose, fusarium and mildew are also known to attack vanilla.

Fruiting Season: Flowering occurs in November - December and harvesting is between June - September.

Harvesting: Pods should be harvested when they are fully grown, and the tips begin to turn yellow. Immature pods will produce an inferior product and over ripe pods split during the curing process.

Storage Conditions: Beans must be cured and dried before use as this process develops the aroma and flavour. There are different methods of curing vanilla adopted by the different countries that produce it. In Madagascar they use a process of cooking, sun drying, sweating and slow drying as follows:

- Cooking – pods are immersed into 80°C near boiling water for 30 seconds and allowed to drain for 15 minutes.
- Sun-drying – cooked pods are spread out on a dark woollen blanket and exposed to the sun for 2 - 3 hours.
- Sweating – the warm pods are rolled up inside the blanket and stored over night in an airtight wooden box

This process is repeated for several days – avoiding overexposure to the sun as pods will become dry and brittle.

Pods are fully cured when they are fine chocolate brown colour, flexible and wrinkled.

Slow drying – pods are spread out in a well ventilated drying room for 30 days and turned frequently.

When fully dried they can be stored in an air-tight container.

Culinary Use: Vanilla is mainly used as an essence for flavouring food such as cakes and ice-creams.

Issues: **WARNING** - Vanilla poisoning can occur from contact with the latex juice in the green plant, resulting in skin inflammation. Handling pods during curing can also result in skin eruptions, headache, fever and intestinal disorders.

References: Purseglove, Brown, Green & Robbins (1981). Spices Vol 2. Longman. N.Y.