

# Vanilla

# #6



**Botanical name:** *Vanilla planifolia*

**Common name:** Vanilla

**Tongan name:** Vanila

**Other names:**

## DESCRIPTION & USES

Scientific name - *Vanilla planifolia*, Tongan name - *Vanila*.

Vanilla is an important cash crop in Tonga. In 1993, the total area under vanilla was 804 hectares of which about 78 percent was in Vava'u and 18 percent in Tongatapu. The average production has been about 110 tons of green vanilla, or 22 tons of cured vanilla, in the last five years. Vanilla production requires considerable time for maintenance, and some tasks, such as pollination, must be carried out in a timely and correct manner. Significant yields are not attained until the fourth year after planting. For this reason it is advisable to grow intercrops to supply food and cash while vanilla is not productive.



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## PRODUCTION NOTES

**Climate:** Vanilla requires 1000 - 2000mm of well-distributed rainfall; a short low rainfall period of 6 to 8 weeks during flowering and again at harvesting (May to September) is important. Daily temperatures of 20 - 30 °C are optimal. Vanilla requires shade and shelter, so trees, preferably fast growing trees, should be planted as windbreaks

**Soil:** Vanilla requires well-drained, deep, fertile soils, rich in organic material.



**Propagation:** Vanilla is a perennial climbing plant which is cultivated on live trees, such as the *fiki* (*Jatropha curcus*), which provide support and shade. Cuttings of the *fiki* tree are planted at least 3 to 4 months before the vanilla is planted. Vanilla is planted by cuttings of at least 1m long and with at least 12 nodes. It is very important to select planting material that is healthy and virus free.

**Planting density:** Spacing of about 2.5m between rows and 1.5m along rows can be used, or 1000 plants/ac.

**Growth period:** The first vanilla fruiting is in the third year of growth, to be harvested in the fourth year. Well-managed vanilla plantations should produce for 12 to 15 years.

**Intercropping:** To offset the accumulating development expenditures, intercrops may be planted in the first 2 years of production. Crops such as pineapples, vegetables, yams and taro can be grown. Intercrops will not only provide food and cash for the farm family, but will shade the young vanilla plants and reduce the need for extra mulch and weeding.

**Pollination:** In Tonga, the flowers of the vanilla have to be pollinated by hand. After pollination, it takes 9 to 10 months until the beans are mature. The beans are harvested when the tips turn yellow. The green beans turn brownish black through a fermentation process which occurs as the beans are "cured".

**Looping:** Looping is the regular burying in the soil of the new vanilla stems, near the base of the support tree, to allow formation of new roots and encourages the growth of new shoots. Looping should be done at least every 2 months.

**Pests and disease control:** The most significant problem of vanilla plants is infection by viruses. This can occur from the use of infected planting material and by the transfer of sap during practices such as looping. The only way of reducing the problem is to replace the infected plants with healthy ones.

**Marketing:** The price of vanilla beans is dependent upon the world market for vanilla.

**Processing:** Vanilla beans must be cured prior to export. Curing takes about 18 hours of labour per kg of green beans and yields 0.2kg of cured vanilla (i.e., 5kg of green beans yield 1kg of cured vanilla). A farmer who seeks to cure his own crop would have to invest about \$600 towards the cost of a cooperatively owned shed in the fourth year of vanilla productions.

### **Marketing of vanilla:**

Vanilla is entirely grown for export market. Farmers sell their vanilla to exporters, the main exporters of vanilla are private sector's company or individuals. The average farm gate price for green vanilla is about \$80 per kg.

### **Economics of vanilla production:**

A budget for the production of vanilla is given with the assumption that the vanilla beans will be sold when still green, i.e., not cured.

For more information

Address: Ministry of Agriculture, Food and Forests (MAFF)