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National Agricultural Research Institute

How to plant Vanilla



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Copies of this toktok and further information
can be obtained from:



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Wet Lowlands Islands Programme**

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THE INSTITUTE

The National Agricultural Research Institute (NARI) was established by an Act of the National Parliament of Papua New Guinea in July 1996 as a publicly funded, statutory research organisation, to conduct applied and development oriented research on food crops, alternative food and cash crops, livestock and resource management issues. Besides applied and adaptive research, NARI is responsible for providing authoritative technical, analytical and diagnostic services and up-to-date information to the entire agriculture sector in PNG. The major targets are the smallholder semi-commercial farmers in the country.

The mission of NARI is to contribute, through applied research and technical services, to the development of the agriculture sector and realisation of the national goals by identifying, adapting and transferring agricultural technologies and information, so as to:

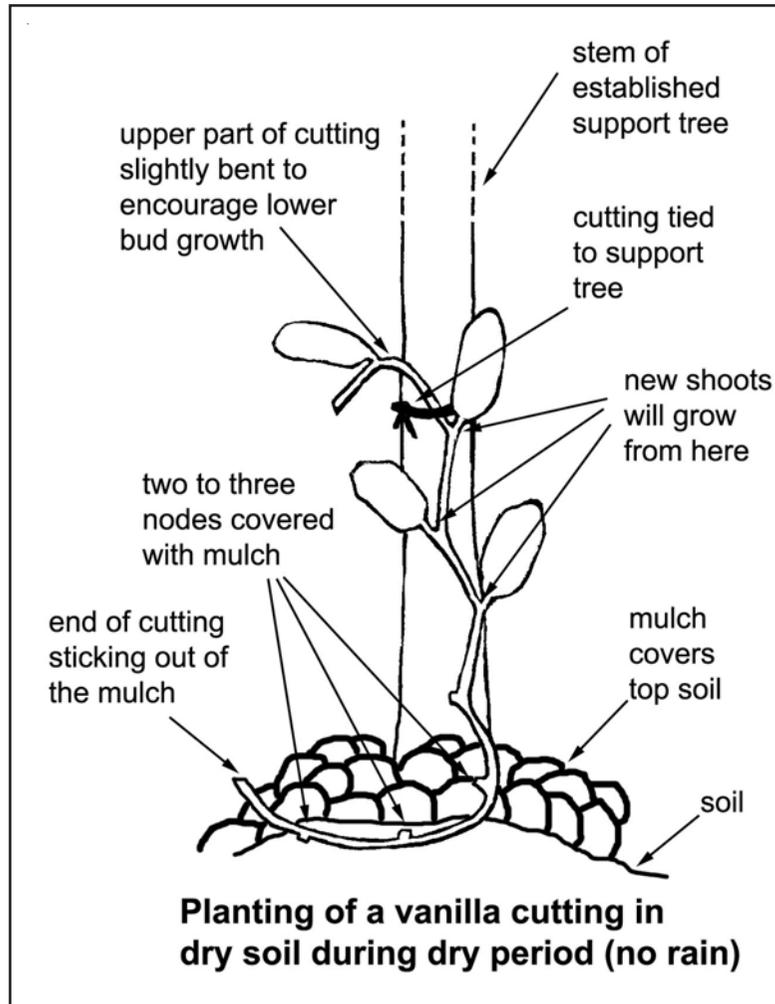
- Enhance the productivity, efficiency and sustainability of the smallholder agriculture, and
- Improve farmer income, food security and welfare of Papua New Guineans and the nation.

This toktok was written by Gadi Ling, NARI Wet Lowlands Islands Programme in December 2002 (revised in December 2003). The material presented is based on the best information available at the time of printing (December 2003).

Vanilla Planting Summary

- Use thick 1.20 to 1.40 m long apical stem cuttings from very healthy, vigorous plants
- Dress the vine: cut four to five leaves off at the bottom, cut the growing shoot at 15 cm (the tip plus two to three leaves) from the growing point
- Hang the cuttings in a very shady, ventilated area for seven to ten days
- Bury a two to three node portion of the cutting or lay the cutting on softened soil and cover with mulch
- Leave the bottom end of the cutting out of the mulch
- Tie the planted cutting to the support tree

The upper end of the cutting should be bent slightly to encourage quicker sprouting of one of the lower buds. Establishment is better during a rainy season.



How to plant Vanilla

Before planting vanilla, support trees need to be well established to provide support and shade for the newly planted vines. For details, please refer to NARI toktok 'Support and Shade Your Vanilla'.

Vanilla is grown from cuttings. Any part of the vine can be used but the cuttings must be taken from a healthy and vigorous plant. Avoid plants with leaf discoloration or deformation as this may be due to virus infection. Cuttings ranging from 50 cm to three metres have been reported as being suitable, but cuttings measuring about 120-140 cm are preferred. Cuttings shorter than this will take longer to come into first flowering. Material longer than this would be wasteful. Because of their succulent nature, cuttings may be stored or transported for periods of up to two weeks if required.

The Lowlands Agricultural Experiment Station (LAES) at NARI Keravat recommends apical stem cuttings measuring 120 to 140 cm.

Vanilla can also be propagated using tissue-cultured material. Tissue culture is a useful method for mass-propagation of vanilla. Plants can be multiplied *in vitro* every two months. Furthermore, plantlets derived in this way are normally free from disease. Therefore, if vanilla is introduced to a new area, then it is best to obtain plants grown in tissue culture. Transplanting of vanilla plantlets from the laboratory into pots is a very delicate operation and care should be taken, otherwise the materials may not survive.

NARI LAES Keravat can supply planting material from tissue culture to interested farmers only on request.

Planting of Vanilla

Vanilla cuttings should be planted next to well-established support/shade trees.

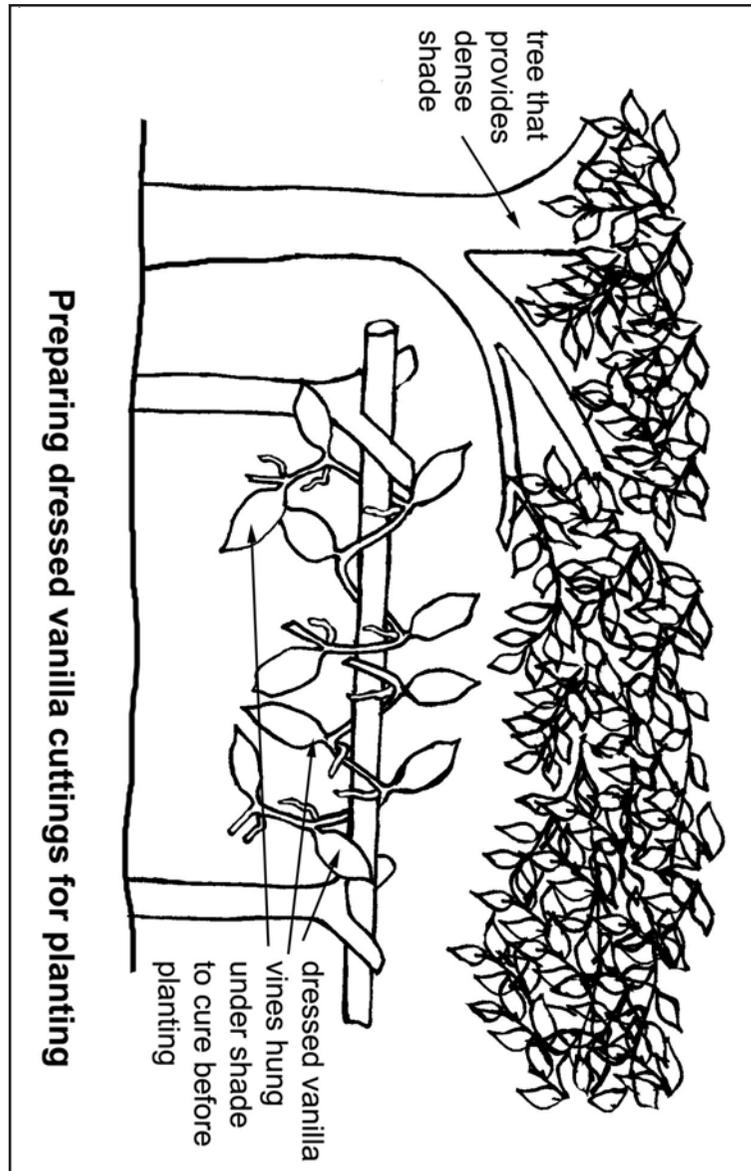
If there is no rain and the soil is dry, a hole is made (up to 10 cm deep, 30 cm long and wide enough to fit the cutting easily) and the cutting is planted as shown in the drawing on page ten.

If there is plenty of rain and the soil is wet, the cutting is laid on the surface of the softened soil (do not bury the cutting in the soil).

With both planting methods the cutting needs to be covered with a deep layer of mulch. Mulch is organic material such as coconut husks or dead plant material covering the base of the plant. It is important to plant the cutting with at least two nodes (point where the leaf was attached) buried with mulch.

The cut end at the base of the cutting must be left sticking out of the mulch. This will allow for healing of the wound where the material was originally cut off for planting.

The other half to two thirds of the cutting can be left pointing upwards or lying on the ground close to the support tree. Tie the cutting to the support tree if possible.



Preparing the Planting Material

Vanilla cuttings for planting should be dressed and cured seven to ten days before planting.

Dress the vine by cutting four to five leaves off at the bottom of the cutting. Remove the growing shoot at 15 cm (the tip and two to three leaves) back from the growing point.

Let the cuttings wilt for seven to ten days by hanging them under a roof or shade in a well-ventilated location.

Cutting leaves off at the end to be planted (bottom) is to stop rotting and prevents infection of the cutting after planting. Cutting the growing tip off helps to stimulate quicker sprouting of a new shoot from one of the buds below the cut end. If the growing tip is not cut off, it will wilt a bit and slow down new vegetative growth taking place. This will delay growth of the whole plant.

Curing by hanging the prepared vine for seven to ten days is to let vines lose some moisture. Loosing excess moisture (wilting) will harden the vines and prevent rotting and infestation by fungal diseases once they are planted.

