

# VERTICAL OR HORIZONTAL ?

## WHICH IS THE CORRECT METHOD OF PLANTING OUT SEED-NUTS ?

By C. AMBROSE,

*Research Assistant, Botanical Division.*

**H**ITHERTO nurserymen and coconut growers have been sharply divided in their opinions as to the best method of laying down seed-nuts in the nursery.



### HORIZONTAL AND VERTICAL SEEDLINGS

Note the healthy crown, sturdy stem and vigorous root growth of the former

be on the ground, in a heap, or suspended in the air. The question naturally arises "Why then are we so concerned about the method of planting if position does not matter for germination?"

"The coconut should be planted vertically with the base facing upwards," says one to the other on no adequate evidence.

"Nonsense!" replies the other, "the horizontal or sideways method is what we always adopt. This is the natural position as the nuts come to rest on their sides when they drop from a palm."

The two harboured their views; neither was able to convince the other from a practical stand point, nor were they able to refer to any published data on the subject. One can recall to memory the beautiful account on the "Germination of the Coconut," as given by the Rev. Fr. M. J. Legoc, O.M.I., in his Book "Introduction to Tropical Botany"—where he begins by saying:

"The Coconut is planted in the ground either in a horizontal position or with the base facing upwards." Even this then is inconclusive.

There is no doubt as we all know that a coconut can germinate in any position whether it

“ It is because we wish to obtain a higher percentage of germination, a lower percentage of rejections and more robust seedlings.” In other words, to get the best out of our seed-nuts, they should be laid down in a particular manner. The most common method in vogue is undoubtedly the horizontal or sideways planting. Yet, we find it difficult to furnish reason for adopting this procedure.

In order, therefore, to compare the quality of the resulting seedlings, an experiment on the vertical and horizontal methods of planting was laid down at Bandirippuwa Estate, in a Latin Square of four treatments replicated four times. This in its identical form was repeated at St. Anne’s Nursery, Pallavi, in the semi-dry zone. Germination counts were taken from time to time, while growth measurements were recorded at the time of uprooting the seedlings.



**HORIZONTAL PLANTING**  
A block of sturdy plants

An analysis of the collected data revealed the following observations, as common to both places where the experiment was conducted :—

	Horizontal	Vertical
1. Width of leaves ...	Greater	Less
2. Number of leaves ...	Greater	Less
3. Number of roots ...	Greater	Less

From the above, it is obvious that more desirable seedlings can be obtained, by laying the nuts horizontally rather than vertically in nursery beds.

During the experiment certain interesting features were also observed :—

(1) In the beds where the nuts were planted vertically, a certain number sprouted and died back. The sprout had a scorched appearance possibly due to a fungus whose growth had been accentuated by the accumulation of moisture in the basal pocket of the nut which in this method faced upwards.

(2) Among the vertically-planted nuts, many seedlings showed corrugations in their leaves, which was rare in the horizontally planted ones.

In conclusion, it is necessary to add that the chances of damage to a seedling during handling and transport from nurseries to distant estates is considerably less in the case of one obtained by



**VERTICAL PLANTING**  
A block of stunted seedlings

planting horizontally, owing to the high degree of reinforcement afforded to the shoot by the husk. In the vertical seedling the shoot does not pierce the husk but comes straight out from the base.

The results of the experiments were quite definite and conclusive. The horizontally or side-ways-laid seedlings were far superior to those laid down in the vertical position.