THE EXPERIENCE OF A PLANTER

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1. The Establishment of a New Coconut Plantation

Lands selected for a New Coconut Plantation may fall into any one of the following categories.

(1) Neglected Lands with herbaceous plants
(2) Shrub jungle lands
(3) Thick jungle lands.

I propose to deal here with the subject of clearing a thick jungle land for the establishment of a coconut plantation.

An inexperienced person may perhaps feel that clearing a *thick* jungle and planting it with coconut would be difficult. Actually the difficulties are limited. The absence of shrubs and grass enable the planter to clear the land by firing after felling the jungle. In the case of shrub jungle and grasslands, firing would not be so effective a method of clearing the land.

It is good to commence the operations in connection with the clearing after the monsoon rains. The trees that can be felled by *Kathi* knives should be cut and spread evenly on the ground. The trees which yield good timber should not be cut at this stage, but their branches may be cut and spread leaving sufficient clearance around to avoid any damage to them, by fire. After about two months, the shoots coming off the stumps and other plants inadvertantly left behind should be cut down. Before setting fire, wood necessary for fence posts, construction of huts or any other work should be removed. The cost of completing the aforementioned work would be about Rs. 100/- per acre.*

A day with bright sunshine and good blowing should be selected for setting fire to the felled jungle. Those who own adjoining lands should be given prior notice of the date on which firing would be done. Note the direction in which the wind is blowing and set fire at several places of the land in such a way that the wind would facilitate the spread of fire throughout the land. If the fire spreads properly and burns all the jungle cut down, the cultivator could have the satisfaction that his initial

* *Note.* The costs indicated in this article reflect the price conditions prevailing today.

operations have been successful. Unburned patches left, if any, should be burnt without delay. The trees left out for timber, should be cut and removed at this stage. Pieces of wood left after firing can be sold for firewood, which fetches a high price in many parts of the country. Whatever is left, should be heaped in rows arranged in the direction of the wind, and set on fire at suitable points in the windward direction. The firings would cost nearly Rs. 60/- per acre. More will have to be spent if the fire does not spread properly and burn all the felled jungle. If the land is generally free from large trees the total cost of clearing should not exceed Rs. 135/- per acre.

After clearing, fencing the land is very necessary. Some cultivators make a *danduwata*, a fence made out of pieces of wood alone. A barbed wire fence would actually be more economical on grounds of durability, even though the initial cost may be higher. The traditional *danduwata* suits only chena cultivation, which is temporary.

2. Lining and Planting Distance

After the preparation of the land, the following work should engage the attention of the planter.

(1) Lining.

(2) Construction of drains.

Lining: Lining can be done in two ways: (*a*) Triangular method (*b*) Square method. Triangular method can be considered more advantageous because more plants can be planted per acre and it provides more shade for the ground.

The planting distance should be varied according to soil type. In loamy soils, the planting distance should be greater in order to provide adequate room for luxuriant vegetative growth. The distance may be less in light gravelly soil and more so in hard gravelly soil. Suitable planting distances for one's land can be gauged by the following method: select a coconut land with similar soil conditions in close proximity to the land, measure the length of a mature coconut leaf of a well grown tree, multiply this length by 2 and subtract 4 feet. The answer is the suitable planting distance. The reason for the above calculation is as follows. The coconut leaf should be fully exposed to sunlight. Therefore the distance between two trees should be twice the length of one leaf. Four feet are subtracted because the leaves do not stretch out straight, but bend downwards.

It is a serious error to shorten the planting distance purely with the idea of increasing the number of palms per acre. Generally it would be very expensive to rectify any initial errors in planting.

According to the triangular system, 74 palms per acre could be planted with 26 feet as the distance between palms. On the square system 64 palms per acre could be planted with the same distance between them. Space required for the construction of houses and other buildings should be left out before lining. The Coconut Research Institute of Ceylon assists planters in lining and this assistance is indeed very helpful. Planters should make use of this free service made available by the Institute.

3. Cutting Planting Holes

Planting holes should be as large as possible. The size of the hole has an important effect on the growth of the palm. The size of the planting holes should be varied as follows according to the type of the soil.

Gravelly, cabook and quartzitic soils	—	$4' \times 4' \times 4'$
Clay Soils	—	$4' \times 4' \times 3'$
Sandy Soils	—	$3' \times 3' \times 3'$

The soil removed up to a depth of one foot should be kept separately to be used for the filling of the hole. The soil removed from the deeper levels should be thrown away from the hole and should not be used to fill it. In filling holes, if the soil is hard, place a layer of husks with the concave side up, cover it with a layer of soil, and place another layer of husks in similar manner towards the periphery leaving the centre free and cover it with soil up to a height of about 6 inches from the ground level. Husks however should not be used in water logged soils. Surface soil used to fill the holes is rich in humus and would contain ash from the burnt jungle. One pound each of Dolomite and Saphos Phosphate may be mixed with this surface soil to advantage.

If expenditure on labour, husks and manure is added then the cutting and filling of each planting hole would cost as follows:

In Sandy soil	$3 \times 3 \times 3 =$ Rs. 1.00
In Clay soil	$4 \times 4 \times 3 =$ Rs. 1.30
In Gravelly soil	$4 \times 4 \times 4 =$ Rs. 1.85

Expenditure on cutting drains is as follows:

Sandy soil	3×3 (6 feet)	Rs. 00.70
Clay soil	3×3 (6 feet)	Rs. 00.90
Gravelly soil	3×3 (6 feet)	Rs. 01.15

4. Seedlings

The success of the plantation would depend to a very great extent on the quality of the seedlings planted. However good the soil and the manure added may be, bad seedlings would be poor bearers. One of the

best services rendered by the Coconut Research Institute of Ceylon so far, is the distribution of selected seedlings at subsidised prices among coconut growers. During the past fifteen years I have obtained seedlings from this source and I have always found them very satisfactory.

Over-grown seedlings are planted by some, either because they are very cheap or because they believe that they are good for water logged soils. Planting over-grown seedlings is not good, under any circumstances, and cannot therefore be recommended.

Some planters prepare their own nurseries, to get their seedling requirements. This is a good practice, but each seedling would cost at least -/75 cents to produce.

5. Planting

Planting should commence with the monsoon rains, *Wesak* month (May/June) or *Ill* month (October/November) is suitable for this. The following points should be observed in planting:

(1) When uprooting, seedlings should not be pulled up by the stem, the mammoty should be used carefully to *pull them* out of the ground.

(2) Seedlings should be carefully transported to the place of planting. The damaged roots must be cut off with a sharp knife. Damaged roots may rot after planting resulting in much damage to the plant. Smaller seedlings would have less roots, and therefore it is always better to plant seedlings at a very young age. Over-grown seedlings would have more roots, and therefore greater damage is likely. This is yet another reason why the planting of over-grown seedlings should be discouraged.

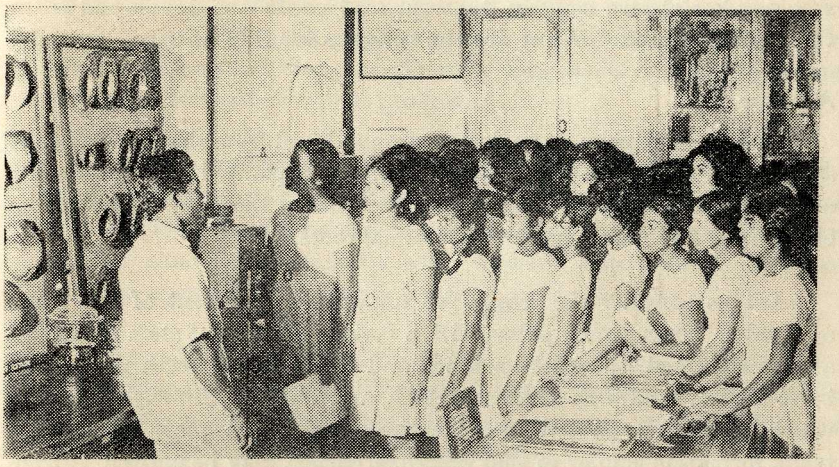
(3) Seedlings should be planted up in proper rows. Plants in straight rows are pleasing to the eye, and facilitate the use of mechanised equipment on Estates.

(4) Depth of planting should vary according to the soil type. My experience is that planting at a depth of 12″ in hard soils and 6″ in loose wet soils is good. In some areas planting at a depth of 2′ is done. The only advantage in this practice is that such palms would develop a deep root system which might afford a greater protection during periods of long drought. However these palms may take 12 to 15 years to spread roots on to the surface and come into bearing. In such a situation one would have to wait for a long period to reap the benefits of his

investment. Furthermore, the maintenance of the land for a long period without a return would be an added burden. Surface soils have more manure and therefore the practice of planting seedlings close to the surface is generally to be preferred.

After-planting care should be taken to protect the seedlings from pests and weeds. Common pests are Red Weevil, Black Beetle and the Coconut Caterpillar. Manuring should be done regularly.

The attention the plantation should receive, from the planting stage to the bearing stage, would be the theme of my next article.



The students of Mahamaya Girls School, Kandy, listen with rapt attention to an explanatory talk given in the Botany Division of the Coconut Research Institute.

Visitors, particularly the representatives of agricultural associations and school children are most welcome to the Institute. Prior arrangements regarding visits should be made by letter.