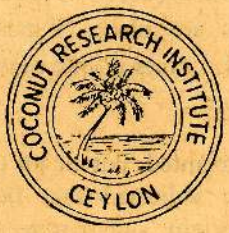
COCONUT RESEARCH INSTITUTE



Leaflet No. 2

(New Series)

NURSERY MANAGEMENT AND SELECTION OF SEEDLINGS

Selection of seedlings is one of the most important phases in the choice of planting material in coconuts. Seednuts should not be planted out directly in the field for a proper selection of seedlings would not be possible then. They should first be planted in a nursery and only selected seedlings should be transplanted.

THE NURSERY

Location:—Nurseries should be on sandy or light loamy soil, free from water-logging, but close to a source of water, away from heavy shade, and, if possible close to the area which is to be planted up.

Seed-Beds:—The size of seed beds may vary with the facilities available for watering. The width should not be more than five rows deep to facilitate the examination of individual seedlings from the edges of the beds. The length of each bed can be adapted to suit the watering systems and the available nursery space.

In permanent nurseries the edges of the beds should be turfed; otherwise they will be damaged during rains and fall in, blocking up the drains. Beds should be separated by shallow drains, which join up to form a leader drain for carrying away excess water during rains.

Planting:—It is convenient to cut straight trenches down the beds about 8 inches broad, 6 inches deep and spaced 9 inches apart. The seed nuts are placed 9 inches apart on the trenches and covered with soil. Nuts in one trench should alternate with those of the adjacent one.

Nuts should be planted flat or on the side and not upright. Our experiments have indicated that the seedlings that develop from nuts planted upright suffer more from drought than those that develop from nuts planted flat.

The number of nuts planted in the nursery should be at least 75 per cent more than the number of seedlings required. We ourselves reject about 50 out of every 100 seedlings in our nurseries.

Nursery beds should be mulched, particularly in the drier areas and fallen coconut leaves are an ideal material for this purpose. No weeds should be allowed to remain in nurseries especially during drought. Watering should be done at least thrice a week during dry weather.

SELECTION OF SEEDLINGS

A seedling can be properly studied and reliably selected when it has developed about three green leaves. Seedlings should be selected on the following criteria.

(*a*) Early germination.
(*b*) Rapidity of growth.
(*c*) Sturdiness and freedom from 'legginess'.
(*d*) Resistance to pests and diseases.

Seed-nuts sprout in three to five months after pick. If after about five months seed-nuts have shown no germination or are only about to sprout, they should be rejected. From 10 to 20 per cent of the nuts may have to be discarded under these two heads of late germinations and non-germinations. *Nuts that germinate early give rise to palms that flower earlier and are more productive than those from late germinations.*

The characters of rapidity of growth and sturdiness are an expression of vigour. Vigorous seedlings grow up straight with stout 'stems'; leaves are dark green in colour, broad and comparatively short in length, veins are prominent and the leaf stalks are short; they spread outwards without being pointed upwards. All 'leggy' seedlings, *i.e.*, those having weak stems with pale green narrow leaves which are disproportionately long with thin veins should be rejected.

When seedlings are selected on early germination, vigour, and resistance to pests and diseases 40 to 50 per cent including late and non-germinations have to be discarded.

Reluctance to destroy about half the plants in a nursery is understandable. Nevertheless it is clear that in the long run, it is profitable to do so. From a field experiment, the value of the rejected seedlings was recovered in crops as early as the first reasonably full year of bearing, *i.e.*, the eighth year. The selected seedlings flower earlier and are heavier bearers than the palms raised from unselected seedlings. It must be remembered that the palms continue to bear for over sixty years and only the best should be planted.

Recovery of copra from rejected seedlings.

Rejected seedlings need not be a total loss, since low grade copra can be recovered from them. For example, at Bandirippuwa Estate, 7,848 rejected seedlings gave 3 candies and 160 lbs. of copra, working out at 2,388 rejected seedlings to a candy. This means that even in seedlings over eight months old, over half the kernel still remains and can be dried for copra. The copra, moreover, is unusually rich in oil.

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