

# THIRTY-FIVE YEARS' TRIALS ON A COCONUT ESTATE

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MY talk to you will be a general one and not on a particular subject and to begin with let me tell you that we have not still reached a stage of perfection as to the possible production of the coconut palm which is the main money-earning crop of a major portion of the low-country population of Ceylon. It might be mentioned that in some instances production well over 5,000 nuts per acre, per annum, has been secured against an average of about 1,500 nuts from all Ceylon plantations. Similarly, the span of life of this palm is still unknown and there are some plantations above 85 years old, producing an annual average yield above 80 nuts per palm, per annum.

Moreover, in spite of my 35 years' experience in coconut planting, I must admit that there are many more things on this subject which I have yet to learn.

We are in a scientific era and unless we follow and adopt the principles of science, we will be left in the background and the time has come to move on without being complacent in life. As you are aware, science dominates in every sphere and we are very fortunate in having a very able Ceylonese Scientist attached to the C.R.I., to guide and lead us, to attain far better results from the coconut plantations.

My experience has proved that we have to improve the mother soil by adopting systematic soil cultivation and manuring which are essential factors to secure high yields and in this respect mass treatment does not answer the purpose. The treatment should be local, according to the individual requirements of the particular soil or the palm, on the same basis as a doctor would diagnose the case of a sick person and prescribes accordingly without administering a general tonic. Further, the manure mixture should be a well-balanced one, suitable for the particular soil and the yield of the plantation. The success of manuring depends mostly on the systematic application and good results could not be expected by haphazard application. Apart from this no remunerative results could be expected by treating ill-grown, tapered and dud palms which should be removed and replaced with healthy seedlings, in well-prepared planting holes.

In view of the fact that most of the soils in coconut-producing areas are rather exhausted of fertility, bulky manures duly supplemented with the deficiencies, especially phosphoric acid and potash, answer better than the solitary application of artificial manures, as the former adds organic substances which retain moisture which, no doubt, is a main factor for the successful growth of any tree. Where cattle or goat manure is not available, green manure answers the purpose. On the basis of unit value artificial manure is economical but where organic manures are available at a moderate price, these should not be overlooked as well as burying of husks which answers manifold purposes.

Systematic methods to improve the texture of the soil, by way of digging, ploughing and draining to aerate the sub-soil, to arrest rain water, to prevent soil erosion and proper drainage of excess water too are important factors which should be periodically carried out to maintain the agricultural condition of a coconut property.

Questions are being freely asked why the seedlings are manured from the time these are planted. As was mentioned previously, in exhausted soils, it is not possible to bring trees to a healthy condition, unless the plants are attended to from the early stage, as otherwise, the seedlings become delicate which in due course become poor yielders. In many instances where the seedlings have been treated systematically and the mere fact that they have been nursed on solid foundations have resulted in the palms becoming high-yielding ones, producing about 150 nuts per palm, per annum, within 15 years. This should be the main policy of all coconut estate owners.

Coming now to knotty points about the ill-effects of both soil cultivation and manuring, I wish to point out that over-dosing of artificials, notwithstanding the limiting factors, excess of phosphoric acid has a tendency to increase superfluous formation of buttons which do not form into nuts at all and in some cases result in the trees having only empty spikes. Over-dose of the other plant foods too have bad results. Disturbing the soil on wet days, encourage formation of a hard pan within a foot from the surface and similarly the disturbance of the soil during dry weather destroys humus. Another important matter I have noticed is that the continual disc-harrowing one way, throws the soil from the centre, on to either sides, thus exposing the feeding roots or getting closer to the surface and in such cases it causes immature nut-fall. Dumping coconut husks in low-lying drains, filling drains with a large quantity of fibre dust and also using a thick mulch of fibre dust and even a thick layer of coconut branches for mulching round palms too have the consequent bad results. Without any hesitation, I admit that proper mulching of husks and fronds is beneficial, except in case of light sandy soils.

I am sorry that the time at my disposal does not permit me to go into further details. Apart from this, it is not possible to deal with all aspects pertaining to coconut cultivation within such a short time. However, before I conclude my talk, I have to refer to two other important matters, weeds and pests and diseases.

Weeds are a stumbling block for the progress of any agricultural plant and in this respect I may mention that most of our plantations are fully covered up with both high and low weeds, robbing both plant-food and soil-moisture which otherwise, would be available for the main crops. Even retaining green manure and cover crops for a long period, especially during dry weather, has the same tendency. The loss of crop due to these facts could easily be estimated at about 20%.

The other important matter which even many of the big estate owners have neglected is the pests and diseases which affect plant sanitation. Black beetle, Red Weevil and Coconut Caterpillar, (*Nephantis Serinopa*) are the main troubles and the loss of crop from this source could be accounted for about another 15%.

Before I conclude my talk, I wish to tell you that friendly interchange of views and visiting different places of agricultural interest help to gain a beneficial extra knowledge. In conclusion, I am sure that the Coconut Research Institute would be able to impart new ideas. You gentlemen who are being trained to rehabilitate the coconut industry, should in return, impart your experience to those with whom you have to work, especially the small-holders.

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In the last number of *The Ceylon Coconut Quarterly* an article by an experienced coconut planter, Mr. Marcus Rockwood, was published. We are pleased to follow it up in this issue by a similar article based on the long experience of Mr. A. J. C. Peiris, J.P., Veteran Manager of the Kirimetiana Estate, Lunuwila. It is based on a talk he gave to the Advisory Officers in training. The editor does not necessarily agree with all the views expressed by the writer and welcomes comments from readers with similar planting experience.