

THE CEYLON COCONUT QUARTERLY

EDITORIAL

CATTLE BREEDING UNDER COCONUTS

The establishment of the National Milk Board and the related provisions of the Food Production (Estates) Act should no doubt give an impetus to cattle breeding on coconut estates. In this connection we would draw the attention of our readers to an article by the Animal Husbandry Officer of the Coconut Research Institute dealing with a very important aspect of cattle breeding: the importance of heat tolerance in cattle breeding.

While it is necessary to recognise the existence of a large population of indigenous cattle (so-called Sinhala breed) kept on coconut estates, the economic limitations of this type of animal for the purpose of high production of milk (or even meat) have to be borne in mind.

There are two methods of improvement of milk yield of cattle—by selective breeding within a breed (upgrading) or by cross-breeding the low yielding indigenous animals to high yielding exotic breeds such as Ayreshire, Freisian and Jersey, or Indian milk breeds such as Scindhi and Shabiwal.

Though no doubt selective breeding among the local breed may be desirable, it is a slow process and would not meet an immediate national need for an increase in milk production in Ceylon. The provisions of the Food Production (Estates) Act as applied to the dairy industry on coconut estates are clearly designed to stimulate better breeding of cattle.

The effect of climate on the progeny produced by introduction of exotic breeds needs careful study. In this connection the problems of heat tolerance under tropical conditions such as are applicable to coconut estates have to be carefully investigated.

Unless the animals bred on coconut estates are able to stand the climatic stress under conditions of high temperature and high humidity, production would be effected and management of such dairy herds would cause new problems.

Coconut Cultivation and Proper Land Use

Coconuts have been cultivated in Ceylon under a variety of soil, rainfall and topographic conditions. While it may be true that, in contrast to tea and rubber the majority of coconut estates are planted on what are commonly believed to be flat lands, nevertheless, proper land and water use on coconut estates have received little scientific attention.

It is a duty of everybody connected with the land, be they land owners, big or small, to realise the importance of proper land use. It is a duty which we owe to this generation which reaps the produce of our coconut estates today but also to generations to come.

There is an intensive tempo of development of both crown and private jungles for planting nuts and it is in the national interest that a proper concept of land use should be instilled in the minds of both owners of coconut lands and of those who direct the land development of this country.

There are certain traditional methods which may have some intrinsic value; there may also be methods which have certain defects in that the systems adopted are not conducive to the conservation of soil fertility, soil moisture and the attainment of maximum crop production, as is seen in the article on this subject appearing in this number.

We have a million acres of coconut land today and a study of the patterns of land use is essential for planned development of the coconut industry. The Coconut Research Institute has recently decided on the establishment of a Soil and Land Capability Survey Unit attached to the Soil Chemist's Division. Necessary staff has already been appointed. A start has been made with the study of the soil types of existing coconut plantations. This is no short-term project which will be extended as new trained staff becomes available.

It will be appreciated if Coconut Planters extend their co-operation and assist the members of the Soil Survey Unit, who will have occasion to visit estates in connection with these investigations.

At the present the Soil and Land Capability Survey Unit will restrict its activities to crown coconut lands. It is however hoped that in the near future we will be in a position to advise the Government Land Development Department in carrying out surveys of crown jungles for alienation for planting under coconuts.

Pests of the Coconut Palm

With the expansion of the research activities of the Coconut Research Institute, the work on the pests and diseases of the Coconut Palm (Crop Protection) was commenced on an organised basis in August 1956, with the appointment of a Crop Protection Officer.

Luckily, compared to other countries Ceylon has been spared the ravages caused by epidemics of the major insect pests of the coconut palm. Nevertheless, with extensive clearing of coconut estates, the Rhinoceros Beetle (*Oryctes rhinoceros* L.) and Red Weevil (*Nephelopus ferrugineus* Ol.) unless properly controlled can be a menace to the successful cultivation of young palms.

In studying methods of economic control of any pest it is necessary to study the life cycles of the pests. Although there is a certain amount of published work on both these pests, there are still certain lacunae which need careful investigation.

We are pleased to record that the first of these studies, that of the Rhinoceros Beetle (*Oryctes rhinoceros* L.), has been recently published in the *Tropical Agriculturist* and issued separately as No. 18 of the Coconut Research Institute. The article on Red Weevil published in the same number of the *Ceylon Coconut Quarterly* records an interesting study, which should provide fundamental data that would be of value in the control of this pest.

Based on these studies, the methods of treatment, be they biological (by the use of parasites) or chemical (by the use of insecticide dusts or sprays) that should be successfully adopted will be worked out. It is of interest to record that Coconut Planters, large and small have, through the establishment of the Crop Protection organisation become conscious of the need for

advice on the control of these pests. There has thus been a very large demand for visits to estates for the purpose of *ad hoc* investigations, in the course of which interesting information on the ecology of these pests have been collected.

Reference should be made to the note on the biological control of the Coconut Caterpillar appearing in this number. Coconut Caterpillar (*Nephantis serinopa*) is a serious pest in some parts of the island, particularly in the Eastern Province, but has also recently made its appearance in certain parts of the Kurunegala and Chilaw Districts as a result of recent droughts. Work on biological control of the Coconut Caterpillar and breeding of parasites has been recently commenced and a fully equipped insectary established at Bandirippuwa. The demand for parasites has been extremely heavy in view of the unusual incidence of this pest within Kurunegala and Chilaw Districts.

In the next number of the *Ceylon Coconus Quarterly*, it is hoped to give a more detailed account of work that has been in progress in the control of other less common insect pests of the coconut palm which have also made their appearance.

When the Crop Protection Officer, who recently left on study leave to America, returns after further post-graduate training, it is hoped that the Coconut Research Institute will have a full-fledged division of Crop Protection that would undoubtedly meet any contingency.