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COCONUT RESEARCH INSTITUTE

Advisory Leaflet No. 24

CATTLE UNDER COCONUTS — FARMYARD MANURE

The value of Farmyard Manure in maintaining and improving soil fertility is often not appreciated. It is not unusual to think that the cure for every ill lies in the application of artificial fertilizers, which are easier to handle and do not have to be prepared.

The composition of Farmyard Manure varies, and depends on a number of factors such as the age, size and type of the animals; the food eaten; the quality and quantity of their bedding. So far as the three major ingredients of plant food to be found in the excreta of cattle are concerned, the following may be accepted as a fair average analysis—

	Nitrogen	*Phosphoric Acid*	*Potash*
Dung	1 . 12%	0 . 58%	0 . 83%
Urine	1 . 13%	Trace	1 . 49%

It is interesting to note that while the urine is richer in nitrogen and potash, dung contains more phosphoric acid. The necessity for conserving the urine and using it economically is therefore apparent. This may be done by having pits to collect the urine, and then applying it as a liquid on the land; or by utilising it in making compost; or by making farmyard manure as described below.

When one considers that, in the making of farmyard manure the material, used for bedding, also contains some of the ingredients of plant food if not all of them and that, in addition, the dung, urine and bedding contain number of the minor and trace elements not to be found in artificials, it will be seen that farmyard manure is a vital factor in maintaining and improving soil fertility. Furthermore, it contains plant hormones and a host of beneficial micro-organisms, which stimulate the multiplication of bacteria and earthworms in the soil. Its also improves it absorbtive capacity, and its power of retaining moisture.

It needs to be explained that farmyard manure is not the same as compost which requires more labour in its preparation. Farmyard manure is processed by the animals themselves and no labour is required in its preparation.

There are various methods of preparing farmyard manure. The system that is being followed at the Coconut Research Institute and on a number of coconut estates has been found to be very successful.

SYSTEM OF PREPARING FARMYARD MANURE

To prepare Farmyard Manure, a pit say 20'x15'x2' deep is required. The size or the number of pits can be varied depending on the cattle population and the manure pits may be distributed over the estate, which will save labour and cartage. A floor space in the pit of 20 sq. ft. per head will be found adequate for Sinhala animals. This pit is lined with bricks on the sides, but the bottom is left unlined The brick lining is necessary, otherwise coconut rhinoceros beetle will breed where the manure does not get compressed in the sides of the pits. The pit should be covered over by a roof as the manure degenerates in quality by exposure to sun and rain.

The animals which have been grazing under the coconuts during the day are brought in at night and tied inside the pit. The stakes to which they are tethered may be shifted to new places within the pit every week or so, in order to equalize the manure. Any loose dung or urine from the dairy may be added. Before the animals are tied, a liberal quantity of bedding of either coarse

grass or straw, the latter to be preferred, should be spread over the manure already in the pit. The grass feed for the night when required can be put over this bedding. The manure pits should be lightly watered every other day so as to ensure satisfactory decomposition of the manure materials. The mass should be moist but not saturated. When the pit is full, say in about 6 months the manure is taken out and heaped in a cadjan shelter until required for application in the field.

A feature of this manure is that it will come out in the form of compressed cake. This system is very economical and simple to follow and it is hoped that more and more smallholders will adopt it so that they will be rewarded with increasing crops. The production of farmyard manure may be seen at Bandirippuwa Estate, Lunuwila.

APPLICATION

By this simple process about 10 times more manure is obtained from original dung and the manurial value of farmyard manure is quite as good as that of dung. For rates of application see Advisory Leaflet No. 9.