

COCONUT RESEARCH BOARD



Advisory Leaflet No. 45

PASTURE UNDER COCONUTS

There is a growing need to increase the country's milk and meat production. Scarcity of arable land with sufficient rainfall necessitates intensification of agriculture feasible mainly in the favourable environment under coconuts. For profitable animal production under coconuts, a good pasture must be established and managed without any adverse effects on the coconuts.

COCONUT AREAS SUITABLE FOR PASTURE ESTABLISHMENT

Coconut lands in the **Wet and Intermediate Zones** are recommended for cultivation of pasture (vide map overleaf). In areas subject to prolonged dry periods, the pasture would adversely affect the yield of coconuts.

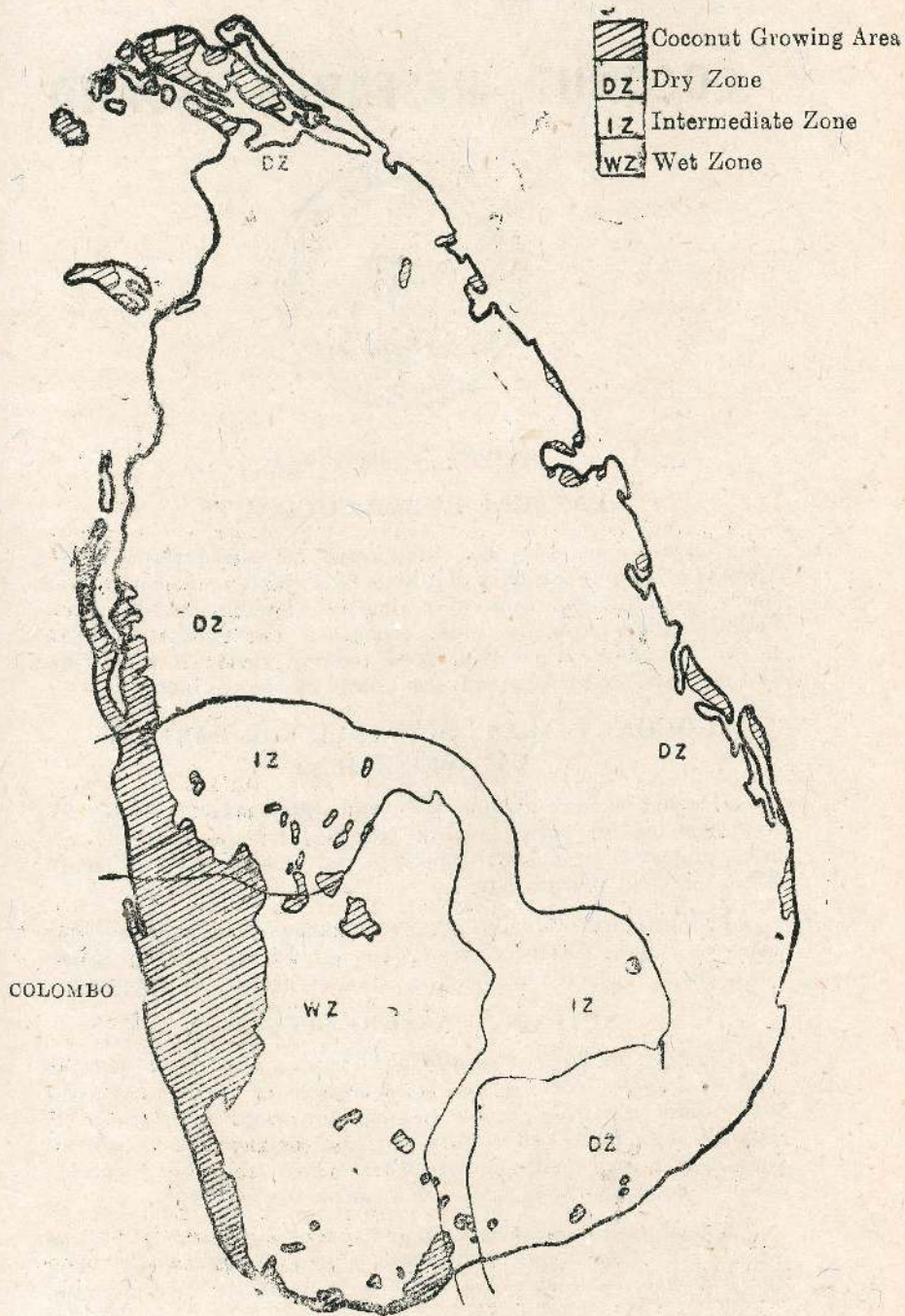
Pastures could be satisfactorily established under a stand of coconuts approximately thirty years old. Under young stands the shade could be too heavy for satisfactory growth of any pasture.

SUITABLE PASTURE SPECIES

Cori* grass (*Brachiaria miliiformis*) is a vigorously growing semi-erect perennial (long life) grass capable of withstanding the shade under coconuts, heavy grazing and weed infestation. It responds excellently to fertilizers. Like most tropical grasses it forms only a very small quantity of viable seed and has to be propagated by cuttings. Cori grass will grow on any soil type.

A good pasture must have, in addition to the grass, a legume mixed in it. *Centrosema pubescens*, *Pueraria phaseoloides* and *Calapogonium mucunoides* are suitable legumes for this purpose.

*Coconut Research Institute.



ESTABLISHMENT OF THE PASTURE

The best time to plant a pasture is at the beginning of the South-West and North-East Monsoons. The soil should be wet when planting.

Plough or harrow the land to remove all shrubs and herbs. Apply 63 kg. per hectare ($\frac{1}{2}$ cwt. per acre) each of saphos phosphate and muriate of potash broadcast. Spread the grass cuttings so that three cuttings fall per metre of land. (One cutting per foot of land.) Now run a harrow over the area. Alternatively, cut a sod every metre (three feet), place a few cuttings in each hole and cover with the soil.

The legume is best planted in small patches every three metre (ten feet). Dig a patch, $\frac{1}{3}$ metre (one foot) in diameter to make a rough seed bed. Mix 15-20 seeds of the legume with the top $2\frac{1}{2}$ cm. (one inch) of the soil.

Within a fortnight the grass and legume will commence growth. Apply 127 kg. per hectare (1 cwt. per acre) sulphate of ammonia broadcast, avoiding as far as possible the fertilizer falling on the patches of legumes. If farm-yard manure is available, this could be applied instead, at the rate of 50 kg. (1 cwt.) per coconut square.

MANAGEMENT OF THE PASTURE

Within a month from fertilizer application a luscious green pasture will be available for grazing. Graze this lightly. This would help trample the grass which will then root at the nodes and spread to fill in any vacancies. Heavy grazing will destroy the pasture, and should be avoided.

The pasture is ready for grazing when it is in mid-bloom (i.e., when half the tillers are in bloom.) As hectare (acre 2.2) of pasture could easily maintain four animals per year. Rotational grazing is recommended — the animals being paddocked in half the area till the pasture is grazed down to ankle height and then transferred to the other half. Alternatively, in the absence of paddocks, the cattle could be tethered in half the area and transferred to the other half.

Frequent manuring is the key to successful pasture production. Manure the pasture every three months with a mixture of 63 kg. ($\frac{1}{2}$ cwt. per acre) sulphate of ammonia and 31½ kg. ($\frac{1}{4}$ cwt. per acre) sulphate of ammonia and 31½ kg. ($\frac{1}{4}$ cwt. per acre) each of saphos phosphate and muriate of potash per hectare, broadcast. If manuring every three months, is impracticable, apply fertilizer at double the rate, every six months.

Larger doses of sulphate of ammonia up to 500 kg. per hectare (4 cwt. per acre) per year have resulted in large increase of pasture at the Institute's estates, and could be resorted to in loamy soils.

Do not stop manuring your Coconut palms as per the C.R.I. recommendations. The recommendations for pasture manuring given in this leaflet are in addition to those for coconut palms.