INTRODUCTION.

The concept of grass as a crop and that of grass as the cornerstone of a farming system are both high in the evolution of farming practices, since in each case grass is cultivated. But the concept of grass as the foundation stone of an agricultural system is consummate since effects of the grass on soil, crop and animal have to be considered. In these considerations lies the difference between the two concepts - the one in terms of yield and the other in terms effects - and the difference between fodder and pasture grass.

In the wet tropics most of the work on grass has been done on fodder grasses. Pasture grass has, on the other hand, only recently received attention. Yet it is grass in the form of pasture which allows for alternate husbandry which alone, according to Patterson (1941) "allows periods under the plough to alternate with periods of soil recuperation under grass". Yet it was inevitable that fodder grass should receive attention prior to pasture grass. Of the vigorous grasses in the wet tropics fodder grasses yield by far the greatest quantity of nutrient per given area when given good management. This, as well as other factors, becomes very important where available land for farming is limited.

In spite of its advantages, the high cost of labour for cutting and carting fodder to the loafing pen is becoming very high and since tropical grasses are low in nutrient when compared with temperate grasses, the practice is becoming uneconomic and is aptly described by Howes and Campbell (1953) as "analogous to the feeding of bulky root crops in the temperate Zones". Moreover..../

Moreover a limit is put on the number of stock that can be kept on a farm not by the amount of fodder the farm can produce, but by the amount of fodder the farmer can afford to cut and cart to the stock.

The removal of fodder grasses by cutting has a depletive effect on the soil since the grass takes the form of a crop extracting nutrients from the soil. With pastures a large percentage of the nutrients is returned to the soil in the form of faeces and urine; organic matter in the form of dead and decaying parts is added to the soil; biological activity in the soil is increased and the numerous roots sent out by the spreading herbage helps to improve soil structure. In addition weeds, particularly weeds of arable lands, under good management, are effectively controlled in a pasture so that when the land is ploughed in for cropping, conditions for optimum growth are presented.

Any well balanced agricultural programme in the wet Tropics must contain, as its primary aims, the improvement of soil and the increase of animal protein in the diet of the inhabitants. These two aspects of a programme are brought together only by a system of alternate husbandry which in turn depends on the use of pasture grasses. For example in East Africa, Edwards (1954) considers that "the use of artificially established grass in the limited crop producing areas ..... appears to offer the only possibility of checking the alarming soil deterioration which takes place". It is not surprising, then, that pasture grasses have now become the subject of so much investigation in wet tropical countries like Hawaii, the West Indies, Ceylon, India, and Queensland (Australia). Work from these places are later reviewed.

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