

INTRODUCTION.

This project was carried out with two objects in mind; firstly to try and develop techniques for the preliminary evaluation of potential grazing species; and secondly, to apply these techniques in the study of four imported grasses and two indigenous grasses, under conditions of the Imperial College of Tropical Agriculture.

Observations and measurements were taken from small trial plots in order to try and determine their seasonality, rate and habit of growth, and time of flowering. At the same time a study was made of the available literature on the introduced species to try and ascertain the correct management and cultural practices, the potential uses and yields, and the type of planting material to use.

If any of the grasses showed promise under Trinidad conditions, they could then be subject to the second stage in a grassland research programme. This comprises bulking up the grass to ensure sufficient planting material, and then laying down a large scale replicated experiment. From this experiment, the yield per acre of fresh grass, the yield of nutrients per acre, the rapidity and extent of ground cover, and the ability of the grass to withstand competition from weeds, could all be studied. Finally the effect of grazing and intensity of cutting, combined perhaps with digestibility trials of the grass in both the wet and dry seasons, would give a comprehensive result of its potential use under Trinidad conditions.

Under field conditions in Trinidad and especially on peasant holdings, little or no irrigation of pastures is practised. Consequently the experimental plots were not irrigated at all and so a true evaluation of the ability of the grass to survive and continue growth in the dry season could be assessed.

The techniques used in the preliminary evaluation of these potential grazing species consisted of weekly tiller counts, primary, secondary and tertiary tillers being recorded; weekly measurements

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either of the height or diameter of the grass, depending on growth habit, and in the grasses which were stoloniferous, the number and weekly increases in length of the stolons.

Where possible the grass was defoliated at the beginning of the dry season, and the above measurements carried out in subsequent weeks. This gave some indication of the behaviour of the grass after defoliation.

Samples of the different species of grass were collected at the end of the wet season and chemically analysed to determine their nutritive value. A second sample was collected in the dry season for analysis, but due to the shortage of staff in the Chemistry laboratory it is doubtful if these results will be forthcoming in time to be included in this report.

This project had the added advantage in that the student had the opportunity of becoming familiar with at least three grasses which he is likely to encounter in the territory to which he has been posted.

It must be borne in mind that this project was only carried out for seven months of the year by a student attending a Post-Graduate Course at the College.

The observation plots (14' x 14') were sited on the sandy loam soil of the Old Farm, immediately south of the Museum Plots.

This genus contains about 50 species confined to the tropics and sub-tropics in both hemispheres. About 50 of these species occur in Africa.

Origin and Ecology :-

After the May rains in 1957 part of a bed of young plant came at the College new farm was observed to produce a dense and uniform cover of a