

INTRODUCTION.

Most grazing behaviour studies have been carried out in temperate regions, few results from experiments under tropical conditions have been published. The need for such work is used economically and efficiently. Until recently this problem has not been important in the tropics, due to the almost complete lack of suitable, commercial, pasture grasses. With a knowledge of the grazing behaviour of indigenous and grade cattle in the tropics, these improved pastures can be

managed. In Trinidad the grass feeding of cattle has been based on the practice of carrying the grass to the animal rather than grazing the herbage in situ. This is obviously an expensive practice on a large scale, with the increasing costs of labour and transport. Recently Pangola Grass (*Digitaria decumbens*) has shown promise as a pasture grass in the island, and many of the dairy herds are now grazing pure Pangola swards, with systems of management similar to those found in temperate regions.

One of the main problems associated with dairy cows in the tropics, is to find animals which are capable of withstanding the stresses of a tropical climate, especially the factor of high day temperatures, and which at the same time have a high production. To some extent this problem has been solved by crossing *Bos taurus* and *Bos indicus* cattle, thus combining the production capabilities of the former with the heat tolerance of the latter.

With the advent of better pasture grasses in the tropics and high producing, heat tolerant cattle, there remains the problem of combining these two potentials in the correct management, in order to obtain maximum animal production. In the past there has been much discussion on the influence of the animal complex on the pasture complex, and only recently has the emphasis been on the effect of the pasture on the animal. The study of the grazing animal's behaviour can help to answer these problems.

Most grazing behaviour studies have been carried out in temperate regions, few results from experiments under tropical conditions have been published. The need for such work is important, especially with the introduction of better pasture grasses. With a knowledge of the grazing behaviour of indigenous and grade cattle in the tropics, these improved pastures can be managed to the mutual benefit of animal and pasture.

Anderson (1949) was one of the first workers to observe the grazing behaviour of cattle with the object of improving range management. Prior to his observations he had developed the range system of rotational grazing. It was not until the early 1950's that more systematic interest was taken in behaviour studies, but even then the experiments were largely designed for the purpose of obtaining yields. In the last decade there has been a marked increase in scientific study, and very good work has been carried out in Australia and New Zealand.

Before discussing the design and technique of present day studies it will be useful to consider some of the mistakes of past workers. Hancock (1950a), and Pearson, Rogers and Latta (1951) have stressed the importance of observing several cattle, a major fault in early experiments was often only one or two cattle were used. Early workers including Rodgers (1937), Sheppard (1937), Jones (1938) and Park (1937) did not observe the cattle at night, on the assumption that when a cow goes to rest it will only do so for one night. This is of course a complete fallacy and night grazing is often of great importance.