

## INTRODUCTION

Early research workers considered grassland improvement and management mainly from the botanical standpoint. It is only in the last twenty years that workers have realised that the practice of good grassland management necessitates the investigation of the effects of the animal on the pasture, as well as the effects of the pasture on the animal. Grazing behaviour studies provide a measure of the reaction of the animal to the pasture, and to its environment in general.

Although behaviour studies have received considerable attention in temperate regions, there is by comparison a dearth of knowledge in the tropics. Grazing behaviour studies can help to answer three important questions - What grass? Which type of cattle? What management? The answer to these questions will be a great help in improving the production from cattle in many under-developed regions in the tropics.

Grassland improvement and grassland management studies are less advanced in the tropics because of later development. Further in the Caribbean the previous system of growing soilage grasses has retarded research into pasture grasses. The soilage system of keeping cattle has proved laborious and uneconomic, and a change to a pasture system of management is desirable, especially since good pasture grasses such as Pangola (Digitaria decumbens) have shown promise in this area. Grazing behaviour studies are of assistance in evaluating the worth of the various pasture grasses in terms of animal production.

The selection of cattle capable of withstanding high temperatures in the tropics, and at the same time of giving high

production has led to the crossing of Bos taurus and Bos indicus cattle. The value of these various pure and cross-breds can be ascertained to some degree by behaviour studies.

Finally there has been an assumption that methods of cattle and grass management which have proved effective in temperate regions will be equally effective in the tropics. This is not necessarily the case, and in recent years grazing behaviour studies are being used in an attempt to discover the most suitable form of animal and pasture management for a particular area and environment.

The method used in grazing behaviour studies has been to record the activity of a herd, or of individual animals, at fixed intervals of time. Unfortunately different workers have used different intervals of time and have recorded the animals' activities in different ways. This makes the evaluation of their results difficult. Furthermore in many cases repeated trials on the same animals were not carried out, observations were not conducted on consecutive days, or observations were omitted due to periods of "unfavourable weather". A final criticism of some experiments is that results were based on observations of only few to eight animals, and as such are not truly capable of statistical analysis as the sample is so small.

Most of the workers on the well conducted experiments have given comparable results for the major activities of grazing and ruminating. There is not however the same uniformity in the reporting of the other activities.

Cattle and Haller (1953), Hancock (1954), Barker, Taylor and Robinson (1954), Hughes and Bell (1951), Morgan (1951), Turcott (1955)