

GRAZING BEHAVIOUR STUDIES WITH ZEBU-HOLSTEIN
CATTLE ON PANGOLA PASTURES. THE EFFECT OF YARDING CATTLE
ON THE GRAZING BEHAVIOUR OF DAIRY HEIFERS.

INTRODUCTION

In recent years, an increasing interest has been taken in the subject of animal research in the tropics. Much of this has been concerned with food conversion efficiency by the grazing animal. The most efficient production from the grazing animal is only possible when the animal is in a healthy state and is presented with an optimum amount of the best quality herbage at the right time. There are certain times in the day when animals prefer to graze and it is at these times that food utilisation efficiency is likely to be highest. Animal grazing behaviour studies have shed light on the grazing patterns of animals and have provided the farmer with useful information regarding his herd management. Behaviour studies have made the realisation that it is equally important to study both the effects of the animal on the pasture and the pasture on the animal.

This report is one of a series being made at this College and is concerned with a comparison of the grazing behaviour pattern of cross-bred zebu-Holstein dairy heifers when confined in covered yards for seven hours during the hottest part of the day, with their behaviour pattern when out on Pangola pasture for the full twenty four hours. It was hoped to gain some idea of the elasticity of the grazing habits of cattle in a tropical environment. This experiment was designed to see if, when the animals were shut in during the day time, they would graze more at night and so graze for the same total daily period as when at pasture for the full twenty-four hours. Previous work at the College has shown that dairy cattle will put in a large proportion of their total daily grazing hours at night and that this proportion can be increased by changes

in management.

The practice of keeping animals under cover for a few hours in the middle of the day to lessen the trouble due to biting flies, is quite common in Africa and other parts of the tropics. Another reason is simply to reduce the stress which the animal may undergo from grazing in the hot sun. At the Eastern Caribbean Farm Institute in Trinidad, the dairy herd is milked at midday instead of in the late afternoon, which is normal practice in most areas, in order to minimise the fly menace and to allow the cows more time for grazing in the cooler part of the day.

The restriction period of seven hours practised in this experiment is a very long time for animals to be away from pasture, but by having this long period, it was thought that a better idea would be gained of the extent to which cattle will change their behaviour patterns.

- and management can alter the diurnal behaviour patterns of cattle.
- (2) Days of unsuitable weather have been avoided for the convenience of the observer. These non-random selection of days for recording may have led to erroneous conclusions, especially where the purpose of the trial was to establish normal behaviour patterns.
 - (3) Too few animals were used. Individuals of a herd may vary widely in their activities. Observations on just a few animals may therefore not be of general validity.
 - (4) Repeated trials on the same animals were not carried out.

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In addition to the above, there is often some difficulty in comparing the results of similar experiments performed by various workers, because of differences in recording intervals used and definition of the