

INTRODUCTION

Several factors control the development of any calf rearing technique. Foremost amongst these is the influence of climate, with its subsequent effect on the supply of herbage at any given time throughout the year and on the incidence of disease. The prevailing climatic conditions also determine the length of the period during which calves must remain indoors.

The purpose for which the calves are being reared is another important consideration. Heifer calves of a dairy breed and calves intended for beef production require separate treatment. On farms where beef is produced as a by-product from the milking herd, however, both steer and heifer calves may be suitably reared along similar lines in early life.

Calf rearing techniques in the tropics have lagged behind those commonly practised in more temperate regions in relation to economy of labour and feed. Several factors have been responsible for this. Most of the pasture grasses in the tropics are extremely unpalatable for young stock, being of a high fibre and low protein content. As a consequence of this, it has been necessary to continue bucket feeding until the calf is five or six months old, in order that it should obtain an adequate supply of nutrients. This is the present practice on many of the dairy farms in Trinidad and in other parts of the tropics, where it is usual to feed over 100 gallons of milk per calf. With the selection and improvement of more nutritious and more palatable grass species, for example Pangola grass, it would seem possible that the total amount of milk fed could be reduced somewhat and that some of the ideas developed in temperate dairying regions could be incorporated into tropical calf management.

The determination of the optimum level of milk feeding is

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REVIEW OF LITERATURE

of considerable importance, since the economics of calf rearing largely depend upon it. The quantity of milk fed and the age at weaning must however be compatible with satisfactory growth, since it is unwise to sacrifice the well being of the calf in the interests of economy.

NEW ZEALAND

In New Zealand a considerable amount of work has been carried out on the development of suitable calf rearing methods. The results of some of this work, reported by McEwen (1954), indicate that calves weaned at 8 weeks directly onto grass, without supplementary concentrates, show favourable growth although initially falling behind those fed on skim milk for longer periods do ultimately obtain similar body weights. The seasonal birth of calves in New Zealand favours this system however, since the majority are weaned when the grass is in the most nutritious state and it becomes more abundant as their requirements increase. The prevailing climatic conditions are also extremely favourable.

In the United Kingdom these conditions do not exist and other methods have been developed. Concentrates are relied on to a greater extent and pasture grass plays a lesser role in calf nutrition. The main attempts to reduce the duration of the suckling period have been made, however, and in experiments by Fricker (1956) calves have been weaned as early as three weeks of age. Lawrie and Watson (1959) made a direct comparison between early weaning at five weeks and the conventional system of rearing on whole milk and milk substitute for fourteen weeks. In neither case was access to grazing provided. They found that there was no difference