

SECTION I.

INTRODUCTION.

Unthriftiness in the calf is not an uncommon occurrence especially at the stage of weaning onto roughages. The cause of this lack of thrift is mainly physiological, since at this stage the rumen is not developed to the extent that it can digest fibrous material efficiently, this resulting in a poor growth rate. Poor growth is often associated at another stage, that of being turned out unto pasture for the first time. Nutritional factors may again be involved but, in this case, it may be that the pasture is unable to provide enough protein in the quantities of grass the calf can eat and digest. When the calf is turned out of the rearing house it has to face environmental factors to which it previously had been sheltered. Such factors as rain and hot sunshine may produce stresses on the calf which in turn affect the growth. On the other hand direct managerial influences may be involved, such as, the provision of water on the pasture and, control of external and internal parasites. So often, without clinical signs of a disease, internal parasites get blamed for these poor growth rates, especially as laboratory risks are the only positive indication of their presence. In many cases this accusation is valid, because many reports of large numbers of internal parasites in calves have been published throughout the world. The effects of these parasites, many of which are blood suckers, are well shown by the debility they can cause to their host. In view of these facts, together with studies of the biology of these helminths, for that is what they have come to be called, techniques have been evolved to control their incidence in their hosts. Rotational grazing of pastures is such a technique and it aims at reducing the numbers of infective helminth larvae present on the

pasture at the time of grazing. Apart from this preventive technique, the pertinent use of drugs in a chemotherapeutic approach is another. The success of these practices depend upon, in the first case the knowledge of the helminths involved, their life-cycles and persistence, in relation to the unique conditions of the pastures concerned. In the second case, chemotherapeutic control, a knowledge of not only the helminths present but also the drugs effective against them.

In Trinidad, helminth burdens for calves have not been evaluated and because of the association of debility following pasturage of calves at the University Field Station, it was decided to obtain some indication of their incidence and significance there. Together with this aim it was decided to evaluate whether or not infective helminth larvae were more easily picked up by calves during the night rather than during the day. This idea was stimulated by the theory that during the day with high solar receipts the grass in the pasture would be dry and therefore unfavourable to the helminth larvae. While during the night, with much higher relative humidity, the dew formed would provide favourable conditions for the larvae on the grass.