GENERAL INTRODUCTION.

Although sheep are not widely kept in Trinidad, there are some islands in the Eastern Caribbean where sheep are fairly common (e.g. Tobago). These sheep are generally kept under poor conditions of management and feeding, and they are generally but little improved. Nevertheless, there is a ready market for mutton. However, no work has yet been done at the College to investigate the effects of pre-natal nutrition of the ewe, and subsequent live-weight gain on the live-weight of the ewe after parturition, and the live-weight at 12 months of the lambs has been shown to be strongly correlated with the milk production of the ewe (Edmond and Fries, 1963).

An effort is now being made at the New Farm, U.C.W.I., to improve the farm flock by grading up with Blackhead Persian type rams, in order to breed sheep suitable for mutton and lamb production.

The Blackhead Persian is one of the most adaptable breeds of sheep to hot "unfavourable" climatic conditions. It is particularly suited to the drier parts of South Africa where the breed is still popular because of its hardiness during times of drought. It is prolific in comparison to the Merino, but its slow growth, late maturity and poor fat distribution present disadvantages from the point of view of fat lamb production. (Campbell 1952).

It is therefore apparent that the Blackhead Persian is not ideally suited to Trinidad conditions, where the rainfall is high, (60 to 80 inches per year) serious drought extremely unlikely, and where the high population pressure necessitates a breed with rapid growth and early maturity characteristics, so that intensive systems of lamb or mutton production can be practised.

The introduction of Pangola grass (Digitaria decumbens) into the West Indies has made it possible to graze animals on pastures which are of considerably better quality than the indigenous pastures, so that, with the right type of sheep, mutton and lamb production in Trinidad is not an impractical proposition.
Some studies have already been undertaken at the Imperial College of Tropical Agriculture to investigate the milk production of the Blackhead Persian-type ewes, and the growth rates of their lambs. Both have been shown to respond to improvements in the nutrition of the ewe after parturition, and the liveweight gains of the lambs have been shown to be strongly correlated with the milk production of the ewes (Edmond and Prior, 1960). However, no work has yet been done at the College to investigate the effects of prenatal nutrition of the ewes, on the birthweights and subsequent liveweight gains of the lambs. Furthermore investigation of some of the factors which have been shown in temperate and sub-tropical countries to be of importance in lamb production may be rewarding.

Aims and Objectives.

In view of the foregoing, this project was carried out with the following objectives:-

a) To establish how the following three rations, fed to the ewes during the last 6 weeks of pregnancy, affect the liveweight increase of the ewes:

(i) Relatively poor grazing on Pangola grass.

In view of the aim to build up the farm flock, it was not considered to be desirable to restrict the nutrition severely. Furthermore, it would have been impracticable to do so, because there were no adequately fenced pastures of very poor quality, or an unimproved nature, available on the New Farm, where the other two groups were to run.