

1. INTRODUCTION.

It is a recognised fact that there is a need for some source of animal protein in tropical areas, where the population exist on a high starch diet. There are distinct possibilities in Trinidad for the introduction of home produced mutton on a larger scale than at present practiced. Success of a venture of this sort depends on the ability of sheep to produce economically the product for which they are bred under given environmental conditions. Breed, nutrition, climate topography and disease are the main factors governing an enterprise of this type.

The Black-head Persian, Ovis Aries Steatopyga (Lydekker 1912) has been shown in recent work carried on in this College (Watney 1957), to be relatively satisfactory under Trinidad conditions. The market for home produced mutton in Trinidad is an expanding one due to the large Hindu Community. The breed is well adapted to bush country because of its long clean limbs and absence of fleece. It is capable of withstanding drought and can exist on the poorest pasture. The sparse wool coat permits regular and effective dipping. It is immune to blowfly "strike" and can be introduced into tick infested areas with safety. A distinctive feature is the presence of a thick deposit of fat around the root of the tail, extending over the rump and down the buttocks. It has been suggested by Duerden and Boyd (1930) that this serves as a reserve of food. Early maturity and prolificacy are the breeds most valuable attributes. The lambs on good pasture mature in about 8 - 9 months.

The present study was planned with the primary object of studying the relative growth and development of lambs of the Black-head Persian breed. The investigation confines itself to a determination of the live-weight gains, yield and composition of milk over a period from birth to weaning of the lamb. The ultimate aim is to obtain a full expression for the growth qualities of the breed.

It should be realised in considering the results of this investigation that it confines itself to a critical study of the comparative growth and development of lambs housed under controlled and artificial conditions.

- i) To study various factors affecting the milk yield.
- ii) To measure the live weight gain of Persian Black-headed lambs.
- iii) To study milk intake and other factors affecting the live weight gain of the lambs.
- iv) To study variation in composition of milk over lactation period of twelve weeks.
- v) To determine influence of milk composition on live weight gain.