

INTRODUCTION

The nutrient requirements for pigs in the tropics is a subject which still needs a great deal of research. Very little is known about the requirements of pigs in the tropics and how these requirements differ, if at all, from those in the temperate areas. Some preliminary trials have been carried out in Trinidad (Butterworth & Houghton, 1961) and these seem to indicate that pigs in the tropics have better weight gains and food economy than pigs in temperate areas, but the carcasses are of poorer quality, largely due to over fatness. However this preliminary experiment also showed that a restriction in intake of feed, thus restricting energy intake, tended to reduce the back fat thickness and decrease the amount of food required per unit of live weight gain. This experiment was therefore designed to further investigate the possibility of improving carcass quality and the food conversion efficiency, by restricting food intake.

Food conversion efficiency and carcass quality are of great importance to pig growers in both the temperate and tropical areas, but the importance of these two factors cannot be over stressed here in Trinidad because of the following reasons :-

1. Nearly all the ingredients of a feed have to be imported, thus the cost of feed is high. The food conversion efficiency of pigs must therefore be good to make pig farming an economic proposition.

2. Good quality pork can be imported at reasonable costs from New Zealand, Canada and other countries. The buyers will therefore only buy locally produced pork if it is of the same standard as pork that can be imported.

The aims and objectives of this experiment are therefore to investigate the nutritional requirements of pigs in the tropics so as

to be able to compare these with requirements in temperate areas, and specifically, to investigate the possibility of improving the food conversion efficiency and carcass quality of pigs by restricting food intake.

Work has been done on pig nutrition in the tropics. Payne, Haidt & Sills, (1954) conducted a pig feeding trial in Fiji using different sources of protein. They found that the protein requirements for optimum growth in the tropics did not differ markedly from those generally recommended in temperate climates. However the growth rate and economy of gain of the pigs fed the optimum ration was very good by temperate zone standards. Debecker, (1957), working with Matras pigs in the Belgian Congo, recorded a conversion rate of 4.867 Kg to one Kg of live weight gain with an average weight gain of 503 gms/day. (Approximately 1.11 lbs/day).

A pig energy trial was conducted by Butterworth & Houghton, (1960) in Trinidad. They investigated the possibility whether under tropical conditions, some saving of food could be made, both before and after 100 lbs live weight, by restricting the energy intake of the pigs. It was hoped that this would give better carcasses and lower values for food conversion efficiency (F.C.E.), at the cost of only slightly delayed growth rates. However, due to an infection during the period of growth 50 - 100 lbs experimental treatments could not be imposed as intakes were limited. During the growth period 100 - 150 lbs, five experimental treatments were successfully imposed. These ranged from an average intake of 5.71 lbs/day to 4.11 lbs/day. There were no significant differences in the F.C.E., although the results indicated that the lowest treatment was slightly worse than the other four, while the other two lower treatments were slightly better than the higher treatments. High significant differences were obtained in days from 100 lbs live weight to 150 lbs live weight. The lowest treatment requiring 15 days longer to reach slaughter weight (150 lbs) than the