

INTRODUCTION.

The British Isles have for long been the home of good cattle breeding, rearing and management. This has been due, fundamentally, to the climate in which the cool conditions and moderate rainfall encourage the growth of grass, the most natural and least expensive form of cattle fodder. The standard of cattle has been steadily improved since the enclosure movement by good selection. It was therefore perhaps natural, that during the colonisation of new areas in the last century, particularly in the tropics and sub-tropics, that the high quality European cattle should be introduced to improve meat and milk production throughout the world. It was soon discovered, however, that the imported cattle could not give the same performance in the new areas in which the climate differed from that to which the cattle were adapted.

In the tropics, the purebred Bos taurus cattle rapidly deteriorate due to the adverse conditions of climate, feeding, disease and management. It has been found however, that by crossing these animals with the indigenous Zebu, a crossbred animal may be raised which combines the hardiness and thriftiness of the Zebu with the performance of the European cattle.

The prime cause of the deterioration of the Bos taurus in the tropics is their inability to eliminate the excess heat of the environment. As a result, their body temperature is raised and the respiration rate is also increased in an attempt to cool the body. By a study of these physiological functions in different breeds of cattle under varying conditions of temperature and humidity, it is proposed to discover which grade of animal is best adapted to the Trinidad climate.

The wider implications of this study lie in the need today for increasing the world food production, particularly of animal products, and the problem still exists of finding suitable standards for selection of high yielding cattle in the tropics. It is clear that the most important criterion for the selection of cattle is the economic one, namely that the animal should be productive. In the tropics, the productive capacity of the temperate breeds is largely controlled and limited by the climate, and much work has been done to study the response of cattle to the climate.

85	102.3	105.0
90	101.9	103.8
95	102.4	103.7
100	103.4	104.7
105	104.4	104.9
110	103.8	