I. INTRODUCTION AND OBJECTS.

The necessity of livestock for the maintenance of fertility in a balanced agricultural programme and for providing a source of protein in the human diet has long been recognised. Much work has contributed to the knowledge of the scientific principles of genetics, nutrition and growth and development in relation to animal husbandry, and the application of this knowledge is now widespread in the breeding and nutrition of improved stock throughout temperate areas.

In most of the tropics however, where the peoples are in the main backward in both thought and deed, the position is vastly different. The indigenous livestock have to exist under conditions of malnutrition, disease and bad management generally, and thus they contribute little to agricultural production. For this reason it is obvious that improvement of the environmental conditions of these tropical stock should precede any direct use of scientific principles of breeding and selection applicable in the temperate zones.

The major environmental factor involved is of course the climate, and all work on animal improvement in the tropics must be carried on with the climate always in mind. Because the climate itself cannot be altered, the primary need is for ample knowledge of the reaction of different classes and breeds of animals to the tropical environment. Having learnt how the stock react, further studies can then be carried out to ascertain the reasons. Only then, in the light of such information, should scientific principles be applied.

Any response that an animal makes is reflected in the growth and development of its body, and therefore a long-term experiment was started last year by Weavind (1953) to investigate the growth of chicks in Trinidad. Poultry were chosen for ease

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of handling and as a cheap means of obtaining a large quantity of data, and measurement was of one characteristic body weight up to the age of 12 weeks.

Yet the environment will affect not only initial growth but also the onset of puberty, the lifetime production, reproduction and above all the efficiency of these processes. Similarly, growth entails not only an overall increase in weight but also a change in the shape and size of every part of the body.

The object of the present study is therefore twofold. Firstly, the rate of growth of the birds as reflected in body weight increases is followed to maturity and beyond. At the same time practical variables such as different feeds and different hatching dates, which are of immediate importance to local agriculture, are introduced and the progress and performance of the birds under such circumstances are noted. The second part of the experiment is chiefly a preliminary investigation of the body development of chicks hatched and reared in the humid tropics. From such fundamental work as this, it is hoped that data will first be accumulated and then compared with similar experiments performed with poultry in temperate countries.

It is only after the reaction of birds to tropical conditions has been thoroughly investigated in this way that recommendations as to the best method of breeding and management can be made. A long journey lies ahead but even the longest must be accomplished step by step.