INTRODUCTION

When all the characters possessed by the domestic fowl are considered, egg production will appear to be of tremendous practical significance to all commercial poultry keepers throughout the world. The ability to lay eggs involves a number of physiological processes particularly those relating to egg formation. There is in addition the question of genetic factors as a result of which variations occur from one bird to another.

In order to judge individual birds as regards their performance in terms of egg production, a time basis will have to be introduced because a bird will have to lay a certain number of eggs in a given time for it to be regarded as economic.

Egg production in commercial breeds of poultry is influenced by both heritage and environment. Several factors are at work and contribute to these influences. Such factors are of direct scientific interest as well as economic importance to deserve some sort of serious study. The investigation reported in this thesis constitutes an attempt to evaluate some of these factors.

In the humid tropics generally, very little is known concerning both the environmental and management factors which may affect breaks in egg production. Persistence of production will depend on the total length of non-productive periods such as moulting, broodiness, and pausing. The principal causes determining the onset and duration of these non-productive periods as well as the interaction between them will have to be studied from a fundamental viewpoint.

The investigation of the subject of egg production is essentially of a long term nature but in the work here reported, the effects of basic factors such as date of hatching on the seasonal incidence and length of non-productive periods have been estimated. No definite conclusions can be drawn at the present stage of this investigation but one thing that can be said is that the foundations for a 'pilot scheme' have been laid which
it is hoped will serve as a preparatory ground for further specific experiments.

Most of the assumptions on which the work is based are arbitrary. This is what will be expected when it is remembered that as far as it is known, there is very little published work on the subject anywhere in the humid tropics. It is hoped that a continuation of this work and later specific investigations over a considerably longer period than is at present available to the writer will confirm or disprove some of the interim findings here reported.

Spy and Thompson (1927) found little difference in average egg production between winter and spring batches in Oklahoma. They however reported that summer and autumn-hatched birds gave decidedly lower production.

Berry and Walker (1927) observing in New Mexico observed that winter-hatched birds produced eggs at a good rate and gave the highest net returns.

气候条件, in the three areas referred to above are as different from those obtaining in Trinidad and the extent to which these results will apply in Trinidad remains to be seen.

On the other hand, Winters and Jack (1943) working in Missouri could not justify the assuming that the month of hatching chicks not egg differences to rate of lay, age since, egg production patterns, feed consumption, and other physical factors because of the limited research work that had been reported. There appears to be a strong argument in the view expressed by these writers and more basic research will be necessary before valid conclusions can be drawn.

Early research workers particularly Jeffrey and Platt (1948) in New Jersey found that the effect of season on egg production in high greater than the effect of date of hatching. In other words, the effect of season in