

INTRODUCTION

Experimental work on the College farm has always been hampered by the extreme lack of evenness in the crops being grown. This unevenness has rendered any results which have been obtained very unreliable.

Previous workers, as noted by Paine (1) have had results spoilt by this inconsistency, and have stated that the farm land is unsuited for experimental work.

Recently, work has been undertaken with a view to finding out the causes of this uneven growth, and whether experimental layouts can be modified to give reliable results on any land on the farm.

This work was first started by Paine in the season 1939-40. He used, for the purposes of his investigation, part of a series of plots laid out on fields I, II and III in a series of blocks of ten plots each. This investigation was carried out on blocks 16 to 26 which make up field III, and which adjoin the area used for the present investigation.

The investigation which is the subject of this thesis was carried out on field II, on blocks 5 to 15 of the series.

The object of the present work was to see whether or not there was a relationship between, on the one hand the water relations and the chemical and physical analyses of the plot soils, and on the other hand the yield of yams off these plots.

Owing to the time required for full soil analyses, these investigations have been carried out on several series of plots, deliberately selected in an attempt to cover the whole range of variation existing in the field.