

## INTRODUCTION

Imports of food in Trinidad, and many of the other West Indian islands, represent a high proportion of their total imports, and for this newly independent island to gain a reasonable balance of payments, these imports should be reduced.

In Trinidad, the value of imported foodstuffs was \$90 million B.W.I. in 1963, although the island has its own nitrogen fertiliser plant. Matters could well be improved by the extension of available knowledge of food producers and a campaign to buy 'local' instead of 'sophisticated' imported food.

To compete with imported food, locally grown produce must be cheaper and of as good quality. Quality is associated with uniformity and hence an intensive well organised industry of food crop farming or large scale market gardening is desirable as compared to 'backyard' growers. Also needed is a competent marketing system to enable the produce to reach the housewife but that subject is outside this review.

For this food crop industry, a knowledge of the optimum use of fertiliser must be imparted to the grower, and this correct usage must stem from properly designed experiments carried out in that area or on that soil type. We must move away from the vague state of affairs as, for example, described in a survey of tomato production in the Aranguez area of Trinidad where the standard dressing was 'one handful of pen manure per plant hole applied during planting, with a cupfull of cow's urine per plant, when the plants began to set.' (Rombulow-Pearse 1953).

For some time, there has been a need for a review of the fertiliser experiments done on food crops in the Caribbean, to determine whether general conclusions could be reached about the use of fertilisers.

This review was originally designed to cover food crops grown in peasants' small holdings or back yard but so little work has been done on these crops that cash crops had also to be included. Cash crops, which are grown on the estate system, are very well covered by fertiliser trials and in these cases e.g. sugar cane, the writer abstracted a review which covers over a thousand trials and which was the subject for a Ph.D. thesis.

A short review of this type can not list abstracts of every trial on every crop on every soil type on each island, if, indeed, such trials have been carried out, trends only can be shown but a list of nearly 140 references of all experiments from which statistically significant results are obtainable, is included and recourse to this list may be of benefit to the grower.

The aim of this review is, therefore, to present a general picture of fertiliser response. The optimum economic dressing will depend on the cost of fertiliser, which will vary yearly and between islands depending on the transport distances, and on the price for produce.

#### The Period Covered

The period, 1935 to 1963, covered by this report was chosen because proper statistical design, and statistical analysis afterwards, was not very prevalent before 1935 and hence many observations were not very significant. This report is only concerned with properly designed experiments and only statistically significant responses are included.