

A VARIETY AND SPACING TRIAL OF TOMATOES.

INTRODUCTION.

The growing popularity of tomatoes has resulted within recent times in a rapid expansion in the production of this crop. There is an increasing demand for high quality table fruit largely due to its vitamin value, its attractiveness and flavour as a slicing vegetable and its pre-eminent suitability for canning purposes. This has led to the development of an important tomato industry in certain countries.

In the United States, tomatoes according to Work (23), rank third in importance amongst the vegetable crops both in acreage and value. They are also held to be the leading canned vegetable and one of the three chief greenhouse vegetables. In England, they are the most widely grown greenhouse crop and are intensively raised in centres around Cheshunt and Wisbech. In the tropics, however, the crop is relegated to a minor position and is mainly produced in peasant allotments - where little or no improvement has been effected - for sale in local markets.

The main commercial purposes for which tomatoes are grown may be classified as follows and it is in the first two categories that tomato culture in the tropics has at present any possibilities of development.

1. Local markets.
2. Export markets.
3. Canneries.
4. Seed.

Tomatoes are raised in home and market gardens, greenhouses, and as a field rotation crop, under a diversity of soil and climatic conditions. The methods of growing and handling

the crop vary considerably but depend largely on the purpose for which it is grown and the areas where it is produced.

Even in centres of limited markets the crop has proved attractive. In comparison with most other annual field crops in the tropics, its yield and return per acre are high. But there is the danger of overproduction and consequent wastage owing to the perishable nature of the fruit, unless wider and regular markets can be organised. The crop is also very susceptible to disease, especially during seasons of prolonged wet weather. There is, nevertheless, much scope for the development of tomato production in tropical countries, but it lies rather in the direction of an export trade especially for smaller places like the West Indies.

The general increase in the consumption of tomatoes and the improvements that have taken place within recent years in the methods of grading, packing and transport have made it possible to extend the markets of this crop and to grow it for export during seasons of shortage in other countries. An opportunity has therefore arisen for the development of tomato growing under such conditions in the tropics.

A beginning has already been made in this direction in the export of tomatoes from the smaller British West Indian islands to Canada during the Winter months when the crop is short and prices high. The export has been made possible by a preferential tariff and these islands have therefore an advantage over other neighbouring tomato producing countries like Mexico which may be less distant. The extension in production to include the whole of the British West Indies has recently been viewed in order to enable the larger islands of Jamaica and Trinidad to participate in the trade without competing with the smaller islands and a recommendation has been made at the recent West Indian Conference (24)

that the former should endeavour to produce tomatoes during the Spring months when supplies from the smaller islands become limited by virtue of their earlier planting season. It was also suggested that before any production be attempted on a large scale that experiments should first be undertaken to investigate the possibility of growing tomatoes commercially under the conditions mentioned.

There have been scarcely any data so far accumulated in regard to the improvement of tomato growing in the tropics and much work needs to be done on questions of yield, varieties, systems of cultivation, etc. in order that high quality fruit should be produced remuneratively and satisfactorily. The demand for information on the cultivation of the crop is increasing with the attention that is now being paid to vegetable culture in general and to the search for new crops with commercial possibilities. A programme of experiments designed to supply some data on the crop in the West Indies has been prepared by Paterson (15) so that the work in these islands could to some extent be coordinated.

The aim of this investigation was primarily to carry out a comparative trial of three varieties and three spacings purely from the yield standpoint and to examine any other data which were obtainable during the course of the experiment.

Each class is again sub-divided by him according as to whether the