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TOMATO AND PEPPER PRODUCTION IN BARBADOS

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INTRODUCTION

Both Tomatoes and Peppers are two vegetable crops produced in Barbados on a relatively small scale. This does not mean that they are not popular. On the contrary, they are reasonably popular with the consumer, but there are several problems which have seriously affected production of these two crops. The same problems have, to a great extent, also limited to amount of research undertaken on these crops.

There have been few farmers who have paid any real interest in the production of these two crops. However, these crops have been planted to some extent in Sugar Cane preparation land at relatively wide spacing, or to put it another way at low plant population densities, with varying results (from one to two tons per acre)*. Of the two crops, Tomatoes and Peppers, the farmer has been by far the more important crop as is seen by the sale of planting material from the Ministry of Agriculture Seed Store.

TOMATOES AND PEPPER VARIETIES

Very little research has been undertaken on varieties of these crops. The Ministry of Agriculture operates a vegetable seed store which makes vegetable seeds available to the Farmer. Whereas this is not the only source of vegetable planting material available to farmers, it probably caters to the majority of farmers.

The tomato varieties sold to farmers over the last five years or so have been: Bounty, Indian River, Flora Lou, and Success, with Bounty being by far the most popular. Manalucie has also been used, but only in the dry season.

Over the same period the pepper varieties sold to farmers have been: Ruby King, California Wonder, Yolo Wonder and Early Wonder.

THE MAIN FACTORS AFFECTING THE PRODUCTION OF TOMATOES AND PEPPERS

Birds

Probably the biggest single factor operating against the economic production of tomatoes and peppers in Barbados is that of birds. The two types mainly responsible are the Sparrow and the Black birds. Some research was undertaken, with a view of eliminating the bird damage problem with varying degrees of success. Sarran Netting was used to cover areas, but whereas this was somewhat successful, the cost involved was prohibitive. Areas up to one acre were enclosed under nylon netting and these too gave almost perfect control but the cost was exceptionally high, and the farmer, of necessity, was forced to plant his crop continuously resulting in a nematode build up. In initial stages as much as 30 tons of tomatoes were harvested from one acre. Simple bird scares and explosive devices were also used but in a relatively short period of time the birds became accustomed to the devices.

*Vegetable Production in Barbados by K.A. Ingersent, A.H. Brathwaite and J.O.J. Nurse.

In trials carried out by the Ministry of Agriculture in 1966 the percentage of bird damage experienced in control plots was as high as 58%, while commercial farmers have reported as high as 80% bird damage.

The bird damage problem is by no means solved and this is beyond doubt the biggest deterrent to both commercial production and research trials.

Seasonality

There are basically two seasons in Barbados; the wet season and the dry season. The dry season starts late in the year or very early in the year. There is sufficient moisture in the early part of the dry season to permit good land preparation, germination and establishment, permitting maturity to take place when there is little precipitation. The nights are also coolest and these overall conditions apparently favour tomato and pepper production, and the largest acreages are planted at this time.

There are a tremendous amount of difficulties experienced in wet season production. Land preparation is difficult as a result of sodden conditions. Young plants are lost to damping off as a result of excessive moisture and the incidence of insect and fungal disease problems are high as a result of an adversely effected spray programme. For this reason only very few farmers take the risk of planting during this season, and the do so as a result of the high retail prices which prevail during this period (\$1.00 - 1.80 per lb retail).

It has been found that varieties which do well in the dry season need not do well during the wet season. Night temperatures are different, being somewhat higher during the wet season, and this no doubt has an adverse effect. A variety like Manlucie for instance - performs very well in the dry season, but produces a dense mass of vegetative growth and sometimes little or no fruiting during the wet season. A variety like Bounty does not do as well in wet as in dry season, but considerably better than Manalucie.

Marketing and Labour Problems

Marketing uncertainties do exist and to some extent affects production of vegetable crops in general. Many plantations would probably also plant larger acreages of both crops if labour shortages could be overcome or if mechanization could replace a larger amount of labour.

More recently with the introduction of the Staley Precision Seed Drill, there has been increased interest in vegetable production - since nursery preparation for vegetables is eliminated and direct seeding carried out.

Weedicide Damage

Sugar Cane occupies approximately 80% of the arable acreage of land in Barbados. More and more farmers, particularly the larger plantations (there are 210 of these) are employing weedicides for weed control. Vegetable crops in general are adversely affected as a result of spray drift, volatility, incorrect technique etc.

Price

Price to some extent tends to have an effect on the production of these crops. There are times particularly during the later part of the wet season and the early dry season when retail prices soar. This tends to act as an incentive and acreages are increased. When this happens, there tend to be over production, and prices fall rapidly particularly since the crops are perishable, and acreage is subsequently withheld or planted to alternative crops. In a situation as outlined above, acreage is put in motion.

IMPORTATION AND EXPORTATION

As mentioned earlier, large quantities particularly of tomatoes are imported into Barbados at high value. Table I below shows quantity and value of tomatoes imported into Barbados over the period 1967 to 1969. Unfortunately no statistics are available on peppers since these are grouped with 'other vegetables' in the Import - Export statistics.

Table 1.- Imports of Tomatoes (Fresh)

Year	I M P O R T S	
	Quantity	C.I.F. Value
	1000 lb.	\$1000
1967	117.6	50.6
1968	149.4	97.2
1969	179.7	161.4

Table 1 clearly shows that increasing quantities and value of tomatoes are being imported into Barbados.

It was mentioned earlier that there are occasional periods of glut when tomatoes are exported. There are also times when tomatoes are imported and re-exported. Table 2 show quantity and value of tomatoes Exported and Re-exported over the period 1967 - 1969.

Table 2.- Exports and Re-Exports of Tomatoes (Fresh)*

Year	Exports and Re-Exports	
	Quantity	C.I.F. Value
	1000 lb.	\$1000
1967	12.3	5.6
1968	21.2	8.2
1969	4.1	1.5

*Import - Export statics, Government Statistical Services, Barbados.

ESTIMATED ACREAGE AND PRODUCTION

Accurate information is not available for acreage and production of the crops. During 1967-1968 however, the Ministry of Agriculture Barbados, undertook a survey of Vegetables Production and from this unpublished data, together with unpublished Food Crops Inspector's Reports the following figures were extracted and presented below as Table 3. Peppers are again grouped with other vegetables so that specific information is not available for peppers.

Table 3.- Estimated Gross Output of some Vegetables from Estates and Small Holdings

Crop	Estimated Acreage			Estimated Production 000 lb.			Estimated Gross Output \$ 000		
	E	S	T	E	S	T	E	S	T
Tomatoes	123	35	158	551	161	712	127	29	156
Other	:	:	:	:	:	:	:	:	:
Vegetables	47	748	795	211	3,394	3,605	44	577	621
	:	:	:	:	:	:	:	:	:

E = Estates, S = Small holders, T = Total Producers.

Table 3 shows that whereas the Estates or Plantations have been the Principal producers of Tomatoes, small farmers have been the main producers of other vegetables.

Within the last year or so a new pattern of production is emerging. There is a distinct effort at specialisation in the production of vegetable crops on acreages ranging from about twenty to sixty acres. Whereas onions appear to be the main crop of specialisation, both tomatoes and peppers have been included, and ultimately this will inevitably give rise to increased production.

S U M M A R Y

Whereas the Production of tomatoes and peppers have not been of tremendous importance in Barbados in the past, more recently they are increasing in importance. There are several problems involved in Tomato and Pepper Production which have had adverse effects on both production and research. The principal problem is that of bird damage, caused mainly by Sparrows and Black Birds. If bird damage problems can be solved, this in itself would of necessity lead to increased interest in these crops. More recently, there is a new trend in Vegetable Production in Barbados which should ultimately lead to increased production of tomatoes and peppers.