

ABSTRACT

There is a need to increase tomato production in Jamaica. This report covers the initial stages of a programme, carried out at Mona from September, 1966, to September, 1968, to increase local tomato production.

The main findings were :

1. There was a significant difference between the yields of plants with and without side shoots. Plants without side shoots produced fewer but larger fruits.
2. There was a seasonal variation in the yields of Manalucie and other varieties grown at Mona. Highest yields were obtained during the September to December growing season, and lowest yields during the May to August season. Low mid-year yields were probably caused by poor fruit setting and development, and physiological disorders due to unfavourable weather conditions.
3. Pure line selection in Manalucie resulted in an initial increase in yield during favourable, but not unfavourable conditions. Further selection was not able to increase yields beyond this initial gain. It was possible to isolate, by pure line selection, variants with large fruits and with fruits different in shape from those of unselected material.
4. Six imported varieties failed to produce any marketable fruit after 100 days (November to February) when grown under cool, moist conditions

at an altitude of about 4,000 feet.

5. Manalucie x Galaxy and Manalucie x Basket Pak F_1 hybrids showed heterosis for yields, which were higher than those of any other variety, including imported hybrids, grown at Mona during the favourable 'winter' season.
6. Of the imported varieties tested at Mona, Floralou, Galaxy, Indian River from the U.S.A.; Devon Sunrise and Money Maker from Britain; and Eurocross BB from the Netherlands seem to be most promising.

A viable tomato industry, capable of supplying all local needs and exploring the export market, can be developed by using improved cultural techniques suited to local conditions and newer, disease-resistant, high yielding varieties.