

ABSTRACT

Evaluation of the Response of Yellow Passion Fruit (*Passiflora edulis f. flavicarpa*) to Trellis Methods And Plant Spacings in Jamaica.

Phyllis Harvey

A study to determine the response of yellow passion fruit vines to three trellis types T-type, Fence and Arbor and at planting densities 3m x 3m, 3m x 3.6m and 3m x 4.5m was undertaken at two locations and over two cropping seasons at Bodles and Springvale in Jamaica.

The plant spacings affected vegetative and reproductive growth at both locations. The widest spacing produced more vegetative and reproductive buds and the close spacing the least. Flower production was extremely low at both locations even though a slightly higher number of buds were produced at Bodles. The present findings indicate that a major constraint to high yield produce from passion fruit vines in Jamaica is the low level of flower production.

The level of pollination was not significantly different from that reported for yellow passion fruit under normal field conditions. While both the Carpenter

bee (Xylocarpa sonoria) and the honey bee (Apis mellifera) were observed in both locations the number of honey bee was higher. The presence of the latter did not appear to influence the level of pollination that was recorded. The use of different trellis types had little effect on growth and yield at the two locations. The yield obtained was similar for all plant spacings although the wider spacing produced a significantly higher number of flowers per vine.

The total yield/ha obtained was not affected by trellis types or plant spacing at Springvale, however, at Bodles the closer spacing gave higher yield over the other two spacings.

There was no difference in fruit quality with trellis types or plant spacings. Differences were observed between locations for fruit weight, pulp weight and weight of extracted pulp. The Springvale site produced heavier fruit which contained more pulp however, the percent juice yield was lower than that obtained from fruits harvested at Bodles.

Special thanks also to the staff of the Citrus Growers Association Laboratory especially C. Tavares and to the chairman Mr J. Tealiner for his continued encouragement and interest in my work. My gratitude is also extended to the statisticians Dr. Beckle, Mrs H. M. Reid, Mr. William Fielding and Mr. Bruce Lauckner for their assistance in designing the