

PHYSIOLOGICAL STUDIES ON
PAPAYA FRUITS

BY

HANAA AHMED ZAKI

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H.A

The Thesis of Hanna Ahmed Zaki

is approved:

A. L. El-Tarni
P. Talat. Hegazy
Salah Mahmoud Elshahy

Committee

Ain Shams University

1971



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INTRODUCTIO

The papaya is widely cultivated throughout the tropic and subtropic regions for their large melon-like fruits. It is now planted on a large scale in Florida, Hawaii, East & South Africa, Ceylon, India, the Malay Archipelago, Australia and many other countries to supply local and export fresh fruit markets, and as a source of the papain enzyme.

Merory (1960) reported that papaya is a tropical melon fruit which grows on trees, and the natives call it the "fruit of the angels".

The unripe papaya fruit contains the enzyme "papain" one of the most powerful digestants known ingredient of most meat tenderizers. The ripe fruits contains vitamins A, B₁, B₂ and C also iron, calcium, and phosphorus. Papain is absent from the ripe fruit and its juice. Papaya, banana fruit flavour and apple essence make a good combination.

Ripe papaya fruit contains little or no starch but run from 7 to 9 percent or higher in total sugars. Their main use is as a fresh dessert or salad fruit. There is a great variation in flavour even with fruit from the same plant. They are highest in sugar content when matured in

hot summer months. Ripe papaya fruits are also used for making fresh or carbonated soft drinks, ice cream flavouring, jam, canned balls or cubes in sirup, crystallized fruit, pickles, and dried candied pulp. The stems and leaves contain small amounts of the alkaloid "carpain", a heart stimulant. The tender tips are used as greens.

In addition to its popularity as a fresh fruit, the papaya is of even greater value as the source of papain, a proteolytic enzyme similar in action to pepsin and trypsin. In fact, long before dried papaya latex became a commercial product, it was known that the juice from green fruit or leaves would tenderize the toughest meat. At present, papain finds use as a beer clarifier, in meat tenderizing solutions, and as a drug for digestive ailments.

United States imported about 180,000 Kgs of powdered latex in 1951, mostly from East Africa and Ceylon.

In Egypt it is grown in few scattered areas, such as the Barrage Experiment Station, Ministry of Agriculture, at Anshas, at the Basatin Island in Aswan and at the farms of the faculties of Agriculture. It is also planted in many private gardens especially at Alexandria, U.A.R.