

SOME COMMON DISEASES OF PAPAYA

by

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Papaya is rapidly gaining importance as a crop because of its excellent flavor and high vitamin-C content. But diseases can be a problem, and neglected plantations can be totally wiped out.

Hawaii is the world's leading producer of papaya for export. Most of it is shipped fresh, but some is canned as nectar and juice. At one time Cuba exported substantial quantities of this fruit to the United States, but this trade has now ended. Small quantities of papaya are grown in southern Florida. And Surinam has done excellent work in processing papaya for nectar, and in combining it with passion fruit nectar. They have also produced a very high-quality jelly of the two fruits.

Among the major diseases found frequently where papaya is cultivated are three fungus diseases --anthracnose, St. Croix decline, and phytophthora- and two virus diseases-- mosaic and bunchy top.

These different diseases often have similar symptoms. The commercial papaya grower should learn to recognize these symptoms and use proper and timely control measures.



Continuous spraying is an essential for economic production of papaya.



*The end result of proper fertilization, regular spraying
and weed control is a high yield of quality fruits.*

Anthracnose

This fungus usually attacks the ripening portions of the fruit and produces small water-soaked lesions, which extend and darken as the fruit ripens. These lesions are dark brown or black, tend to be sunken, and have concentric circular markings.



Papaya Decline

Papaya decline can be caused by one or more fungi. It has often been confused with bunchy top, which is a virus disease. An early symptom is the free flow of latex when the plant is wounded; it is visible on the leaves. Swelling of the trunk occurs frequently, and the canopy is much reduced; and eventually the plant resembles a pencil, pointed at the top.



The development of St. Croix decline is gradual terminating in a marked pencilpoint effect and death.



*Necrotic lesions are a typical symptom of St. Croix decline (*Corynespora cassiicola*).*



Water-soaked or greasy areas appear on the stems of papaya affected by St. Croix decline.

Phytophthora,

Phytophthora, which is usually found where soil water content is high, is a serious fungus disease. It attacks both the fruit and plant stems. Areas infected may enlarge and girdle the stems of young plants, causing wilting and consequent death. In older trees lesions may weaken the stem so much that the tops are blown down. Fruits become shriveled and take on a grayish color before they drop to the ground.



Phytophthora symptoms on the fruit of a diseased tree appear as lighter colored dried areas.



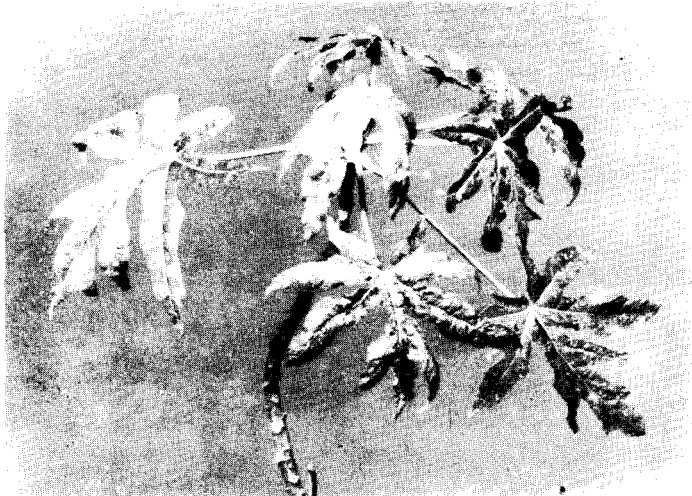
Fruit drops from a plant attacked by phytophthora becomes mummified and changes color to a light gray brown.

Mosaic

This virus disease causes marked chlorotic mottling, distortion of the leaf laminae, and stunted growth. This is reflected by the size of internodes, leaves, and petioles. Mosaics are not always fatal to plantings. In many cases, plants will live and continue to bear some fruit, although yields are lowered.



Symptoms of mosaic include mottling, crinkling and necrotic or chlorotic areas. Mosaic left, healthy right.



Typical symptoms of mosaic are shown bottom and upper left, compared with a healthy leaf, upper right.

Bunchy Top

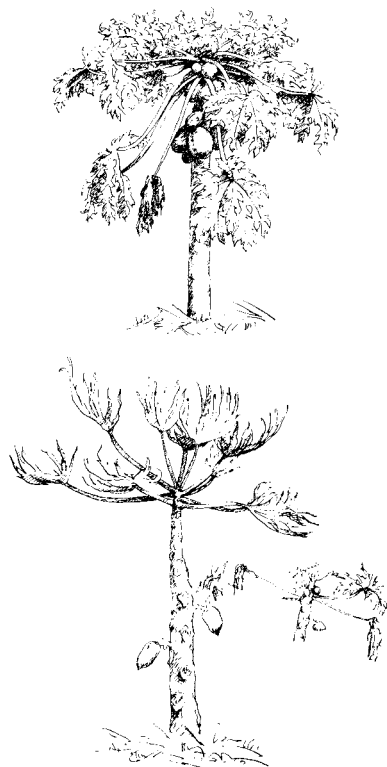
The symptoms of this virus disease are the absence of latex flow from wounds, a distorted umbrella-like canopy resulting from leaf-size reduction, and the appearance of chlorotic patches on the leaves. Plant tissues, leaf, stem, and petiole become dry and brittle.

These virus diseases are serious problems in Puerto Rico, Jamaica, Dominican Republic, Cuba, Antigua, Haiti, Trinidad, Mexico, Florida, South and Central America, and the smaller Caribbean islands.

Aphids are probably the main transmitters of mosaic and bunchy top. The most efficient means of controlling aphid populations is to spray infected plants with malathion. This provides some relief, particularly if nearby plants are also sprayed.

A suitable spraying program using 'Dithane M45' or 'Copper A' will control anthracnose if directions are carefully followed.

When applied at intervals of 10 days or 2 weeks zinc ion and maneb ('Manzate D') have given satisfactory control of St. Croix decline.



Bunchy top symptoms result in an umbrella-like effect quite distinct from other papaya diseases.



Bunchy top is symptomised by a marked reduction, or bunching of apical growth, and some chlorosis.

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