
Bunchy Top on Papaya

ECHO Inc.

Some of ECHO's Malaysia exotica papaya trees developed what I presumed to be the disease "bunchy top." Because this is a viral disease, we did nothing to try to control it. Fruit production almost stopped, and what did ripen was so low in sugar as to be uninteresting. We cut the trees and have replanted.

Yong Lee Ming at the Tenom agriculture experiment station in Malaysia sent us some fresh seed, and some important information. "The problem may not be due to a virus. The symptom you described appears to be similar to what we have in Malaysia, but so far is not a big problem and often easily controlled. The so-called bunchy top symptom is often caused by thrips and/or a fungus." He sent us a research report done in Malaysia called "Bunchy and malformed top of papaya cv exotica caused by thrips parvispinus and Clado sporium oxysporum." (Write us if a copy of the article would be helpful). Excerpts follow.

A previously unrecognized disease of papaya (cv *exotica*) was first observed on nursery plants, then in the field, where more than 50% of plants were affected. Plants showing the symptoms, bunchy and malformed tops, were slow to recover, and had almost no yield if infection occurred before fruiting.

"At a cursory glance, the symptom appeared similar to papaya mosaic virus disease which has not been reported in Malaysia thus far. Closer examination, revealed that the leaves did not exhibit the marked chlorosis and vein clearing of the crown leaves which are characteristic of papaya mosaic disease."

Subsequent research showed conclusively that the syndrome was due to the attack of thrips followed by infection of young leaves with the fungus *C. oxysporum*. The fungicide benomyl alternated weekly with mancozeb gave complete control. Control of thrips with insecticide was partially effective, but not recommended. It is believed that the thrips are pollinating agents as well; inadequate pollination in papaya may lead to premature fruit drop and reduced fruit size. The cultivar *exotica* (developed for its disease resistance) was more susceptible than some other Malaysian cultivars.

[It is almost impossible to hear the "s" in 'exotica'. I missed it when I was first given this seed in Malaysia and have introduced it widely as 'exotica.' At this late date I will not try to change it back. Besides, 'exotica' has intriguing connotations in our culture and I have become attached to it. I guess this is a living example of how languages change.]

For a small packet of Dr. Ming's seed, drop us a line. (All seed is free to development workers, \$1.75 to others). Bonnie and I much prefer its flavor to any of the other solo papaya cultivars.

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