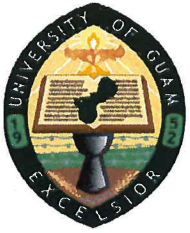


Banana Bunchy Top Virus Prevention and Control

George Wall

Western Pacific Tropical Research Center
University of Guam



Banana Bunchy Top

The most damaging disease of bananas in the Mariana Islands at this time is banana bunchy top, which is caused by a virus. Once a plant becomes infected by the **banana bunchy top virus (BBTV)** it cannot be cured. All its subsequent shoots will be infected; the entire mat, which is attached underground at the corm, will be infected. Diseased banana plants cease to produce fruit, and become a source of the virus that can infect other healthy bananas – your own or your neighbor's.



How the Virus is Spread

The virus is spread by the banana aphid, a small sucking insect that loves to hide in the whorl of banana plants. This insect also lives on other related plants, such as ginger, taro and caladiums.



Close-up of aphids and lady bug beetle (left) and aphids as they appear on banana tree (right).



BBTV Symptoms

Banana plants can be infected for up to 4 months before symptoms become apparent. Symptoms of bunchy top disease include suckers that have numerous leaves bunched together instead of their normal growth habit. In healthy plants the stem grows some distance between leaves and the leaves don't look so crowded together. Infected plants also have yellow margins on the leaves. A closer examination reveals dark green streaks on the petioles, and the leaf lamina also exhibit a dot-and-dash pattern. Veins develop a hooked appearance where they connect to the midrib, as opposed to normal veins that are straight; this can be appreciated best by holding leaves up against the sun.



Dot-and-dash pattern on leaf infected with BBTV.

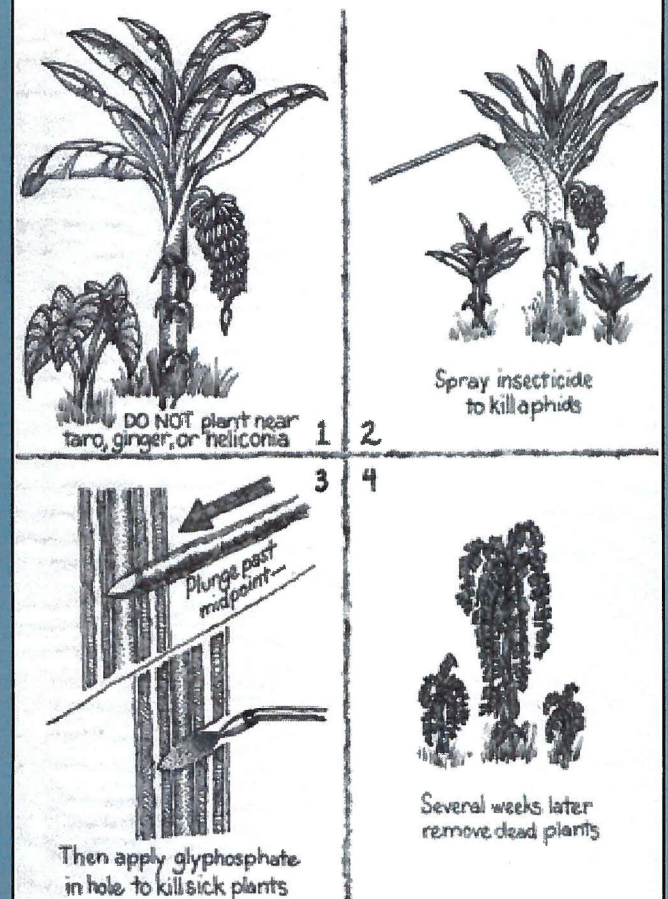


Dark streaks on midrib of BBTV infected leaf.

For assistance in diagnosing your banana plants, or for more information about BBTV please contact:
Guam Department of Agriculture
734-3940
College of Natural and Applied Sciences
Cooperative Extension Service
735-2080
Western Pacific Tropical Research Center
Plant Pathology Laboratory
735-2100

BBTV Control

Control of banana bunchy top is achieved by killing the banana aphids then destroying all infected material. First, the aphids should be killed on the infected banana mat and then proceed to kill the mat. Banana mats usually consist of several plants, some mature and some developing suckers, all coming from one underground corm. Infected banana plants can be first sprayed with an insecticide like Sevin, or simply soapy water. Spray only the whorl and upper part of the trunk to kill the aphids, which like to hide deep in the central whorl. Once the aphids are dead, a few days after spraying, the infected banana plants can be killed with an herbicide.



One method recommended in Hawaii is to stab a sharp stick or a large screwdriver into the trunk at about waist height; open a hole by rotating the instrument, remove it and spray or pour one tablespoon of concentrated glyphosate into the hole. The entire banana mat should begin to show signs of stress in a few weeks and should die in about 6 to 8 weeks. Then the dead plants can be cut and removed, no longer representing a threat to the rest of the healthy banana plants in the vicinity.

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