

PHYTOPHTHORA CANKER OF AVOCADO TREES IN GUATEMALA

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In January, 1973, we observed cankers on the trunks of several young avocado trees in the variety planting at Los Aposentos Nursery (6,000 feet above sea level), the government nursery near Chimaltenango, Guatemala. Several trees were girdled or nearly girdled by cankers from which the typical white sugar was exuding, as is commonly seen when an avocado tree is wounded or invaded by a canker organism.

Isolations showed the presence of a species of *Phytophthora* different from *P. citricola* that we recently found in California (2) as the cause of avocado trunk cankers and which we have occasionally isolated from avocado roots in California. The isolations were made by the senior author, using antibiotic media (cornmeal agar with pimarcin, and vancomycin). We are still working on the identity of this new species of *Phytophthora* from avocado in Guatemala, but it is different from either *P. cinnamomi* or *P. citricola*.

On two other trips to Guatemala in the past eight months the planting has been revisited. The number of affected trees has gradually increased from six in January 1973 to 12 in June 1974, and 15 in January 1975. The new species of *Phytophthora* has been reisolated from cankers on several trees, and *P. cinnamomi* has not been found in any of the cultures.

The rootstocks used in this plot are Guatemalan criollo types with fruit that vary considerably in size and shape. Several different types of scions have been infected including Siquinalá, Rinconada, Haakuu Hawaii, Zamorano 10, and Chocóla 5.

Affected trees have either been girdled and have died, or are stunted in growth and of poor vigor and color. In moderately advanced stages severe wilt occurs and bronzing and death of the leaves. Cankers are often sunken (Figure 1) with whitish sugar exudation apparent when not washed off by rains during the rainy season. Cankers extend into the inner bark and to some extent into the outer wood.

If detected in a sufficiently early stage it should be possible to cut out young cankers. All discolored tissue should be removed as well as at least one inch of healthy-appearing bark on the margin of the lesion. The area should then be painted with some fungicidal paste or paint, such as Bordeaux paste.

This is a new record of an avocado disease for Latin America, to be added to the list published in 1959 (1).

LITERATURE

1. ZENTMYER, G. A. 1959. Avocado diseases in Latin America. *Plant Disease Reporter* 43: 1229.
2. ZENTMYER, G. A., L. JEFFERSON, C. J. HICKMAN. 1972-73. Another species of *Phytophthora* on avocados in California. *Calif. Avoc Society Yearbook* 56: 175-179.