

PSOROSIS and RELATED DISEASES

More Information on Psorosis Disease in Bahia, Brazil

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In 1971, bark symptoms of psorosis were first reported on some uninoculated citrus trees, in Bahia, propagated from nucellar budwood (2). Sweet orange varieties involved included Bahia, Bai-aninha, Natal, Pera, Hamlin, Caipira (common), Piralima, Lima, Parson Brown, Pineapple, Westin, and Blood Oval. Symptoms were also observed on Dancy and Oneco tangerines and on the hybrids Kinnow, Robinson, and Osceola.

More recently, bark symptoms of psorosis were seen in 100 per cent of the Pera sweet orange trees in an experimental trial in which trees had been propagated from nucellar budwood and from seeds originating at the Limeira Experiment Station of the Instituto Agrônômico, São Paulo. Psorosis bark symptoms also were seen on 57 per cent of some 10-year-old nucellar Hamlin sweet orange trees in a commercial orchard.

These determinations of psorosis in nucellar lines were made only on the basis of bark symptoms. It is unlikely that this bark scaling was the result of leprosis or a related condition, since leprosis has not been described in Bahia and no symptoms were seen on leaves or fruit.

If these symptoms are truly those of psorosis, then transmission from psorosis-infected to nucellar trees must be occurring in the field in Bahia. This would be similar to the situation described by Pujol (3) for the Concordia area of Argentina.

Final diagnosis of psorosis requires young-leaf symptoms, which are found elsewhere, but which have been reported as not occurring in Bahia (1). In 1971, we attempted to obtain leaf symptoms of psorosis in inoculated indicators. Psorosis donor plants were the sweet orange variety Do Ceu (Heaven orange), propagated from psorosis-infected budwood supplied by Dr. Sylvio Moreira from the Limeira Experiment Station and from Bahia, and Pera sweet orange varieties of local origin. Tissue from these plants was grafted into seedlings of Caipira sweet orange. Oak leaf and vein-flecking symptoms were seen occasionally in the Do Ceu donor plants, but no such symptoms were seen in the local varieties and none developed in the Caipira indicators.

In view of the inconclusive nature of these tests, budwood from affected nucellar trees and from our Bahia and Pera sweet orange trees is being indexed at the Limeira Experiment Station. We have also set up a new indexing trial near Bahia at an altitude of 1,000 meters. Average temperature is lower and temperature fluctuation is greater at this new location than at our experiment station at Cruz das Almas.

Some uninoculated nucellar citrus trees in Bahia exhibit the "popcorn" symptom on trunk bark (eruptive pustules usually less than 1 cm in diameter), which may indicate the presence of psorosis (4). Budwood from these trees is also being indexed in Bahia and at Limeira in São Paulo.

LITERATURE CITED

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