Letters

A Paper Is Questioned . . .

A paper published in the April 1982 issue of PLANT DISEASE (page 311) entitled "Suppression of Citrus Young Tree Decline with Humus" by J. A. Pinckard has caused us some concern. We feel the paper in question has many serious deficiencies which make it unacceptable for publication in PLANT DISEASE:

1. There is no documentation that the trees treated with the product had blight (young tree decline) prior to treatment. Decline symptoms associated with the disease are nonspecific and should be confirmed by water uptake tests (Cohen, M. 1974. Plant Dis. Rep. 58:801-805) and/or by zinc analysis of trunk wood (Wutscher et al. 1977. Plant Dis. Rep. 61:572-576). The tests reported were apparently done after completion of the experiment. Neither the type of test conducted nor the results of the tests were presented. We know of no test for the disease which utilizes "cambial samples." Thus, there remains a question as to whether the trees were even suffering from the disease at the beginning of the experiment.

2. Although recovery of the trees is reported, no critical evaluation of tree condition was made. There are no subjective ratings of tree appearance and no documentation of tree growth, shoot length, canopy density, water uptake, or zinc content of trunk wood. Even the exact number of trees in various stages of decline before and after the experiment remains vague.

3. Only yield data from an unreplicated test are reported. No yield data for individual trees before and after treatment are presented. Differences between the two blocks of trees could have been due to any number of factors. Yields reported were apparently collected from both healthy and diseased trees within each block. If, indeed, the yield increase was due to treatment, it is at least as likely to be attributable to some other property of the added humus, such as increased water-holding capacity of the soil, as to suppression of the disease.

4. In addition, all of the data up to 1979 have been published previously in two papers (Pinckard, J. A. 1979. Citrus Veg. 42[8]:20-24 and 43[4]:47-48). The previous work should have been cited. The data collected from the block after 1979 add little information, since no yields are reported from control blocks in 1980 and a severe freeze reduced yields in both blocks in 1981.

In addition to scientific shortcomings, data are further clouded by Dr. Pinckard's association with the Ekol Corporation which produces the humus studied in his articles. An ad for the humus appears on the front page of his article in *Citrus and Vegetable Magazine* (43[4]:47). Apparently, the reputation of APS has been used to add credibility and to increase sales of the product. Along with other literature on the humus, Dr. Pinckard has distributed a copy of the article prior to publication and a copy of the acceptance card with this statement: "The following manuscript has been accepted for publication in *Plant Disease*, an international journal of applied plant pathology. This official journal of the American Phytopathological Society is distributed and read throughout the world." We suggest that in the future, articles which are of a promotional nature be scrutinized with greater care.

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. . . and the Author Replies

Some people at the University of Florida Citrus Experiment Station in Lake Alfred are critical of the editorial reviewers of PLANT DISEASE for accepting my 6-year field study of the 104-year-old citrus decline disease.

The pages of PLANT DISEASE are no place to air such complaints. I urge my critics to "cool down" and reread my paper. The answers to their criticism are all there, including my alleged misuse of the term "cambial" sample. I cannot imagine how one can take a wood sample from a growing tree with an electric drill without including cambial tissue. That, however, is unimportant.

Citrus decline is a most unusual disease. It is now causing roughly 10 or 12% loss of *mature bearing* trees annually. No causal agent is known; it has not been artificially transmitted; it has not responded to applications of plant foods or to various treatments thus far devised by University of Florida investigators.

My reason for undertaking this study is worth recording because it will have future significance. In 1944, Pinckard and Leonard published results of an extensive field study on the control of the Fusarium wilt nematode disease of cotton by incorporating a high-nitrogen organic residue under the cotton row (J. Agron. 36:829-843). The significance of this work was not recognized at that time. Later, in a study of Verticillium wilt of cotton, a similar high-nitrogen form of organic matter changed a Verticillium wilt-conducive soil to suppressive. Still later, a soil conducive to *Rhizoctonia solani* was made suppressive by a similar procedure. Publication of the latter work will appear in due course. I, therefore, had good reason to try similar studies with citrus decline which the people at Lake Alfred were not aware of, ie, microbiological readjustment of the citrus rhizosphere.

As soon as I was reasonably assured the special humus treatment was improving tree growth, I went to Lake Alfred, offering to share my results with them. They said they were "too busy" to inspect my test plots but would accept a ton of material to be applied to 20 trees known to be affected by the disease. I had the ton of material delivered in 50-lb bags to the station to make their work easy. After an appropriate interval (18 months), I inquired about the results. To my surprise, they refused to show me the test or to show photos of the trees at the time the application was supposed to have been made! Again, they claimed to be "too busy" to inspect my test trees, which by this time were recovering nicely. I was never able to see either photos of or the 20 trees they claimed to have treated with the special humus. Had a few colored photographs been taken at time of treatment and at appropriate later dates, all concerned would have been well served.

In my limited experience and much too often, unfortunately, investigators of particularly difficult problems seem to become frustrated and sensitive to outsiders entering what they assume to be their exclusive domain. A competent administrator would recognize the situation and make appropriate adjustments.

In times gone by, if one investigator had reason to suspect the results of another, he would have reworked the project, either confirming or disproving the conclusions of the first person. In these permissive times, however, some people just write letters to the editor!

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