CADET
Citizens Against The Destruction & Eradication of Trees

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To: Dr. Westphal

From: Heinz Wutscher

Subject: Memo on citrus canker campaign

Here is the emeo I promised you.I sums up what I have learned about the disease during my career in citrus research as a horticulturist.

Heinz K. Wutscher

Comments on the current citrus canker eradication campaign

Personal data: Heinz K. Wutscher, Research Horticulturist retired from the Agricultural Reseach Service, U.S. Department of Agriculture in October 1999 after 32 years of service, 8 years in South Texas, 24 years at the U.S. Horticulturral Research Laboratory in Orlando FL. I hold a B.S. degree in Tropical Crop Production (1963) from the University of Hawaii and a Ph.D. degree in Pomology (minors Plant Physiology and Agronomy) from Cornell University (1967). I spent my entire professional career working with citrus, in Texas on variety and rootstock development, cold hardiness and salinity problems, in Florida on citrus blight (a tree decline of unknown cause), rootstocks, nutrition and pollution problems. Because I am multilingual I worked in short-term assignments in Chad, Cuba, Venezuela, Mexico, Argentina, Uruguay, Brazil, Peru, Chile, Costa Rica, Guatemala, Belize, the Dominican Republic and Puerto Rico. An earlier career made me familiar with the Far East (Japan 6 months, Singapore 3 months). My opinions on citrus canker are based on personal experience and the opinions of leading pathologists such as Dr. L.C. Cochran (see enclosed letter).

That citrus canker is a serious disease is a Florida invention, probably in the repeated, time-tested pattern of scaring people into providing funds. Little attention is paid to what happens in the areas of origin of these "threats" or what happens in other citrus producing countries. Canker originated in South East Asia, the area where citrus also comes from, where the two have always coexisted. That citrus canker is a tree killing disease is an outright myth. It attacks only the young parts of the tree, may cause a limited amount of leaf and fruit drop, but definitely does not kill trees. It is particularly noteworthy that nobody in Japan talks about eradicating citrus canker, an island nation where it should be relatively easy, where all the production is for fresh fruit, which probably has the most exacting marketing standards. Canker was introduced to Brazil by Japanese immigrants in 1957 and spread to Argentina and other South American countries shortly afterwards. It is noteworthy that the citrus industry in Argentina has tripled and the Brazilian industry has increased tenfold since the introduction of canker, showing the "seriousness" of the disease

A few years after the introduction of canker to Florida in 1910 an eradication program by burning affected trees was started which continued in fits and starts until 1933 when "victory" was declared. It is difficult to imagine that with the methods used in this campaign the disease really was eradicated. Canker is highly dependent on climatic variations and it is very likely that, as in other countries, the epidemic subsided on its own and that pockets of it remained in the state, unnoticed by the authorities. The burning of trees, a classic example of the cure being worse than the disease, was copied in South America when the disease first appeared, but was always abandoned shortly afterwards because of ineffectiveness and grower resistance. Even the most ardent advocates of eradication will admit that in Florida the only really affected part of the citrus industry would be fresh grapefruit. It would be of little importance to the orange crop which is 95% processed.. Only 50% of the grapefruit is sold fresh and with one or two extra sprays the "threat" can be conquered, as experience in the eastern parts of Argentina shows, where climatic conditions are more conducive to canker than in Florida (strong winds from the Antarctic with horizontally driven rain). Even if the current campaign eliminates canker, reintroduction would be very likely because of the prevalence in the rest of the world.

Current efforts.

The 1900 foot radius of tree removal around affected trees far exceeds previous standards, yet

according to Deputy Commissioner Craig Meyer, as presented at the Citrus Expo Seminar in Fort Myers, only 95% of the inoculum is removed that way. That is not eradication, it is only control It means you have to come back again in a couple of years and repeat the process, a sure-fire way to kill the citrus industry. At the same seminar the word "control" was anathema, only eradication is acceptable. We already know that timely copper sprays will control canker. If some of the millions spent on burning trees were spent on control research I am sure something could be found. As a starting point I would suggest methyl alcohol which even with 100% application does not hurt the trees, has no residue, penetrates into the plant tissues and actually has positive effects on tree physiology. If we really think canker is a threat, why not use the method advocated by Dr. DuCharme, the czar of the canker effort in the 1980's, especially for backyard trees ? He showed me his tests in Argentina where defoliation of the trees with a herbicide, followed by two or three copper sprays, eliminated the disease, with no sign of recurrence four years later. The leaves have to be removed, which would be difficult in large-scale plantings, but not under backyard trees. The method is not new, it has long been used in Asia where seawater was used as a defoliant.
Identification of canker is notoriously difficult and visual diagnosis is highly unreliable because many common diseases have similar symptoms. Even serological methods are unreliable because it is hard to distinguish between bacteria of the genus Xanthomonas, many of which are harmless and unimportant. The classical example of misidentification was the canker campaign of the 1980's where, after burning 22 million trees, it was decided it wasn't canker after all and it became bacterial leafspot, not a threat at all. Another example was the identification of Canker C on limes in Mexico, which shut down exports for years until it was shown to be a fungus disease. The 1900 foot rule and many burnings are based largely on visual identification, often by personnel with dubious qualifications. The tree removal contractors, who get $ 90 per tree, have been reported to have cut down mango trees on occasion. The current campaign seems to concentrate largely on backyard trees and small growers. Is there no likelyhood that big companies' groves might also be infected ? The political repercussions in that case would be severe. Growers organizations have made it no secret that they are in favor of removing backyard trees to force the population to buy more citrus.
The 1900 foot rule has other weak points. Removing the trees does not eliminate the bacteria in the soil and on the surrounding weeds where they can persist for months. Nineteen genera of rutaceous plants and one species of Meliaceae can be hosts of the citrus canker organism. Apparently nobody in Florida has investigated this possibility. One of them, orange jessamine (Murraya paniculata) , is one of the most common ornamental plants in Florida, are we going to burn these plants too ?
The decontamination methods used couldn't be expected to stop the spread of a bacterium. If it were that easy kill bacteria the hospitals could save a lot of money.
In summary, is it worth spending millions, disrupting peoples' lives and ruining whole industries like the lime industry in South Florida to eradicate a disease of at most moderate importance? A look around the world shows that canker can be lived with; how many times do want to repeat charades like the 1980's canker campaign and the current eradication project ? Have we learned nothing from similar boondoggles like the blackfly scare in the 1970s ?

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Dear Heinz:

I am inclosing a copy of Dr. Whiteside's MS which you may have already seen. To me he is serving a good purpose to bring some rationalization to some of the erronious frenzy which has been rampant in the canker campaign.

If he is correct that the new find is a remanent of the old 1912 infection, this further shows that canker is not the the highly contagious pathogen that has been castigated. Since it is Type A, the same as that of 1912 his logic seems reasonable. Bacterial diseases in the words of Kunkel does not have wings as insects do or viruses with wings to carry them. I am concerned about the credibility of control agencies. We need them and we want them to be able to get support when a real threat such as Greening disease gets to Florida.

If this article has not been seen please pass it along to Garnsey and Jack Hearn.

Regards,

L. C. Cochran