

## Short Note 9.1

### Pieces Still Missing

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#### Origins of the 1900-ft Policy

The puzzle has not quite been completed. The major pieces of the puzzle came together. In Chapter 9 of my book, a new history of the eradication program was proposed. The cornerstone of the new history, is the field study was meaningless to policy making. It is consistent with Dr. Gottwald testimony that the 1900-ft policy was not agreed upon as a result of any reports. The new history suggests 1900-ft originated with an undisclosed clear-cutting model. The 1900-ft rule would provide from 95 to 99% areal coverage. The 1900-ft rule is a mathematical result, not related to the biology of canker.

Prior to the field study, the Drs. Gottwald and Graham published three articles [1,2,3], suggesting that windblown rain could carry canker bacteria anywhere from 2741-ft to seven miles. In the first article, published in April 1992, a three lemon trees were identified as the sources, but there was no details of the wind velocity and precipitation that day. [1] In fact, the article did not state specifically when this storm occurred, except in mid-August 1989.

In Chapter 9, I wrote the brief paragraph describing the miracle raindrop which could defy gravity and travel for miles and then encounter foliage of a citrus tree far distant from their source. I was tempted to dress the raindrop in a superman suit, flying over houses, ponds, canals and parks, to miraculously land on a susceptible foliage of a citrus tree. This might be included in the next revision of my book.

I do not know what motivated Drs. Gottwald and Graham to exaggerate the transport distance of citrus canker under conditions of windblown rain. Where they really convinced that rain could be transported for miles? No, I don't believe so. Did they understood the economic backlash if their focus was on contaminated nursery plants? Yes, they understood any accusation of contaminated nursery plants would have immediate ramifications against the nursery selling citrus. It could easily put a nursery out of business. Did they believe at large radii cutting circles were the only way to eliminate the disease? Yes and no on this. Within residential areas, a large radius would eliminate pockets where citrus canker could re-emerge. The actions of the Risk Assessment Group suggest that they would allow many exceptions to grove owners for the 125-ft rule, and likely the 1900-ft rule as well. Where they were compliant to the needs of the Department including legal justifications? Yes, I believe they understood the USDA did not want to be funding a prolonged battle. I believe they understood that the courts could limit the authority of the Department if an eradication distance was judged excessive under the standards of strict scrutiny. Under this standard, the Department had the obligation to demonstrate that the eradication distance was narrowly tailored to the minimum distance to achieve its objective. The strict standard has been around since the Supreme Court used it in 1944.

I stated, based on detailed analysis, that the field study called it a hoax. It was a deep dive in pursuit of the truth. Are there alternative explanations for all the conflicting results, and dubious statistical procedures as described in appendices B to F? Did the field study really come from downloaded data from the CCEP database? Was the "oldest lesion ages" just made up data? Am I correct about the simulation study being the source of the 1900-ft rule?

The Highlands study, as published in April 1992 [1], was used to corroborate the results of the field study. This also appeared to be lacking in details, and based on a foregone conclusion that the grove could not have been infected by contaminated nursery stock. This is document in Short Note 6.4.

The clear-cutting simulation study as suggested in Chapter 7 could have been developed anytime Dr. Gottwald was employed with the USDA/ARS in Florida. It could have been done as early as October 1990, when the “Highlands Study” was being done. I believe that as early as 1990, there was serious discussions among plant pathologists of the appropriate eradication radii which should be used.

## Other Missing Pieces

I have described an inner circle of plant pathologists, mostly from FDACS, but also including Dr. Graham (UF/IFAS) and Dr. Stephen Poe (USDA/APHIS). How much did they know? Why did Dr. Graham become so involved in epidemiological research? This always seemed very strange. His area of specialty is soil microbiology, but he did extensive research into citrus canker.

It also seemed strange that the USDA Science Review took place in 1998 before the field study, and active promotion of the rule in the Task Force Meetings in 1999. Knowing the size of commitment of the USDA to compensate growers, and later nursery owners, why would the USDA/APHIS not subject the field study to additional scrutiny by independent epidemiologists?

How did officials approve the 1900-ft policy in 1999 given the lack of technical documentation? I wonder how much Deputy Commissioner Craig Meyer knew. I believed Dr. Gottwald confided mainly in Drs. Schubert and Dixon. I envision that Drs. Schubert and Dixon often were the “go betweens” Dr. Gottwald and officials in FDACS headquarters in Tallahassee, Florida.

As money flowed from the USDA, in year 2000, did the USDA really expect the 75 million dollars given to lime grove owners in Homestead to go to replanting? The USDA/APHIS was spending half the eradication funds on compensation and delinquent in any follow-up on the money spent.

But, as I pieced together the interpretation of events, I was always reminded of quote from William Faulkner, “The past is never dead. It’s not even past.”

David Lord

## References

1. Gottwald, T.R., Graham, J.H., Egel, D.S., 1992, Analysis of Foci of Asiatic Citrus Canker in a Florida Citrus Orchard, Plant Disease, April 1992.
2. Gottwald, T. R. and Graham, J. H., Schubert, T.S. 1997. An Epidemiology Analysis of the Spread of Citrus Canker in Urban Miami, Florida and Synergistic Interaction with the Asian Citrus Leaf Miner, Fruits, Vol 52-5, 371, 1997.
3. Gottwald, T.R. Graham, J.H., and Schubert, T.S., Citrus Canker in Urban Miami: An analysis of spread and prognosis for the future, Citrus Industry, 78m, 72078. 1997.

