

Testimony of Derrell L. Chambers on Bill Number 87 – “Relative to the Light Brown Apple Moth”.

April 28, 2008

Good afternoon, and thank you for this opportunity to testify.

I am Derrell Chambers and my intent today is to bring to this matter my experience in the development of insect pheromones in pest management. I retired from the U. S. Department of Agriculture in 1994 after nearly 40 years largely devoted to developing pheromones and hormones as they emerged as new opportunities to avoid the use of pesticides. I obtained a Ph. d. in 1965 in insect physiology precisely to prepare for this new area of research. Thereafter, I returned to the Agricultural Research Service of the USDA and specialized in conducting and directing pheromone development until my retirement. I was the Laboratory Director of ARS research in Mexico and Hawaii concentrating on the technologies now in use in California and elsewhere to manage and eradicate pests such as the Mediterranean fruit fly and the Mexican Fruit Fly. In 1968 I became Director of a new ARS facility in Gainesville, Florida, created specifically to conduct research on insect pheromones and hormones. During the following 12 years I was intimately involved in the conceptual and technical development of pheromones in agriculture. I then returned to field research in Guatemala, using its existence there as an opportunity to model such methods on large wild populations. I retired after 11 years in Guatemala.

In the nineteen seventies the medfly emergency in San Jose brought me there to serve as a science advisor to CDFA and I continued this service until well after my retirement. I hold the staff and management of CDFA's pest control activities in the highest regard, and feel that with them I have contributed to California's ability to address it's emergency projects. I am fully in favor of eradicating emergent pest populations in California where it is necessary and feasible. Nevertheless, I do not support the aerial application of pheromone to attempt eradication of LBAM .

There are a number of ways pheromones are used to deal with pest insects. They are one of the best alternatives to reduce or avoid pesticide use. That said, no eradication of a pest species with only mating disruption has ever been accomplished. An attempt to eradicate the gypsy moth was the only regional, stand-alone mating disruption eradication yet attempted that I am aware of. That attempt has been reduced to its application in suppressing populations and delaying the pest's spread. All other applications are for suppression only, and are accompanied by multiple, supporting integrated tactics.

In fact, the recommendation to CDFA by the advisory Working Group on LBAM specifically states, “ in addition to mating disruption, the program should consider using a multi-pronged integrated approach”, and then lists tactics to be included. If, indeed, CDFA intends an integrated attack on LBAM, why is this not apparent to the public?

But, if eradication with mating disruption alone is the true intention, I think it unlikely ever to succeed. Even so, such an attempt should be preceded by extensive trials to develop, improve and demonstrate efficacy. Eradication is extremely difficult and I think it unlikely to succeed in California without methods development and proof tests on an island population, even using multiple tactics. This has not been done for LBAM, not by ARS, APHIS, CDFA or even those most in a position to do so, the scientists of the various New Zealand agencies responsible for LBAM management in that country. The only field trial of mating disruption alone for eradicating LBAM was conducted recently in Santa Cruz County

We learned in San Jose that justification, appropriate technology, safety and proven efficacy must be convincing. Certainly, the public’s present feeling that they are being subjected to an unwarranted, unsafe, and untested procedure should be more thoroughly addressed than it so far has been. I believe the LBAM project should be challenged on all these issues, but I am particularly concerned that the issue of efficacy has not been sufficiently questioned.

I hope to convince you today that I am qualified to consider the principles of pheromone uses, the strategies for their employment, the tactics for their successful use and the complexities of the planning and management of large-scale eradication campaigns. It is my judgment that:

1. Mating disruption alone is not appropriate for California’s situation, and probably never will be.
2. Mating disruption for eradication of LBAM, even with the recommended supporting tactics is unlikely, and certainly has not been adequately tested, and
3. The political and social sensitivities of an unconvincing project are not being adequately addressed.

Thank you for your attention. I would be pleased to attempt to answer any questions you may have.

Derrell L. Chambers