

Economic Impacts
and
Implications for California Agriculture

Light Brown Apple Moth Eradication Program: Potential Effects on Pollinators and Implications for California Agriculture

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Full report at <http://www.lbamspray.com/Reports/Bees.pdf>

Critical Points:

- Worldwide there is an alarming incidence of *Colony Collapse Syndrome* among honey bee populations.
- The LBAM eradication program, in addition to the aerial spraying of pesticide solutions, includes chlorpyrifos, *Bacillus thuringiensis* (Bt), permethrin, and spinosad, **all of which are highly toxic to bees**, and can have devastating effects on California agriculture that is **far greater than any real or projected estimates from damage due to LBAM**, which is considered to be very low.
- In light of the severe incidence of *Colony Collapse Syndrome* throughout the U.S., and the important economic impact of bees on California agriculture, **it is imperative** that State agriculture officials reconsider the use of microencapsulated delivery systems for pesticides, and **call a halt** to the LBAM eradication program before there is greater damage to California bee populations.
- According to the USDA, one-third of the human diet is derived from insect-pollinated plants. Honeybees are responsible for 80 to 85% of this pollination.
- Pesticides can severely impact bee colonies and are considered to be one of the four primary stressors on bee colonies.

Potential Effects on Pollinators (Continued)

- ❖ Microencapsulated pesticide delivery systems present a more specific and detrimental action on bee colonies than standard spray applications, due to the size of the microcapsules being within the exact same size range (10 to 190 microns) as pollen grains (15 to 100 micron).
- Wings and bodies of bees can potentially get soaked in the sticky viscous liquid associated with microencapsulated pesticides, thus inhibiting flight.
- Microcapsules can electrostatically stick to the pollen gathering hairs on the bees; bees gather and carry pesticide-laden microcapsules to the hive where the contents are fed to the larva, emerging adults, and the queen.
- The pesticides encased in the microcapsules used in the LBAM spray, which include compounds that are directly toxic to bees, are designed to break down over a period of from 30 – 90 days, thereby presenting a constant exposure of pesticides to the hive throughout 2 to 3 lifecycles of the bees (25 to 45 days).
- After the aerial spray of the Checkmate pesticide solution in Santa Cruz, CA, an anomalous and temporal association of disoriented and dead bees was observed by many people but went uninvestigated by State and Federal officials.

Ingredients in Checkmate LBAM-F and OLR-F

Water

(E)-11-Tetradecen-1-yl acetate 16.9% (pheromone)

(E,E) -9,11 Tetradecadien-1-yl acetate 0.71% (pheromone)

(z)-11-Tetradecenyl acetate (pheromone)

11-Tetradecen-1-ol acetate (pheromone)

Tricaprylyl methyl ammonium chloride (syn. methyltrioctylammonium chloride)

Sodium phosphate

Ammonium phosphate

Potential Effects on Pollinators (Continued)

1,2-benzisothiazoli-3-one
2-hydroxy-4-n-octyloxybenzophenone
Butylated hydroxytoluene
Polyvinyl alcohol
Cross linked polyurea polymer

P.A.C.T. comment:

- 1) The *proportions* of these 'inert' compounds are secret.
- 2) The CDFA analysis doesn't take into account the *synergistic effects* of these components when mixed.
- 3) It does not include the surfactant * that was added to the spray as it exited the nozzles.

* See Summary Report prepared by Roy Upton, Citizens For Health Soquel, CA
:www.lbamspray.com/Reports/Prof%20nd%20Report%20CDFA%20LBAM%20fraud%208

Implications for California Agriculture

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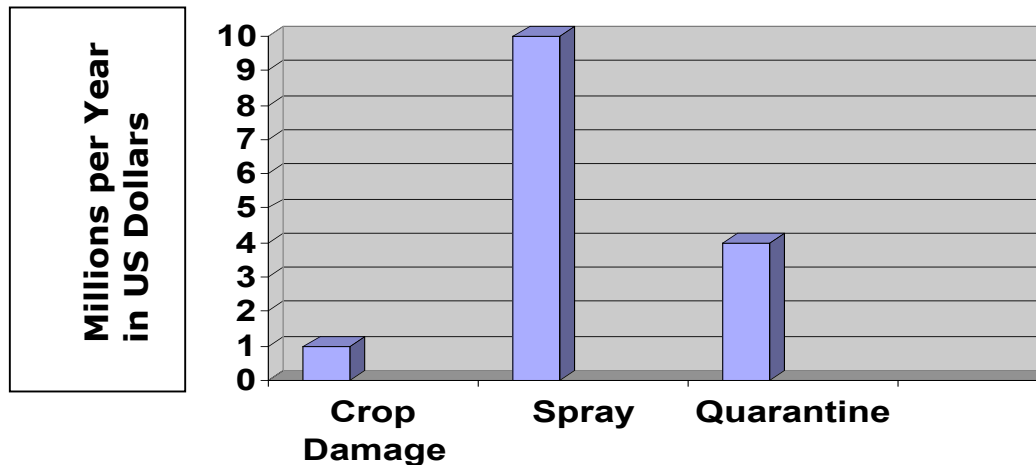
Complete report at:

www.stophespray.org/resources/LBAM_Fact_Sheet_Agriculture.pdf

Critical points:

The report addresses two primary agricultural concerns:

1. The potential loss of revenues due to crop damage.
2. The loss of agricultural revenues due to quarantine restrictions against LBAM, both domestic and international.



Source U. S. Department of Agriculture, October 16, 2007

- Conclusions are based on review of the primary scientific literature regarding the biology of LBAM, agricultural journals from Australia and New Zealand, field excursions to New Zealand growing regions, interviews with experts in horticulture, pheromones, biological

Implications for California Agriculture

controls, integrated pest management, communications with agricultural officials worldwide, specific LBAM experts, and a critical review of the CDFA's and USDA's published documents.

- Data regarding the justification for creating a restrictive classification for LBAM has not been found through on-line searches of the National Agricultural Library, formal requests and searches by National Agricultural Library librarians, reviewing the published agricultural literature, or through searches and inquiries through State assembly representatives.
- Classifying LBAM and other non-native pests as objectionable likely awarded the US a trade advantage in citrus and apples at a time when Australia and New Zealand were developing as apple and citrus producers.
- Today, neither Australia nor New Zealand have difficulties meeting the US zero tolerance against LBAM through the use of integrated pest management practices.
- In Hawaii, where LBAM has been an introduced insect for more than 100 years, no damage to crops has been published that could be found.
- It has been demonstrated that the discontinuation of organophosphates results in greater degrees of LBAM parasitism due to beneficial predators (Geier and Briese 1980).
- Integrated pest management practices such as regular mowing in the summer, removal of green waste that can harbor eggs in under stories during the winter, intercropping, and leaving flowering weeds (clover, coriander, borage) to draw beneficials have all been shown to provide natural controls against leaf rollers in general and LBAM specifically (Begum 2004; Begum et al. 2006; Irvin et al. 2000; Thomas and Burnip 1993).

Economic Impacts and Solutions

By Foster Gamble, based on research by the CASS (California Alliance to Stop the Spray) Economics and Politics Action Team

Complete 30 page study at

http://www.lbamspray.com/Reports/ECON%20Report%20CASS_v4.0_050508.pdf

Some of the Critical Points:

POTENTIAL ECONOMIC COSTS TO COMMUNITIES

Tourism: Projected annual losses are vast, \$198 million to \$1.98 billion in 9 California counties

Real Estate: Properties further devalued, sales commissions falling significantly

Organic Farming: All losses are from quarantines, NOT crop damage

Taxpayer Costs: \$500 million taxpayer dollars allocated for the first 5 years of the LBAM eradication program, and for CDFA's public relations and legal efforts. No such program has ever eradicated a species, so this will go on and on, as long as we let it.

Miscellaneous Costs: Illnesses, lost workdays, medical expenses, lost productivity. Average absences more than doubled in high schools.

WHO PROFITS?

Windfall Profits - to pesticide manufacturers

BY AERIALY SPRAYING OVER URBAN POPULATIONS

CDFA failed:

- to address economic impacts
- to admit violations of US and California laws
- to acknowledge violations of human rights

CDFA violated:

- over 30 laws, regulations and international moral and ethical guidelines

Economic Impacts and Solutions (Continued)

CDFA ignored:

- Safe alternatives

IN THIS REPORT:

The following points found elsewhere in this collection are corroborated here.

- People, animals, birds, and pollinating insects have been harmed by just one dose of the spray.
- There is NO crop damage due to the Light Brown Apple Moth. LBAM is considered an insignificant pest in New Zealand where it has been for more than 100 years and is controlled by non-toxic means.
- The CDFA uses invalid figures from 1993 in Australia when growers there were using pesticides. The use of these pesticides killed the predators that keep LBAM under control.
- Eradication of LBAM is deemed impossible.
- CDFA concealed ingredients that, once revealed, turned out to be verifiably toxic to humans.
- The "State of Emergency" was based on decades old now-invalid classification.
- As long as active attempts to eradicate are in place then CDFA can access 'emergency' federal funds, currently \$90,000,000 or more per year just for LBAM.

SOLUTIONS

The author lists 21 suggested solutions, including:

- Reclassify the LBAM as a non-eradicable species.
- Lift the quarantines both here and abroad.
- Implement safe alternatives, **if** control is necessary.

Economic Impacts and Solutions (Continued)

- **Enforce *already existing government protections*** of our health, safety, and economic well-being.
- Adopt the **Precautionary Principle** as a guiding law of the land.
- “Begin the Initiative Process”
- “Begin Recall Petitions” for all representatives who do not uphold laws to protect the health and safety of citizens.

Appendices:

Appendix A – Calculations of Economic Impacts

Appendix B – Faulty Economics in USDA/CDFA Calculations of Potential Crop Losses

Appendix C – Listing of 28 legal and coded moral violations including the “Common Rule” that requires the protection of human subjects from experiments done by the EPA and the USDA

Appendix D – Penalties for Medical Experimentation without Informed Consent

Appendix E – History of Covert Testing of Chemicals on Humans

Appendix G – Notes on Suggestions Solutions