

## FINDINGS REGARDING A TREATMENT PLAN FOR THE LIGHT BROWN APPLE MOTH

Upon inspection of light brown apple moth (LBAM) traps and visual surveys conducted between May 4, 2015, and July 14, 2015, four separate detections of the LBAM, a serious exotic pest, were detected in the city of Oxnard, Ventura County. All four of these detections fall within 1.5 miles of each other. Based upon the proximity in time and distance between the detection sites, these detections indicate that a breeding population exists in the area.

The LBAM is a pest of ornamental plants and agricultural crops. It is native to Australia, and has become established in New Zealand, New Caledonia, Hawaii, and the British Isles. If the LBAM becomes established in California, this pest will devastate residential landscapes and agriculture. Based upon the climatic zones of countries where the LBAM originated, and the distribution of similar climatic zones in California, it is likely that the pest will successfully adapt to the climate of this state if the infestation is not controlled.

The LBAM attacks over 250 hosts. It attacks nearly all types of fruit crops, ornamentals, vegetables and nursery stock. Hosts occurring in California that are of significant concern include: apple, apricot, avocado, broccoli, camellia, chrysanthemum, citrus, cottonwood, cypress, dahlia, ferns, geranium, grape, honeysuckle, kiwi, oak, peach, rose, spruce, strawberry and willow. The LBAM causes economic damage from feeding by the larvae. The pest destroys, stunts and deforms young seedlings; spoils the appearance of ornamental plants; and injures deciduous fruit tree crops. During severe outbreaks, damage to fruit may be as high as 85 percent of the crop.

The LBAM has the capability of causing significant irreparable harm to California's agriculture industry and some adverse environmental impacts. The spread of the LBAM will likely result in loss of revenue and the possible loss of jobs within California. In 10 of California's affected counties, it is estimated that the LBAM could cause \$160 to \$640 million in losses. These estimates were derived from the agricultural impacts in Australia and New Zealand. This estimate does not include economic costs to the nursery industry nor to other significant host crops in California such as apricots, avocados, kiwifruit, peaches, etc., grown in other countries. Additionally, both Canada and Mexico consider the LBAM a pest of quarantine concern and impose international trade restrictions on host material. Canada is the State's number one export market and Mexico is the number two export market for our agricultural products.

Establishment of the LBAM could cause indirect environmental damage via increased pesticide use statewide by commercial and residential growers and direct damage via adverse feeding impacts on native plants. Populations of threatened and endangered plant species could be severely threatened or extirpated should this moth adapt to feeding on them.

This decision to proceed with treatment is based upon a realistic evaluation that it may be possible to control the LBAM and prevent its spread using currently available technology in a manner that is based on an action plan developed by the United States Department of Agriculture (USDA), the CDFA and other scientists on the LBAM Technical Working Group. In making this decision, the CDFA has evaluated possible eradication methods. In accordance with integrated pest management principles, the

following is the list of options that I have considered for the eradication of this LBAM infestation: 1) mechanical controls; 2) cultural controls; 3) biological controls; 4) pheromone mating disruption; and 5) foliar application of pesticides.

Based upon input from my professional staff and recommendations from outside experts familiar with the LBAM, I have concluded that there are no mechanical, biological, or cultural control methods that are effective to control the LBAM and allow the CDFA to meet its statutory obligations. To control the adult LBAM I am ordering the deployment of pheromone-infused dispensers be applied by ground to LBAM hosts within a 200-meter radius around all detection sites. The option selected is a chemical control measure that involves the use of a synthetic insect pheromone (sexual attractant) that confuses male moths, impairing their ability to find mates. This option was selected based upon biological effectiveness, minimal public intrusiveness, cost, and minimal impacts to the environment.

### **Sensitive Areas**

The treatment area has been reviewed by consulting the California Department of Fish and Wildlife's California Natural Diversity Database for threatened and endangered species. Mitigation measures will be implemented as needed. The CDFA also consults with the U.S. Fish and Wildlife Service and National Marine Fisheries Service when rare and endangered species are located within the treatment area. The CDFA will not apply pesticides to bodies of water. The CDFA will also not apply pesticides to schools, day care centers, nursing homes, and hospitals.

### **Treatment Plan**

The proposed treatment area encompasses an area within the city of Oxnard, Ventura County, which falls within 200 meters of each individual detection site. If additional LBAM are detected outside of the treatment area, the area will expand as necessary. A map of the detection sites is attached. In summary form, the work plan consists of the following elements:

1. Delimitation – Jackson traps baited with the LBAM pheromone lure will be placed in the treatment area at the density of 25 traps per square mile where the LBAM has been detected. Additional traps may be added to further delimit the infestation and to determine the efficacy of treatments. All monitoring traps will be serviced on a regular schedule for a period of time equal to three generations beyond the date of the last LBAM detection.
2. Treatment – Ground applications with pheromone-infused dispensers placed on trees, shrubs and other suitable locations on designated properties within a 200-meter radius of each detection site. The target density for the pheromone is 250 dispensers per acre. The pheromone dispensers contain an odorless, synthetic insect pheromone (sexual attractant) that confuses male moths, impairing their ability to find mates. Once the breeding cycle of the moth is broken, the LBAM population is reduced and ultimately disappears from the area. Residents in the

affected area will be notified in writing prior to the deployment of the pheromone dispensers.

3. Post-Treatment Monitoring – The LBAM traps will be inspected for one life cycle following the last deployment of the pheromone dispensers.
4. Quarantine – The official detection of any life stage of the LBAM will trigger a quarantine or expansion of an existing quarantine boundary. The quarantine boundaries will be developed in association with local regulatory authorities.

All regulated entities, such as nurseries, landscapers, packing houses and green waste handlers will be identified, informed of the quarantine restrictions and placed under regulatory compliance. Quarantine inspections will be conducted as necessary in all quarantine areas to ensure ongoing compliance with quarantine restrictions.

### **Public Information**

Residents of affected properties will be invited to a public meeting where officials from the CDFA, the Office of Environmental Health Hazard Assessment, and the County Agricultural Commissioner's Office will be available to address residents' questions and concerns. Residents are notified in writing at least 48 hours in advance of any treatment in accordance with FAC Sections 5779 and 5401-5404. Following the treatment, completion notices are left with the residents detailing precautions to take and post-harvest intervals applicable to any fruit on the property. For pesticide applications in public areas, a press release is issued to the general public. Please contact the CDFA's toll-free hotline at 800-491-1899 and staff will be able to assist with any questions related to the project. This telephone number is also listed on all treatment notices.

Information concerning the LBAM Program will be conveyed directly to local and State political representatives and authorities via letters, emails, and/or faxes. Press releases, if issued, are prepared by the CDFA's information officer and the county agricultural commissioner in close coordination with the project leader responsible for treatment. Either the county agricultural commissioner or the public information officer serves as the primary contact to the media.

### **Duty to Act**

Under my statutory authority, as Secretary of the California Department of Food and Agriculture, I have decided, based upon the likely environmental and economic damage that would be inflicted by an established infestation of the LBAM, that it is incumbent upon me to attempt to address this threat.

My duty to act, and this decision, is based upon authority set forth in Sections 24.5, 401.5, 403, 407, 408, 5401-5405, and 5761-5764 of the Food and Agricultural Code (FAC), authorizing and mandating the Secretary to: thoroughly investigate the existence of the pest; determine the probability of the pest spreading to other areas; adopt regulations (Title 3 of the California Code of Regulations, Section 3591.20) as are

reasonably necessary to carry out the provisions of this code; abate a pest from the established treatment area; and, to prevent further economic damage. The enclosed project work plan describes the CDFA's actions that are necessary to mitigate the spread of this pest.



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Karen Ross – Secretary



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Date

If you have specific questions related to this program, please contact Patrick Akers, Branch Chief, Integrated Pest Control, at (916) 262-1102.

Attachments

# 2015 Light Brown Apple Moth Ventura County Oxnard Area

