

APHIS – Plant Protection and Quarantine  
 California Department of Food and Agriculture  
 Weekly Situation Report: Light Brown Apple Moth (LBAM)  
 September 10, 2009

**Detection Trapping Pest Results (Adult LBAM):**

Source: CDFA/PHPPS

Date 9-10-2009													Positive Totals by Year/YTD	
County	2007	2008	Jan-09	Feb-09	Mar-09	Apr-09*	May-09*	Jun-09*	Jul-09*	Aug-09*	Sep-09*	YTD	Total	
Alameda	46	1528	430	796	1969	2528	2358	2946	6156	4038	0	21221	22795	
Contra Costa	16	1283	184	248	1139	859	1141	2030	1403	716	0	7720	9019	
Los Angeles	1	0	0	0	0	0	0	0	6	19	0	25	26	
Marin	62	927	46	153	707	978	1471	667	1201	779	15	6017	7006	
Monterey	574	5163	271	337	408	890	1395	1689	2704	2211	2	9907	15644	
Napa	0	13	2	10	10	9	21	4	50	32	1	139	152	
San Benito	0	9	0	1	3	0	2	2	4	4	0	16	25	
San Francisco	3959	16001	2853	3969	6403	7992	8243	3586	4012	3887	0	40945	60905	
San Joaquin	0	0	0	0	0	0	0	1	1	0	0	2	2	
San Luis Obispo	1	0	0	0	0	0	0	0	5	0	1	6	7	
San Mateo	73	1862	536	416	142	282	494	617	1072	1406	0	4965	6900	
Santa Barbara	0	6	0	0	0	0	0	0	0	0	0	0	6	
Santa Clara	12	128	9	11	29	80	63	42	38	27	0	299	439	
Santa Cruz	6911	15439	1388	1990	3308	4230	4752	3509	5241	2791	0	27209	49559	
Solano	7	28	2	4	1	12	7	10	38	19	0	93	128	
Sonoma	0	21	0	2	3	8	28	9	16	19	0	85	106	
Ventura	0	0	0	1	0	0	0	0	0	0	0	1	1	
Yolo	0	0	0	0	1	0	1	1	2	0	0	5	5	
<b>Project Totals</b>	<b>11662</b>	<b>42408</b>	<b>5721</b>	<b>7938</b>	<b>14123</b>	<b>17868</b>	<b>19976</b>	<b>15113</b>	<b>21949</b>	<b>15948</b>	<b>19</b>	<b>118655</b>	<b>172725</b>	

\* Not all monthly totals have come in.

- **Survey**

- Survey teams continue to implement a rigorous detection and delimiting survey for the light brown apple moth (LBAM), *Epiphyas postvittana*, in **18** counties.
- A total of **28,795** pheromone-baited traps are placed in and around retail and production nurseries, at ports of entry, and in the open environment and are being inspected bi-weekly.
- Visual inspections of all nurseries located within 1.5 miles from any traps with confirmed LBAM are conducted for the presence of any life stages.
- LBAM was detected in a residential area in Long Beach (Los Angeles County) on July 20, 2009, and again on July 23, 2009, triggering a quarantine within this county. Long Beach is approximately 32 miles from a previous LBAM detection that occurred in 2007 in Sherman Oaks, Los Angeles County.

- San Luis Obispo (Los Osos) area first positive detection occurred on July 14, 2009. A second detection occurred on July 27, 2009, triggering a quarantine of the county.
  - On July 10, 2009, a Federal Order was issued to remove Santa Barbara County from the LBAM quarantine.
  - A second LBAM was detected on July 7, 2009 in Manteca, triggering a federal quarantine within San Joaquin County due to the proximity of the finds in time and location.
  - On June 15, APHIS confirmed one adult male light brown apple moth trapped in a citrus tree in Manteca, California, which is located in a residential area in San Joaquin County. This detection represents a new county record for the State. Manteca is located 80 miles east of San Francisco and is south of Stockton, California. This find is approximately 30 miles from the nearest LBAM detection. Delimitation surveys were conducted.
  - A first detection for Yolo County occurred in the city of Davis on April 1, 2009. A second moth was trapped and confirmed on May 15 and another detection was made on June 10, 2009.
- **Identification and Diagnostics**
    - A total of **172,725** moths have been confirmed to date as LBAM (2007-09): 11662 in 2007 and 42,402 in 2008.

Total confirmed “positive” larvae/pupae/egg masses collected in nurseries to date is **4,656**.

    - LBAM immature life stages, including larvae and pupae have been found in a total of **98** nurseries, cut flower or greenery farms in Alameda, Contra Costa, Marin, Monterey, San Benito, San Francisco, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Solano, and Sonoma counties. Infested nurseries have the option to treat and be re-inspected as part of the regulatory requirements.

### **Operational Update:**

- **Technical Working Group (TWG)**
  - The TWG met in July 2009 in Monterey, CA to review program information and provide technical recommendations in support of the program.
  
- **Program Resources**

- A total of **166** personnel are on-site (**122** CDFA, and **44** APHIS) assuming various roles within the emergency program structure.
- **Regulatory Actions**
  - CDFA, APHIS, and County personnel continue to conduct inspections and certification of host commodities in the quarantine areas as required by State LBAM regulations and by the Federal Quarantine Order.
  - To date, a total of **2,630** compliance agreements have been issued to **6,276** sites located within the quarantine area requiring regular inspections of all nursery stock and other host materials.
- **Treatment**
  - Nurseries with host plants that are confirmed as infested with LBAM larvae or pupae have the option of treating or destroying infested plants before shipping outside the quarantine area.
  - 2009 treatment plans –
    - Twist-ties are being used to eradicate LBAM infestations in outlying areas.
    - Preparations continue for the Sterile Insect Technology (SIT) demonstration project. The goal of the demonstration project is to develop, adapt and validate mass-rearing, irradiation, handling, release, and evaluation technologies to lay the groundwork for future implementation of an operational SIT program for the Light Brown Apple Moth (LBAM).
- **Environmental Assessment and Monitoring**
  - A draft Environmental Assessment (EA) in support of the LBAM Sterile Insect Technology (SIT) pilot releases has been published and the comments received are being analyzed by APHIS staff. Pilot releases in Napa and Sonoma counties are scheduled to be implemented during September 2009.

### **Trade Update:**

- From June 15-18, 2009 members of Chile's SAG (Servicio Agrícola y Ganadero) visited the light brown apple moth (LBAM) facilities in Moss Landing, CA. During their visit, the Chilean SAG group toured the Moss Landing program headquarters and heard presentations on surveillance and detection, regulatory methods/treatment of produce, and sterile insect technique from PPQ staff. The Chilean SAG members also visited a plant nursery and observed a field inspection.
- CFIA removed the phytosanitary certificate requirement for citrus, effective August 18, 2008.
- On March 24, 2008, Mexico verified phytosanitary compliance measures required for importation of LBAM host products originating from California and Hawaii, including LBAM regulated areas. Compliance measures include a monitoring system, integrated pest management, products sent in closed containers and sealed at origin.
- On January 25, 2008 the Canadian Food Inspection Agency (CFIA) posted the 3rd revision to D-07-03 - Plant Protection (Phytosanitary) Import Requirements to Prevent the Entry of

Epiphyas postvittana (Walker) (light brown apple moth). The directive outlines requirements for the importation of host commodities into Canada.

- China and South Korea have made inquiries about the LBAM program.
- Chile has imposed restrictions because of LBAM. An additional AD is required for all LBAM host material declaring that it did not come from a quarantine area.

### **Communication and Outreach:**

- The Joint Information Center (JIC) continues to provide information and field questions regarding LBAM program plans in California.
  - The JIC is developing coalition of individuals and organizations who support solutions to invasive species problems and developing outreach associated with SIT program and invasive species campaign.
  - The Hungry Pests project unveiled a new statewide advertising campaign beginning August 17 designed to raise awareness of invasive species in California (see [www.youtube.com/hungrypests](http://www.youtube.com/hungrypests)). The message of this information campaign is the danger posed by invasive pests and the very serious threat invasive pests pose to California's agricultural and natural resources and to its economy. The eleven week campaign, run in two market areas within the LBAM quarantine areas, features television, radio, and newspaper advertising, as well as the Hungry Pests internet blog.
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### **Background:**

- On February 6, 2007, a private citizen near Berkeley in Alameda County, California, reported that two suspect moths had been captured in a blacklight trap on his property.
- In response, pheromone-baited traps were placed on March 1, 2007, in Alameda and Contra Costa counties. Trap inspections began March 7, 2007.
- On March 16, 2007, the ARS Systematic Entomology Laboratory (SEL) in Washington, DC, confirmed through morphological testing that the two samples submitted were, in fact, LBAM.
- CDFA established on April 20, 2007 a LBAM quarantine of at least 182 square miles in Alameda, Contra Costa, San Francisco, Marin and Santa Clara counties. The quarantine is expected to expand to include Monterey, Santa Cruz and San Mateo counties.
- APHIS issued a LBAM Federal Quarantine Order on May 2, 2007, requiring inspection and certification of all nursery stock and host commodities from eight counties in California, including Alameda, Contra Costa, Marin, Monterey, San Francisco, San Mateo, Santa Clara, and Santa Cruz counties.
- A Technical Working Group (TWG) consisting of subject matter experts from Australia, New Zealand, and the United States was established to provide APHIS and CDFA technical recommendations. The TWG toured the infested region on May 16 and concluded with a two-day meeting on May 17-18 in San Jose, California. Recommendations designed to provide short and long-term plans to contain, control, and eradicate LBAM in California were forwarded to APHIS and CDFA.

- The light brown apple moth (LBAM), *Epiphyas postvittana*, is a native pest of [Australia](#) and is now widely distributed in New Zealand, the United Kingdom, Ireland, and New Caledonia. Although it was reported in Hawaii in the late 1800s, the LBAM find in California is the first on the US mainland.
- LBAM has a host range in excess of 120 plant genera in over 50 families, including nursery stock, cut flowers, fruits, and vegetables.
- LBAM could cause an estimated \$160 to \$640 million annually in crop damage and control costs if it spreads to agricultural production area in the 15 affected counties and up to \$2.4 billion in California.