

FINDING OF EMERGENCY

The Secretary of the Department of Food and Agriculture finds that an emergency exists, and that the foregoing adoption of a regulation is necessary for an immediate action to avoid serious harm to the public peace, health, safety or general welfare, within the meaning of Government Code Section 11342.545 and Public Resources Code Section 21080. The Secretary has also determined that this emergency clearly poses such an immediate, serious harm that delaying action by providing five working days advance notice to allow public comment would be inconsistent with the public interest, within the meaning of Government Code Section 11346.1(a)(3). Further, the Secretary has determined that this emergency clearly poses such an immediate, serious harm that delaying action by the Office of Administrative Law providing five working days advance notice to allow public comment would also be inconsistent with the public interest, within the meaning of Government Code Section 1349.6(b).

Description of Specific Facts Which Constitute the Emergency

The light brown apple moth (*Epiphyas postvittana*) was first detected in California on February 27, 2007, in Alameda County and on March 7, 2007, the light brown apple moth (LBAM) was first detected in Contra Costa County. Through the deployment of delimiting detection traps, numerous additional adult male moths were trapped in both counties. As a result, the Department adopted an emergency regulation, Section 3591.20, which became effective on March 21, 2007. The Department continued to deploy detection traps in additional counties. As a result of multiple detections of LBAM, the Department amended Section 3591.20 to add the counties of Marin and San Francisco (effective April 3, 2007); Santa Clara County (effective April 20, 2007); and, Monterey, San Mateo and Santa Cruz counties (effective April 23, 2007). The Department also proposed the emergency adoption of Section 3434, Light Brown Apple Moth Interior Quarantine (effective April 20, 2007). Emergency amendments to Section 3434 were subsequently made adding portions of Alameda, Contra Costa, Marin, Monterey, San Benito, San Mateo and Santa Cruz counties

(effective June 6, 2007) and Napa County (effective June 7, 2007). On May 2, 2007, the United States Department of Agriculture issued a federal order regulating the interstate movement of host material from the infested areas of California and all of Hawaii.

On June 5, 2007, an adult male LBAM was identified and it was collected from outside the current regulated area of Fremont, Alameda County. On May 25, 2007, an adult male LBAM was identified and it was collected from the Bonny Doon area which is outside the current regulated area of Santa Cruz County. Two additional adult moths were identified from the Bonny Doon area on June 5, 2007. On June 8, 2007, an adult LBAM was identified and had been collected outside the current regulated area in Monterey County. The detection of these additional adult LBAMs outside is indicative of incipient infestations of LBAM in these areas.

On June 12, 2007, the Department reviewed its list of LBAM interceptions from nursery stock located within the regulated area. LBAM larvae were detected on 22 new genera in California. The Department anticipated there would be new nursery stock hosts and as a result, regulated all nursery stock originating from an area under quarantine for LBAM. However, one of the new LBAM hosts is strawberry guava. Under Section 3434, the Department does not currently regulate strawberry guava as a harvested commodity. The Department now believes that it is prudent to regulate all harvested fruits and vegetables for this pest. The known host list for this species is very large, and its generalist feeding habits suggest that the list will continue to expand as it encounters new suitable hosts in California.

In addition, the females appear to be relatively indiscriminate in regards to where eggs are laid. In one recent paper, there was no difference in oviposition between known host and non-host plants (Foster and Howard, 1999, Ent. Exper. Appl. 92: 53-62). However, hatched larvae did discriminate between such plants. The implication is that females look for a suitably textured surface for oviposition, and rely on the larvae to relocate to host

plants. One advantage to this behavior is that it encourages larval dispersal from the egg mass, which would in turn decrease intersibling competition. Finally, the federal order issued on May 2, 2007, regulates the interstate movement of all fruits and vegetables. Amending Section 3434 to include all harvested fruits and vegetables would harmonize the regulatory requirements for interstate and intrastate movement,

An additional emergency quarantine response is necessary now to help ensure the LBAM does not continue to spread to other uninfested areas of the State. This emergency amendment to Section 3434 is necessary to ensure the State's regulation continues to be substantially the same as the recent federal order. If the State's regulation is not substantially the same as the federal order, the USDA cannot regulate less than the entire State.

The adult LBAMs will continue to emerge and are not known to be a long distance flyer. These types of moths generally only fly up to approximately one half mile and the current traps will attract a male moth within 100 meters. The real threat of long distance spread is through the human assisted movement of infested plants and plant parts, including green waste, and other possible carriers such as contaminated equipment or appliances.

The proposed emergency amendments of the regulated areas include the initial detection sites as the epicenter and a buffer zone which extends approximately one and one half mile in each direction from the epicenter. A buffer zone is necessary because the LBAM can spread naturally (as well as being spread artificially in infested hosts). The proposed boundary lines were drawn jointly by the United States Department of Agriculture, the California Department of Food and Agriculture, and the affected county agricultural commissioners. The proposed quarantine area is considered the minimum area around the initial detection sites which should be regulated to prevent artificial spread of LBAM to noninfested areas.

The LBAM has the capability of causing significant irreparable harm to California's agricultural industry and some possible adverse environmental impacts. While the Department's compliance with the California Administrative Procedure Act and the California Environmental Quality Act (CEQA) are separate actions, they can be interrelated. Although adoption of specific regulatory authority can be the beginning of a project and therefore covered by CEQA, this regulation, for the reasons already set forth, constitutes a specific act necessary to prevent or mitigate an emergency as authorized by Public Resources Code section 21080, subdivision (b) (4) and Title 14, California Code of Regulations Section 15269, subdivision (c). The regulation is also an action required for the preservation of the environment and natural resources as authorized by Title 14, California Code of Regulations, sections 15307 and 15308.

LBAM is a highly polyphagous pest that attacks a wide number of fruits and other plants. Hosts occurring in California that are of significant agricultural or environmental concern include, but are not limited to: alder, alfalfa, apple, apricot, avocado, blueberry, blackberry, broccoli, cabbage, camellia, cauliflower, ceanothus, chrysanthemum, citrus, clematis, clover, columbine, cottonwood, currant, cypress, dahlia, ferns, fir, geranium, grape, hawthorn, honeysuckle, kiwi, lupine, madrone, mint, oak, peach, pear, peppers, persimmon, poplar, potato, raspberry, rhododendron, rose, sage, spruce, strawberry, walnut and willow. It is an insect species that feeds upon over 250 species of native and ornamental plants. The general area of infestation contains numerous sensitive plants species and habitats. There is an imminent threat for adverse consequences and ultimate extinction to some of these sensitive species if LBAM becomes permanently established in California.

Currently, this species has a relatively restricted geographic distribution, being found only in portions of Europe and Oceania. The pest is native to Australia but has successfully invaded other countries. The likelihood and consequences of establishment by LBAM have been evaluated in pathway initiated risk assessments. LBAM was considered highly likely

of becoming established in the United States and the consequences of its establishment for United States agricultural and natural ecosystems were judged to be severe. The United States Department of Agriculture, Animal Plant and Health Inspection Service (USDA, APHIS) estimated that approximately 80 percent of the continental United States may be climatically suitable for LBAM.

In its native habitat of Australia, LBAM generally completes three generations annually. More than three generations can be completed if temperatures and host plants are favorable. In southeastern Australia where it is warmer, four generations can be completed. In contrast, two generations occur in Tasmania, New Zealand and in Great Britain. In Australia, generations do not overlap, but they do in the Great Britain. As the population builds, LBAM is more abundant during the second generation. Therefore, the second generation causes the most economic damage as larvae move from foliage to fruit. The size of the third generation is typically smaller than the previous two due to leaf fall (including attached larvae) as temperatures decline in autumn. LBAM does not diapause and its continued development is slowed under cold winter temperatures. In cold climates the pest overwinters as larvae. Because LBAM causes damage in a wide range of climate types in Australia, pest status is not dictated by climate.

LBAM causes economic damage from feeding by caterpillars, which may:

- destroy, stunt or deform young seedlings;
- spoil the appearance of ornamental and native plants; and
- injure deciduous fruit-tree crops, citrus and grapes.

Based upon losses in Australia, annual losses in California are expected to be much higher as the agricultural sector is larger and more variable. Additionally, LBAM, if not eradicated, will cause economic damage to California's export markets due to the implementation of quarantines by foreign and state governments.

Where it occurs, LBAM is difficult to control with sprays because of its leaf-rolling ability, and because there is evidence of resistance due to overuse of the same insecticides. Conifers are damaged by needle-tying and chewing. Larvae have been found feeding near apices of Bishop Pine seedlings where they spin needles down against the stem and bore into the main stem from the terminal bud. LBAM constructs typical leaf rolls (nests) by webbing together leaves, a bud and one or more leaves, leaves to a fruit, or by folding and webbing individual mature leaves. During the fruiting season, they also make nests among clusters of fruits, such as grapes, damaging the surface and sometimes tunneling into the fruits. During severe outbreaks, damage to fruit may be as high as 85 percent.

Egg masses are most likely to be found on leaves. The larvae are most likely to be found near the calyx or in the endocarp; larvae may also create “irregular brown areas, rounds pits, or scars” on the surface of a fruit. Larvae may also be found inside furled leaves, and adults may occasionally be found on the lower leaf surface.

LBAM is an actionable pest for the USDA, APHIS and requires the Australian Quarantine and Inspection Service to take corrective actions to prevent this pest from being associated with apple, citrus, pear fruits and other host commodities being exported to the United States. Host fruit exported from New Zealand faces similar restrictions by USDA, APHIS and the New Zealand Ministry of Forestry and Fisheries is responsible for any corrective actions at origin. Any host commodity arriving in the United States that is infested with or contaminated by LBAM is issued a Federal Emergency Action Notice and must be either destroyed, reexported or undergo an appropriate quarantine treatment prior to its release into the United States commerce. Canada and Japan also treat LBAM as a quarantine action pest. The People’s Republic of China requires all host fruit imported to originate from orchards that are free from LBAM.

Where ever LBAM occurs in association with vineyards, it is considered to be a very important agricultural pest. Unless properly managed, LBAM causes substantial risk to

crop yield and quality by causing both direct and indirect damage. Emerging larvae in the spring may feed upon both the flowers and newly set fruitlets causing a direct loss in yield. Later in the year, LBAM larvae feeding on maturing fruit can cause indirect loss by introducing botrytis infections into the grape bunches. As an example, in 1992 in Australia, 70,000 larvae per hectare were documented and caused a loss of 4.7 tons of Chardonnay fruit. Damage in the 1992-93 Chardonnay season at Coonawarra, southern Australia, cost \$2,000 per hectare.

In South Australia, LBAM is also a significant pest of apricots and can attack other stone fruit. Peaches are also damaged by feeding that occurs on the shoots and fruit.

The first generation (in spring) causes the most damage to apples while the second generation damages fruit harvested later in the season. Some varieties of apples such as 'Sturmer Pippin' (an early variety), 'Granny Smith' and 'Fuji' (late varieties) can have up to 20 percent damage while severe attacks can damage up to 75 percent of a crop.

There is no comprehensive estimate of the total economic losses that could be caused by the LBAM to the environment and the agricultural industry in California. The impact on production costs for LBAM hosts could top \$100 million. It was estimated for Australia that LBAM causes AU\$21.1 million annually in lost production and control costs, or about 1.3% of gross fruit value, for apples, pears, oranges and grapes. Applying this percentage to the 2005 gross value of these same crops in California of \$5.4 billion (USDA 2006), the estimated annual production costs would be \$70.2 million. 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 and strawberries. If the same level of costs were incurred by these as for the previous four crops, the additional costs would be \$63.1 million, based on their 2005 gross value of \$4.8 billion. Therefore, the total lost production and control costs in California could be \$133 million for all of the crops mentioned above.

Exact economic impacts on international and domestic exports are uncertain at this time. California is the nation's leader in agricultural exports and in 2003 shipped more than \$7.2 billion in both food and agricultural commodities around the world. Some countries have specific regulations against this pest, and many others consider it a regulated pest that would not be knowingly allowed to enter. Additional measures, such as preharvest treatments and postharvest disinfestation, would likely have to be taken to ensure that shipments to these countries are free from LBAM. In addition, LBAM is an exotic pest, i.e., it is not established in the continental United States, and therefore other states within the United States would likely impose restrictions on the movement of potentially infested fruits, vegetables and nursery stock. These restrictions could severely impact the domestic marketing of California agricultural products.

The majority of California does have a climate which would favor the LBAM. Additionally, LBAM may have seven or more generations under some California climatic conditions. If unchecked, this would enable LBAM to build higher population levels in California. Given the known economic damages occurring in LBAMs present range, its potential damage to California's environment and agricultural industry could be devastating; especially without adequate control measures.

The Department has determined that to ensure it conducts the most efficient and effective quarantine project with the greatest chances of success, quarantine regulatory activities need to begin as soon as possible. The immediate implementation of this proposed regulatory action is also necessary to prevent the USDA, APHIS from considering the entire state as infested with LBAM, rather than just the current areas of Alameda, Contra Costa, Marin, Monterey, Napa, San Francisco, San Mateo, Santa Clara and Santa Cruz counties. If this were to occur, there would likely be additional detrimental quarantine requirements directed against California host commodities by the USDA, APHIS and our concerned international trade partners.

As an interim solution, the Department has relied on its statutory authority contained in California Food and Agricultural Code (FAC) Section 5701 to prevent the artificial spread of this pest from new find sites. FAC Section 5701(a) states, “If any pest exists on any premises, the director or the commissioner may hold any plant or other host or possible carrier which is, or may be, capable of disseminating or carrying the pest. The director or the commissioner also may hold the plants, other hosts, or other possible carriers on any premises within five miles of the premises on which the pest was found to exist. The director or commissioner shall notify the owner of the plant or other host or possible carrier, or his or her agent, of this action, and the issuance of any shipping permit or nursery stock certificate with respect to the plant or other host or possible carrier shall be refused and any such permit or certificate which has been previously issued shall be revoked.

(b) The distance from the premises at which a pest is found that the director or commissioner may hold plants, other hosts, or other possible carriers shall be the maximum distance that the director or commissioner determines the pest is likely to travel, but not to exceed five miles.”

During the delimitation trapping activities, the Department has targeted the highest risk facilities located within one and one half mile of a trapped moth by placing a hold notice on the affected property to prevent the long distance movement of LBAM. This will continue to be done as an interim solution until the necessary emergency amendments are able to be made to Section 3434, which compliments our eradication regulation and targets LBAM.

The proposed amendments of subsection 3434(b) will establish additional quarantine areas in the Fremont area of Alameda County; the Bonny Doon and Scott’s Valley areas of Santa Cruz County; and, the Mt. Madonna area of Monterey County. The proposed emergency amendments to subsection 3434(b) will establish: approximately 11 additional square miles in the Fremont area of Alameda County to be regulated for a total of 21 square miles; and, add approximately 22 square miles in the contiguous Monterey and

Santa Cruz counties. The total proposed land mass area to be under quarantine is now approximately 784 square miles.

The proposed amendments of subsection 3434(c) will also establish all harvested fruits and vegetables as hosts and possible carriers of LBAM and delete all references to specific genera.

The effect of this regulation will be to provide authority for the State to perform quarantine activities against LBAM (*Epiphyas postvittana*) in these areas.

To prevent the spread of the LBAM to non-infested areas in order to protect California's agricultural industry and environment, it is necessary to begin quarantine activities against the LBAM immediately. Therefore, it is necessary to amend this regulation as an emergency action.

Authority and Reference Citations

Authority: Sections 407 and 5322, Food and Agricultural Code.

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Informative Digest

Existing law provides that the Secretary is obligated to investigate the existence of any pest that is not generally distributed within this state and determine the probability of its spread, and the feasibility of its control or eradication (FAC Section 5321).

Existing law also provides that the Secretary may establish, maintain and enforce quarantine, eradication and other such regulations as he deems necessary to protect the agricultural industry from the introduction and spread of pests (Food and Agricultural Code, Sections 401, 403, 407 and 5322).

Section 3434. Light Brown Apple Moth Interior Quarantine.

The proposed amendment of Section 3434(b) will establish additional portions of Alameda, Monterey and Santa Cruz counties as additional areas under quarantine. The effect of the amendment of this regulation is to provide authority for the State to perform quarantine activities against LBAM in these portions of Alameda, Monterey and Santa Cruz counties.

Mandate on Local Agencies or School Districts

The Department of Food and Agriculture has determined that Section 3434 does not impose a mandate on local agencies or school districts, except that an agricultural commissioner of a county under quarantine has a duty to enforce it. No reimbursement is required under Section 17561 of the Government Code because the agricultural commissioners of Alameda, Monterey and Santa Cruz counties requested the changes in the regulation.

Cost Estimate

The Department has also determined that the regulation will involve no additional costs or savings to any state agency because initial funds for state costs are already appropriated, no nondiscretionary costs or savings to local agencies or school districts, no reimbursable savings to local agencies or costs or savings to school districts under Section 17561 of the Government Code and no costs or savings in federal funding to the State.