

DEPARTMENT OF FOOD AND AGRICULTURE
PROPOSED CHANGES IN THE REGULATIONS

Title 3, California Code of Regulations

Section 3434, Subsection (b) and (c)

Light Brown Apple Moth Interior Quarantine

INITIAL STATEMENT OF REASONS/

POLICY STATEMENT OVERVIEW

Description of Public Problem, Administration Requirement, or Other Condition or Circumstance the Regulation is Intended to Address

This regulation is intended to address the obligation of the Department of Food and Agriculture to protect the agricultural industry from the movement and spread of injurious plant pests within California.

Specific Purpose and Factual Basis

The specific purpose of Section 3434 is to provide authority to the State to regulate the movement of hosts and possible carriers of light brown apple moth (LBAM), *Epiphyas postvittana*, from the regulated area and within or from the quarantine areas.

The factual basis for the determination by the Department that the amendment of this regulation is necessary is as follows:

The Department uses Geographic Information Systems (GIS) mapping programs to plot locations of all the detections of LBAM and also negative trapping results for LBAM. As a result, based upon the criteria contained in the USDA regulatory protocol, the Department makes determinations when the infestation of LBAM has spread or become established or been eradicated and it is necessary to expand or remove the quarantine and regulated areas as appropriate.

The movement of LBAM can occur in two significantly different ways. One is through artificial human assisted movement often over long distances and sometimes into new

uninfested counties. This movement is considered sudden and unexpected and may be cause for making a change to the regulation through an emergency action under the Administrative Procedures Act. Once submitted to the Office of Administrative Law, emergency regulations may become effective within 10 days, if approved.

The second method of movement of LBAM is through its natural spread from the infested environmental habitats in California. LBAM is not a strong flyer and this spread is over distances can be approximately a maximum of 50 meters at any one time, barring any wind assistance. As this is natural spread, it is expected and does not meet the criteria for an emergency amendment. In order to add natural spread areas to the regulation it requires the Department to pursue a normal rulemaking action. This usually takes approximately six months. It must be remembered that during this six month period LBAM may continue to slowly naturally spread. This poses problems both for the Department but for the USDA and our trading partners who want to ensure regulations are in place to ensure there are adequate pest mitigation measures in place to prevent the introduction of LBAM through interstate or international trade in host material.

The Department also has had some success in eradicating LBAM from some quarantine areas and there are two methods used to remove the affected areas from regulation. If the area is a significant part of the economic engine of the State, the Department may be able to justify this as an emergency rulemaking action. However, if it is not, then the Department has to pursue the removal of the area through a normal rulemaking. In one instance those impacted by the regulation are getting timely relief from regulatory restrictions and in the other they are not and subjected to unnecessary regulatory restrictions for a lengthy period of time.

The Department concluded that a different more responsive regulatory approach is necessary to ensure adequate protections are in place when necessary and they are removed in a consistent timely matter when unnecessary. The purpose of this proposed amendment is to accomplish that in a transparent manner which can be more easily

understood by those who are affected by the regulation. Further, the only way to accomplish this is to remove the regulated and quarantined areas from the regulation.

Text Changes

This proposed amendment will remove the existing text from subsection 3434(b) and delete subsection 3434(c).

New text under subsection 3434(b) will establish the procedures for designating and removing the regulated and quarantine areas.

Subsection 3434(b)(1)

Establishes that an area shall be designated as a quarantine or regulated area when survey results indicate an infestation is present, the Department has defined the area and notified the local California County Agricultural Commissioner/interested parties and provided an electronic/written description of the area to them, posted the area description to its website at: : <http://www.cdffa.ca.gov/plant/lbam/regulation.html> and provides for automatic notifications to interested parties through a list serve option.

Subsection 3434(b)(2)

Establishes the biological criteria used to establish when an infestation is present.

Subsection 3434(b)(3)

Establishes the minimum radius used is 1.5 miles surrounding any qualifying epicenters but this distance may be extended farther in order to not split properties having host material, the commonly accepted methods used for describing the affected area(s) and that latitude and longitude coordinates and imaginary lines may be used when there is no other acceptable method for describing the area.

Subsection 3434(b)(4)

Establishes the procedures for an interested party or local entity to appeal the area designation and that the Department must respond to such appeals within 10 days.

Subsection 3434(b)(5)

Establishes the accepted scientific criteria used to justify the removal of an area from regulation or quarantine.

This proposed amendment to Section 3434 is necessary to ensure the Department has the needed flexibility to add or remove areas from regulation or quarantine in a timely manner based upon accepted biological and scientific criteria.

California Environmental Quality Act

A Programmatic Environmental Impact Report (PEIR) was prepared by the Department as the lead agency under the California Environmental Quality Act (CEQA). The PEIR addresses the potential environmental impacts that would result from implementation of alternatives for the eradication of the light brown apple moth (LBAM) (*Epiphyas postvittana*). The PEIR may be accessed at the following website:

<http://cdfa.ca.gov/plant/lbam/envimpactrpt.html>

Background

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); Monterey, San Mateo and Santa Cruz counties (effective April 23, 2007); and, Napa County (effective June 5, 2007). The Department has continued to make subsequent emergency amendments to this regulation as needed.

The Department also proposed the emergency adoption of Section 3434, Light Brown Apple Moth Interior Quarantine (effective April 20, 2007). Numerous subsequent emergency and normal rulemaking amendments to Section 3434 were as needed.

On May 2, 2007, the United States Department of Agriculture (USDA) issued the first federal order regulating the interstate movement of LBAM host material from the infested areas of California and all of Hawaii. Numerous federal orders have subsequently been issued.

In late October 2007, the USDA established a new regulatory protocol which was distributed to county agricultural commissioners as "Phytosanitary Advisory No. 31-2007." This regulatory protocol was adopted based upon the recommendations of the LBAM Technical Working Group (TWG). The purpose of the protocol is to determine when it is appropriate to initiate or remove interstate regulatory restrictions pertaining to LBAM in response to new detections or the elimination of incipient LBAM populations. A key component of this regulatory protocol is the revision of the triggers for initiating a regulated area. Under the recommendations of the TWG, a single detection (trapping) of a male LBAM more than three miles from another male LBAM, no longer warrants a quarantine response. This is contingent upon the deployment of LBAM traps at the appropriate delimitation levels in buffer areas surrounding the single detection. Prior to this regulatory protocol, the detection of a single LBAM was the agreed upon trigger for initiating a quarantine area. The Department reviewed and concurs with this new protocol and is applying the same criteria contained in it to initiate or remove LBAM regulatory restrictions pertaining to the intrastate movement of regulated articles and commodities.

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 plant species and habitats. There is a threat for adverse consequences to some of these sensitive species if LBAM becomes permanently established in California.

Prior to the infestations here, this species had a relatively restricted geographic distribution, being found only in portions of Europe, Oceania and Hawaii. 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 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, round 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 apples, 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.

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

In Australia, when insecticides are not applied, typically between five to 20 percent of fruit is damaged, but this can exceed 30 percent. In New Zealand, damage to unsprayed crops commonly reaches 50 percent (Wearing et al., 1991). More information regarding potential economic impact in California may be found in the environmental assessment prepared by USDA at www.aphis.usda.gov/plant_health/ea/downloads/lbam_ea_sc.pdf. In 10 of California's affected

counties, it is estimated that 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 counties.

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 LBAM's present range, its potential damage to California's environment and agricultural industry could be devastating, especially without adequate control measures.

Unless the State's LBAM regulation is substantially the same as the LBAM federal regulation and orders, the USDA cannot regulate less than the entire State. As an example, on January 11, 2008, the USDA issued a Federal Order that expanded its citrus greening (CG) quarantine to encompass the entire State of Florida. This action was a result of the USDA confirming detections of CG in two new Florida counties: Lake and Hernando. Following discussions with the State of Florida, the USDA determined

that parallel quarantine actions proposed by the State of Florida were not adequate and, therefore, it was necessary to impose statewide restrictions on the movement of all live host plants and host plant parts from Florida.

Estimated Cost of Savings to Public Agencies or Affected Private Individuals or Entities

The Department of Food and Agriculture has determined that the amendment of Section 3434(b) and (c) does not impose a mandate on local agencies or school districts and no reimbursement is required under Section 17561 of the Government Code. Each county commissioner in a regulated county originally requested the State to implement the regulated areas in their county and there are no costs associated with removing areas from the regulation.

The Department also has determined that no savings or increased costs to any state agency, no reimbursable costs or savings under Part 7 (commencing with Section 17500) of Division 4 of the Government Code to local agencies or school districts, no nondiscretionary costs or savings to local agencies or school districts, and no costs or savings in federal funding to the State will result from the adoption and subsequent amendments of Section 3434.

Within the regulated and quarantine areas, the Department estimates that there are approximately 500 production nurseries (includes cut flower producers). The nursery or growing grounds must be free from LBAM to ship within or outside the regulated area. To achieve this, nurseries must implement an integrated pest management (IPM) program. One grower may use a mating disruption program, another may use a mating disruption program plus a pesticide, another may use an organic pesticide only, etc. The Department does not specify what constitutes an appropriate IPM program. It has established a performance standard. Whatever IPM program the producer uses with success to keep the nursery stock free from LBAM is acceptable.

If the IPM program fails, a production nursery (including cut flowers) with an active LBAM infestation must eliminate LBAM from the nursery or from a specific lot of nursery

stock in order to be eligible for quarantine certification. There are at least 24 pesticides registered for use in California that are efficacious against LBAM and may target different life stages (egg, larvae, pupae and adult). The grower may choose from this existing list or may present another compound if it is registered for use in California and there is scientific evidence that it is efficacious against LBAM. It takes approximately 10 days for LBAM eggs to hatch and the larvae to be susceptible to a larvicide. If a grower chooses to use a material that is not ovicidal, they must wait 10 days for a reinspection by an authorized agricultural official to determine that no live life stages of LBAM are present and the product is eligible for certification. If they use a product that is an ovicide and a larvicide, the reinspection may occur within the time period specified on the product's label.

The Department acknowledges that it may be a significant cost to a producer to eliminate LBAM from an infested area/growing grounds. Where a nursery is infested, the biological risk of all life stages being present: egg, larvae, puparium, and adults are extremely likely. The eggs, larvae, puparium and adults may be present in the foliage. There are many variables that may impact the actual cost for compliance. There are currently 24 different labeled products that are registered for use in California and which may be used for treatment to obtain quarantine certification. Some of these products may either be used singly or must be used in combination and this is dependent upon the nursery's production methods; stage of development of the nursery stock; the biological risk to exposure of the nursery stock to infestation; and, the nursery's production and sales needs. The costs for these products all vary at both the retail and wholesale levels. The costs will also vary based upon the given volume purchased at any one time.

The length of time to treat an acre varies greatly depending on whether it is field planted, containerized, the size of the container holding the nursery stock (one gallon container versus 36" box), the size and spacing of the containers, walkways, roadway, etc.

Other factors that may affect the cost of compliance include:

- The type of material used affects the quantity and formulation of the active ingredient in the material.
- How long the nursery stock is held at the affected nursery prior to its sale and the need to have replacement stock in the production cycle.
- Pending sales contracts may vary from nursery to nursery and drive the nursery's choice of approved materials to use.
- Labor costs may vary from nursery to nursery.
- Whether the nursery has a qualified pesticide applicator on site or has to hire one varies from nursery to nursery and size of the nursery may be a factor.
- The availability of the necessary treatment equipment and type of equipment may vary from nursery to nursery.
- There may be a substantial difference between start-up and ongoing costs.
- The physical location of the growing grounds relative to the labor cost for that area.

Therefore, rather than there being a single prescriptive treatment, there are a number of possible treatments available to ensure that the performance standard (i.e. treated in a manner to eliminate live life stages of LBAM from nursery stock) is met based upon the biological risk of the nursery stock harboring a live life stage of LBAM. Once the LBAM infestation has been eliminated, the producer may go back to an IPM program.

Based on the preceding information, it was determined that the amendment of Section 3434 may have an adverse economic impact on some nursery businesses, but it is not expected to be significantly adverse. For the most part, there are a number of optional ways to comply that are available to the affected businesses so they may select the means with the lowest cost and easiest implementation for them. The highest costs would be for an infested nursery. The most expensive material (Entrust) costs approximately \$97 per acre for material. The least expensive material costs

approximately \$15 per acre. This excludes the labor and any pesticide applicator and equipment costs.

Assuming 65,000 one gallon containers per acre, the average time to treat one acre is approximately 1.5 hours. The labor costs for application may vary from \$7.50 to \$10/hour. Using the higher labor cost, that would be \$15 per acre for labor. The highest material and labor costs per acre would be \$112 per acre and the lowest cost would be \$30 per acre. At the highest rate this translates into an approximate increased production cost of \$0.002 per one gallon container.

The Department does not have any reasonable way to project equipment or consulting costs, if needed by the producer.

The Department also obtained information directly from two nursery operations, one in Santa Clara County and one in San Mateo County. The nursery in San Mateo County indicated that it cost approximately \$5,140 to treat 23.5 acres. Assuming all one gallon containers, this translates into an approximate increased production cost of \$0.003 per one gallon container. The nursery in Santa Clara County spent \$6,336 to treat 45 acres. Again, assuming all one gallon containers, this translates into an approximate increased production cost of \$0.002 per one gallon container.

Within the quarantine area, the Department has determined there are retail nurseries. The nursery stock offered for sale at a retail nursery must also be free from LBAM. A retail nursery found with an active LBAM infestation must eliminate LBAM from the nursery or from a specific lot of nursery stock in order to be eligible to continue sales to the general public. The retailer also has a choice of at least 24 pesticides registered for use in California that are efficacious against LBAM and may target different life stages. However, due to the nature of the retail business, it may not be practical to treat plant material on the premise and hold for reinspection prior to resuming sales. Some retailers may choose to send the plant material back to the producer (if it can be done

safely) or destroy the plant material and bring in new plant material from a producer that is free from LBAM to ensure they can immediately resume sales to the public.

Nursery stock that is infested with LBAM does not meet the current requirements of Section 3060.2, Standards of Cleanliness, California Code of Regulations (CCR), and cannot be sold anyway. This regulation requires that all nursery stock must be kept free from pests that are of limited distribution, including pests of major economic importance which are widely, but not generally distributed within California. The LBAM is a major economic plant pest of State, national and international quarantine concern. The costs associated with keeping nursery stock free from LBAM would be incurred by the affected nurseries, regardless of this regulation. Therefore, for nurseries, there are no additional mandated costs of compliance solely associated with the adoption and subsequent amendments of this regulation.

Fruits and vegetables may move from community gardens and host crop producers if inspected and found free from LBAM. The Department does not mandate any specified treatments. As long as the harvested fruits and vegetables are free from LBAM life stages, the product is free to move within or from the regulated area. The Department has inspectors that perform the required inspections at the affected industry's natural control points (field or cold storage facility) with no costs. Therefore, the Department is not aware of any specific costs for compliance with this regulation.

Cold storage facilities are required to safeguard harvested fruits and vegetables from becoming infested by the adult LBAM female laying eggs on it. The female LBAM only flies at night so there are minimum safeguarding actions needed. The Department is not aware of any specific costs for compliance with this regulation.

Within the quarantine area, the Department has determined there are landscape maintenance companies and green waste companies that handle green waste movement from or within the regulated area. Movement of such material must be conducted in a manner that precludes the escape of any possible live life stages of

LBAM. Green waste may move within or from the regulated area if it is certified as originated from an uninfested area or inspected or treated by an authorized agricultural official or under the terms of a permit issued by the Department. Approved methods of treatment include maintaining the green waste completely enclosed in containers or plastic bags, or completely covered with fine mesh or tarps, or moved in an enclosed truck or trailer or chipped and shredded on site prior to movement to an authorized disposal site. All of these methods are very inexpensive and are already required as a condition of movement on public roadways by other State and/or local agencies. Therefore, these methods of treatment would not represent a significant economic impact.

For the majority of businesses, no additional costs will be incurred.

Currently the United States Department of Agriculture's Federal Domestic Quarantine Order for LBAM restricts the interstate movement of host commodities produced in the California counties of Alameda, Contra Costa, Los Angeles, Marin, Monterey, Napa, Orange, San Benito, San Diego, San Francisco, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Solano, Sonoma and Yolo.

There are approximately 3,718 production nurseries and 7,099 cut flower producers located in California. Of these, the majority are located outside the regulated and quarantine areas. Many of the businesses located outside the current regulated area are interstate shippers. Therefore, this regulatory action is necessary to provide the majority of potentially affected California businesses, which are not inside the current State regulated area, the continued ability to compete with businesses in other states without unnecessary federal restrictions on California's interstate commerce.

There are 6,454 retail nurseries located throughout the State. Of these, the majority are located outside the regulated and quarantine areas. Again, nursery stock that is infested with LBAM does not meet the current requirements of Section 3060.2, Standards of Cleanliness, California Code of Regulations (CCR), and cannot be sold.

This regulation helps protect the majority of the retail nurseries located within California from ever having to incur losses due to LBAM.

The Department has determined that the proposed actions will not have a significant adverse economic impact on housing costs or California business, including the ability of California businesses to compete with businesses in other states. The Department's determination that the action will not have a significant statewide adverse economic impact on business was based on the following: Only portions of the State are regulated by this action and without this regulation the USDA would regulate the entire State.

Economic Analysis

The long term economic impacts of LBAM on California's agriculture and the environment are unknown. A "Mini Risk Assessment" prepared by staff at the University of Minnesota's Department of Entomology stated the "Potential Economic Impacting Rating" for the US was high but did not quantify it. A May 2008 USDA Factsheet stated that the LBAM causes five to twenty percent crop loss in New Zealand. Applying this crop loss to California's agriculture would result in losses from \$685 million to \$2.7 billion annually if LBAM was to "thrive and flourish." The most recent document the Department has relied upon is the USDA's "Economic Analysis: Risk to U.S. Apple, Grape, Orange and Pear Production from the Light Brown Apple Moth, *Epiphyas postvittana* (Walker)," published in May 2009. This document concluded that for these crops the economic damage could be from \$86 to \$150 million with a mean of \$118 million in the at risk areas. The crop production acreages used for this document were from 2007 and they converted crop values from 1998 to 2006 into 2007 dollars. They listed each portion of the crops economic loss as: oranges 43 percent, grapes 30 percent, apples 22 percent and pears 5 percent. In 2009, compared nationally, California ranked first the production of grapes, second in oranges and pears, and fifth in apples. The LBAM also is known to attack, but not limited to [California's national production value ranking in parenthesis]: apricot (first), avocado (first), bell peppers (first), blueberry (seventh), carrots (first), chili peppers (second), flowers and foliage (first), grapefruit (fourth), lemon (first), lettuce (first), mandarin (first), nursery products

(first), peach (first), plums (first), nectarine (first), persimmon, strawberry (first), tangerine(first), tangelos (first) and tangors (first). No economic analysis information was available for these crops.

The Department's operational program costs for the implementation of this program for the period January 1, 2012 to September 30, 2012 is \$1,655,007. However, this is all federal funding obtained by the Department under contract with the USDA. The Department's program costs related to staff time, laboratory supplies, etc. is derived from this source of funding. Additionally, the remaining federal funding is then dispersed by the Department to participating California County Agricultural Commissioners through cooperative agreements with each county. No State general fund money, other than staff dedicated to the promulgation of any regulation changes is used to sustain this program.

The use of this federal funding by the program creates California business opportunities within the regulate area. This source of funding enables the certification of host material which otherwise would be unable to move and which then facilitates the sales of host material for intra, inter and international movement. The sale of this host material then also serves as an important source of California tax revenue. The 2011 value of Christmas trees was approximately \$4.5 million, cut-foliage was approximately \$26 million, potted plants were approximately \$510.5 million and woody deciduous and evergreen ornamentals were approximately \$957 million. While it is impossible to determine the specific value of all of the host plants of LBAM and how much of the exact production is located outside the current regulated area; these would be additional crop areas subject to damage and statewide federal quarantine restrictions if this amendment was not made.

Canada is California's number one export market and Mexico is our number five. Lettuce and strawberries were the leading exports to Canada. Both Canada and Mexico have export restrictions pertaining to the LBAM.

If the Department cannot make changes to the regulated and quarantine areas in a timely manner the USDA may choose to regulate the entire State to ensure there are adequate interstate commerce protections to prevent the establishment of LBAM in other states. The general economic welfare of the State would be harmed if the USDA quarantined the entire State. There are still vast areas of the State which have significant agricultural production and which are not under regulation for LBAM. Unnecessary interstate quarantine restrictions would negatively impact the State's interstate trade. California's unemployment rate in March 2013 dropped to 9.6 per cent. During the preceding 12 months prior to March 2013, agricultural employment was up by 2.8 per cent. The agricultural industry is one of the economic engines which are lowering the State's unemployment rate. Additionally, any job losses in this area would likely be felt by low-skilled workers whose employment options are already limited. The loss of any agricultural jobs would likely result in an increase in the State's public assistance obligations which would negatively impact the State's economic recovery.

If the USDA quarantined the entire State then Canada and Mexico would too. Canada is the State's number one export market and Mexico is the number five export market for our agricultural products. The 2009 value of agricultural exports to Canada was over \$2.5 billion and to Mexico was \$551 million. The following are examples of some of the LBAM hosts 2009 export values to just Canada: cut flowers and nursery stock \$83.4 million, table grapes was \$197.4 million, strawberries \$239 million, raspberries \$75.6 million, oranges \$117.6 million, peaches and nectarines \$52.7 million and cherries \$30.8 million.

Anticipated Benefits from This Regulatory Action

Existing law, FAC section 24.5. states that "Inasmuch as plants growing in native stands or planted for ornamental purposes contribute to the environmental and public health and welfare needs of the people of the state, the Legislature hereby finds and declares that such plants shall be considered as a part of the agricultural industry for the purpose of any law that provides for the protection of the agricultural industry from pests.

Existing law, FAC section 407, provides that the Secretary may adopt such regulations as are reasonably necessary to carry out the provisions of this code which she is directed or authorized to administer or enforce.

Existing law, FAC section 5321, 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.

Existing law, FAC section 5322, provides that the Secretary may establish, maintain, and enforce quarantine, eradication, and such other regulations as are in her opinion necessary to circumscribe and exterminate or prevent the spread of any pest which is described in FAC section 5321.

The existing law obligates the Secretary to investigate and determine the feasibility of controlling or eradicating pests of limited distribution but establishes discretion with regard to the establishment and maintenance of regulations to achieve this goal. The amendment of this regulation benefits all of the affected businesses located outside the regulated area and the environment by having a quarantine program to prevent the artificial spread of LBAM over long distances. The amendment of this regulation also protects the native plant stands and ornamental plantings in the general environment from damage due to the artificial long distance spread of LBAM.

FAC Section 401.5 states, "the department shall seek to protect the general welfare and economy of the state and seek to maintain the economic well-being of agriculturally dependent rural communities in this state." The amendment of this regulation protects the agriculturally dependent rural communities located outside the regulated area.

The United states Department of Agriculture (USDA) maintains a federal domestic quarantine and orders regulating the interstate movement of host material. If the State does not have a parallel interior quarantine which is substantially the same as the federal domestic regulation, the USDA cannot regulate less than the entire State. The

amendment of this State regulation will prevent the USDA from having to unnecessarily regulate the entire State.

This proposed amendment to the regulation will enable the Department to add or remove regulated or quarantine areas in a timely manner while still providing opportunity for industry and public input.

The Department is the only agency which can implement plant quarantines. As required by Government Code Section 11346.5(a)(3)(D), the Department has conducted an evaluation of this regulation and has determined that it is not inconsistent or incompatible with existing state regulations.

Assessment

The Department has made an assessment that the repeal of the regulation would not 1) create or eliminate jobs within California; 2) create new business or eliminate existing businesses with California; or 3) affect the expansion of businesses currently doing business with California.

Alternatives Considered

The Department of Food and Agriculture must determine that no alternative considered would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.

Information Relied Upon

The Department relied upon the following studies, reports, and documents in the proposed adoption and subsequent amendment of Section 3434:

News Release No: 13-14 dated March 29, 2013, Employment Development Department, State of California.

Nursery Advisory No. 01-2013 dated April 12, 2013, to All County Agricultural Commissioners from California Department of Food and Agriculture, Pest Exclusion-Nursery Services.

Federal Order dated July 25, 2011, *Epiphyas postvittana* (Light Brown Apple Moth), DA-2011-41.

"Pest Profile," updated March 16, 2007, Kevin Hoffman, California Department of Food and Agriculture.

"Mini Risk Assessment, Light Brown Apple Moth, *Epiphyas postvittana* (Walker), [Lepidoptera: Tortricidae], September 21, 2003, Department of Entomology, University of Minnesota.

Letter dated May 16, 2013, from Rick Le Feuvre to Karen Ross.

Letter dated May 14, 2013, from Sandy Parks to Karen Ross.

Letter dated December 23, 2011, from Henry Gonzales to Karen Ross.

Letter dated August 4, 2010, from Robert G. Atkins to A.G. Kawamura.

Letter dated June 16, 2010 from Frank Carl to A.G. Kawamura.

Letter dated August 3, 2009, from Robert Lilley to A.G. Kawamura.

Letter dated July 13, 2009, from Scott Hudson to A.G. Kawamura.

Letter dated May 19, 2009, from Rick Landon to A.G. Kawamura.

Letter dated April 28, 2008, from Lisa Correia to A.G. Kawamura.

Letter dated March 17, 2008, from William D. Gillette to A.G. Kawamura.

Letter dated July 12, 2007, from Kurt E. Floren to A.G. Kawamura.

Letter dated July 11, 2007, from Jearl D. Howard to A.G. Kawamura.

Letter dated June 1, 2007, from David R. Whitmer to A.G. Kawamura.

Letter dated May 25, 2007, from Ken Corbishley to A.G. Kawamura.

Letter dated May 24, 2007, from Paul J. Matulich to A.G. Kawamura.

Letter dated May 4, 2007, from Eric Lauritzen to A.G. Kawamura.

Letter dated May 4, 2007, from Gail M. Raabe to A.G. Kawamura.

Letter dated April 11, 2007, from Greg Van Wassenhove to A.G. Kawamura.

Letter dated April 4, 2007, from Scott T. Paulsen to A.G. Kawamura.

Letter dated April 3, 2007, from Edward P. Meyer to A.G. Kawamura.

Letter dated April 2, 2007, from Dennis F. Bray to A.G. Kawamura.

Letter dated March 30, 2007, from Stacy Carlsen to A.G. Kawamura.