

Department of Food and Agriculture
Proposed Changes in the Regulations
Title 3, California Code of Regulations
Section 3437(b)
European Grapevine 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 (Food and Agricultural Code Section 403).

Specific Purpose and Factual Basis

The specific purpose of Section 3437 is to provide authority to the State to regulate the movement of hosts and possible carriers of European Grapevine Moth, *Lobesia botrana*, within or from the regulated area.

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

OAL File No. 2011-0524-02 E Effective May 31, 2011

On May 9, 2011 (Pest and Damage Record No. 1402319), adult male EGVM were trapped in the Grass Valley area of Nevada County. This new occurrence is located in the vicinity of a general agricultural area and is thought to be associated with the human-assisted artificial movement of EGVM life stages. These EGVM were trapped within three miles of one another and within one life cycle. This meets the State and federal regulatory protocol for establishing a quarantine in this area of Nevada County.

This amendment established a regulated area surrounding the Grass Valley area of Nevada County of approximately 103 square miles for a total of approximately 2,174 square miles under regulation in the State.

OAL File No. 2011-0609-01 E Effective June 15, 2011

On September 1, 2010 (Pest and Damage Record No. 1402320) an adult male EGVM was trapped in the Nevada City area of Nevada County. On May 31, 2011, a second male EGVM was detected (Pest and Damage Records No. 1585400) in the Nevada City area. These EGVM were trapped within three miles of one another and within one life cycle. This meets the State and federal regulatory protocol for establishing a quarantine in this area of Nevada County. This new occurrence is located in the vicinity of a winery and is thought to be associated with the human-assisted artificial movement of EGVM life stages.

This amendment established a regulated area surrounding the Nevada City area of Nevada County of approximately 73 square miles for a total of approximately 2,247 square miles under regulation in the State.

OAL File no. 2011-0620-01 E Effective June 27, 2011

On September 1, 2010 (Pest and Damage Records No. 1549662) an adult male EGVM was trapped in the Aptos area of Santa Cruz County. On June 7, 2011, a second male EGVM was detected (Pest and Damage Records No. 1483683) in the Aptos area of Santa Cruz County. These EGVM were trapped within three miles of one another and within one life cycle. This meets the State and federal regulatory protocol for establishing a quarantine in this area of Santa Cruz County. This new occurrence is located in the vicinity of a general agricultural area and is thought to be associated with the human-assisted artificial movement of EGVM life stages.

The amendment established a regulated area surrounding the Aptos area of Santa Cruz County of approximately 87 square miles for a total of approximately 2,334 square miles under regulation in the State.

The intended effect of these emergency quarantine amendments is to prevent any additional human-assisted artificial spread of the pest. Artificial spread, such as moths hitchhiking on equipment, clothing or the movement of infested plant material has the potential to spread the pest rapidly throughout the state, whereas the natural spread of the pest is gradual.

The EGVM regulated products include grapes, olives, stone fruits, kiwifruits, pomegranates, and persimmons. California's 844,000 acres of grapes (526,000 acres of wine grape, 93,000 acres of table grape and 225,000 acres of raisin-type grapes) leads the nation in grape production with 89% of the total. In 2007, grapes were the number two commodity in the state, based on a dollar value of \$3.08 billion dollars, and were among the top three commodities produced in 15 California counties. The retail value of California grapes was valued at \$16.5 billion in 2006. The United States Department of Agriculture's (USDA) November 2010 economic analysis estimates the EGVM regulated products were valued in 2008 at \$2.7 billion in the existing quarantined counties California. More information regarding potential economic impact in California may be found in the economic analysis prepared by USDA at: http://www.aphis.usda.gov/plant_health/plant_pest_info/eg_moth/downloads/EGVM-EconomicAnalysis-Nov2010.pdf

EGVM is known to feed on close relatives of plants listed as threatened or endangered in the United States and presents a potential threat to perhaps 24 species, some of which are known to occur only in California. To protect this source of revenue and the environment, California must do everything possible to prevent the spread of EGVM in the State.

The EGVM has the capability of causing significant irreparable harm to California's agricultural industry and some possible adverse environmental/urban impacts. Should the Department not take these actions; the EGVM could cause catastrophic losses to not only California's table and wine-grape industries but the industries which rely on the regions scenic beauty and international reputation as a tourist destination.

The Secretary finds that the immediate amendment of a regulation to establish a new quarantine area is necessary to prevent or mitigate the emergency, to avoid serious harm to the general welfare and economy of the State, demanding immediate action to prevent the spread of an injurious insect and to maintain the economic well-being of agriculturally dependent rural communities.

Project Description

EGVM is a pest of quarantine concern to the USDA and they have issued a federal order governing the interstate movement of host material. Unless the State's EGVM regulation is substantially the same as the latest EGVM federal order, the USDA cannot regulate less than the entire State. The current federal order requires the State to regulate at least a five mile radius (this includes a buffer area) surrounding an EGVM infestation as defined under the regulatory protocol. Minimally, the State's regulation has to prevent the intrastate movement of regulated articles and commodities which do not qualify for certification from the infested area and the surrounding buffer area. This is to ensure that such articles and commodities are not subsequently moved from a non-regulated area of California into interstate commerce. More information regarding EGVM including all issued federal orders may be accessed at:

http://www.aphis.usda.gov/plant_health/plant_pest_info/eg_moth/index.shtml

This proposed emergency action will establish a new quarantine area for EGVM and will include the new detection sites as epicenters and a buffer zone which extends approximately five miles in each direction from the epicenters. A buffer zone is necessary because the moth can spread naturally (as well as being spread artificially on 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 Santa Cruz County Agricultural Commissioner. The criteria for determining quarantine boundaries around an epicenter was based upon the information contained in the Final Report of the International Technical Working Group for the European Grape Vine Moth in California, released February 10, 2010. An epicenter is defined as an egg, larva or

pupa found in the environment, or two male moths trapped within three miles of one another and within one life cycle.

The proposed quarantine area is considered the minimum area around the initial detection sites which should be regulated to prevent artificial spread of EGVM to noninfested areas.

The effect of the amendment of this regulation will be to implement the State's authority to perform quarantine activities against the EGVM in this new area of Santa Cruz County. Quarantine activities consist of limiting the movement of EGVM host articles within or from the area under quarantine. Any quarantine actions undertaken by the Department will be in cooperation and coordination with the USDA and the Santa Cruz County Agricultural Commissioner. The proposed amendment will establish a new regulated area in Santa Cruz County of approximately 87 square miles. The total regulated area in the State would be approximately 2,334 square miles. It is immediately necessary to implement quarantine actions in order to prevent the artificial spread of EGVM to the uninfested areas of California.

California Environmental Quality Act

"Specific actions necessary to prevent or mitigate an emergency" are exempt from the California Environmental Quality Act [CEQA]. Public Resources Code Section 21080(b)(4). "Emergency means a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services." Public Resources Code Section 21060.3.

Statutory Exemption

Title 14, California Code of Regulations Section 15269, subdivision (c) "Specific actions necessary to prevent or mitigate an emergency."

Categorical Exemption

Title 14, California Code of Regulations, Section 15308. “Class 8 consists of actions taken by regulatory agencies, as authorized by state or local ordinance, to assure the maintenance, restoration, enhancement, or protection of the environment where the regulatory process involves procedures for protection of the environment.”

For the reasons set forth in this document, this constitutes a specific act necessary to prevent or mitigate an emergency and is also an action required for the preservation of the environment.

Background

In addition to California, EGVM are found in southern Asia, Europe, North Africa, Anatolia, the Caucasus and in South America (Chile where it was first identified in 2008). Adult EGVM are 6 to 8 mm long with a wingspan of about 10 to 13 mm. However, their size is greatly affected by larval food quality. The first flight of adults occurs in spring when daily average air temperature is above a minimal threshold temperature of 10°C for 10 to 13 days. High temperature (over 20°C) and low humidity (40-70% relative humidity) provide optimal conditions for moth activity – conditions that prevail in much of California’s grape production areas. The second flight period begins in summer. Adults may be hard to discover during the day and may be noticed only when they take flight after being disturbed. Within a day or two of mating, females begin to oviposit on the blossoms, leaves, and tender twigs of grapevines. The female lays 300 or more eggs at a rate of 35 per day. First generation eggs are laid on the flower buds or pedicels of the vine while second generation eggs are laid on individual grapes. Eggs hatch in seven to eleven days in spring and three to five days in summer. The number of generations in a given area is fixed by photoperiod together with temperature. The moth achieves two generations in northern cold areas and usually three generations in southern temperate areas, but as many as five generations have been reported.

Larvae develop in four to five weeks in spring and two to three weeks in summer. Pupation lasts nine to twelve weeks in spring, five to seven days in summer, and up to six months in winter.

The EGVM is a serious pest in warm vine-growing areas, such as California. Damage by EGVM makes berries attractive to other insects and predisposes the fruit to fungal infection. Larval boring may promote a number of fungal rots, including *Aspergillus*, *Alternaria*, *Rhizopus*, *Cladosporium*, *Penicillium* and especially, grey rot caused by *Botrytis cinerea*. Loss of up to one-third of the vintage has been reported in areas of the Soviet Union, Syria and Yugoslavia. Losses in Israel sometimes reach 40 to 50 percent among table grapes and up to 80 percent for wine grapes. Further loss is due to the time and labor spent in cleaning the grape bunches. When infestations are heavy, work days spent in cleaning the fruit account for 30 to 40 percent of the time of those involved in harvesting.

First generation EGVM larvae feed on bud clusters or flowers and spin webbing around them before pupating inside the web or under a rolled leaf. If heavy flower damage occurs during the first moth generation, the affected flowers will fail to develop and yield will be low. Second generation larvae enter the grapes and feed before pupating inside the grape. Larvae of the third generation, the most damaging, feed on ripening grapes, migrating from one to another and spinning webs. When berries are a little desiccated, the larvae penetrate them, bore into the pulp, and remain protected by the berry peel. Larvae secure the pierced berries to surrounding ones by silk threads in order to avoid falling. Each larva directly damages several berries (one to six), but if the conditions are suitable for fungal or acid rot development, a large number of surrounding berries may also be affected. The third generation larvae leave the fruit and seek shelter under the bark, among dead leaves, or between clods of earth, where they pupate before overwintering.

The most probable method of EGVM movement within California is human-aided on equipment, fruit or infested propagative material. Though larvae are active, their

movement is usually limited to between berry clusters, and virgin females' movement rarely exceeds 80 m.

EGVM detections in California have led to several expansions of the original quarantine areas in Napa and Sonoma counties; as well as creating new quarantine areas in Fresno, Lake, Mendocino, Merced, Nevada, Santa Clara, San Joaquin and Solano counties. Lake County was subsequently removed from the regulation.

The emergency amendment of subsection 3437(b) was necessary to prevent the artificial spread of the pest to other areas of California.

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

The Department of Food and Agriculture has determined that the adoption and subsequent amendments of Section 3437 do 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 requested the State to implement the regulated areas in their county.

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 3437.

The cost impact of the changes in the regulations on private persons and businesses are expected to be insignificant.

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:

Previously the Department determined that regulated growers/vineyard managers and harvesters of bulk grapes for crush must ensure that all equipment used for vineyard maintenance and harvesting is thoroughly cleaned of all host material, debris and all possible life stages of EGVM year-round and prior to leaving the growing premises. The Department estimates that it will cost a representative grower/vineyard manager or harvester \$500 to purchase cleaning equipment to accomplish the above. An additional labor cost would apply but would vary widely depending on how often equipment is moved from the premises.

The Department has also determined that haulers/transporters of bulk grapes for crush must ensure that: all equipment used (bins, barrel, machinery, gondolas, etc.) is thoroughly cleaned of all host material, debris and all possible life stages of EGVM prior to leaving the growing premises, all vehicles/conveyances used in the transport of shipment must be cleaned of same prior to leaving the growing premises, and, again, prior to leaving the receiving facility. Additionally, they must transport the bulk grapes in a fully enclosed conveyance or the shipment must be completely covered. The haulers/transporter may face additional costs of \$500 to purchase cleaning equipment to accomplish the above, \$1,085 for tarps and labor costs of \$434, although the last two costs may be distributed among growers and/or harvesters.

The Department has also determined that receivers of bulk grapes who must ensure that all equipment (bins, barrels, machinery, gondolas, etc.) used for the transport of bulk grapes to their facility are thoroughly cleaned of all host material, excess debris and all possible life stages of EGVM prior to leaving the premises. The Department estimates that a representative receiver may face an additional cost of \$500 to purchase cleaning equipment to meet this requirement with unknown labor costs.

Based on the preceding information, it was determined that the amendment of Section 3437 will result in some costs to affected businesses, which may have an adverse economic impact on some of these businesses within the regulated area, but it is not expected to be significantly adverse. The total number of affected businesses are unknown at this time.

Assessment

The Department has made an assessment that the adoption of this 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 as and less burdensome to affected private persons than the proposed action.

Information Relied Upon

Letter from Mary Lou Nicoletti to Karen Ross, dated June 16, 2011.

Letter from Jeffery Pylman to Karen Ross, dated May 20, 2011.

Pest and Damage Records 1402319, 1402320, 1585400, 1549662 and 1483683, California Department of Food and Agriculture.

Federal Domestic Quarantine Order, *Lobesia botrana* (European Grapevine Moth), Revised February 10, 2011.

“ECONOMIC IMPACTS OF THE EUROPEAN GRAPEVINE MOTH (*LOBESIA BOTRANA*) IN CALIFORNIA,” dated November 2010, Policy Analysis &

Development Policy & Program Development, Animal & Plant Health Inspection Service, United States Department of Agriculture.

Phytosanitary Advisory No. 11-2010, dated June 21, 2010, California Department of Food and Agriculture.

Movement of Grapes and Other Regulated Articles from the European Grapevine Moth (*Lobesia botrana*) Quarantine Zone, Environmental Assessment, dated June 2010, United States Department of Agriculture.

European Grapevine Moth 2009 Napa County Winegrape Fruit and Wine Value Losses, June 2010.

Second Report of the International Technical Working Group for the European Grape Vine Moth (EGVM) in California, Final – May 14, 2010.

Email dated February 18, 2010, from Eileen Y. Smith to Helene Wright, and its attachments.

Phytosanitary Advisory No. 02-2010 dated February 16, 2010, California Department of Food and Agriculture.

Final Report of the International Technical Working Group for the European Grape Vine Moth (EGVM) in California, dated February 10, 2010.

Email dated February 8, 2010, from Kevin Hoffman to Stephen Brown and its attachment.

Email dated February 8, 2010, from John Hooper to Stephen Brown and its attachment.

Email dated February 4, 2010, from Eileen Y. Smith to Helene R. Wright and its attachment.

Interim Report of the International Technical Working Group for the European Grape Vine Moth (EGVM) in California, January 11, 2010.

Email dated December 15, 2009, from Stephen Brown to Susan McCarthy, and its attachment, "The European Grapevine Moth."

Agricultural Statistical Review, California Agricultural Resource Directory, 2008-2009.

Electronic Code of Federal Regulations (e-CFR), Title 7, Part 305, dated October 13, 2009.

Email dated December 23, 2009, from Eileen Y. Smith to Helene R. Wright, and its attachments.

New Pest Advisory Group (NPAG), Plant Epidemiology and Risk Analysis Laboratory Center for Plant Health Science & Technology, October 14, 2009.

Press Release, National Agricultural Statistics Service, October 9, 2009.

California Grape Acreage Report, 2008 Summary, United States Department of Agriculture.

Mini Risk Assessment, Grape berry moth, *Lobesia botrana*, (Denis & Schiffermuller) [Lepidoptera: Tortricidae], September 5, 2003. Robert C. Venette et. al., Department of Entomology, University of Minnesota.