DEPARTMENT OF FOOD AND AGRICULTURE

PROPOSED CHANGES IN THE REGULATIONS

Title 3, California Code of Regulations

Section 3591.2, Subsection (a)

Oriental Fruit Fly Eradication Area

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 3591.2 is to provide authority to the State to eradicate infestations of *Bactrocera dorsalis,* Oriental fruit fly, from within the declared eradication area by the established means and methods.

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

On July 9th, 2018, (Pest and Damage Record # 090P06087498) an adult male Oriental fruit fly was taken from a trap in the El Dorado Hills area of El Dorado County. On July 11th, 2018, (Pest and Damage Record # 450P06002151), an adult male Oriental fruit fly was identified from a trap in the Redding area of Shasta County. These detections of adult Oriental fruit flies are indicative of a possible incipient infestation of the fly in the El Dorado Hills area of El Dorado County and in the Redding area of Shasta County. This is the first time an Oriental fruit fly has been detected in El Dorado or Shasta counties. Oriental fruit fly is a destructive insect pest of over 230 agricultural crops. Fruits (including nuts, dates, and berries), many kinds of vegetables, and the fruiting bodies of many wild and ornamental plants are known to be hosts or possible hosts of the Oriental fruit fly. Larval feeding reduces the interior of fruit to a rotten mass. Egg punctures admit decay organisms that cause tissue breakdown. Damaged fruit is generally unfit for human consumption. It has been estimated that the cost of not eradicating Oriental fruit fly in

California would be at least $44 to $176 million in crop losses, additional pesticide use, and quarantine requirements (Oriental fruit fly Fact Sheet, California Department of Food and Agriculture).

This occurrence of Oriental fruit fly triggers the delimitation response as outlined in the United States Department of Agriculture's Cooperative Fruit Fly Emergency Response Triggers & Guidelines in El Dorado and Shasta counties. This response requires CDFA to have eradication authority in El Dorado and Shasta counties.

Oriental fruit fly eradication activity must target hosts on the revised host list in order to meet United States Department of Agriculture (USDA) requirements. This minimizes the chance of an Oriental fruit fly being moved beyond the quarantine zone. Because the Department has detected Oriental fruit flies in multiple counties in 2018, the Department reviewed USDA requirements and determined that it is necessary to adopt the USDA Oriental fruit fly host list that was revised in 2016. This proposed amendment allows the Department to successfully adjust delimitation protocols to incorporate the new information and to prepare for a possible quarantine if more flies are located in the area.

The implementation of this proposed regulatory action is necessary to prevent the United States Department of Agriculture's Animal and Plant Health Inspection Service (USDA APHIS) from considering the entire state as infested with Oriental fruit fly, rather than just the current area of El Dorado and Shasta counties. If USDA APHIS were to consider the entire state infested, there would likely be additional detrimental quarantine requirements directed against California host commodities by the USDA APHIS and our international trade partners.

This regulation will avoid harm to the public's general welfare by providing authority for the Department to perform detection, control, and eradication activities against *Bactrocera dorsalis* in El Dorado and Shasta counties. It is necessary to begin eradication activities to prevent spread of the fly to non-infested areas. Therefore, it is necessary to amend this regulation.

The entire counties of El Dorado and Shasta are being proposed as eradication areas because the utilization of these political boundaries will avoid frequent amendments to the regulation; if the Oriental fruit fly is detected elsewhere within this county there will be no associated

regulatory impacts in areas of the county where no flies are found. The existing regulation covers the entire counties of Alameda, Contra Costa, Los Angeles, Orange, Riverside, Sacramento, San Bernardino, San Diego, San Joaquin, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Ventura, and Yolo. Fruit may have already been moved from the infested area to another portion of the county, and flies which may have already spread naturally from the infested area may have already resulted in small infestations outside the current known infested area. Additionally, these fly finds may be linked to smuggled uncertified fruit shipments which have been distributed within the State. Only through the implementation of this regulation would the Department be able to rapidly treat these small infestations in the affected county. To successfully adjust delimitation protocols to incorporate the new information and to prepare for a possible quarantine if more flies are located, the host list must meet USDA requirements.

If the Oriental fruit fly were allowed to spread and become established in host fruit production areas, California's agricultural industry would suffer losses due to decreased production of marketable fruit, increased pesticide use, and loss of markets if other states or countries enacted quarantines against California products.

In California, the combined 2015 gross value of the commercial hosts potentially affected was over $16.4 billion.

Potential Impact to Homeowners and Community Gardens

Many of the host fruits attacked by the Oriental fruit fly are enjoyed by the home gardener and community gardens. Therefore, if Oriental fruit fly is not eradicated homeowners and community gardeners would be negatively impacted.

Potential Impacts to General Fund and Welfare

The negative impacts to agriculture would in turn negatively impact the State’s economic recovery which would negatively impact the general welfare of the State.

California’s unemployment rate in July 2017 fell to 4.8 per cent. During the preceding 12 months prior to July 2017, the average amount of individuals employed in agriculture was 421,475. 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 also negatively impact the State's economic recovery.

Action Plan

This amendment will provide authority for the State to perform specific detection, control, and eradication activities against the Oriental fruit fly in El Dorado and Shasta counties. This authority includes "The search for all stages of oriental fruit fly by visual inspection, the use of traps, or any other means." It is necessary to perform delimitation procedures within El Dorado and Shasta counties. These delimitation procedures are nationally and internationally accepted standards for establishing if there is an incipient infestation of Oriental fruit fly and its exact location.

To enable rapid treatment of new infestations of Oriental fruit fly, the revised host list must be incorporated into the delimitation authority and eradication regulation to ensure the correct host plants are included in management actions and to increase the rapidity of effective management responses. The timing of effective management actions can determine the success of pest eradication.

Intensive Delimitation Trapping

Intensive trapping is triggered after a single fly is trapped by the Department. Following confirmation of the specimen through lab tests, trap densities in the core square mile are increased to 25 Jackson traps and 25 McPhail traps within 24 hours. In the remainder of the delimitation area, 81 square miles, traps are places in densities of 5 Jackson traps per square mile within 72 hours of the find. Traps in the core will be checked daily during the first week. Traps in the first buffer zone, 8 square miles, will be serviced every two days; those in the remainder of the delimitation area are checked at least once during the first week. All traps in the delimitation zone will be checked weekly following a week of negative trap catches. Intensive trapping ends after the second complete life cycle following the last fly find, and then trap densities revert to detection trapping levels.

If a second fly is found, additional traps are deployed around the new fly find and trap servicing in the new core area will be daily for the first week and increased emphasis will be placed on

servicing traps in the buffer areas in an effort to better delimit the infestation. Traps in the eight-square miles around the core are serviced every two days, until eradication activities begin, at which time the trap inspection frequency changes to weekly. All traps are then serviced weekly for three life cycles of the last fly detected. Traps may be relocated to available preferred hosts as practical.

Following an eradication program, if no additional flies are trapped, intensive trapping ends after the third complete life cycle of the final fly find, as determined by a temperature dependent developmental model run by program personnel in Sacramento.

Larval Survey

Fruit on a property where a fly has been trapped may be inspected for possible larval infestation. Small circular oviposition scars are occasionally visible, indicating an infested fruit. In the absence of visible clues, 100 or more of the fruit on preferred hosts (if available) may be cut open at random and examined for larvae. First and second instar larvae are tiny and may be feeding immediately under the surface of the skin; therefore, fruit cutting should be left to experienced personnel. Fruit on properties adjacent to a trap catch may also be inspected.

If two or more flies are trapped in proximity, fruit cutting may be extended to all properties in a 200-meter radius of the finds, concentrating on preferred hosts. Fruit must be inspected on the property; it cannot be removed from an established quarantine area.

ERADICATION ACTIVITIES

The Department begins an eradication project when it determines that an Oriental fruit fly infestation exists within the state. Although there is no debate that either criterion two or three of the below criteria indicate the presence of a breeding Oriental fruit fly population, criterion one below is often open to further review. The CDFA may take up to 10 days, after the criteria are met, to further identify the presence and location of the infestation in order to better target eradication activities.

1. Two flies within three miles of each other and within a time period equal to one life cycle of the fly;
2. One mated female; or
3. Larvae or pupae.

After an infestation is determined to exist and, 24 to 72 hours later, a notification of treatment is issued, then treatment will begin. Treatment activities may include the following methods:

Male Attractant Technique

The male attractant technique makes use of small amounts of attractant (methyl eugenol) and pesticide (insecticide) to lure all the male flies in a population to bait stations. The insecticide/lure mixture is applied to utility poles, street trees, and other unpainted surfaces (such as fences) within public right of ways using pressurized tree marking guns. The project boundaries will be nine square miles (3 mi. X 3 mi.) around each detection location. Project boundaries may be enlarged if the number of flies trapped warrants it. Application is made to at least 600 sites distributed evenly in each square mile. Treatment is repeated every two weeks. Treatment continues for one to two fly life cycles after the last fly was trapped, dependent on the severity of the infestation.

Ground Bait Spray

If ground treatments of insecticide and bait are deemed necessary, the foliage of all shrubs and trees within a 200-meter radius of each infested property will be treated within 24 hours with insecticide/bait sprays using hydraulic spray equipment. Residents and tenants on affected properties will be notified in writing at least 48 hours prior to treatment. Completion notices are left following treatment detailing precautions to take and harvest intervals applicable to any fruit on the property. Treatments are repeated at five to 14-day intervals, unless significant rainfall justifies re-treatment.

Fruit Stripping

Fruit will be stripped from all host trees on a known infested property and on all other properties within a minimum of 100 meters of the property. Fruit is placed in heavyweight plastic bags and removed to a landfill site to be buried under at least one foot of fill.

<u>California Environmental Quality Act</u>

A Statewide Plant Pest Prevention and Management Program Environmental Impact Report (EIR) was prepared by the Department as the lead agency under the California Environmental Quality Act. The EIR addresses the potential impacts and mitigations when implementing the Statewide Plant Pest Prevention and Management Program activities related to Oriental fruit fly. The EIR may be accessed at the following website:
http://www.cdfa.ca.gov/plant/peir/.

Economic Impact Analysis

The eradication and prevention of the spread of Oriental fruit fly in California through the amendment and implementation of this regulation economically benefits:

- the general public
- homeowners and community gardens
- agricultural industry
- the State's general fund.

These treatments are part of our general exotic fruit fly treatment program. Single area delimitations such as this one for the El Dorado and Shasta counties area are estimated to cost approximately $50,000 per county.

The Creation or Elimination of Jobs within the State

The amendment is designed to minimize the spread of Oriental fruit fly to ensure that the devastating damage caused by Oriental fruit fly is limited to the smallest area possible. Compliance activities are currently being performed by existing state staff throughout quarantine areas within the State. The Department has been conducting quarantine actions throughout the State for over 30 years without causing significant creation or elimination of jobs. Therefore, the Department has determined that this regulatory proposal will not have a significant impact on the creation or elimination of jobs in the State of California.

The Creation of New Businesses or the Elimination of Existing Businesses within the State

The amendment is designed to minimize the spread of Oriental fruity fly to ensure that the devastating damage caused by Oriental fruity fly is limited to the smallest area possible. Compliance activities are currently being performed by existing state staff throughout quarantine

areas within the State. The Department has been conducting quarantine actions throughout the State for over 30 years without causing significant creation of new businesses. Therefore, the Department has determined that this regulatory proposal will not have a significant impact on the creation of new businesses in the State of California.

The Expansion of Businesses Currently Doing Business within the State

The amendment is designed to minimize the spread of Oriental fruity fly to ensure that the devastating damage caused by Oriental fruity fly is limited to the smallest area possible. Compliance activities are currently being performed by existing state staff throughout quarantine areas within the State. The Department has been conducting quarantine actions throughout the State for over 30 years without causing significant creation of new businesses. Therefore, the Department has determined that this regulatory proposal will not have a significant impact on the expansion of businesses currently doing business in the State of California.

Anticipated Benefits from This Regulatory Action

Existing law, FAC section 403, provides that the department shall prevent the introduction and spread of injurious insect or animal pests, plant diseases, and noxious weeds.

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 the Secretary 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 the Secretary's opinion necessary to circumscribe and exterminate or prevent the spread of any pest which is described in FAC section 5321.

Existing law, CCR Section 3591.2, defines the state's eradication areas for Oriental fruit fly.

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. This amendment provides the necessary regulatory authority to prevent the artificial spread of a serious insect pest, which is a mandated statutory goal.

This regulation will benefit the public's general welfare by providing authority for the State to perform detection, control, and eradication activities against Oriental fruit fly in El Dorado and Shasta counties.

The implementation of this regulation will prevent:

- direct damage to the agricultural industry growing host fruits
- indirect damage to the agricultural industry growing host fruits due to the implementation of quarantines by other countries and loss of export markets
- increased production costs to the affected agricultural industries
- increased pesticide use by the affected agricultural industries
- increased costs to the consumers of host fruits
- increased pesticide use by homeowners and others
- the need to implement a State interior quarantine
- the need to implement a federal domestic quarantine

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.

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

The Department of Food and Agriculture has determined that subsection 3591.2 does not impose a mandate on local agencies or school districts and no reimbursement is required under Section 17561 of the Government Code.

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 amendment of subsection 3591.2.

The agency is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

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:

Assessment

The Department has made an assessment that the amendment 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. The Department has been conducting eradication projects throughout the State without creating or eliminating businesses.

The amendment of subsection 3591.2 will provide authority for the Department to conduct eradication activities against Oriental fruit fly in El Dorado and Shasta counties and revise the host list, there are no known private sector cost impacts.

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

The Department relied upon the following studies, reports, and documents in the proposed adoption and subsequent amendment of Section 3591.2:

090P06087498

"Pest and Damage Record # 090P06087498," dated July 9, 2018, California Department of Food and Agriculture, Plant Health and Pest Prevention Services.

"Pest and Damage Record # 450P06002151," dated July 11, 2018, California Department of Food and Agriculture, Plant Health and Pest Prevention Services.

"Action Plan for METHYL EUGENOL ATTRACTED FRUIT FLIES including the Oriental Fruit Fly" *Bactrocera dorsalis* (Hendel)" California Department of Food and Agriculture Plant Health and Pest Prevention Services and Pest Detection/Emergency Projects Branch

"Oriental Fruit Fly Fact Sheet" California Department of Food and Agriculture, Plant Health and Pest Prevention Services.

"California Cash receipts by commodity" USDA/ERS Farm Income and Wealth Statistics, Data as of November 29, 2017

"Oriental Fruit fly, Bactrocera dorsalis, Host List", August 2016, United States Department of Agriculture. Access July 12, 2018:
https://www.aphis.usda.gov/plant_health/plant_pest_info/fruit_flies/downloads/host-lists/off-hostlist.pdf