Department of Food and Agriculture

Proposed Changes in the Regulations

Title 3, California Code of Regulations

Section 3639

Huanglongbing (HLB) Disease 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 (Food and Agricultural Code Section 403).

Specific Purpose and Factual Basis

The specific purpose of Section 3639 is to provide authority to the Department to conduct eradication activities against Huanglongbing (HLB) disease (HLB associated bacteria *Candidatus* Liberibacter asiaticus).

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

The Secretary of the Department of Food and Agriculture found that an emergency existed. On March 23, 2012, suspect citrus tissue samples for Huanglongbing (HLB) disease (HLB associated bacteria *Candidatus* Liberibacter asiaticus) were collected in the Hacienda Heights area of Los Angeles County. These suspect samples were sent to the United States Department of Agriculture (USDA) for confirmation. On March 30, 2012, the USDA confirmed the first occurrence of HLB in California.

The single known citrus tree infected with the devastating HLB disease was located in an area of the State which has heavy populations of Asian citrus psyllid (ACP). ACP adults are the only mobile vector of this disease in California. It was essential to remove

this source of inoculum as soon as possible to prevent any ACP in the area from feeding on it and transmitting the disease elsewhere which may occur with each passing day since the tree was confirmed as positive for HLB. Food and Agricultural Code Section 5762 establishes that any pest with respect to which an eradication area has been proclaimed, and any stages of the pest, its hosts and carriers, and any premises, plants, and things infested or infected or exposed to infestation or infection with such pest or its hosts or carriers, within such area, are public nuisances, which are subject to all laws and remedies which relate to the prevention and abatement of public nuisances. Food and Agricultural Code Section 5763 establishes that the Department can take summary abatement actions against a “public nuisance” when it is part of an eradication regulation. Otherwise the Department would have to provide standard due process through notice, hearing and the opportunity to appeal the proposed action. It was essential to remove this HLB infected citrus tree in an appropriate biological timeframe to prevent further spread and the Department could only do this by being able to exercise its summary abatement authority which is why this regulation was adopted as an emergency action.

The only known HLB infected tree in this area has been removed. However, given the high populations of ACP in the area and that expression of the symptoms of the disease may take up to two years, it is necessary to continue the maintenance of this regulation. In this area 60 percent of the residential properties have host material. HLB infected ACP may already have transmitted the disease to nearby hosts which are being surveyed for the next two years. Additionally, HLB is a graft transmittable disease. The known infested lemon tree had multiple grafts on it of pumelo. The individual who performed these grafts also grafted numerous trees at other locations in southern California. The individual also admitted that some of the trees he grafted had died and were removed. These various properties have been surveyed already with negative results and will also have to be monitored for at least two years before it can be determined that HLB was not transmitted to these properties via the grafting activities.

HLB samples are being taken from any host material showing HLB-like symptoms when they are found anywhere in the State. There are several diseases and nutritional issues which show symptoms similar to HLB in its early stages. These samples are then submitted for laboratory analysis.

The Hacienda Heights area of Los Angeles County has substantial established populations of the Asian Citrus Psyllid (ACP). By itself, ACP causes only minor cosmetic damage to citrus trees. However, when it becomes infected with (HLB or citrus greening), it becomes a carrier for the disease and can transmit the HLB-associated bacteria from the fourth nymphal instar through the adult stage with a latency period as short as one day or as long as 25 days. HLB was first identified in China in 1919 and is considered to be the most devastating of all citrus diseases. Once infected, there is no cure for HLB infected citrus trees, which decline and die within a few years. Additionally, the fruit produced by infected trees is not suitable for either the fresh market or juice processing due to the significant increase in acidity and bitter taste.

California Code of Regulations, Title 3, Section 3591.21, ACP Eradication Area established the entire State as an eradication area for ACP, one of the vectors of HLB. Now that the disease has been introduced into California, this vector disease complex may occur anywhere in California where host material is grown. Therefore, the entire State is being proposed as an HLB eradication area.

Both ACP and HLB are federal action quarantine pests subject to interstate and international quarantine restrictions by the USDA. It is imperative that the Department eradicate any known infestations of HLB host material and HLB infested ACP wherever possible to ensure the devastating damage caused by HLB is limited to the smallest area possible.

California is the number one economic citrus state in the nation, with the USDA putting the value of California citrus at $1,131,851,000 (Federal Register Vol. 71 No.83; published May 1, 2006; pg 25487). A 2002 report by the Arizona State University

School of Business indicates that there is at least $825.6 million of direct economic output and another $1.6 billion when all upstream suppliers and downstream retailers are included. This represents over 25,000 direct and indirect employees. To protect this source of revenue, California must do everything possible to exclude both HLB-associated pathogens and ACP from the state.

The current study by the University of Florida IFAS Extension calculated and compared the impact of having and not having HLB present in Florida. Their economic analysis concluded HLB had a total impact of $3.64 billion and eliminated seven percent of the total Florida workforce. For 2008 in Florida, the estimated increased production costs for citrus range from $266 to $332 million. There are approximately 600,000 acres of citrus in production in Florida. This translates into increased production costs of $443 to $553 per acre. This estimate is based upon an eight dollar per tree replacement cost. In California, the estimated cost to replace a tree is from $10 to $20. Using a cost of $15 per tree would push the projected production costs up to $450 to $550 per acre. The estimated citrus acreage in 2008 in California is approximately 290,000 acres. The projected increased citrus production costs in California would be at least $130.5 to $159.5 million.

Project Description

This proposed emergency action would establish the entire State as a HLB eradication area, the hosts, means and methods to eradicate or control HLB, and that any HLB host nursery stock of subsection (b) which is regulated under the California Code of Regulations, Title 3, Section 3439, HLB Interior Quarantine, and which does not meet the requirements of subsection 3439 (d) Restrictions, cannot be maintained free from HLB and is declared a public nuisance under 5762 and subject to the provisions of California Food and Agricultural Code Section 5763. HLB infected ACP can transmit HLB into the HLB host through one feeding. However, the disease symptoms and the titer levels necessary to confirm the presence of the disease may not occur for two years after the plant becomes infected. Therefore, any exposed host nursery stock poses a high risk of being infected with the disease wherever the ACP and HLB

complex exist. Nursery stock would also include any plantings of host material being dug up from the environment.

The effect of the adoption of this regulation will be to implement the State's authority to perform eradication activities against HLB in the entire State. This includes the searching for host plants showing symptoms of HLB anywhere in the State.
The Department currently conducts a statewide HLB survey of commercial citrus and for any host material regulated within the ACP Interior Quarantine area. The Department's regional Field Plant Pathologists supervise crews that survey citrus groves as resources allow. Citrus and ornamental nurseries are also checked periodically. Crews are trained based on the knowledge that psyllid populations are predominant in the spring whereas disease symptoms are most obvious in the fall. Surveys must also be timed to the period of best flush of new growth. The USDA's Cooperative Agricultural Pest Survey (CAPS) Program has funded this survey, in part.

1. Commercial Survey: Spring and fall surveys are conducted in commercial citrus throughout the state. Approximately 25% of commercial citrus orchards are targeted annually. A visual inspection of host plants is conducted by looking for symptoms of citrus greening (blotchy mottle of leaves, yellow sectors of individual trees, abnormal shaped fruit) and the presence of any life stages of the two species of psyllids. Any suspect plant material or insect is collected and submitted for analysis and identification.

2. Residential survey: This survey targets areas that are at risk of the introduction of HLB-associated bacteria or the vector. High-risk areas include those areas that receive plant material from eastern or southern Asia. Each District Plant Pathologist receives grid maps defining the areas to survey. Five residences are surveyed per square mile. In the counties that maintain a State-run trapping program for fruit flies, The Department's detection trappers conduct the survey; in the other high-risk counties, the Department's plant pathologists and others perform the survey.

3. Nursery survey: The Department's District Plant Pathologists inspect all the citrus production nurseries annually and County Agricultural Inspectors conduct additional inspections in some counties. Ornamental nurseries that regularly carry citrus or citrus relatives, especially *Murraya paniculata,* are inspected every year.

4. Yellow Panel Traps: Traps are placed in nurseries, at the dumping/unloading stations at packing houses, especially those importing fruit from Mexico and Texas, and in the vicinity of produce markets, especially those known to import curry-leaf. Any suspect specimens are submitted for identification.

5. Collections of ACP: Within the ACP Interior Quarantine area, samples of collected ACPs are sent to diagnostic laboratories for analysis to determine if HLB is present in the ACP.

There is now a need to establish specific regulatory authority to ensure these activities may be conducted wherever necessary in the entire State. Additionally, with the exception of the curry plant which is a symptomless carrier, any host material which becomes infected with HLB will die. Therefore, since the host material is going to die anyway, the removal and destruction of host material is biologically sound. Additionally, infected host material remains a source of inoculums for the mobile vector ACP. Therefore it also makes biological sense to knockdown the ACP vector in the area as soon as possible to prevent the ACP from acquiring HLB and to prevent HLB infected ACP from leaving the affected area. Finally, it is critical to remove the infected host material as soon as possible to remove the sources of inoculums. HLB is a systemic disease and any re-growth of host material must be prevented. This requires grinding out any stumps or treating them with a California registered herbicide which will prevent any re-growth.

Controlling ACP is critical to controlling HLB. To proceed with a treatment program, the department conducts a site specific realistic evaluation that it may be possible to address the threat posed by ACP using currently available technology in a manner that is recommended by California's HLB Task Force. Treatment needs and environmental conditions are considered in this evaluation. In making a decision to treat, the department evaluates all possible eradication methods. In accordance with integrated pest management principles, the following is a list of the options that are considered for the eradication of any ACP infestation: 1) mechanical controls; 2) biological controls; 3) mass trapping; 4) cultural controls; and 5) the application of pesticides by ground equipment.

Should the department determine it is necessary to treat; the treatment area is reviewed by consulting the Department of Fish and Game's California Natural Diversity Database for threatened or endangered species. Mitigation measures will be implemented as needed. The department also consults with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service when rare and endangered species are located within the treatment area. The department will not apply pesticides to bodies of water or undeveloped areas of native vegetation. All treatments will be applied to residential properties, common areas within residential developments, and other non-commercial properties. The following is the department's general work plan for ACP:

I. Detection Trapping and Visual Survey

The California Department of Food and Agriculture (CDFA) maintains a cooperative state/county trapping program for ACP to provide early detection of any infestation in the county. Traps are serviced by agricultural inspectors. The trap used for ACP detection is the yellow panel trap. The yellow panel trap is a two-sided board coated with stickum. ACP becomes entangled on the sticky capture surface. Yellow panel traps have proven successful at detecting infestations of ACP. Proper deployment enhances catch success.

At all locations where traps are placed, the host plant is visually inspected for ACP (and HLB). If there is evidence that ACP exists, the host will be sweep-netted for ACP samples.

Urban and Rural Residential Detection Survey

1) Yellow Panel Traps
   a) Trap Density: 5 traps/square mile.
   b) Trap Servicing Interval: Every two weeks.
   c) Trap Relocation and Replacement: Traps should be replaced and relocated every six weeks to another host at least 500 feet away if other hosts are available.

2) Visual and Sweep-Net Survey
   a) Trap Sites: Visual surveys and sweep-netting should be conducted once at each trapping site when the trap is placed or relocated at that site.
   b) Detection Survey: Twenty sites per square mile should be visually inspected and sweep-netted each month. These sites should be rotated each month if hosts are available at alternate sites.

II. Delimitation Survey Protocols

The protocols below are to be used upon the detection of a single psyllid.

Urban and Rural Residential Delimitation Survey

Any detection of ACP not associated with a recently arrived nursery or landscaping shipment from an infested area shall trigger a delimitation survey. This survey shall continue for three life cycles past the last psyllid found.

1) Yellow Panel Traps
   a) Trap Density: Up to 100 traps per square mile in the core square mile (0.5 mile radius from detection site), up to 50 traps per square mile in the first buffer (1.5 mile radius from detection site).
   b) Trap Servicing Interval: First week: daily in the core, twice a week in the buffer. Second week and longer: weekly for all traps.
   c) Trap Relocation and Replacement: Traps do not need to be relocated. Traps should be replaced every six weeks or sooner if needed.
   d) Post-Treatment Monitoring: Trap densities will remain at this level for three life cycles past the last psyllid detected.

2) Visual and Sweep-Net Survey

All properties within 400 meters of the initial detection shall be surveyed. Initial surveys should be door-to-door, moving outward in all directions from the original detection site. Additional detection locations shall be used as new epicenters to expand survey boundaries using a 0.25- mile radius.

If high or scattered ACP populations are found in the initial inspections, a transect survey may be implemented to rapidly determine the extent of the infestation. This involves inspecting a minimum of 20 properties per square mile.

III. Treatment

Trigger: Treatment is warranted upon the detection of one or more psyllids.

Treatment Area: Treatments may extend to 800 meters around each detection site. Only host plants are treated.

Treatment Plan: Both foliar and systemic insecticides will be applied. Foliar insecticides are useful for immediate reduction of the adult population in order to eliminate dispersal, while systemic insecticides are necessary to kill the sedentary

nymphs. The frequency of the treatments is dependent on the insecticide applied and severity of the infestation.

1) Foliar Treatment

Tempo® SC Ultra (cyfluthrin), a contact insecticide is used for controlling ACP adults and nymphs. This material will be applied as per label instructions for up to two life cycles beyond the last ACP detected (as determined by a life cycle model driven by accumulated day degrees). Tempo® SC Ultra may be applied to the foliage of all host plants within an 800-meter radius of the detection sites, using hydraulic spray or hand spray equipment. Affected properties will be notified in writing at least 48 hours prior to treatment. Following treatment, completion notices are left with the homeowners detailing precautions to take and post-harvest intervals applicable to any fruit on the property.

2) Soil Treatment

Merit® 2F, an imidacloprid insecticide will be applied to soil beneath the drip line of host plants to control developing nymphs and adult psyllids. This material will be applied a minimum of one time to the soil of host plants at designated residential properties. Affected properties will be notified in writing at least 48 hours prior to treatment. Following treatment, completion notices are left with the homeowners detailing precautions to take and post-harvest intervals applicable to any fruit on the property.

IV. Outreach

Residents of affected properties are invited to a public meeting where officials from CDFA, the California Department of Pesticide Regulation, the Office of Environmental Health Hazard Assessment, and the County Agricultural Commissioner's Office will be present to address residents' questions and concerns. Residents are notified in writing at least 48 hours in advance of any treatment in accordance with Food and Agricultural

Code 5779. After treatment, completion notices are left with the residents detailing precautions to take and post-harvest intervals applicable to the citrus fruit.

Public information concerning the ACP project will consist of press releases to the public and direct notification of project developments to concerned local and State political representatives and authorities. Press releases are prepared by CDFA's information officer and the county agricultural commissioner, in close coordination with the project leader responsible for treatment. Either the county agricultural commissioner or the public information officer serves as the primary contact to the media.

V. Life Cycle Projections

ACP can complete one life cycle in as little as two weeks. The developmental parameters for Florida populations of ACP from egg to adult are a lower threshold of 10.45º C and a degree day accumulation of 249.88 days (Fahrenheit threshold 50.81º F, 449.78 DD) (Liu and Tsai 2000). Liu & Tsai (2000) further reported that ACP failed to complete development at 10° C and 33° C (50º F and 91.4º F).

Project Activities Where HLB has been Detectied

The project area encompasses those portions of Los Angeles County which fall within an approximate one-square mile area around each property in which HLB-infected ACP and/or HLB have been detected. Activities will occur until negative survey data indicates that HLB is no longer present. At a minimum, this will be for a period of at least two years past the date of the last detection of HLB-infected ACP and/or HLB. The two year period is necessary to allow bacteria titers in any undiscovered asymptomatic HLB-infected host plants to build up to a detectable level. In summary form, the treatment plan consists of the following elements:

1. ACP Monitoring. Yellow panel traps will be placed within an 800-meter radius around the detection site(s) to delimit and monitor post-treatment ACP

populations. Traps will be placed at a density of 100 traps per square mile and will be serviced on a regular schedule, generally once every two weeks.

2. ACP and HLB Visual survey. All host plants will be inspected for ACP and for HLB symptoms within an 800-meter radius around the detection site(s), at least twice a year. ACPs and HLB-symptomatic plant tissue will be collected and forwarded to the Department's Plant Pest Diagnostic Center (PPDC) for identification and analysis.

3. HLB Disease testing. All collected symptomatic host tree tissues and ACP life stages will be tested by the PPDC for the presence of HLB.

4. ACP Treatment. All properties within the treatment area will be treated according to the following protocol to control ACP: 1) Tempo® SC Ultra (containing cyfluthrin), a contact insecticide will be applied to the foliage of host plants to control existing ACP adults and nymphs; 2) Merit® 2F or CoreTect® (containing imidacloprid), will be applied to the soil beneath the drip line of host plants to protect the plant from reinfestation. Treatments will be repeated as per label instructions, for a minimum of two years beyond the last HLB-infected ACP and/or HLB detected. Both insecticides will be applied by ground using hydraulic spray equipment.

5. HLB-infected host plant removal. All host plants found to be infected with HLB will be destroyed in order to stop the spread of the disease. Infected host plants will be removed and destroyed using mechanical means. Stumps may be physically removed or may be treated with Roundup® (containing glyphosate) in order to prevent re-sprouting.

Residents of affected properties are invited to a public meeting where officials from the Department, the California Department of Pesticide Regulation, the Office of Environmental Health Hazard Assessment, and the County Agricultural Commissioner's

Office will be present to address residents' questions and concerns. Residents are notified in writing at least 48 hours in advance of any treatment in accordance with FAC Section 5779. After treatment, completion notices are left with the residents detailing precautions to take and post-harvest intervals applicable to the citrus fruit.

Treatment activities were funded by the California Citrus Pest and Disease Prevention Committee. Survey activities are funded by the California Citrus Pest and Disease Prevention Committee and the United States Department of Agriculture.

Background

The California citrus industry has taken a great deal of responsibility in preparing for the introduction and establishment of HLB-associated bacteria and psyllid vectors. Funding has been allocated towards research on easy, early (i.e., pre-clinical) detection methods (i.e., one primer set to detect all strains rather than primer sets specific for each known strain; host systemic responses) and the identification of HLB-associated bacterial strains, and vector relationships. In addition, a public relations firm has been hired to determine the most effective and efficient methods to educate the general public and make them feel as though they are part of the solution. Industry leaders (research and marketing boards) are involved in procuring federal funds for national research programs in the areas of host plant resistance, etiological agents and variants of HLB, specific native and exotic natural enemies of the insect vectors, and pesticide efficacy and new chemistries.

California citrus industry leaders recognized how Florida was at a loss of ample supplies of HLB-free citrus stock when the pathogen was detected in 2005. As a result, plans are underway to expand the screenhouse facility at the UC Lindcove Research and Extension Center that houses the industry's pathogen-free budwood source to allow for the protection of additional varieties. Other alternatives are being considered to protect valuable citrus propagation sources, germplasm, and breeding material such as isolated and/or protected locations and tissue culture. For long-term survey and management, the industry may pursue the formation of pest control districts.

In Florida and countries where HLB exists, insecticides have been a first line of defense to eliminate the psyllid vector, thereby reducing the spread of the HLB-associated pathogens. Applying insecticide sprays at critical flushing periods in order to kill psyllid nymphs may be an effective method of HLB control. In accordance with integrated pest management principles (IPM), the department will evaluate all appropriate mechanical, biological, cultural and treatment control options which may be efficacious to prevent the artificial spread of HLB infested ACP. If a treatment option is chosen, as insecticide use registrations vary between crops and urban areas and between fruit trees and ornamentals, any treatment program will need to be tailored to each situation.

The implementation of biological control methods (the use of beneficial organisms to attack pest populations) will be an important component of an integrated pest management program to reduce populations of the ACP. As there are no known psyllids in California citrus, exotic natural enemies from the pest's area of origin may need to be imported into the United States or from Florida under strict quarantine protocols. There may be some generalist predators such as the coccinellid beetles that will come into citrus from other habitats but to what extent these would be effective is not known at this time. Natural enemies obtained from commercial sources or mass reared by government or industry personnel can be periodically released into field situations once the psyllid becomes established.

Populations of ACP in Florida are fed upon by many generalist arthropod predators such as spiders, lacewings, hover flies or syrphids, and minute pirate bugs, and are attacked by a number of parasites. The coccinellids exert the greatest amount of control. Two lady beetles, *Olla v-nigrum*, which is native to California and *Harmonia axyridis,* are the most important predators of ACP nymphal stages in Florida. *H. axyridis* was imported from Japan to control the pecan aphid and is established in parts of California. Two tiny parasitic wasps have been imported and released in Florida. *Tamarixia radiata* was imported from Taiwan and Vietnam, and *Diaphorencyrtus*

aligarhensis was imported from Taiwan. *Tamaraxia radiata* has already been imported into California and releases of this parasitoid have occurred.

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.

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 constituted a specific act necessary to prevent or mitigate an emergency and is also an action required for the preservation of the environment.

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

The Department of Food and Agriculture has determined that the adoption of Section 3639 does not impose a mandate on local agencies or school districts and no reimbursement is required under Section 17561 of the Government Code. All eradication activities are conducted by the Department.

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 of Section 3639.

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:

The emergency amendment of Section 3639 provides authority for the Department to conduct eradication activities against HLB throughout California and there are no known private sector cost impacts.

Anticipated Benefits from This Regulatory Action

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 adoption of this regulation benefits the citrus industries (nursery and fruit) and the environment by establishing eradication authority enabling the removal of HLB infested host material from the environment. By removing the sources of HLB inoculums it is more biologically feasible to confine HLB's devasting impacts to the smallest area possible.

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 adoption of this regulation is one step to mitigate the spread of HLB through its vector, ACP. This prevents the ACP from naturally spreading ACP and increasing the chances of successfully containing the disease to the smallest area possible.

All eradication activities are conducted by the Department. Except for curry plants, any other host material infected with HLB will die as there is no cure. Homeowners and others will benefit by having this host material removed at no cost to them.

The adoption of this regulation benefits over 99 percent of the citrus industries (nursery and fruit) and the environment by having an eradication program to prevent the natural spread of HLB; thus confining its devasting impacts to the smallest area possible. Almost all of the commercial citrus fruit and nursery stock production is located outside the area known to be infected with HLB.

The California consumers benefit as the fruit from host trees infected with HLB is inedible. Eradicating the existing HLB infestation and the implementation of a statewide program to detect any new HLB infestations in the smallest area possible ensures citrus fruits and other host fruits are available for consumption and at reasonable prices.

The Department is the only agency with the authority to adopt eradication regulations pertaining to plant diseases. The Department is the only agency which can implement plant pest eradication regulations. 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.

Economic Analysis

The current study by the University of Florida IFAS Extension calculated and compared the impact of having and not having HLB present in Florida. Their economic analysis concluded HLB had a total impact of $3.64 billion and eliminated seven percent of the total Florida workforce. It is anticipated that HLB would also have a similar devastating impact in California.

Total Statewide Value of the Host Material in the Environment Affected

Throughout much of California, citrus may be planted in parkways, parks, as street trees, etc. The Department is not aware of any way to estimate the value of host material in the environment.

Total Value of the Damage/Loss of Host Material in the Environment within the HLB Infected Area

The Department does not have a way to assess the potential damage/loss of host material throughout the environment. Most host plants infected with HLB die. To date, only one citrus tree infected with HLB has been removed from a residential property at no cost to the owner. The cost of a replacement tree would be entirely dependent upon the

Host Material on Residential Properties

Citrus and its relatives are the most commonly planted trees on residential properties in southern California with 60 percent of the properties having at least one tree. It is also popular for planting throughout the rest of California where the climate will support it.

Approximate Total Value of Commercial Host Material in the State

Estimated $2.19 billion per year: $2.1 billion for citrus fruit and $28.5 million for citrus nursery stock.

(Reference: John Gilstrap of California Citrus Nursery Board for citrus nursery stock value and *USDA-NASS 2010 data for citrus fruit)*

Per USDA-NASS for 2010, total value of citrus fruit in California: $2,166,395,000

Oranges	$	1,178,778,000	.00
Lemons	$	441,189,000	.00
Tangerines & Mandarins	$	321,012,000	.00
Grapefruit	$	70,786,000	.00
Tangelos	$	5,316,000	.00
Kumquats	$	2,877,000	.00
Limes	$	1,297,000	.00
Citrus, unspecified	$	145,140,000	.00

The actual value is known to be higher than the above as the above does not take into consideration all hosts, just citrus hosts. The Department is not aware of any way to obtain the data for all hosts.

Program's Costs

No State general fund money is being used for this eradication program; it is federally funded and funded by the California Citrus Pest and Disease Prevention Committee. The California Citrus Pest and Disease Prevention Committee is comprised of industry members and they direct the expenditure of the industries funds which are collected through assessments. To date for the known HLB affected area; the California Citrus Pest and Disease Prevention Committee has funded the project by $322,849 and the USDA has funded the project by $286,565.

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

Email dated July 2, 2012, from Debby Tanouye to Stephen Brown and her "Economic Analysis for the Huanglongbing Disease."

Email dated March 30, 2012, from Robert Leavitt to Stephen Brown and its attachments.

Featured Creatures, "Common name: an Asian citrus psyllid parasitoid; Scientific name: *Tamaraxia radiata*," University of Florida Institute of Food and Agricultural Sciences and Florida Department of Agriculture and Consumer Services, printed on March 29, 2012.

Economic Impacts of Citrus Greening (HLB) in Florida, 2006/07-2010/11, University of Florida IFAS Extension.

Federal Register, Vol. 76, No. 81, dated April 27, 2011, Docket No. APHIS-2010-0048, Citrus Canker, Citrus Greening and Asian Citrus Pysllid; Interstate Movement of Regulated Nursery Stock.

“New Pest Response Guidelines, Citrus Greening Disease,” dated June 2, 2008, United States Department of Agriculture, Animal and Plant Health Inspection Service.