Welcome to

PEST EXCLUSION BRANCH

Detection Dog Chelsea

INTRODUCTION

The Pest Exclusion Branch is a part of California's pest prevention system, and has the following overall objective and vision:

Objective and Vision — To serve the citizens of California by preventing the entry and spread of harmful pests and ensuring the availability of high-quality commodities for consumers worldwide.

BRANCH BACKGROUND

The Pest Exclusion Branch is the cornerstone of CDFA's pest prevention system. The Branch is charged with preventing the introduction and spread of damaging and invasive plant pests into California.

The primary responsibilities of the Branch are to keep serious pests out of the State and to prevent or limit the intrastate spread of newly discovered pests. The Branch is responsible for: exclusion of serious agricultural pests, prevention or delay of the spread of serious pests within the State which have become established or which are being subjected to eradication, suppression or intensive control measures; phytosanitary certification of agricultural commodities for export to other states and foreign countries; assuring that nursery stock meets specified standards; registration and certification of avocado, caneberry, citrus, deciduous fruit and nut trees, garlic, grapevine, seed potato, and strawberry plant nursery stock for farm planting; assuring that seed meets labeled statements as to germination and purity, is free from noxious weed seeds, and properly labeled as to seed treatments if treated; assuring that all cotton grown in the San Joaquin Valley meets criteria established in the Joaquin Valley Quality Cotton Act; coordination of the enforcement of the California Desert Native Plants Act; investigations of agricultural commodity smuggling; and education of the traveling public about California plant quarantine laws.

Key Highlights in 2009

- From late August through November, the Interior Pest Exclusion Program, with assistance from border protection station staff, provided emergency quarantine responses to a series of expansions to the Asian citrus psyllid quarantine area covering the entire counties of Los Angeles and Orange, portions of San Bernardino, Riverside and San Diego counties, while simultaneously providing emergency quarantine responses to the Mediterranean fruit fly quarantines in the Escondido and Fallbrook areas of San Diego County.
- The Senate Bill 140 was signed into law thereby providing the Nursery Program with the authority and responsibility for implementing a mandatory citrus nursery stock cleanliness program.

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EXTERIOR PEST EXCLUSION

Since 1923, the California Department of Food and Agriculture (CDFA) has maintained agricultural inspection stations to inspect vehicles and commodities to ensure they are pest free and meet plant quarantine entry requirements. Today, the Exterior Pest Exclusion Program operates 16 inspection stations, known as Border Protection Stations (BPS), on the major highways entering California. These stations play an integral role in CDFA's efforts to exclude exotic invasive species from the State. Personnel at the BPS perform the following functions:

- Enforcement of federal and state plant quarantine laws and regulations.
- Inspection of vehicles and commodities to ensure freedom from exotic invasive species, including animals, weeds and pathogens.
- Taking control of high-risk shipments which cannot be inspected at the border by forwarding them to destination for inspection.
- Collection, analysis, and dissemination of data pertaining to commodity movement, pest interceptions and traffic flow.
- Increasing public and industry awareness about the importance in preventing the movement and spread of exotic invasive species.

Additionally, the program has cooperative relationships to assist with many regulatory agencies and programs within and outside CDFA. A few of these include:

- CDFA — Animal Health Division
- CDFA — Inspection Services Division
- USDA — Animal and Plant Health Inspection Services
- The California Department of Fish and Game
- The California Highway Patrol

Winterhaven Station c. 1927

Winterhaven Station Today

(BORDER PROTECTION STATIONS)

PRIVATE VEHICLE INSPECTIONS

In 2009, 25.6 million private vehicles entered California through the BPS. Of these, 2.4 million were determined to be high-risk and given detailed inspections. From these vehicles, 73,873 lots of plant material were rejected because they were either in violation of plant quarantine regulations or infested with pests. Inspection of rejected materials yielded 7,244 pest samples submitted for identification; of these, 2,368—an increase of 35 percent compared to 2008—were determined to be pests of concern to California.

Private Vehicle Interception Highlights

Chili Thrips

Chili Thrips: Chili Thrips is an invasive insect originally from Asia and recently introduced into the southeastern United States. It can infest and severely damage over 150 different plant species including asparagus, citrus, figs, grapes, strawberries and tomatoes. This pest was intercepted on guava fruit from Texas in a private vehicle at the Needles Inspection Station.

Invasive Weeds: Thirty-two (32) different species of invasive weeds of limited distribution or not known to occur in California were intercepted from private vehicles on 77 separate occasions—representing a 57 percent increase over the 2008 total. Species included: Diffuse knapweed, spotted knapweed, Scotch thistle, musk thistle, halogeton and Mediterranean sage.

In one instance, during a routing automobile inspection, several bags of aquatic plant material were detected. The interception included four species of invasive aquatic weeds (water lettuce, duckweed, eel grass and water milfoil). They were being transported from Texas by a hobbyist to plant in his backyard pond in southern California.

Also of note were four interceptions of meadow knapweed (*Centaurea monktonii*). This invasive weed has outcompeted native species in several areas of the Pacific Northwest, overgrowing acres of forest and ranchland. These finds were all made at the Redwood Highway station in small shipments of hay with livestock from southern Oregon. These interceptions mark the first occurrences of this weed being intercepted at a border protection station.

Meadow knapweed growing in a southern Oregon field

EXTERIOR PEST EXCLUSION

Cereal Leaf Beetle

Cereal Leaf Beetle: Cereal leaf beetle (Oulema melanopus), a serious pest of grain, was intercepted from plants being transported in private vehicles three times in 2009. These interceptions marked the first occurrences of cereal leaf beetle being intercepted from private vehicles at a border protection station. The specimen shown here was found at the Hornbook Station on ornamental grass plants being transported to Stockton along with personal belongings in a U-Haul.

Wood-Boring Pests: In cooperation with the U.S. Forest Service and the California Department of Forestry, special training on firewood inspection techniques was provided to BPS staff in order to improve their ability to detect wood-boring insects. Invasive wood-boring pests like the Emerald Ash Borer and the Asian Longhorn Beetle can kill or severely injure many types of native tree species and valuable landscape tree species. As a result of the special training, wood-boring pests were intercepted 143 times from firewood transported in private vehicles. This number included: 83 longhorned beetles (family: Cerambycidae); 49 metallic wood-boring beetles (family: Buprestidae); 10 bark beetles (family: Scolytidae); and one horn-tailed wasp (family: Siricidae).

An inspector at the Truckee Station splits firewood to check for insects.

Longhorned beetle larva found in ash firewood from Maine.

The longhorned beetle larvae pictured here were found burrowing inside ash wood from Maine inside a U-Haul trailer at the Truckee Station. The owner was moving to Placerville and had "thrown a few pieces of firewood in because he had extra room on the trailer."

(BORDER PROTECTION STATIONS)

In another instance, over 100 pounds of mesquite wood from Texas was being transported in a pickup to San Bernardino through the Needles Station. Inspection revealed eight different species of insects, including longhorned and metallic wood-boring beetles.

Summary of Actionable Pests Intercepted from Private Vehicles in 2009

Type	Occurrences
Homoptera (scales, mealybugs, leafhoppers, whiteflies), including: Magnolia white scale, citrus snow scale, wax scale, palm mealybug, etc.	857
Diptera (flies), including: Walnut husk maggot, cherry fruit fly, apple maggot, etc.	298
Coleoptera (beetles), including: Japanese beetle, cereal leaf beetle, pecan weevil, long-horned beetles, etc.	255
Mollusks (snails and mussels), including: Quagga mussel, zebra mussel, false dark mussel, bradybaena snail, etc.	253
Animals, including: Ferrets, gerbils, quaker parrots, etc.	168
Hymenoptera (ants), including: Imported fire ant, white-footed ant, Florida carpenter ant, etc.	149
Lepidoptera (moths), including: Gypsy moth, European corn borer, hickory shuckworm, false codling moth etc.	78
Thysanoptera (thrips), including: Chili thrip, eastern flower thrip, etc.	78
Weeds, including: Russian knapweed, diffuse knapweed, Canada thistle, Scotch thistle, hoarycress, etc.	77
Hemiptera (bugs), including: Chinch bug, cotton stainer, etc.	47
Other Insects and mites	113
Total	**2,368**

COMMERCIAL VEHICLE (TRUCK) INSPECTIONS

Commercial Vehicle Inspections

In 2009, 7.38 million commercial trucks entered California through the BPS. Of these, 553,439 were determined to be high-risk and were given detailed inspections, 3,054 were rejected because they were either in violation of plant quarantine regulations or infested with pests, and 25,548 were forwarded to destination for more detailed inspection by county agricultural commissioners' staff.

EXTERIOR PEST EXCLUSION

Commercial Shipment Dispositions by Commodity Type			
Commodity	Inspected and Released	Sent to Destination Under Hold Notice	Rejected Because of Pests or Lack of Certification
Produce (fresh fruits and vegetables)	384,896	82	1,819
Nursery Stock	9,060	10,238	644
Other Plant Material (cut greens, Christmas trees, etc.)	63,992	315	751
Seed	2,819	8,728	54
Feed Grain	4,464	31	16
Hay	56,853	3	79
Apiary (bee colonies)	844	3,021	129
Household Goods	37,956	2,840	137
Total	560,884	25,258	3,629

Commercial Produce Regulatory Sampling

To verify that fruits and vegetables subject to state and federal quarantines have been properly treated for exotic fruit flies and other pests, commercial shipments of many commodities including citrus, mangos, and cherries are randomly inspected to ensure they are free of pests. In 2009, 44,251 lots were sampled. Of these, only one shipment (a shipment of cherries from Utah infested with cherry fruit fly, *Rhagoletis indifferens*) was found to be infested. Random verification inspections by the BPS provide a deterrent to commercial smuggling and help ensure that required quarantine treatments are properly conducted in other states and countries.

Commercial citrus fruit being sampled at the Blythe Station

Inspecting a truckload of spruce trees at the Hornbrook Station.

(BORDER PROTECTION STATIONS)

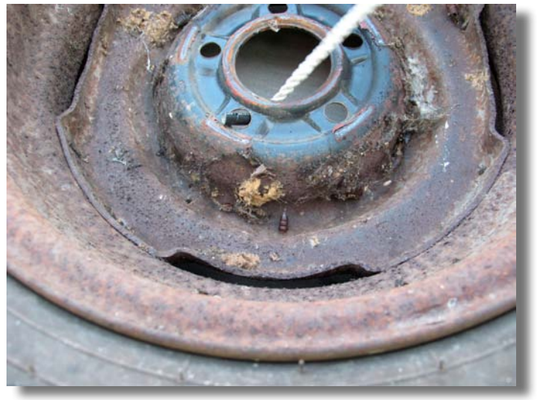
Pest Interception from Commercial Shipments

All commercial shipments of plant material and conveyances, even those not subject to state and federal quarantines, are inspected to ensure that they are not infested with pests. During the course of inspecting commercial shipments, 1,024 pests were intercepted. Each of these detections resulted in the rejection of the shipment or conveyance until the infestation was eliminated (i.e., fumigation, cleaning, etc.). The table below illustrates the interceptions by type of pest.

Commercial Vehicle Pest Interception Highlights

Gypsy Moth: During an inspection for aquatic pests, gypsy moth egg masses were found on the spare tires of a boat trailer hauling a 40' sailboat from Massachusetts at the Needles Station. The tires were pressure washed and released.

An inspector uses a creeper to check the underside of the trailer



Gypsy moth eggs and pupae on trailer wheel

Sweet Potato Weevil: The Blythe station intercepted a shipment of 50 cartons boniatos (sweet potatoes) from Florida destined to the Los Angeles Produce Market. Inspection revealed that the shipment was heavily infested with eggs, larvae, pupae and adult sweet potato weevil (*Cylas formicarius*). The shipment was returned to origin.

Adult Sweet Potato Weevil

EXTERIOR PEST EXCLUSION

Perennial Sow Thistle Seeds

Weeds on unusual hosts: Typically invasive weeds are found in commercial shipments of hay or grain; however, occasionally they are found by alert inspectors on machinery, in bee colonies, and on farm equipment. For example, inspectors at the Needles Station found perennial sow thistle (Sonchus arvensis) on an open-aired pump hauled on a flatbed trailer from Quebec, Canada, destined to Los Angeles. The pump was released after the weed contamination was released.

Summary of Actionable Pests Intercepted from Commercial Vehicles in 2009	
Type	Occurrences
Homoptera (scales/mealybugs), including: Lesser snow scale, magnolia white scale, palm whitefly, striped mealybug, etc.	511
Hymenoptera (ants), including: Imported fire ant, white-footed ant, Florida carpenter ant, etc.	117
Weeds, including: Musk thistle, Scotch thistle, diffuse knapweed, spotted knapweed, etc.	126
Coleoptera (beetles), including: Japanese beetle, May beetle, long-horned beetles, etc.	67
Lepidoptera (moths), including: Gypsy moth, false codling moth, hickory shuckworm, pickleworm, etc.	50
Mollusks (snails and mussels), including: Quagga mussel, zebra mussel, banded wood snail, bradybaena snail, etc.	22
Thysanoptera (Thrips), including: Chili thrip, cotton bud thrip, eastern flower thrip, etc.	19
Hemiptera (bugs), including: Brown marmorated stinkbug, chinch bug, etc.	13
Diptera (flies), including: Mexican fruit fly, cherry fruit fly, etc.	20
Other Insects and mites	79
Total	1,024

INTRA- AND INTER-AGENCY COOPERATIVE ACTIVITIES

Quagga/Zebra Mussel Inspections

The BPS continued to play a key role in the multi-agency effort to prevent the introduction of quagga and zebra mussels into California through the transport of infested watercraft. To prevent the introduction of invasive mussels, the BPS staff inspect the exterior surfaces (i.e. hull, motor, trailer) of watercraft for adult mussels and ensure that the watercraft is free of standing water that can harbor the microscopic larval form of these pests.

(BORDER PROTECTION STATIONS)

Quagga Mussels clinging to weed debris found on boat trailer at Vidal Station

The BPS inspected 159,581 watercraft. Of these, 9,245 (about 5.8 percent) either had adult mussels clinging to the exterior surfaces or were carrying standing water. All boats with standing water were drained at the stations; those with adult mussels were cleaned at the station and sent on to destination under quarantine restriction for additional, more detailed inspection by California Department of Fish and Game (CDFG) staff.

Board of Equalization Use Tax Collection Pilot Program

In conjunction with the Board of Equalization (BOE), a program to assess the level of use tax compliance is being conducted at the Needles BPS. This program began in July 2006 and has been extended through July 2010. Needles BPS personnel have been trained to identify and collect information on commercial shipments of commodities that are subject to the use tax. Information on these shipments is provided to BOE in order to determine if appropriate taxes have been paid. In the 2009/10 fiscal year, this program is projected to collect $8.9 million use tax and penalties that otherwise might not have been recovered.

Game Importation Declarations

Under provisions of the California Fish and Game Code, everyone entering California with fish or game from other states are required to complete a game declaration form. The information from the forms helps the CDFG to identify potential violations of hunting and fishing laws and regulations, including a regulation to prevent the spread of chronic wasting disease. This disease is closely related to mad cow disease and affects and kills deer and elk in several other states. To assist the CDFG, the BPS inform people entering the state with fish and game about the law, provide them the form and remit the completed forms to CDFG. BPS staff remitted 63,406 game declaration forms to the CDFG.

An inspector assists a hunter with a game declaration at the Dorris Station

Livestock Tracking

To assist CDFA's Animal Health Branch in tracking animal ownership and disease outbreaks, BPS recorded all shipments of livestock entering California. 40,291 shipments were recorded.

Market Egg Shipments

To assist the Egg Quality Control Program in ensuring quality standards are met and appropriate mill fees are paid, BPS record all shipments of market eggs entering from other states. 12,712 shipments were recorded.

INTERIOR PEST EXCLUSION

The Interior Pest Exclusion Program serves the citizens of California by working toward two goals:

- Preventing the introduction and spread of harmful and invasive plant pests
- Promoting market access for California agricultural products

Pest Prevention

Harmful and invasive exotic pests threaten California's agricultural industry. Pests can directly damage crops by stunting growth, diminishing quality or invading croplands and irrigation systems. Pests can indirectly affect crops by causing unsightly damages that reduce marketability or by restricting exports to countries that impose quarantines on areas where pests are established. To protect California's agricultural interests from these and other consequences of non-native plant pests, the Interior Pest Exclusion Program works within the pest prevention system to reduce the risk of pests entering the State on infested commodities and to prevent pests that have entered the State from becoming established.

The pest prevention system relies on a combination of strategies to protect agricultural commodities from damaging or invasive species. Two strategies employed by the Interior Pest Exclusion Program, pest prevention and pest containment, are the cornerstones of the pest prevention system. First, the Program prevents the entry of pests on commercial or private shipments of goods by conducting inspections on incoming shipments, enforcing state and federal regulations that pertain to incoming shipments and working with agricultural agencies to enhance origin inspections to achieve pest-free shipments. Secondly, the Program takes immediate action to contain the spread of newly-introduced pests by enforcing regulations that restrict shipments from areas that are newly infested with pests.

Functions of the Interior Pest Exclusion Program are carried out in cooperation with the county agricultural commissioners, the United States Department of Agriculture (USDA) and other state agricultural agencies. The Program works with other state agencies such as the California Departments of Fish and Game, Forestry and Fire Protection, Public Health and Pesticide Regulation to share knowledge and help enforce regulations.

Promoting Exports

To promote California agricultural commodities in foreign and domestic markets, the Interior Pest Exclusion Program maintains a close working relationship with the USDA to facilitate the export of California's products worldwide. Examples of the Program activities that promote California exports include providing up-to-date pest lists requested by interested trade partners and enforcing regulations that limit the spread of newly-infested pests within the state. By restricting shipments from areas of the state known to be infested with pests, non-infested areas are protected from the effects of quarantines imposed by trade partners, thus ensuring continued access to California-produced commodities in the world-wide marketplace.

Interior Pest Exclusion Program Activities Include:

- Quarantine Response
  - Emergency response to a pest infestation
  - Quarantine response to a pest incident
- Quarantine Training, Direction, Oversight and Consultation
- Quarantine Enforcement
- Trade Facilitation
- Commodity Treatment Coordination and Consultation
- Data Collection and Information Management

Following are highlights for 2009:

QUARANTINE RESPONSE

Emergency Response to a Pest Infestation

When a reproductive population of a pest is discovered in California, an infestation is declared. The Interior Pest Exclusion Program responds by enacting emergency pest abatement and control measures to contain the infestation and determine effective commodity host treatments that facilitate movement to market. If the pest is a federal action pest, emergency regulatory responses are coordinated with the USDA. In 2009, emergency responses were conducted for infestations of Asian citrus psyllid, European gypsy moth, Mediterranean fruit fly, Mexican fruit fly, Oriental fruit fly, Mexican fruit fly, white striped fruit fly and sudden oak death.

Asian Citrus Psyllid

Asian citrus psyllid (ACP) is a serious pest of great concern. ACP vectors the disease commonly known as Huanglongbing (HLB), which causes the decline and eventual death of plants that become infected. HLB infects plants in the family *Rutaceae*, including all citrus and several types of ornamental plants.

Asian citrus psyllid was first discovered in California in San Diego County on August 27, 2008, on a yellow panel trap placed in South Bay Terraces, a small community 11 miles north of the Mexican border. A state interior quarantine was declared on September 5, 2008. In October 2008, a portion of Imperial County was declared quarantined but, due to additional new ACP finds in Imperial County and also in the adjoining state of Arizona, the entire Imperial County was placed under ACP quarantine on November 11, 2009.

Because of new finds, the entire counties of Orange and Los Angeles were declared quarantined in August and September 2009, respectively. Further, additional finds of ACP in Pomona in Los Angeles County resulted in encompassing portions of San Bernardino and northwest Riverside County. No ACP was detected in San Bernardino and Riverside counties in 2009.

By the end of 2009, a total of 15,937 square miles was included in the quarantined area in Imperial, San Diego, Orange, Los Angeles, San Bernardino and Riverside counties (see Table 1).

INTERIOR PEST EXCLUSION

Table 1: Asian Citrus Psyllid Quarantine in California in 2009	
County	Quarantine Area (Square Miles)
Imperial**	4,484
Los Angeles**	4,098
San Diego*	3,702
Riverside*	2,205
Orange**	800
San Bernardino*	648
Total	15,937

*Partial county under quarantine

**Entire county under quarantine

The ACP regulation prohibits the movement of ACP host nursery stock (citrus and citrus-related plants) from the ACP quarantined area, and allows movement within the quarantined area only if properly treated for ACP. A total of 809 production nurseries regularly treat and transport treated citrus nursery stock into or within the ACP quarantined area.

Citrus fruit is not regulated by the ACP quarantine, but growers and harvesters of citrus fruit must ensure that harvested fruit and all bins and equipment used to transport citrus fruit is free of all plant parts (stems and leaves) prior to leaving the quarantined area.

By the end of 2009, a total of 4,470 nurseries, growers, harvesters and haulers of citrus fruit and handlers of green waste were identified in the ACP quarantined area and were issued compliance agreements to aid in the enforcement of the quarantine requirements (See Table 2).

Adult ACP
Photo Citation: DavidHall, USDA, AgResearchService, bugwood.org

Table 2: Number of Businesses Regulated for Asian Citrus Psyllid in 2009		
Counties	Regulated Business	Count
San Diego, Imperial, Riverside, San Bernardino, Orange and Los Angeles	Production Nurseries	809
	Growers	376
	Cut Flowers/Cut Greens	420
	Yard Maintenance	892
	Certified Farmers' Market Vendors	1,833
	Harvester	36
	Packer	45
	Processor	2
	Hauler	57
	Total	4,470

European Gypsy Moth

Adult GM male (left) and female (right)

In between the summer and fall of 2008, seven adult European gypsy moths (GM) several egg masses and larval cast skins were discovered in Ojai, Ventura County. The infestation was linked to a recreational vehicle that originated in and entered the State the previous year.

On October 28, 2008, a GM state interior quarantine was established in the Ojai area of Ventura County and continues through 2009. The quarantine covers approximately five square miles. All hosts and possible carriers of gypsy moths (i.e., recreational vehicles, trailers, outdoor household articles, firewood) within the quarantine area must be inspected and certified free of GM life stages prior to leaving any property inside the quarantine area. A total of 36 businesses are affected by this quarantine, including landscaping and tree service companies; green waste transporters; receivers and processors of green waste; lumber storage and transportation companies; nurseries; feed stores; and recreational and commercial equipment rental and storage facilities. The quarantine area is expected to remain in effect until the fall of 2010.

INTERIOR PEST EXCLUSION

Oriental Fruit Fly, Lakewood, Los Angeles/Orange Counties

Oriental Fruit Fly

An Oriental fruit fly state interior quarantine was initiated in August 2008 in Los Angeles and Orange counties after the detection of eight adult flies in the vicinity. The 109 square mile quarantine included the areas of Lakewood, Long Beach, Paramount, Carson, Bellflower, Dominguez Hills, Compton, Norwalk, Cerritos, Rancho Dominguez, Hawaiian Garden, Lynwood, Artesia, Southgate, Signal Hills, Downey, Cypress, La Palma, Seal Beach and Los Alamitos. The quarantined area is primarily an urban area.

Many businesses in the region were affected by the quarantine, including growers, produce markets, wholesale produce distributors, swap meets, certified farmers' markets, nurseries, landscaping companies and others. The quarantine also applied to residents, who were asked not to move any fruits, vegetables or other host material from the area.

Interior Pest Exclusion staff issued 548 compliance agreements to affected businesses. A total of 4,218 pounds of potentially infested host material was seized and destroyed. Project staff supervised 42 pre-harvest bait treatments for cucumbers. The quarantine concluded in June 2009.

Oriental Fruit Fly, La Verne, Los Angeles County

An Oriental fruit fly quarantine was initiated on August 5, 2009, after having confirmed an incipient infestation of the fly in the La Verne area of Los Angeles County. The 84 square mile quarantine includes the areas of La Verne, Glendora, Pomona, Claremont, West Covina, Covina, Walnut and San Dimas. The quarantined area is primarily an urban area mostly residential and commercial.

Project staff has issued a total of 142 compliance agreements to affected businesses which include nurseries, certified farmers' markets, community gardens, yard maintenance gardeners, produce markets, growers, packers and haulers. The quarantine also applies to residents who are asked not to move any Oriental fruit fly host material from the area. The quarantined area is expected to remain in effect until April 2010.

Mediterranean Fruit Fly, El Cajon/Spring Valley, San Diego County

A state interior quarantine for the Mediterranean fruit fly (MDFF) was established in El Cajon on November 26, 2008, after the detection of multiple adults and larva. The initial quarantine encompassed 107 square miles and after additional detections, was expanded to 139 square miles on December 19, 2008. Quarantine areas included portions of Lakeside, Spring Valley and Alpine.

Mediterranean Fruit Fly

In 2009, an additional detection on February 5, 2009, expanded the quarantine further into Spring Valley increasing the quarantine to 198 square miles. An additional fly was found on May 7, 2009, which did not increase the quarantined area. Sterile MDFFs were released each week for two life cycles around each find site to aide in eradication.

Interior Pest Exclusion and project staff issued 317 compliance agreements to nurseries, swap meets, a food bank, certified farmers' markets, yard maintenance companies and fruit sellers. The quarantined area included a 500-acre avocado grove and several small groves of various commodities.

On July 14, 2009, the El Cajon portion of the quarantine was declared eradicated. The remainder of the quarantine, 93 square miles with 186 regulated establishments, was renamed the Spring Valley Mediterranean Fruit Fly Project. This quarantine was declared eradicated on August 23, 2009.

Mediterranean Fruit Fly, Escondido, San Diego County

In September 2009, a MDFF quarantine was established in the Escondido area of San Diego County. Additional fly finds and larval detection in November expanded the quarantined area from 77 to 148 square miles. Project staff have issued 259 compliance agreements and conducted 1,510 inspections of regulated entities, including growers, harvesters, fruit haulers, fruit processors, fruit packers, produce markets, nurseries and yard maintenance gardeners. A total of 354 hold notices were issued to commercial and back yard growers of MDFF host material. Fifty-five growers entered into a pre-harvest bait treatment program. Project staff supervised 216 bait treatments for avocados, cherimoyas, citrus, guavas and persimmons. Over 10,000 pounds of potentially infested host material has been seized and destroyed. Quarantine enforcement activities will continue into 2010.

Mediterranean Fruit Fly, Fallbrook, San Diego County

In late October 2009, two wild male MDFFs were trapped in the Fallbrook/Bonsall area of San Diego County. Two additional flies and 68 larvae were also found. A 79 square mile quarantine was enacted which is in close proximity to the Escondido MDFF quarantine. Both quarantine projects are based in one office and managed with the same staff. Project staff have issued 197 compliance agreements and conducted 839 inspections of regulated entities, including growers, harvesters, fruit haulers, fruit processors, fruit packers, produce markets, nurseries and yard maintenance gardeners. There were also 262 hold notices issued to commercial and back yard growers of MDFF host material. Eighty growers have entered into a pre-harvest bait treatment

INTERIOR PEST EXCLUSION

program for commodities such as avocados, cherimoyas, citrus, guavas and persimmons. A total of 349 pre-harvest bait treatments have been supervised by project staff. Approximately 3,500 pounds of host material has been seized and destroyed due to non-compliance with the quarantine rules and regulations. Quarantine enforcement activities will continue into 2010.

Mediterranean Fruit Fly, Santa Monica, Los Angeles County

In October 2009, three sexually mature females of MDFFs were detected in the Santa Monica area, Los Angeles County. As a result, on November 16, 2009, the Santa Monica MDFF quarantine was declared. The quarantine area is 65 square miles in a primarily urban area. Interior Pest Exclusion and project staff have issued 400 compliance agreements to nurseries, certified farmers' markets, swap meets, food banks and fruit sellers. A total of 130 pounds of potentially infested host material has been seized and destroyed.

Sterile MDFFs are dropped weekly for two life cycles around each find site to aide in eradication. The quarantine is scheduled to end in August 2010.

Mediterranean Fruit Fly, Mira Mesa, San Diego County

On June 1, 2009, a MDFF quarantine was established in Mira Mesa, in the county of San Diego. The quarantine covered approximately 106 square miles in an urban area. Project staff issued 17 Hold Notices, 85 Compliance Agreements to businesses such as produce markets, food banks, a certified farmers' market and nurseries. There were no commercial growers inside the quarantine. No host materials were seized and no Notices of Violation were issued. The quarantine concluded on October 24, 2009.

Nursery stock on hold at a nursery in the quarantine area.

Mediterranean Fruit Fly, Imperial Beach, San Diego County

A state interior quarantine for the MDFF was established in Imperial Beach on August 7, 2009, after the detection of a mated female fly. The quarantine encompassed 37 square miles and included portions of Chula Vista, San Diego and National City.

Interior Pest Exclusion and project staff issued 100 compliance agreements to nurseries, swap meets, a certified farmers' market, yard maintenance companies, fruit sellers/distributors and two small growers. Sterile MDFFs were released each week for two life cycles around the find site to aide in eradication. The quarantine was declared eradicated on January 6, 2010.

Mexican Fruit Fly, Azusa, Los Angeles County

In July 2009, a Mexican fruit fly quarantine, which had been in place since December 2008, was lifted in Azusa, Los Angeles County. The 70 square mile quarantine included the areas of Azusa, Baldwin Park, Irwindale, Covina, West Covina, Duarte, Monrovia, Glendora, La Puente, El Monte, San Dimas and Bradbury. The quarantine area was primarily urban. About 300 businesses were affected and were operating under compliance agreements. Hold notices were issued to four find sites in the area. The avocado growers within the quarantine area harvested Hass avocados and moved them under Limited Permit in accordance with USDA Requirements for Packing Hass Avocados Grown Inside the Quarantine Area. A new Hass Release Protocol was enacted on November 8, 2007, allowing Hass growers to pick their crop without treatment if they followed sanitation and safeguarding requirements.

The quarantine also applied to residents who were asked not to move any fruits, vegetables or other host material from the area.

The quarantine was lifted after three life cycles of the Mexican fruit fly were completed with no new detections.

White Striped Fruit Fly, Los Angeles/San Bernardino Counties

This is the first time that white striped fruit fly (*Bactrocera albistrigata*) has been detected in the U.S. The white striped fruit fly is a known destructive insect pest of several hosts including guavas and mangos. The white striped fruit fly quarantine was established in August 2009 in Los Angeles and San Bernardino counties after the detection of multiple adult white striped fruit flies in the La Verne and San Dimas area of Los Angeles County. The 81 square mile quarantine area included the cities of Laverne, San Dimas, Claremont, Glendora and Pomona of Los Angeles County and a portion of the city of Upland in San Bernardino County.

White Striped Fruit Fly

The quarantined area was primarily residential. There was no commercial production of host plants. Over 72 businesses were affected and included certified farmers' markets, produce markets, fruit sellers, nurseries, landscaping companies and yard maintenance gardeners. Residents of the area were asked not to move fruits, vegetables or other host material from the area. All quarantine activities will be concluded in January 2010.

INTERIOR PEST EXCLUSION

Sudden Oak Death (*Phytophthora ramorum*)

Interior Pest Exclusion has a lead role in administering the Cooperative *Phytophthora ramorum* Quarantine Project. The project is a cooperative effort between state, federal and county agencies for the purpose of enforcing state and federal regulations for *P. ramorum*, the causal agent of sudden oak death (SOD). Interior Pest Exclusion oversees the compliance agreements for the regulated establishments in both quarantine counties (where the pathogen is known to occur in the environment) and in regulated counties, which includes all other counties in the State. Listed below are the types of compliance agreements that were issued and/or monitored in 2009.

Number of Businesses Regulated for P. ramorum in 2009

Counties	Regulated Business	Count
Quarantined	Nursery Stock/Soil of Nursery Stock	263
	Wood and Wood Products	30
	Greenery, Garland and Wreaths	13
	Green Waste Facility/Transporter	155
	Compost Facility	15
	Tree Farm	14
Regulated	Nurseries that ship host material	446
	Nurseries that only ship non-host material	694
Total		1,630

As a component of the enforcement of the *P. ramorum* state and federal quarantines, nurseries are surveyed annually and samples are collected to test for the presence of *P. ramorum*. Surveys are also conducted at source nurseries (trace back) or destination nurseries (trace forward) as part of the investigation process when *P. ramorum* is detected. In 2009, a total of 1,403 nurseries were surveyed and the pathogen was detected at four of the surveyed nurseries (see table below).

Interior Pest Exclusion Activities at Nurseries Where P. ramorum was Detected

Survey	Quarantined Counties	Regulated Counties	Total
Compliance Agreement	2	2	4
Nursery Stock Cleanliness	0	0	0
Trace Forward	0	0	0
Other/Trace Back	0	0	0
Total	2	2	4

Following the detection of *P. ramorum* in a nursery, eradication is initiated by implementing the Federal (United States Department of Agriculture, Animal and Plant Health Inspection Service) Confirmed Nursery Protocol for *P. ramorum*, including the issuance of quarantine hold, delimitation survey, trace forward and trace back investigations and destruction of infected plant(s).

During 2009, over 17,917 samples were collected from nurseries and tested for *P. ramorum* at CDFA's Plant Pest Diagnostics Laboratory. *P. ramorum* was detected in less than one percent (or 17) of the samples. Approximately 29 percent of the detections in nursery samples were taken from three plant types; *Camellia spp.*, *Rhododendron spp.* and *Pieris spp.* Other *P. ramorum*-positive nursery stock included species of the genera *Arbutus, Camphora, Laurus, Leucothoe, Loropetalum, Magnolia* and *Sequoia*.

In July 2009, the United States Department of Agriculture scheduled a *P. ramorum* Program Review in California to ensure that all participating nurseries maintained compliance with the federal regulations. A tour of nurseries in California that ship *P. ramorum* host plants interstate was organized by the Interior Program, and the Interior Program staff provided an overview of the regulatory program, including the inspection and sampling methods, ongoing monitoring methods and actions undertaken if *P. ramorum* is found in a nursery setting.

In August 2009, at the request of the Southern Plant Board, a second tour of nurseries that ship. *P. ramorum* host material interstate was organized by the Interior Program. The purpose of this tour was to provide transparency in the *P. ramorum* regulatory program in California to the Southern Plant Board members. Interior Pest Exclusion Program staff provided an overview of the regulatory program, including the inspection and sampling methods, ongoing monitoring methods and actions undertaken if *P. ramorum* is found in a nursery setting.

Quarantine Response to a Pest Incident

Throughout California, pests may be detected but do not qualify as a trigger for establishing a quarantine. It is essential for such pest incidents to receive immediate quarantine response to prevent the establishment of an infestation. In 2009, quarantine responses were conducted for pest detections of branched broomrape, a Q-rated cerambycid, gladiolus rust, gypsy moth, Oriental fruit fly, guava fruit fly, Mexican fruit fly, peach fruit fly and panicle rice mite.

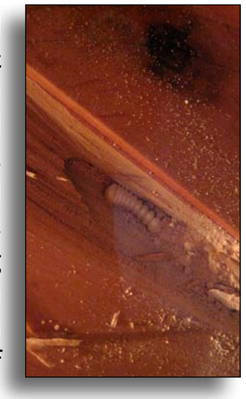
INTERIOR PEST EXCLUSION

Branched Broomrape –Orobanche ramose

Broomrape attacks tomatoes, lettuce, safflower and other crops as well as native plants and weeds. It is a plant parasitic weed and can severely reduce yields. This parasitic weed is listed as a Federal and State Noxious Weed and thus must be eradicated.

On September 4, 2009, CDFA was notified of a possible branched broomrape find in Hollister, California by San Benito County Agricultural Department (County). CDFA notified USDA immediately of this potential noxious weed. The following week, the County and CDFA conducted a delimitation survey on the 871-acre tomato ranch. A plant sample was sent to the CDFA Lab for identification and was confirmed positive for branched broomrape on September 14, 2009. The initial delimitation survey concluded that the infestation was limited to approximately 42 acres in two blocks. After establishing a buffer zone around the infested area, the quarantine area increased to 67 acres and Federal and State Hold Notices were issued to the farming company. On October 6, 2009, USDA, County and CDFA staff conducted a pre-harvest survey of the entire ranch and the farming company was allowed to harvest and ship tomatoes from the portions of the ranch that were outside the quarantined area. Harvest concluded on November 3, 2009, the field was turned over and seed beds were prepared for next season. The equipment that was used in the quarantined area was cleaned and inspected by the County before it was allowed to move out of the area. The USDA is still evaluating long term eradication and control methods for the quarantined area due to the biology (longevity) of this weed seed.

Q–Rated Cerambycid Detection in Alderwood Flooring in San Francisco



On September 21, 2009, CDFA and San Francisco County biologists visited a residence in San Francisco, responding to the homeowner's request for an inspection of alderwood flooring in their kitchen for possible woodborer infestation. Biologists quickly located several exit holes and dug out one live and one dead cerambycid larvae. A Hold Notice was issued and specimens were submitted to the lab resulting in Q-rated cerambycid, possibly Asian long-horned beetle (ALB). Suspicion for ALB was supported by the fact that the wood originated from China. The flooring was sold about a year prior to our inspection by a flooring company in San Francisco that imports flooring from China as well as from other foreign countries. Inspection at this facility was scheduled with participation of state, county and federal agencies. The original alderwood shipment from China had all been sold out and no other customers have reported any problems. Biologists conducted a second inspection at the homeowner's residence to try to find adults to get a proper identification. No adults were found but nine more live larvae were found. A Rejection Notice was issued and the flooring company agreed to remove the flooring and pay for the proper disposal. The removal was performed under CDFA supervision and compromised wood was disposed of following an approved disposal method. Traps have been placed at both the house and at the warehouse of the flooring company and these are now monitored. Surveys around the property are planned. So far the homeowners have reported no further problems.

Gladiolus Rust

Gladiolus rust was found for the first time at a commercial nursery in Santa Cruz County. This rust is caused by a fungus, *Uromyces transversalis*, and it attacks only members of the family Iridaceae. A county inspector first noticed infested gladiolas flowers at the farmers' market and then traced back the gladiolas to a commercial producer. This producer grows various cut flowers as well as fruits and vegetables for local farmers' markets. Santa Cruz County issued a Hold Notice and USDA and County inspectors initiated eradication activities at the producer's site. Two rows of gladiolas (400 feet) were pulled. Subsequently the rows were disked and an estimated 35 pounds of bulbs were collected and together with previously collected bulbs were properly disposed of in a landfill under county supervision. The producer agreed to remain host free for one year. Additionally, a residential survey will be conducted in a one-mile radius around this nursery.

The USDA continues to conduct residential surveys in Bay Area counties.

Gypsy Moth

A Gypsy moth was trapped in the city of Los Gatos in Santa Clara County. A Hold Notice was issued to the property where the moth was trapped and to the adjacent properties in order to stop the movement of potentially infested commodities. Program staff surveyed the area for host material and businesses that would be affected if a quarantine were to be established. Fortunately, the number of moths detected did not trigger a quarantine in this area.

INTERIOR PEST EXCLUSION

Oriental Fruit Fly and Guava Fruit Fly - Los Angeles, Orange, Riverside, San Bernardino, Santa Clara, Sacramento, San Mateo and Ventura Counties

During 2009, Oriental fruit flies were trapped in the cities of: Monrovia, Long Beach, Los Angeles, Santa Clarita, La Verne, Norwalk, Reseda and Temple City of Los Angeles County; Santa Ana and Laguna Niguel of Orange County; Corona of Riverside County; Chino Hills and Rancho Cucamonga of San Bernardino County; Ventura; Santa Clara of Santa Clara County; and Sacramento of Sacramento County.

During 2009, guava fruit flies were trapped in the cities of: Long Beach, Carson, Agoura Hills, Calabasas, El Monte and Bell of Los Angeles County; Santa Ana and Garden Grove of Orange County; Thousand Oaks of Ventura County; and San Mateo of San Mateo County. Hold notices were issued to fly-find properties to stop the movement of potentially infested commodities. Staff surveyed the areas for host material and potentially affected businesses. Fortunately, the number of flies detected in these areas did not trigger quarantines.

Mexican Fruit Fly

A Mexican fruit fly was trapped in the city of Sacramento in Sacramento County. A Hold Notice was issued to the property where the fly was trapped and to the adjacent properties in order to stop the movement of potentially infested commodities. Program staff surveyed the area for host material and businesses that would be affected if a quarantine were to be established. Fortunately, the number of flies detected did not trigger a quarantine in this area.

Peach Fruit Fly, Orange County

A peach fruit fly was trapped in the city of Anaheim, Orange County. A Hold Notice was issued to the property where the fly find was trapped to stop the movement of potentially infested commodities. Program staff surveyed the area for host material. The detected fly did not trigger a quarantine in the area.

Panicle Rice Mite, Davis, Yolo County

In January 2009, a post entry inspection of rice plants in a research greenhouse at U.C. Davis resulted in the detection of *Steneotarsonemus spinki*, Panicle Rice Mite (PRM), a Q-rated pest not previously found in California. All rice plants within the greenhouse were destroyed through steam sterilization. CDFA Interior Pest Exclusion Program staff and USDA inspectors then collected samples from all campus greenhouses containing rice plants. Fourteen (14) of the 22 greenhouses sampled were positive for PRM. In some of these greenhouses, PRM was also detected on switchgrass. All rice and switchgrass plants in positive greenhouses were destroyed. Non-host plants were also removed from the infested greenhouses which were then steam sterilized. Due to the widespread infestation on campus and to avoid escape into field grown rice plots, CDFA ordered the destruction of all rice plants in campus greenhouses and growth chambers. Working closely with the U.C. Davis Department of Plant Pathology, CDFA allowed some rice plants deemed as part of critical research projects to be transferred under safeguarded conditions - and under CDFA and USDA supervision - to the level three containment facility located on campus. A 30-day plant-free period was then enforced for all previously infested

greenhouses. To avoid future problems, U.C. Davis developed a protocol which includes treating all incoming rice seed of both domestic and foreign origins. Before reintroducing rice into campus greenhouses, a plan was implemented by CDFA, USDA and U.C. Davis that included placing sentinel rice plants in all greenhouses that had contained rice plants. Samples were collected from these plants once a month for four months, continuing into 2010. Field surveys were also conducted in rice-growing areas of the State. To date, there have been no new PRM detections.

QUARANTINE TRAINING, DIRECTION, OVERSIGHT AND CONSULTATION

Interior Program staff instruct county inspectors on high risk parcel inspections during a 2009 Pest Prevention University training session.

Each county agricultural department provides the necessary staff to perform pest exclusion inspections at many locations within California. Interior Pest Exclusion provides regional training, direction, oversight and consultation for county agricultural commissioners' offices in order to ensure uniformity in exclusion procedures throughout the State.

INTERIOR PEST EXCLUSION

Topics for regional training sessions included the County High Risk Pest Exclusion Program, Interior Pest Exclusion extranet resources, Pest and Damage Report completion, Notice of Rejection completion and monthly reporting, quarantine violations, parcel inspection procedures, dog team inspection and program reporting, post entry quarantine, use of the Plant Quarantine Manual, violation investigation and prosecution, Huanglongbing and the Asian citrus psyllid.

Regional Training Sessions

Conducted by Interior Pest Exclusion in 2009

Sessions	Counties Served	Participants
18	36	378

In addition to regional training sessions, the Interior Pest Exclusion staff provides assistance to county inspectors in preparation for annual quarantine certification examinations and training to new county inspector biologists. Seven sessions were held in 2009 with a total of 42 attendees.

TRADE FACILITATION

Interior Pest Exclusion works cooperatively with the United States Department of Agriculture (USDA), agricultural officials from other states and the county agricultural departments to facilitate both domestic and foreign trade of agricultural products. This is accomplished by:

- Collaborating with other states
- Administrating the Federal Phytosanitary Program

Collaboration with Other States

The Program works with agricultural officials in other states to coordinate certification and inspection procedures that will meet California entry requirements.

Origin Inspection Program

Interior Pest Exclusion administers CDFA's Origin Inspection Program (OIP). This Program facilitates the entry of pre-qualified and pre-cleared agricultural commodities from participating shippers in other states. Encouraging origin inspection activities with regulatory officials in other states is an integral part of California's pest prevention system. The OIP mitigates pest risk at origin by requiring commodities to be inspected by regulatory officials in the other states before being shipped and consequently reducing the inspection workload in California. Ongoing negotiations with other regulatory agencies are required, as shippers request new commodities to be included in the program.

In 2009, 149 shippers in 11 states participated in the OIP. The commodities covered under the OIP include fruits and vegetables, cut flowers and cut greens, canola pellets, bulbs, seeds, grass sod and nursery stock.

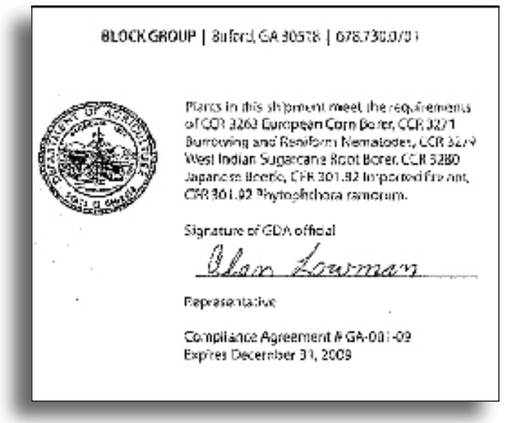
Origin Inspection Program

State	OIP Participants
Arizona	2
Colorado	1
Florida	2
Hawaii	28
Mississippi	1
Nevada	4
New Mexico	2
Ohio	1
Oregon	64
Utah	1
Washington	43
Total	**149**

Master Permits and Compliance Agreements

Interior Pest Exclusion worked with agricultural officials in Alabama, Arizona, Florida, Georgia, Hawaii, Illinois, Michigan, Nevada, New York, North Carolina, Ohio, Oregon, Texas, Utah, Washington and Virginia to develop compliance agreements and enforce stipulations of master permits. Compliance agreements and master permits were approved for the shipment of nursery stock, bulk produce and fresh fruit gift packages.

Phytosanitary Export Certification Administration

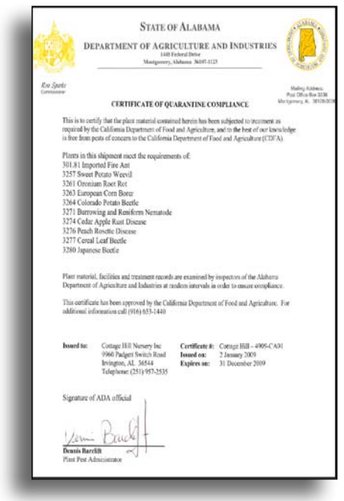

BLOCK GROUP | Buford, GA 30518 | 678.730.0/01

Plants in this shipment meet the requirements of CCR 3263 European Corn Borer, CCR 3271 Burrowing and Reniform Nematodes, CCR 3279 West Indian Sugarcane Root Borer, CCR 3280 Japanese Beetle, CFR 301.82 Imported fire ant, CFR 301.89 Phytophthora ramorum.

Signature of CDA official

Representative

Compliance Agreement # GA-001-09
Expires December 31, 2009


STATE OF ALABAMA
DEPARTMENT OF AGRICULTURE AND INDUSTRIES

CERTIFICATE OF QUARANTINE COMPLIANCE

Plants in this shipment meet the requirements of:
301.81 Imported Fire Ant
3257 Sweet Potato Weevil
3261 Oriental Fruit Fly
3263 European Corn Borer
3264 Colorado Potato Beetle
3271 Burrowing and Reniform Nematode
3274 Cedar Apple Rust Disease
3276 Peach Rosette Disease
3277 Cereal Leaf Beetle
3280 Japanese Beetle

Issued to: Cottage Hill Nursery Inc
9960 Padgett Switch Road
Irvington, AL 36544
Telephone: (251) 957-2535

Certificate #: Cottage Hill – 4005-CAN
Issued on: 2 January 2009
Expires on: 31 December 2009

Signature of ADA official

Dennis Burchfiel
Plant Pest Administrator

INTERIOR PEST EXCLUSION

Phytosanitary certification is a service provided to industry to meet the plant quarantine requirements of foreign countries, other states or California's own interior quarantines. This service helps facilitate domestic and foreign trade in agricultural commodities. The USDA is charged with nationwide implementation of the international phytosanitary certification program. Interior Pest Exclusion administers both this federal program in California for the USDA and the domestic phytosanitary certification program. Interior Pest Exclusion provides training to county agricultural commissioners' staffs to issue phytosanitary certificates.

Phytosanitary inspections may include post-harvest inspections of agricultural commodities at packing sheds or terminal inspection points, and/or growing season inspections of seed fields, nursery stock and fruit and vegetable stock. Staff performed over 194,000 inspections and issued more than 199,000 phytosanitary certificates in 2009.

Assistance with the Federal Phytosanitary Program

Interior Program staff assisted the USDA, Animal and Plant Health Inspection Service in administering the Federal Phytosanitary Program and resolving phytosanitary issues involving California exports. In 2009, some of the major export issues that CDFA helped to resolve are summarized in the following table:

Oranges to South Korea	Assistance with review of the Septora citri treatment program
Nursery stock to Canada	Assist with implementation of snail free operations for shippers to Canada
Stone fruit to Mexico	Assistance with pre-season audits and site visits to review trap and lure placement in groves
Citrus shipments to Australia	Assisted stakeholders with facilitating shipments despite Australian concerns regarding Asian citrus psyllid in southern California
Table grape shipments to New Zealand	Assist with work plan review and program implementation for the shipping season
Almond shipments to India	Assistance with review and interpretation of import permits which erroneously called for a seven-day fumigation period
Sweet potato whitefly (B. tabaci) concerns regarding strawberry plant shipments to the European Union	Collaborated with USDA to conclude that Bemisis tabaci not be a problem for field-grown strawberries for the coastal growing areas
Methyl Bromide prohibition for broccoli exports to Taiwan	Assisted industry to facilitate resumption of broccoli shipments to Taiwan after temporary ban due to California pesticide use regulations
Phytosanitary Certificate Issuance and Tracking (PCIT) user fees for plants and plant products	Collaborated with the USDA and the counties to implement the new fee structure incorporated into the PCIT system in California
Hay shipments to China	Assisted with initial facility evaluations to facilitate shipments into that country under a new work plan

CALIFORNIA DOG TEAMS

The purpose of the California Dog Teams is to enhance inspection and surveillance activities related to plant products entering the state of California via parcel delivery facilities and airfreight terminals.

Mariah Slusser and Bart in action

During 2009, California Dog Teams operated out of Contra Costa, Fresno, Sacramento, San Bernardino and San Diego counties and continued to intercept prohibited and regulated plant material entering California via unmarked parcels.

In October 2009, Los Angeles, San Diego and Santa Clara counties sent a total of four handlers to a 10-week training course at the National Detection Dog Training Center in Georgia. All four handlers successfully completed training and graduated in December 2009.

By the end of 2009, there were a total of ten teams operating out of eight counties in California.

San Diego County Detection Dog Friday sniffs out plant products

Each Dog Team is trained to inspect unmarked agricultural parcels to detect the presence of any unwanted plant pests, including insect species, diseases or other harmful organisms that may pose a threat to the economic well-being of the State. Currently, California Dog Teams conduct inspections at UPS, FedEx, DHL and other private parcel carriers in Alameda, Butte, Contra Costa, Fresno, Imperial, Marin, Napa, Monterey, Placer, Riverside, Sacramento, San Benito, San Bernardino, San Francisco, San Joaquin San Mateo, Santa Clara, Santa Cruz, Shasta, Solano, Sonoma, Sutter and Yuba counties.

INTERIOR PEST EXCLUSION

The California Dog Teams have demonstrated that unmarked parcels present a high-risk pathway for harmful pests to enter California. In 2009, the California Dog Teams intercepted 1,756 unmarked packages containing plant material, from which 91 pest interceptions were made, which included 18 actionable A- and 73 Q-rated pests. Types of pests intercepted included Asian citrus psyllids, ants, scale pests, weevils, whiteflies, mealybugs and aquatic weeds.

Fresno Dog Team Stephanie LeBarrón and Chelsea

A summary of Dog Team pest interceptions during 2009 is shown in the table below.

2009 Dog Team Pest Interceptions

Unmarked Packages	1,756
# of Actionable Pest Interceptions (A-and Q-Rated)	91
Number of Actionable Species	76

Some Significant California Dog Team Pest Interceptions

January - The San Bernardino County Dog Team hit on two large moving boxes. The unmarked parcels were sent from Alabama. The packages contained 50 pounds of sorghum cuttings. The inspector says that there were no roots attached to the sorghum, just long stems cut into 8-10 inch pieces. The plant material contained a Q-rated moth (*Moodna sp.*); the shipment was also rejected for violation of State Exterior Quarantine for European corn borer (CCR 3263).

February - Contra Costa County Dog Team, Cecilie Siegel and Bella, intercepted a package from a private shipper in Cuautla, Mexico while working at FedEx. Cecilie explains, "There was no indication that there was plant matter in the box. The box contained a number of things that were out of our jurisdiction so the plant matter was removed and the rest was sent on." In addition to plant material, the package contained a bag of homemade crusher, Mexican cheese, candies and other goods for personal consumption.

Cecilie and Bella

In total, 16 Q-rated pests were intercepted including: armored scale (*Diaspis sp,* Diaspididae Family.), gall midge (Cecidomyiidae Family), leaf miner (Agromyzidae Family), red-banded whitefly (*Trialeurodes exuriae*), soft scale (Coccidae Family) and whiteflies (*Aleurotrachelus sp.*, *Trialeurodes sp.* near *cryptus*, *Trialeurodes sp.* near *flonidensis*, *Trialeurodes sp.* near *honidensis* and *Trialeurodes sp.*).

March - Alameda County inspectors were working with the Contra Costa Dog Team (handler Mariah Slusser and Bart) at the FedEx facility. The Dog Team intercepted an unmarked package (in violation of marking requirement – Food and Agricultural Code Section 6421) from a private shipper in Miami, Florida. The 31-pound package was in a large KFC box and contained a wide variety of plant cuttings. The Alameda County inspectors took the package back to the office where they combed through the plant material to find one A-rated pest mealybug (*Dysmicoccus grassii)* and five Q-rated pests including white-footed ant (*Technomyrmex albipes),* carpenter ant *(Camponotus sp.),* weevil *(Myllocerus sp.),* red-banded whitefly *(Tetraleurodes sp.),* and a whitefly *(Aleurodicus sp.).*

Unmarked Package Contents

Additionally, the plant material was sent to the botany lab (nine PDRs) where it was identified. The majority of the plants were D-rated; however, the package did contain a Q-rated invasive vine (*Polygonum aubertiii*).

May - While conducting a parcel inspection at the DHL facility, Fresno County Inspector Stephanie LeBarron and her partner Chelsea intercepted a homemade care package of 'tea' from Lao. The 20-pound parcel contained unknown plant material, which was sent to the botany lab for identification. Most of the package contained nonpropagative wood chips, stem, root and fern stipes. However, Q-rated cinquefoil (*Potentilla sp.*) was also found. The cinquefoil was destroyed.

Stephanie and Chelsea

Tassie hitting on an unmarked package

June - While working the parcel belt, Sacramento County Dog Team Jennifer Berger and Tassie hit on a white unmarked package from a private shipper. The package was wrapped in tin foil and newspaper and contained several handmade leis from Hawaii. The leis were found harboring A-rated red wax scale and tropical palm scale (*Hemiberlesia palmae*) and Q-rated armored scale (*Aonidiella sp.*), croton whitefly and soft scale (*Pulvinaria sp.*/Coccidae Family). The leis were destroyed by the County.

July - The Fresno County Dog Team was working at a FedEx facility when Chelsea hit on a canvas gym bag. This was no ordinary gym bag – it contained clothes, jewelry, knick-knacks, peppers, nail polish, newspaper and a grocery bag of plant and leaf material (*believed to be curry leaves*).

INTERIOR PEST EXCLUSION

Ten A-rated Asian citrus psyllid nymphs and adults (*Diaphorina citri*) were found in the leaf material. Further testing confirmed that the nymph psyllids were positive for A-rated Huanglongbing disease.

The gym bag originated from Kochi, India and made its way on Emirates Airlines to the Los Angeles FedEx Air Facility. It was then sent via FedEx Air to Fresno, where the owner resides.

Stephanie and Chelsea

The bag somehow managed to bypass customs clearance and the USDA. The bag still had the original "packing" tape that was placed on the gym bag by the Emirates Airlines at origin. The "packing" tape was not disrupted upon arrival in Fresno County. Furthermore, there was no certification of customs clearance.

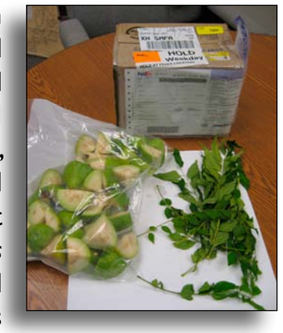
The plant material was destroyed. The other contents of the gym bag were inspected and released to the owner. The USDA/Safeguarding Interdiction and Trade Compliance (SITC) Team was notified.

State agriculture crews conducted a survey for Asian citrus psyllids near the package's destination. CDFA crews also deployed traps in a one-square-mile area, conducted visual surveys and used a vacuum device on host plants all with negative results. Furthermore, the SITC team is continuing their investigation of the incident.

Jennifer and Tassie

August - Sacramento County Dog Team Jennifer and Tassie, and Sacramento County Inspector Gafar intercepted a small unmarked package from Texas at the FedEx facility in North Sacramento. The package was a family hodgepodge: with the Texan uncle sending his nephew a needed part, plus a few "unexpected" surprises including guavas and curry leaves.

Because curry leaf presents a high risk for transporting Asian citrus psyllid (ACP), the dog handler and Sacramento County inspector acted quickly by safeguarding the package and returning to the agricultural commissioner's office for a detailed inspection. Back at the office, many suspect ACP samples (adults and nymphs) were collected and submitted to the CDFA Plant Pest Diagnostics Center (lab). The exact number of live ACP found in the package is unknown (*county reports that there were too many to count*). The samples were later confirmed to be A-rated ACP (*Diaphorina citri*). Additionally, the curry leaves were submitted to the lab (center) for Huanglongbing (HLB) testing. Fortunately the samples were found negative for the disease.



Infested Curry Leaf

September - San Diego County Dog Team, Jeremy Partch and Friday, intercepted a shipment of 10 cherimoya fruit at a FedEx location. The unmarked parcel originated from the state of Florida and was in violation of the following regulations:

- California FAC 6421, Markings: Shipments of plant material must have the name and address of the shipper and receiver, origin of material and a statement of contents.
- California FAC 6461.5, Live Pests: Lab results revealed that the cherimoya fruit was infested with Pseudococcus odermatti (mealybugs) and Tortricidae (family), both 'Q' rated pests not known to occur in California. The fruit was rejected and destroyed.

Detection Dog Friday and Handler Jeremy Partch

COUNTY HIGH RISK PROGRAM

The County High Risk Pest Exclusion Program (CHRPEP) was established in December 1998 by urgency legislation, Senate Bill 2062, Rogers (Chapter 635, Statutes of 1996), known as "the Rogers' Bill," to augment funding for counties to perform inspections on incoming shipments at the destination (terminal) points. The CHRPEP is a cooperative program that provides funds to county agricultural commissioners to conduct high-risk pest exclusion activities under state oversight by the California Department of Food and Agriculture (CDFA).

A study found that conducting a statewide County High Risk Pest Exclusion Program at optimal levels would cost approximately $14 million per year. In 1998, Section 2282.5 of the Food and Agricultural Code and a state budget augmentation provided the county agricultural commissioners (CACs) with $5 million to conduct an optimal level program for the latter portion (December-June) of fiscal year 1998/99. CDFA allocated funding by way of a negotiated work plan process with the CACs.

In 1999, Section 2282.5 was amended, providing for continuation of the program in fiscal year 1999/2000 by extending the June 29, 1999, sunset date to June 30, 2000. In fiscal year 2002/03, the High Risk Program's funding had been reduced to $5.5 million with Scientific Evaluation Trapping paid out of CDFA's funds.

INTERIOR PEST EXCLUSION

High Risk Inspections

The primary responsibility of the County High Risk Pest Exclusion Program (CHRPEP) is to provide guidance and funding to county agricultural commissioners to conduct high risk pest exclusion activities at first point of entry terminals within California. The CHRPEP is a vital component in the State's overall pest prevention efforts and is a crucial part of CDFA's mission to protect agriculture and the environment from the threat of newly introduced exotic pests.

For FY 2008/09 and FY 2009/10, $5,500,000 was disbursed to 43 counties to conduct high risk pest exclusion activities. Funding for each county varied based on the pest risk of specific pathways and the volume of work associated with those pathways. The top priority pathways were parcel facilities, airfreight shipments, nursery stock shipments and truck shipments of beehives from red imported fire ant (RIFA) infested areas.

As a result of the CHRPEP, a total of 1,459 shipments were rejected in 2009 for the presence of A- and Q-rated pests.

Fresno County inspectors found evidence of red imported fire ant on a shipment of beehives

In addition to A- and Q-rated pest detections, there were 241 seizures of foreign origin plant pest and quarantine material brought into California illegally in 2009. These detections are outlined in the table below.

Foreign-Origin Materials Rejected in 2009

Material	# of Rejected Shipments	Origin
Animals	1	Algeria
Bulbs	4	Canada, Netherlands
Cut flowers	42	Colombia, Costa Rica, Ecuador, France, Israel, Netherlands, Thailand
Cut foliage	5	Costa Rica, Ecuador
Cuttings	79	Australia, Canada, Colombia, Costa Rica, Dominican Republic, Guatemala, Mexico, Netherlands, Uganda, United States Minor Outlying Islands, Viet Nam
Foliage	1	Costa Rica
Fronds	10	Costa Rica
Fruit	40	Argentina, Brazil, Chile, Costa Rica, Dominican Republic, Guatemala, Honduras, Israel, India, Morocco, Mexico, United States Minor Outlying Islands
Herbs	2	Mexico
Leaves	25	Colombia, Costa Rica, Ecuador
Plants/plant material	19	Armenia, Canada, Costa Rica, Thailand, South Africa, Syria
Root	2	Peru
Seeds	4	Lebanon, Thailand, United States Minor Outlying Islands, South Africa
Vegetables	7	Argentina, Dominican Republic
Other	24	Canada, Costa Rica, India, Cambodia, Mexico
Total	**241**	

Note: Notice of Rejection data source. Not all counties are reporting.

INTERIOR PEST EXCLUSION

Below are some examples of High Risk activities and inspections conducted by county inspectors in 2009.

Coqui Frog PDR 1407958 January 23, 2009

Coqui frog
(Photo: Caryn Moen, Shasta County)

San Francisco County inspector Rhodora Lino intercepted Q-rated coqui frog (*Eleutherodactylus coqui*) on a shipment of dracaena plants sent by California and Hawaii Foliage Growers in Papaikou, Hawaii. Rhodora found the frog in the base of the box and described the frog as light green in color, with very thin skin – so thin you could see its insides. The plants were treated with citric acid and will be released pending a negative re-inspection.

Master Permit QC 650 states that all nursery stock shipped under the compliance agreement shall be free of A-, B- and Q-rated pests. Furthermore, coqui frogs are listed as "detrimental animals" under the California Fish and Game Commission's Wild Animal Policy (Title 14, Section 671 of the California Code of Regulations). The Hawaii Department of Agriculture has been notified and is working to resolve the pest issue at the nursery.

Bee on the Lookout PDR 1556632-3 February 3, 2009

Merced County intercepted A-rated red imported fire ant (RIFA), *Solenopsis invicta*, on Texas beehives sent by McEvoys House of Honey and Bee Line Apiaries. The inspectors report that it appeared the hives had been sprayed with insecticides as only dead ants were found in the truck bed. They found the live RIFA in the sides of the beehive boxes where the ants were probably protected from an insecticide spray. The beehives were fumigated.

Counties are reporting that beehive shipments from Texas have been arriving with a voluntary ant-free apiary certificate. The Texas Department of Agriculture is ***not*** a participant in this program and CDFA does ***not*** recognize this type of certification from Texas.

Life at LAX PDR 1308598 March 5, 2009

On March 5, Los Angeles County inspectors working at the Los Angeles International Airport made an interesting pest find. Inspectors intercepted a Q-rated cricket (Grillidae Family) in a shipment of pineapples from Brazil. There were 180 boxes (three skids wrapped in bug-netting) in the shipment. The shipment was cleared by the USDA at the first point of entry. The county reports that no treatment stamps or carton markings were observed. The shipment was destroyed under Food and Agricultural Code Section 6461.5 for presence of pests.

The shipment was placed under quarantine hold while waiting for the cricket to be identified and rated by the CDFA Plant Pest Diagnostics Center (lab).

No SOD Wood in My Neighborhood NOR 03172009-EP-1 March 2009

Photo courtesy of Eric Pittman, Butte County

Butte County agricultural inspector Eric Pittman intercepted an unmarked package from United Forest Products containing bark chips, mulch and soil while performing parcel inspections at FedEx. The wood products originated from the forest floor in Sonoma County, which is a quarantined area for *Phytophthora ramorum* (causal pathogen of Sudden Oak Death or SOD). After investigation, Eric discovered the shipper had been pre-notified by Sonoma County that they needed to be under compliance for the *P. ramorum* State Interior Quarantine before they could ship their wood products.

The package was rejected for Food and Agricultural Code FAC) Sections 6501 (lack of intrastate markings) and 6521 (reasonable cause to presume that intrastate shipment may be infested or infected with a pest). The package was destroyed.

Santa Barbara is Glad Happy PDRs 1554947, 1269648 March 30 & April 3, 2009

On March 30 and April 3, while conducting a FedEx parcel inspection, Santa Barbara County Biologists Tashina Simon and Heather Scheck intercepted shipments from Jacobs Trading containing yellow gladiolas from the Netherlands. The plants were inspected and found infected

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with Q-rated gladiolus rust (*Uromyces transversalis*). The County destroyed the plants. Because the flowers are of a foreign origin and gladiolus rust is a federally-actionable pest which is being actively surveyed for in California by the State Plant Health Director's Office, the USDA has been notified of this interception.

As of April 3, 2009, Santa Barbara County had intercepted three shipments from Jacobs Trading. Two of the shipments were also in violation of California FAC Section 6421 for lack of markings.

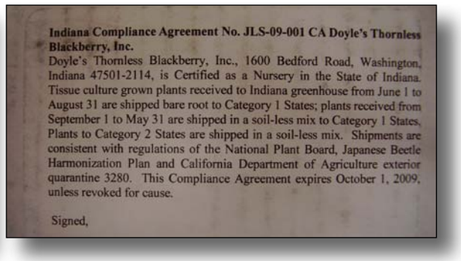
Tashina Simon inspects the gladiolas shipment from the Netherlands

Gladiolus rust

Santa Cruz Sleuth Sees No Origin Statement NOR 440R2009500154 May 2009

Santa Cruz inspector Tony Dennis intercepted a shipment from Doyle's Thornless Blackberries at United Parcel Service (UPS) sent from an Indiana address. The package was accompanied by an official certificate issued from the Indiana Department of Natural Resources stating all applicable California quarantines had been met. However, the package lacked a statement of growing origin as required by the California FAC Section 6421. Tony pointed out this was a real scenario of a topic covered in the recent training provided by Interior Pest Exclusion staff.

The package was placed on hold and once contacted, the shipper indicated the plant was from Florida. The shipment was destroyed for not meeting FAC 6461.5 (reasonable cause to presume infestation) and FAC 6421 for lacking an origin statement.



Indiana Compliance Agreement No. JLS-09-001 CA Doyle's Thornless Blackberry, Inc.
Doyle's Thornless Blackberry, Inc., 1600 Bedford Road, Washington, Indiana 47501-2114, is Certified as a Nursery in the State of Indiana. Tissue culture grown plants received to Indiana greenhouse from June 1 to August 31 are shipped bare root to Category 1 States; plants received from September 1 to May 31 are shipped in a soil-less mix to Category 1 States, Plants to Category 2 States are shipped in a soil-less mix. Shipments are consistent with regulations of the National Plant Board, Japanese Beetle Harmonization Plan and California Department of Agriculture exterior quarantine 3280. This Compliance Agreement expires October 1, 2009, unless revoked for cause.

Signed,

Photos courtesy of Santa Cruz County

CERTainly Not Acceptable NOR 361R2009900267 September 2009

San Bernardino County inspector Keri Vigil inspected a nursery stock shipment from Hines Nursery, Oregon at a Lowe's store in Rancho Cucamonga that contained *Syringa species* which is a genus on the host list for *Phytophthora ramorum*. Keri rejected the shipment because federal certification 7 CFR 301.92 for *Phytophthora ramorum* was missing. The rejection was issued because the shipment also contained pine species that lacked certification for California Code of Regulation 3275 for European Pine Shoot Moth.

7 CFR 301.92 certification is mandatory for interstate nursery stock shipments of host species from *P. ramorum* regulated states, including Oregon.

A Sour Surprise NOR 071R2009L00163 December 2009

It was a bitter sweet gift for the intended recipient of this Meyer lemon tree, intercepted by Contra Costa County Deputy Agricultural Commissioner Joe Deviney. On December 17, 2009, Joe identified a UPS parcel with no markings *and* no certification shipped from "Meyer Lemon Tree" in Georgia. The parcel contained one Meyer lemon tree packaged with soil. The parcel was in violation of the following quarantines:

Joe Deviney gets down with his inspection of the suspicious Meyer lemon tree. This parcel was definitely a sight for "sour" eyes!

- Federal Domestic Quarantine 301.81- Imported Fire Ant
- Federal Domestic Quarantine Order Citrus Greening and Asian Citrus Psyllid
- California Food and Agricultural Code 6421- Markings
- California Code of Regulations, State Exterior Quarantines: 3250- Citrus Pests, 3271- Burrowing and Reniform Nematodes, 3279- West Indian Sugarcane Root Borer and 3280- Japanese Beetle

Samples submitted to the CDFA diagnostics lab yielded negative results for the presence of nematodes and Huanglongbing (HLB). After sampling, the Meyer lemon tree was destroyed.

Because the parcel violated federal quarantines, Smuggling Interdiction and Trade Compliance (SITC) were contacted to initiate an investigation. SITC agents discovered that the tree had been ordered online by a person in Iowa as a gift to be received in California. The tree was shipped from Georgia to California by "meyerlemontree.com", though the company claims not to ship

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citrus into California, Arizona or Texas. SITC has contacted the shipper and is continuing the investigation to determine if any additional shipments have been sent into California and what can be done to prevent similar shipments in the future.

Agricultural Commodities Investigative Team

In 2009, an ACIT Investigator conducted 16 investigations of alleged Food and Agricultural Code violations. The investigations involved the illegal movement of quarantine material including prohibited exotic fruit and nursery stock.

Cases settled in 2008/09:

In May 2008, an investigation was initiated by CDFA into an illegal plant importation by a nursery owner in San Francisco. The shipment contained 286 plants that lacked both bills of lading and certificates from the Florida Department of Agriculture and Consumer Services. The purpose of certification is to prevent the importation of plants infested with pests not native to California.

In July 2009, the San Francisco District Attorney reached a settlement in this case and a stipulated judgment was placed against the nursery owner. The nursery owner paid a $15,000 civil penalty for trying to import uncertified plants into California from the state of Florida. The defendant also paid $4,690 in investigative costs to CDFA.

In 2007, packages of Indian mangos and yams labeled "ladies apparel" were imported into California. An airport dog discovered the packages. State and federal laws prohibit the importation of untreated mangos and yams from India because they can be infested with crop-damaging pests such as Oriental fruit fly. CDFA launched an investigation into the international express courier company. The Attorney General's Office charged the company with violating the California Food and Agricultural Code and engaging in unfair business practices. CDFA and the Attorney General's Office worked together to complete an agreement with the express courier company. The settlement prevents them from importing produce that has not been properly inspected for foreign pests. The company also paid $40,000 in civil penalties. If the agreement is violated in the future, they will be forced to pay $1.6 million.

• NURSERY, SEED AND COTTON PROGRAM •

NURSERY PROGRAM

The mission of the Nursery Program is to prevent the introduction and spread of agricultural pests through nursery stock and to protect agriculture and the consumer against economic losses resulting from the sale of inferior, defective or pest-infested nursery stock. In 2009, the total value of nursery and floral products produced was $ 3.7 billion, a decrease of 7.5 percent over the previous year. The cost to run the Nursery Program for 2008/09 fiscal year was $2.3 million. Nursery program activities are funded entirely from revenue received in the form of license and acreage fees, and registration and certification fees. Revenue received in fiscal year 2008/09 totaling $2.2 million was used to offset the costs of all program activities.

NURSERY REGULATORY AND INSPECTION ACTIVITIES

Financed primarily through license and acreage fees, nursery regulatory activities are conducted by the county agricultural commissioners and their staff and are an integral part of the State's agricultural pest prevention system. Nursery inspection and regulatory activities have prevented numerous pests from being disseminated throughout agricultural and suburban communities by preventing and/or eradicating pests at the nursery level. The quality of nursery stock has improved as a direct result of the regulation of nursery stock.

In 2009, there were 11,917 licensed sales locations with 1,010 production (growing grounds) locations. Since 2007, the budget for nursery inspection contracts has been set at $600,000. In addition, any disencumbered funds from the previous year's nursery contracts are added to the next annual allocation. The amount added to the allocation for this year was $48,563, resulting in a total of $648,563 to be divided among the counties for the 2009/10 fiscal year contracts.

REGISTRATION AND CERTIFICATION SERVICES FOR PLANT MATERIALS

The California Food and Agricultural Code authorizes the Department to establish plant registration and certification (R & C) programs (see Table 1). These programs are implemented by the California Code of Regulations and enforced by the Secretary. In 2009, CDFA staff performed over 855 inspections for R & C, including site approvals, growing season inspections, sampling for various purposes and harvest inspections. In addition to making inspections to meet R & C requirements, all nursery stock must also meet the general nursery regulatory standards for pest cleanliness.

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R & C programs are voluntary programs developed at the request of various segments of the agricultural industry for the exclusion of specific plant pests that are not readily detected by ordinary inspections. These programs are the result of close working relationships between the University of California, USDA and CDFA, with the added support of the agricultural industry. Specific viruses, viroids, fungi, soil-borne pathogens and nematodes are the targeted pests of the nursery stock registration and certification programs.

The criteria for establishing these programs are: 1) there is an established need 2) sufficient technical information is available 3) a source of "clean" propagating stock has been established and 4) methods have been developed to assure the continued pest cleanliness of the stock.

California presently has nine "clean stock" (registration and certification) programs available for use by the various segments of the agricultural industry.

Table 1. Registration and Certification Programs

PROGRAM	PLANTING TYPE (BLOCKS)	TARGET PEST	TESTING OR TREATMENT REQUIRED
Avocado Certification	Certified	Phytophthora cinnamomi	Hot water treatment of seed and soil fumigation
Avocado Registration	Registered (tree)Increase	Sun Blotch Viroid	Foundation tree index-testing for sun blotch viroid (UC)
Citrus Registration and Certification	Foundation, Scion, & Seed (tree) Increase Certified (nursery row)	Citrange stunt, concave gum, exocortis, psorosis, tatterleaf, seedling yellow tristeza, tristeza vein enation and yellow vein viruses	Index testing (UC) + individual tree identification index-testing (CDFA)
Deciduous Fruit and Nut Tree Registration and Certification	Foundation, Mother, Scion, & Seed (tree) Increase Seed (bed) Certified (nursery row)	Various virus diseases, including prunus ringspot virus (PRSV) and prune dwarf virus (PDV)	Index-testing (UC) + index-testing for PRSV and PDV (CDFA) (Participant)
Grapevine Registration and Certification	Foundation & Increase (vineyard) Certified (nursery row)	Fanleaf, fleck, asteriod mosaic, leafroll, yellow vein (Tomato ring-spot), corky bark virus	Nematode sampling (CDFA)
Seed Garlic Certification	Increase Certified	Stem and bulb nematode (*Ditylenchus dipsaci*) and white rot	Nematode sampling (CDFA)
Pome Fruit Tree Registration and Certification	Foundation & Mother (tree) Increase & Stool Certified (nursery row)	Various virus diseases	Index-testing (USDA & UC) fumigation
Strawberry Nursery Stock Certification	Foundation Increase Certified	Mottle, vein-banding, crinkle, mild yellow-edge, necrotic shock, pallidosis, tomato ring-spot, witches-broom, pseudo mild yellow-edge, latent "c," leafroll, and feather-leaf viruses	Index-testing (UC & CDFA) Nematode sampling
Nematode Certification	Nursery plantings produced for on-farm planting	Various plant-parasitic nematodes	Nematode sampling, fumigation supervision, and commodity treatment (CAC & CDFA)

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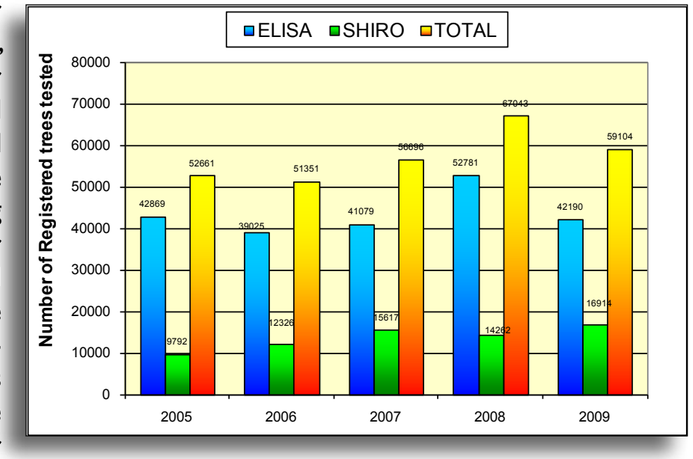
The primary tools developed for maintaining pest cleanliness of the stock in these programs are: 1) biological indexing (use of indicator plants which exhibit symptoms of virus or virus-like diseases) and enzyme-linked immunosorbent assay (ELISA) 2) laboratory techniques for the detection of nematodes 3) eradication treatments (thermotherapy, fumigation and hot water treatments) and 4) visual field inspections targeted to specific life cycles of the pests and plants.

The costs of services to carry out these programs are borne by the participants. Fees are charged for the inspections, testing and treatments. In addition, the Fruit Tree, Nut Tree and Grapevine Improvement Advisory Board (IAB) provides partial-to-full funding for annual testing and inspections required by the Deciduous Fruit and Nut Tree R & C, Pome R & C and Grapevine R & C programs.

Avocado Registration and Certification Program

This program provides the registration of avocado rootstock and scion wood sources when inspected and tested for sun blotch virus. The Avocado Certification Program provides the certification of avocado nursery stock when grown under specific guidelines and inspected for freedom from *Phytophthora cinnamomi*, avocado root rot. Currently, one nursery is participating in the registration program and three nurseries are participating in the certification program.

Deciduous Fruit Tree and Nut Tree Registration and Certification Program



In the R & C program for deciduous fruit and nut trees, all trees in a Registered Mother Block, Registered Scion Block and Registered Seed Block are tested annually for viruses. Testing may be done by biological indexing using Shirofugen cherry as an indicator plant or by ELISA, an approved laboratory technique. Trees are tested for Prunus Necrotic Ring-Spot Virus and Prune Dwarf Virus by biological indexing at least once every five years and by ELISA for these viruses and others in the other four years. Tested trees may be used as a source of certified propagative material in the year following testing.

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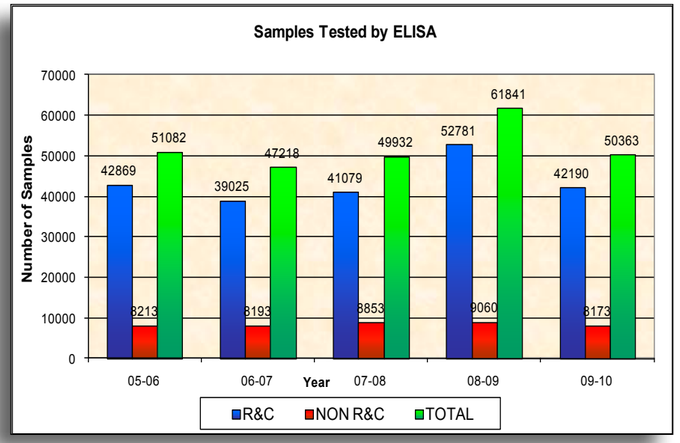
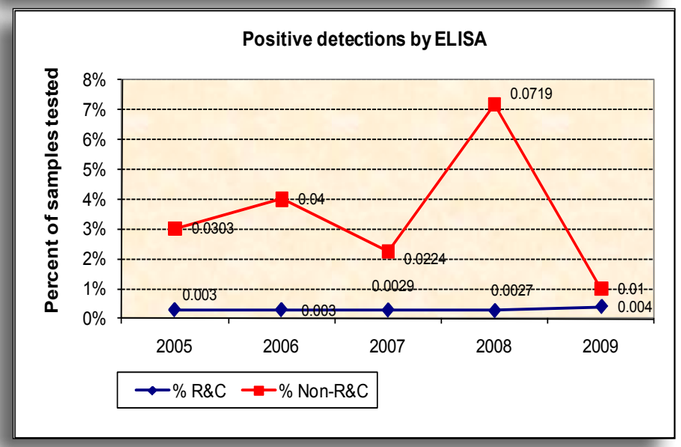
In 2009, 18 nurseries participated in the program. The total number of registered trees tested was 59,104 (42,190 by ELISA and 16,914 by Shirofugen indexing), compared to an average of 56,938 per year for the 2005-2008 growing seasons.

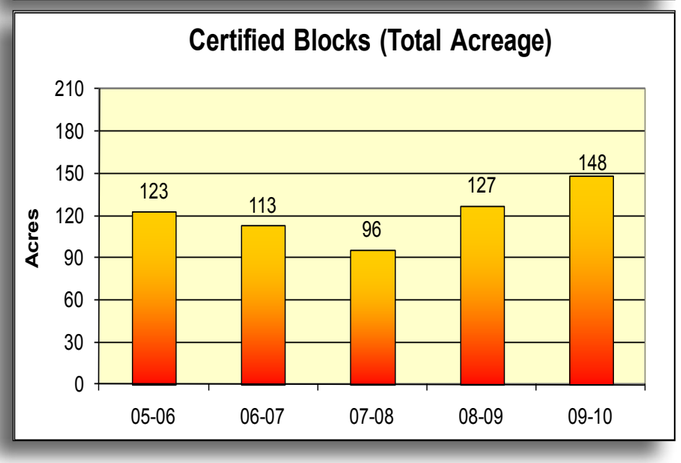
The total number of trees tested using the ELISA technique was 50,363 (42,190 registered trees and 8,173 service samples). The service samples are obtained from non-registered trees and tested as a service to the industry.

Of the 50,363 trees tested by ELISA, 250 (0.5%) were found positive for viruses. Only 170 (0.4%) of the registered samples tested positive for viruses, while 80 (1.0%) of the service samples tested positive for viruses.

Of the samples taken from registered trees, 15 (0.09%) tested positive for viruses using the Shirofugen cherry biological indexing technique. Certified nursery planting acreage totaled 148 acres in 2009, compared to an average of 115 acres over the previous four years.







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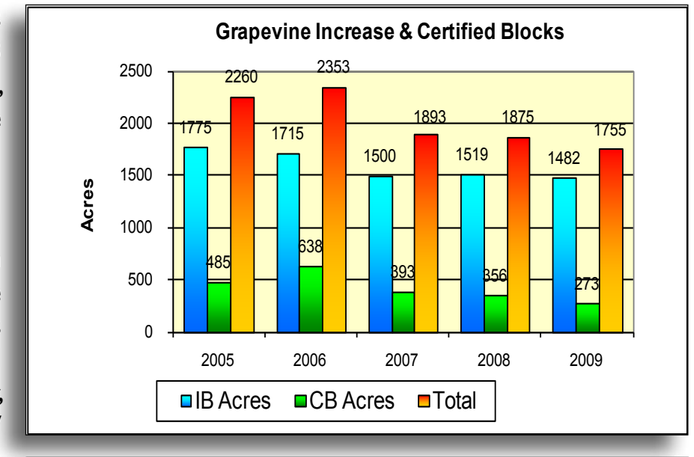
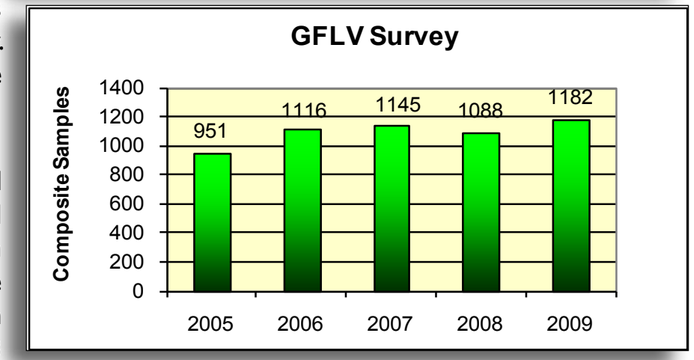
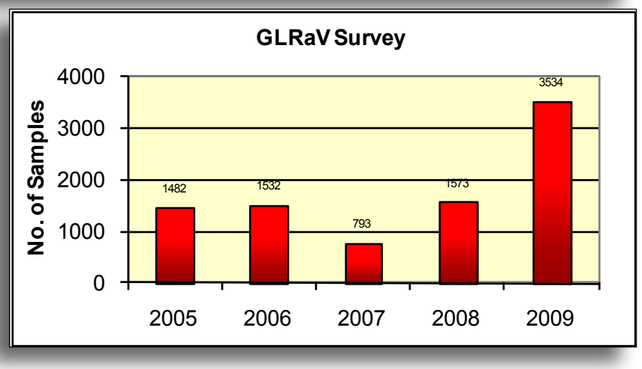
year. Grapevine certified blocks (nursery plantings) totaled 273 acres and five greenhouse blocks, 83 acres (23%) decrease from the previous year's 356 acres.

CDFA collected and tested 1,182 composite samples (each is a composite sample from five vines) for grapevine fan leaf virus (GFLV). Plants were selected randomly for testing. However, if plants exhibiting typical GFLV symptoms were seen, those plants were also included in the survey. Of the total samples tested, none were positive for GFLV.

In 2009, 3,534 vines were sampled and tested for grapevine leafroll associated viruses (GLRaV). In total, 77 samples tested positive (2.2%) for leafroll virus – three in compared with 56 out of 1,573 samples (3.56%) that tested positive in 2008.







In 2004, the Fruit Tree, Nut Tree and Grapevine Improvement Advisory Board (IAB) began supporting trapping for vine mealybug (VMB). The shipment of grapevine nursery stock within California became a problem as some northern counties were contemplating ordinances. Traps were deployed in certified (both Increase and Certified Blocks) and in non-certified plantings. Eight counties assisted CDFA in trapping by doing non-certified plantings and, in some cases, plantings in CDFA's Grapevine R & C Program. There were over 1,600 acres and 3 greenhouses of non-certified plantings. This represented 85 traps deployed in late May and checked over the

Grapevine Registration and Certification Program

Thirty-three nurseries participated in the program in 2009. Grapevine Increase Block plantings totaled over 1,482 acres, a decrease of 37 acres (2.4%) less than the previous

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following six months. There were 1,683 acres and 5 greenhouses of plantings entered in the registration and certification (R & C) programs for 87 traps deployed. Male VMBs were found at 15 locations due to association with nearby vineyards. There were three positive finds for female VMB following intense inspections.

Citrus Registration and Certification Program

The Citrus R & C program provides for the testing of propagative source trees for tristeza to meet the requirements of the Citrus Tristeza Quarantine. Other diseases of importance being tested as part of the registration and certification program include exocortis and psorosis. In 2009, 37 citrus nurseries participated in the program. A total of 4,304 citrus seed and scion source trees were sampled and tested for tristeza and other viroids, an increase of 1,934 trees from 2008.

Strawberry Nursery Stock Registration and Certification Program

Ten nurseries participated in the Strawberry Nursery Stock R & C Program in 2009. The strawberry program differs from other registration programs in that foundation stock is maintained by nurserymen in their isolated plantings rather than by the Foundation Plant Services of the University. Strawberry plants in foundation plantings are index-tested annually using *Fragaria vesca* and *Fragaria virginiana* strawberry indicator hosts for the following viruses: mottle, vein-banding, crinkle, mild yellow-edge, necrotic shock, pallidosis, tomato ringspot, witches broom, pseudo mild yellow-edge, latent C, leafroll and featherleaf. CDFA nursery staff index-tested 9,358 foundation plants at CDFA's greenhouse facility in Sacramento; a 53 percent increase was seen over the previous year. Twenty-four plants that were indexed tested positive for viruses and were rejected from the program. CDFA staff visually inspected over 849 acres of registered and certified strawberry nursery stock for the presence of virus diseases and other pests, and collected and processed nematode samples.

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Pome Fruit Tree Registration and Certification Program

The Pome Fruit Tree R & C Program provides for the registration of rootstock and scion sources for the propagation of certified nursery stock when inspected and tested for virus diseases and other important pests. Three nurseries are currently participating in the program. In 2009, CDFA staff inspected and registered over 2,225 trees as propagative source trees. Over two acres of nursery plantings were inspected and approved for sale as certified nursery stock.

Seed Garlic Registration and Certification Program

The Seed Garlic R & C Program provides for the registration of seed garlic for the propagation of certified nursery stock when found free from stem and bulb nematode, *Ditylenchus dipsaci*, and when inspected and found free of white rot fungus, *Sclerotium cepivorum*. Two nurseries participated in 2009. A total of 20 acres were inspected and registered, a decrease of 48 acres (70 percent) from 2008.

FRUIT TREE, NUT TREE AND GRAPEVINE IMPROVEMENT ADVISORY BOARD

The Fruit Tree, Nut Tree and Grapevine Improvement Advisory Board (IAB) element of the Nursery Program administers an industry-requested assessment (Food and Agricultural Code, Section 6981) on the production of nursery plants, such as deciduous pome and stone fruit trees, nut trees and grapevines. The mission of the IAB is to improve the quality and pest-free fruit tree, nut tree and grapevine nursery stock offered for sale. The assessment is used to fund research on plant pests, breeding varieties that are resistant to plant pests, plant pest diagnostics, varietal identification and disease elimination. The University of California Foundation Plant Services (FPS) provides support and serves as a source of clean planting stock. The FPS carries out activities related to the development of planting materials for pome and stone fruit trees, nut trees and grapevines, and subvents the costs to carry out CDFA programs concerning the registration and certification of pome and stone fruit trees, nut trees and grapevines. The assessment is collected with the nursery license renewal. In 2009, the total assessment collected on gross sales of fruit trees, nut trees and grapevines was $ 1,294,842, a 1.5 percent decrease from the collection of $1,315,202 in 2008.

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In 2009, the IAB approved funding for 12 research proposals totaling $275,000; funding of Foundation Plant Services in the amount of $525,672; and, payment to the Nursery Program to subvent R & C activities in the amount of $344,441. The total budget approved was $1,500,000. As revenues still remain low relative to the past five years, the Board recommended a lower level of funding for research; the Foundation Plant Services (University of California, Davis); and, the CDFA R & C program.

SEED SERVICES

The Seed Services Program administers seed law enforcement throughout California and is funded entirely through an annual assessment on the value of agricultural, vegetable and grass seed sold in California. Staff of the Seed Services Program assist county agricultural commissioners in all seed- related enforcement activities and evaluate compliance at the local and statewide level. CDFA associate agricultural biologists conduct seed sampling and coordinate enforcement activities of assigned counties, as well as investigate seed complaints. The Seed Services Program interacts with agricultural departments in other states, the USDA, industry representatives and the California Crop Improvement Association, which is the authorized seed certifying agency for California. An advisory board of nine seed industry members and two public members provides oversight of the Seed Services Program for CDFA.

The value of seed sold for planting in California exceeded $533 million in FY 2008/09, an all-time high. The total number of firms registered to sell seed in California was approximately 500 firms in FY 2008/09.

The expenditures by the Seed Services Program for FY 2008/09 were $1,264,226.37. Significant program expenditures were the funding of CDFA's Seed Laboratory ($461,556), the Seed Biotechnology Center at UC Davis ($240,000) and the Seed Subvention contracts paid to agricultural commissioners ($120,000). In order to cover these expenses, the Seed Advisory Board recommended an assessment rate of $0.32 per hundred dollars of gross sales in California during the reporting period. Recent furloughs of state employees have resulted in reduced expenditures. The funds generated by the current assessment rate are adequate to cover expenditures in 2009.

The subvention to county agricultural commissioners for the enforcement of the California Seed Law remains at $120,000, provided annually by FAC Section 52323. This voluntary program uses annual performance measures to establish the funding for each county. The commissioners are required to maintain an 85 percent compliance level of all seed offered for sale or labeled in their respective counties. In FY 2008/09, county personnel evaluated 3,700 labels of seed offered for sale. In addition, 2,900 unique labels of seed lots from out-of-state seed suppliers were inspected by county staff for compliance to the California Seed Law.

The Seed Services Program also administers an alternative dispute resolution process for farmers and labelers in dispute over seed performance. Participation in conciliation and mediation is a mandatory prerequisite before pursuing legal remedy in court for seed complaints. In FY 2008/09, the Seed Services Program received one formal seed complaint that was settled through the alternative dispute resolution process.

CDFA agricultural biologists stationed throughout the state continue to perform compliance monitoring through the annual collection of over 600 seed samples. The samples are analyzed by the CDFA Seed Laboratory in Sacramento. A recent analysis of the laboratory results revealed that greater than 96 percent of the samples were in compliance with the California Seed Law, while only 4 percent were found to be out of compliance. Of the non-compliant samples, about 50 percent were misrepresenting germination by a slight amount, while the remaining 45 percent had slight misrepresentations of the percent purity and five percent had slight misrepresentations of inert material.

The Seed Services Program is continuing its efforts to prevent violations of the Plant Variety Protection Act (PVPA) and Certified Seed standards. New inspection forms have assisted inspectors in the identification of PVPA violations and Certified Seed lots. The Seed Services Program will work with the Federal Seed Regulatory and Testing Branch and the California Crop Improvement Association to implement additional measures that insure seed sold in California is of the best quality and the maximum benefit to growers.

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QUALITY COTTON PROGRAM

The Quality Cotton Program has the primary responsibility of enforcing the San Joaquin Valley Cotton District laws and regulations. The Cotton District consists of all counties in the San Joaquin Valley. The 26-member San Joaquin Valley Cotton Board, composed of cotton growers, cotton industry representatives and public members administers the Program. Cotton growers and industry members are elected to the Board by their peers.

One of the Board's major duties is to establish quality standards for San Joaquin Valley Acala and Pima varieties. To accomplish this, the Board has a multi-location cotton variety-testing program. The Board meets at least four times a year to review the progress of its variety-testing program and determines which new varieties meet or exceed existing quality standards and are superior in some meaningful respect, such as improved yield or resistance to disease. The exceptional quality and yield of the cottons in the District are a reflection of the Board's sound decisions. Throughout the year, board committees examine major cotton issues in order to make well-researched recommendations to the full Board.

In 2009, CDFA's Pink Bollworm Program reported another huge drop in total cotton acreage in the San Joaquin Valley. Pima acreage was 118,975, down almost 22 percent and Upland acreage (including Acala) was 62,305, down 40 percent from 2008. The total cotton acreage was 181,280, a drop of 76,290 acres. Most experts predict that the acreage will increase next year.

Due to this continued pattern of declining acreage in the San Joaquin Valley and the resulting funding issues, the Board is considering ways to further reduce operations of the Program.

In 2009, the assessment rates for the San Joaquin Valley Cotton District were set by the Secretary, upon recommendation from the Board, at $6.00 per hundredweight of undelinted cotton seed sold or planted within the District. The assessments are the primary source of income for the Board's testing program and the enforcement of the San Joaquin Valley Quality Cotton District Laws and Regulations.