

# *Phytophthora ramorum* Program Update

CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE  
INTERIOR PEST EXCLUSION

JUNE 2025-NURSERY ADVISORY BOARD MEETING

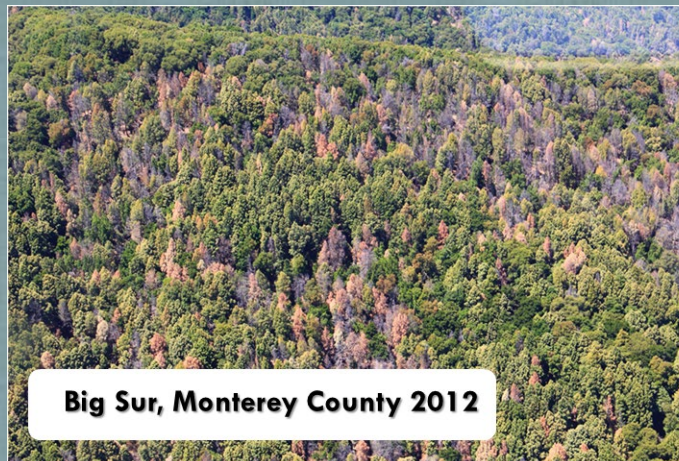


# THIS PRESENTATION INCLUDES:

- About *Phytophthora ramorum*
- Regulations in Quarantine and Non-Quarantine Counties
- Program Updates
- Positive Nursery Protocols
- Nursery Guidance
- Prenotification
- Positive Nurseries
- Resources

# ABOUT *PHYTOPHTHORA RAMORUM*

- In 1995 Sudden Oak Death was detected in the environment in California.
- APHIS issued an interim rule published in the Federal Register in 2002.
- In 2004 *P. ramorum* was detected in a major interstate shipping nursery.
- Sudden Oak Death is terminal in several oak species.



- A water mold
  - Recently re-classified as a Stramenopile
- Prefers moist, humid conditions.
- Naturally spread through wind-driven rain and water; artificially spread through plant material and human activity.

# CDFA *Phytophthora ramorum* Regulations and Program Overview

**Preventing the spread of *P. ramorum*** is important for protecting natural resources and safeguarding trade.

***Phytophthora ramorum* is the cause of several plant diseases**, including Sudden Oak Death which has killed over 50 million oak and tanoak trees in California and Oregon.

**The presence of *P. ramorum*** can also cause interstate and international trade issues for timber, wood products, and nursery stock.

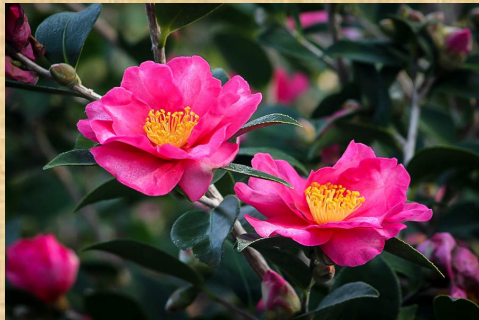


**The authority to regulate *P. ramorum*** comes from the U.S. Code of Regulations – [7 CFR Part 301.92 Subpart X: \*Phytophthora ramorum\*](#). These regulations apply to all states and territories and all interstate plant shippers. These regulations derive from the interstate commerce clause of the U.S. Constitution. [State Miscellaneous Ruling 3700 Oak Mortality Disease Control](#) is a state-specific authority to regulate *P. ramorum*.

### Frequently Positive Genera in California:



Loropetalum



Camellia



Rhododendron



Viburnum

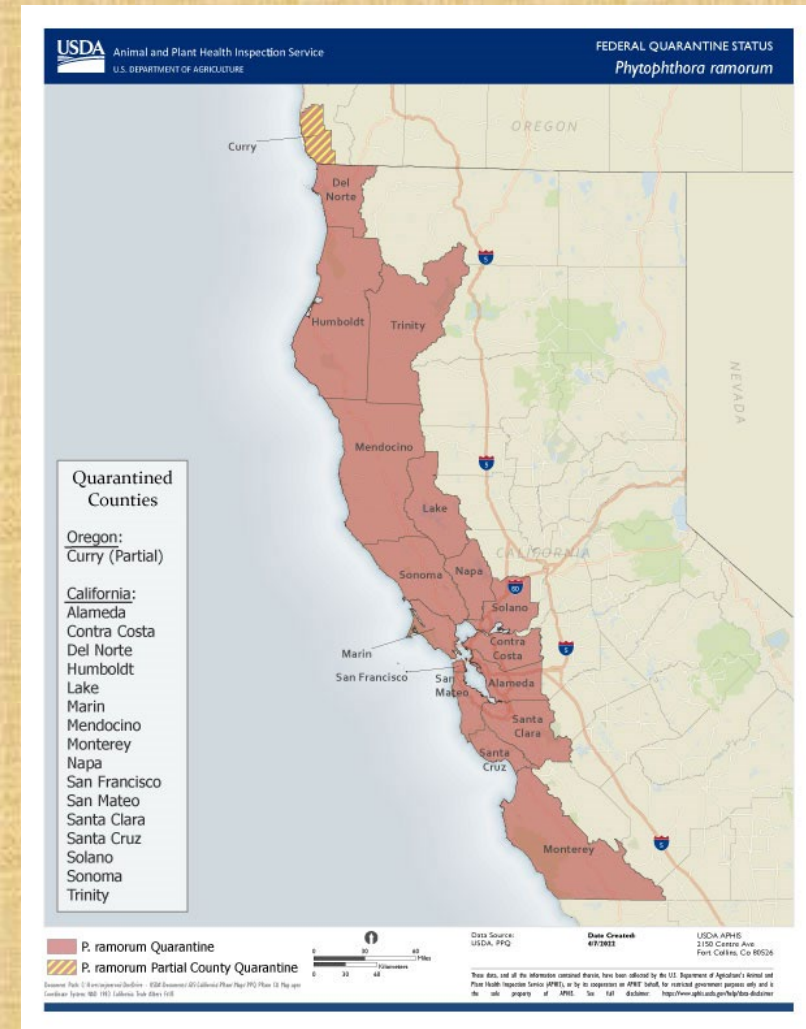


Pieris

# *Phytophthora ramorum* has been detected in 16 California counties

- Alameda
- Contra Costa
- Del Norte (2022)
- Humboldt
- Lake
- Marin
- Mendocino
- Monterey
- Napa
- San Francisco
- San Mateo
- Santa Clara
- Santa Cruz
- Solano
- Sonoma
- Trinity

# Quarantined Counties



# QUARANTINED COUNTY Nursery Regulations

## Host or Associated Host Plant (HAP):

- Annual inspection and sampling
  - Minimum of 40 samples
- Samples taken from symptomatic plants
  - If there is no symptomatic tissue, then asymptomatic plants must be sampled with bias toward proven hosts
- 30-day pre-shipment inspections
- Ship with Federal Shield (interstate) or Certificate of Quarantine Compliance for CCR 3700 (intrastate)

## Non-HAP in Soil Must:

- Annual inspection for the presence of regulated articles of nursery stock
- Remove duff from pots before shipping
- Ship with Federal Shield or Certificate of Quarantine Compliance



STATE OF CALIFORNIA  
DEPARTMENT OF FOOD & AGRICULTURE, SACRAMENTO  
PLANT HEALTH AND PEST PREVENTION SERVICES – PEST EXCLUSION  
CERTIFICATE OF QUARANTINE COMPLIANCE  
66-079 (7/2001) ORIGIN OR TREATMENT

THE FOLLOWING COMMODITY MEETS THE REQUIREMENTS OF  
STATE OF CALIFORNIA FOOD & AG CODE SECT. 6461.5A, 5704

COMMODITY «Commodity»	QUANTITY «Quantity» Pallets		
SHIPPER «Shipper»			
CONSIGNEE «Consignee»			
<b>ORIGIN OR RESHIPMENT</b>			
<input type="checkbox"/> COMMODITY ORIGINATED IN A PORTION OF _____ COUNTY NOT KNOWN TO BE INFESTED WITH: _____			
<input type="checkbox"/> IDENTITY HAS BEEN MAINTAINED AND IT HAS NOT BEEN EXPOSED TO INFESTATION			
<b>TREATMENT - FUMIGATION</b>			
<input type="checkbox"/> ATMOSPHERIC	<input type="checkbox"/> VACUUM	<input type="checkbox"/> TARPED	<input type="checkbox"/> CHAMBER
DATE «Fum_date»	CONCENTRATION 2 lbs	DURATION AND TEMPERATURE 2 hours	
CHEMICAL (ACTIVE INGREDIENT) Methyl Bromide	TREATMENT «Fumigant_Schedule»	ADDITIONAL INFORMATION «Enclosure»	
ADDITIONAL DECLARATION Carrier: «Carrier»			
PLANT QUARANTINE OFFICER	COUNTY	DATE	



# *Phytophthora ramorum* Protocol

- Major changes to the Confirmed Nursery Protocol include:
  - Increased minimum sample numbers at previously positive nurseries for biannual inspections.
    - 199 became 332 (20,000 regulated plants) samples required
  - Block destruction trigger
    - An entire block of plants can be destroyed after 2 positive delimitations in the block
  - Soil must be remediated under positive plants if regulated plants are to be placed there.



# Phytophthora ramorum Host List

<i>Arctostaphylos glauca</i> §
<i>Arctostaphylos hooveri</i> §
<i>Arctostaphylos montereyensis</i> §
<i>Arctostaphylos morroensis</i> §
<i>Arctostaphylos pilosula</i> §
<i>Arctostaphylos pumila</i> §
<i>Arctostaphylos silvicola</i> §
<i>Arctostaphylos viridissima</i> §
<i>Berberis aquifolium</i> § (= <i>Mahonia aquifolium</i> )
<i>Chamaecyparis lawsoniana</i> §
<i>Chrysolepis chrysophylla</i> §
<i>Larix × eurolepis</i> §
<i>Larix decidua</i> §

<i>Lophostemon confertus</i> §
<i>Notholithocarpus densiflorus</i> (= <i>Lithocarpus densiflorus</i> )*
<i>Phoradendron serotinum</i> subsp. <i>Macrophyllum</i> §
<i>Vaccinium parvifolium</i> §
<i>Vinca minor</i> §
<i>Abies alba</i> §
<i>Abies procera</i> §
<i>Alnus cordata</i>
<i>Arctostaphylos glandulosa</i> §
<i>Arctostaphylos montaraensis</i> §
<i>Arctostaphylos pallida</i> §
<i>Arctostaphylos peninsularis</i> §
<i>Arctostaphylos rainbowensis</i> §

<i>Arctostaphylos virgata</i> §
<i>Arctostaphylos viscida</i> §
<i>Betula pendula</i>
<i>Ceanothus oliganthus</i> §
<i>Cornus capitata</i> §
<i>Fothergilla major</i> §
<i>Hydrangea seemanii</i> §
<i>Ilex latifolia</i> §
<i>Larix occidentalis</i> §
<i>Lonicera periclymenum</i>
<i>Magnolia acuminata</i> §
<i>Magnolia delavayi</i> §
<i>Magnolia lotungensis</i> (= <i>Parakmeria lotungensis</i> )

<i>Picea sitchensis</i> §
<i>Pickeringia montana</i> §
<i>Pinus ponderosa</i> §
<i>Polystichum munitum</i> §
<i>Quercus phillyraeoides</i> §
<i>Quercus robur</i> §
<i>Rosa hybrida</i> 'Radrazz' <sup>§</sup>
<i>Rubus ursinus</i> §
<i>Salix babylonica</i>
<i>Sarcococca hookeriana</i> §
<i>Schima argentea</i> §
<i>Sorbus aucuparia</i> §
<i>Syringa meyeri</i> §
<i>Syringa pubescens</i> §
<i>Tsuga heterophylla</i> §
<i>Vaccinium intermedium</i> §

- The USDA *P. ramorum* host list link: [https://www.aphis.usda.gov/plant\\_health/plant\\_pest\\_info/pram/downloads/pdf\\_files/usdaprlist.pdf](https://www.aphis.usda.gov/plant_health/plant_pest_info/pram/downloads/pdf_files/usdaprlist.pdf)
- 55 new hosts added to CCR 3700 in 2022. Approximately 190 hosts total.
- §New additions to the proven host list
- \*Unmanufactured wood and wood products, including firewood, logs, and lumber of species listed above are not regulated. See Federal Regulations, 7 CFR 301.92 - 301.92-2.

# Positive Nursery Response

If *P. ramorum* is detected at a nursery, follow steps listed in the Confirmed Nursery Protocol in the [Phytophthora ramorum Domestic Regulatory Program Manual](#).



Animal and Plant Health Inspection Service  
U.S. DEPARTMENT OF AGRICULTURE

## *Phytophthora ramorum* Domestic Regulatory Program Manual

Chapter

3

### Interstate<sup>1</sup> Confirmed Nursery Protocol

*For Interstate Nurseries Confirmed  
Positive for P. ramorum*

Chapter

4

### Intrastate Retail Nurseries and Retail Nursery Dealers

*Positive for P. ramorum*

# Trace Forward Protocol



The positive nursery is required to provide trace records to county or state officials within five business days.



Trace records are sent to the USDA *P. ramorum* National Operations Manager within five business days of *P. ramorum* detection.



Trace records are distributed to county agricultural offices for inspections at locations that have received suspect plant material from the positive nursery within the last six months.



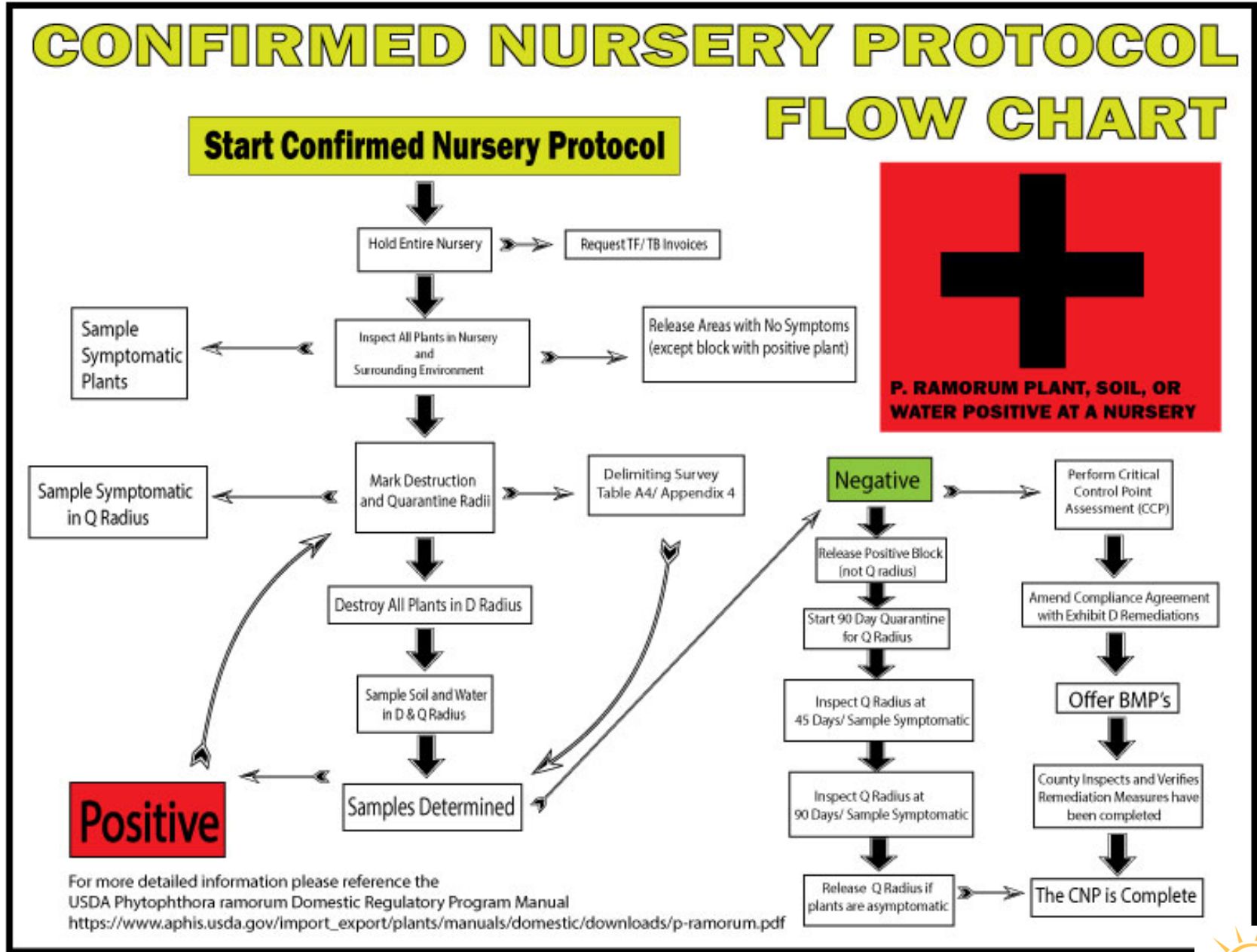
Inspect any suspect plants from the positive genera and all other high-risk genera: *Camellia* spp., *Kalmia* spp., *Pieris* spp., *Rhododendron* spp. (including azalea), and *Viburnum* spp. regardless of their location in the nursery.



If symptoms are seen, plants are sampled, flagged, and put on hold pending laboratory results. Use the Sampling and Submission Protocol on page 8-1-1 of the [Phytophthora ramorum Domestic Regulatory Program Manual](#).

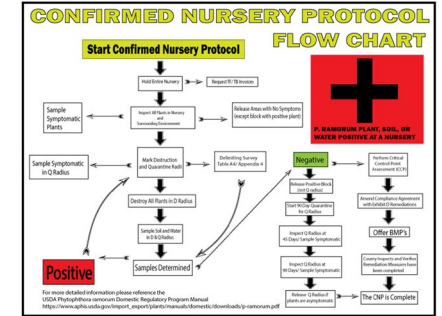
# Response at Positive Nurseries:

# CONFIRMED NURSERY PROTOCOL Flow Chart





# PHYTOPHTHORA RAMORUM: CONFIRMED NURSERY PROTOCOL CHECKLIST



- Release blocks of plants that are asymptomatic (except positive blocks). Sampled plants remain on hold until lab determinations are made.
- Mark Destruction (D) and Quarantine (Q) radii (2 meters) around the positive plant(s).
- To avoid the minimum 90-day quarantine period the nursery can choose the Alternative Quarantine Release Strategy and destroy all the plants in the destruction and quarantine radii.
- Collect prescribed number of delimiting samples in the positive block.
- Destroy all plants in the Destruction Radius.



# Biannual Inspection Protocol

Used to detect the presence of *Phytophthora ramorum* in positive (or previously positive) nurseries

Enhanced protocols for nurseries that have been positive for *P. ramorum*:

- Approximately 300 foliar samples collected twice a year
  - Number of samples depends on amount of HAP in nursery  
([See table 3-1-5 in the USDA Phytophthora ramorum Domestic Regulatory Program Manual](#))
- Timed during periods conducive to disease
  - Spring and Fall
- Samples Collected From
  - Plants
  - Water
  - Cull Pile
- Biannual inspections end after six negative inspections

# SHIPMENT PRENOTIFICATION REQUIREMENT FOR POSITIVE NURSERIES

Interstate shipments of Camellia, Kalmia, Pieris, Rhododendron (including Azalea), and Viburnum nursery stock from POSITIVE nurseries must provide written notification to non-regulated states.

Nurseries can send invoices attached to an email to the Notify mailbox. Invoices are stored and an email message will be sent to the receiving state's regulatory offices.

**PERDUE NURSERY NOTIFICATION SERVICE:**

**<https://notify.ceris.purdue.edu/>**

# Chronology of Positive Nurseries in California

Year	Non-Quarantine		Quarantine		Total
	Production	Retail	Production	Retail	
2025	1		3	2	6
2024			3	1	4
2023		1	4	1	6
2022					0
2021	3				3
2020	2		3		5
2019	2	3	5	5	15
2018	2	3	2	4	11
2017	1	3	5	7	16
2016	1			1	2
2015					0
2014	1				1
2013			1		1

# 2025 *Phytophthora ramorum* Nursery Detections

Trace forward inspections from six positive nurseries in 2025 have yielded no additional positive samples. However, a trace back inspection to a production nursery yielded four positive Camellia and three positive Viburnum plants.

5,082 plants were destroyed at these six positive nurseries.

635 samples collected in response to positives. 4,092 *P. ramorum* samples processed total year to date by the CDFA Plant Pest Diagnostics Center.

Camellia, Loropetalum, Rhododendron, and Viburnum species were positive this year.

One out of state trace back inspection from Oregon was negative.

# Number of Plants Destroyed at Positive Nurseries in 2025

<b>Nursery</b>	<b>Number of Plants Destroyed</b>
Production	<b>72</b>
Retail	<b>120</b>
Production	<b>450</b>
Production	<b>93</b>
Retail	<b>35</b>
Production	<b>4,309</b>
<b>Total</b>	<b>5,082</b>



# Nursery Best Management Practices Resources

[National Ornamental Research Site Best Management Practices Manual](#)

[Presidio Phytophthora Management Recommendations](#)

[Safe Procurement and Production Manual: A Systems Approach for the Production of Healthy Nursery Stock](#)

[UC Davis Best Management Practices for Phytophthora ramorum](#)

[Phytophthora Online Course: Training for Nursery Growers](#)

[Accreditation to Improve Restoration \(AIR\) Nursery Program](#)

USDA/APHIS/PPQ

<https://www.aphis.usda.gov/plant-pests-diseases/pramorum>

# *Phytophthora ramorum* Resources



California Department of Food & Agriculture

[www.cdfa.ca.gov](http://www.cdfa.ca.gov)

PHPPS Extranet Site

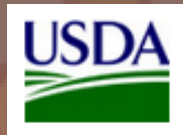
<http://phpps.cdfa.ca.gov/pbuilder/FileReader.asp?pageid=982>

CDFA Plant Quarantine Manual

[http://pi.cdfa.ca.gov/pqm/manual/htm/pqm\\_index.htm](http://pi.cdfa.ca.gov/pqm/manual/htm/pqm_index.htm)

USDA/APHIS/PPQ

<https://www.aphis.usda.gov/plant-pests-diseases/pramorum>



USDA *Phytophthora ramorum* Domestic Regulatory Program Manual

[https://www.aphis.usda.gov/import\\_export/plants/manuals/domestic/downloads/p-ramorum.pdf](https://www.aphis.usda.gov/import_export/plants/manuals/domestic/downloads/p-ramorum.pdf)

California Oak Mortality Task Force

<http://www.suddenoakdeath.org>



The background features a vibrant, stylized illustration of a parrot with black, white, and blue feathers, perched among large, colorful flowers in shades of orange, yellow, and red. The overall style is reminiscent of a folk-art or poster aesthetic.

**CDFA *Phytophthora ramorum* Program Update**

**Thank You!**

Please send questions or comments about this presentation or the CDFA cooperative *Phytophthora ramorum* program to Carolyn Lambert at:

[carolyn.lambert@cdfa.ca.gov](mailto:carolyn.lambert@cdfa.ca.gov)