

Citrus Pest & Disease Prevention Committee January, 2010

Asian Citrus Psyllid In California

Larry Bezark, ACP Task Force Co-Chair
Plant Health and Pest Prevention Services
Integrated Pest Control Branch
California Department of Food and Agriculture



Protection of California Citrus from Exotic Pests and Diseases



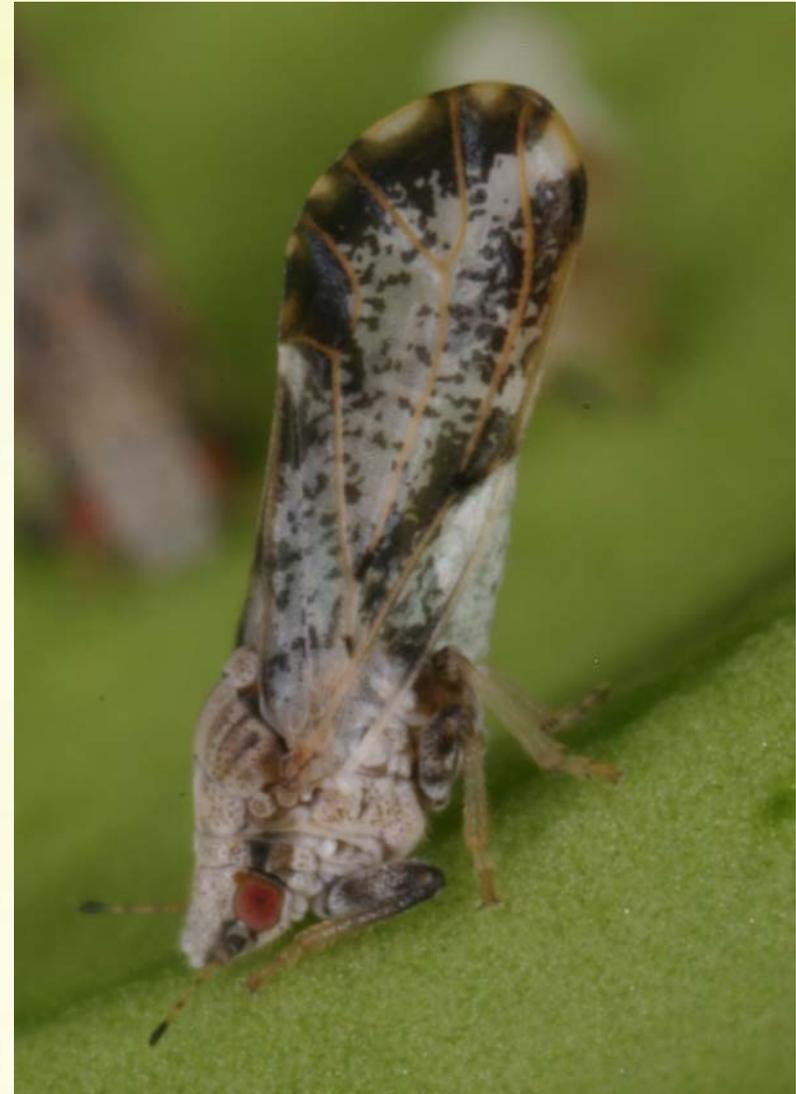
Asian Citrus Psyllid



Diaphorina citri Kuwayama

Adult Asian citrus psyllids

- ❖ 3-4 mm in length
- ❖ mottled wings
- ❖ wings held “roof-like” over body



UNIVERSITY OF
FLORIDA

EXTENSION

Institute of Food and Agricultural Sciences

Monitoring Psyllid Populations

- ❖ Inspect new leaf and shoot flushes of citrus
- ❖ Look for white honeydew and leaf distortion on new leaf flush and shoots.



In the presence of citrus greening...

...the status of the Asian citrus psyllid as a minor pest is a thing of the past.

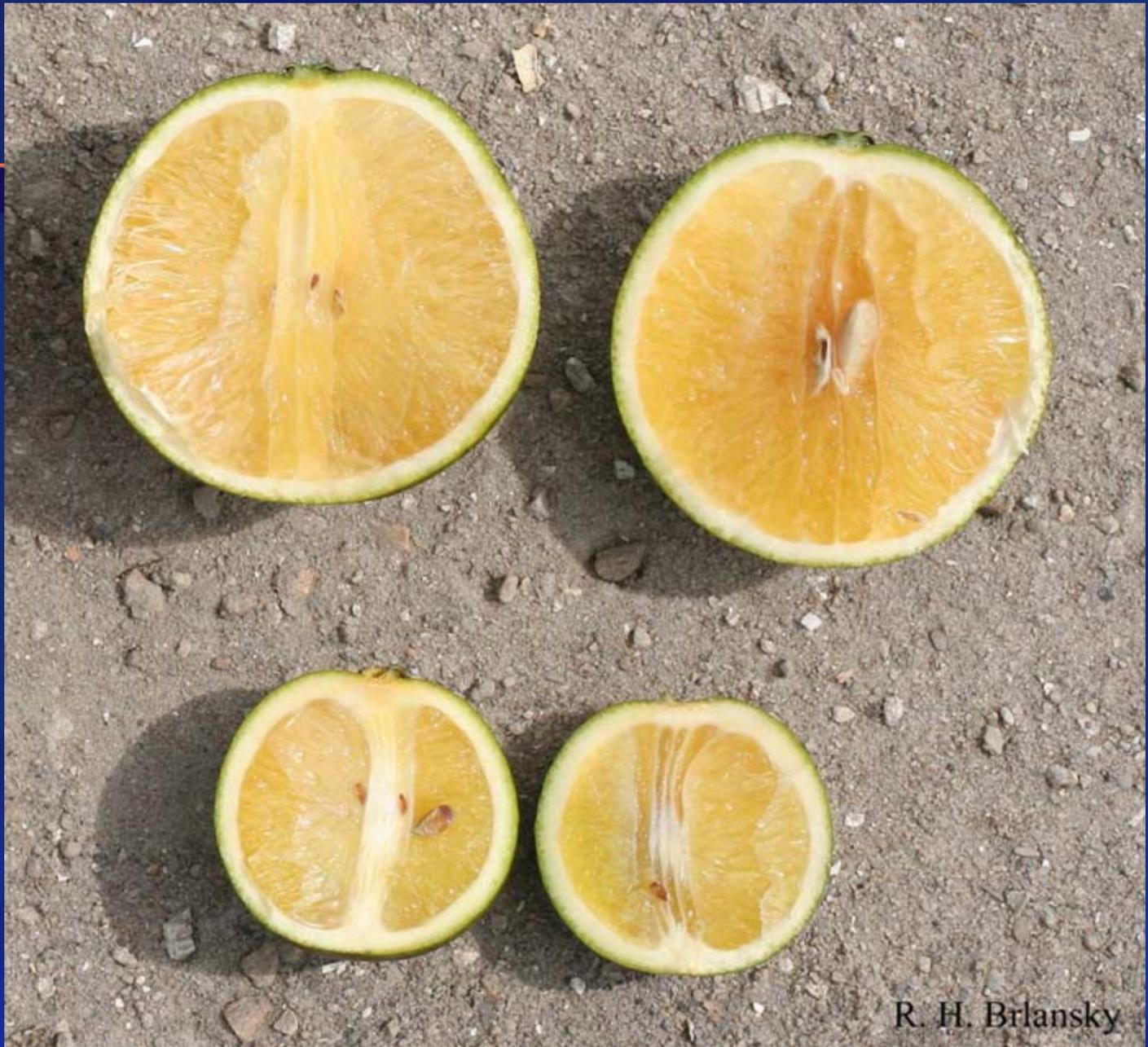




World Distribution (Citrus Greening)

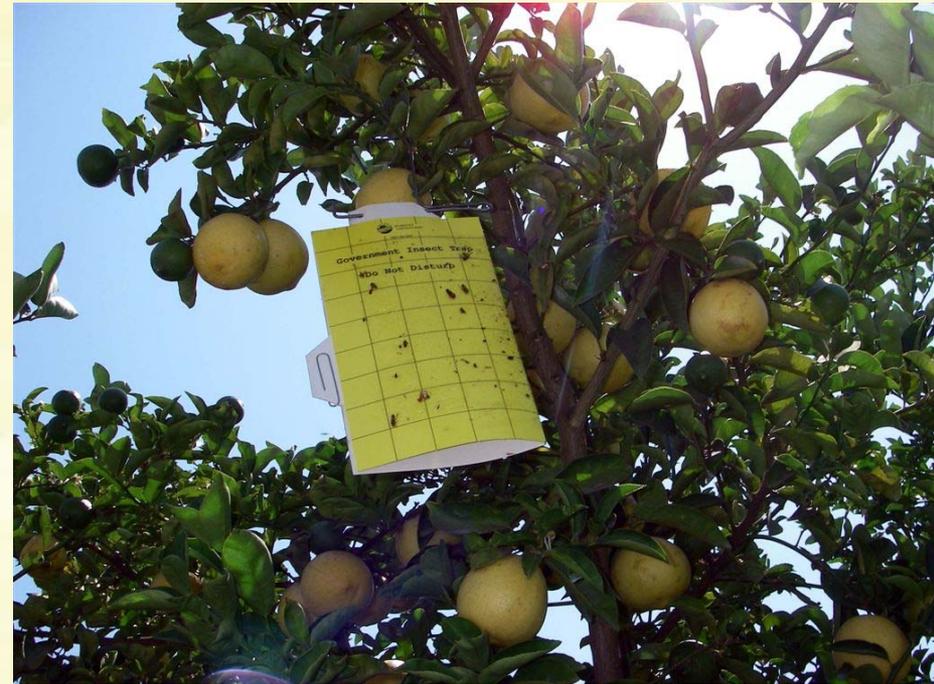
Misshaped fruit with aborted seeds



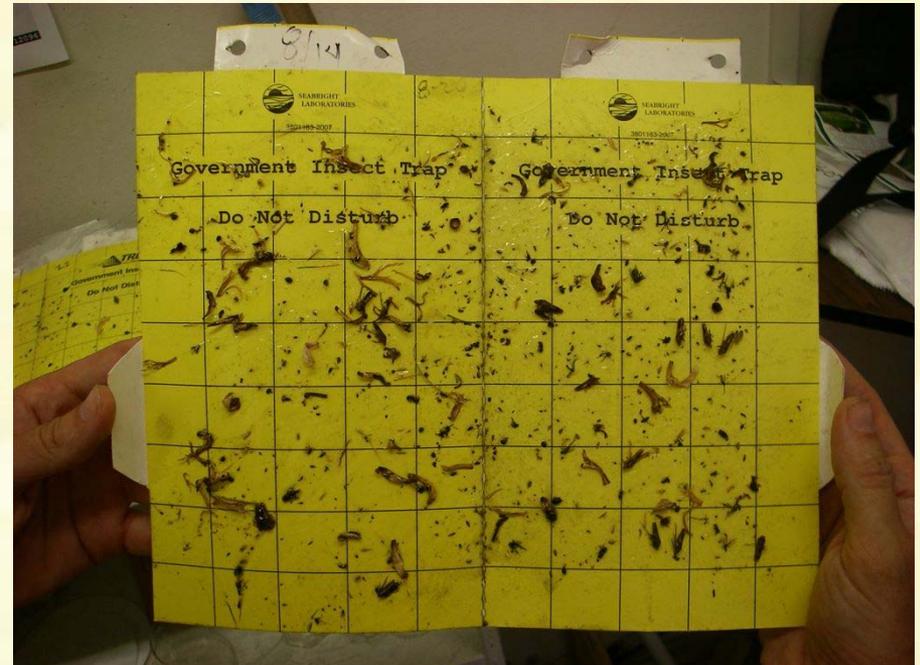


R. H. Brlansky

ACP Detection Activities



ACP Detection Activities



ACP Detection Activities

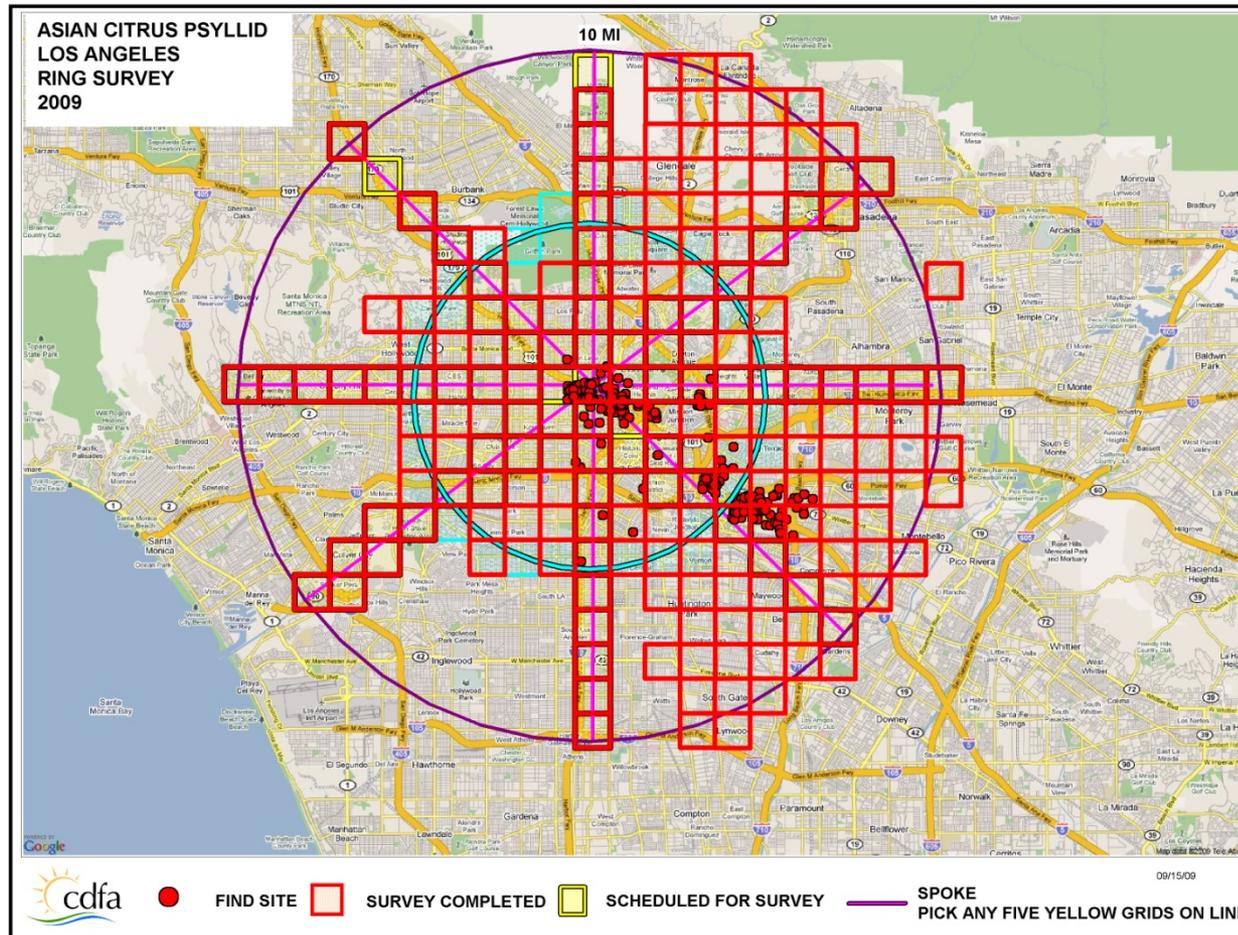


HLB Visual Survey

- The survey targets areas of the state that are at risk for HLB or Asian citrus psyllid.
- Areas that are surveyed include:
 - Residential areas
 - Nurseries
 - Commercial groves
 - Specialty farms/nurseries
 - Airports, produce/flower markets and mail sorting centers



Determining The Extent of The Infestation



- A transect cardinal point survey (trap placement, vacuum survey and visual survey) is performed out to 10 miles from the initial epicenter.
- YP traps were placed at the density of 100 traps in the core sq mi and 50 traps per sq mi in the adjacent sq miles



ACP Treatment Activities

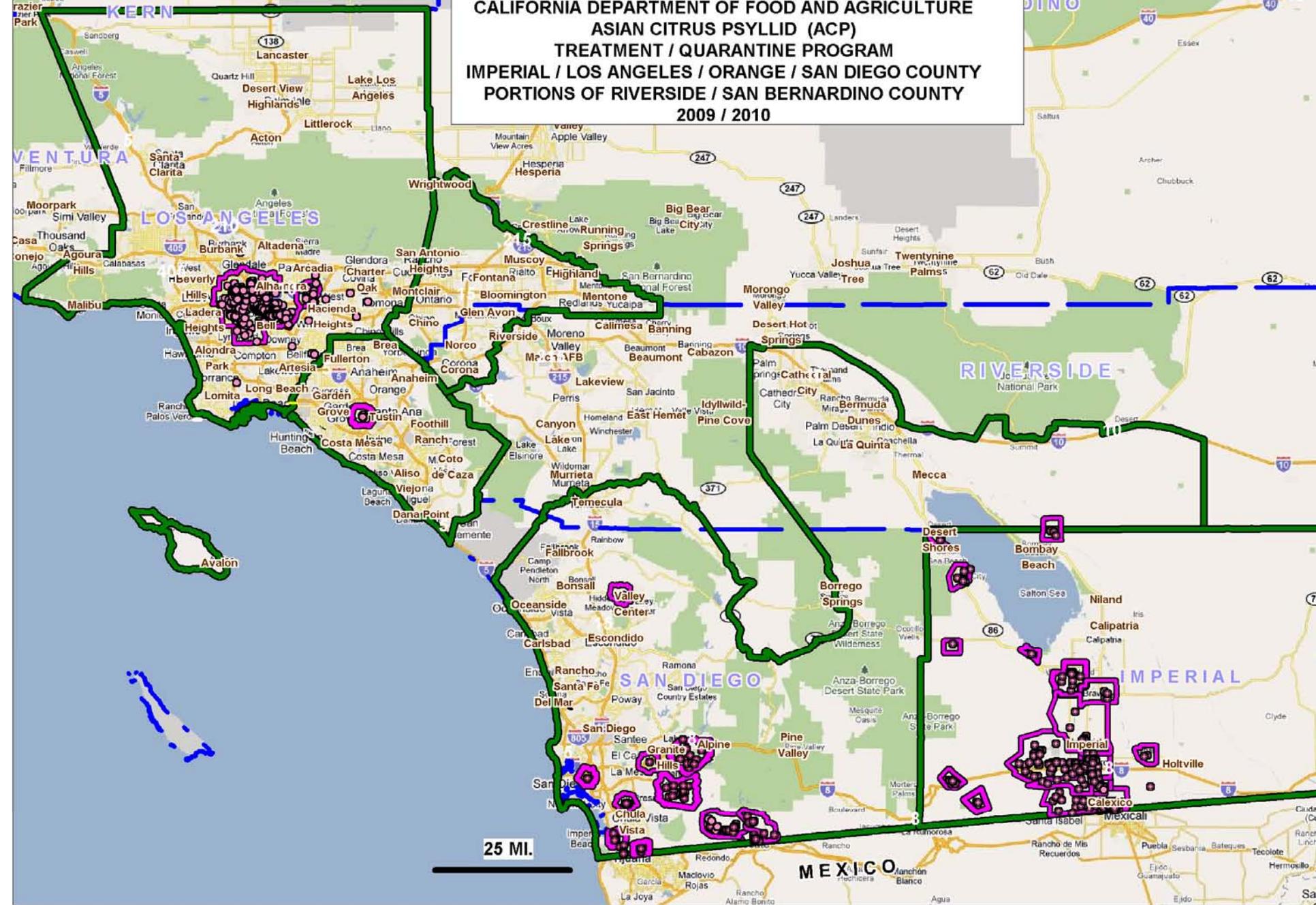


Treatment Activities

- Foliar application only to citrus
- Soil treatment only to citrus
- Both treatments made together
- Fruit can be eaten any time

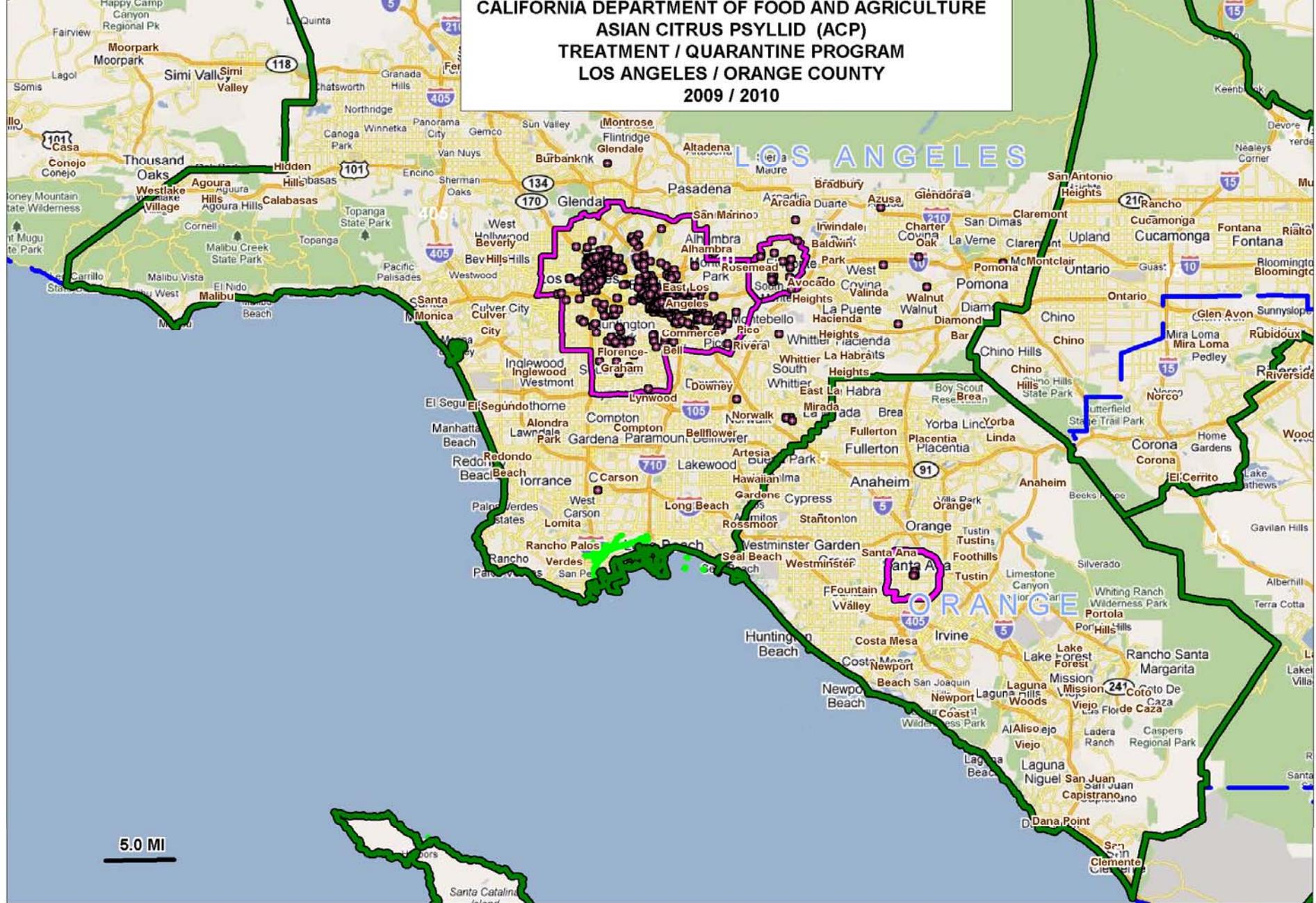


**CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE
 ASIAN CITRUS PSYLLID (ACP)
 TREATMENT / QUARANTINE PROGRAM
 IMPERIAL / LOS ANGELES / ORANGE / SAN DIEGO COUNTY
 PORTIONS OF RIVERSIDE / SAN BERNARDINO COUNTY
 2009 / 2010**



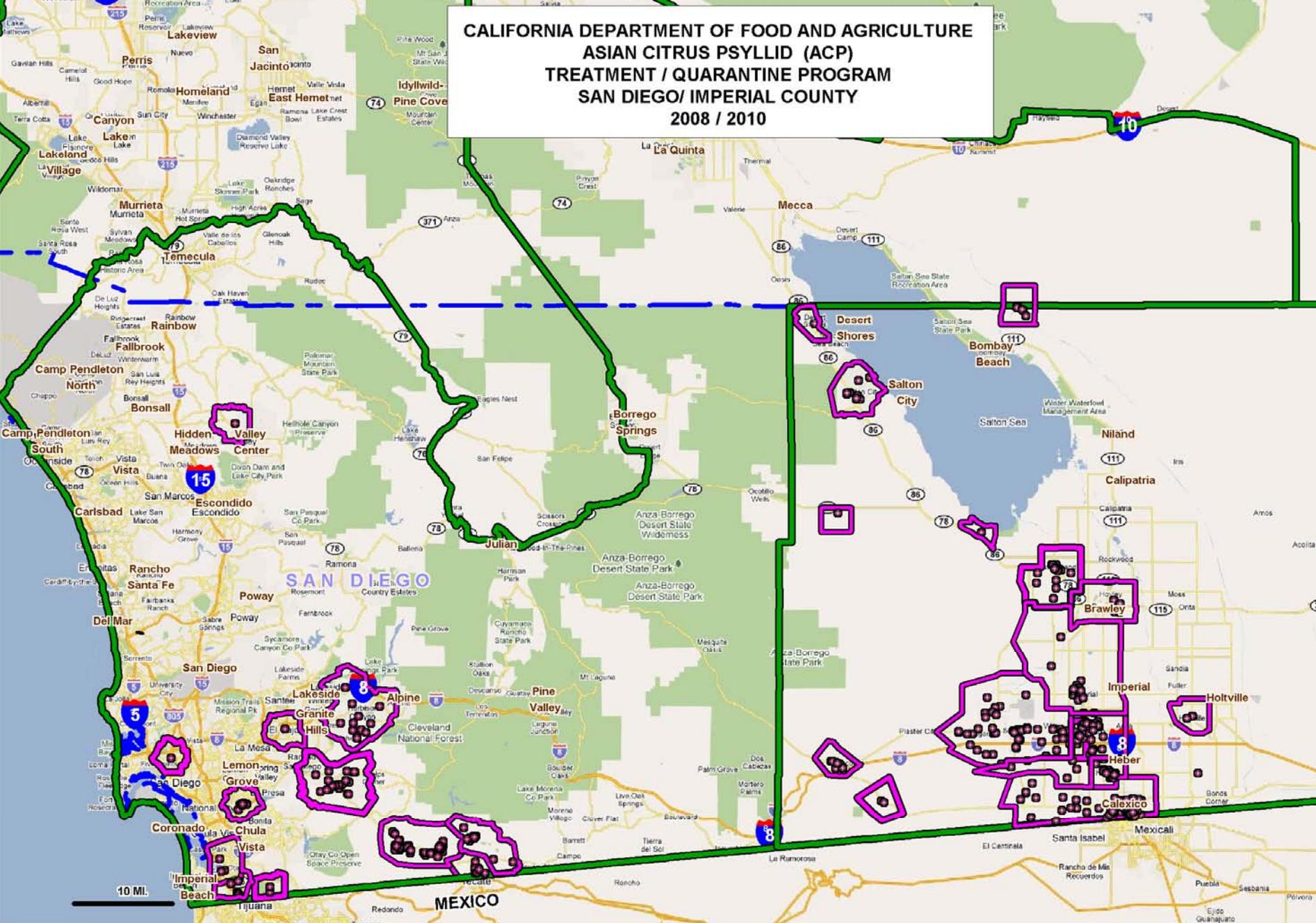
- ACP DETECTION**
- PROGRAM BOUNDARY**
- QUARANTINE BOUNDARY**

**CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE
 ASIAN CITRUS PSYLLID (ACP)
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 2009 / 2010**



- ACP DETECTION
 - PROJECT BOUNDARY
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**CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE
 ASIAN CITRUS PSYLLID (ACP)
 TREATMENT / QUARANTINE PROGRAM
 SAN DIEGO/ IMPERIAL COUNTY
 2008 / 2010**



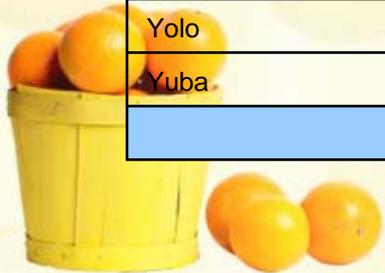
Planned Trapping Expansion

County	Estimated # of Traps
Butte	615
El Dorado	220
Fresno	5,940
Glenn	135
Imperial	1,770
Kern	6,765
Kings	350
Madera	2,470
Merced	1,170
Monterey	590
Orange	135
Placer	70
Riverside	5,590
San Bernardino	810

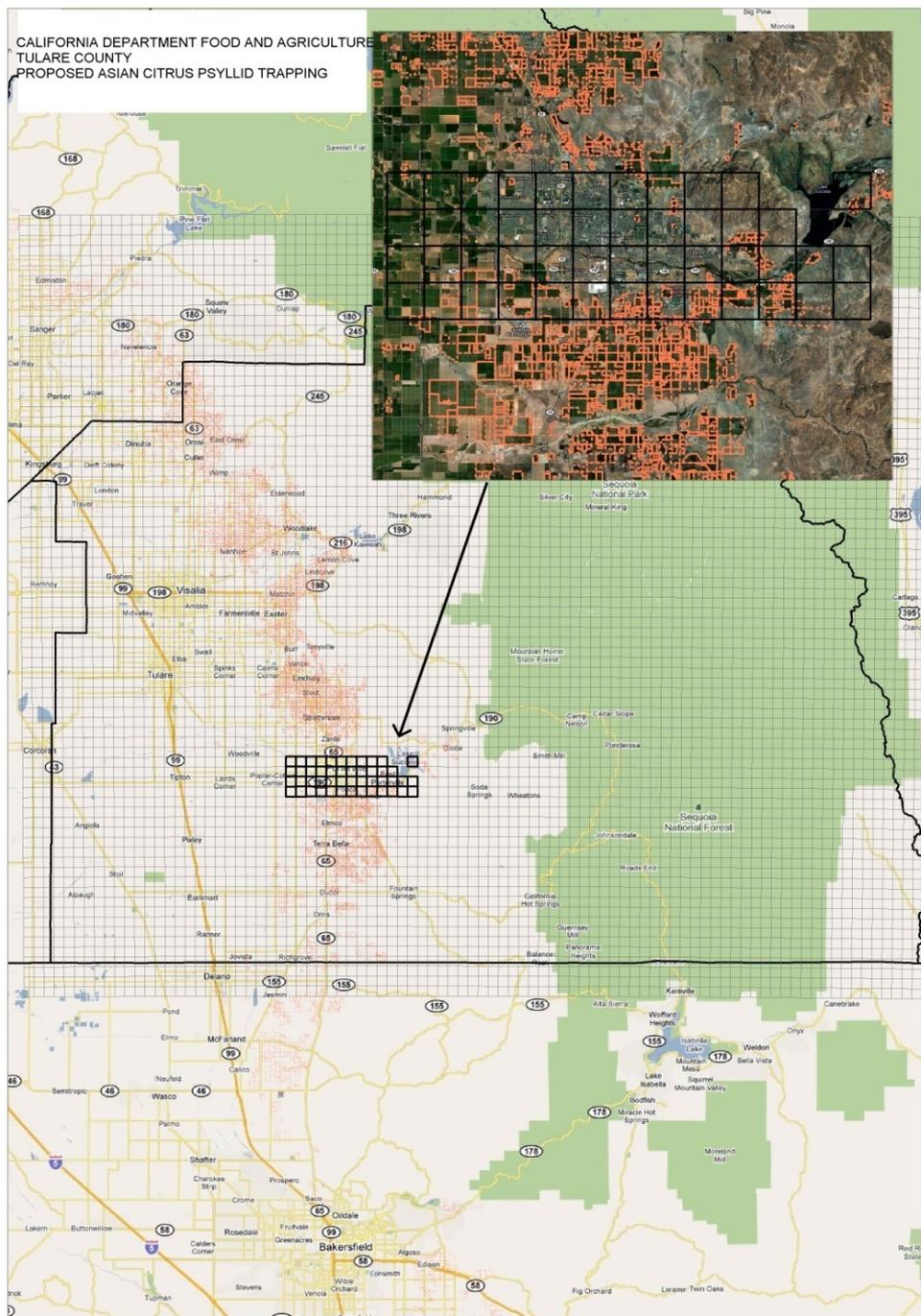


Planned Trapping Expansion

County	Estimated # of Traps
San Diego	2,980
San Joaquin	125
San Luis Obispo	1,255
Santa Barbara	1,120
Santa Clara	465
Santa Cruz	550
Solano	1,195
Sonoma	240
Stanislaus	610
Sutter	660
Tehama	200
Tulare	3,135
Ventura	5,135
Yolo	645
Yuba	525
Total # of Traps	18,840



CALIFORNIA DEPARTMENT FOOD AND AGRICULTURE
 TULARE COUNTY
 PROPOSED ASIAN CITRUS PSYLLID TRAPPING



□ 1 SQUARE MILE

CDFFA Outreach

Web Site: www.cdfa.ca.gov/phpps/acp

<http://www.youtube.com/user/CDFAtoday>

HAVE YOU SEEN THIS INSECT? Asian Citrus Psyllid



The Asian citrus psyllid, *Diaphorina citri*, is a small, aphid-like insect. It feeds on the new flush of citrus and very closely related plants such as orange jasmine (*Murraya paniculata*). Psyllid feeding causes burned tips and twisting of the new leaves. More importantly, it can spread the bacterium that causes Huanglongbing (HLB) disease.

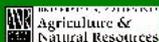
HAVE YOU SEEN THIS CITRUS DISEASE? Huanglongbing or Citrus Greening Disease



Huanglongbing (HLB), also known as citrus greening disease or yellow shoot disease, is a very destructive bacterial disease of citrus and closely related plants. It is spread primarily by psyllid insect vectors and through grafting with infected budwood. Symptoms include yellow shoots, leaf mottle, small upright leaves, and lopsided fruits with a bitter flavor. Diseased trees are non-productive and must be removed and destroyed to prevent further spread of the disease. HLB is a serious threat to the California citrus industry.

IF YOU SUSPECT YOU HAVE SEEN THIS INSECT OR DISEASE CALL THE CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE HOTLINE: 1-800-491-1899

E. Grafton-Cardwell and G. Vidalakis, University of California Riverside
University of California ANR Core Grants Program
Photos by M. Rogers and M. Keremane



CALL 1-800-491-1899 TO REPORT

www.cdfa.ca.gov/phpps/acp

FREE
MAKING LEMONS INSIDE

ASIAN CITRUS PSYLLID

ASIAN CITRUS PSYLLID

HAVE YOU SEEN THIS REALLY TINY BUG?

Actual Size



CALIFORNIA DEPARTMENT OF
FOOD & AGRICULTURE

Pest Detection/ Emergency Projects
1230 N Street, Room A-336
Sacramento, CA 95816

PHOTO: STD.
US POSTAGE PAID
SACRAMENTO, CA
PERMIT NO 818

ASIAN CITRUS PSYLLID

ASIAN CITRUS PSYLLID

ASIAN CITRUS PSYLLID

FREE
MAKING LEMONS INSIDE

CALL 1-800-491-1899 TO REPORT

Actual Size

Traducción en español dentro del folleto.
Una lepa gratis!

C DFA Outreach

STOP THE ASIAN CITRUS PSYLLID!



Adult psyllid - 1/8 inch



Eggs tucked inside new citrus flush



Young stages with waxy tubules



New citrus flush is twisted or burnt back

The psyllid is a carrier of the bacterial disease Huanglongbing (citrus greening disease). The psyllid feeds on citrus and closely related plants.

IF YOU SEE THIS PSYLLID IN CALIFORNIA CALL 1-800-481-1888
 California Dept. of Food and Agriculture



STOP HUANGLONGBING = CITRUS GREENING DISEASE!



Asymmetrical leaf blotch



Lopsided, bitter, hard fruit with dark seeds



Diseased - Healthy



Yellow shoots

This devastating disease of citrus is spread by the psyllid.

IF YOU SUSPECT THAT YOUR CITRUS HAS THIS DISEASE CALL 1-800-481-1888
 Calif. Dept. of Food and Agriculture

G. Vidalakis and E. Gratton-Cardwell
 University of California
 ANR Core Grants Program
 Photos by M. Rogers and M. Koremanc

EL PEÍLIDO ASIÁTICO DE LOS CÍTRICOS

No se encontró en California el psílido asiático de los cítricos.

Este insecto pequeño, volador puede transmitir una enfermedad llamada Huanglongbing (HLB) que es muy dañosa a los árboles cítricos. A causa del HLB, la fruta no se desarrolla completamente, tiene sabor amargo y no es madura. Los retoños son deformados y enroscados y eventualmente el árbol se muere.

No se puede curar el HLB. Los árboles que están enfermos deben ser destruidos y quitados.

Para más información, visite el sitio del Internet de CDFA en:
www.cdffa.ca.gov/plapps/asp

El psílido asiático de los cítricos es muy pequeño! Es más pequeño que una pulga. Se encuentran en los retoños - en la extremidad de los tallos y debajo de las hojas.

Llama al **1-800-481-1888** (el sospecha la presencia de esta plaga o enfermedad).

Psíldos, ninfas y multitudes de huevecillos encontrados por debajo de la hoja.

Psyllids, nymphs, and egg masses found on the underside of a leaf!

Fotografía por: Michael Rogers USDA

ASIAN CITRUS PSYLLID

Asian Citrus Psyllid (ACP) has been detected in California.

This tiny, flying insect can transmit a harmful citrus disease called Huanglongbing (HLB). HLB causes underdeveloped, bitter-tasting fruit that doesn't ripen. New growth is misshapen and twisted, and the tree eventually dies.

HLB is not curable. Diseased trees must be destroyed and removed.

For more information, visit the CDFA website at www.cdffa.ca.gov/plapps/asp

The ACP is TINY! It's smaller than a flea. The best place to look for it is on new growth - at the tips of stems and the underside of leaves.



Adult psyllid



Psyllid nymph



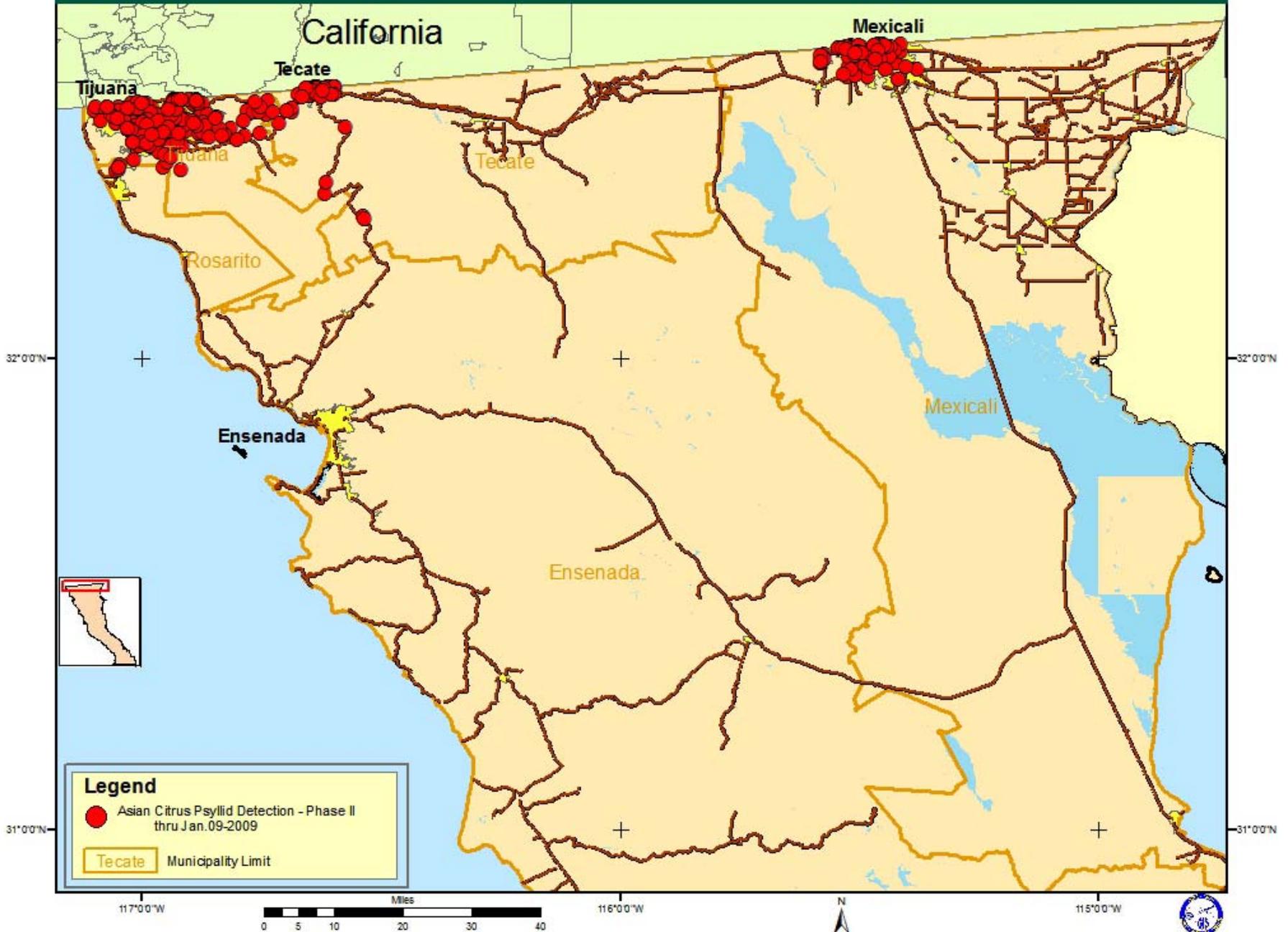
Actual size

CALL 1-800-481-1888 TO REPORT

Fotografía por: Michael Rogers USDA



Asian Citrus Psyllid Cooperative Program Baja California, Mexico Phase II





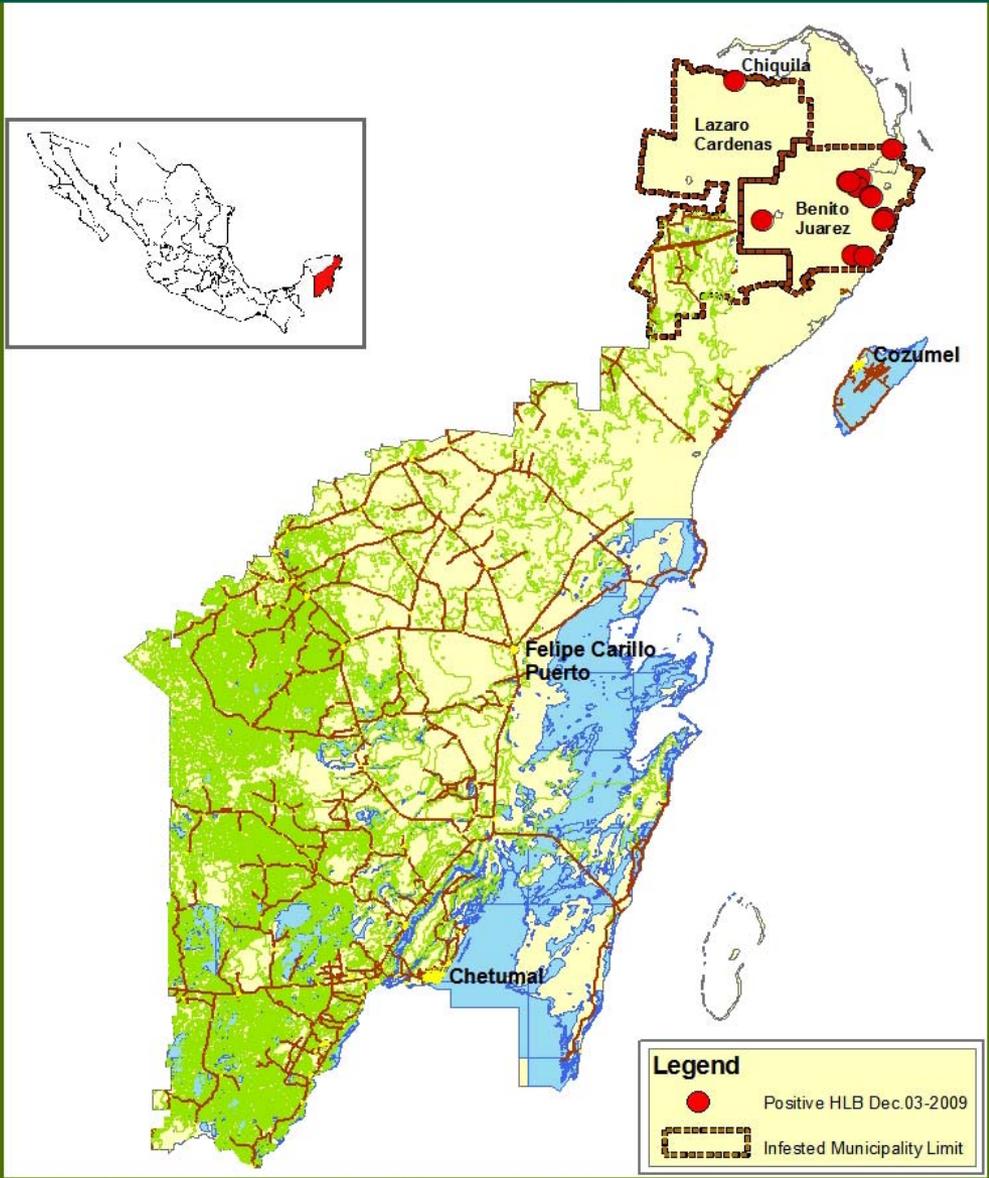
Asian Citrus Psyllid Program National Health Service and Food Safety (SENASICA) HLB in MEXICO



USDA, APHIS, IS
North America Region GIS Center
Mexico, D.F.



Asian Citrus Psyllid Program
National Health Service and Food Safety (SENASICA)
Quintana Roo - MEXICO



USDA, APHIS, IS
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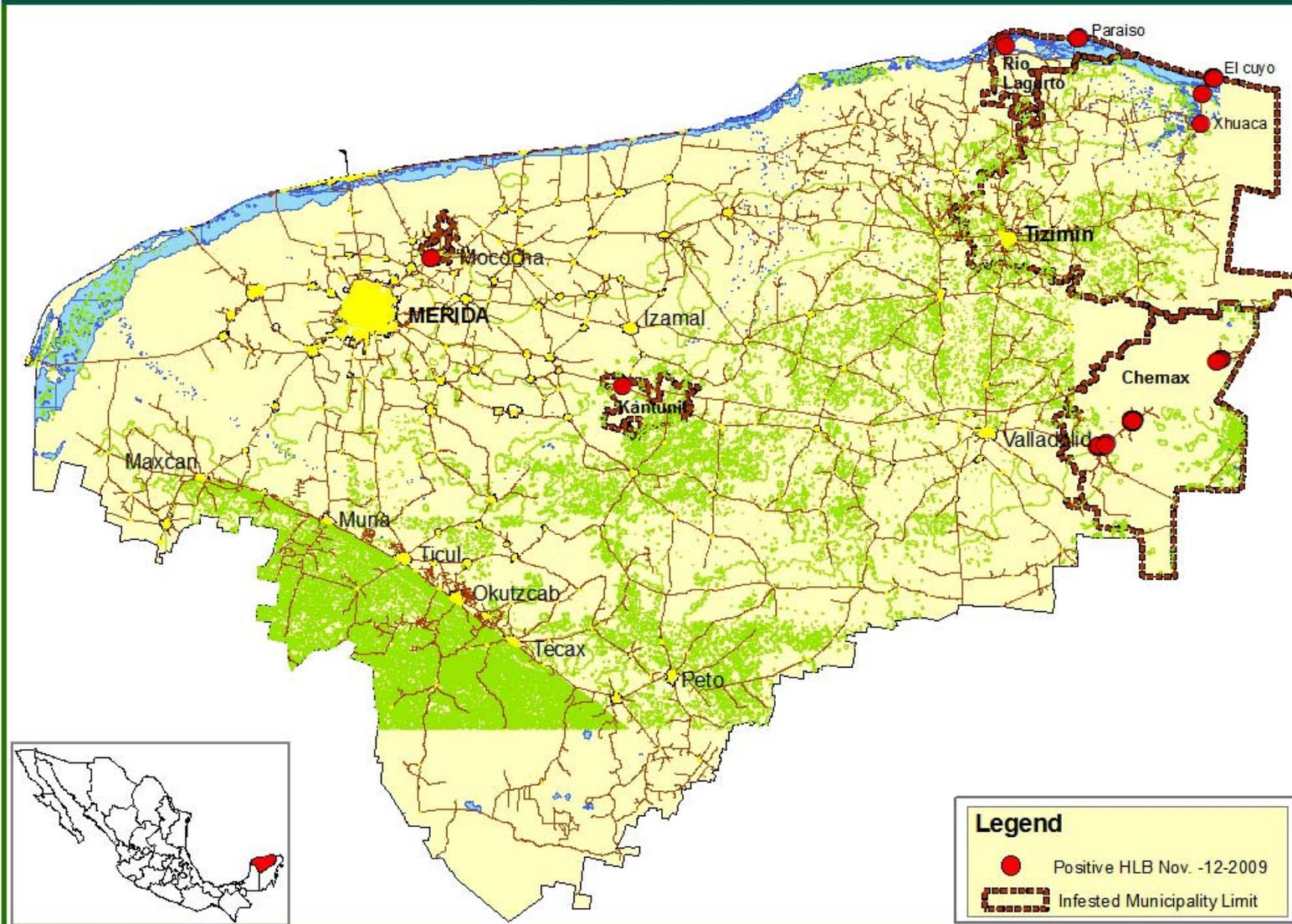
Data Source:
DGSV - SENASICA
INEGI





Senasica

Asian Citrus Psyllid Program National Health Service and Food Safety (SENASICA) Yucatan - MEXICO



USDA, APHIS, IS
North America Region GIS Center
Mexico, D.F.



Legend

- Positive HLB Nov. -12-2009
- Infested Municipality Limit

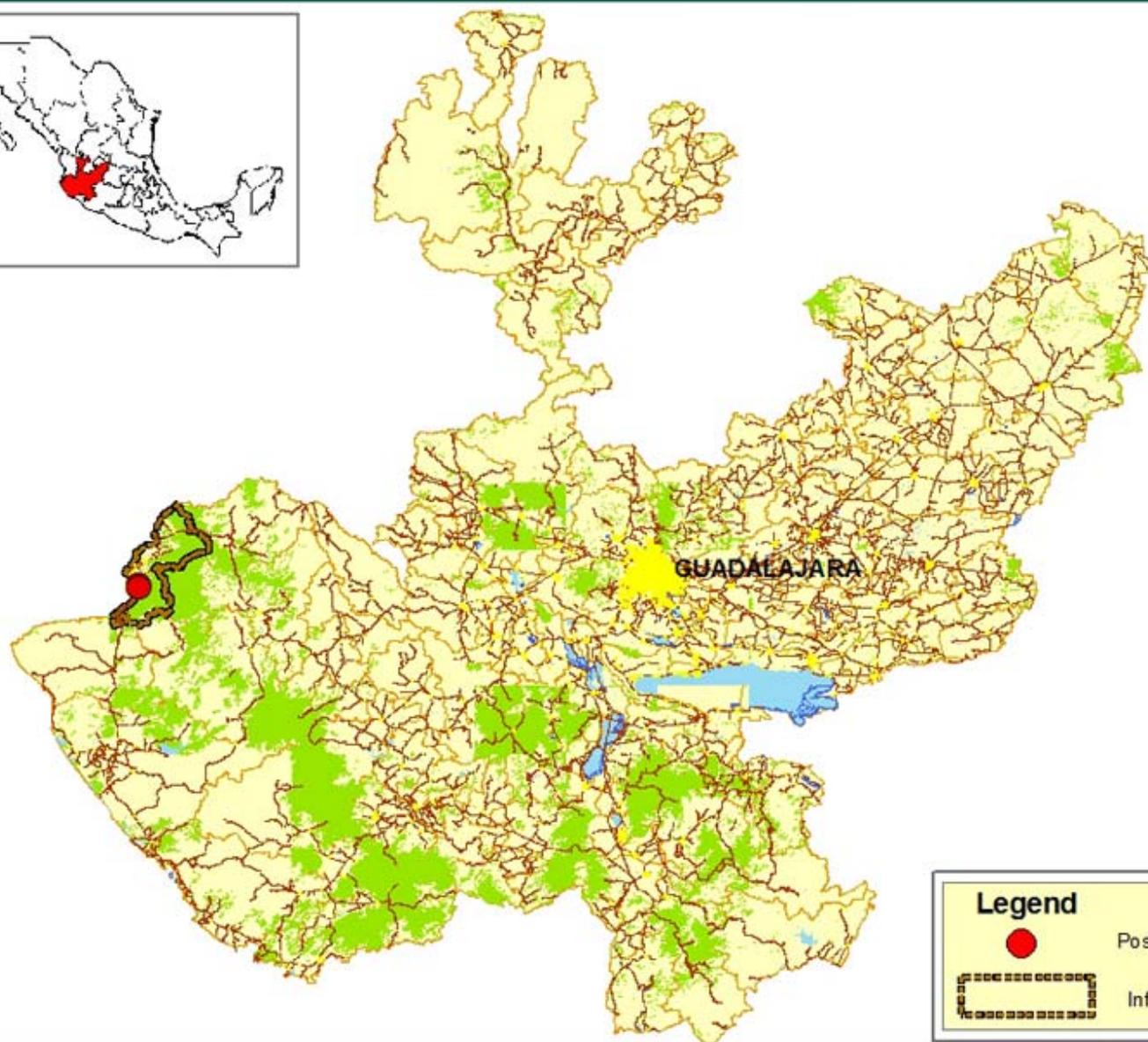
Data Source:
DGSV - SENASICA
INEGI





Senasica

Asian Citrus Psyllid Program National Health Service and Food Safety (SENASICA) Jalisco State - MEXICO



Legend

- Positive HLB Dec. 10-2009
- ▭ Infested Municipality Limit





Asian Citrus Psyllid Program
National Health Service and Food Safety (SENASICA)
Nayarit State - MEXICO

