Strategies for Reaching the Public in California

Beth Grafton-Cardwell

UC Riverside Entomology
stationed at the Kearney Ag Center
and Director of Lindcove Research and Extension Center

HLB Task Force
Communications Subcommittee

Mission Statement

To communicate to the general public the devastating nature of ACP and HLB, to educate the citrus and ornamental industry in the details of identification and management of the pest and disease and to provide communication linkages between Governmental agencies, the University, and the citrus industry

California Department of Food and Agriculture
University of California
Citrus Research Board
USDA

Target Audiences

Detailed Information for Trainers and Citrus Industry	General Public
Researchers	Homeowners
Extension Specialists	Landscapers
Farm Advisors	Retailers
County Ag Commissioners	Migrant workers
State and local inspectors	Farmer's markets
Citrus growers	Floral markets
Pest Control Advisors	Garden shows
Nurserymen	County Fairs
Packers	Food Industry
Master Gardeners	Botanical gardens
Rare Fruit Growers	K-12

Information to the Industry and Trainers

- Meetings: packinghouses, nurseries, inspectors, master gardeners etc.
- PPT training with quizzing (meetings, online)
- PCA Training in the field (ACP samples, monitoring methods, treatment plans)
- UC IPM Guidelines for Citrus (ACP treatments)

University of California ANR Publications: 2006-07

Select & Zoom

PUBLICATION 8205

Asian Citrus Psyllid

ELIZABETH E. GRAFTON-CARDWELL, University of California, Riverside, and UC Kearney Agricultural Center, Parlier; **KRIS E. GODFREY,** California Department of Food and Agriculture, Sacramento; **MICHAEL E. ROGERS,** University of Florida Citrus Research and Education Center, Lake Alfred; **CARL C. CHILDERS,** University of Florida Citrus Research and Education Center, Lake Alfred; and **PHILIP A. STANSLY,** University of Florida Southwest Florida Research and Education Center, Immokalee

UNIVERSITY OF CALIFORNIA
Division of Agriculture and Natural Resources
http://anrcatalog.ucdavis.edu

UC IPM

UC Exotic/Invasive Pest and Disease Program

UC PEER REVIEWED

The Asian citrus psyllid, *Diaphorina citri* Kuwayama (Homoptera: Psyllidae) (fig. 1) is a pest of citrus and close relatives of citrus. Asian citrus psyllid damages plants directly through its feeding activities. New shoot growth that is heavily infested by psyllids does not expand and develop normally and is more susceptible to breaking off. While direct damage is serious, there is even greater concern that the psyllid is an efficient vector of the bacterium that causes the economically devastating disease citrus greening, or Huanglongbing.

Asian citrus psyllid is found in tropical and subtropical Asia, Afghanistan, Saudi Arabia, Reunion, Mauritius, parts of South and Central America, Mexico, and the Caribbean (fig. 2). In the United States, Asian citrus psyllid was first found in Palm Beach County, Florida, in June 1998 in backyard plantings of *Murraya paniculata* (orange jasmine) (fig. 3). By 2001, it had spread to 31 counties in Florida, with much of the spread due to movement of infested nursery plants (Halbert et al. 2002). In the spring of 2001, Asian citrus psyllid was accidentally introduced into the Rio Grande Valley of Texas on potted nursery stock (orange jasmine) from Florida (French et al. 2001). The Asian citrus psyllid could invade California at any time, with most likely sources of infestation being Florida, Mexico, or Asia. There were 170 interceptions of Asian citrus psyllid at U.S. ports on plant material (primarily *Murraya* and citrus) from Asia from 1985 to 2003.

Figure 1. Asian citrus psyllid adult and nymphs. Photo by M. E. Rogers.

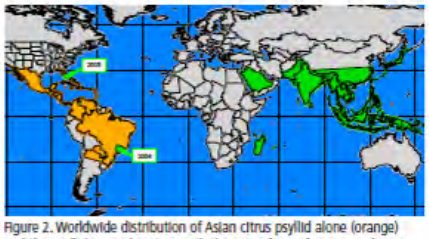

Figure 2. Worldwide distribution of Asian citrus psyllid alone (orange) and the psyllid in combination with the Asian form of greening disease (green). Illustration by G. H. Montez.

Figure 3. *Murraya paniculata*, orange jasmine. Photo by E. E. Grafton-Cardwell.

PUBLICATION 8218

Citrus Bacterial Canker Disease and Huanglongbing (Citrus Greening)

MARYLOU POLEK, Program Manager and Plant Pathologist, Citrus Tristeza Virus Program, California Department of Food and Agriculture, Tulare; **GEORGIOS VIDALAKIS,** Director, Citrus Clonal Protection Program (CCPP), Department of Plant Pathology, University of California, Riverside; and **KRIS GODFREY,** Senior Environmental Research Scientist, Biological Control Program, California Department of Food and Agriculture, Sacramento

UNIVERSITY OF CALIFORNIA
Division of Agriculture and Natural Resources
http://anrcatalog.ucdavis.edu

UC PEER REVIEWED

INTRODUCTION

Compared with the rest of the world, the California citrus industry is relatively free of diseases that can impact growers' profits. Unfortunately, exotic plant pathogens may become well established before they are recognized as such. This is primarily because some of the initial symptoms mimic other diseases, mineral deficiencies, or toxicities. In addition, development of disease symptoms caused by some plant pathogenic organisms occurs a long time after initial infection. This long latent period results in significantly delayed disease diagnosis and pathogen detection. Citrus canker (CC) and huanglongbing (HLB, or citrus greening) are two very serious diseases of citrus that occur in many other areas of the world but are not known to occur in California. However, if the pathogens causing these diseases are introduced into California, they will create serious problems for the state's citrus production and nursery industries.

CITRUS BACTERIAL CANKER DISEASE

Citrus bacterial canker disease (CC) is caused by pathotypes or variants of the bacterium *Xanthomonas axonopodis* (formerly *campestris*) pv. *citri* (*Xac*). This bacterium is a quarantine pest for many citrus-growing countries and is strictly regulated by international phytosanitary programs. Distinct pathotypes are associated with different forms of the disease (Gottwald et al. 2002a). All disease forms are subject to the same international phytosanitary regulations.

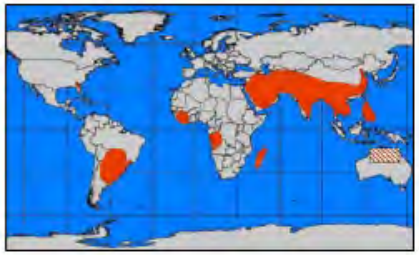

Figure 1. Areas shaded in red indicate the presence of citrus canker. The cross-hatched area in Australia shows where citrus canker occasionally occurs and infected trees are removed. *Source:* G. H. Montez, UC Kearney Agriculture Center.

Xac probably originated in Southeast Asia or India and presently occurs in over 30 countries including the United States (Florida) and Australia (northern region). *Xac* is present in Asia, Pacific and Indian Ocean islands, and South America. It is also found in dryer, more temperate areas in Southwest Asia and the Middle East, occurring in countries such as Iran, Iraq, Oman, Saudi Arabia, United Arab Emirates, and Yemen. (Whiteside et al. 1988; Gottwald et al. 2002a) (fig. 1).

Citrus canker occurs primarily in tropical and subtropical climates where considerable rainfall accompanies warm temperatures, but it can also occur in drier climates. CC becomes a serious disease when wet weather conditions occur during the periods of shoot emergence and development of young citrus fruit. Pathotypes of CC may vary in their severity, host range, and location in the world. CC-A (Asiatic canker) is the most severe form of the disease; it affects most citrus varieties and is the most economically

University of California www.ccpp.ucr.edu/
G. Vidalakis (Dept of Plant Pathology)
and E. Grafton-Cardwell (Dept of Entomology)

Spanish
English
Chinese

www.ipm.ucdavis.edu/EXOTIC/diaphorinacitri.html

University of California • Agriculture and Natural Resources

UC IPM Online

STATEWIDE INTEGRATED PEST MANAGEMENT PROGRAM

UC IPM

Printer-friendly version

UC IPM Home

Search

How to Manage Pests

Home & garden
Agriculture
Natural environments
Exotic & invasive

Weather data & products
Degree-days
Interactive tools & models

Identification Galleries

Natural enemies
Weeds

Educational Resources

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A New Pest in California, Diaphorina citri (Asian Citrus Psyllid): Provisional Treatment Guidelines for Citrus in Quarantine Areas

Citrus pest management guidelines

The Asian citrus psyllid, *Diaphorina citri* (Hemiptera: Psyllidae), is a tiny (1/8 inch, 3 mm in length) mottled brown insect that is about the size of an aphid. It attacks citrus and very closely related ornamental plants in the family Rutaceae (mock orange, Indian curry leaf, orange jasmine and other Murraya species). This pest attacks new citrus leaf growth and, because of the salivary toxin that it injects, causes the new leaf tips to twist or burn back. However, the more serious damage that it causes is vectoring the bacteria (*Candidatus* Liberibacter asiaticus and related species) that cause Huanglongbing (HLB or citrus greening) disease. Huanglongbing causes shoots to yellow, assymetrical leaf mottling, and abnormally shaped fruit with bitter juice. The disease can kill a citrus tree within 3 to 5 years, and there is no known cure for the disease. Asian citrus psyllid arrived in southern California from Mexico in 2008. At this point, Huanglongbing has not been detected in California. However, in Florida the psyllid rapidly spread throughout the state on *Murraya*, and a few years later began to spread Huanglongbing. It is thought that Huanglongbing was present in Florida backyard citrus trees, and it took the arrival of Asian citrus psyllid to move the disease into commercial citrus orchards. Florida citrus growers are now treating up to 8 times per year with broad-spectrum pesticides to reduce Asian citrus psyllid and slow the spread of the disease. Pesticides can reduce the number of psyllids, but an adult psyllid carries the bacteria its entire life and can transmit the disease faster than some pesticides will kill it.

Because Asian citrus psyllid has only recently entered California, we are relying heavily on research done on this pest in Florida and Texas. Currently, treatments that are applied to California citrus orchards in the quarantine zone are designed to disinfest trees and thus minimize the risk of moving Asian citrus psyllid in bins of harvested fruit and to limit the natural spread of Asian citrus psyllid throughout California. Adult psyllids can be detected through visual surveys and yellow sticky cards. Immature stages (eggs and nymphs) are limited to new growth so direct monitoring efforts towards "feather flush" to detect these stages.

For more information, read UC ANR Publication 8205, Asian Citrus Psyllid, and 8218, Citrus Bacterial Canker Disease and Huanglongbing (Citrus Greening).

If you see the Asian citrus psyllid, please contact the **CDFA Exotic Pest Hotline at 1-800-491-1899**. Personnel from CDFA will inspect plants for the presence of this psyllid and send any specimens to diagnostic laboratories for identification and determination of the presence of Huanglongbing.

Provisional treatment guidelines for citrus in quarantine zones only

The following treatment guidelines have been developed for citrus growers within the quarantine zones. Treat with both a foliar insecticide for immediate control and a systemic insecticide for long-term control. Systemic insecticides take time for uptake and should not be depended on for immediate control. The most important treatment periods are when Asian citrus psyllid adults are found during visual surveys or on yellow sticky traps and during periods of new growth flush when immature stages are developing. Because the systemic insecticides take some time for uptake, apply them before the initiation of flush. For resistance management purposes, rotate between insecticides from different classes.

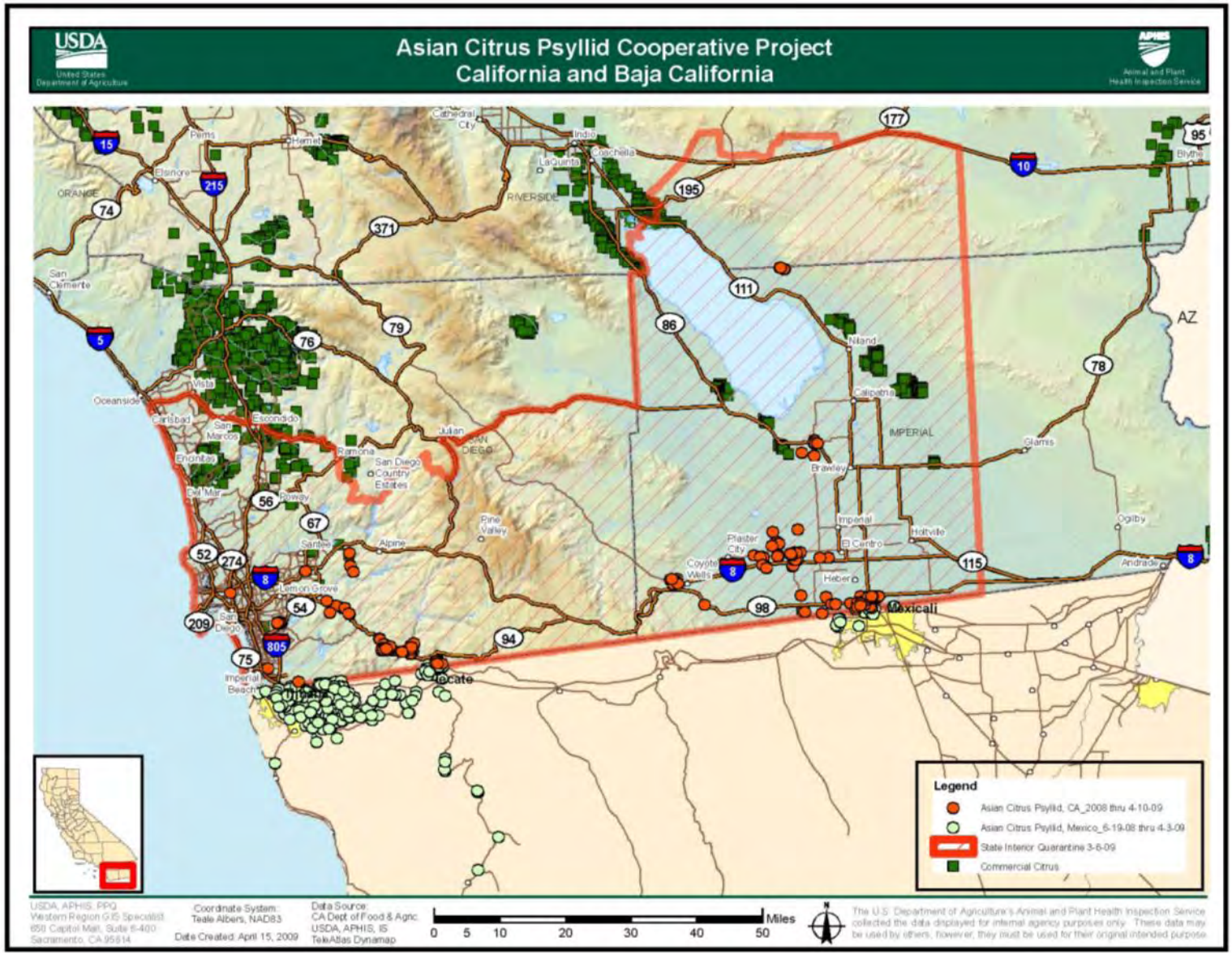
FOLIAR INSECTICIDES

A. **Danitol 2.4 EC** (fenpropathrin*) use 21.3 oz/acre. Apply in 100-500 gal water/acre.
Restricted entry interval (REI): 24 hours; Preharvest interval (PHI): 1 day.
MODE OF ACTION GROUP NUMBER[1]: 3
COMMENTS: Use only on citrus trees 3 years or older. Do not apply in the vicinity of aquatic areas and do not apply more than 21.33 fl oz/acre/year.

B. **Baythroid XL** (cyfluthrin*) use 6.4 oz/acre in 100-500 gal water/acre.
Restricted entry interval (REI): 12 hours; Preharvest interval (PHI): 0 day.
MODE OF ACTION GROUP NUMBER[1]: 3
COMMENTS: Only a single application may be made per crop season. Do not apply within 25 feet of lakes, reservoirs, rivers, permanent streams, marshes, or natural ponds, estuaries, and commercial fish farm ponds.

Asian citrus psyllid arrived in California from Mexico in 2008 and was found in backyard citrus in San Diego and Imperial Counties

The red dots indicate locations where the psyllid was found in California and the green dots in Mexico.



How does the psyllid (and potentially HLB) get around?

It can spread naturally by flying or be transported on plant material

Psyllid-infested curry leaves shipped in boxes from Hawaii, India

Unprocessed fruit from infested areas

On ornamentals in floral bouquets from Mexico

Citrus riding across the border in vans

Target Audiences

Detailed Information for Trainers and Citrus Industry	General Public
Researchers	Homeowners
Extension Specialists	Landscapers
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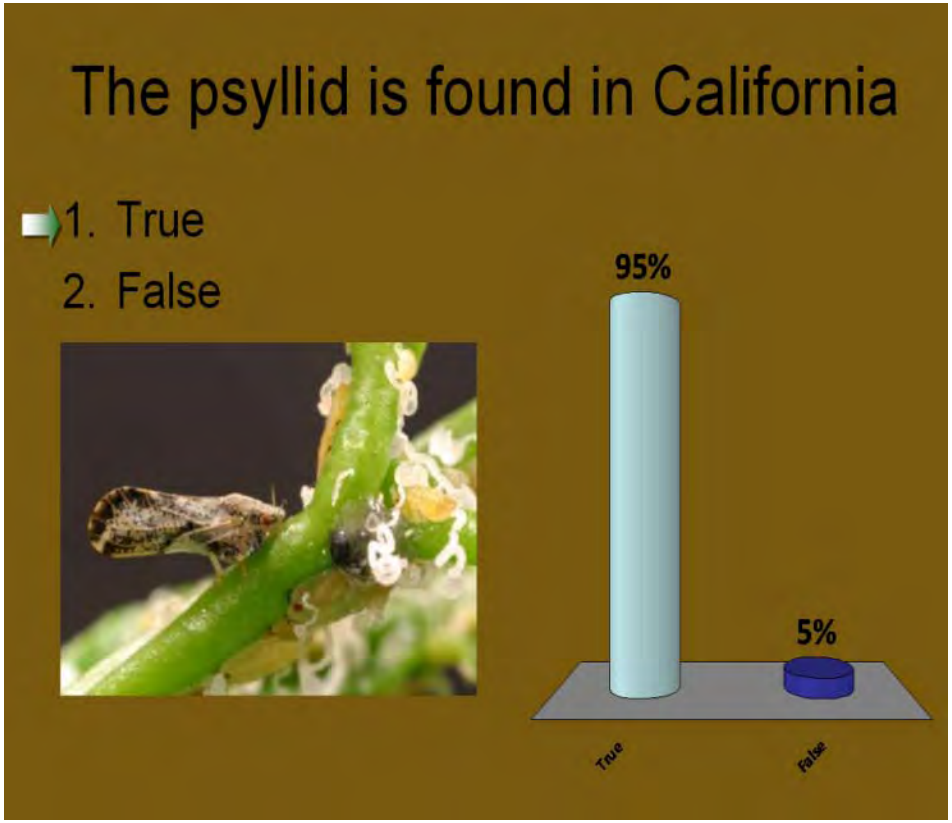
Citrus growers	Migrant workers
Pest Control Advisors	Farmer's markets
County Ag Commissioners	Floral markets
State and local inspectors	Garden shows
Nurserymen	County Fairs
Packers	Food Industry
Master Gardeners	Botanical gardens
Rare Fruit Growers	K-12

Using PPT and Electronic Student Response Unit, Test Audience Knowledge



Citrus Research Board

Public Relations firm Nuffer, Smith and Tucker

Messaging:

- Avoid the term greening
- Dangerous, lethal, fatal, deadly pest
- Consumers and gatekeepers concerned and willing to survey for the pest and disease
- Prevention of the disease depends on eradication of the insect
- Act fast!

Information to the General Public

- **TV**
- **Newspaper**
- **Magazines and Newsletters**
- **Media tours**
- **Events (farm shows, garden clubs, master gardeners)**
- **Posters/cards (in multiple languages)**
- **Radio (English, Spanish, Hmong)**
- **Social Media (Youtube, Facebook, Twitter)**

Citrus Research Board and Nuffer Smith and Tucker flyer

In English, Spanish, Hmong, Vietnamese, Chinese, Punjabi, Khmer

No more California citrus?

That's what is at stake if the disease-carrying Asian citrus psyllid gets a foothold.

It must be stopped – before it's too late.

The Dangerous Pest: Asian Citrus Psyllid

- A small insect, about the size of an aphid.
- Feeds on citrus leaves and stems.
- Is a carrier of the deadly bacterial plant disease, Huanglongbing (HLB) also known as citrus greening disease.
- This insect has already been found at several sites in California.
- It threatens our locally produced citrus and Californians' ability to grow citrus in their backyards.

The Disease: Huanglongbing (HLB)

- Destroys production, appearance and value of citrus trees.
- Causes asymmetrical yellowing and splotching of leaves.
- Produces bitter, inedible, misshapen fruit.
- Is fatal to citrus trees.

The Solution: We All Play a Critical Role

- It can take years for symptoms of the disease to appear, meaning inspection for and elimination of the psyllid is our first line of defense.
- HLB is also spread through grafting with infected budwood. Be sure to plant only certified disease-free citrus trees from a reputable nursery and do not bring any plant material into California from other states or countries.
- Inspect trees monthly and whenever watering, spraying, pruning or tending trees.
- If you find the Asian citrus psyllid, act fast! Call your County Agricultural Commissioner or the CDFA hotline at **800.491.1899**. Time is critical.

To learn about the Asian citrus psyllid and HLB disease, visit

CaliforniaCitrusThreat.org

Printed materials in English, Spanish and Chinese are downloadable from this Web site.

CITRUS RESEARCH BOARD

¿Se quedará California sin cítricos?

Esto podría suceder si el psílido asiático de los cítricos y la enfermedad que transmite se establece en el estado.

Debemos detenerlo – antes de que sea demasiado tarde.

La peligrosa plaga: el psílido asiático de los cítricos

- Un insecto diminuto (3-4 mm), del tamaño de un áfido.
- Se alimenta de las hojas y tallos de los cítricos.
- Es portador de la enfermedad Huanglongbing (HLB) la cual mata las plantas. También se le conoce como el enverdecimiento de los cítricos.
- Este insecto ya se ha encontrado en el Sur de California.
- Representa una seria amenaza para la producción y cultivo de cítricos en California.

La enfermedad: Huanglongbing (HLB)

- Hace que las hojas se tornen de un color amarillento con moteado. (ver foto a la izquierda)
- Produce frutos amargos, incomibles y deformes.
- Daña la apariencia y reduce el valor de los árboles de cítricos.
- Es mortal para los árboles de cítricos.

La solución: todos jugamos un papel importante

- La detección y eliminación del psílido es la primera línea de defensa contra la enfermedad.
- Es ilegal traer árboles de cítricos a California provenientes de otros estados o países, porque podrían estar infectados con HLB. Asegúrese de plantar sólo árboles de cítricos cultivados en California y que hayan sido certificados como libres de enfermedades.
- Inspeccione sus árboles con frecuencia en busca de señales del insecto o de la enfermedad.
- Si sospecha que sus árboles tienen el psílido asiático de los cítricos, ¡actúe de inmediato! Llame a la línea directa de CDFA al **800.491.1899** o comuníquese con el Comisionado de Agricultura de su condado. ¡No pierda un minuto para hacerlo!

Para conocer más acerca del psílido asiático de los cítricos y el HLB, visite el sitio

PeligranCitricosEnCalifornia.org

En este sitio se pueden descargar materiales impresos en inglés, español, chino y otros idiomas.

CITRUS RESEARCH BOARD

Citrus Research Board www.CaliforniaCitrusThreat.org

Citrus Research Board www.PeligranCitricosEnCalifornia.org

Banners on cotton trailers

Citrus Research Board

California Department of Food and Agriculture

www.cdfa.ca.gov/phpps/acp/

CDFA > PHPPS > ASIAN CITRUS PSYLLID - Windows Internet Explorer

http://www.cdfa.ca.gov/phpps/acp/

cdfa asian citrus psyllid

CDFA > PHPPS > ASIAN CITRUS PSYLLID

Page Tools

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California CDFA

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LBAM | Pest Exclusion | Pest Detection/Emergency Projects | Integrated Pest Control | Diagnostics Center

Home » phpps » **acp**

REPORT A PEST

- CDFA Pest Hotline **1-800-491-1899**
- Contact Your Local County Agriculture Department

THREAT TO CA CITRUS

- Public Service Announcement (**Video**)

OTHER RESOURCES

- Citrus Crisis Alert *USDA sponsored*
- County of San Diego Agriculture, Weights and Measures

Asian Citrus Psyllid (ACP) and Huanglongbing (HLB)

Please choose one . . . Go

Quick Links

HOT TOPICS

- USDA ANNOUNCES $5.8 MILLION IN FUNDING TO FIGHT THE ASIAN CITRUS PSYLLID
- FACT SHEET - **QUESTIONS AND ANSWERS** ABOUT THE ASIAN CITRUS PSYLLID QUARANTINE IN SAN DIEGO AND IMPERIAL COUNTIES
- HOT TOPIC ARCHIVE

GENERAL PROJECT INFORMATION

ACP | HLB | MULTIMEDIA | QUARANTINE

- **PRESS RELEASES** (CDFA)
- **PARTIAL HOST LIST**
- **BROCHURE** (CDFA, UC RIVERSIDE, UNIV OF FLORIDA) - *2005*
- **PEST PROFILE**
- **PEST SHEET** (LOS ANGELES CO.)
- **Q&A** - QUARANTINE IN SAN DIEGO AND IMPERIAL COUNTIES

2 Wind... | Grafton-C... | University... | CDFA > P... | 11:22 AM

CDFA Calendar of Educational Events

ACP Calendar - Windows Internet Explorer

http://www.cdfa.ca.gov/egov/acpcalendar/calendar.asp

cdfa ACP calendar

CONFIDENTIAL AND PRIVILEDGED

Month View | Day View | Admin

June 2009

Sun	Mon	Tue	Wed	Thu	Fri	Sat
31	1	2	3	4 HLB Communications Committee teleconference 10:00 AM	5	6
7	8	9	10 CAPCA Meeting 8:00 AM - Materials have been provided	11 Citrus Nursery Workshop: "Meeting the Challenge of the ACP in CA Nurseries"	12 Master Gardener Exhibit at San Diego County Fair, Del Mar - CRB is sending 1000 English Fliers, 100 in Spanish	13
14	15	16 Mexico-United States Meeting on ACP/HLB 8:00 AM	17 Mexico-United States Meeting on ACP/HLB	18	19 Citrus Institute 8:30 AM	20 Master Gardener Summer Plant Sale 10:00 AM - CRB is providing 300 ACP fliers to give to public
21	22	23	24	25 ACP/HLB Communications Committee Conference Call 10:00 AM	26	27
28	29	30 Pesticide Applicators Professional Association Seminar	1	2	3	4

CDFA Activities

- Flyers
- Tags for the Nursery stock at retail stores alerting customers to quarantine restrictions
- Public meetings prior to treatments
- Interviews and information for news media
- Mailers

CDFA Mailer to Homeowners in English and Spanish with lens

USDA

www.hungrypests.com

They're Here and They're Hungry!

INVASIVE PESTS | PEST MANAGEMENT | FAQ | BLOG | ABOUT THE COALITION | CONTACT US

Why Should You Care?

Invasive pests affect every Californian. They eat our food, destroy our parks and forests, wreck our gardens and throw our ecosystem off balance. Farmers lose crops, prices for produce and goods go up, our beautiful natural resources are threatened and the negative economic impact to our State's economy could be devastating as agricultural exports diminish through loss of products or quarantines imposed by other states and countries.

Join us in taking a stand against non-native, invasive pests. Stay informed. Join the movement. Make a difference.

"I support protecting California's resources against invasive pests. Please sign me up to receive more information and to learn how I can get involved."

I Agree!

Ask The Experts

Email us at experts@hungrypests.com with a question.

Your question and an answer from one of our experts will appear on the homepage and this page!

What's New

- Advertising Campaign
- New photos added to gallery

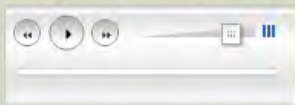
What are Invasive Pests?

Invasive pests are in California and they sure are hungry. Invasive pests are any kind of damaging animals, insects, plants or plant diseases that are not native to the State. Invasive pests can rapidly expand their populations and feed on local plants, crops and other species. As they compete with native species for resources, they cause damage to local ecosystems and wreak havoc on crops and local plant life.

read more...

Things aren't always what they seem...

Shh! The bugs are conspiring, listen in...



Check out the rest of the spots.

Invasive Pest Tracker

Opportunities for blogging on the HungryPests web site

INVASIVE PESTS | PEST MANAGEMENT | FAQ | BLOG | ABOUT THE COALITION | CONTACT US

Recent Posts

What is the Sterile Insect Technique (SIT)?

Be Smart When Buying Agriculture Products Online

What is Asian Citrus Psyllid and How Will it Affect Me?

Fresno Dog Inspection Team Stops Deadly Citrus Disease Infection in its Tracks

We Understand the Threats Posed by Invasive Pests

Twitter

Check this video out -- USDA Launches LBAM SIT Program http://bit.ly/3xU2Bj 2009/11/09

Want to learn what is sterile insect technique? http://www.hungrypests.com/blog/?p=270 2009/11/04

The white striped fruit fly was recently discovered in Calif. Learn about this invasive pest at http://www.hungrypests.com/WSFF.html 2009/10/28

Check this video out -- Why UCCE San Mateo & San Francisco Counties Joined the HungryPests Coalition http://tinyurl.com/yl9tsgg 2009/10/22

The Nature Conservancy fully supports regulations that help prevent non-native pests & species from entering U.S. http://tinyurl.com/yjwj2eh 2009/10/15

HungryPests Blog

« Be Smart When Buying Agriculture Products Online

Fresno Dog Inspection Team Stops Deadly Citrus Disease Infection in its Tracks »

What is Asian Citrus Psyllid and How Will it Affect Me?

You may have heard the news that a tiny insect, about the size of an aphid, has arrived in southern California and has the potential to cause great harm to the citrus industry. The Asian citrus psyllid lives on young leaves of all types of citrus (lemons, limes, oranges and grapefruit) and closely related plants such as kumquat, Indian curry leaves and an ornamental plant called mock orange. When it feeds, the psyllid injects a toxin that causes the new leaves to twist and curl or fall off completely.

The psyllid is an irritating pest by itself, but we can control the damage it causes to leaves by releasing natural enemies or spraying insecticides. The more serious problem is that this insect is a very effective carrier of a bacterial disease called Huanglongbing (HLB). HLB disease can't hurt humans but it is devastating to citrus trees, causing the fruit to taste bad and the tree to die about five years after it is infected. There is currently no cure for the disease, so HLB is a death sentence for citrus trees. In Florida, where both the psyllid and the disease are found, citrus growers are destroying tens of thousands of trees each year to prevent the disease from spreading further.

You may be asking, what does this have to do with me? Well, we know that in some areas of California, up to 60% of families have a citrus tree in their yard. The psyllid doesn't just affect commercial orchards—it can find your backyard tree and infect it with the disease as easily as it can attack an orchard. Imagine not having that citrus tree, or any citrus trees in California, because a disease wiped them out. I think we can all appreciate how great that loss would be.

Categories

Agriculture products

Agriculture Quarantine

Asian citrus psyllid

California Agriculture

Hitchhiking pests

Invasive Pests

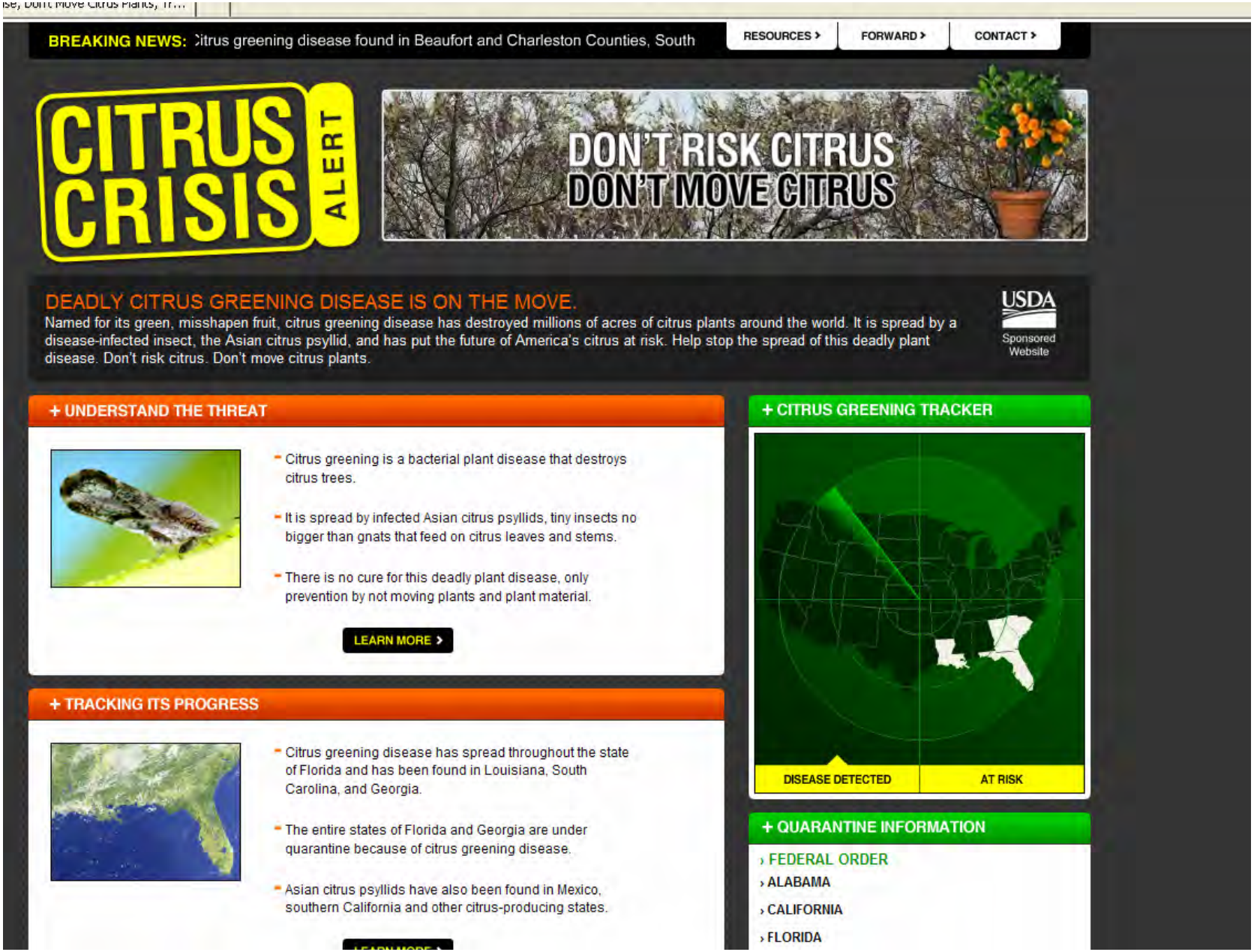
Pest Management

Tags

Asian citrus psyllid California California citrus Central American Pineapple Diaprepes root weevil hitchhikers hitchhiking host plants Huanglongbing (HLB) HungryPests Coalition insects invasive pest Invasive Pests invasive plants Light brown apple moth Mediterranean fruit fly Pest detection Pest mating disruption snails Sterile Insect

USDA

www.saveourcitrus.org/tracking.php

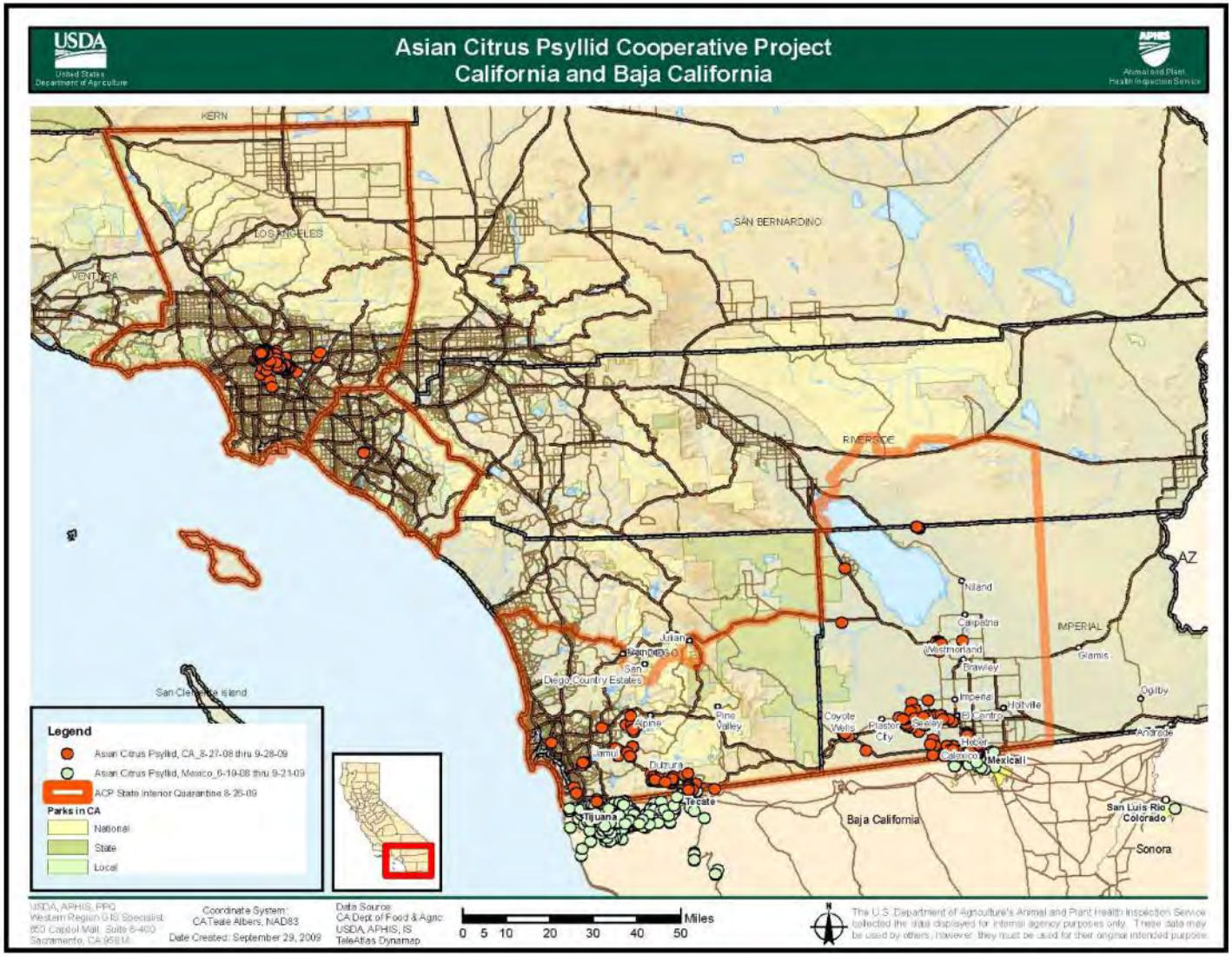


Videos

- **English**
  - **CDFA Public Service Announcement (2 min)**
  - **Florida DPI Huanglongbing information (7 min)**
  - **Louisiana Farm Bureau: ACP (3 min)**
  - **Citrus Mutual/CRB grower interviews**
- **Spanish**
  - **Senesica: ACP and HLB (10 min)**

The Situation is constantly evolving

LA is a large infested area inhabited by groups with high risk activities



Citrus Research Board Flyer

No more California citrus?

That's what is at stake if the Asian citrus psyllid and the disease it carries establishes here!
With your help it can be stopped – before it's too late.

The Dangerous Pest: Asian citrus psyllid (ACP)

- A small insect, about the size of an aphid.
- Feeds on leaves and stems of citrus and close relatives of citrus.
- Eggs are laid on young "flush growth" of citrus, where small yellowish orange nymphs (larvae) feed and develop.
- The psyllid is a carrier of the deadly plant disease, Huanglongbing.
- This insect has spread from Mexico into southern California.
- Limiting the spread of the psyllid will limit the spread of the disease.

The Disease: Huanglongbing (HLB)

- Also called greening disease and yellow shoot disease.
- Causes irregular yellowing of leaves.
- Produces bitter, inedible, deformed fruit.
- It kills citrus trees.
- This disease has not yet been found in California, but it is infecting citrus in nearby states and in Mexico.

The Solution: We All Play a Critical Role

- Be prepared – learn to recognize the pest and disease and teach others what you know.
- Inspect your citrus trees each month.
- Be sure to plant only California-grown certified trees that are known to be free of disease.
- Remind everyone that it is illegal to bring citrus trees or cuttings into California from other states or countries because they can carry the insect or be infected with HLB.
- If you live in a quarantine area, help prevent the spread of psyllids to other areas:
  - Don't move plants out of the quarantined area that may harbor the psyllid.
  - Dry out plant clippings for two weeks before putting them in green waste recycle bins or double-bag clippings.
- If you suspect your tree has the psyllid or disease, act fast! **Call your County Agricultural Commissioner or the CDFA hotline at 800-491-1899.**

To learn about the Asian citrus psyllid and HLB disease, visit
CaliforniaCitrusThreat.org
Printed materials in English, Spanish, Hmong and Chinese are downloadable from this Web site.

Evolving Messaging:

Quarantine Area Issues

green waste
movement of plants
movement of fruit

Homeowner Participation in Treatments

Systemic imidacloprid

HLB discovery

Tree removal

Communications Opportunities and Challenges

- Fresh news to retain the interest of the general public
- Addressing the cultural aspects of plant movement
- Social media: using it for education and countering anti-pesticide efforts
- Size of the audience, severity of the problem and the rapidity with which the situation changes