

# LOS ANGELES CHAPTER

2024 Volume XXIX Issue 6

Steven Murray, Murray Family Farms

Saturday, November 23, 10:00 am

Sepulveda Garden Center

### http://www.crfg-la.org

2024 Chapter Officers & Committees		16633 Magnolia, Encino CA 91406			
<b>Chairman:</b> Anwar Hachache	chairman@CRFG-la.org	Steve is a Fruit Hunter and also has the most amazing family farm in all of Bakersfield. It's going to be a fun and fascinating presentation!			
<b>Treasurer</b> : K.Payton	treasurer@CRFG-la.org 818-222-7556	All members are requested to please bring something to share for our snack table afterwards.			
<b>Secretary</b> : Margaret Frane	hospitality@CRFG-la.org 310-429-9455	<b>Event:</b> A Date: S	nnual Holiday Party aturday, December 7, 10:00 am		
<b>Newsletter Editor</b> : Deborah Oisboid	editor@CRFG-la.org	Location: S	Sepulveda Garden Center 16633 Magnolia, Encino CA 91406		
<b>Program Chair</b> : Lydia Shabestari	program@CRFG-la.org 818-572-3460	For L.A. Chapter members (and their Significant Others) only, please. Bring your jingle bells and holiday spirit to our annual holiday fest! There will be a White Elephant gift exchange for those who bring a wrapped gift. Please bring something for our fabulous potluck LUNCH!			
<b>Historian:</b> Emory Walton	historian@CRFG-la.org 805-497-8835				
Food Coordinator: Chris Warren	818-362-8537				
<b>Plant Sales</b> : David Payton	plants@CRFG-la.org 818-222-7556	Save the date! CALENDAR FOR L.A. CHAPTER 2025			
<b>Members at Large:</b> Eve Guth Kathleen Doran Kevin Lieu Art Fitzsimmons Reza Shabestari	guth_atlarge@CRFG-la.org doran_atlarge@CRFG-la.org kevin_atlarge@CRFG-la.org art_atlarge@CRFG-la.org reza_atlarge@CRFG-la.org	January 25 Feb 14 - 16 February 22 March 22 April 26 May 24 June 28 July 26	Annual Scion Exchange Festival of Fruit, Arizona, USA Grafting Techniques (TBD) Fourth Annual Tony Stewart Tree Symposium & Fruit Event/Sylmar High School tour Ron Whitehurst, Beneficial Insects (TBD) Annual Plant Sale Richard Richie, Organic Fruit Tree Growing		
<b>Emeritus Members:</b> Pat Valdivia Edgar Valdivia	edpitaya@gmail.com	August 23 September 27 October 25 November 22	& Soil Enrichment Garden Tour (TBD) Dragon fruit panel of experts (TBD) Patio Tree & Small Space Gardening for the Kitchen (heirloompotager.com) Best Garden Irrigation Methods (TBD)		
		December 6	Holiday Party at Sepulveda Gardens		

Meeting **Topic:** 

Location:

Date:

## LOOKING BACK

By Deborah Oisboid

# September 27 – CRFG honors Steve List, plus bonus plant sale

September's meeting was a little different. We were originally going to start late because our guest of honor couldn't attend before noon. However, because Sepulveda Gardens starts to close at 2 pm, we had to make sure everyone could get out before the gates were locked.

We started off with a "small" plant sale that turned out to be bigger than expected. Several people donated live plants including guest of honor Steve List! (Much appreciation to Art Fitzsimmons for picking them up and delivering them to the Center on time!) Other plant donors included Karen and David Payton, Margaret Frane, Eve Guth, Deborah Oisboid, Bill Brandt, and Charles Malki. Many, MANY thanks to all our generous members!



Plants for sale included plumeria, green pomegranates, several different fig varieties, heuchera, squill, black salvia, seedling macadamias, figs, loquats, Barbados gooseberries, pepinos, Cherry of the Rio Grande seedlings, rose cactus seedlings, mulberry - "The Best", gojiberry, climbing roses, epazote, lots of cherimoya seedlings, both black AND white sapotes, tropical guavas, winter jasmine, longan, blackberries, mint, galangal, "pregnant onion," Queen's Tears bromeliad, dragonfruit, hoya, fuchsia, elephant's ear, Hawaiian papaya, opuntia, and more.

Steve List's donations included fuyu persimmon saplings, Satsuma plum and Dapple Dandy pluot saplings, huge Legacy blueberries, several full-sized fruit trees (Parfianka, Azadi, and Utah Sweet pomegranates; Methley plums, Tropical Beauty peach, Gold Kist and Patterson apricots), dozens of canna starts, and dozens of cyclamen starts.

There were also non-plant items for sale: IV Organic products, plant stands, plant hangers, plant pots, pot pads, dried bay leaves, and potting trays.

Bill Brandt offered and described an audio box that emits a high pitch frequency to repel mammals, especially raccoons. He's not sure how well it works on squirrels because he doesn't have any squirrels. He also didn't know if it bothers cats. It can be purchased from Ace Hardware, if you're interested.

Bill also answered some general gardening questions.

What do you do when fruit doesn't grow? One cause could be overwatering. Make sure the soil dries out between waterings.

Bill says a fruit tree is a relationship. "If you plant it and wait several years without tending it, it will do very poorly. You have to visit it, you have to talk to it, you have to pay attention to it. And in the winter, you have to prune it back. If you let it grow into a thicket, you will be very unhappy."

You need to be committed. Look up on YouTube how to prune different kinds of fruit trees. Number one: make sure you can reach the fruit. Number two: open it up. Number three: get rid of crossing branches. Do not cut off the teeny tiny branchlets that grow along the stems because that's where the fruit comes from.

How do you graft an avocado? If you have an old tree you don't want to graft 8 to 10 ft high, you want fruit low where you can pick it. If you start with a 20 ft tall tree, chop it down to 10 ft and wait until the sprouts show up and graft onto those.

Bill recommends wrapping grafts with wet paper towels. Then using a paper bag over it to protect against the sun. You can also cover it with parafilm and let new growth push through. Damp paper towels are particularly helpful to citrus and avocado grafts. These are tropical plants, and they need the humidity. The moisture keeps them from drying out while the graft knits together.

Charles Malki, owner of IV Organics, was invited to speak next. He told us he has been grafting since he was 12 or 13 years old. He agreed with Bill that adding humidity with wet paper towels does work! He likes to keep the grafts wrapped for the first 10 to 20 days.

Charles promotes whitewashing fruit trees to protect

from sun scald. While a tree is young, it does not have many leaves, so the trunk is exposed to 90° and 100° weather and sunshine. Preventing burns will allow the tree to grow better and produce more fruit. Whitewashing is helpful to young trees and can be done any time you prune. Whitewash protects the cambium layer, which is the only layer which grows,

Charles challenged us with few gardening questions:

What macronutrients do all plants need? Most people know about Nitrogen, Phosphorous, and Potassium (NPK). Magnesium, Calcium, and Sulfur are also necessary macronutrients.

- Nitrogen makes the green stuff green.
- Phosphorus helps with flowering and fruiting.
- Potassium helps fruiting but also helps with disease resistance.
- Calcium regulates nutrient transport and supports enzyme functions.
- Magnesium and Sulfur help with photosynthesis.

Did you know Calcium makes up about 30% of the dry weight of most plants? Charles said raised beds often do not have enough Calcium in them because they're not connected to the earth.

Adding Epsom salt or eggshells is a common method to prevent blossom end rot in tomatoes. (Epsom salts contain both magnesium and sulfur.)

He cautioned you may want to do a soil test before you start adding minerals. Too much of a good thing can be a problem.

Charles says feeding your plants should be done on "the bell curve." Since nutrients are typically added to the soil, the soil biology will break down the food over time. Time the fertilization so the elements are readily available to the plant WHEN THEY NEED IT. You want peak nutrition on the first day of summer, so you should start feeding the soil in May to allow the breakdown to happen and make nutrients available to the plants in June.

If you choose to feed earlier, such as February or March, only feed half as much because the days are shorter and the plants can't absorb as much, so you don't need the full recommended dose.

His bell curve works like this: apply half-dose of fertilizer in February/March, full dose in May/June,

and half dose in September/October.

Someone asked whether coffee grounds and tea leaves can add anything to garden nutrition? Charles said they add nitrogen but they also are acidic. They're great for blueberries. Coffee and tea should only be part of the equation not the only thing. The goal is to diversify your soil (via compost piles).

Alasdair commented that when he puts coffee grounds near a fruit tree the ants no longer farm the aphids on nis trees as much. Maybe they don't like the smell of coffee?

Very important advice for gardeners with raccoons in their yard: do not use blood meal or fish fertilizer!! That will attract the varmints who are more than happy to dig up what they think is their next meal!

Steve List arrived about noon. He had been presenting at another event at Lopez Canyon earlier that morning busy fellow!

CRFG-LA Chair Anwar Hachache provided the first introduction. "If you're into gardening and Agriculture and you don't know who Steve is, then you're not into agriculture!" Several people followed with stories of how they met Steve and some of the projects they worked together on.



Steve was a teacher at Sylmar High School for over 25 years and is retiring as the head of their Agriculture Department. He has been and plans to continue being very active in agriculture outreach. He makes garden presentations all over California, teaching people gardening techniques, answering questions about plant varieties and diseases, and helping everyone grow their own green thumbs.

Jim Schopper described the amazing transformation of the Sylmar High Agriculture fields. When Steve started at Sylmar, it was bare and full of trash. As many CRFG members know from the multiple field trips we've taken there, he and his students have transformed it into something incredibly special.

Bill Brandt recalled all the times he and his grafting team have taught grafting at local schools.

Steve and Tony Stewart (former CRFG-LA Chapter Chair) originally connected through volunteering. Steve's Agriculture students would raise plants and Steve used to give them away. Tony suggested doing raffles, and this eventually became a huge fundraiser for Sylmar High.

The baton has been passed. Steve has been training his student Stefan Strong for 7 years. Now Stefan is a certified teacher and will be continuing Steve's legacy at the school.



By the way, Steve is not 100% retiring! He's simply going to stop teaching students in one school. Now he will be teaching teachers. Steve just got his dream job: he's going to be a Superintendent of Horticulture. His vision is to transform other schools' agriculture programs like he did at Sylmar

Part of his new job will be to go out to farms and develop relationships. Call it a "Farm-To-School" program. He wants schools to purchase food directly from farmers instead of going through middleman. When schools purchase through corporations, the farmers only get 10% of the price. With Farm-To-School they got a hundred percent of the price!

Steve told us a bit more about himself. Growing up, he didn't like gardening very much, because it consisted of him being forced to pull weeds out of the family's dichondra lawn. However, his first "real" job was working at Green Arrow nursery. (Loading fertilizer. Yuck!) As he got older, he started appreciating gardens a little more, especially when mowing lawns made him some bucks.

When he left high school, he went to work at Green Arrow nursery again. While attending Pierce College, he studied agriculture/pest control under Professor E. Deming Williams.

Eventually he chose to become a teacher and has loved it for 25 years. But last year, it was "starting to get to him." Steve feels he's leaving at the top of his game!

Now he gets to drive around to different schools helping with their gardens. And he drives around to farms trying to bring them together with LAUSD so the campuses get more and fresher fruits and vegetables.

To celebrate, we had a HUGE sheet cake with our potluck. There was much merriment and plans for the future. Steve, we hope to see you more often, when you can stop by in between your new and improved, INCREDIBLY busy schedule! Have a great "retirement!"



### October 26 - Kathleen Doran, Protecting Gardens From Pests, Particularly Asian Citrus Psyllid

Our October meeting provided some fantastic information and resources. Those who did not attend really missed an excellent meeting. Kathleen Doran presented information on how to fight Citrus Greening Disease and its insect vector, the Asian Citrus Psyllid, as well as several other garden pest issues. The talk became technical at times but was perfectly understandable. There were lots of questions and lively interaction, with some good suggestions coming from CRFG members as well.

Huanglongbing (HLB) is called many things: Greening disease, yellow shoot, dragon disease. It is highly infectious. Some symptoms include leaf curl and fruit never ripening. The interior of infected fruit is dry and woody, and the tree will usually die in a few years.

Kathleen said HLB is kind of like Covid; you don't know you have it until it's too late, because HLB symptoms don't show up until long after the tree has become infected. Symptoms usually appear 5 years after infection, but sometimes it takes 8 years to show!

Citrus trees grow all over California. Not just in agricultural settings but also in private/household gardens. The disease first attacked Florida about 10 years ago and decimated their production, destroying about 80% of their trees. They're just now starting to come back from it, and only with very careful controls. They raise their trees inside individual nets. When the

trees get to fruit-bearing age, the nets are opened and the trees are allowed to produce fruit for 5 years, Then the



trees are destroyed.

This is not a disease you want to take lightly! So how can you recognize it?

One way is to look for the insect which spreads HLB: the Asian Citrus Psyllid. HLB is a bacterial disease

spread by injection. Similar to how mosquitoes spread West Nile and other diseases, the Psyllid bites into the tree, picks up the disease, and moves to the next tree to spread it. The nymphs look like an aphid that's



been tipped over, with little red eyes. The adults look like a sapsucker but smaller. They feed, usually on the underside of leaves, at a 45-degree angle, sucking the juices out and sharing the bacteria of HLB.

The nymphs create a waxy exudate, and honeydew collects on these hardened strings. Ants love sugar, so they harvest the wax and eat it like a lollipop! So, you might not see the wax. If you see ants crawling up and



down your tree, deal with them immediately!

Greening Disease actually affects normal psyllid behaviour. The insects carrying the infection tend to fly further and faster than those not carrying the disease. The infected psyllid eats more, it reproduces more, and now the bacteria spreads even further!

The psyllid is actually quite widespread, however the disease has been somewhat controlled in California, thanks to the strict citrus quarantine which does not allow plant material to pass from city to city without certification. Quarantine boundaries are adjusted as other diseased trees are found/reported.

Curry leaf plants are more attractive to Asian Citrus

Psyllids than citrus, so they are sometimes used as trap crops for the psyllid. You are no longer allowed to grow curry leaf in California.

HLB is a systemic bacterial infection. Which means if only a small section of a tree shows symptoms of the disease, the entire tree is infected. You can't just prune away the bad stuff. You've got to get rid of the whole tree.

What does HLB look like? The leaves become curled or distorted, more in the tip than in the middle of the leaf and you start to see splotchy yellow color.





Asymmetrical mottling of a leaf, a symptom of citrus greening (Huanglongbing) Credit: Elizabeth E. Grafton-Cardwell

UC IPM

Nutritional deficits also show up as yellowed leaves. But those are usually on both sides of the leaf. In HLB, the color is uneven. If a tree has nutritional issues (iron deficit, etc), the discoloration would not be one side of the leaf, or one branch, it would be all over.

With the recent summer's extreme heat, many plants were sunburned. How do you tell the difference between sunburn and HLB? You need to observe the pattern of destruction. As HLB spreads, you might find a whole section of the tree changing color, one side being noticeably brighter.

Even green fruit is not a symptom exclusive to the disease. There is something called Citrus Regreening. Regreening is when oranges hang on the tree for a long time and they start to turn green again. But CR shows up as a mottled pattern. If you see a fruit with a solid dividing line in between the orange and the green then it's more likely to be HLB.

An infected tree may survive another 5 to 8 years before it dies. And if the State of California discovers the disease in your garden, they will pull the tree out and destroy it. And they will also pull all your other citrus trees without warning. Because if one tree has it, the others do. It makes no sense to save the tree if it's sick and going to die anyway.

How long before you can plant another citrus tree in that location? That's a judgment call. If you have the disease in your yard, then you don't want to put something else that will catch that disease.

If you're not sure if you have HLB, take pictures of your tree: the leaves, the trunk, and even nearby plants, and send the pictures to Ventura Master Gardeners (<u>MGVentura@ucanr.edu</u>). Be sure to include your zip code in the message. They can tell you whether it's HLB or not. It might take a few days or even a week for an answer, since the staff is volunteers.

California agriculture is very tightly regulated. The citrus crops are under constant monitoring and control. And yet the quarantine still spreads. Why?

"....but I just wanted to share my fruit with Grandma who lives just over there." "...but it's just one little graft from a friend." Diseases spread because people think one little exception is not going to hurt. It comes down to everyone. We have to think, "It is my job to make sure my tree is uninfected, so it doesn't affect other people."

So what can you do in your own garden for protection? First, know the life cycle of the Asian Citrus Psyllid and attack it where you can. Eggs are laid where the petioles come together on the stem. The nymphs hatch and move a little way to find a spot and dig in. They love the first fresh growth, and nice soft leaves.

The Asian Citrus Psyllid does have some natural enemies: lady beetles, lacewing larvae, syrphid larvae, pirate bugs, parasitic wasps, and birds. They can help keep the population in check.



The Tamarixia Radiata wasp is native to Pakistan and feeds on the ACP. When imported, the wasps will expand their territory until the psyllid is gone from the area, then die back because that's their only food source here. The problem with wasps is that ants are successful at killing them and taking them back to the nest as food, so you need to protect the wasps from ants!



A surprisingly effective psyllid predator is the hoverfly larva. Hoverflies look like tiny bees but only have two wings instead of four. They love Sweet Alyssum flowers, especially the white and yellow varieties, and will lay their eggs

on the source of food nearest to the flowers. If the alyssum is growing under your citrus tree, then you will get hoverfly larvae on the citrus leaves. You will also get instant warfare with the psyllids! Hoverfly larvae are voracious, plus they fight back when ants try to protect their "lollipop" crop. Alyssum flowers can be grown as a perennial if you trim them back. Be sure to plant LOTS of alyssum in your garden. You won't regret it!

There are chemicals that will kill psyllids, but be sure to use them appropriately! Doubling or tripling the dose is not going to make it work better. READ THE INSTRUCTIONS. Even more importantly, FOLLOW THE INSTRUCTIONS TO THE LETTER!!

Type of treatment	Pesticide Name	Effectiveness against ACP	Duration of control	Application timing
Professional treatment	Tempo & Merit	High	Months	Foliar: when psyllids are present Systemic: summer or fall
Homeowner- applied broad- spectrum foliars	Sevin, Malathion	Moderate	Weeks	When psyllids are observed
Homeowner- applied soil drench	Bayer Advanced Fruit, Citrus & Vegetable	Moderate	Months	When psyllids are observed in summer or fall
Homeowner - applied soft foliars	Insecticidal soaps, oils and pyrethrins	Low to moderate	Days	Every 7-10 days during *leaf flushing

Do not take chemical treatments for granted. Wear protective clothing, wear gloves, wear a mask, change your shoes, do not bring it in your house. Since psyllids are often hiding under leaves, you need to start at the bottom and spray up. That's why you need the mask and the gloves and the changed clothes.

The instructions for each chemical should say when to use it: after flowering, at certain times of year, and so on. Follow the instructions!!

Kathleen advises not to spray in the morning. In Southern California if you use neem oil on a hot day you will burn your plants. When the weather is warmer than 80 degrees you can damage the plants. Also, bees are less active in the late afternoon or early evening.

If you don't like chemicals, try barriers. You can use a dead umbrella covered with chicken wire and then fine mesh. Make sure the mesh is tight around the trunk. You will need to remove all the insects that are inside first, otherwise you've just created an Insectarium!

Also, wait to put a net over the tree after fruit set, or you've missed the important pollination phase. Finally, if you use a full-tree net, get it with a zipper!! Kathleen was very emphatic about that. Get the zipper!! She couldn't emphasize that enough.

Another good barrier is Kaolin clay, sometimes sold as "Surround." This clay is what they put in face powder! Sprinkling the powdered Surround on trees will provide sunburn protection and also increases reflected light inside the canopy of the tree. Psyllids won't lay their eggs on it.



Clay doesn't work well as a barrier in Florida because Florida has lots of rain which washes it off. You can mix the clay with "Colorback," which will help the clay stick better. (Plus, you can turn your trees an interesting pink color!) Colorback and Surround can be purchased from Amazon, Fruit Growers Supply, reputable nurseries, and larger agriculture supply sources. An added benefit of clay: since it doesn't look normal, squirrels and birds might leave your tree alone. However, it also discourages the hoverfly. On the other hand, as long as the blooms are available to the bees, you should be okay. Make sure you spray before buds open, so the flowers are not covered with dust.

One other drawback is you need to spray from UNDERNEATH the tree, so the clay coats the underside of the leaves. Otherwise, the psyllids will continue to gather in the unsprayed areas and spread the disease.

Kaolin can affect photosynthesis. It provides controlled shade. Citrus are more of an understory tree and do best with four to six hours of direct sunlight. Studies show this applied shade actually accelerated tree growth!

A different barrier can be used against the ants who protect the psyllid. Sticky barriers such as Tanglefoot prevent ants from climbing up into the tree. It should be applied in a band around the trunk, but not directly on the wood. Tightly tightly tightly wrap the trunk! You don't want ants to be able to get underneath. Wrap with paper or cotton or saran, and replace the wrap after it gets covered in ants. Move the band a little when you replace it, so the trunk does not stagnate underneath. Also, make sure there are no other paths into the tree: branches touching another tree, touching a wall, touching the ground will let the ants get in!

If you use boric acid to fight ants, know that too much Boron can be toxic to citrus, stone fruit, and nut trees. So, when you put boric acid traps out, make sure they don't spill into the ground. Also, be sure to change the traps every 2 weeks because they dry out, becoming more concentrated - and the ants realize it's bad stuff and ignore it.

Kathleen told us about some promising studies on HLB control. Researchers isolated a peptide from Finger Limes which seems to fight off the HLB disease. Other chemicals are being tested which prolong the productive life of infected citrus trees. (The tree will still die, but you will have production for more than 5 years.) Orange jasmine is also resistant to HLB. You can try approach grafting orange jasmine at the bottom of your citrus tree. The jasmine will convey its resistance up to the rest of the tree. Approach grafting with Australian finger lime is also good, but orange jasmine performed better in tests.

Other tests are studying injecting salicylic acid (acne medicine!) and tetracycline (antibiotic). Both are showing some promise.

The problem with state-approved methods is it takes time to approve. To create a study, you have to make a proposal and wait for approval. Then you must run the study, which can take several years to get consistent results. Plus, you need to intentionally infect trees to prove effectiveness, and not many people want their trees to become infected in the first place, not even to test a potential cure!

California has many quarantines for many pests. Sometimes, quarantines get reduced or are no longer in effect. But the HLB quarantine is increasing size. In fact, as of October 23, 2024, the HLB quarantine boundary expanded in the Riverside area. You can check the boundaries using this interactive link: <u>http://maps.cdfa.ca.gov/QuarantineBoundaries/HLB/ HLB\_PQM\_OverviewGrid.pdf</u>

You can also sign up to receive email updates of the quarantine status - and other critical agricultural information at

https://public.govdelivery.com/accounts/cadfa/subscriber/new

Had enough of the Asian Citrus Psyllid? We also learned about other nasties in the California & Los Angeles region.

Thousand Oaks had a major problem with the Queensland fruit fly. People in the quarantine area couldn't even share their fruit with their own neighbor! They had to cook or double-bag discard or destroy their homegrown fruit. They couldn't even add any plant matter to mulch or toss it in the garden trash can. Happily, restrictions have been lifted on four major fruit fly pests. Happily, there are no current quarantines on Queensland, Tau, Mediterranean, and Oriental fruit flies in the Los Angeles area. So, the fight can be won! (Oriental still has a quarantine in Orange and Riverside counties as of November 2024.)



The Black Fig Fly is still a problem. They lay their eggs in the "eye" of the fig, hatch, munch their way through the fig, and leave. Symptoms include bruised or soft spots, misshapen figs, and you might see a small exit hole in the fruit. The larvae drop to the ground, pupate in the soil, and emerge as adults to start the cycle again. Their life cycle is very short - these fruit flies

can have 4 - 6 generations hatching EVERY YEAR!

The best way to stop this fruit fly is exclusion. Make sure you clean up all fruit



which have dropped from the tree. Do whatever is necessary to keep the pest from burrowing into the soil. A cardboard sheet can provide a barrier between fallen larvae and the dirt they want to hide in. Fine mesh bags can protect figs from the black fig fly. Even a Kaolin clay (Surround) coating can help. Kathleen did a quick test and sprayed a fig tree while she was spraying her citrus. And it worked: she got a full crop of figs!

Someone asked can you seal the eye of the fig so the fig fly can't lay eggs in it? Apparently, this is being tested now. The problem is, any barrier needs to stay soft and move as a fig grows or else it's not a good barrier. Kathleen also introduced us to a potential new pest, wax scale, *Ceroplastes.* It is small and geometric, and almost impossible to get rid of. Heavy infestations of the scale cause yellowing, loss of foliage, and poor fruit set. She

warned us we will need to be excruciatingly careful at our scion exchange this coming January. The scale insect could be hidden in a tiny



nub of a leaf and not seen until it's too late.

According to CDFA, *Ceroplastes rusci* (fig wax scale) is regularly intercepted by California, most often on palm nursery stock from Florida.

If you wish to learn more about the Huanglongbing quarantine, please go to https://www.cdfa.ca.gov/citrus/

The Statewide Integrated Plant Management Program (UCIPM) has several online courses to learn more about pests, pest prevention, and integrated plant management (natural pest control). Their website is <u>https://ipm.ucanr.edu/training/index.html</u>

And don't forget the ever helpful Master Gardeners of Ventura County, and their helpdesk to identify pests: https://ucanr.edu/sites/VCMG/Home\_Gardening\_Helpline821

We truly appreciate the incredible amount of information which Kathleen brought to us. It was a fantastic presentation!

PS, check out the newsletter attachment on the last page which provides a recipe for Kaolin clay with Colorback for a beautiful and effective insect barrier!

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# Home Citrus Educational Series: How to Mix and Apply Kaolin Clay

Funded by: USDA National Institute of Food and Agriculture-Grant # 2021-70029-36054 C. Vincent, M. Pierre, J.D. Burrow, T.R. Weeks, L.M. Diepenbrock

Kaolin clay is a nontoxic approach to managing pests and enhancing growth. When sprayed onto the leaf, the clay particles reflect light in a way that camouflages it from the Asian citrus psyllid. It also helps to keep the leaf cool, which increases growth.



 Measuring cup and tablespoon 3 tablespoons Colorback<sup>™</sup> Bowl and bucket



kaolin clay and pour into bowl. Add 2 Step 2: Measure 3.5 cups Surround® cups of water and mix with whisk. Pour into large bucket.



Step 3: Shake Colorback<sup>™</sup>. An apron and gloves are suggested to prevent damage to clothing.



Step 4: Add 3 tablespoons of Colorback<sup>™</sup> to bucket.



Step 5: Add one gallon water and stir.







Step 7: Apply to upper and lower side





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Wet