CALIFORNIA LEGISLATURE

Informational Hearing

Senate Committee on Agriculture
Senator Cathleen Galgiani, Chair

Asian Citrus Psyllid and Huanglongbing Disease: An Update on the Continuing Threat to California's Citrus

State Capitol, Sacramento

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SENATOR CATHLEEN GALGIANI: Good morning ladies and gentlemen, and welcome to the Senate Agriculture Committee's informational hearing on the Asian citrus psyllid and the Huanglongbing disease, an update on the continuing threat to California citrus. California is facing a serious, ongoing infestation of Asian citrus psyllid (ACP), an invasive pest that carries the Huanglongbing disease that threatens to kill every California citrus tree. As already seen in Florida, this tiny pest and the disease it carries have the ability to devastate both the citrus industry as well as residential citrus trees.

The aim of the hearing this morning is to get an update on the crisis facing California citrus due to the rapid spread of ACP throughout the state. Thank you for being here today and thank you for all of our panelists for your participation in the hearing. As a reminder, if anyone is interested in providing testimony during the public comment period, please sign in with the

sergeants at the back of the room.

Thank you, and I would like to invite Vice Chair Wilk, if you would like to make any comments.

SENATOR SCOTT WILK: Other than this is a serious issue and appreciate your leadership on this and looking forward to the testimony today to hopefully learn about some progress, although I think that is probably not the case, which is why this hearing is even more important. So thank you.

SENATOR GALGIANI: At this point, we'd like to invite our first panelist up, please. And with us, we have Nick Condos, Interim Director, Citrus Pest and Disease Prevention Program with the California Department of Food and Agriculture. Welcome and thank you.

MR. NICK CONDOS: Thank you for asking us here today to give you an update on this devastating disease. I am the interim director of the CDFA Citrus Pest and Disease Prevention Program. As you mentioned, the Asian citrus psyllid, very small insect about the size of an aphid, vectors a bacteria that causes a disease called Huanglongbing. We use the acronym HLB. It also goes by another name, "citrus greening."

ACP has now been found throughout the state from San Diego County all the way up to Placer County. So far, we only have HLB in certain parts of Southern California: Los Angeles County, Orange County, a little bit in the city of Riverside, and one HLB-positive psyllid detected in San Bernardino but no tree there.

So the psyllid feeds on citrus stems and leaves, and it takes the plant

juice out of the tree; and in doing so, it can inject the bacteria into the tree. And that's what makes it so bad, is because it vectors this deadly bacteria. While the bacteria is not harmful to humans, as you mentioned, it does kill citrus trees. It's a hundred percent lethal; and unfortunately, according to the National Academy of Sciences, we're really not all that close to a cure even though millions and millions of dollars are being spent trying to find a cure and therapies to ameliorate the effects of the disease.

HLB has infected about 80% of Florida's commercial citrus groves and is resulting in $2.9 billion economic loss for the state, and it's now threatening to do the same to the California citrus industry and our beloved backyard citrus trees. It would be even more significant for California. Florida is a juice-producing state, so they can sort of blend out their citrus. One of the other things that HLB does, before it kills the tree, it causes the fruit to become small, misshapen, and sour. They can blend out their fruit. We are a fresh-market citrus industry, so we can't blend out a sour piece of fruit. So it could be even more impactful to California.

And here in California, we estimate that 60% of all residences have at least one citrus tree; and many of them have more than one. So it's not just an important commercial commodity. It's important for Californians and their backyard landscape and for the fresh fruit that it provides their families. So it's a little bit different situation here in California than it is in Florida. Although it's been devastating for them, it could be even worse for us.

ACP was first detected in San Diego County in 2008; and as I mentioned,

it has since spread north into Placer County. And it can exist wherever citrus trees grow. Since the initial detection and to protect California citrus trees from serious pests and diseases, the Citrus Pest and Disease Prevention Program was established in 2010. As a program, it is composed of citrus growers, packers, and nursery people from around the state; and their job is to sort of have oversight over the program activities and make recommendations to the secretary and set the annual assessment. The growers assess themselves, depending upon their crop, between $14 and 18 million a year to support this program. So it's a cooperative partnership in the delivery of the program between federal, state, and county governments, the citrus industry, the University of California, and the general public. We couldn't do this program without the support of the public. And we have a very robust outreach program to continue their support and impress upon them the seriousness of this disease. It's going to kill their citrus tree if it gets to that point.

And the program's number one objective is to detect and eradicate HLB. That's our primary concern. But despite all the efforts, HLB continues to be detected throughout the residential areas of Southern California. It was first detected in Hacienda Heights, Los Angeles County in 2012. And a moderate amount of HLB detections followed, up until July of 2017. At the beginning of July, we had had a grand total of 73 detections since that first one in 2012; and most of those 73 were in the earlier part of 2017. But then from July through the end of the year, we had an additional 229 detections; so we ended

the year at 302 trees positive for HLB. And since January 1st -- in the, well, now five months -- we have had 265 HLB trees detected for a grand total right now of 567 trees positive and removed across 14 cities in Southern California. So it's currently an infestation that is picking up steam, unfortunately. It's starting to become "exponential to the curve," as they say in mathematics.

So the HLB quarantine area continues to expand. And right now, it's 674 square miles, mainly centered from San Gabriel down to Santa Ana, sort of a corridor along the I-5/405 corridor. Our ACP quarantines -- so we have both an ACP quarantine and HLB quarantine. And earlier this year we implemented a statewide regional quarantine for ACP to restrict the movement of bulk citrus and nursery stock into discrete regions, and now that quarantine is 63,000 square miles.

We have over 6,000 citrus growers, packers, haulers, and nurseries operating under compliance agreement. So the industry is well regulated; and they're bearing the cost, the additional cost, to conduct their business to prevent the artificial spread of ACP and HLB around the state. It's very costly. And we have two industry experts that are actually members of the Citrus Pest and Disease Committee here, as well. They can explain the impacts of just even complying with the quarantine to their businesses.

Currently, there are over 94,000 properties in the HLB eradication response area. And due to the number of HLB detections and properties within this response area, CDFA's lab -- well, not just CDFA's lab, we are actually cooperating with other labs as well -- we processed 140,000 ACP,

citrus psyllids, and plant samples last year at our lab in order to find the disease wherever it may exist.

But this increase in detections indicates that the program survey and detection protocol are working. So things are working. Unfortunately, we're finding more HLB; but that reveals a larger problem at hand and warrants the need for the program to continue to aggressively pursue HLB. And while the disease has been successfully kept out of commercial groves because, according to our strategic plan, that's our number one goal -- is to keep the disease out of commercial groves. And our number one strategic activity is to quickly find the diseased trees and eliminate them. So we've been successful to date of keeping it out of commercial groves.

I'd like to point out that Texas found their first HLB probably within the six months prior to our finding it; and last report there, they had over 3,000 trees positive for HLB. So their program is not quite as robust as ours, probably nowhere near as robust as ours. And that's the impact of doing less than what we're currently doing -- is you could end up being like Texas or eventually like Florida.

So over the last year, the Citrus Pest and Disease Committee has gone through an extensive planning process and developed a strategic plan for combating HLB now and in the future. We realize that the way the program had operated in the past or the things we emphasized in the past needed to shift; and because of the increasing HLB, it was time to really focus on what the most important activities within the program are and come up with a list of

the highest priorities. And in doing so, that would be the way that we would focus our budget resources in the future -- is aligning our budget with our strategic plan. So in January, the committee unanimously agreed to approve their strategic plan; and we are now utilizing that plan to help shape the budget priorities. The plan identified and prioritized five strategies to achieve the goal of keeping HLB out of commercial groves, and limiting the Asian citrus psyllid movement, and fine-tuning the program.

The number one -- as I mentioned before -- the number one is to quickly detect and eradicate diseased trees by improving the urban survey and sampling processes and continuing quick mandatory tree removal of infected trees and collaborating with the scientific community on early detection efforts. In an average year, we'll inspect over 70,000 residential properties for symptoms of the disease. It's a major, major effort. And then when we do find the disease, we go into a more focused area and survey all properties within 800 meters of a detection. Every property gets inspected. Every tree, every citrus tree, on any property that has them within the 800 meters gets sampled. And if we can catch the psyllids in the trees, we'll catch them and sample them to detect the disease in them, as well.

The number two strategic priority is to control the movement of psyllids around the state and enforce the regulations by increasing our enforcement staff, and we are working very collaboratively with the county agricultural commissioners. They do the majority of the enforcement of our bulk citrus quarantine regulations. So we're expanding and utilizing partnerships, as

appropriate, to ensure that we can deliver the program as efficiently, as effectively for the growers. But by doing that, the growers -- you know, they're, as I mentioned -- they're incurring costs themselves and bearing the costs. But they understand that that's a cost that needs to be borne in order to preserve their livelihood and prevent the artificial movement of the psyllid and the disease around the state.

Number three priority is to suppress psyllid populations by promoting grower participation in areawide treatment programs, removing uncared-for host plants, and continuing to use biocontrol, and continually assessing the urban treatment program. So the growers have formed areawide treatment programs. And they've identified discrete growing regions; and the goal there is for them to all do timed treatments -- to time the treatment in their groves so that they're covering a wide area all at once rather than scattered treatments throughout an area. It's much more effective that way. That's what they learned to do in Florida -- is treat wide areas all at once. It's the best way to suppress psyllid populations.

We're also focusing on improving our data technology in the analysis and sharing the data and exploring new solutions for digitized data, including our pesticide usage reports. This is an ongoing effort. The program generates a massive amount of data, and trying to use that data to determine trends and guide our actions in the future is a big effort. We're collaborating with the California -- the Citrus Research Board and the University of California and the University of Riverside to analyze the program data and figure out trends and

how we could be doing things better.

And the fifth and final strategic activity is to use outreach and collaboration to encourage homeowner and industry participation in the program efforts and foster local government support for program activities. We have a -- Obviously, without public support and understanding the seriousness of this disease, we'd be nowhere. We're going into people's yards; and, especially in regards to HLB, it's a mandatory activity. We have to have access to your yard; and to get people's cooperation, you have to be able to explain to them the serious nature of what -- of this disease. And when you can do that, most people get it, and they understand, and they cooperate. We've had incredible level of cooperation with this program.

So our diagnostic capabilities are very crucial. That's one of the main focuses for the -- for a strategic priority because you can send hundreds of people out to survey the sample; but you have to have the lab capacity to run the sample. So that's one of the -- one of the key areas that were trying to increase because from the laboratory diagnostic capacity everything flows from there. You're able to find more infected trees. You're able to limit them. You're able to treat the psyllid populations around there. You're able to quarantine the appropriate areas to prevent the artificial spread. So everything sort of begins and ends with our diagnostic capacity, and we're really trying to focus on improving that.

What happens when we do find HLB? When we find a positive tree, first we contact the homeowner immediately and explain that we're going to need to

remove the tree; and 99.9% of the time they're very cooperative. Then all trees within 800 meters are sampled. We mandatorily take a leaf off every tree, even if the tree is not showing symptoms. One of the other insidious things about this disease is it can have a two- to five-year latency period after infection -- no symptoms can show up for two to five years. So you have a tree that has the disease -- the psyllid is on it, it's being vectored -- and you don't see any symptoms on it. So in order to account for that, we collect leaves from every tree, regardless of whether they're showing symptoms are not. So that's a huge diagnostic effort, but more than often it pays off. We actually find additional positive trees through that effort that don't have any symptoms at all. So it's a big workload, but it's necessary, and it has proven to be very beneficial.

So after we do our 800-meter survey, we'll then move on to the treatment portion of our program. And before we do that, we have a public meeting for all residents within the 800-meter area and a small buffer outside of that; and we invite them to public meeting to explain the program, the importance of it. We also have officials from Department of Pesticide Regulation and Office of Environmental Health Hazard Assessment to answer any questions that the residents might have about our treatment activities and the pesticides we use and the effects thereof. After that, we'll provide individual notices to the residents 48 hours in advance; and then we'll schedule the treatment at whatever time is convenient for them: weekends, evenings . . .

And we use two pesticides in our treatment program. We use a foliar

pesticide for a quick knockdown of the adults and juvenile psyllids on the tree -- that's called cyfluthrin. And then we use a systemic pesticide called Imidacloprid that is applied to the base of the tree, a little puddle at the base of the tree. And that soaks into the ground, into the roots, and is taken up into leaves; and that provides long-lasting protection to the tree. So for months afterwards, it's providing protection against psyllid re-invasion of that tree. And then, obviously, if our survey efforts reveal additional trees in the area, those trees will be immediately pulled out as well. Yes, ma'am.

SENATOR GALGIANI: Can I ask a question? I had always understood that once a tree was infected that the tree had to be taken out and couldn't be saved.

MR. CONDOS: That is true -- the positive tree. But all the other trees within 800 meters will get the treatment program . . .

SENATOR GALGIANI: I understand.

MR. CONDOS: . . . and sampled as well. And occasionally, we do find adjacent trees, trees next door, that also are positive. But it's usually after that initial detection in the very thorough delimitation, and we'll start to find other trees in the area. When we find them, they come out.

SENATOR GALGIANI: Thank you. I wanted to make sure I understood that correctly.

MR. CONDOS: When an HLB-positive psyllid -- because occasionally we'll find a positive psyllid, but not the tree -- and when that happens, we'll go in, and we'll do our normal treatment program. But we won't remove the tree

that we found the psyllid on until we conclusively prove that that tree is actually positive. There have been a couple of instances where we've -- Well, San Bernardino, is now going on probably four or five months where we found a psyllid, positive, and no tree. And that's very worrisome -- had to come from somewhere. It's quite a ways away from any other known positive HLB location. So we go in, and we do very thorough delimitation of the area, collecting all the same leaves. We do a treatment program; but that's it. It's a worrying situation when we know that there's positive psyllids flying around out there, and you can't find the source tree.

We also have an Asian citrus psyllid control program that focuses in Southern California where Asian citrus psyllid is generally infested. We do treatments along the San Diego border and Imperial County border with Mexico to suppress psyllid populations that may be coming across from Mexico -- because the HLB is present in Mexico, all the way up to our southern border, at least in the Calexico-Mexicali area. So we're trying to prevent psyllids from coming into California already infected there.

We'll also do buffer treatments in residential areas around commercial citrus. The growers band together at areawide treatments and do their treatments. We'll actually treat the residential properties in 400-meter proximity to them to give an even larger areawide suppression effect.

In the San Joaquin Valley in northern parts of the state, we do responsive treatment. So if we find a psyllid, we'll go out and do a treatment. If it's away from commercial citrus, it's just the 50-meter treatment; but if it's

near commercial citrus, we'll go out 800 meters and treat all residential properties. And the growers are expected to do an immediate treatment in response to that, as well. And they're very cooperative with that.

And as I mentioned, as ongoing survey method for HLB we're inspecting 70,000 properties around the state. We have a risk-based survey that's developed in cooperation with scientists from USDA ARS. It's sort of reverse engineered how the disease manifested itself in Florida and helps guide our statewide survey activities.

SENATOR GALGIANI: We have a question from a member. And if you don't mind, it's helpful as we think of questions, sometimes, to ask. Senator Dodd.

SENATOR BILL DODD: You know, I have had some experience in trying to . . . When I was on the board of supervisors in Napa County, we had the European grape vine moth. And, you know, with the help of the state and the feds and, frankly, even people -- growers from Europe, ag experts -- they were able to kill that within, I think it was -- I don't know -- two to three mating cycles -- if that's what it's even called. But I guess the question that I have . . . First of all, I'm very, very supportive of the industry and their quest to get this done. I think that to get rid of this -- I think you're showing that the grower participation is there -- what you're asking for and, at the end of the day, is for in these urban areas, we've got to take care of business.

But my question is . . . 70,000 inspections -- I mean, it's a lot. But if you were king for the day and budget wasn't a limit, scientifically, at what level

would you have to do this to reasonably get to the problem?

MR. CONDOS: So as part of that statewide risk-based survey, the ARS, they give us an estimate of the number of square miles throughout the state that we should strive to visit and the number of properties within that square mile that we should strive to gain access to, and the number of actual plant samples that we should try to collect.

That's the goal; but due to a variety of factors, in any given year, we usually fall a little bit short of that goal. Last year, we actually fell a little bit shorter than the 2016 and 2015 because our activities and our attention was diverted to the delimitations of all the HLB positives that we found. So we have limited staff right now, and we can either do one or the other. And when you have a lot of HLB, you have to focus on what you know you have rather than doing the other good work that you would still like to be doing as much as you could.

But your comment about the EGVM: We have the same level of industry and public support for this program as we had for that very successful program, and that's key for any successful pest management program. You got to have both of those. But both of these pests are game changers for the industry. They realize that, they're fully behind it; and the public gets it pretty quick.

SENATOR GALGIANI: Senator Pan has a question, also. And even though he's not finished with his presentation, it shows you we're engaged and interested in the material you're presenting. So thank you for obliging.

SENATOR RICHARD PAN: I was going to wait till the end, but I thought just follow up on Senator Dodd's question, your answer to that. So I certainly understand that you said there are some trade-offs in terms of staff, but sort of to get back to Senator Dodd's question: So 70,000 is a lot of properties, but I think near Southern California 70,000 is a drop in the bucket. So the question is that -- and you described in your answer to Senator Dodd. Well, so how many properties ideally if you had infinite resources -- or I should say, not infinite, but what . . . So given what you described . . . You said, "Well, we can't get to all of them." So how many is "all of them"? In other words, so given what you just described, you know, these are at-risk areas and so forth. You're able to get 70,000; but how many would you want to have gotten to?

MR. CONDOS: Well, it's more than 70,000. The exact number, I don't have off the top of my…

SENATOR PAN: Well, can you give me a rough scale?

MR. CONDOS: It's in the 80 to 90,000.

SENATOR PAN: Okay, 80 to 90,000. Okay, so it's…

MR. CONDOS: But that's also predicated on our laboratory have…

SENATOR PAN: Okay, that was my next question, actually.

MR. CONDOS: Okay, so we know, about, on average, how many plant samples we collect when we do that survey per square mile. And what we do is we work with the researcher to figure out -- okay, if our lab can only process X per month, then we have to stretch out our survey over the X number of

months. So we extrapolate our lab capacity and then factor in that we're probably going to find some HLB, and that will take up a portion of our lab capacity. So we have been in the process of evaluating based upon future lab capacity and how many samples we should be collecting every year. And we're working with the researcher to give us that number to design a survey that would target that.

SENATOR PAN: Okay, so in my mind, since you're talking to the Legislature here . . . And I haven't had the experience that Senator Dodd has in terms of plant disease, I'm a physician and have a background in public health. So I think we all have . . . (Tristan -- there you go) But there's some similarities.

So I guess what I really want to know -- and you said, maybe you don't have the answer right now -- is what kind of lab capacity do you need -- because you said that's a rate-limiting step -- both today and then projecting into the future, because unfortunately -- what you also testified to -- this is continuing to spread; so despite our best efforts -- we are fortunate it has not gotten to any commercial groves -- but it's still spreading.

And so my guess is what that means is that your 70 -- well ideally, 80 to 90,000 properties may go to 100,000, may go to 110,000. And if your rate-limiting step is your lab capacity, then we should be building lab capacity and, recognizing it may take some time to construct it, to think about where the puck's going and ideally get to the point where at least we can limit its spread so that it's not continuing to spread. I mean, ideally, we'd try to shrink

it; but recognizing there's also -- may be coming -- other sources.

But what I'd like to know, especially as we start talking about budgets and so forth, is what is that lab capacity we need to have -- since that's the constrainer right now -- that's going to allow us to be able to get to all the properties you talk about? And then, of course, once you have the lab capacity, the additional staff and so forth. So I hope we will get that answer sometime soon.

MR. CONDOS: Well, so, as part of my current interim role is working with the committee to identify what dedicated resources they need for this program. Right now, they're using the existing resources of our Plant Health Division to do a lot of other things.

SENATOR PAN: So when would we anticipate you…

MR. CONDOS: May 9th, I'll be presenting to the committee.

SENATOR PAN: Which date?

MR. CONDOS: May 9th. We have a committee meeting on May 9th, and I'll be presenting to them our estimate of the dedicated resources that they need. It's all based upon what our future lab capacity will be.

SENATOR PAN: And you already have the resources for that? -- or do you need resources for that?

MR. CONDOS: Well, we just redirected some resource from this year's budget to increase our lab capacity. So it's going to be based upon that. We also have a couple of other labs, Citrus Research Lab, that can increase their capacity as well. What we've done is we've built a formula because we know

that this is just the first step in increasing lab capacity because it does lead to the need for additional survey resources. You find more HLB, you need more tree removal resources. So what we've created is sort of a model that you increase the lab capacity, and it tells you on down the line how many more of the other activities you need to do.

SENATOR PAN: So what I would urge you to do, since you are talking to the Legislature . . . And I realize you are also part of the administration, and they have sometimes their own ideas. I would like to know -- I hope that you can report to us -- what is the ideal scenario in terms of lab capacity and staff necessary to reach every -- not just "I can't reach those; I'm going to have to stretch it out" -- reach every place so we can start trying to contain this disease? -- which I know you're working hard on and done a better job than many other places. But let's try to . . . I want to know what the resources are necessary to be able to actually hit all the areas that you need to take care of to solve . . . Alright. And then we can figure out, as the Legislature, what kind of resources we can allocate from the state to try to do that. But I'd like to know -- under what I'll call the "ideal scenario" -- but the optimal scenario in terms of resources in order to be able to -- you don't have to say, "Well, I have to pull back on this so I can do that."

MR. CONDOS: That's what on May 9th we'll make…

SENATOR PAN: Excellent, because we have a budget we're going to be passing in June. Thank you.

MR. CONDOS: Very cognizant of that.

SENATOR GALGIANI: Thank you, Senator Pan. Thank you.

MR. CONDOS: I might have answered everything else I had to say. Oh, our biocontrol program. So very interesting: In order to suppress psyllid populations in generally infested areas, we, through the University of California and the Citrus Research Board, imported a natural predator called Tamarixia radiata. And it's a tiny, tiny wasp; and it attacks the psyllid, the young psyllids. And we produce over 3 million of them a year and release them throughout Southern California and other areas in San Joaquin Valley or Northern California, where there's incipient ACP populations. Very critical part of our program because it provides a level of control in areas where we don't have a treatment program, and it's a lot of high degree of public acceptance as well for that program.

It's free pest control, just flying around in the air. All you have to do is control the ants on your citrus trees, and it maximizes the benefits -- because the ants will actually farm the honeydew -- which is that the psyllids' excrement is full of sugar -- and they farm and protect the psyllids. So if you don't control your ants, you can't maximize the benefit of this free biocontrol agent just hovering over your tree waiting to do its job.

This program is a very big program. It has very few actual dedicated resources, as I mentioned. That's why we're working with the committee, is to identify them. Right now, in any given month, based upon the workload, we can have as many as 500 staff working a portion of their time on this program. But they also do other things: Medfly, Japanese beetle, gypsy moth. Things

like that.

We equate that to about 300 full-time equivalents. If you took the portion of everybody's salary and boiled it all down and divided it by the number of hours in a month, about 300, just on the program activities that we have now. That might change once we determine what our future activities are and what the appropriate dedicated resources are, but that's the level of effort going into this program. And that's just for state staff, because now you have the county agricultural commissioner staff, all the contractors that we use to help us deliver this program. So it's a -- it's a big effort, very big effort. But it's an appropriate effort because California's commercial and backyard citrus trees are experiencing the biggest threat ever between ACP and HLB. And the CPDPC and its many partners are dedicated to protecting our state's citrus trees, and it's critical that the program continue to be supported in order to save our state's citrus. And that's the end of my presentation.

SENATOR GALGIANI: Thank you very much. How are residents responding to the mandatory program? What's your sense?

MR. CONDOS: 99.9 of them are very supportive of the program; but when you get to 94,000 properties, even a small percentage that disagrees, for a variety of reasons . . . Some people are just antigovernment: "I don't care what you're here for. You're from the government, I don't want you on my property." Others may be antipesticide. Others just don't, they don't understand that the tree looks fine; but it has a death sentence. And once you can explain these things to the people, they get it. Occasionally, you just

have some people that are just not going to comply. And we'll actually get a warrant issued by the magistrate, show up with a Highway Patrol and the dogcatcher, and gain access to their yard. And this is after many, many, many attempts to persuade them, to educate them. We'll get the county ag commissioner to come over: "If you don't believe somebody from the state, here's your local county ag commissioner to explain that this is something we need to do, and it's very important." But if we get to the end of all of our efforts, we'll resort to getting a warrant to compel them to allow us access to take out the tree. We don't like having to do that. You don't make any friends doing that, but it's truly important, and it's what needs to be done.

SENATOR GALGIANI: Thank you. Any other questions from members? Senator Wilk?

SENATOR WILK: Yeah, I've got a couple just to follow up on that. Is there any compensation for someone when we extract their tree?

MR. CONDOS: There is no compensation because we're providing them a service. Their tree's going to die. If it dies and loses all its leaves and is an eyesore in their yard, and they're going to have to spend their own money to take that tree out. So…

SENATOR WILK: Then I'm wondering, have we had any sightings in the San Fernando Valley, since that's on the edge of Ventura County, which is obviously a commercial area for citrus?

MR. CONDOS: No HLB has been detected in the San Fernando Valley, but that's one of the areas where we do the intense statewide survey.

SENATOR WILK: Alright. Thank you.

SENATOR GALGIANI: Senator Pan?

SENATOR PAN: Thank you. Again, thank you so much for your presentation. In terms of, because you made mention . . . Obviously, this is a partnership between the state and many of our local ag commissioners and local officials. In terms of resources, we touched on state resources, lab staff, and so forth. Are we allocating funds to affected counties or ag commissioners so that they can do their work? Are they using the – or just using local resources for those?

MR. CONDOS: We provide them money for doing the ACP detection trapping throughout the state and also for enforcing our bulk citrus movement restrictions. And some of them may go above and beyond. I'm sure that probably like Tulare and Kern and Fresno County are probably spending a little bit of their own money, but it's money that the citrus industry in their community donates to them via their taxes and the business activities. But we do pass money through to the counties to cover their costs for assisting with the program.

SENATOR PAN: Okay. I appreciate that because in terms of our total infrastructure, you know, we have to be sure we have appropriate funding at all the levels. We don't want to just not provide support for affected counties because, after all, this is a statewide threat.

MR. CONDOS: That would be an unfunded mandate, and we try not to do those.

SENATOR PAN: Well, aside from unfunded mandate, I mean, it doesn't benefit . . . The unaffected areas will only be affected areas later on if we don't step in.

And then I guess the other question I had is that you did make mention about some challenges in terms of people not cooperating. But in terms of pesticide applications, have you been running into any resistance or difficulties there or what should we be doing about that issue?

MR. CONDOS: Well, it's always a perennial issue in California. But because of the nature of the pest and disease, it's 100% fatal . . . The organic pesticides have been investigated. The University of California has done extensive investigation, and there's just no organic option currently available that provides the same level of efficacy and duration of efficacy as the pesticides we're using. The pesticides we're using are all EPA registered, they're all for use in residential situations. It's very helpful when we can call upon Office of Administrative Health: "If you don't believe CDFA, talk to OEHHA . . . They're not going to pull any punches on our behalf. They're going to tell you the straight story about this stuff." And when we can get residents to talk to them, almost always they assuage their concerns -- that with the fact that it's 100% deadly disease. The tree's going to die, and the people -- that message resonates with people.

But there is still some resistance to that, as well. We can fall back and say, "Well, we have a biocontrol program. At best, it's probably 30 to 40% effective, if you control your ants." So we are showing that we're doing other

things other than just spraying pesticides. I mean, the massive amount of detection and survey work that we do to find HLB. Pulling the tree out, that's a non-pesticidal activity. And that's the focus of the program. The focus is not trying to spray pesticides to suppress it. That's one element of it, but the focus is finding those trees. That's the number one focus.

So we can try to convince them that the whole program is a benefit, in that one part of the program that they may find objectionable is an important part but it's not our primary focus.

SENATOR PAN: But I guess in terms of public education and so forth, I'm just wondering in terms of the level of resistance you run into when you do decide you need to treat an area whether that's something we need to invest more in public education or not -- or you seem like that you're able to, by just talking to people, get their acceptance.

MR. CONDOS: Yeah, if we can get them together with OEHHA, it usually does the trick.

SENATOR PAN: Okay. And then the other question I had was in terms of the . . . So you said the problem is still growing. And based on your analysis, is that mainly internal spreading, still stuff coming from outside? What, where, what seems to be the main driver of the continued spread so far, right now?

MR. CONDOS: Last year, based upon the place where we found it and the number of trees we found, those infestations had been there for a couple of years -- and we finally found them. And then once we found them and started

delimiting, we really kind of started to get our hand around it. But unfortunately, that means that those trees were out there; and some of these places . . . There's a map in your packet showing the different eradication zones and the number of trees per city. Some of these infestations are pretty intense. We went from finding no trees there -- within eight, nine months, hundreds of trees. So it's definitely a concern that those trees were there undetected for several years, but that's good that we found them. We're removing the inoculum, suppressing the psyllid population, and quarantining the area so that it can't move artificially out of there.

And the quarantine for HLB, it's pretty harsh. If you have citrus nursery stock in an HLB quarantine area that's been exposed to the outdoors, you have two options: you can either have it destroyed or move it inside of an insect-proof structure. So, once again, you've got to spend your own money to build an insect-proof screen house, put your nursery stock in there for two years while we continually test it for the disease. And after that two-year time, then you can sell it -- but only in the HLB quarantine area. It has to be tagged that says you can't move it out of the HLB quarantine area. So things start to get better quickly once we find it. The program starts to apply its mitigations -- but first you've got to find it.

SENATOR PAN: Right. So in terms of, and I realize maybe it's pretty difficult, you have a two- to five-year latency period. In terms of trying to identify the -- I guess the index case or whatever. So when you have these clusters, is it mainly because it's going from one place to another in the state,

or someone's bringing it in from outside. I mean, I'm just trying to get it…

MR. CONDOS: Yeah, it was probably, I would say, local movement; but we have . . . There's at least two different strains in California. The one strain was – in the first place we found it, Hacienda Heights. It's apparently a very, very, virulent strain, and they think that that's the only reason why we've only ever found two positive trees in Hacienda Heights since 2012. Two? I think it's two -- two or three, very few. Whereas, the other milder strains in the surrounding areas, we've -- when we first found the disease -- and a lot of those trees that we found were not symptomatic -- it was much more prevalent everywhere.

So that indicates there may have been two separate introductions. But because of our border stations that are preventing the entry of fruit and trees from Texas and Florida and the emphasis that we place upon this program, our federal partners are keenly aware and have redoubled all of their efforts to prevent the introduction from the land borders like in Mexico or our ports, as well. So they are very aware that the growers are spending millions of -- and the federal government is spending $14 million a year. So it's something that they're keenly aware -- not making the problem worse, by prevention efforts to keep it out.

SENATOR PAN: The final question is about our border area, and do we have enough inspectors for things coming across our border, people driving things into Southern California, or so forth? Do we need . . . I think right now we don't inspect everything, we just sort of sample. What's the situation

right now in terms of agricultural inspection at the border?

MR. CONDOS: We have the resources we need now. Obviously, in the -- When we were searching for budget solutions a few years ago, we had a major cut. But then we were able to get resources back in the very next year to make sure that we are operating at the bare minimum level or sufficient level to maintain our goal and our mission of keeping pests out. So we collaborate with other agencies to actually help defray the cost to us of our pest prevention.

SENATOR PAN: Okay, when you say "bare minimum," that doesn't . . .

MR. CONDOS: At the time, at the time. But we've been able to form these partnerships. We have a partnership with CalRecycling, BOE. They pay us to help them deliver their mission, and in turn, it helps us continue to deliver our mission.

SENATOR PAN: So the situation right now is, what percentage do we inspect?

MR. CONDOS: So if you were to drive into the state from Reno, and we'd see you coming with your California license plate, and we'd ask you, "Hey, where you coming from?" You say Reno. And we know there's really not much in Reno in western Nevada that we're concerned with. But if you drove in in your U-Haul with Florida plates on it, you would get your full exam.

SENATOR PAN: So you catch every car coming . . .

MR. CONDOS: Yes, we inspect every car, if it's nothing more than, "Hi, how are you doing; where you coming from; do you have any fruits or

vegetables?" It may be as simple as a question. If the questions lead to the right answers, you get to open your trunk and open your trailer. All commercial vehicles are inspected.

SENATOR PAN: Alright. Thank you.

MR. CONDOS: You're welcome.

SENATOR GALGIANI: Senator Wilk?

SENATOR WILK: Yeah, I have a final question. I, too, want to thank you for your testimony. I think you can sense that you have sympathetic ears here. And it seems to me, I think we all probably feel like we're under-investing in addressing this. So if my notes are correct, you had mentioned that in Florida 80% loss, right? Which accounted for $2.9 billion. If we had an 80% loss here in California of our commercial citrus crop, what does that equate to in a dollar figure?

MR. CONDOS: So our industry here is worth about 2 billion -- $1.6 billion impact. It's big. And then that doesn't count the citrus trees in people's backyard. Which I have seven citrus trees in my backyard, and they're important to me. And there's a lot of other Californians that feel the same way. So it's not just the commercial loss, it's a loss of those plants in our yard. Which it's a cliché to say they're, it's an icon of California landscape, but it really is. I mean, with 60% of all homeowners have at least one. It's an important tree. And people get sentimentally attached to their trees. You know, "Oh, my grandfather planted that tree." You hear that story, stories like that all the time -- or "We use that citrus to make orange

juice on New Year's Day. It's our family tradition. That tree's, you know, part of our family."

SENATOR GALGIANI: Thank you. We very much enjoyed your presentation. Thank you very, very much.

MR. CONDOS: Thank you.

SENATOR GALGIANI: And next, we have Lauren Noland-Hajik on behalf of California Citrus Mutual; Nick Hill, a citrus grower and immediate past, present, and current committee member of the Citrus Pest and Disease Prevention Program with CDFA; and our third panelist is Kevin Severns, citrus grower, General Manager of Orange Cove-Sanger Citrus Association, who is also immediate past vice chairman and current committee member of the Citrus Pest and Disease Prevention Program with CDFA. Welcome. Thank you.

MS. LAUREN NOLAND-HAJIK: Thank you, Madam Chair and members of the commission, Lauren Noland-Hajik here on behalf of California Citrus Mutual. I just want to thank you for your continued efforts on this issue and for continuing to keep up awareness of this issue. Obviously, Huanglongbing is one of the most significant and increasing threats to the citrus industry here in the state of California. And as you heard from Mr. Condos, we have seen a great expansion of the number of positive trees that we found here in California. Detection has actually increased a thousand percent in the last 12 months. And while this is incredibly alarming as a number, it also shows that the program that CDFA is implementing is working. We're finding these trees,

we're identifying them, we're finding the bug. And so, we need the state to continue in its commitment to ensure that we can continue to have the resources to fight this disease and have CDFA continue to be successful in identifying this.

In the last 10 years, citrus growers have invested well over $100 million into this program themselves, and that's all directed towards urban inspection, treatment, trapping of the bug, et cetera. It's not being used on those commercial groves. Anything that the growers are doing are on top of that. And the citrus industry is incredibly committed to this cause. In the last 12 months, on top of what they are funding under their assessment, they also raised $8 million and built a brand new lab at UC Riverside specifically for HLB research to try to find a cure for this disease, see what we can do.

To Senator Wilk's question that he just raised -- so thank you for that -- a study by UC Riverside actually just came out yesterday -- and we're still combing through it -- but it estimates that the industry is actually a 3.3 billion industry and that its economic impact to California in 2016 through 2017 was $7.1 billion. It also estimates that if there was just a 20% reduction of citrus acreage it would cause a loss of 7,350 jobs and 127 million in employee income and reduce the state's GDP by $501 million. So we will get you, the committee, and staff that new research that just came out so that you can see all the numbers through there.

And then, as Senator Pan had brought up, what do we need in resources? You know, last year we got $10 million from the General Fund,

and that was huge. On top of what we were getting from the federal government, on top of the assessments that the citrus growers were putting in, that $10 million allowed CDFA to increase what it was doing in the program. And as you can see, it was successful because we are finding those trees. That's why we're so encouraged by the Legislature this year, Senator Galgiani for pushing forward the budget request and for holding this hearing because it is critical that we maintain the relationship that we have between the growers, the state, and the federal government so that we can continue to have a successful program and protect our commercial citrus.

So I'm here to answer any questions. But fortunately for all of us, we have two citrus growers with us who are, you know, on the ground seeing this every day, who can tell you what's going on and then answer any more particular questions. Thank you.

SENATOR GALGIANI: Thank you very much. Any questions or should we proceed? Please. Thank you very much.

MR. NICK HILL: Hi, my name is Nick Hill. I'm a grower -- I grow six different varieties of citrus -- past chair of the Citrus Pest and Disease Prevention Committee. And I think I'm here to add a little perspective to what we're doing.

Let's look at Florida. Once the disease was found, it took them about four to six years till they were completely infested. Texas, once they discovered the ACP, within four to six years they were within a tipping point; and they can't go back because they got so many trees they can't stop it.

We're now in our 10 years of this program, and we're still not found any “hot” trees or HLB-positive trees in any commercial orchard because this state, the growers have driven this program, have funded it to make sure that we trap and find where the ACPs are and where the HLB is. That's 10 years ago. So I think that we have a strong program.

Our budget in the beginning ran about $2 to $3 million. We are currently at a budget of $42 million; and without the state’s kick-in of the $10 million last year, we feel that we would have had to dilute our program, everything from biocontrol, to residential trapping, to buffer zone treatments, to trapping out in the field. Several years ago, I went to Florida. I've been to Florida four times. And they were at that time spending $20 million a year to fight ACP/HLB, and I thought we'll never get to that point. Well, we're double that now, and I don't see any end to the current budget. As long as we have these hot trees, and as long as we're taking out trees, as long as we're spending the bulk of our money in the urban areas, I don't see our budget declining by very much. I would like to see the sustained budgeting from the state at that 10 million or plus level. We need the money.

The growers have put everything they've had into this thing. Between the assessments of CDPCP and CRB, we're upwards close to $0.16 to $0.17 per box. That's 100 bucks an acre. Not to mention all the different farming practices I've had to put in to mitigate the movement of ACP. We're now tarping all loads. We're now mitigating anything we move within quarantined areas with spray and moves or washing or cleaning products. I've got extra

detection in the field. I have extra training to my employees. We check every bag that goes out of our field, in and out, to make sure that they been properly cleaned. All my equipment is properly cleaned before it comes and goes in the orchard. All of these things are all costs that we're having to take in. I now add extra systemic chemicals and pesticides into my fields so that if the ACP bites the tree, if I have a rogue one in the field, I drop it right there.

All these things, all good growers are doing. It's adding a couple hundred dollars onto our budget per acre to manage this upcoming disease. And right now this industry is lockstep in stopping this disease. No matter what we say or do, we're going to do that.

I'm a businessman. I cannot pull up my trees and move them to Arizona or Texas -- I wouldn't want to move to Texas. But we're here to make sure this industry lasts for my generation, the next generation. Thank you.

SENATOR GALGIANI: Thank you very much. Please.

MR. KEVIN SEVERNS: Senator Galgiani and the committee, thank you very much for allowing us to come here and talk to you today about our battle with HLB and the Asian citrus psyllid.

It's our desire to express to you the importance of maintaining, if not enhancing, the state of California's current level of support in the CPDPC program through CDFA. To do otherwise will no doubt result in drastic reductions in important aspects of this program at a critical time in our battle. Now is not the time for us to back off in what is truly a fight for our lives and the survival of the California citrus industry. As has been mentioned already,

we need look no farther than Florida where there were once thriving orange groves; and we can see the urgency of the war that we're waging on the Asian citrus psyllid and the deadly HLB that it carries.

At one time, California citrus production was comparatively a fraction of what Florida produced. Sadly, those roles have now been reversed. As you may be aware, HLB detections -- and it has been mentioned already here -- HLB detections in urban areas of Southern California have increased drastically over the past couple years. Those detections have been answered quickly and effectively by CDFA staff with removal of the diseased trees. Those removals could not have happened without a very effective outreach program to the homeowners in the areas where HLB has been found.

The success of the outreach program is directly attributable to the state's $10 million contribution to this program. The removal of those HLB-positive trees has helped us keep with zero detections of HLB in commercial citrus -- so far. We're conscious of the fact that we probably won't be able to maintain commercial citrus as HLB free forever; and in fact, today, we may not be. We just don't know that yet. But the current efforts are buying precious time, time to allow research to find solutions to the HLB curse. Last year, the $10 million provided by the state helped us enhance our biocontrol program and engage in a robust outreach program to the homeowners and people in urban settings with backyard citrus. This, in turn, freed up other program funds for detection and testing in both urban and commercial citrus. Again, now is not the time to back down. Growers are not expecting the state to step up so they

can back down.

Currently, the California Citrus Pest and Disease Prevention Program, as has been stated, collects between $14 and $18 million a year from the industry to fund this fight. That doesn't include, as Nick has mentioned, the expense that growers, packers, and haulers go on regulating themselves to avoid potentially spreading potentially deadly psyllids as we harvest, pack, and ship our crops. Growers are constantly monitoring for the pest and the disease and treating, if needed, completely at their own expense. Growers also fund research efforts, as has been mentioned, through the California Citrus Research Board with the majority of that research going to HLB/ACP research.

We urge and we ask you that the current level of funding is maintained, if not increased. If we don't pay attention to this critical aspect of this effective program, it will have to be drastically curtailed. Urban detection and testing, outreach, and biocontrol are all essential, proactive, environmentally sound aspects of this program. We ask you for your continued support and thank you for your attention and time today.

MR. HILL: Can I make one more comment?

SENATOR GALGIANI: Please do.

MR. HILL: Back in 1990, we had a disastrous freeze; and it pretty much put the citrus industry out of business. Small towns like Orange Cove, Lindsay, Exeter, Delano, Terra Bella, just to name a few -- unemployment went to 80 to 90% literally overnight. We're talking about pickers; we're talking about packing house workers, with Kevin; we're talking about truck drivers;

we're talking about, you know, all those people that deal with the citrus industry. Those dollars that turn over in the local economy three to four times were gone literally overnight. That's the kind of disaster we're talking about. There's a whole population that depends -- and I'm not talking about us growers -- I'm talking about the guys I have in my field today working that depend on that job to pay their rents, their food, and have something to take home at night. So this is a far-reaching problem that we don't want to see . . . We want to see this industry survive and be viable.

SENATOR GALGIANI: Thank you. I'm really glad that you brought that up because we argue on behalf of the need for greater funding in the budget and the potential for disaster and what happened in Florida and so forth; but for these smaller communities, the devastation is so real and so harsh. And there's not enough time to wait for recovery. What do you do in the meantime? So that's another argument that we need to be sure to convey as we're pushing for certainty in the budget to have continued funding at the levels that we need. So thank you.

Senator Wilk? Okay. Well, thank you very much to our presenters, and that concludes our hearing for today. Thank you.

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