

Genetically modified orange trees set for Florida field trials

01/16/2012 04:03:00 PM

By Citrus + Vegetable Magazine Staff



Courtesy of Cornell University
Research support specialist
Ewa Borejsza-Wysocka
transfers genes for insect resistance into a Hamlin orange plant growing in tissue culture.

Hamlin orange trees genetically engineered to produce a natural insecticide that wards off Asian citrus psyllids may be planted in Florida field trials as soon as required permits are granted.

The trees, three years in the works, were developed by Cornell University scientists, according to a news release.

Plant pathologists Kerik Cox and Herb Aldwinkle identified a handful of naturally occurring insecticides. Technicians used genetic engineering to insert the insecticidal genes individually and in groups into tomato plants.

The plants were then exposed to tomato psyllids, which are closely related to Asian citrus psyllids.

Asian citrus psyllids carry bacteria responsible for citrus greening, or huanglongbing.

The disease is harmless to humans but causes citrus fruit to remain green, causes an off taste in the fruit, stunts citrus trees and may even kill trees.

The researchers found some lines successfully warded off the tomato pests and inserted the most promising genes into Hamlin orange plants.

Aldwinkle says he hopes to have at least preliminary trial results within a year.

The researchers are working with Southern Gardens Citrus Inc. of Clewiston.

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Karen

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colorado | January, 17, 2012 at 03:31 PM

completely unacceptable. you are killing your mother earth. How dare you.

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March, 04, 2012 at 08:30 PM

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March, 04, 2012 at 08:30 PM

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Anastasia

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Washington, DC | January, 17, 2012 at 04:35 PM

Great work! Here's hoping that this trait will allow Florida citrus production to continue despite the invasive psyllids. I grew up in Florida and nothing compares to our citrus. Good luck to the researchers!

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January, 23, 2012 at 10:59 PM

Bad Medicine!

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Angela

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Orlando | January, 23, 2012 at 11:12 PM

Super! One more fruit I'll have to cross off my list of natural things I can eat. PLEASE STOP PLAYING GOD!

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Eric

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January, 23, 2012 at 11:26 PM

This is one of those situations where a well-meaning effort can potentially have future catastrophic effects on the trees and to us. You change the genepool and you don't know what that can do to the tree populations, the wildlife around them, the other insects (bees) Etc. and to us over long-term exposure. I'm sure the FDA will approve it right away having said that.

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Maria

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January, 23, 2012 at 11:57 PM

PLEASE mark it with a GMO stamp. No one knows what they are eating anymore. Dire consequences.

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Kristina

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Fort Walton Beach, FL | January, 23, 2012 at 11:59 PM

SAVE THE BEES! Put a stop to the use of systemic pesticides that can contribute to Bee population decline. Support organic farming!!

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Steve

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Las Vegas | January, 24, 2012 at 12:11 AM

Genius! Insert the pesticide/poison into the food we eat so we can't wash it off, and not like GMO corn I'm sure the pest its meant to kill will not evolve to be immune to it(LOL) because they have such a short life cycle and regular people will not be one second closer to cancer. And since they are "naturally" occurring" pesticides they are totally not harmful to people just like all other natural poisons:)

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Missouri | January, 24, 2012 at 04:02 AM

No! Not my Florida Orange Juice! I've been drinking it to avoid the nuclear contamination of the juice from other sources. I do not consume GMO's as a rule and that applies to Orange Juice as well. Since we do NOT have truth in labeling in this country, I will have to give up Orange Juice and Oranges all together as well. This is truly sad news.

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Fred Jones

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Pittsburgh | January, 27, 2012 at 07:54 AM

You can still drink orange juice marked "organic." It won't be from GMO's. There is no reason to give up on oranges. I myself however,

have no problem with GMO's.

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Cate

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January, 30, 2012 at 10:55 AM

Yet another food to boycott for health.

This means one grower will cause quite a few people to stop buying non-organic oranges and juice from ALL USA farms. Good job guys.

People are getting educated about GMOs. You'll regret this move in the long run.

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Rupert Knowles

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Cranfield, UK | January, 31, 2012 at 03:20 AM

Extraordinary to see all these hysterical comments ranting against biotechnology without even finding out what insecticide is proposed for the oranges. Presumably it is non-toxic to humans or it does not leave residue in the fruit - otherwise it would not be passed by the regulators.

Presumably also it will have to pass tests on bees and other pollinating insects as no Florida farmer will want to harm his precious bees. But given these caveats, have the critics considered the danger to spray operatives in applying conventional pesticides against psyllids? Do they realise that all pesticides are designed to be rain-fast and cannot be washed off? Do they understand the sums that are spent by all those in the food chain on testing MRLs?

For ordinary psylla there are natural enemies that keep them under control, but these and the Citrus Greening disease they transmit are invaders from abroad and because the disease is so devastating and one psylla sting is sufficient to transmit it, there is a zero tolerance. It really is high time that more effort was put into science teaching in schools to combat these ill-informed and self-centered opinions. I thought we only had to put up with it in Europe!

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Steven

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US | February, 01, 2012 at 10:14 PM

Rupert Knowles, I think its about time idiots like you stop living in a fantasy world where the government and big corporations all "have your back." In the end, the only back they'll have is the back of your sorry ass lying face first six feet under. And hopefully with this kind of attitude toward your planet, I hope that will be a long and insidious process. Good day sir....

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Louise

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Canada | February, 23, 2012 at 05:14 PM

Extraordinary to see this hysterical comment ranting about how great biotechnology is without finding out anything about the insecticide proposed to become one with the oranges. Placing total trust in the regulators and business to make the big, long term thinking decisions. Beyond the dollar signs? Are you from earth?

Have you read about the possible links of GMO's to cancer - allergies etc? Check this out : <http://www.wimp.com/realfood/>

Also - check out videos about Cuba - the Accidental revolution. Organic food for the masses IS possible. What about the potential problems with wheat now for human health. Google that. Heritage grains didn't mess with humans - then with a lot of tinkering to wheat, we have problems.

It is high time that more effort was put into teaching students to REALLY think, period. Deeper level thinking - not so much of the surface garbage we live with today. I think Europe on the whole has done just fine by the way.

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taylor

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Texas | April, 29, 2012 at 04:35 PM

How is this playing god? We're playing smart and producing more food for our country.

[Reply](#)

D

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<http://allcancerfightingfoods.com/florida-oranges-causing-cancer/> | May, 03, 2012 at 03:45 PM

Well, no matter how good the psyllids thingie goes, Florida oranges need to be devoid of food colorants at least!

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Denise

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October, 05, 2012 at 11:28 PM

Leave nature alone.It never works It always backfires.Just look at history people.Are we that dumb Come on. As one of my coworkers says Really.

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Mary Medina

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Mobile Alabama | October, 16, 2012 at 07:29 PM

No problem Florida. I'm watching California's prop 37 and hoping it passes. I will just buy California oranges.

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anonymous

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November, 20, 2012 at 11:21 AM

GMOs anything is bad! It's ruining our earth and creating more diseases in our food supply!

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Gerry

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Ga | December, 16, 2012 at 07:48 AM

Whatever the reasons for the alterations (Thicker skin for cold resistant/resist insects) they are leaving out the fact that they change taste to almost 0, and skins on apple to cardboard.

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Jon

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UK | March, 12, 2013 at 10:06 AM

Great work.. not. Anastasia you are oblivious.

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Vicky

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Florida | March, 20, 2013 at 02:38 PM

STOP messing with the food! We want organic - not this genetically engineered crap....every time you mess with the food you mess with the health of the people who eat that food! STOP...enough already!!

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Bob

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Mass | March, 21, 2013 at 07:14 AM

AND...what effect does this insecticide have on Honey Bees??

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[GO](#)

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