

Antibiotics don't belong on citrus trees, suit alleges

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Superbugs emerging from Florida's orange groves?

It sounds like the stuff of bad science fiction, but a coalition of nonprofits filed suit against the federal government Thursday, warning the state's citrus industry could become the breeding ground for dangerous antibiotic-resistant bacteria.

What has alarmed environmentalists, public health advocates and farmworker groups alike is the EPA's approval of the broad-spectrum antibiotic streptomycin to fight citrus greening and canker, which have ravaged the state's iconic crop.

On Thursday, they sued the Environmental Protection Agency for allowing widespread spraying of streptomycin on more than 650,000 acres in Florida and California trees over the next seven years.

The suit alleges the EPA didn't adequately assess impacts to endangered species. It also says the agency failed to ensure that using the antibiotic as a pesticide would not cause unreasonable harm to human health.

That's the crux of the matter for Jeannie Economos.

"This approval of streptomycin is making farmworkers guinea pigs," said Economos of the Apopka-based Farmworker Association of Florida. "They're already some of the most vulnerable people in our entire county. They're already exposed to a toxic soup of other chemicals in the workplace, and this approval of streptomycin is just one more insult and one more abuse of farmworkers by exposing them to possible antibiotic resistance."

As citrus yields have dwindled, growers are grasping for solutions, says Hendry County extension agent Gene McAvoy of the University of Florida IFAS Southwest Florida Research and Education Center. Industry research shows that though antibiotics don't cure greening; they can buy the trees more years of reduced productivity, and farmers searching for ways to hang on are eager to try new methods that appear promising.

The bacterial infection is carried by a psyllid, a tiny flying insect. Greening showed up in the early 2000s, and is now spreading in California groves as well. Over the past decade, Florida's citrus industry has lost 59% of its jobs and taken an estimated \$2 billion hit in economic impact, according to the University of Florida.

The suit also points up a conflict among federal agencies: Both the Food and Drug Administration and the Centers for Disease Control and Prevention have loudly sounded the alarm about the ever-expanding list of drug-resistant bacteria. Pathogens like *Clostridium difficile* and *Staphylococcus aureus* haunt the halls of hospitals and nursing homes, infecting upwards of 2 million people a year, leading to some 36,000 deaths, Michael Craig, senior adviser for antibiotic resistance, told The News-Press last year.

Farmworkers who tend the trees are at much greater risk than the public, said Nathan Donley, senior scientist with the Center for Biological Diversity, one of the groups bringing suit. “Those who are in the places where streptomycin is used are more at risk, because that’s where the bacteria will develop resistance,” he said. “Overuse of (antibiotics) in these fields can really increase your risk of getting an infection that is resistant to these drugs,” said Donley.

“The EPA is not equipped to deal with this, and I think it shows in their analysis. I think this was hurried very quickly without much input from their federal partners who have a lot of experience in this like the CDC.”

Joining his and Economos’ nonprofits in the suit are Beyond Pesticides, the Environmental Confederation of Southwest Florida, Farmworker Justice, Migrant Clinicians Network, the Natural Resources Defense Council and U.S. Public Interest Research Group.

The World Health Organization calls the class of antibiotics to which streptomycin belongs a critically important weapon against dangerous diseases including multidrug-resistant tuberculosis and many countries prohibit its use on crops.

The problem with using drugs developed for humans on crops is that with greater exposure, some germs normally present on and in healthy people can mutate to resist the drugs designed to fight them, according to the CDC. Resistant bacteria can survive and proliferate, as increased use of antibiotics gives bacteria even more opportunities to “learn” how to defeat medical defenses.

Streptomycin isn’t the only drug used on citrus; the EPA also allows another widely used antibiotic, oxytetracycline, for the same use. Also alarming advocates is the sheer amount of the drugs approved for use – more than 650,000 pounds of streptomycin on citrus crops in Florida and California. In comparison, some 14,000 pounds of the entire antibiotic class that includes streptomycin, is used in the U.S. for medical reasons.

“To jeopardize an essential tool in controlling the global tuberculosis pandemic by allowing it to be sprayed on citrus trees is the height of irresponsibility,” said Donley. “Leading global health officials are sounding the alarm about overuse of essential medicines like streptomycin, yet the EPA’s pesticide office is recklessly blessing its use as a pesticide.”

As for wildlife, the potential effects have yet to be seen, though the EPA’s own analysis indicates that widespread use of streptomycin could have harmful long-term effects on mammals that forage in treated fields, but has not analyzed how this change could affect specific endangered and threatened mammals that forage or nest in and around these citrus groves, or that rely on waterways contaminated by the antibiotic. Nor has EPA adequately assessed the risk that streptomycin poses to pollinators, whose health and survival are already compromised by a wide range of stressors, including other pesticides, the suit alleges.

The good news in Southwest Florida may be that some growers have already tried and discarded antibiotics as a cure for greening. Last year, Hendry County citrus farmer Wayne Simmons told The News-Press he began using them about five years ago, but since then, “field work has shown we’re probably not getting a whole lot of effect from it, so the amount of use in the industry is getting to be less and less every year.

“I’ve moved on, personally.”



Blotchy, mottled leaves are among the signs of the citrus greening disease. SOUTHERN GARDENS CITRUS/SPECIAL TO THE NEWS-PRESS

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