

Test Tomato Crop Free of Perchlorate

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SAN MARTIN - The results are in and Bob Cerruti's tomatoes don't show signs of harboring perchlorate, at least above 50 parts per billion. What the test does show, Cerruti said, is that tomatoes don't appear to concentrate the chemical as does lettuce.

"There could very well be some perchlorate in these tomatoes. But at this current stage of technology, they can't detect it," Cerruti said.

The testing technology used by the local lab, Sequoia Analytical, is only able to find levels at 50 ppb and above. State and federal regulatory levels, once set, could range between 1 and 6 ppb, making some agricultural leaders question the usefulness of the backyard experiment.

"You don't know what a crop's uptake is until you do an analysis," Cerruti said. "What I do know is that there is no rapid accumulation of perchlorate in these tomatoes."

Cerruti, a San Martin resident, decided to have his homegrown tomatoes tested because a recent study in Texas showed outer lettuce leaves tend to concentrate perchlorate up to 60 times the amount of the toxin that is in the irrigation water, and he wondered if his tomatoes reacted the same way.

So, Cerruti planted his tomatoes in two sections, watering one part with well water and the other with bottled water and measuring water and fertilizer.

In recent weeks, experiments like Cerruti's have been the target of concern by politicians, farming advocates and some local growers and residents. They worried that if Cerruti's test showed that tomatoes accumulated perchlorate like lettuce, the news could cause a reaction from buyers of all types of produce that could wipe out Santa Clara County agriculture.

"The news is encouraging, however I'd be saying the same thing whether the results were good or bad: the testing methodology is faulty because labs can't guarantee more than 50 percent accuracy, so there is still a lot of work that needs to be done," said Jenny Midtgaard Derry, executive director for the Farm Bureau.

Ag officials like Derry are pressing for government funded scientific experiments on all produce crops. They are inviting all elected county, state and federal officials to a perchlorate working group meeting later this month to lobby for more testing and a so-called risk assessment level so farmers know what level of perchlorate in their food is too much to be considered safe.

"We have a tight concentration of public will to get this done, we're trying to get politicians to buy in and help us," Derry said.

The Tomato Experiment

The tomatoes were planted by Cerruti in May and watered with a gallon of water roughly every fourth day until they were harvested July 26. After harvest, Cerruti delivered his tomatoes to the lab for testing and results were released this week.

Paul Henige, business development manager for Sequoia Analytical, located on Jarvis Drive, said his company was happy to help Cerruti although the cost to the company was significant. Sequoia generally charges \$300 for a produce test.

"Bob did his work in creating a controlled situation that might allow us to progress further (in gathering data)," Henige said. "He took it upon himself to find out if tomatoes concentrated perchlorate, and he provided a lot of extra details that we don't normally get. Bob created a very good working method that allowed us to test another vegetable. ... You have to do a lot of them (tests) before there is useful statistical evidence."

Sequoia has tested fruits and vegetables, among them melons, oranges, corn and leafy vegetables from all over California but never before tomatoes.

Further concerns

The level for perchlorate in drinking water that triggers health warnings is 4 ppb, but health officials have said they do not know at what point perchlorate intake becomes harmful. A study from 2002, suggests that it takes nearly 250 ppb to impact the thyroid of a healthy person, but other segments of the population - such as infants, pregnant women and people with thyroid problems - are likely more sensitive.

Even less is known about the effects of eating produce irrigated with perchlorate-contaminated water.

The Environmental Working Group based locally in Oakland was responsible for the lettuce study and the actual testing was performed by Texas Tech University; its detection levels differed from other studies.

“When we did our study on lettuce,” said EWG’s Renée Sharp, “our detection limit was 30 ppb. The Riverside Press Enterprise (newspaper) did a similar study on lettuce but with a detection level of 1 or 2 ppb.”

Only 1 or 2 percent of the EWG test had detectable levels of perchlorate, but all of the newspaper-sponsored study tests showed perchlorate since the detection level was so low, Sharp said.

“Every fruit and vegetable is a little bit different,” Sharp said, “and they accumulate perchlorate in different ways. Obviously, lettuce has a high water uptake, though tomatoes may accumulate at a much lower rate.”

She said what Cerruti did was “absolutely great and totally necessary. What we really need is a much larger official government study on lots of crops using the best detection methods available.”

The San Martin resident’s plans to monitor and test tomatoes were not universally cheered. Cerruti said there had been some concern by growers in San Martin that people would refuse to buy their produce if the tests showed concentrations of the chemical.

He said he was happy the produce picture was less dire than he expected, especially added to the fact that some growers’ wells test “nondetect,” meaning that perchlorate at a level of 4 ppb and above is not detected, although lower levels may be present.

“I’m pleased with what we found, I hope farmers recognize this is in the interest of science,” Cerruti said. “More testing needs to be done, I would like to see coordination of the Farm Bureau, the Water District and the ag commissioner to start funding continued testing. As technology improves, we will find out better how crops are affected.”

Cerruti said he has been concerned about local growers since the perchlorate issue appeared in January.

“Some growers came away frustrated from the communitywide perchlorate meeting in May,” he said. “Nobody went to bat for the farmers. They took care of the individual homeowner but did nothing for the farmer. They were left hanging out to dry.”

County Ag Commissioner Greg van Wassenhove said he hasn’t had a chance to think about the Cerruti results yet.

“The testing raised some concerns by the community PCAG (Perchlorate Citizens Advisory Group) and the ag industry,” he said. “They discussed the

reliability of the results (Cerruti is a retired quality assurance manager, not a trained scientist) and what it would mean if they found anything.”

PCAG has endorsed a proposal to bring together elected legislators to ask for help in establishing a risk assessment procedure, van Wassenhove said.

“We’ve always supported a movement toward valid risk assessment and a testing program by the appropriate government agencies (the state and federal Environmental Protection agencies),” van Wassenhove said, “as opposed to private testing.”

Sylvia Hamilton, chair of the PCAG, was happy to hear of Cerruti’s results.

“It is very encouraging,” Hamilton said. “We’d love to find out that it’s not taken up by other produce; however, we must be very careful. The last thing we want to do is to disrupt someone’s business.”

Cerruti did have one good thing to say about his perchlorate-spotted well water though he suspects it has more to do with minerals than with perchlorate.

“On average, the tomatoes grown with well water were larger than those grown with bottled water,” he said.

And he wants everybody to know that he still eats his tomatoes, even the ones irrigated with his well water.

Cerruti first became aware of a potential problem with perchlorate in December 2002 when the Santa Clara Valley Water District collected water from the well he shares with three families on Moreno Court. Since then, nearly 450 wells have tested positive for perchlorate between Tennant Avenue in Morgan Hill and north Gilroy.

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