E. coli culprit vexes industry

Decade of outbreaks casts suspicion on Salinas Valley water.

By Jim Downing and Matt Weiser - Bee Staff Writers

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For more than a week, the million-dollar-a-day Salinas Valley spinach harvest idled as government investigators hunted for the source of an E. coli contamination that has sickened 171 people across the country.

Now, as scientists comb over 10 suspect farms in the valley, most other growers, within days, are likely to get the all-clear and send their spinach back to markets.

Yet a sense of crisis lingers over the industry because one scary thing is now clear: This wasn't a fluke.

For nearly a decade, the Food and Drug Administration has zeroed in on the Salinas Valley -- the "Salad Bowl of the Nation" -- as a hot spot for foodborne illness. The latest E. coli outbreak is the ninth incident in the last decade to be traced back to the region, which produces two-thirds of the nation's spinach and much of its other fresh greens.

"The region grows great spinach. It has to grow great, safe spinach," said Dr. David Acheson, chief medical officer at the FDA's Center for Food Safety and Applied Nutrition. "(The outbreak) does raise the question of what are the practices of that valley and what will it take to ensure the produce coming out of there is safe. We have got to get a handle on this."

State legislators also are promising to get tough. Sen. Jeff Denham, R-Merced, chair of the Senate Agriculture Committee, and incoming Assembly Agriculture Chairwoman Nicole Parra, D-Hanford, plan a joint hearing on the E. coli outbreak.

The biggest barrier to combating the Salinas Valley's recurring contamination problems has been the unsolved mystery of its specific cause: All previous outbreak investigations have failed to confirm the source of the harmful bacteria.

Water, contaminated by human or animal waste, has consistently been a leading suspect. Those bacteria can move to lettuce or spinach in myriad ways -- from a creek flooding a field in winter to dirty water in a roadside ditch soaking a field worker's boot.

In the Salinas Valley, water troubles run deep.

Both the Salinas and San Benito rivers consistently contain fecal coliform bacteria, harbingers of E. coli contamination. As a result, both are considered "impaired" under the federal Clean Water Act.

Partly as a result of the poor quality of river water, most growers and cities use groundwater. Curtis Weeks, general manager of the Monterey County Water Resources Agency, said 97 percent of the water consumed in his county comes from groundwater, about 550,000 acre-feet per year.

Most farm wells are at least 200 feet deep, Weeks said, and water experts consider these sources safe from bacterial contamination because of the filtering action of the overlying soil.

But Bill Theyskens, a Salinas Valley hydrogeologist, said the area's heavy groundwater exploitation could open other paths for contamination. For instance, he said, the bore of an abandoned well can allow pathogens to enter groundwater from a failed septic system.

State regulators do not require growers to test irrigation water for contaminants. But many farm operations do so voluntarily in order to convince processors -- and consumers -- of the safety of their produce.

The prospect of bacterial contamination is just one of the groundwater worries in the region. Many wells bring up water contaminated with nitrates from farming or livestock operations. Saltwater, too, has seeped underground from Monterey Bay into aquifers depleted by decades of pumping.

For many years, water managers have recognized this situation as unsustainable. Yet growth has continued, and critics say the county continues to approve too many housing subdivisions that rely on wells for water and use underground septic tanks to treat household sewage -- another combination that could lead to contamination.

Two unincorporated towns near Salinas, San Jerardo and Chualar, already depend on bottled water for domestic consumption because wells in the area are loaded with nitrates.

"We have serious water problems," said Lupe Garcia, deputy director of LandWatch Monterey County. "We're setting ourselves up for a major disaster, basically."

As a partial solution to the water squeeze, the Monterey County Water Resources Agency in 1997 built a $78 million system to pipe highly treated wastewater to 12,000 of the county's 240,000 acres of farmland. The water is filtered and disinfected to meet drinking water standards. A study of the system, published by the National Academies Press in 2005, found no trace of E. coli in the delivered water, and none on crops irrigated with the water.

Now, though, that project is under fire. Last week, in response to the outbreak, state Sen. Dean Florez (D-Shafter) promised legislation to ban reclaimed wastewater from vegetable crop irrigation.

But water experts said Florez's proposal might be too hasty. The reclaimed water is already among the most tightly regulated in California agriculture, said Christopher Rose, an environmental scientist with the Central Coast Regional Water Quality Control Board.

"If there were a problem with respect to bacteria in that water," Rose said, "it would be known."

Whatever the outcome of the current E. coli investigation, water quality will remain a vexing issue for Salinas vegetable producers.

"There's a risk to the whole industry," said Samuel Fromartz, author of "Organic Inc.: Natural Foods and How They Grew."

"You could have the best practices in the field," Fromartz said. "But if your water supply is tainted, what are you going to do about that?"

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