

Opinion

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Manage manure better for fewer E. coli outbreaks

AS TRAGIC AS THE SPINACH E. COLI outbreak has been and continues to be, a loss of consumer confidence in the safety of fresh produce would be a far greater tragedy.

Increasing the daily servings of fresh fruits and vegetables is arguably the nation's No. 1 public health priority, for reasons well known to readers of **THE PACKER**. Fresh-cut bagged salads and greens have become enormously important in shifting dietary patterns for millions of Americans.

In recent years, scaling up fresh-cut production to match demand has stretched the ability of farmers, processors and input suppliers to build and manage new infrastructure and deal with new on-farm challenges.

The need for fresh-cut processors to contract with dozens of hundreds of new growers each year has created a source of vulnerability. First-time fresh-cut growers get no practice runs. Immediately, they have to adhere to the stricter, evolving quality control and food safety standards applicable to fresh-cut produce.

The system has failed a few times, with tragic consequences. The key now is to aggressively deal with the reasons and circumstances undermining quality control procedures that clearly work the vast majority of the time.

Can the industry do better? Absolutely yes.

SMALL PROPORTION: In finding and implementing solutions, we need to keep in mind that the current spinach episode will likely account for less than 0.4% of the approximately 52,000 cases of E. coli O157-triggered illness expected nationwide in 2006.

This number of cases is down 29% from the 73,000-case estimate published by CDC in 1999 and reflects progress made in reducing illnesses linked to ground beef over the past few years.

Fresh produce will likely account for about 10% of all cases, and foodborne transmission will trigger about half of the cases. Accordingly, when people look back on 2006, the California spinach outbreak is likely to account for a little less than 4% of all produce cases. Imagine the impact on consumers if the other 96% of cases linked to produce received the attention directed to this spinach outbreak?

Many of the cases involving produce will occur through no fault of crop farmers and packers. Contaminated water flowing downhill, or in groundwater or via drainage systems, will be the direct cause in many cases, and improperly managed animal wastes and less-than-healthy cattle will be a major source. Contaminated fertilizers and soil amendments might also emerge as a problem.

One message has been missing in all the attention directed to this episode: One of the best strategies to manage this problem more effectively is to eliminate E. coli at its source. The food safety strategies and protocols available to vegetable growers and food processors will become far more successful if a comprehensive strategy reduces the frequency and number of pathogenic E. coli bacteria that reach production fields.

Vegetable and fruit growers across the nation will need a lot of help from their neighbors raising beef



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and dairy cattle if sustainable solutions are to be found. We simply have to reduce E. coli O157 shedding by cattle.

Fortunately, solid science confirms there are several practical ways to do so. More effort is needed to detect and avoid E. coli O157 contamination in feed. Better surveillance will help pinpoint herds with serious E. coli O157 infection.

Water troughs and feed bunk need to be cleaned more effectively when O157 bacteria are actively shed on a farm. Young animals, those with health problems, or animals new to a herd require special attention. Feed rations on some farms will need to be altered to undercut the ability of E. coli O157 bacteria to proliferate in the bovine gastrointestinal tract, especially during the spring and summer.

Government agencies responsible for water quality at all levels need to take more seriously their responsibility to deal with manure management, especially on and around CAFOs (concentrated animal feeding operations) in or near major fruit and vegetable production areas.

EPA ACTION: In the wake of this episode, the failure of the roughly 10-year effort by the Environmental Protection Agency to put in place meaningful CAFO manure management restrictions could emerge as more important than any lack of Food and Drug Administration authority to enforce food recalls or inspect grower fields.

The emerging agreement between FDA and growers to intensify soil and water sampling for pathogenic E. coli is a step in the right direction, but the best opportunities for sustained solutions will be back uphill — on and around livestock farms where E. coli comes from in the first place.

In expanding E. coli margins of safety for consumers, important lessons can be learned from the manure management and compost requirements in the National Organic Program (NOP) rule. The ability of organic livestock farmers to reduce the prevalence of E. coli shedding deserves attention.

Equally important, science needs to assure, and, if necessary, improve the reliability of the composting processes set forth in the NOP rule. Do they kill all pathogenic E. coli, and when and under what circumstances might they fall short? Insights gained will help identify improved preventive practices for both organic and conventional livestock farmers.

Still, consumers need to know that it is not possible for organic or conventional farmers to completely eliminate pathogenic E. coli from agricultural landscapes. Zero presence in food, though, is the only goal that consumers should accept, and we must all do everything we can to get there.

Consumer confidence in fresh produce hangs in the balance, and as a result, so does progress in slowing down our nation's epidemics of obesity, diabetes and other diet-related diseases.

Do we need any higher stakes?

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