

Organic Produce Production and Food Safety

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National news media and produce industry trade journals have been perpetuating misinformation regarding the state of our scientific knowledge of the microbial food safety risks associated with specific environmental sources of contamination and farm management practices. Most recently, the American Vegetable Grower (Feb 1999 page 8) printed a news report using information that can be traced to an article by Dennis Avery, originally printed in the Wall Street Journal (Dec. 8, 1998; See below). The brief AVG note reiterated the Avery position that the Center for Disease Control had established and reported an eight-fold higher risk of infection by the pathogen *Escherichia coli* O157:H7 associated with the consumption of "organic" and "natural" foods.

To determine the original source of this data or statistical determination through epidemiologic evaluations of reported food borne illness, the CDC was contacted directly. The CDC, in response to the Avery article and the cascade of secondary news reports based upon it, has stated that there exists no basis in any data to support the comparative risk of conventional versus organic farming practices for microbial food safety. CDC states: "Since 1982, most of the outbreaks of *E. coli* O157:H7 have been associated with foods of bovine origin (e.g.—ground beef). In recent years, a wider spectrum of foods, including produce, have been recognized as causes of outbreaks. The Centers for Disease Control and Prevention (CDC) has not conducted any study that compares or quantitates the specific risk for infection with *E. coli* O157:H7 and eating either conventionally grown or organic/natural foods. CDC recommends that growers practice safe and hygienic methods for producing food products, and that consumers, likewise, practice food safety within their homes (e.g., thoroughly washing fruits and vegetables). These recommendations apply to both conventionally grown and organic foods."

Scientific research is being conducted at many public and private universities, institutes, and government labs to develop risk assessment data, to develop rapid and sensitive means of detection and identification of foodborne pathogens, and to identify innovative prevention and control practices.

Produce production practices that include the use of animal manure and manure slurries or "teas" (especially when applied at short pre-plant intervals or directly to foliage) clearly require careful attention to process controls for pathogen reduction by careful composting, heat treatment, or other effective management (See Manure Management article in this issue).

In addition to the response from CDC, the following New York Times article was recently published which provides some perspective to Mr. Avery's position.

ANTI-ORGANIC, AND FLAWED, February 17, 1999, The New York Times, MARIAN BURROS

According to this story, Dennis T. Avery wants organic food to go away. Four years ago, he said that organic food could not feed the world without destroying the environment. Now, he says it's lethal. In an article in the fall issue of American Outlook magazine, published by his employer, the Hudson Institute, a conservative research group, Avery wrote, "Organic foods have clearly become the deadliest food choice." This is the case, he said, because organic farms use animal manure and do not use chemicals or permit pasteurization. The last assertion is untrue, as were several other statements in the article. The story says that the accusation might have gone unnoticed, but excerpts from the article were published in The Wall Street Journal and continue to be picked up around the country, by The Associated Press, The Tampa Tribune and trade industry publications. The simplest definition of "organic" is food grown without hormones, pesticides or synthetic fertilizers. Avery, however, used the terms "organic," "free-range," "natural" and "unpasteurized" interchangeably. Avery, the author of "Saving the Planet With Pesticides and Plastic" (Hudson Institute, 1995), was quoted as saying, "I grant you that I've mixed together natural and organic. But to me they are distinctions without significant difference in terms of public health." His most combative accusation is based, he said, on 1996 data compiled by the Centers for Disease Control and Prevention, showing that "people who eat organic and 'natural' foods are eight times as likely as the

rest of the population to be attacked by a deadly new strain of *E. coli* bacteria (O157:H7).” Yet some of the foods that caused the outbreak, which he called organic, were not, like unpasteurized Odwalla apple juice. Avery’s claim that “consumers of organic food are also more likely to be attacked by a relatively new, more virulent strain of the infamous salmonella bacteria” was based on a Consumers Union study in 1998 showing that “premium” chickens had higher levels of salmonella than regular supermarket chickens. But the premium chickens were not organic. In the article, Avery took the Food and Drug Administration to task for failing “to issue any warnings to consumers about the higher levels of natural toxins their researchers regularly find in organic foods.” In the interview, he said that that assertion was based on a statement by Dr. Robert Lake, an official in the agency’s Center for Food Safety and Nutrition. Lake denied making such a statement, saying, “We don’t go out of our way to sample organic food, and hence I don’t think we are in a position to say anything one way or another about it.” Avery wrote that because “organic farmers use animal manure as the major source of fertilizer,” there are higher levels of harmful bacteria in organic food. Katherine DiMatteo, the executive director of the Organic Trade Association, said that manure is not the major source of fertilizer on organic farms (it is also used in conventional farming) and that, when it is used, certain rules must be followed for safety. Avery said he had never “bothered that much about consumer safety aspects of organic food until O157:H7.” His real goal, he said, is to prevent organic agriculture from becoming the norm. “My big concern is that we do not have room on the planet to feed ourselves organically,” he said. The attack on organic food by a well-financed research organization suggests that,

even though organic food accounts for only 1 percent of food sales in the country, the conventional food industry is worried.

From Wall Street Journal, Dec. 8, 1998
Adapted from American Outlook Fall 1998
By Dennis T. Avery

According to recent data compiled by the U.S. Centers for Disease Control (CDC), people who eat organic and “natural” foods are eight times as likely as the rest of the population to be attacked by a deadly new strain of *E.coli* bacteria (O157:H7). This new *E.coli* is attacking tens of thousands of people per year, all over the world. It is causing permanent liver and kidney damage in many of its victims. Consumers of organic foods are also more likely to be attacked by a relatively new, more virulent strain of the infamous salmonella bacteria. Salmonella was America’s biggest foodborne death risk until the new *E.coli* O157 came along. Organic food is more dangerous than conventionally grown produce because organic farmers use manure as the major source of fertilizer for their food crops. Animal manure is the biggest reservoir of these nasty bacteria that are afflicting and killing so many people. Organic farmers compound the contamination problem through their reluctance to use antimicrobial preservatives, chemical washes, pasteurization, or even chlorinated water to rid their products of dangerous bacteria.

One organic grower summed up the community’s attitudes as follows: “*Pasteurization has only been around a hundred years or so; what do you think people did before that?*” The answer is simple. They died young.
