

Antibiotics, Organics and Food Safety: A Ball of Confusion

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Today's consumer is bombarded with information about food safety and nutrition related topics by sources ranging from mommy blogs and Twitter feeds to the nightly news and talk shows. In the 1990s, the need to handle food safely to prevent foodborne illness was a key topic that received extensive coverage by major media. At that time, many high profile foodborne illness outbreaks occurred and inspired strong interest among consumers in bacterial contamination and safe food handling practices.

Research by Christine Bruhn, Ph.D., of the University of California Davis in 1997 found that microbiological safety was consumers' most frequently volunteered food safety concern.¹ Action by the industry to improve microbiological safety meat products reduced the number of recalls and the negative publicity associated with them. Centers for Disease Control and Prevention also reported significant progress in reducing foodborne illnesses. More recently, microbiological issues have been linked to produce.

Decreasing media attention to the need to improve safe handling practices and the need to use thermometers, for example, may have contributed to the lack of adoption of thermometer use as a routine practice as evidenced in research by the U.S. Department of Agriculture and more recent research by Bruhn and others. In fact, a 2011 study published by Bruhn in the *Journal of Food Protection* showed that only 13% of consumers knew the recommended internal temperature for ground beef. An analysis of consumer cooking practices showed that 22% of burger preparers declared burgers done when the temperature was below 155 degrees F.

More recently, groups like the Center for Livable Future, the coalition Keep Antibiotics Working and Pew Center

have effectively focused media attention on the issue of antibiotic use in animal agriculture. Films like *Food, Inc.* and books by popular authors like Eric Schlosser and Michael Pollan have focused Americans' attention on "modern agriculture" and suggested that a return to small and local food production is prudent. They have focused negative attention on the feeding of corn to cattle, the use of antibiotics and hormones in livestock and poultry production and what they believe to be the food safety, nutrition and environmental benefits of organic food production.

Consumer research by the International Food Information Council showed that concern about preservatives and chemicals nearly doubled in research conducted in 2010 and 2012 from 8% to 13% while concern about handling and preparation decreased from 23% to 21% and concern about disease/contamination remained stable at 29%.

Research by Midan Marketing reveals that 41% of consumers are concerned about the negative effects of antibiotics and 42% are concerned about the effects of growth hormones. However, 44% couldn't accurately define antibiotics or growth hormones.

Anecdotal research by the popular show "Bullshit" by Penn and Teller showed that identifying a product as organic prompted a strongly emotional and positive bias towards the products. In the show, the majority of consumers were asked to unknowingly sample pieces of the same banana, tomato and apple that were claimed to be either organic or non-organic. Many believed that the "organic" product tasted better, fresher or had a better texture.

Research done in 2013 by the American Meat Institute and the Food Marketing Institute found that the number one consumer driver behind organic was a perceived positive long-term personal health effect. This driver was reported as a major motivator by 55 percent of consumers compared to 44 percent in a similar survey in 2011. In 2013, 46 percent of consumers said they bought organic because the products were "free of substances I want to avoid." The AMI/FMI 2013 research also found that labeling declared something to be "free" of a substance, like "hormone free" had some of the most significant purchasing influence.

¹Emerging Infectious Diseases, 1997, October-Dec., 3(4) 511-515.

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The risk communications experts David Ropeik has said that risks that are “human made” are scarier to consumers than those that are considered natural and that risks that are difficult to understand are also more frightening. The new and novel nature of the antibiotic issues, as opposed to the more familiar issue of bacterial contamination, may be driving consumers to fear what they perceive as added substances and chemicals as opposed to more natural risks. In addition, consumers can be empowered to destroy bacteria through cooking, while they perceive that the only way to avoid the risk of antibiotics and other

foods with much feared added chemicals is to buy products that make “free” declarations or that are organic.

Meanwhile, research by the Center for Food Integrity reveals that shared values are more important to consumers than credentials, which suggests that meat scientists and others engaged in communicating around these issues must lead their messages with values and take a personal approach in conveying scientific and food safety information. In this way, consumers may become more receptive to the scientific information.