

PolicyPennings by Dr. Daryll E. Ray

## Careful food preparation is a necessary but not sufficient condition to reduce foodborne illnesses

One of several comments that we have run across since we began writing about food safety is that imposing additional requirements on slaughterhouses is unnecessary because the ultimate responsibility belongs to the person cooking the meat.

One person writes, "Just cook it stupid! We're trying to protect people from ignorance...never going to happen no matter how hard producers or government tries."

A blogger responding to that comment says, "Amen. Brother!!! Americans would rather [complain] about everything than take personal responsibility. Leave the patty in the pan until it is 160 degrees, problem solved."

We believe that those preparing food items should engage in safe food handling procedures, including frequent hand washing and the use of separate cutting boards for meat and vegetable products. Certainly it would not hurt for the United States Department of Agriculture (USDA) and the Food and Drug Administration (FDA) to better communicate the importance of safe food handling in restaurants and at home.

However, cooking the hamburger patty to 160 degrees may not prevent the spread of E. Coli O157:H7 unless the cook's hands were washed before making the patty, after making the patty and before touching any utensil or food item, and after putting the patty on the grill and washing the plate used to take the raw hamburgers to the grill (someone else will need to open the door back into the kitchen). You get the idea. It doesn't take much of a slip to cross-contaminate other food or serving items.

That being said, we, of course, agree that safe food handling in the home, including cooking hamburgers to 160 degrees in the middle, is a necessary element of a national food safety program. But while at the current time it is a necessary element of a food safety program, it is not sufficient to reduce the number of people falling ill from foodborne illnesses to less than the current one in four per year.

We recently read a meatingplace.com posting by Richard Raymond, a former Food Safety and Inspection Service (FSIS) official. He noted, "As a result of the Salmonella Initiative and industry efforts, positive carcass rinses dropped from 16.3 percent in 2005 to only 8.5 percent in 2007.... Yet, this same...report showed that foodborne illnesses from Salmonella did not decline during the same time period."

Richards concludes, "If dropping the rate of posi-

tive carcasses by nearly 50 percent did not reduce illness.... Maybe the 'change' we need is testing of chicken parts and mechanically separated meat instead of carcasses?"

Using an enhanced rinse technique to ensure a reduced level of pathogens on poultry carcasses is a necessary element in improving food safety. But as we have seen in this case it was not sufficient to reduce the number of Salmonella related illnesses.

At this point in the discussion of food safety, we think it is helpful to make a distinction among three concepts: processes, testing procedures and public health results.

When we were youngsters learning how to bat a ball, our coach always said: "Keep your eye on the ball."

That's what we need to do when it comes to food safety: keep our eye on the ball. And the ball is results, significantly reducing the number of people suffering from foodborne illnesses.

There are all kinds of procedures that can be discussed: HACCP, hands-on federal inspections, improved rinses, changes in plumbing and air circulation.... All of those are fine, and implementing some subset of all possible procedures is a necessary element in improving food safety. But unless they eliminate foodborne illnesses that can be traced back to the slaughterhouse that provided the boxed beef to the downline processor, such procedures are not sufficient.

Similarly, while testing of carcasses, primal cuts, mechanically separated parts, etc. is a necessary part of the process of improving the safety of the food we eat, it is not sufficient unless this testing results in changes in procedures that eliminate the relevant pathogen and result in fewer foodborne illnesses.

In the end, it is all about providing the public with the safest food possible so that the number of people who fall victim to foodborne illnesses each year can be significantly reduced. That each year one in four US residents experiences a bout of illness caused by a foodborne pathogen is truly a startling statistic.

In response to an argument that all of the food safety concerns are a symptom of American society being "too clean," James Marsden, Kansas State University Regent's Distinguished Professor of Food Safety and Security, writes: "Regarding the argument that our society is 'too clean,' one way to evaluate the

Originally published in *MidAmerica Farmer Grower*, Vol. 29, No. 32, August 07, 2009  
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success of public health improvements is to evaluate their impact on life expectancy.

"During the 20th century, systematic improvements were made in food safety, medicine, and hygiene. These include pasteurization of milk, chlorination of water, the development of antibiotics and vaccines, and refrigeration infrastructure and aseptic processing of food products.

"In 1900, the average life expectancy in the US was about 47 years (<http://www.elderweb.com/home/node/2838>). By the year 2008, life expectancy increased to about 78 years ([http://www.kaisernet.org/daily\\_reports/health2008dr.cfm?DR\\_ID=46838](http://www.kaisernet.org/daily_reports/health2008dr.cfm?DR_ID=46838))."

Marsden continues, "Of course, this increase is due to multiple factors. However, nutrition and the cleanliness and safety of foods have had a positive effect on overall health and life expectancy."

As Congress and the administration wrestle with the issue of food safety, additional progress is required in order to reduce the incidence of foodborne illness to well below one in four people each year.

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