

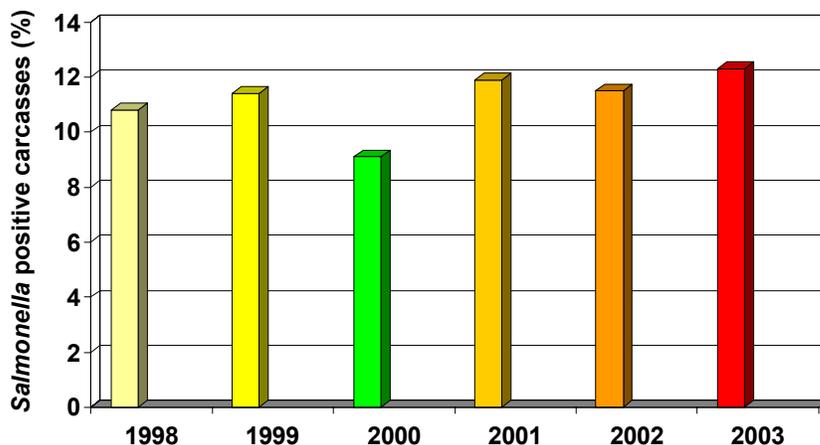


## PROCESSING TIP . . .

### A POSSIBLE REASON WHY MORE PLANTS ARE FAILING THE *SALMONELLA* PERFORMANCE STANDARD

Although recent news reports indicate that HACCP has had a dramatic positive impact on the safety of our food supply, new data from the USDA, Food Safety and Inspection Service (FSIS) indicate a disturbing trend (<http://www.fsis.usda.gov/Frame/FrameRedirect.asp?main=/ophs/haccp/salm6year.htm>). According to Figure 1, the number of *Salmonella* positive carcasses has increased for the last three years. This is a bit confusing because of the increased attention that has been given to HACCP programs and all of the new intervention methods available for reducing *Salmonella* throughout the production and processing chain.

**Figure 1: Percentage of *Salmonella* positive carcasses throughout the poultry industry from 1998 to 2003**



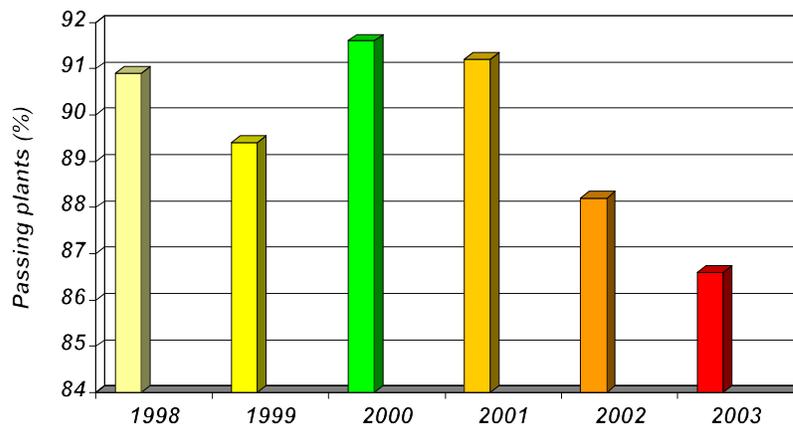
#### PUTTING KNOWLEDGE TO WORK

Likewise and even more disturbing, is the fact that fewer plants are able to meet the *Salmonella* performance standard, as required by the USDA-FSIS. Figure 2 indicates the percentage of plants that were able to meet the performance standard from 1998 to 2003.

These trends seem to indicate that something happened after the year 2000 that resulted in higher prevalence of *Salmonella* and fewer processing plants being able to meet the performance standard. What changed in the industry that may have had an impact on *Salmonella* levels industry wide?

Beginning around the year 2000 and continuing today, many poultry companies are being pressured by large customers to eliminate the use of antibiotics as growth promotants in poultry feed because of consumer concerns about antibiotic resistant pathogenic bacteria. I conducted a study in 2002 to determine if birds infected with air sacculitis that are not treated with antibiotics had higher numbers and prevalence of pathogenic, food-borne bacteria than treated, air sac free birds. The data indicated that flocks of chickens showing signs of air sacculitis have lower weights, more fecal contamination, more processing errors, higher levels of *Campylobacter* spp., and a higher prevalence of *Salmonella*. Research also indicates that withdrawal of antibiotics from broiler flocks may result in a rise in food-borne pathogens on poultry (Russell, 2003). This research was supported by industrial data collected over 5 years, representing 32,000,000 chickens. The conclusions from the industrial data were similar: more disease (less use of antibiotics) is highly related ( $P = 0.0001$ ) to a higher prevalence of *Salmonella*. Based on these data, it is possible that the industry may be experiencing an increase in *Salmonella* prevalence because of the gradual withdrawal of the use of antibiotics within the industry to appease consumer groups. This is evidenced by the fact that the average *Salmonella* prevalence within plants nationwide is gradually rising and the number of plants that are passing the standard is gradually decreasing, while the industry is ever more vigilant in terms of trying to implement intervention strategies to control *Salmonella*. Put simply, more effort is resulting in a negative effect. The industry should try to determine how these new “politically oriented” decisions are affecting their bottom line in terms of meeting USDA guidelines.

Figure 2: Number of poultry plants that passed the *Salmonella* performance standard for the years 1998 to 2003



Reference:

Russell, S. M., 2003. The effect of air sacculitis on bird weights, uniformity, fecal contamination, processing errors, and populations of *Campylobacter* spp. and *Escherichia coli*. Poultry Science. 82:1326-1331.

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“Your local County Extension Agent is a source of more information on this subject.”