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The poultry and red meat industries in the U.S. have made significant progress in recent years in reducing foodborne pathogens, according to federal food safety surveillance data. Even so, the rates of human illness persist, as noted by Doug Smith, PhD, Director of Food Safety at Diamond V.

The Foodborne Diseases Active Surveillance Network operated by U.S. Centers for Disease Control and Prevention has been tracking trends for human infections transmitted through food for nearly 20 years. *Salmonella*, *Campylobacter*, and *Escherichia coli* have been frequently associated with consumption of animal protein products. Often these bacteria have been cited among the top five pathogens causing foodborne illness in the U.S.



Doug Smith, Ph.D.
Diamond V

"Despite progress against pathogenic *E. coli*," Dr. Smith says, "the level of *Salmonella* infections have been constant for nearly a decade and *Campylobacter* infections have been on the rise."

This ongoing challenge is part of the impetus for new federal feed and food production regulations stemming from passage of the U.S. Food Safety and Modernization Act.

Research Update

Research at IPSF 2016: Pre-harvest food safety



“In order to lower the risk of human illness,” Dr. Smith says, “companies producing foods of animal origin must implement effective pre-harvest food safety programs.”

Producing a safe, sustainable, and affordable food supply, says Don McIntyre, Ph.D., Diamond V Director of North American Poultry Research and Technical Service, means strengthening each link in food supply chain – from farm to fork.



Don McIntyre, Ph.D.
Diamond V

Dr. McIntyre notes: "Abstracts and posters at the 2016 International Poultry Scientific Forum (IPSF) report research focused on human pathogens that occur in poultry during production as well as on the effects of production challenges like heat and crowding stress."

Key presentations at IPSF 2016, January 25, at the World Congress Center in Atlanta include:

- "Effects of feeding Diamond V Original XPC™ on the virulence, antibiotic resistance, intestinal colonization and fecal shedding of multiple antibiotic-resistant *Salmonella* Typhimurium in broilers." S.A. Carlson* (Iowa State University), K.L. Anderson, M.F. Scott, and D.R. McIntyre – 2:00 p.m., Room B-312, M46
- "Including Original XPC feed additive in the diet of inoculated broilers during grow-out helps control *Salmonella* associated with their carcasses after processing." N.A. Cox* (USDA Agricultural Research Service and University of Georgia), D.E. Cosby, J.L. Wilson, D.V. Bourassa, R.J. Buhr, M.E. Berrang, D.R. McIntyre, and D.P. Smith – 4:30 p.m., Room B-313, P273
- "Effect of Original-XPC on the cecal microbiome of broilers influencing the survival of *Salmonella* in an anaerobic in vitro mixed culture assay." S.M. Roto* (University of Arkansas), P.M. Rubinelli, S.H. Park, and S.C. Ricke – 4:30 p.m., Room B-313, P334
- "Effect of feeding Original XPC™ on *Salmonella* populations in the cecum (hindgut) of experimentally *Salmonella*-challenged 6-week-old broiler chickens." P.M. Rubinelli (University of Arkansas), S.M. Roto, S.H. Park, and S.C. Ricke* – 4:30 p.m., Room B-313, P239
- "Effects of heat and crowding stress on commercial turkey hen performance supplemented with dietary Original XPC or combined with AviCare™ in water." B. Bartz* (North Carolina State University), J.L. Grimes, S.B. Black, I.B. Barasch, and D.R. McIntyre – 9:15 a.m., Room B-314, M86

A number of the investigators involved in pre-harvest food safety research presented at IPSF will be on hand at the Diamond V Booth A429 at the [International Production and Processing Expo](#), January 26-28, also at the World Congress Center in Atlanta. See all IPSF abstracts [here](#).



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