Dairy Calf Study Indicates Need For Management Change

HUNTINGDON (Huntingdon Co.) — The U.S. Department of Agriculture has announced that a recently completed one-year study indicates that herd management practices may have an impact on the prevalence of the pathogen E. coli 0157:H7 in dairy herds.

"This finding is valuable and could point to ways to lower the levels of E. coli 0157:H7 in cattle and thus reduce the incidence of food poisoning and related diseases in humans," said Patricia Jensen, acting assistant secretary for marketing and inspection services.

Cattle shed the E. coli 0157:H7 organism in their feces, which can contaminate the environment and expose other animals. Although cattle carry and shed the bacteria without becoming ill, human illnesses associated with E. coli 0157:H7 can include bloody diarrhea and hemorrhagic uremic syndrome, a serious kidney disease and the leading cause of acute kidney failure in children.

Sources of human infection vary, but many documented outbreaks of disease have been traced to undercooked beef.

Humans can become exposed through consuming contaminated undercooked meat, untreated water, unpasteurized milk, or materials cross contaminated with these products. Person-to-person transmission is also an important source of secondary infections in humans.

Jensen said the dairy heifer study, conducted by USDA's Animal and Plant Health Inspection Service, is only one of a number of efforts by the department to improve the safety of meat and poultry products.

"Over the past year," she said, "we have initiated a strategic pathogen reduction program that aims to reduce microbial contamination from the farm to the table."

The study that APHIS conducted through its National Animal Health Monitoring System followed newborn calves to the weaning stage. The study included 1,811 dairy operations in 28 states, Fecal samples collected from about 7,000 preweaned calves from more than 1,000 dairy operations were tested for presence of the pathogen.

Samples from 25 of these calves from 19 farms in 16 states tested positive for the organism, for a prevalence of 3.6 per 1,000 calves. Farms with positive test results were spread across the country, and no regional or seasonal clustering was found.

The project next conducted a follow-up study on 64 of the study herds to look at shedding patterns (expelling the organism in feces) in infected herds and to determine management factors that might be associated with infection.

An increase in prevalence was identified at eight weeks of age, the average age at which calves were weaned. Weaned calves were three times more likely to test positive than nursing calves.

The study found that if calves were grouped before weaning, the herd was nine times more likely to test positive, than if they were grouped after weaning. This indicates that grouping calves before weaning may increase transmission of E. coli to other calves or precipitate shedding of the pathogen in calves already carrying it in their systems.

Jensen said USDA's food safety emphasis last year was on enforcement and on developing a science-based inspection system.

She said food safety improvements have included special unannounced reviews of meat and poultry plants, which resulted in temporarily stopping activities at several plants; mandating and improving training on zero tolerance for fecal matter on beef carcasses; increased research from the farm to the table to develop methods to detect and destroy pathogens, as well as new inspection methods based on sound science; rapid bacteria test research; and the hiring of 200 additional inspectors in the Food Safety and Inspection Service and an additional 200 in the fiscal 1995 budget.

"We are in the process of issuing a final rule mandating safe cooking and handling labels for raw and partially cooked meat and poultry products," Jensen noted. "USDA also is engaged in a broad range of cooperative efforts with the states and with other federal agencies to enhance food safety. Currently, more than 70 pathogen reduction activities are under way."

Poultry Association Sponsors Scholarships

GETTYSBURG (Adams Co.) — The Adams County Poultry Association has voted to provide $2,000 in scholarship funds to Penn State University for the 1994-1995 academic year.

To be eligible, students must be from Adams County, be enrolled or accepted for enrollment in the College of Agricultural Sciences or Human Development. The applicant must have an acceptable scholastic average and be in need of financial assistance. Students should apply for assistance through the Office of Student Aid.

Application forms and any additional information can be obtained from Walter P. Griest, 2710 Mummasburg Road, Gettysburg, Pa 17325, (717) 677-8646 or from the Adams County Extension Office, 1135 Chambersburg Rd., Gettysburg, PA 17325 (717) 334-6271.

Deadline for forms is June 15.