Crohn's-Johne's Connection: Scientists Look Into Controversy, Herd Control Options

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potential for an enormous impact on human health due to the prevalence of this organism on the farm and in water. Further study of MAP as a food and/or waterborne pathogen should be conducted. Viable MAP should be sought in commercial milk and other dairy products as well as in meat. Conclusive studies of the effectiveness of pasteurization using commercial equipment and process rather than laboratory simulations should be performed. In order to conduct the above, standard methods for the concentration, detection, and in vitro culture of Map should be developed and used by participating researchers. Federal agencies with regulatory authority over the food supply should consider conducting such research in cooperation with relevant food production industries and academic researchers.

Dr. Robert Whitlock, professor of the school of veterinary medicine at the University of Pennsylvania New Bolton Center, spoke about Johne's disease in cattle and how important control efforts are.

When asked about the possible connections of drinking raw, unpasteurized milk, Whitlock noted that he drank it as a child himself. But for those who drink it, the risk of getting Crohn's is "very, very, very small."

Also, the bacterium will not survive the pilot commercial pasteurization methods with their short-term, high temperatures, Whitlock noted.

However, dairy producers must learn to focus more on eradication programs, including culling the older, higher-shedding animals first and creating a program that is economically viable to protect the more valuable young stock.

Johne's is a chronic bacterial infection that begins in the young calf and can take a long time — as long as 10 years — to be clinically evident. But most animals on the farm that have it "don't show any clinical signs," Whitlock said.

Usually if the herd animal identified at the top is shedding and has clinic signs, there could be 15-20 animals infected that aren't showing any clinical signs. They look "perfectly normal," he said.

Also, cows in the summertime cooling off in a farm stream or pond can infect other cows readily.

Other animals, including dairy goats and deer are even more susceptible to it. Whitlock pointed out a Bison herd in Montana that had a high level of infection — about 25 percent of the total herd of 3,400.

One infected dairy cow could be shedding a billion organisms of the Johne's bacterium a day. And that could amount to huge herd losses. If sold as meat, about 115 pounds difference in body weight could result, or about a $45 per cow loss. In terms of milk loss, cows could lose about 3,000 pounds per year for a loss of about $386 per cow.

Those can add up. On a 100-cow herd, that could total a loss of $22,700 per year. Overall, Johne's spells a $200 million a year loss to the dairy industry.

And the public perception of Johne's could spell real problems for the dairy industry. Whitlock pointed out a book by Robert Cohen, who has a doctorate in nutrition, according to the New Bolton Center vet professor. The book, "Milk: The Deadly Poison," makes claims that could create real problems with the public's perception of the industry.

In Lancaster and Chester counties alone, some believe up to 50 percent of the dairy herds are infected. There are 670,000 dairy cattle in the state, and Whitlock noted that 50,000 of those cattle may have Johne's.

And other states are no better. Whitlock noted that one official noted that in California, Johne's is present in all herds.

Before too long, it may become feasible and profitable for dairies to sign up and become Johne's certified free. In the future, milk could be marketed that way.

In recent Pennsylvania state budget hearings, there was a recommended doubling of appropriations for state Johne's testing, according to Sam Hayes Jr., state secretary of agriculture. The Pennsylvania Johne's Disease Program is a cooperative effort involving the Pennsylvania Department of Agriculture, Penn State, University of Pennsylvania, USDA, and the state cattle industry. For more information, call (717) 783-5301.

In June, it is expected to be officially announced that Pennsylvania has achieved bovine tuberculosis-free status. And Pennsylvania could also be going into Stage V in the swine pseudorabies eradication effort and perhaps be pseudorabies-free by June of 2001, noted Hayes.

It may be important in the future to adapt the principles of the Pennsylvania Egg Quality Assurance Program, or PEQAP, to the dairy beef industry in the state, according to Hayes.

In the meantime, working closely to obtain a certified Johne's-free dairy herd could be critical and provide very valuable information for dairy marketing, according to Dave Galligan, section chief of animal health, economics, and nutrition at the School of Veterinary Medicine at New Bolton Center.

Meanwhile, better, more accurate tests are needed to control errors and false Johne's identification tests. Improved testing and eradication efforts can help stop the huge losses accrued by culling cattle too early. A heifer early removal program or separate heifer purchasing program (contract rearing) could keep the disease out of the critical young herds.

To control Johne's, it is important to segregate the young stock quickly, use milk replacer, and cull infected animals.

More coverage of the symposium in next week's issue.

'Bioterrorism' Growing Concern In Public Perception

ANDY ANDREWS
Lancaster Farming Staff

GRANTVILLE (Dauphin Co.) — U.S. borders are quite porous, noted a leading expert on "bioterrorism," and disease affecting crops and livestock can move in through a variety of ways.

Corrie Brown, professor and head of the Department of Pathology of the College of Veterinary Medicine at the University of Georgia, told about 180 educators, legislators, and agri- industry representatives that known biological terrorism has even been perpetrated on humans.

Brown, who spoke Thursday morning during the Pennsylvania Agriculture In the 21st Century Symposium on Profitability, pointed to a case in which a disgruntled worker in 1996 in Dallas, Texas injected shigellosis into jelly donuts at a company party. The pathogen put 12 people in the hospital and 45 people became sick.

Bioterrorism can even be used by the right people for the wrong reasons. Brown pointed out that in 1997, a virus was introduced into the rodent rabbit population in New Zealand to control them.

If something like that happens in New Zealand, said Brown, it "could happen anywhere," she said.

There are six billion people in the world generating a "tremendous amount of traffic," she said, bringing new plant and animal diseases into areas where they didn't exist before. In one case, some raccoon hunters picked up 500 raccoons from the Southeast into West Virginia, all perfectly legal at the time across state borders, not knowing some of them were rabid. As a result, the Mid-Atlantic and Northeast states have an unprecedented problem with rabid animals.

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