



November 2003 Department of Animal Sciences and Industry

<http://www.oznet.ksu.edu/ansi/nletter/beeftips.htm>

## Upcoming Events

### Northeast Beef Management Series

Nov. 4, Washington  
Nov. 5, Salina  
Nov. 6, Valley Falls

### NW Kansas Cattlemen's Seminar

November 18  
Atwood, Kan.

### Range Beef Cow Symposium

December 9 - 11  
Scottsbluff, Neb.

For details on the above conferences, see page 4.

### January 15

4-State Beef Conference  
Maple Hill, Kan.  
785-765-3821

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## Johne's disease detected in Kansas beef cattle

Larry C. Hollis, D.V.M., M.Ag.  
Extension Beef Veterinarian

A disease that is relatively unknown to most beef producers is on the rise in beef herds throughout the United States and is known to exist in some beef herds in Kansas. The disease, named Johne's disease (pronounced Yo-nees) after the German veterinarian who discovered it in 1895, is a contagious bacterial disease that infects the intestinal tract, primarily of ruminants. It is considered a "wasting disease," causing persistent diarrhea and rapid weight loss in infected animals. Infection is primarily by the fecal-oral route, and most commonly occurs when a calf nurses a bacteria-contaminated teat of its mother.

The disease is extremely slow to develop, and does not commonly become clinically evident until the animal reaches adulthood. It sometimes appears in individual cows shortly after the stress of calving occurs. Once clinical signs become visible, affected animals will generally not have a fever but will continue to eat and rapidly lose weight because of the damage that the disease produces in the small intestine. Affected animals will continue to deteriorate until they die or are humanely destroyed.

Johne's disease is caused by a bacterium, *Mycobacterium avium* subspecies *paratuberculosis* (MAP). It causes what is known as granulomatous inflammation of the section of the small intestine known as the ileum. Once these granulomatous changes advance to a certain point, the infected area stops absorbing nutrients, leading to both diarrhea and rapid weight loss.

This disease has been a major problem in the dairy industry for decades, but only in recent years has it become a significant problem in some beef herds. The NAHMS Beef '97 survey indicated that Johne's disease had been recognized in 7.9 percent of U.S. cow-calf operations. The Dairy NAHMS survey indicated that 22 percent of dairy herds were experiencing Johne's disease. In response, a national eradication program has been instituted in the dairy industry.

Vaccination does not stop infection with the disease but only delays development of clinical signs. Treatment with antibiotics is not practical because treatment must be administered continuously for several months in order to kill the organisms. A test-and-cull program based on testing the entire adult cow herd seems to be the most effective approach. MAP is an organism that can build up in the soil over time if the sources of contamination are not eliminated. It may take several years of testing and culling to clear the disease from a herd.

Testing of Kansas beef herds will help determine which herds already have the organism present. Utilization of a test-and-cull program should help eliminate this disease before it becomes a major problem. If your herd is free from Johne's disease, the best way to keep it free is to purchase replacement animals only from Johne's-free herds that have completed whole-herd adult testing and found to be free of the disease.

— Technical information abstracted from *Johne's Information Center Web site hosted by University of Wisconsin, School of Veterinary Medicine*

*“If you fail to plan, you plan to fail.”*

## Is Biosecurity Important to Your Operation?

For each question, select the answer that applies to your livestock operation. Write the number of your answer in the space to the right and total your score below. We'll include more on developing biosecurity plans in the next issue.

### How valuable are your animals?

**Your Response**

Extremely valuable (4)

Above average (3)

Average (2)

Below average (1)

\_\_\_\_\_

### Are your animals replaceable?

Yes, easily (1)

Yes, difficult (3)

No (5)

\_\_\_\_\_

### Would a disease outbreak affecting 30 percent of the gross income from your livestock operation be financially devastating?

Yes (3)

No (1)

No, although it would be a severe setback (2)

\_\_\_\_\_

### Is reputation for animal health an important aspect of your business plan?

Yes, if health is used in marketing livestock (4)

No (1)

\_\_\_\_\_

### Do you think producers are important players in food safety, product quality, and the control of livestock diseases that may also affect people?

Yes (4)

No (1)

\_\_\_\_\_

**Total Score**

\_\_\_\_\_

### If your score is:

#### 15 or more

Biosecurity is critical for your operation. Effective measures need to be incorporated into your routine management plan to deal with the risk of disease exposure to your livestock and in maintaining a safe and wholesome food supply.

#### 11-15

Biosecurity is important. Your livestock are valuable to you. It is worthwhile to spend some time assessing disease risks and developing a biosecurity plan that will fit into your management plan.

#### 10

Biosecurity is moderately important to you. A disease outbreak would be unpleasant, but other livestock could replace them. You don't want the inconvenience of biosecurity interfering with your activities. At the same time, you may want to evaluate your risks and options.

#### 8 or less

Biosecurity is not important to you.

## Research Highlights

*Body condition at parturition and postpartum weight changes do not influence incidence of short-lived corpora lutea in postpartum beef cows. Looper, M.L., C.A. Lents, and R.P. Wettemann. 2003. J. Anim. Sci. 81:2390-2394.*

Cow-calf producers are always concerned about getting cows bred early in the breeding season. Time is truly money when it comes to breeding cows because an extended breeding season translates into lighter weaning weights and lost revenues.

Research has shown that cows losing weight before calving will have delayed first estrus, and thin-calving cows will oftentimes be the last cows to conceive during the breeding season. Often, cows will have a short cycle before their first ovulation postpartum.

Looper and coworkers recently investigated nutritional effects on the incidence and characteristics of short-lived corpora lutea in mature cows. Cows were fed to

calve in thin (3.6) or moderate (4.5) body condition.

As expected, the intervals between calving and first estrus, normal luteal activity and conception were shorter for moderate body condition score cows than thin cows. Interestingly, body condition at calving and/or postcalving weight change had no effect whether cows experienced a short cycle or normal first cycle or the incidence of estrus with the first normal cycle. In conclusion, the events associated with resumption of normal estrous cycles after calving are similar for cows in thin or moderate body condition.

These results reinforce the important concept of body condition scoring cows to improve cowherd management.

*Summary by Twig Marston*

*Effects of body condition, initial weight, and implant on feedlot and carcass characteristics of cull cows. Funston, R.N., J.A. Paterson, K.E. Williams, and A.J. Roberts. 2003. The Professional Animal Scientist 19:233-238.*

Feeding cull cows through the fall and winter while waiting for typically higher spring prices may increase their value. The increased value can be the result of higher body weight and improved carcass quality due to increased lean meat yield, improved marbling, increased carcass fat, whiter carcass fat, and improved cooked meat palatability.

Two Montana experiments reported the effect of initial body condition score (**BCS**) and body weight (**BW**) on feedlot performance and carcass traits of cull cows. One of the experiments also compared implanted to non-implanted cows. The cows were fed in four different groups at two locations for approximately 90 or 110 days. All were started on a 50 to 60 percent concentrate diet (dry matter basis) for 14 days and finished on an 80 to 85 percent concentrate diet. The four feeding group averages ranged from 1,036 to 1,212 pounds for initial BW, 1,469 to 1,628 pounds for final BW, 3.45 to 4.66 pounds ADG, 29.6 to 37.4

pounds dry matter intake, and 7.3 to 8.6 pounds dry feed per pound of gain.

A higher initial BW was correlated with a higher final BW, hot carcass weight, ribeye area and yield grade. Initial BCS was positively correlated with initial and final BW and was also associated with an increased backfat thickness. However, neither initial BW nor BCS affected feedlot performance. Synovex Plus increased ADG, final weight, carcass weight, and ribeye area by approximately 0.44 pounds, 40 pounds, 39 pounds, and 1.3 square inches respectively. Implanting reduced yield grade, averaging 3.20 for all cows, by 0.24 units. Marbling was also lower in the implanted cows by approximately one-third of a marbling score, but remained within the Small category.

It is important to remember that while feeding and implanting can improve animal and carcass value, profitability is extremely dependent on the seasonal purchase and sale prices.

*Summary by Ron Hale*

## Focus on Feedlots

The most recent report from Focus on Feedlots can be found at:

[www.oznet.ksu.edu/dp\\_ansi/nletter/fof.htm](http://www.oznet.ksu.edu/dp_ansi/nletter/fof.htm)

To receive e-mail notification of the monthly report contact Linda Siebold, [lsiebold@oznet.ksu.edu](mailto:lsiebold@oznet.ksu.edu) or 785-532-1281.

## Four-State Range Beef Cow Symposium is Dec. 9–11

The Scotts Bluff County Events Center in Mitchell, Neb., will be the site of the Four-State Range Beef Cow Symposium on Dec. 9–11. The symposium is co-sponsored by the University of Nebraska, University of Wyoming, South Dakota State University, and Colorado State University. More than 1,000 attendees from the four sponsoring states plus many other states and Canada are expected to attend the two-and-a-half day program. More than 900 attended the meeting two years ago in Casper, Wyo.

This symposium is a significant source of the most current information about the cattle industry. For example, one of the speakers at the 1976 symposium told producers about the possibility of using microchip technology for electronic animal identification. Now, almost 30 years later, that concept is a reality.

Speakers will give 30-minute presentations and then answer participant questions

during “bullpen sessions” in the evenings. The program is grouped into broad topic categories with several speakers for each topic. This year’s topics include genetics, range and nutrition, reproduction, animal health, management and marketing, and industry issues. Speakers are from a wide range of industry and academic positions.

Registration for the entire symposium is \$60 if received before Nov. 28, and it includes proceedings and lunch on Tuesday and Wednesday. Late registration is \$75. Rates are also available for spouses, students, and single-day attendance.

Registration forms and more information about symposium speakers are available at [www.panhandle.unl.edu/symposium/](http://www.panhandle.unl.edu/symposium/) or contact Ivan Rush at the University of Nebraska Panhandle Research and Extension Center, 4502 Avenue I, Scottsbluff, NE, 69361, phone 308-632-1245 or [IRUSH1@unl.edu](mailto:IRUSH1@unl.edu).

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### NW Kansas Cattlemen’s Seminar

Producers in northwest Kansas will have the opportunity to hear from several well-known speakers on topics critical to the beef industry on Nov. 18, at the Rawlins County Fairgrounds in Atwood.

Speakers include David Owen, Owens Associates Consulting, who will discuss *International Beef Trade*; Dr. Kevin Varner, USDA-APHIS, *Potential Effects of a Foreign Animal Disease Outbreak in Area Beef Operations*; John Brethour, KSU Agricultural Research Center – Hays, *Proven and Emerging Uses of Ultrasound Technology*, Cynthia Dixson, Rawlins County Extension Office, *Carcass Data 101*, and John Maddux, Maddux Cattle Co., *Developing and Achieving Herd Goals*.

The program begins with registration at 9 a.m. Registration of \$15 for the noon meal is requested by Nov. 14. To register or for more information call 785-626-3192 (Rawlins County Extension Office) or 785-462-4582 (Thomas County Extension Office).

### Beef producer meetings set

Managing a Successful and Profitable Beef Enterprise is the subject of meetings on Nov. 4, 5, and 6 in Washington, Salina, and Valley Falls, Kan.

Speakers are Larry Hollis, *Bioterrorism and Farm Biosecurity* and *Precalving and Calf Health Programs*; Joel DeRouchey, *Feed Management and Site Selection for Feeding Areas*, and Dale Blasi, *COOL Update and Identification Verification and Supplementation Programs*.

Locations and contacts:

- Nov. 4 – Washington County Fairgrounds, Washington, Kan., Ross Mosteller, 785-325-2121.
- Nov. 5 – Farmers and Ranchers Livestock Commission Co., Salina, Kan., Carl Garten, 785-309-5850.
- Nov. 6 – Jefferson County Fairgrounds, Valley Falls, Kan., David Hallauer, 785-863-2212.

Programs begin with registration at 4:30 p.m. Advance registration of \$10 is requested to cover meal costs. Registration at the door is \$15.