WHAT YOU NEED TO KNOW ABOUT BLV

Bovine Leukosis is an immunosuppressive disease that has not received much attention over the last several years in the United States. In fact, unless you have been involved in exporting cattle overseas and have an understanding of the measures that many countries are taking to keep it out of their supply chain, you may not have even heard of BLV. As many as 21 countries, as well as the state of Western Australia have now successfully eradicated BLV from their cattle herds and will not accept BLV-positive cattle or cattle products. Data from a recently published article indicates that the subclinical effects of BLV are more severe and damaging than previously thought.

Following is the abstract and a summary of the article.

Options for the control of bovine leukemia virus in dairy cattle

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The subclinical impact of bovine leukemia virus (BLV) on the sustainability of the US dairy industry is only now being fully recognized. Findings of recent longitudinal studies conducted in Michigan dairy herds were consistent with the results of previous studies in showing that within-herd prevalence of BLV-infected cattle was negatively associated with milk production and cow longevity. Risk factors relating to routes of hematogenous transmission such as the use of shared hypodermic needles, shared reproductive examination sleeves, and natural breeding were associated with BLV within-herd prevalence. Few US dairy producers know the prevalence of BLV-infected cattle in their herds or are aware of the insidious economic impact of BLV or the options for BLV control. As an increasing number of countries eradicate BLV from their cattle populations, restrictions on the movement of US cattle and cattle products will likely increase. Veterinarians should be aware of recent developments for screening serum and milk samples for antibodies against BLV and the results of research regarding the economic impact of BLV so they can advise their dairy clients of available alternatives for monitoring and controlling BLV infection.

SUMMARY HIGHLIGHTS FROM THE ARTICLE

BLV prevalence, according to USDA surveys in 1999 and 2007:

- US beef cow-calf = 39%
- Dairy herds = 83%

Annual economic losses to the US dairy industry associated with BLV are estimated to be $285 million for producers.
• Malignant lymphosarcoma induced by BLV is the largest single reason that US cattle are condemned during postmortem inspection at slaughter plants
• The USDA National Animal Health Monitoring System’s (NAHMS) 1996 dairy study determined that 209 lb of milk/cow/y was lost for each 10% increase in the within-herd BLV prevalence
• BLV infection impairs cow longevity

OPTIONS FOR BLV CONTROL (as suggested in the article)

1. No action.
2. Monitor BLV prevalence with BLV herd profile milk testing or traditional serum testing. Implement management changes to reduce transmission and thereby reduce prevalence.
3. Test all cattle and segregate BLV test-positive cattle. Make selected management changes to reduce transmission. Maintain a closed herd or only add BLV test-negative cattle that retest negative after a quarantine period.
4. Test and cull BLV-positive cattle. Maintain a closed herd or only add BLV test-negative cattle that retest negative after a quarantine period.

MANAGEMENT PRACTICES TO MINIMIZE BLV TRANSMISSION (as suggested in the article)

1. Use a sterile hypodermic needle for each cow.
2. Clean and disinfect blood-contaminated equipment for dehorning, tattooing, supernumerary teat removal, and other surgical procedures between animals.
3. Use a new or cleaned and disinfected reproductive examination sleeve for each cow.
4. Use artificial insemination exclusively for breeding purposes.
5. Control stable and other biting flies.
6. Minimize contact between newborn calves and BLV-positive cattle.
7. Avoid feeding unpasteurized colostrum from BLV-positive cows to newborn dairy calves.
8. Segregate BLV test-positive cattle from BLV test-negative cattle.
9. Cull or segregate BLV-positive cattle with lymphocytosis (infected animals that have progressed to second stage of the disease).

THE GOOD NEWS

In a study conducted in a dairy herd with a high within-herd BLV prevalence, implementation of single-use hypodermic needles and reproductive examination sleeves, disinfection of tattoo equipment, use of cautery-type dehorners, and feeding of milk replacer and heat-treated colostrum resulted in a decrease in the prevalence of BLV-infected heifers from 44% to 17% in two years without selective culling or segregation of BLV-infected cattle.

In the past, the only recognized losses caused by BLV infection were those associated with condemnation from lymphosarcoma. However, recent studies referenced in the article demonstrate that costs associated with lost milk production and decreased cow longevity also need to be considered. In addition, as more countries maintain or attempt BLV eradication, the US dairy and beef export markets may diminish or be increasingly pressured to make changes to disease control procedures.

TAKE HOME MESSAGE

1. BLV is a growing problem in our beef and dairy herds.
2. BLV is much more costly than previously appreciated.
3. Management and control practices can be effective in reducing within-herd prevalence.
4. It IS possible to achieve and maintain BLV-free herd status.

BLV, among other cattle-specific diseases such as Bovine Viral Diarrhea (BVD), can be controlled in herds by means of various risk-management decisions, including diagnostic testing. Testing provides information on risks and circumstances that could affect cattle health and performance and is in keeping with API's aim of providing "management over medicine" technologies to the cattle industry. The above information is just a snapshot of BLV infection, its effects on US cattle operations and the value of testing. For more detailed information on BLV testing or our other diagnostic tools (including tests for Johne's disease, BVD and pregnancy), please contact us. We are happy to answer any questions you may have with regard to setting up a testing program or for information on other products and services API has in place to make the jobs of dairy and beef cattle managers easier, more efficient, and more profitable. Contact me at the phone or email address below, or reach us at our toll-free number, 877.278.1344.

Sincerely,

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