Cattle Chat: Bovine leukemia virus’ influence on cow productivity

K-State beef cattle veterinarian discusses research, implications on cow fertility

By Lisa Moser, K-State Research and Extension news service

MANHATTAN, Kan. — When traveling abroad to regions that experience different disease threats, there can be some preventative measures that can keep a person from experiencing sickness that occurs in a particular area of the world.

And in some cases, those diseases are carried by insects. In much the same way these vectors can also transmit bovine leukemia virus to beef cattle, say the veterinarians at the Kansas State University Beef Cattle Institute on a recent Cattle Chat podcast.

“Bovine leukosis is a viral infection that infects the immune system of cattle and once cows have the virus in their bodies it stays with them for life,” said K-State veterinarian Brian Lubbers.

He said that while most cattle have the virus in their bodies, it is not common for the virus to develop into cancer.

“Clinical signs of cancer include swollen lymph nodes and rapid weight loss, but those leukosis cases are uncommon compared to the number of animals that carry the bovine leukemia virus,” Lubbers said.

Along with spreading this through biting insects because this is a bloodborne disease, Lubbers said humans can also transmit the virus by using palpation sleeves or equipment such as needles, ear taggers and tattoo guns on multiple animals.

To learn more about the impacts of the disease in beef cattle, K-State veterinarian Bob Larson joined with his veterinary colleague, Shaun Huser, and several others to see if there was a connection between BLV and cow fertility.

Larson said the study was done with 2,820 cows from 43 beef herds in 13 counties in northeast Kansas. The researchers looked at the age of the cow, the size of the herd, the proximity to
other herds in the area, and whether or not the cows became pregnant during the breeding season. All of the animals were also tested for the virus presence as well as the virus load.

“We found that this virus is very common, as about 55% of the cattle were BLV positive... Once the cattle were four to five years of age, that number increased to about 80% of the herd,” Larson said.

Regarding the connection to fertility for BLV-positive cows, Larson said: “We found no effect on the probability of getting pregnant early in the breeding season.”

Because of the high level of spread in the herds of this virus, there is no treatment currently and it is difficult to prevent the transmission, according to the veterinarians.

Depending on whether they are working with a commercial or purebred herd, some producers may regularly test for the disease and look at different management strategies.

“Some producers may group the infected cows away from the others that don’t carry the virus as a way to reduce the risk of virus spread, but that comes at a cost,” Larson said. “The cost may not warrant an invention at this time, but looking ahead we hope that this research can help us find a cost-effective way to manage this virus.”

To hear the full discussion, listen to the Cattle Chat podcast online or through your preferred streaming platform.

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Story by:
Lisa Moser
785-532-2010
lmoser@ksu.edu

More information:
Bob Larson
785-532-4257
rlarson@vet.ksu.edu

Brian Lubbers
785-532-4012
blubbers@vet.ksu.edu