

River View Veterinary Service Newsletter

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News and Upcoming Events:

- Drs. Sarah and Terry will be attending continuing education conferences soon. Let them know if there's any topic you'd like to know more about!

*Welcome to the River View Veterinary Service Newsletter!
This newsletter is designed to provide cattle producers with timely information and education on a variety of topics. Got a topic? Let us know!
Sarah Foust, DVM and Terry Foust, DVM*

Controlling pre-weaning respiratory disease in beef calves

(Adapted from KSU Beef Cattle Institute; by ksubci; Posted on September 26, 2018)

Respiratory disease in pre-weaning beef calves is a growing problem among Midwestern cow-calf herds. In recent studies, prevalence of pre-weaning calf pneumonia has been observed affecting as many as 20%-30% of calves in some operations.

The main factors in determining disease or health in young beef or dairy calves are the transfer of maternal immunity and the duration of maternal immunity.

Dr. Manuel Chamorro, clinical assistant professor with Kansas State University's College of Veterinary Medicine Livestock Services, recently completed research as part of a team investigating the effectiveness of vaccinating pregnant heifers at 6-8 months gestation to prevent pre-weaning respiratory disease.

First-calf heifers vaccinated prior to breeding with a modified live virus (MLV) multivalent vaccine containing BVDV 1, BVDV 2 and BHV-1 were split into two groups. One group received two doses of a killed virus multivalent vaccine 21 days apart between 6.5 and 8 months gestation. The second group received a shot of saline solution. The group then measured the total serum IgG and neutralizing antibodies to BVDV 1, BVDV 2 and BHV-1 in newborn calves.

"The question is, 'Is the just the total IgG level from colostrum enough,'" Chamorro asked, "or are there other factors? We believe it doesn't matter the amount of antibodies but their specificity. You can have a high level of antibodies, broad spectrum, but if you are lacking specific antibodies against respiratory disease, your calves may still have it."

Ultimately, the group's study found that vaccinating beef cows during 6-8 months of gestation would reflect an increase in specific antibodies in maternal colostrum and would result in better antibody uptake in young calves. Higher serum antibody titers to the specific disease might result in prolonged duration of maternally derived immunity and better protection against respiratory disease during the pre-weaning period.

"It's a good idea," Dr. Chamorro said of vaccinating pregnant cows and heifers against common cattle respiratory pathogens during fall pregnancy checking. "It's affordable and we've seen results."