

VACCINATING CALVES AT BRANDING TO PREVENT VIRAL RESPIRATORY DISEASE

It has been a common belief that vaccination of young calves in the face of maternal antibodies obtained from colostrum is largely ineffective, especially those vaccines against the common viral agents involved in bovine respiratory disease. Passively-derived antibodies were thought to bind to the vaccine and make them unavailable for proper antigen processing or to inactivate vaccine virus in the case of the modified live vaccines.

A recent study (Endsley, et. al., Proceedings of the Conference on Detecting and Controlling BVDV Infections, April, 2002, Ames, IA) found that young calves with circulating antibody against both type 1 and 2 BVD viruses could generate T cell mediated immunity against both strains when vaccinated with a MLV vaccine that contained both strains. Vaccination with a killed vaccine containing both strains did not result in cell-mediated immune responses.

This research extends the findings of Ellis, et. al. that found cell-mediated responses against the IBR and BRS viral fractions in calves vaccinated with MLV vaccines while maternal antibody is present.

These studies indicate that producers may want to consider the use of 4-way MLV vaccines at branding to aid in the prevention of BRD pre- or post-weaning.

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