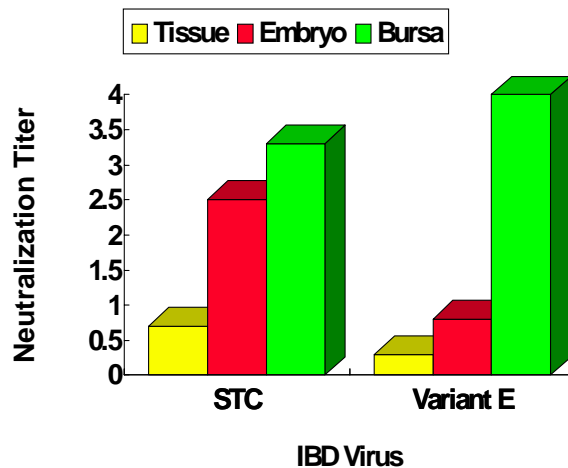


Bursal Tissue Origin, Infectious Bursal Disease Vaccines

Independent researchers have consistently shown that the method of antigen propagation for infectious bursal disease (IBD) virus does affect the level of protection achieved from inactivated IBD vaccines. Bursal tissue origin (BTO) antigen has been shown to produce superior protection compared to tissue culture origin (TCO) and chicken embryo origin (CEO) IBD antigens.

Experimental inactivated vaccines, produced with the same amount of BTO, CEO or TCO IBD virus per dose, were studied to compare their ability to produce IBD virus neutralizing antibodies. Both standard and Delaware variant E IBD viruses stimulated the highest level of neutralizing antibodies when the antigen was produced in bursal tissue (Graph 1). TCO antigen produced the least amount of neutralizing antibodies. CEO antigen produced a lower level of neutralizing antibodies than BTO but more than TCO antigen.

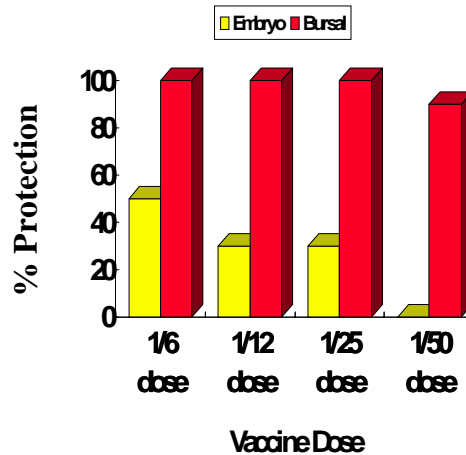
Graph1. IBD Virus Neutralizing Study*



BTO antigen provides the highest level of virus neutralizing antibodies.
 CEO and TCO both produce lower levels of neutralizing antibodies.

To further evaluate BTO antigen, challenge studies were conducted to compare CEO and BTO IBD vaccines. Chickens were vaccinated with various dilutions of either BTO or CEO vaccines produced with the same strain and titer of IBD virus per dose. At 4 weeks post vaccination, birds were challenged with a virulent IBD virus. The vaccine produced with BTO IBD antigen provided excellent protection at each dilution (Graph 2). The CEO vaccine provided inferior protection at each dilution level.

Graph 2. IBD Challenge Study*



BTO antigen provided superior protection in the challenge study as compared to CEO antigen.

The broiler industry's demand for BTO antigen provided direction for the poultry vaccine industry. BTO Delaware variant E IBD antigen was incorporated into IBD inactivated products but the standard IBD viruses were still produced in tissue culture. Use of these vaccines in the breeders has provided the best level of protection in progeny through maternal antibody transfer. But more important, broiler performance was improved. LAHI again listened to the industry's requests; producing our Inacti/Vac[®] BTO2 line of inactivated IBD vaccines. Inacti/Vac[®] BTO2-REO and Inacti/Vac[®] BTO2-REO-ND-IB2 both contain BTO standard and BTO Delaware variant E IBDV. Inacti/Vac[®] BTO2-REO combines BTO standard and variant IBD viruses with S1133 and 1733 strains of reovirus. Inacti/Vac[®] BTO2-REO-ND-IB2 provides additional NDV and IBV protection, containing inactivated LaSota strain of NDV and Mass and Arkansas IBV. LAHI is working to help you achieve your full potential in broiler performance. For more information on these products, please contact your area manager.

* Research conducted by Dr. J.K. Rosenberger *et al.*, University of Delaware.

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