

Cellular and Humoral Response Following Challenge in Cattle Vaccinated with Inactivated Virus Vaccine.

Christopher C.L. Chase^{1,3}, L. Braun³, T. Fraser³, S. Anderson², J. Hanson³ and David J. Hurley^{1,2,3}

*Departments of Veterinary
Science¹ and Biology/Microbiology²
South Dakota State University
Brookings, SD 57007
Rural Technologies, Inc.³
Brookings, SD 57006*

The spectrum and duration of immunity from an inactivated bovine viral vaccine (Vira Shield? 5: Grand Laboratories, Freeman, SD) was evaluated in two studies. In study 1, cattle vaccinated for 6-11 months were challenged sequentially with IBR, BRSV and type II BVDV. In study 2, cattle vaccinated for 13 months were challenged with type II BVDV. In study 1, the vaccinated animals were protected against clinical disease with the type II BVDV 890 challenge. In study 2, clinical

disease was less severe in vaccinates. The antibody response of the vaccinated cattle was significantly higher for IBR, BRSV, type II BVDV challenge and type I BVDV. Cell mediated immune responses as measured by proliferative and cytotoxicity were also stimulated by the vaccine. These studies indicate that an inactivated vaccine can provide protection and stimulate cell mediated immunity up to 13 months post vaccination.

A Novel Diagnostic Ready Reckoner for Animal Disease Diagnosticians, Practitioners and Pathologists

Jay Samudralwar, Ph.D.

*Livestock Disease Diagnostic Center
University of Kentucky
1429 Newton Pike
Lexington, KY 40511*

There are a number of clinical, physiological and chemical parameters required while the diagnosis of diseases and healthy status of food and other livestock. Unlike humans, there are 8-10 different species if animals each having a very different normal, above normal and toxic levels of each of these parameters. When in the field or reading a laboratory report, it is very important to consider normal levels before passing a judgment. I have designed a novel wheel device which has 540 essential data on the animal disease diagnostics. It is handy, portable and ready to use in field or office.

The wheel consists of normal and high (action level) data on four essential trace elements selenium, copper, zinc and iron and one toxic element lead for 8 different

species viz. Bovine, ovine, canine, feline, equine, avian, porcine and in three different tissues viz. blood or serum, kidney, and liver. On the other side of the wheel there are normal and high range for 24 serum chemistry parameters. These include haemoglobin, creatinine, cholesterol, BUN, glucose, SGOT, CPK, PCV, temperature and pulse etc. Just by a twist of the top wheel, the required data can be focused in the window which displays the normal and high values for that parameter for a particular species. Reference has been provided for the more exhaustive data source.

The device has been copyrighted through the University of Kentucky, Lexington, Ky. An electronic version holding 20 times more data base has been proposed for patenting through the University of Kentucky.