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 Steffen & Mavis Seelmeayer

Notes From the Director

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Mad Cow Disease

BVDV Testing

Recently, there has been innovation in BVDV testing methods. This is exciting as some methods under consideration have the potential to reduce program costs. The reported economic benefits may be production system dependent and plans should be implemented with monitoring of assay and economic performance. Programs need to be proven for each management scheme. Not all of the innovation being reported has been properly validated. It has been our observation that there is marked variation in assay sensitivity with pooling of samples. The University of Nebraska has several faculty involved in BVDV assay validation, BVDV research and BVDV control program design. If you have questions about testing or program design give us a call.

Quality Programs

Laboratory quality programs often go unnoticed by clients but the policies and procedures required of accredited labs result in quality work. Both AAVLD (public lab) and ISO (private lab) accreditations are based on the ISO 17025 standards. These standards meet OIE guidelines recognized by the world trade organization. The ISO standard requires that laboratories use validated assays, perform assays following standard procedures (SOP's) and that labs use properly calibrated equipment. Labs must also be able to document these activities. This assures you, the user that the lab says what it will do, does what it says and has a documentation to prove it.

CSF Surveillance

The Laboratory is in the process of renewing a classical swine fever surveillance agreement with the USDA. This agree-

ment pays cooperators \$50 per pig sampled when tonsil and nasal swabs are submitted along with a minimal amount of demographic information. We currently credit the account of participation clinics and will begin quarterly payments to clinics with credits exceeding the laboratory usage during the quarter. The USDA considers Nebraska a high risk state due to the swine numbers and other demographic considerations. If you are interested in participation, please contact the lab and we will send out sampling kits and instructions. This has been fairly profitable for a handful of clinics and we would love to see more clinics benefit from the program.

Information System Update

The laboratory is still progressing slowly toward implementing an new LIMS system as announced at the summer meeting. The system had more customization needed than anticipated and we are not rolling it out until we remove a few more of the bugs and have tested the features internally. Dr. Brodersen and Roxane Ellis are doing an excellent job of leading this implementation process. We should be able to provide real time results reporting via web access and you will be able to view pending tests from your computer. The new system handles accounting differently and we will be terminating the break point fees as this is implemented. We are looking at other ways to discount complex investigations. I expect some fees will be packages based on the syndrome being investigated. The billing will be itemized by tests. Our hope is that the changes will be revenue neutral. A new fee schedule will be forthcoming.

Moraxella ovis and Bovine Pinkeye

Piliated, hemolytic strains of *Moraxella bovis* are the cause of infectious bovine keratoconjunctivitis (IBK), although *Moraxella (Branhamella) ovis* is often isolated from affected cattle. Data from the University of Nebraska's Veterinary Diagnostic Center indicate that *M. ovis* has been isolated with increasing frequency from cattle with IBK, and isolates of hemolytic *M. ovis* examined thus far produce one or more toxins that may be similar to those produced by *M. bovis*. Does *M. ovis* cause IBK? There currently are no experimental data to indicate that *M. ovis*, by itself, is a pathogen. What is the significance when *M. ovis*, and not *M. bovis*, is isolated from cattle with IBK? Previous studies have shown that *M. bovis* becomes increasingly difficult to isolate as the disease progresses. Conjunctival swabs should be collected from acutely affected cattle when culture and antibiotic sensitivity profiles for *M. bovis* are warranted. Is *M. ovis* an opportunistic pathogen, and can it play some role in the pathogenesis of IBK? Because *M. ovis* produces one or more toxins, it is possible that this bacterium may be an opportunistic pathogen in some cases of IBK. Although *M. bovis* is the etiologic agent of IBK, we are currently recommending that veterinarians consider *M. ovis* to be a probable, opportunistic pathogen when isolated from cattle with IBK.

- - Douglas G. Rogers, DVM, PhD, Veterinary Diagnostic Pathologist

Evaluation of the Efficacy of Disinfectant Footbaths As Used in Veterinary Hospitals

Paul S. Morley, DVM, PhD, DACVIM; S. Nanea Morris, DVM; Doreene R. Hyatt, PhD; David C. Van Metre, Dvm, DACVIM

Objective: To evaluate efficacy of 2 disinfectants as used in footbaths in veterinary hospitals for reducing bacterial contamination of footwear.

Design: Prospective study.

Sample Population: Bacteria collected from the soles of rubber boots after experimental contamination and exposure to disinfectant solutions or control conditions.

Procedures: Investigators contaminated boots by walking through soiled straw animal bedding. Swab samples were collected from the sole of 1 boot (right or left) without treatment. The other boot was briefly immersed in a disinfectant solution (either a quaternary ammonium compound [QAC] or a peroxygen compound) or water, and samples were collected after 7 minutes. Differences associated with the experimental treatments were analyzed statistically. Veterinary teaching hospitals (VTHs) in the United States and Canada were contacted to obtain information about the use of footbaths.

Results: Mean bacterial concentrations from peroxygen-treated boots were 67% to 78% lower, compared with samples taken from untreated boots. In contrast, there were no statistically detectable differences in mean bacterial concentrations in samples taken from QAC- or water-treated boots, compared with control boots. Disinfectant footbaths were reportedly used in 30 of 31 VTHs.

Conclusions and Clinical Relevance: Disinfectant solution containing peroxygen applied in a footbath reduced bacterial concentrations on rubber boots under conditions representative of those found in VTHs. Footbaths are commonly used as a method to control infectious diseases in veterinary hospitals. Disinfectant footbaths should not be expected to sterilize footwear, but they may help in reducing the risk for nosocomial infection when used with effective disinfectants. (J Am Vet Med Assoc 2005; 226:2053-2058)

—taken from JAVMA, Vol. 226, No. 12, June 15, 2005; Scientific Reports: Original Study; contributed by Dr. Bruce Brodersen

New Diagnostic Center Employee



David Scott McVey (Scott)

David Scott McVey received the DVM degree from the University of Tennessee in 1980. He spent three years in a dairy practice in East Tennessee. He earned the PhD degree in Veterinary Microbiology from Texas A&M University in 1986. While at Texas A&M University he was awarded the Jack Delaplane Award for research excellence in livestock diseases. Dr. McVey joined the faculty at Kansas State University in 1986 as an Assistant Professor of Immunology. He was promoted to the rank of Associate Professor in 1992. While at Kansas State University, Dr. McVey directed the Clinical Immunology and Flow Cytometry service laboratories. He was board certified in the ACVM in 1989 (Immunology) and 1990 (Bacteriology). Dr. McVey was course

coordinator for immunology and also taught significant portions of infectious disease courses to undergraduate, graduate and veterinary students. Dr. McVey was awarded the SmithKline Beecham Award for Research Excellence in 1992. In late 1995, Dr. McVey joined Rhone Merieux as a Production Animal Scientist working in developmental research in veterinary biological products and diagnostics. He was awarded the Veterinary Information Network Special Services Award in 1997. In January of 1998, he joined Pfizer Bioprocess Research as a Senior Research Investigator and most recently was Director, Biologicals Development of Pfizer Animal Health in Lincoln, NE (through April 2006). Dr. McVey is the immediate past President of the American College of Veterinary Microbiologists and was also a served on the Blue Ribbon Panel for Counter Measures for Terrorist Threats to Agriculture for the President of the United States (2003-2004). Dr. McVey is the author of over 40 research articles, book chapters and patents as well as numerous abstracts and reports.

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We are delighted to have Dr. McVey on our faculty, where he will be supervising diagnostic bacteriology and teaching bacteriology in the veterinary education program. We encourage our clients to take advantage of the expertise he bring to the diagnostic center.

Bacteriology News

The Bacteriology/Parasitology department would like you to be aware of the following updates and changes now available in the testing we offer:

PCR for Listeria - It can be done from direct culture or brain tissue (preferably medulla oblongata). The cost is \$20 and the turn-around-time is 48-72 hours.

The **tick screen** (antibody card test) is no longer available, so the new tick screen is comprised of these three indirect fluorescent antibody tests: Canine Ehrlichiosis, Lyme disease, and Rocky Mountain Spotted Fever. The cost is \$35 and turn-around-time is 24-48 hours. Each of these tests can still be ordered individually at \$13 each.

- - submitted by Deb Royal, Bacteriology Lab Supervisor

Brucellosis Testing Available at VDC

The VDC Bacteriology laboratory has achieved USDA-NVSL certification to perform official brucellosis serology testing (Card test serology) for cattle and swine. Testing requires 2.0 ml of serum. **Samples must be submitted to the Nebraska Veterinary Diagnostic Center using an Official Brucellosis Test Record (VS Form 4-33).** Samples will generally be tested on the day of receipt, but submitting veterinarians are encouraged to contact the laboratory regarding testing needs for large numbers of samples (>10) or special time constraints.

Fees include the accession fee (\$7.00) and \$1.00 per sample test fee. A \$0.50 per tube charge will be applied to separate serum from whole blood (if whole blood is submitted).

Test results will be communicated to the submitting veterinarian through the state of Nebraska Bureau of Animal Industry.

Official Brucellosis Test Record (VS Form 4-33) forms may be ordered by calling the USDA APHIS Veterinary Services area office (402-434-2300).

Contact Dr. D. Scott McVey at the VDC (402) 472-8469 with questions.

**University of Nebraska
Veterinary Diagnostic**

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The Nebraska Veterinary Diagnostic Center is accredited by the American Association of Veterinary Laboratory Diagnosticians

All regulatory testing for export is done in compliance with the code of federal regulations and technicians performing the test have been tested annually by the USDA through the National Veterinary Services Laboratories check-testing program. Additional assays within the lab regarding toxicology, microbiology and parasitology are assessed annually by check testing through the Veterinary Laboratory Association. Positive and negative control samples are included in all serologic and toxicologic testing protocols that require them.

Ancillary testing is reviewed by a single case coordinator who assures that test results are in agreement and any unusual test results are investigated to ensure that standard operating procedures are followed and that results can be replicated. Standard operating procedures are on file in each of the laboratories and available for inspection. A copy of our Quality Manual is available upon request.

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