

Import requirements tightened

BOAH responds to TB outbreak

BISMARCK – The North Dakota State Board of Animal Health (BOAH) has tightened restrictions on imports of Minnesota livestock in response to confirmed cases of bovine tuberculosis in that state.

At its quarterly meeting on Dec. 14, the BOAH ordered that all beef cattle, bison and goats, six months or older, except castrated males and spayed females, must test negative for TB within 60 days prior to entering North Dakota from Minnesota.

The board's order expands on testing requirements imposed Dec. 8, by the state veterinarian, Dr. Susan Keller, for imported Minnesota beef cattle.

The provisions of the order include:

1. All beef cattle, bison and goats six months of age or older, other than castrated males and spayed females, must:
 - a. Be negative to an official test for tuberculosis within 60 days prior to entering North Dakota or
 - b. Originate from a tuberculosis accredited free herd (date of last test and accredited herd number listed on health certificate);

- c. Be listed by official identification individually on a health certificate;
 - d. Obtain import permit prior to entry.
2. Castrated males and spayed females do not need to be tested but must:
 - a. Be officially identified prior to entry;
 - b. Be listed by official identification individually on a health certificate;
 - c. Obtain import permit prior to entry.
3. Breeding beef cattle, bison and goats less than six months of age must:
 - a. Originate from a closed herd which has been whole-herd tested negative tuberculosis within 12 months prior to importation or
 - b. Originate from tuberculosis accredited free herd (date of last test and accredited herd number listed on health certificate) or
 - c. Accompany a negative tested dam.
 - d. Obtain import permit prior to entry.

Alternatively, animals less than 6 months of age may be tested if they are more than

60 days of age at the discretion of the state veterinarian.

The board's order (No. 2005-01) is posted on the North Dakota Department of Agriculture website, www.agdepartment.com (click on "Hot Topics").

Animals from five beef herds in northwestern Minnesota have been diagnosed with bovine TB since July. In addition, a whitetail deer, shot by a hunter in Roseau County, tested positive for TB on a preliminary test.

As of Dec. 29, the Minnesota Board of Animal Health reported that 36 of 43 herds had been released from quarantine. Of the seven still under quarantine, four were among the herds reporting positive cases, while tests results are pending on the other three. The fifth herd with positive cases has been depopulated and the premises decontaminated.

Iowa, Nebraska, South Dakota and Wisconsin have adopted similar testing restrictions on Minnesota cattle.

The U.S. Department of Agriculture has indicated it will downgrade Minnesota's TB status as Modified Accredited Advanced - one step below TB-free status.

Board licenses 21 to practice in North Dakota

The North Dakota State Board of Veterinary Medical Examiners approved licenses for 21 veterinarians to practice in North Dakota in 2005.

The new licensees include Amy Anderson, Englevale; William Baus, Redfield, SD; Dana Beckler, Fergus Falls, MN; Angela Davis, Cook, MN; Donald Ernst, Roslyn, SD; Joanne Fisher, Ashley; Edward Foeltz, New Town; Sara

Fridrych, Ames, IA; Tanya Fyfe, Bismarck; Ronald Goos, Moorhead, MN; Grant Gosch, Mobridge, SD; Carolyn Hammer, Fargo; Maureen Harkin, Medora; Scott Josephson, Taunton, MN; Pete Litynski, Sandstone, MN; Reece Myran, Ashley; Anne Rogers, Grand Forks Air Force Base; Cory Tebay, Steele; Kelly Thorsness, Troy, OH; David Tomsche, Melrose, MN, and Garrick Wiens, Morden, MB.



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THE NORTH DAKOTA STATE BOARD OF ANIMAL HEALTH

Francis Maher, Menoken
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Dr. William Tidball, Beach

and

THE NORTH DAKOTA DEPARTMENT OF AGRICULTURE

Roger Johnson
Agriculture Commissioner

Dr. Susan Keller
State Veterinarian
skeller@state.nd.us

Dr. Beth Carlson
Deputy State Veterinarian
bwcarlson@state.nd.us

Dr. Deidre Qual
Assistant State Veterinarian
dqual@state.nd.us

Dr. James Clement
Animal ID Coordinator
jcclement@state.nd.us

Dr. Thomas Moss
Assistant State Veterinarian
tmoss@state.nd.us

Please send all correspondence
to the State Veterinarian
State Board of Animal Health
N.D. Department of Agriculture
600 E. Boulevard Ave., Dept. 602
Bismarck, ND 58505-0020
PH: (701) 328-2655
(800) 242-7535
Fax: (701) 328-4567

Ted Quanrud, Editor
tquanrud@state.nd.us

Clinics wanted on ID system

Owners and operators of veterinary clinics are urged to register their businesses with the National Animal Identification System (NAIS).

“Veterinary clinics will, of course, play a vital role in stemming the kind of disease outbreak that the ID system was designed for,” said Dr. Jim Clement, animal ID coordinator with the State Board of Animal Health (BOAH).

Clement said that premises registration for veterinary clinics is not mandatory. Information on registering premises will be sent to practitioners.

To register a livestock operation, veterinary clinic, or auction market, contact the BOAH at (701) 328-2350 or the North Dakota Stockmen’s Association at (701) 223-2522. Premises registration forms can be printed from the BOAH link at www.agdepartment.com/Forms/NAISPremisesRegistration.pdf and then faxed to (701) 328-4567.

Euthanasia video available online

A video demonstration for livestock producers on proper euthanasia technique using a captive bolt is now available online.

Created by the Veterinary Medicine Teaching and Research Center at the University of California-Davis, “On Farm Livestock Euthanasia” explains when and how farm animals should be deliberately destroyed.

The video can be viewed at www.vmtc.ucdavis.edu/dfsl/euth/index.htm. It can also be purchased on CD-ROM by mailing a check or money order for \$22.50, payable to UC Regents, to the Veterinary Medicine Teaching and Research Center, Attention: Rhonda Roche, 18830 Rd., 112, Tulare, CA 93274.

Canadian cattle return to U.S. marketplace

More than a half million Canadian cattle have been imported into the U.S. in the five months since import restrictions were lifted.

As of Dec. 17, 2005, the U.S. Department of Agriculture reported that 205,706 Canadian animals had been imported for feeding and 290,540 animals were imported for immediate slaughter. The importation of animals from Canada for feeding and for immediate slaughter was resumed July 18.

Weekly updates are available at: www.ams.usda.gov/lsmnpubs/canada.htm

Lactose tolerance may be inherited

Ability to digest milk could come from your ancestors, according to research from Cornell University. Researchers found that people with European ancestors are more likely to be lactose tolerant than people from Asia or Africa. After infancy, the production of lactase (the enzyme necessary to digest dairy products) stops, but if the digestive system is exposed to dairy, it will continue to produce the enzyme. People of European descent have the mutated gene to produce lactase into adulthood. Because of extreme temperatures and economic conditions years ago in Africa and Asia, people there were less likely to raise dairy animals.

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Idaho set to lose disease-free status for brucellosis

Idaho is likely to lose its brucellosis-free status, following the October discovery of brucellosis in a Swan Valley cattle herd in the eastern part of the state. Later, a virgin heifer from that herd was traced to a small feedlot near Arco.

The U.S. Department of Agriculture will probably designate Idaho a Brucellosis "Class A" state sometime in January, a reduction from the "brucellosis-free" status the state has enjoyed since 1991.

The Idaho State Department of Agriculture (ISDA) is considering its options, including its right to appeal USDA's decision. Class A status will require increased testing of certain cattle that move out of Idaho. At a minimum, all intact male and female cattle over 18 months of age that are not going directly to slaughter will have to be tested for brucellosis before they can be shipped out of state. Additionally, cattle herds in eastern Idaho that have contact with wild elk in the winter time and are identified as "high-risk" by ISDA will be required to be tested for brucellosis. Such a testing regimen will increase costs for Idaho's cattle producers.

ISDA is considering its options, including an appeal. The department said the reactor heifer in the small feedlot should be considered part of the original herd, but APHIS determined that the small feedlot was a second brucellosis-infected herd. The discovery of a second herd triggered the change in Idaho's status to Class A. ISDA also disagrees with USDA's determination that brucellosis would have been transmitted by a virgin heifer to any of the other 17 cattle in the small Arco feedlot which had all been vaccinated and tested negative for brucellosis and were sent to slaughter in early December 2005.

Idaho can apply to regain its brucellosis-free status if no new cases emerge after one year.

It is believed that bison and elk in the Greater Yellowstone Area are the main source of *Brucella* bacteria in the region.

Disease update

By Dr. Beth Carlson, North Dakota Deputy State Veterinarian

Anthrax

The North Dakota State Emergency Commission has granted a \$130,000 request by the State Board of Animal Health to compensate producers for disposal and vaccination costs incurred in the 2005 anthrax outbreak. The funds will be distributed to producers based on the number of animals that died and the number that were vaccinated.

Anthrax was diagnosed on 109 premises in 16 counties in 2005 with total losses estimated at well over 500 head. Species affected included bison, cattle, horses, farmed elk and deer, sheep, llamas and donkeys. Anthrax cases have historically been reported in North Dakota, but the number of cases was much higher than average.

Producers in areas where anthrax has occurred in the past are being advised to add anthrax vaccine to their vaccination protocols.

Bovine spongiform encephalopathy

As of Dec. 18, 2005, all 288 samples submitted in North Dakota for BSE testing proved negative. Nationally, 556,143 samples have been tested since June 1, 2004 as part of the enhanced surveillance. One of these samples was positive. USDA completed its testing of 21,216 clinically normal animals in November. All the animals tested negative.

Chronic wasting disease

No positive results have been reported from the 3,316 farmed elk and 368 farmed deer that have been tested for CWD in North Dakota since 1998. Testing of all farmed deer and elk over 12 months of age that die for any reason is mandatory.

Persons collecting samples should collect the retropharyngeal lymph nodes as well as the obex. If the obex is unsuitable for testing, the lymph nodes will remain in suitable condition longer and may be tested to indicate the animal is negative for CWD. Lymph nodes are not now considered official, but may be in the future.

Vesicular stomatitis

Arizona, New Mexico, Texas, Utah, Colorado, Wyoming, Montana, Nebraska, and Idaho all reported cases of vesicular stomatitis in 2005. Currently, only Colorado has premises quarantined for VS. Because of cases in Montana this year, the waiver allowing animals to move directly from a producer's premises to a North Dakota auction market was suspended until all quarantines for VS in Montana were lifted.

West Nile Virus

The U.S. Department of Agriculture, Veterinary Services is reporting fewer cases of West Nile Virus in horses for 2005, in most states. The year's total, through the end of September, is 807. The year total for 2004 was 1,341.

California again led the country with 431 cases, more than half the national total. Most other states have less than 25 reported cases, excluding Idaho (88), Minnesota (85), Utah (57), Nevada (34) and Arizona (27). Texas, which reported more than 700 cases just two years ago, has only 15 to date. Fifteen states have reported zero cases of WNV. North Dakota had only four confirmed cases of equine WNV in 2005.

Much of the decrease may be attributed to an increase in natural immunization, as well as the effectiveness of WNV vaccines for horses.

N.D. practitioner disciplined over patient burns

The North Dakota Board of Veterinary Medical Examiners has taken disciplinary action against a North Dakota veterinarian, as a result of complaints involving thermal burns to surgery patients. The settlement reached with the veterinarian included a six-month probationary period with four hours of mandatory continuing education on perioperative care procedures.

The complaint involved animals that developed severe burns several days following routine surgery. The injuries were traced to the use of a newly acquired electric heating pad. The board reminds practitioners of the dangers inherent in the use of electric heating pads during surgery. Only temperature-controlled water jacketed heating pads should be used for the prevention of hypothermia during small animal surgery.

Limits wanted on antimicrobials

The American College of Veterinary Internal Medicine (ACVIM) wants to limit all uses of antimicrobial drugs in animals to a prescription-only basis.

The recommendation is part of a consensus statement addressing antimicrobial drug resistance and the ethical questions regarding their use in veterinary medicine. The statement was published in the July/August 2005 issue of the *Journal of Veterinary Internal Medicine* (JVIM).

A committee of ACVIM diplomates, other veterinarians, microbiologists, pharmacologists, epidemiologists and other specialists drafted the statement.

The committee recommends voluntary actions be taken by veterinarians to encourage the conservative use of antimicrobial drugs to minimize the effects on animal or human health.

A copy of the consensus statement can be found online at www.ACVIM.org.

Program update

Scrapie

The 2005-2006 scrapie cooperative agreement, that went into effect in September, is somewhat more restrictive than previous agreements. Any producer can genotype up to ten rams with no restrictions. Seedstock producers can genotype up to 100 rams of any breed but must agree to castrate or cull any which test QQ at codon 171. Additionally, producers may test up to 75 ewes; however, only Suffolk, Hampshire, Shropshire, Southdown, and Mondadale ewes greater than 14 months of age may be tested. Additionally, any ewes which test QQ at codon 171 will be third eyelid tested by state or federal personnel. Producers must obtain approval from the Board of Animal Health before testing.

Non-traditional livestock

In December, the State Board of Animal Health approved a draft of new administrative rules governing non-traditional livestock. These rules are subject to the administrative rulemaking process, that includes a public hearing(s). If approved by the Legislative Council, the rules are expected to take effect by fall of 2006. For more information, contact the BOAH at (701) 328-2655.

Johne's disease control program

During the last quarter of 2005, approximately 20 new herds were enrolled in the Johne's disease control program.

Dr. Don Hansen, the Oregon state veterinarian, will be the main speaker at a short half day Johne's certification/recertification session during the upcoming NDVMA state meeting in July. A former extension veterinarian, Dr. Hansen has been involved with Johne's disease work for a number of years and will share a number of success stories and disease management principles. Dr. John Honstead, the APHIS-VS western regional Johne's disease epidemiologist, will also deliver a presentation.

Reminder: risk assessment/herd management plans and the new agreement form must be delivered to herd owners within one month after testing and copies sent to the Board of Animal Health.

Emergency preparedness/biosecurity

The Private Practitioners Portal will be released as a functional web site within a few months and the information released to all North Dakota licensed veterinarians.

The North Dakota Veterinary Reserve Corps workshop will be held Jan 17-18, in Bismarck.

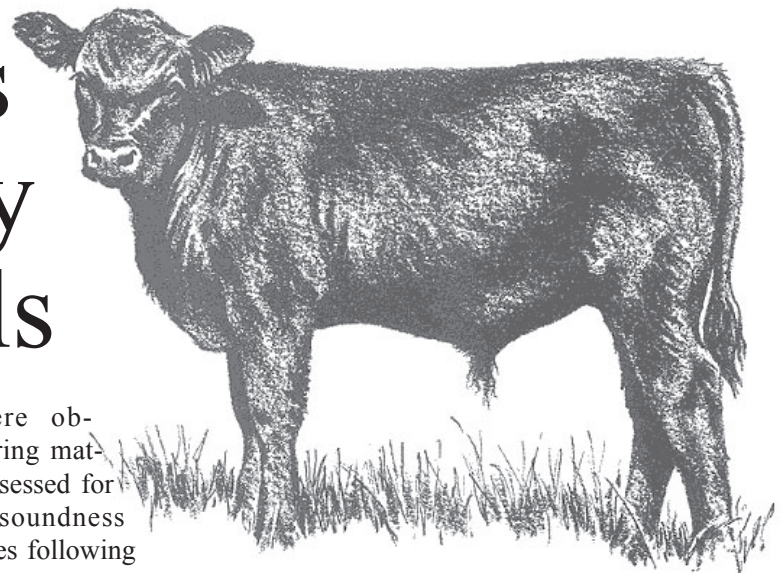
Animal Identification

As of Jan. 1, 2006, 5,874 North Dakota farms and ranches had registered for premises identification numbers through the National Animal Identification System. There are about 14,200 such operations in the state. A spokesman for the NAIS said North Dakota ranks 11th among the states in NAIS sign-ups.

Funding runs out for diagnostic workups

All funds that were available for diagnostic workups through the foreign animal disease cooperative agreement between the State Board of Animal Health and the National Animal Health Monitoring System (NAHMS) have been expended. The \$3,000 was made available to work up cases when multiple animals in a herd are affected by an unknown disease. The funds were used to assist six producers with diagnostic expenses associated with disease outbreaks.

Many factors affect fertility of young bulls



By Roger Ellis, DVM; Gary Rupp DVM; Peter Chenoweth, Ph.D; Larry Cundiff Ph.D, and Donald Lundstra

Interpretive Summary: Yearling crossbred bulls were evaluated for reproductive fitness at the beginning and at the end of a summer breeding season to quantify changes that young bulls undergo during their first year of breeding experience. Groups of bulls (8-10/pasture/breeding period) were selected as having satisfactory breeding soundness at the beginning of the breeding season. At the end of the 63-day breeding season, mean weight loss per bull was 77 kg (170 lb); attrition loss was 22% due to lameness and reproductive injuries resulted in 40% of the bulls being classified as possessing unsatisfactory breeding soundness. Variation among bulls was greater than predicted with 32% of the bulls maintaining or increasing in their percentage of normal spermatozoa while percentage of normal spermatozoa decreased in the remaining bulls. These findings will aid producers and extension educators with recommendations on the use of yearling bulls in groups and impact the design of subsequent studies relating to reproductive soundness of yearling bulls.

Technical Abstract: Crossbred (*Bos taurus*) yearling beef bulls were assessed for breeding soundness and physical traits prior to multi-sire natural mating at pasture. Bulls (n = 60) were assigned to six groups of nine or 10 bulls and two bull-groups were rotated on 14-day intervals during a 63-day mating season in each breeding herd (n = 3) of 191 - 196 cows. The remaining bulls (n = 14) were maintained under similar environmental conditions without mating exposure.

Bulls were observed during mating and assessed for breeding soundness and changes following mating. Bulls used for breeding (UFB) lost 77 kg of body weight and declined from body condition scores of 6 to 4.5, whereas bulls not used for breeding (NUB) maintained body condition scores of 6 and gained 27 kg. The UFB bulls incurred a 75 percent total injury rate with 63 percent incidence of lameness and 12 percent incidence of reproductive injuries, resulting in a 22 percent attrition rate. Only 45 percent were physically sound at the end of mating. Scrotal circumference declined in UFB bulls (-4.58 percent) and increased in NUB bulls (2.49 percent). From the 98 percent BSE-satisfactory rate (UFB) prior to breeding, only 61 percent were BSE-satisfactory post-breeding. The NUB bulls declined from 57 to 36 percent satisfactory. The BSE classification was influenced by significant increases in abnormal spermatozoa (primary and secondary), which was significantly associated with injuries incurred during mating. Group and breed differences in injury rates and BSE-status following mating were evident. Environmental conditions and mating activity influenced bull seminal quality and physical condition. Pregnancy rates in all three breeding herds (91-96 percent) were similar, with insignificant differences between bull-groups; the effects of physical and reproductive changes on individual bull fertility were immeasurable.

Fertility-potential of yearling beef bulls is dependent on the interaction and relationships of multiple physical, reproductive and behavioral factors. In addition, the environmental and management con-

ditions imposed upon young bulls may favorably or unfavorably influence reproductive capability. Within the conditions of this study, yearling beef bulls of satisfactory fertility-potential prior to a mating season incurred marked physical and reproductive changes from the physiologic stress of mating activity, adverse environmental conditions and effects of injuries. The breeding soundness status of nearly 50 percent of the bulls declined through the mating season to standards considered less than satisfactory for expected mating performance. However, reproductive performance within the breeding herd was sustained at acceptable levels due to sufficient fertility of individual bulls through the course of the mating season and moderate mating loads. Undoubtedly, individual bulls contributed differently to the herd reproductive results due to the altered physical and reproductive characteristics and variable responses to the factors identified as affecting fertility. Further investigation will elucidate individual bull reproductive performance under the conditions imposed by this study and individual bull responses to the environmental impacts.

This article originally appeared in the journal *Theriogenology* (Vol. 64, No.3) and was reprinted in the Sept. 2005 issue of *AABP Newsletter*, published by the American Association of Bovine Practitioners. Illustration by Frank C. Murphy, courtesy of the American Angus Association.

Program helps reduce risk of disease

Biological Risk Management describes the overall process of evaluating a veterinary clinic or livestock operation based on the risk of infectious disease entry and spread. Improved infection/disease control is becoming the standard of care, not just for foreign animal disease threats but endemic diseases as well.

To address these concerns, the Center for Food Security and Public Health (CFSPH) at Iowa State University has designed resources that enable veterinarians to evaluate their clinic or their clients' animal facilities, identify opportunities for improvement, and provide management recommendations to decrease disease risk.

The Biological Risk Management (BRM) program gives veterinarians a set of reference materials and a user-friendly assessment tool that provides practical management recommendations that, once implemented, decrease the risk of disease entry and spread within an animal facility or veterinary practice.

The program is divided into beef, dairy and equine facilities and also into mobile and stationary veterinary clinics. There is also documentation and handout materials relating to disinfectants that can be applied to all sections of BRM. The program's contents are on the CFSPH website. Veterinarians must register to use the online database, but there is no cost to access and use the documents and handouts on the website at this time.

The CFSPH hopes to obtain grant funding to continue offering the BRM program free of charge.

The goal of the program is for veterinarians to assess their own practices and their clients' operations, and enter this information (anonymously) into a database, which they can then access at any time.

"Veterinarians can use the database as an idea bank for identifying opportunities for improvement to minimize the risk of infectious disease entry and spread," says Dr. Danelle Bickett-Weddle, one of the CFSPH's team that developed the program. "Often, we know there are things we can do, but we don't know where to start."

Once risk areas are identified by the program, the database then gives suggestions to minimize risk, and the same farm can be easily reassessed to monitor progress.

For more information

Visit www.cfsph.iastate.edu/BRM to learn more about the Center for Food Security and Public Health's Biological Risk Management program, and to register for the database. The database contains tutorials to help veterinarians to get started. The website should be bookmarked for training opportunities.

