



StockQuotes: Animal Health Newsletter

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Quarterly Newsletter from the Animal Health Division of the
Montana Department of Livestock

Volume 9, Issue 1

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CALENDAR OF EVENTS:

Deputy Veterinarian Training:

Jun 30, 2016, Helena
Sep 22, 2016, Helena

MVMA Summer Meeting:

Jun 26-28, Great Falls

Montana Stockgrowers Association

Jun 9-11, Great Falls

State Veterinarian Notes

The Department of Livestock (DOL) hired a new executive officer to replace Christian Mackay who left in September. Mike Honeycutt started February 1, and brings a wealth of administrative and agricultural background to the position. Prior to coming to DOL, Mike served as managing director of the National Council for Agricultural Education in Indiana. He's a strong communicator and has placed a priority on fiscal management and forging strong relationships with industry organizations and legislators. We're pleased to have Mike aboard.

Animal Health Division also welcomes Dr. Emily Kaleczyc who was hired in early March. Dr. Kaleczyc fills the vacancy in the brucellosis program created by Leslie Doely who was hired as the new Brands Division administrator. Dr. Emily Kaleczyc grew up in Vermont and attended undergrad in Maine where she met her husband, John, a Helena native. After graduating from veterinary school in Pennsylvania, she moved to Helena and worked in a private, mixed animal practice for 2 ½ years. In addition to recently joining the DOL, Dr. Kaleczyc is also working on acquiring a master's in public health from the University of Montana. Dr. Kaleczyc hit the ground running and contributed a column in this issue that references prior newsletter articles on equine health (p 5).

We've had new developments on the brucellosis issue. While we luckily avoided any positive livestock herds last fall, we received some worrisome findings from this year's elk surveillance effort. A significant number of elk tested positive just north of the Wyoming border in Carbon County. Additionally, we're becoming aware of increased overlap between positive and negative elk herds near the boundary of the Designated Surveillance Area (DSA) for brucellosis. More on this topic and the proposed bison quarantine facility in the brucellosis column (p2).

We just updated the survey of state trichomoniasis requirements to monitor progress in meeting the established standard for interstate testing, and to inform you of states' requirements prior to shipping bulls this spring. Dr. Szymanski updated the survey and compiled the current requirements for easy reference in a PDF we shared in an email update (contact me if you would like to receive this).

We're glad to report that of the 28 states with trichomoniasis regulations, the number of states that are consistent with the standards has doubled from 6 to 12. An additional five states have pending changes that will meet the standard, and five holdouts reported no intent to change current regulations. Either way, that's tremendous progress to reduce the confusion when shipping bulls interstate. If you're interested in reviewing the individual state responses, check out the survey monkey results <https://goo.gl/o9jPUa>.

I'll close with one more plug for electronic health certifications. We're seeing an increased adoption of the numerous options that are available to veterinarians (many of them at no cost). In addition to providing technical assistance and loaning out hardware, we're recognizing the quality of the data by easing the burden of interstate movement on veterinarians and their clients that use electronic documentation. See the column on eliminating the requirement for re-entry permits (p5) on Montana origin horses. ☺ mz

WHAT'S NEW:

1. Elk surveillance results (p2).
2. Re-entry import permits for users of electronic health certificates (p5).
3. Spring recap of equine health articles (p5).

Brucellosis Update

ELK CAPTURE AND SURVEILLANCE: Earlier this year, 94 elk from four populations along the eastern portion of the Absaroka Mountain range between Big Timber and Red Lodge were screened for exposure to brucellosis. Additionally, elk captured in previous years of this project were recaptured for continued monitoring and/or collar removal (Figure 1).

Six of 16 elk captured in the “Border area” (Figure 1, near WY/MT border) tested seropositive for brucellosis. These elk spend most of their time in Wyoming and were captured on public ground that does not have any cattle grazing allotments. Recent movement data suggests some communication with the group to the north (Silver Run) that tested negative in the recent capture. FWP and DOL are working with producers that may be impacted.

In addition to the live elk capture efforts, Montana Fish Wildlife and Parks (FWP), landowners and DOL have been closely monitoring some unusual elk movement across the Designated Surveillance Area (DSA) boundary. Movement across the boundary is concerning because commingling of negative elk from outside the DSA with positive elk within the DSA could cause the spread of the disease between elk groups and put larger numbers of livestock at risk. Current FWP efforts focus on reducing elk-cattle interaction and are not clear on being able to prevent elk to elk interaction for disease spread.

The two areas we have been actively monitoring include:

1. Crossing of Interstate 90 near Logan: Wardens have reported elk (currently believed to be negative) originating from the Horseshoe Hills from HD 312 moving south into the DSA. These elk have not been observed to move very far south yet. The Black's Ford elk captured in

2015 (north of Hwy 84 between Harrison and Churchill) with known exposed elk have moved north but have yet to move far enough to comingle with the elk from the Horseshoe Hills. Total of both groups have been estimated to include 200-300 animals.

2. Crossing of Hwy 287: An estimate of nearly 500 elk have been observed to move into the DSA across highway 287 southwest of Three Forks. The movement is also concerning because this herd is just a few miles from the Willow Creek group where currently-monitored, brucellosis exposed elk normally travel.

ENVIRONMENTAL ASSESSMENT ON QUARANTINE OF YELLOWSTONE BISON: The intent of the Environmental Assessment (EA) published by the National Park Service is to establish or augment tribal and public populations of bison for conservation, support the culture and nutrition of Native Americans, and reduce the number of Yellowstone bison sent to processing facilities.

Three Alternatives were evaluated. Alternative 1, take no action; Alternative 2, quarantine within the DSA within or near the Yellowstone National Park boundary; and Alternative 3, quarantine outside of Montana's DSA on Fort Peck Tribe.

DOL submitted comments and expressed concerns about a quarantine placed outside of Montana's DSA because:

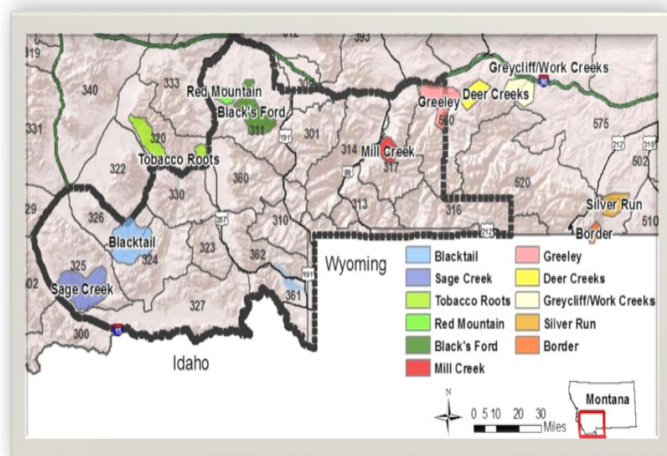
- In the worst case scenario if a transmission to area livestock did occur, there would likely be a significant delay in detection due to little to no brucellosis testing in the area.
- DOL lacks jurisdiction to enforce animal health laws on a sovereign nation
- This action would likely conflict with MCA 81-2-120 which stipulates that bison may be “transferred to qualified tribal entities...” if the bison are “certified by the state veterinarian as brucellosis-free...”.
- There is expected to be significant opposition from local residents, and other state animal health officials. ☒

By Eric Liska, DVM

FIGURE 1. Elk populations that have been screened for exposure to brucellosis as part of the Targeted Elk Brucellosis Surveillance Project during 2011-2016.

See the StockQuotes on our website for a color map (<http://liv.mt.gov/ah/newsletter/default.mcpix>).

Source: Montana Department of Fish, Wildlife & Parks.



Rabies Guidance Updated

The 2016 Compendium of Animal Rabies Prevention and Control was released in March and can be found on the National Association of State Public Health Veterinarians (NASPHV) web site here: <http://nasphv.org/Documents/NASPHVRabiesCompendium.pdf>.

This release has been much anticipated as the new document has significant changes that reflect research done at Kansas State University on the anamnestic response of animals past due for rabies vaccination. DOL will be proposing a rule change in the coming months to update our rabies management policy to reflect the new recommendations.

The 2016 Compendium makes several important changes in the management of animals exposed to a rabid or suspected rabid animal. The 2016 recommendations, along with the prior (2011) recommendations for comparison are summarized in the table below.

Additionally, the compendium now explicitly states that if a cat or dog is overdue for ANY booster vaccination (including the first annual booster vaccination), the animal can be cur-

rent with a single administration of rabies vaccine. This animal should subsequently be placed on a booster schedule consistent with the label of the vaccine used.

Additionally, DOL will be updating our animal exposure decision tree to reflect the 2016 Compendium. If you have questions on the management of exposed animals, or evaluating amnestic response to vaccination, please call our office at 406/444-2043. A prospective protocol for serologic monitoring is available here: <http://nasphv.org/Documents/NASPHVserologicMonitoring2016.pdf>.

We're pleased that these latest changes reduce duration of mandatory quarantine, and offer options for exposed, unvaccinated pets. However, these guidelines are written for known exposures; regular and appropriate rabies vaccination of pets protects for unknown exposures that may occur. Therefore, these recommendations in no way diminish the need for pet owners to maintain a current rabies vaccination status. ☒

By Tahnee Szymanski, DVM

Postexposure Management for dogs and cats:	2016 Compendium	2011 Compendium
<u>No history of vaccination</u> (non-vaccinate).	Animals should be either euthanized immediately or vaccinated within 96 hours of exposure and placed in strict isolation for 4 months.	Animals to be either euthanized immediately or placed in strict isolation for 6 months.
<u>Overdue for a booster with documentation</u> of previous vaccination.	Immediate veterinary medical care for assessment, wound cleansing, and booster vaccination. The animal should be kept under the owner's control and observed for 45 days.	Case-by-case basis based on severity of exposure, time elapsed since last vaccination, number of previous vaccinations, current health status, and local rabies epidemiologic factors.
<u>Overdue for a booster without documentation</u> of previous vaccination.	Treat as non-vaccinate OR prior to booster vaccination and with approval, serologic monitoring may be used to evaluate response to vaccination. If an adequate immune response is documented, manage animal as overdue and observe for 45 days.	Case-by-case basis (see above).

TABLE 1: Differences for postexposure management between the 2011 and 2016 compendium.

Foreign Animal Diseases

I recently attended a course on foreign animal diseases in Plum Island, NY. The course taught us to recognize, and collect samples for ten highly pathogenic diseases that are of greatest risk of reaching the U.S. You should have these in mind when the clinical picture in an animal or herd seems unusual based on symptoms, morbidity, or mortality. Contact DOL immediately to report the case.

FOOT & MOUTH DISEASE (FMD): FMD causes vesicles (often look like erosions after vesicles rupture) in cloven-hoofed animals. Why is it of concern: FMD virus is one of the most infectious viruses in the world. During the Plum Island training, a pig was inoculated with FMD, and this animal spread the disease to another pig, two calves and sheep through aerosol transmission in approximately 48 hours. Pigs will have severe lesions in the coronary bands and marked lameness, while sheep will often be subclinical. Dramatic signs of FMD will be visible in cattle, and the animals will be off feed, salivating, and are likely to have erosions on the tongue, mouth, and interdigital skin. Because of the prominent signs, cattle are considered the indicator species. FMD cannot be differentiated from other vesicular diseases on clinical presentation, so immediate notification of any vesicles in food animals is critical. Rule outs in cattle include epizootic hemorrhagic disease (EHD), and vesicular stomatitis. Rule-outs in swine include swine vesicular disease, Seneca Valley virus, vesicular stomatitis, vesicular exanthema of swine, chemical or thermal burns.

EXOTIC NEWCASTLE DISEASE (END): END is a disease of poultry. It is believed that fighting cocks illegally imported from Mexico were the source of the 2003-04 END outbreak in California, which cost \$161M to control. Why is it of concern: END is found throughout Mexico, Central and South America, and other parts of the world. Smuggling of birds across the southern border has been well documented. Frequent signs are conjunctivitis, swollen combs, and hemorrhages. END may have a neurologic variant with affected birds exhibiting paresis, torticollis, and circling prior to death. Rule-outs include: Avian influenza, fowl cholera, psittacosis, laryngotracheitis (ILT), aspergillosis, and management issues such as water deprivation.

AVIAN INFLUENZA (AI): Several outbreaks of AI have recently affected poultry operations occurred in the U.S. AI in poultry cannot be reliably differentiated from END through clinical signs. Why is it of concern: AI can be carried by asymptomatic wild waterfowl and the virus can spill over into domestic poultry. Both of Montana's AI positive cases in 2015 had exposure to waterfowl. With the pandemic of 1918 that killed over 30 million people as a backdrop, there is concern that an AI virus could mutate and become deadly to people. The public health significance is the reason why AI is the only disease in this list that we did not see demonstrated in the course. Clinical signs include swelling of head, face, and neck from subcutaneous edema, conjunctivitis, and hemorrhages. Rule-outs include: END, fowl cholera (*pasteurella*), laryngotracheitis, and management factors (water deprivation, heat, etc..)

AFRICAN HORSE SICKNESS: This is a highly fatal disease that currently occurs in Sub-Saharan Africa. Why it is of concern: Like bluetongue, this disease is caused by an *Orbivirus* genus virus, and transmitted by *culicoides* which is broadly distributed in the U.S. One would expect low morbidity with high mortality. Signs of the disease include marked edema (esp super-orbital), heart failure, and/or pulmonary edema. A classic clinical sign in the pulmonary form is persistent froth in agonal horses. Rule-outs include: Anthrax, equine infectious anemia, equine viral arteritis, piroplasmosis, purpura hemorrhagica, and monensin poisoning.

CLASSICAL SWINE FEVER (CSF): CSF, also known as hog cholera, is closely related to Bovine Viral Diarrhea (BVD) virus. Like BVD, CSF causes leukopenia and immune suppression. Why is it of concern: There is a potential for introduction into the U.S. because CSF is found along our southern border, Central and South America, Asia and parts of Europe. Affected animals may have acute disease or be chronic poor doers and succumb to secondary infections. Because the signs of CSF may be non-specific and confused with other conditions, there may be a delay in detecting an introduction resulting in greater spread. Rule-outs include: African Swine Fever, runting, abortions, and septicemia from other causes.

(Continued on page 6)

Equine Health Review

Spring is here and summer is just around the corner, so it is worth taking a look back at some of the particular equine health challenges StockQuotes has covered in the past (all of the past issues of StockQuotes are available at <http://liv.mt.gov/ah/newsletter/default.mcp.x> for you to review). Last year in March there were tips for keeping horses safe and improving awareness of biosecurity at equine events. Highlights included the importance of limiting horse-to-horse contact, variations in health risk based on available facilities, and benefits of events requiring health monitoring and documentation.

One specific disease of concern, vesicular stomatitis (VS), was covered in articles from September 2015 and June 2012. Montana has not had a case of VS since 2005, but many surrounding states have been affected the last two years. It is important to review the clinical signs and keep this disease on your radar this summer. VS can affect horses, cattle, swine, sheep, goats and llamas, and it is an important disease because in cattle it is clinically indistinguishable from Foot and Mouth Disease.

Another summertime equine disease to start thinking about now is West Nile Virus (WNV). For review see StockQuotes from September 2013 and September 2012. Montana has had multiple cases of WNV in horses and humans in the last few years. To date all of the affected horses have been unvaccinated or overdue for vaccination. Per recommendation from the American Association of Equine Practitioners (AAEP) WNV should be included in spring vaccination protocols; a hot, dry summer does not necessarily mean fewer cases of WNV.

As horses travel this summer, clients should be aware of the risks of EHV-1 (see StockQuotes March 2013). EHV-1 can cause respiratory or neurologic disease and abortions. Montana has had several cases of EHV-1, including one associated with an exposure at an event. We recommend practicing good biosecurity and taking twice daily rectal temperatures of any horses you think might have been exposed or at risk. Testing involves collecting a nasal swab and blood sample. ☒

By Emily Kaleczyc, VMD

Electronic Health Certification

ELECTRONIC HEALTH CERTIFICATES AND RE-ENTRY PERMITS: In 2014, Montana veterinarians issued 1,525 electronic certificates of veterinary inspection (CVI) for 96,404 head of cattle. In 2015, that number doubled to 3,148 electronic certificates for 252,358 head.

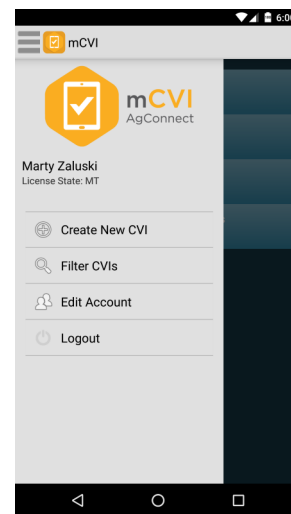
We would like to see these numbers continue to grow. We assume that the increase in use of electronic CVIs corresponds with a decrease in the number of paper CVIs issued but are unable to make this determination with certainty because of the limitations of paper documentation. Examples of limitations to animal movement data reporting includes:

- DOL does not enter animal movement data for all paper CVIs that our office receives due to staff and time constraints.
- We do not receive animal movement data for animals moved internationally from Montana.

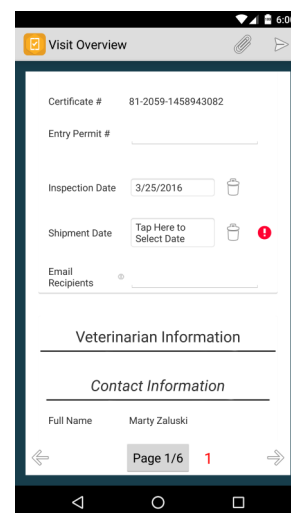
The ability to generate accurate animal movement data is just one benefit of electronic CVIs. Another benefit is the timeliness of how DOL receives this data. For most electronic formats, DOL receives the CVI data in near-real time, which provides a similar function as import permits. Historically, import permits served as a real-time check on animal movements knowing that paper certificates wouldn't arrive in house until well after the actual animals had moved.

The rapid receipt of electronic CVI data makes the need for a phoned-in import permit less pressing and therefore, as of April 1, 2016, DOL will no longer require re-entry permits on MT origin horses moving on electronic CVIs. Acceptable formats of electronic CVIs include the following: PDF eCVI, mCVI app for iOS and Android mobile devices, VSPS, and Global-VetLink. In 2015, DOL issued 1838 re-entry permits for horses, accounting for about 15% of all equine permits issued. We hope to significantly reduce this number for 2016. ☒

By Tahnee Szymanski, DVM



FIGURES 2 and 3: Screen captures of the mobile CVI app on an Android smartphone



Foreign Animal Diseases (cont'd)

AFRICAN SWINE FEVER (ASF): ASF has been expanding through Eastern Europe over the last several years. Why is it of concern: The virus has spread beyond its traditional range and remains viable for extended periods in undercooked pork products. If introduced into the U.S., the disease can pose a risk to commercial swine. Rule-outs include: PRRS, erysipelas, salmonellosis.

SHEEP AND GOAT POX: While actually caused by separate viruses, the clinical signs are similar in both species. Why is it of concern: The virus is found throughout much of the world including southern Europe and survives in wool for up to three months. Naive sheep and goats may have a morbidity as high as 90% and mortality may approach 100% in young animals. Significantly, animals often have broadly disseminated pox lesions involving skin, mucosal and serosal surfaces, and parenchyma of internal organs. Rule-outs include: Orf, insect bites, bluetongue, photosensitization, mange.

RABBIT HEMORRHAGIC FEVER: This calicivirus was intentionally introduced into Australia and New Zealand to reduce the feral rabbit population. Why is it of concern: It is highly resistant to environmental conditions and has been spread through cages and other fomites. This virus can cause up to 90% mortality in laboratory and show rabbits. Sudden death can occur with few clinical signs. Rule outs include: Pasteurellosis, poisoning, and heat exhaustion.

The duty to report contagious diseases is required when persons (including the owner or custodian) has "reason to suspect the existence of a dangerous, infectious, contagious, or communicable disease in livestock...", per Montana Code Annotated 81-2-107. You can contact our office 24/7 at 406/444-2976, and USDA at 406/449-2220. ☒ mz

Special thanks to Fawzi Mohamed, DVM (USDA -APHIS-VS-FADDL) and William White, DVM (DHS) for technical review.

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