STOCK QUOTES

Animal Health Newsletter

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Quarterly Newsletter from the Animal Health Bureau of the Montana Department of Livestock (MDOL)

STATE VETERINARIAN NOTES

Tahnee Szymanski, DVM

Consistent with the volume of cattle movement and handling this time of year, fall brings an uptick in activity for our office, both administratively and in the field.

Highly pathogenic avian influenza (HPAI) continues to be present in our nation's dairy herds. The total number of confirmed detections is 239 premises in 14 states. The most recent detections have primarily been in California with 24 new herds in the most recent 7-day reporting period and 56 total herds detected. California also had a detection of HPAI in a commercial turkey flock. While the detection in California poultry was believed to be due to lateral transmission, the epidemiological data for the past two years show an increase in infections in domestic poultry starting in September as temperatures cool and the fall migration gets underway. While there is a cautious optimism that the risk from wild birds is decreasing, poultry producers should maintain biosecurity efforts through the fall migration, including housing birds indoors or away from wild waterfowl to the extent possible.

We are one month away from implementation of the final rule on animal disease traceability (ADT). The population of animals required to be officially identified will not change, but when animals are required to be identified, the identification (ID) must be both visually and electronically readable. Montana's historical tag use far exceeds the allocation of no-cost Radio Frequency Identification (RFID) tags Montana receives. We are continuing to work with United States Department of Agriculture (USDA) on solutions to Montana tag use needs to minimize the financial impact to livestock producers. In addition to the tags referenced in the ADT article on page four, Montana has been successful in procuring 30,000 orange RFID tags from another state that does not use their entire allocation. Future tag distributions will be prioritized to livestock markets and to our Designated Surveillance Area (DSA) and mandatory vaccination counties. The remaining roughly 1/3 of tags will be available to anyone for use in cattle for vaccination, other official program disease work, or interstate movement. Our one ask of veterinarians is to limit the use of tags in animals that are going direct to slaughter.

The Montana Johne's herd certification program is now in its sixth year. We continue to encourage producers to consider some level of Johne's surveillance, especially for herds that sell breeding cattle. The financial investment to conduct surveillance can be substantial, so we are always happy to have discussions on tailored approaches (see page three) to meet the needs of your clients. To that end, we will also be working to revise the program standards for herds participating in the certification program to allow some eventual decrease in the required level of testing.

Finally, a newsletter or a season rarely passes in Montana without mention of brucellosis. Through our annual compliance evaluation, we continue to demonstrate a high level of compliance (see page two) with our program regulations. As we share these success stories with our trading partners, we have successfully prevented states of destination from establishing their own import requirements for cattle from Montana or from our DSA specifically. We believe this simplifies the process for exporting cattle. It is important to note however, if a state of destination has no brucellosis specific import requirements, movements must still comply with Montana's program requirements. A primary goal of our program is to prevent the movement of an infected animal out of our DSA. Thank you for all the work you do on our state's regulatory programs. Our successes reflect the work you do in your day-to-day practice. ¤

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Montana Brucellosis Compliance

Jacqueline Cima, Brucellosis Compliance Specialist

Per Montana Administrative Rule, sexually intact cattle over 12 months of age are required to be tested before leaving the Designated Surveillance Area (DSA) or changing ownership. To ensure compliance with these regulations and affirm the strength of Montana's brucellosis program, Department of Livestock (DOL) conducts periodic compliance reviews. This requires collation of data from several sources and highlights the need for the collection of accurate and complete data for animal movements and testing.

Compliance for each of the five DSA-area markets begins by identifying which sales include DSA animals and therefore may require a test. Market sales are recorded by DOL market staff. Brucellosis tests conducted at markets are tested at the Montana Veterinary Diagnostic Laboratory (MVDL). Brucellosis test results are matched up to sales. Overall compliance of the market is determined by the number of DSA animals that should have been tested compared to the number that were tested. This evaluation is conducted monthly and typically shows a 50% compliance rate.

DOL believes the actual compliance with DSA regulations is substantially higher. Many producers seasonally use the DSA and therefore their cattle do not always require a test despite being identified as DSA cattle. Additionally, many animals are checked into the market with documentation of a recent herd test. Efforts to improve the accuracy of this assessment through more complete data capture are ongoing. For example, if market staff record accession numbers for DSA cattle that come in with a recent test or market veterinarians send an explanation of why certain animals were not tested (example: cattle that are too large to fit in the chute), market compliance results would be greatly increased.

Compliance for DSA animals that move across county lines or are sold privately is determined in a similar manner but requires the collation of data from more sources. Field staff send their brand inspections to DOL where they are hand entered by Brands Enforcement staff. Each inspection in a DSA county is then evaluated to determine if 1) the animals originated in the DSA, 2) if a test was required based on the animals' age and sex, and 3) if a required test was completed. The originating county and brand owner is often enough to quickly determine if an animal is owned by a DSA producer or was in the DSA when the inspection was performed. Complicating this process are animals tested under a different name than the brand inspection (i.e. tested under a ranch name but the brand inspection is under a Bill of Sale signer's name), varying time frames for when a test was completed (i.e. animals moved out of the DSA in January could have been tested as early as August of the previous year) and standing testing exemptions (i.e. testing upon return to the home ranch after seasonally grazing in the DSA). Some pinch points that DOL staff is working to resolve include lack of detail captured on brand inspections and data entry of inspections in a more timely and efficient manner.

	FY21- Beaverhead County	FY22- Madison County	FY23 Gallatin County	FY23 Park County
Number of Inspections Evaluated	490	615	926	220
Total Number of Cattle	16,874	22,029	11,805	5,069
Compliant Inspections (% Total Inspections)	441 (90%)	568 (92%)		
Total Number of Compliance Cattle	14,599	19,370		

Figure 1. Montana Brucellosis Compliance FY21-FY23. Source: DOL Staff

The high rate of compliance with DOL's brucellosis program reflects the hard work and commitment of our DSA producers and veterinarians. The strength of our program benefits the entire livestock industry and allows Montana cattle to be marketed with minimal to no additional requirements from our trading partners. Thank you for your role in this success. ¤

Johne's Testing Strategies

Erika Schwarz, DVM

Johne's disease (also known as "paratuberculosis") is a chronic bacterial infection that affects the ruminant GI tract, caused by *Mycobacterium avium* subsp. *paratuberculosis* (MAP). An often-frustrating disease to diagnose, Johne's testing strategies require consideration of clinical infection stage, assay limitations, and overall producer goals. Available assays for screening and diagnosing Johne's disease include fecal culture, fecal PCR, and serology (e.g., ELISA). Fecal culture can take 12-16 weeks and has been largely replaced by PCR in most circumstances.

At an individual animal level, diagnosing an infected ruminant depends on the clinical stage of disease progression. Stage I animals are those with silent, subclinical infection. Usually these animals are young (<2 years old) and may not have sufficient antibodies for detection. These animals will not exhibit clinical signs and will not readily shed bacteria in their feces. Commercially available diagnostic tests are typically unsuccessful at diagnosing Johne's disease in these animals, which is why it is usually not recommended to test young calves. Stage II animals are subclinical shedders, usually heifers and older animals that appear clinically normal, but shed MAP bacteria in high enough levels in their feces to spread disease and contaminate the environment. While serology results can be variable in diagnosing these animals, PCR may be a rapid, effective method to screen for silent shedders. Unfortunately, serial PCR tests may be necessary, as these animals may intermittently shed and can be missed on a single PCR test. Stage III includes animals with clinical signs of Johne's disease (acute or intermittent diarrhea, weight loss, decreased milk production, etc.). These animals will shed large amounts of MAP bacteria in their feces and will usually be positive on both PCR and serological tests. Stage IV is the terminal stage of Johne's disease, when animals become emaciated and may have systemic signs of infection (e.g., PLE, bottle jaw, etc.) in addition to chronic diarrhea. Disseminated infection is common at this stage, and animals will often be positive on both serology and PCR tests. A test and cull are recommended, although typically for every animal in Stage IV Johne's infection, another 15-25 animals in the herd are likely infected at a lower stage of the disease.

If herd screening is the goal, history is an important consideration. In most herds with previously confirmed positive animals, where management is the priority rather than eradication of disease, periodic whole-herd serology testing or testing of a defined subset can be effective tools. Positive animals can be monitored and removed prior to developing late-stage disease, if immediate culling is not economically practical, which may reduce the overall burden to the producer. Management decisions should also be influenced by herd type. For purebred and other herds that sell replacement breeding animals, a more aggressive approach to reducing the risk of disease spread is recommended. In herds with no history of clinical disease or confirmed infection, periodic serology testing is also an effective method for screening a closed herd, especially if animals commingle with wildlife. In herds with an unknown history, a combination of whole-herd, pooled fecal PCR (to identify silent shedders) and individual animal serology (to identify likely infected animals) is the most aggressive strategy. Regardless of herd status, testing new animals prior to introduction is critical, and combined testing with fecal PCR and serology would be recommended.

The Montana Veterinary Diagnostic Laboratory (MVDL) is a USDA-approved Johne's testing laboratory, offering both ELISA and fecal PCR (individual & pooled). For questions regarding diagnostic testing, please call the MVDL at 406-994-4885. For questions related to Johne's herd management, please call the Animal Health Bureau at 406-444-2976. ¤

Veterinary Medicine Loan Repayment Program (VMLRP) Shortage Area Nominations

Heidi Hildahl, DVM, PhD

It is the time of year again for the Department of Livestock (DOL) to submit nominations for counties in Montana that have significant food animal veterinary shortages for the United States Department of Livestock (USDA) Veterinary Loan Repayment Program (VMLRP). DOL has until November 12, 2024, to submit the six allotted nominations. If your practice is in an area of the state with a perceived shortage in food animal veterinarians and you have new or seasoned veterinarians coming to your practice that will practice food animal medicine for at least 40% of the time, DOL would like to hear from you! Allowing veterinarians the option of applying to the VMLRP program is an excellent way to recruit and retain staff. For more information about the VMLRP program, go to the website here. Shortage areas will be posted on the VMLRP website in February 2025. Instructional webinars will be available in March 2025 and the application deadline will be in April 2025. Please call or email DOL Program Veterinarian Supervisor, Dr. Heidi Hildahl, with nomination requests at heidi.hildahl@mt.gov or 406-444-5214. ¤

Animal Disease Traceability (ADT) Rule and Tag Distribution Update

Tahnee Szymanski, DVM

As previously communicated, the effective date for the final rule on traceability, November 5, 2024, is quickly approaching with an insufficient number of no-cost radio-frequency identification (RFID) tags available to meet Montana's needs. Montana's allocation of no cost tags for the current federal fiscal year has been clarified to be 193,000 tags. State's allocations are based upon their cattle inventory. The contraction in Montana's cattle numbers over the last few years resulted in the decreased tag allocation for the current year. Of those 193,000 tags, 166,000 have been allocated. The remaining 27,000 will be distributed for use in animals after the November 5, 2024, implementation date.

Without an approved federal budget, we expect that a no-cost tag allocation will not be available for fiscal year 25 (beginning October 1, 2024) until well after the implementation date. In the hope of having no-cost tags available for veterinarians before November 5, 2024, Montana has formally requested an additional 100,000 tags from the United States Department of Agriculture (USDA). Department of Livestock (DOL) will find out additional information about potential reallocation of tags in the coming weeks. Our intent is to prioritize tag distribution in three pools (livestock markets, required brucellosis testing and vaccination, and other elective use of official identification).

An important note regarding the no-cost RFID tags from United States Department of Agriculture (USDA), is that tag allocations are intended for animals covered by the federal animal disease traceability (ADT) rule, meaning those classes of cattle and domestic bison that are required to be officially identified for interstate movement. Montana's tag allocation does not reflect or account for our state's brucellosis program and the percentage of calves that are officially calfhood vaccinated each year. Unless USDA can identify a solution for these cases, industry will bear some of the expense associated with the transition to electronic identification.

Requests for no-cost RFID tags can be submitted to USDA Montana at 406-437-9457 or Yvette.k.leidorf@usda.gov. Please be aware that Montana will be prioritizing tag distribution to get as many tags as possible into the ears of cattle that are required to be officially identified (interstate movement, brucellosis testing, and brucellosis vaccination). ¤

Recent Changes to Administrative Rules of Montana (ARM)

Tahnee Szymanski, DVM

Following a public rulemaking process, several changes to Animal Health Bureau (AHB) Administrative Rules of Montana (ARM) took effect on September 20, 2024. These include changes to:

Indemnity: Following the passage of House Bill 15 during the 2023 legislative session, Department of Livestock (DOL) has begun depositing money in a state indemnity fund for animals depopulated due to disease. Indemnity is available for cattle, domestic bison, sheep, goats, swine, alternative livestock, and poultry. Diseases for which animals are eligible for indemnity include foreign animal diseases (FADs) as classified by the United States Department of Agriculture (USDA) (i.e., bovine tuberculosis, brucellosis, and chronic wasting disease). DOL has already used the fund to pay for several brucellosis reactors that were removed for a culture attempt. A new administrative rule was drafted to provide sideboards on the indemnity process.

Quarantinable Diseases: ARM 32.3.104 defines the list of reportable diseases in Montana and specifies for which diseases DOL has quarantine authority. The rule was amended to add quarantine authority for bluetongue, strangles, and *Brucella canis (B. canis)*. This change does not mean that all confirmed cases of these disease will be quarantined but does give DOL the ability to use quarantine to prevent further disease spread. Potential examples where a quarantine would be applied include confirmation of strangles in a large boarding facility with a large volume of movement in and out, or the diagnosis of *B. canis* in a breeding operation with multiple sexually intact animals.

Requirements for Herds Quarantined Due to Disease: ARM 32.3.108 regarding the quarantine of animals in an affected herd was revised to facilitate herd reconciliation. Herd reconciliation requires that testing has been appropriately conducted on all test eligible animals within the herd.

Several other sections of ARM were revised to provide clarification or update existing regulations. The full adoption notice can be found on our website. As a reminder, the public rulemaking process provides an opportunity for you to comment on proposed changes. If you are interested in receiving notice of proposed changes, you can request to be on DOL's interested parties list by contacting Lindsey Simon via email at lindsey.simon3@mt.gov. ¤

MONTANA SECURE BEEF SUPPLY PLANNING PART 3: LINE OF SEPARATION

Merry Michalski, DVM

Now that you've established a Biosecurity Manager, you should identify a Line of Separation (LOS) for your premises and create a premises map. The LOS is a clearly identified boundary around, or within, the operation to separate off-site from on-site movements of vehicles, items, people and animals. The purpose of the LOS is to limit movement of viruses into areas where susceptible animals can be exposed directly (animal contact) and indirectly (contaminated vehicles, footwear, equipment, run off). In an outbreak, animals, people, or items only cross the LOS through clearly marked access points following appropriate biosecurity measures.

Figure 2. Secure Beef Supply Source: DOL Staff

Multiple options exist for operations with cattle on pasture to establish the LOS and they are highly dependent upon the layout of the operation, traffic patterns, inputs and outputs. The Biosecurity Manager's operational knowledge of the operation can create a well-placed LOS. The LOS boundaries should be clearly identified (road, posts, fences, flags, spray paint, ropes, etc.) and visible to individuals working on the operation, visitors, and service or delivery personnel so that no one crosses the LOS without following the proper biosecurity measures. Vehicles and individuals remaining within the LOS will avoid areas potentially contaminated with FMD virus.

Step 3: Create a Premises Map

The biosecurity plan should include a map of the operation indicating the following points:

- Line of Separation (LOS)
- LOS Access Point(s) for animal, people, and vehicle entry
- Cleaning and Disinfection (C&D) station(s)
- Designated parking area
- Carcass movement pathways and disposal location(s)

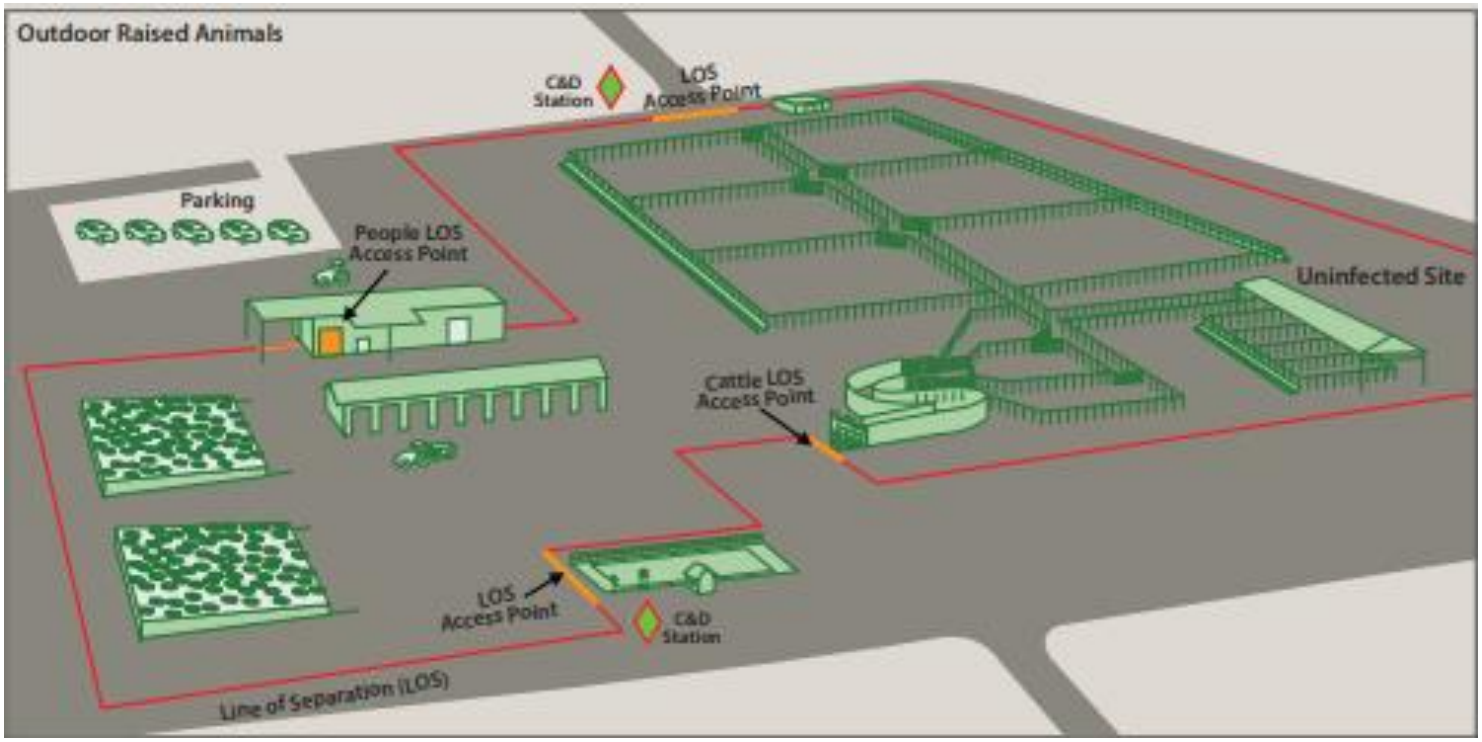

Figure 3. Example Map of Operation for SBS Biosecurity Plan. Source: DOL Staff

TULAREMIA

Erika Schwarz, DVM

It's been an active summer for tularemia cases. Most often diagnosed in domestic feline patients and wild lagomorphs, tularemia or "rabbit fever" is caused by *Francisella tularensis*, a small, Gram-negative bacteria capable of causing zoonotic infections with a very small infective dose. Disease is typically transmitted via ingestion of or interaction with infected wildlife reservoir species, exposure to a contaminated environment or fomites, or through tick bites. In Montana, several species of ticks are known vectors of *F. tularensis*, including the Rocky Mountain wood tick (*Dermacentor andersoni*), the American dog tick (*Dermacentor variabilis*), and the brown dog tick (*Rhipicephalus sanguineus*). Deer fly (*Chrysops spp.*) bites may also transmit bacteria.

Infected cats will typically present with acute clinical signs of fever, depression, lymphadenomegaly, and oral ulcerations. Occasionally, clinical signs in cats may resemble neurological disease, which can be difficult to distinguish from rabies or Highly Pathogenic Avian Influenza (HPAI). Canine patients are less susceptible to clinical disease, but may present with skin abscesses, anorexia, and fever. Ante-mortem diagnosis can be established by either RT-PCR or culture; acceptable specimens include swabs from gross lesions (e.g., oral ulcers, pharyngeal or tonsillar swabs from cats, skin abscesses from dogs) or biopsies/aspirates from swollen lymph nodes. If diagnosed early, tularemia is usually responsive to aggressive antibiotics and supportive therapy, but early intervention is critical to success. Animals undergoing treatment should be isolated for the first 72 hours following antibiotic administration and personal protective equipment for caregivers is recommended. In cases of peracute disease and death, multifocal, discrete, (often tan) nodular lesions may be noted on the liver and/or spleen at necropsy. Because of the very low infective dose in people, in-clinic necropsy of patients suspected of having tularemia is not recommended.

Francisella tularensis is a federal Select Agent and positive test results are notifiable to Department of Livestock (DOL). The Montana Veterinary Diagnostic Laboratory (MVDL) performs necropsy and tissue collection, as well as *F. tularensis* rule-out culture on ante- and post-mortem samples. If you suspect tularemia in a clinical patient, please call MVDL at 406-994-4885 prior to sending in samples for necropsy or testing. ¤

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