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

As we enter the warm months of summer, Highly Pathogenic Avian Influenza (HPAI) cases continue a downward trend, and the 2025 legislative session is behind us.

As of June 11, there have been eight detections nationally in the previous 30 days. Unfortunately, the total number of birds affected in those eight detections exceeds five million as several large laying premises in Arizona broke with the D1.1 variant. Available epidemiological information and preliminary whole genome sequencing results (WGS) indicate that the cases in Arizona were likely due to lateral spread of the virus from affected dairies in the region. The Department's advisory regarding enhanced biosecurity for poultry operations, including housing birds indoors to the extent possible, expires on Jul 30. Currently, we do not intend to extend the advisory, however, until the fall migration is underway, we will not know if the risk of wild bird introductions has substantially decreased. Additionally, the continued presence of the virus in dairy cattle remains a challenge for the poultry industry and is a driver for ongoing conversations regarding the potential use of HPAI vaccines in either poultry or cattle. Currently there is no plan to employ vaccination in either species due to opposition voicing concerns about potential impacts to trade.

The 2025 legislative session was quiet for the Animal Health and Food Safety Division, with a relatively small number of bills touching our work. The Department was successful with our legislative asks, including transitioning one full time veterinarian from federal funding to state per capita funding. This transition will allow the Department to ensure continuity in the face of changing federal budgets and will allow more federal dollars for brucellosis management. We also received financial support for expansion of our state meat inspection program and for the completion of the new veterinary diagnostic laboratory in Bozeman. We are slated to begin the transition to the new facility in early 2026.

At the May Board of Livestock meeting, the Board voted to use $240,000 of year end budget authority for a one-time purchase of orange RFID tags. Additionally, the most recent update from United States Department of Agriculture (USDA) suggests that they expect to order additional no-cost RFID tags for FY25. Should this come to fruition, Montana will receive an additional allocation beyond the 120,000 already received. Look for additional information on tag allocations for both the no-cost and purchased tags in the coming months. If you have not received tags for FY25 and would like to make a request, please call (406) 444-2976. Veterinarians are eligible to receive half of the number of animals vaccinated in 2024, with an allowance for veterinarians new to practice in Montana.

In the coming weeks, you will see openings for two veterinary positions with the Department. Dr. Brad DeGroot who has been at the helm of our brucellosis program is resigning this summer to tend to his health and Dr. Heidi Hildahl who worked on HPAI, and animal disease traceability (ADT) is taking her veterinary career a different direction. Our best wishes go out to both. If you would like more information about the upcoming openings, they will be posted on the state website, but I am also happy to answer questions directly. ¤

INSIDE THIS ISSUE

NEW WORLD SCREWWORM: THE RESURGENCE OF AN OLD ADVERSARY

Heidi Hildahl, DVM, PhD

New World Screwworm (NWS), scientific name *Cochliomyia hominivorax,* is a fly that appears like a common blowfly but behaves very differently when reproducing. Most blowflies lay eggs on decomposing flesh where hatched larva feed on decaying matter, whereas NWS flies lay eggs in or near open wounds of animals where hatched larvae (Figure 1) burrow into the wound to feed on living flesh (myiasis). NWS larvae are distinguished by their tapered anterior, dark mandibles, and darkly pigmented internal tracheal tubes that extend to the truncated posterior end.

When laid next to a wound, NWS eggs hatch after 12-24 hours and larvae feed for approximately 7 days before dropping off to pupate on the ground. Mature larvae can be as long as 17 mm. Dehorning, castration, insect bites and newborn navels are all wounds commonly associated with NWS myiasis. Infestation of feeding larvae is very painful with sequelae of secondary infection and possible death if left untreated. These flies infest livestock, pets, wildlife, birds, and humans; however, the livestock industry is most adversely impacted with economic losses from weight loss, hide damage, and death loss.

Figure1: NWS larvae.
Source: USDA-ARS.

NWS is currently endemic in South America and the Caribbean; however, this species of fly has previously been a major problem throughout the southern United States. In the 1950s, the first experiments using sterile NWS flies were conducted. The sterile insect technique (SIT) uses gamma radiation on NWS pupae to create sterile male flies. The sterile flies are then dispersed into the existing population to break the reproduction cycle. The SIT eradication program continued until the United States was declared free of self-sustaining screwworm populations in 1966. From 1966 until roughly 2001, NWS was gradually pushed as far south as the Darian Gap between Panama and Columbia.

In November 2024, the United States Department of Agriculture (USDA) was notified about an NWS detection in Mexico. Flies had breached the established boundary at the Darian Gap, moved through Central American and into Mexico. The illegal movement of cattle in the region has been a contributing factor. In May 2025, NWS had spread as far north as Veracruz, Mexico with detections surpassing 1,600. In response, live animal imports from Mexico have been suspended indefinitely until the USDA is confident that the spread of NWS is controlled. The suspension will be reviewed every 30 days.

Currently, a joint task force comprised of United States and Mexican specialists is conducting up to 44 flights a week, releasing 100 million sterile flies, which is far below the goal of 200 million per week, the previously established number needed to break the NWS reproduction cycle. The USDA announced in May 2025 that it is investing $21 million to renovate an existing fruit fly production facility in Metapa, Mexico to further the long-term goal of eradicating NWS. The renewed cooperation between the United States and Mexico brings more sterile flies, better access to airports for release of sterile flies, more personnel to release sterile flies and more personnel to conduct surveillance.

Prevention of myiasis includes the use of EPA-licensed pesticides, swift treatment of wounds, and pasture management. NWS is reportable to both state and federal animal health entities. The Montana Department of Livestock (MDOL) is currently working on a mitigation plan including additional animal import requirements in the event of a detection of NWS in the United States. Meanwhile, if you see suspicious myiasis on an animal, call MDOL at 406-444-2976 to report. Suspect flies and larvae can be collected and placed in 70% isopropyl alcohol. Photos are encouraged along with specimens to aid in rapid detection. For more information on NWS, refer to the USDA publication, Disease Response Strategy: NWS Myiasis or the USDA Veterinary Accreditation module on NWS. ¤

EMERGENCY RESPONSE PLANNING PART 2: PREPARATION

Brenee Peterson, DVM

Emergencies and disasters are complex and can have cascading effects on both human and animal ecosystems. Preparation can help decrease the impact and is considered the second phase of emergency preparedness. This phase involves preparing for disasters by setting up plans, training personnel, and acquiring the necessary resources prior to an event. Biosecurity plans play an important role in the preparedness phase as they help prevent the introduction of disease and protect animal and human health. Biosecurity plans help producers develop a risk assessment of their current facility thus establishing protocols for humans, animals, and vehicles that enter their facility. Common resources for developing biosecurity plans include the secure food supply websites (Secure Beef Supply, Secure Pork Supply, etc.), The Center for Food Security and Public Health website and the Beef Quality Assurance Biosecurity web page also have many resources. Equine specific resources through the Equine Disease Communication Center (EDCC) can be found on their website.

Once a biosecurity plan is developed it is just as important to train your staff in a variety of ways. Training can be in the form of workshops and seminars or tabletop exercises and active drills. The variety of learning opportunities raises the staff awareness of the different types of crises that may be encountered during a disaster and how to effectively respond.

The last component of preparedness includes calculating the basic resources needed in a disaster and to ensure access to these resources. This includes forming relationships with local organizations. Memorandums of Understanding (MOU's) or mutual aid agreements can be and should be developed prior to a disaster. Both arrangements define the responsibilities and between organizations during a disaster.

Disaster preparedness is a dynamic and ever evolving task that requires revising plans as new technologies, disease or disaster threats change, and lessons are learned. As you and your producers start to prepare for disasters there are many resources available. Other sources to reference in developing a disaster plan include The Pork Checkoff website, and the best practices documents found on the NASAEEP.org website. ¤

FOOT AND MOUTH DISEASE (FMD) IN EUROPE

Tahnee Szymanski, DVM

So far in 2025, Foot and Mouth Disease (FMD) has been diagnosed in three countries that have not seen FMD cases in several decades, Germany, Hungary, and Slovakia. While these countries are far removed from North America, these detections still merit review.

The detection of FMD in Germany occurred on January 9, the first detection of FMD in Germany since 1988. The detection, in a herd of water buffalo, was a result of increased mortality. Germany's response included:

- Stop movement – An immediate stand still was imposed for five days.
- Stamping out - depopulation of susceptible livestock within three kilometers of the affected herd.
- Surveillance and testing – all animals within one kilometer of the affected herd were tested for FMD and all animals within ten kilometers of the affected herd were examined for clinical signs consistent with FMD.
- Movement tracing – all susceptible species that had moved from the restricted zone for two incubation periods prior to the detection were traced and tested for FMD.

As a result, Germany was able to regain FMD-free status (without vaccination) on April 14, 2025, just over three months from the initial detection.

The detection of FMD in Hungary occurred in March and was the first detection since 1973. The disease has since spread to multiple premises including across the border with Slovakia. Transmission has been attributed to both airborne spread and the movement of fomites (humans, vehicles, feed, etc.). Response in both countries is similar to activities taken in Germany, with the addition of emergency suppressive vaccination in Slovakia.

While the risk of FMD introduction into the United States is low, it is important to note that early detection is critical in limiting the impact of a disease outbreak. Slovakia continues to have on-going outbreaks and will likely not reach FMD free status for some time. Because the pathways for these introductions are not often identified and can occur independent of the movement of livestock, it is important that we remain vigilant for any compatible clinical signs. ¤

TICKS AND TICK-BORNE ILLNESS

Heidi Hildahl, DVM, PhD

You may have seen the recent announcement by Department of Public Health and Human Services (DPHHS) regarding the detection of blacklegged ticks within two Montana counties. Several diseases of importance can be spread by ticks and as we head into the warmer months of summer, the Montana Department of Livestock (MDOL) wants veterinarians to be aware of these new detections. It is important to consider how a new tick on the landscape may impact disease spread and contribute to surveillance by reporting ticks that appear different than we expect to see.

Reportable Tick Species: *Rhipicephalus (Boophilus) microplus* (Figure 2) and *Rhipicephalus (Boophilus) annulatus*, or cattle fever ticks, have been eradicated in the United States except for sporadic detections at the Texas/Mexican border. They are characterized by their reddish-brown color and darker brown plain scutum. They can carry *Babesia spp.* (bovine babesiosis), *Ehrlichia ruminantium* (heartwater), *Anaplasma marginale* (bovine anaplasmosis), and *Theileria equi* (equine piroplasmosis).

Figure 2: Cattle fever tick. Source: MDOL Staff

Haemaphysalis longicornis, or the Asian longhorned tick (Figure 3) is characterized by its long, outward-pointing palps and the lack of any markings. They were first detected in 2017 in New Jersey and have since established populations as far west as Missouri. The longhorned tick parasitizes livestock (particularly cattle) in large numbers that can lead to severe anemia and death in young animals. The tick serves as a vector for several cattle diseases including babesiosis, anaplasmosis, and theileriosis.

Figure 3: Asian longhorned tick. Source: MDOL Staff

Ixodes scapularis, or the blacklegged (deer) tick (Figure 4), is characterized by a dark scutum that looks like a spot behind the head and long mouth parts. Normally found in Midwest states, this species of tick was first detected in Dawson County, Montana in October 2023. The tick can carry *Borrelia burgdorferi* (Lyme disease) which can cause illness in dogs, cats, and horses, *Anaplasma marginale* (bovine anaplasmosis) and *Anaplasma phagocytophilum* (equine granulocytic anaplasmosis). While not reportable to MDOL, because of the animal and public health implications associated with detection, additional information about the distribution of the blacklegged tick in Montana is of value.

Figure 4: Blacklegged tick. Source: MDOL Staff

Reportable Tick-Borne Diseases: Babesiosis is an immediate federal and state reportable and quarantinable disease caused by *Babesia spp*. The disease is currently confined to the Texas and Mexico permanent quarantine area. The organism primarily parasitizes red blood cells and causes considerable economic loss in cattle production due to weight loss and decreased milk production.

Heartwater is a foreign animal disease (FAD) making it an immediate federal and state reportable and quarantinable disease. The causative agent, *Ehrlichia ruminantium*, invades endothelial cells causing vascular leakage and fluid build-up around the heart and damage to the brain.

Equine piroplasmosis is an immediate federal and state reportable and quarantinable disease and is currently reported only in the Southern United States. The disease affects horses, donkeys, mules, and zebras. The causative agents are *Theileria equi* and *Babesia caballi,* both parasitizing red blood cells.

Bovine theileriosis is an immediate reportable disease in the state of Montana that results in a quarantine. Different species of *Theileria* can infect cattle, sheep, and horses with varying levels of pathogenicity. For cattle, the most pathogenic organism is *Theileria orientalis* Ikeda genotype which parasitizes red blood cells and white blood cells.

Additionally, anaplasmosis, tularemia, and Q-fever can be spread through tick bites. Since many of the tick-borne diseases are difficult to treat and often result in a carrier state, prevention is preferred.

If you find a foreign looking tick, the tick can be stored in an alcohol filled specimen vile with the date and location of where the tick was found. For assistance with tick identification or sample submission, contact the Montana Veterinary Diagnostic Laboratory (MVDL) at 406-994-4885 or mvdl@mt.gov. ¤

TARGETED ELK BRUCELLOSIS SURVEILLANCE

Tahnee Szymanski, DVM

The Montana Department of Livestock (MDOL) has been collaborating with Montana Fish Wildlife and Parks (FWP) on the targeted elk brucellosis surveillance project for 14 years. The information collected from this project includes the distribution of brucellosis exposure in elk populations and the movement of elk populations in and around the Designated Surveillance Area (DSA).

The foundational goals of Montana's brucellosis program are two-fold:

- Determine the geographic distribution of seropositive wildlife on the landscape.
- Conduct surveillance on livestock populations that may be exposed to seropositive wildlife.

If Montana is successful at these two tasks, we will prevent the export of a brucellosis-infected animal out of our DSA. If trading partner states have a high level of confidence in our ability to do these tasks successfully, the barriers to the movement of Montana livestock will be minimized.

The targeted elk brucellosis surveillance project helps with the execution of these goals and is a critical component of the success of the program. If we want to minimize the risk of disease transmission between wildlife and livestock, a bonus goal is the spatial and temporal separation of these populations on the landscape.

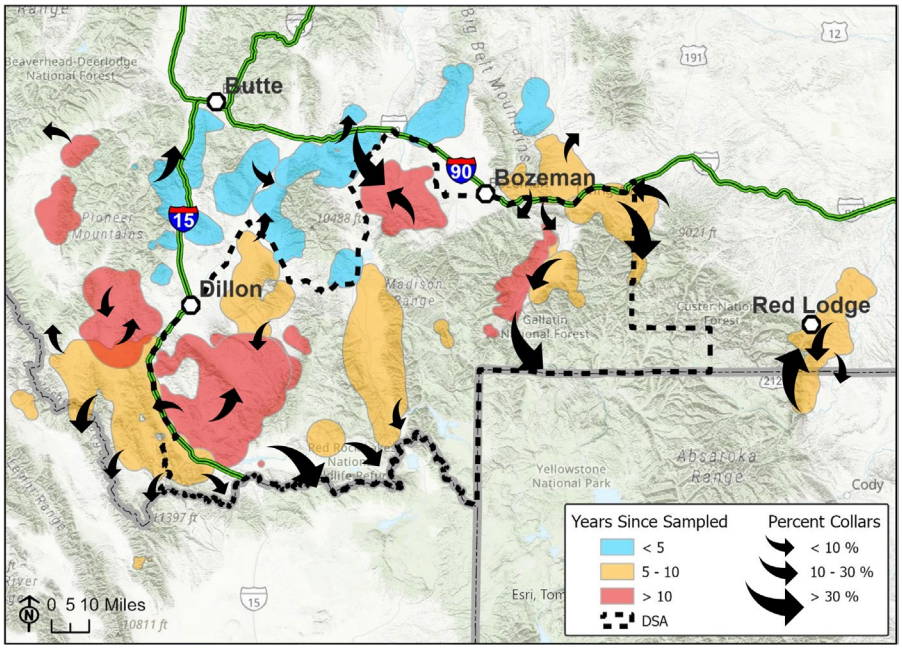

Figure 5: Targeted Elk Surveillance. Source: MDOL & FWP

Montana has reached what feels like a point of inflection in our brucellosis surveillance program. We have five years of surveillance with no new detections of seropositive elk outside of the DSA boundary and a robust surveillance history along the perimeter of the current DSA. As a result, FWP staff have recently compiled historical data to establish a surveillance plan for the coming five years. The time elapsed since the last capture, the number of samples from each area, and movement between populations where the disease has been detected and areas with no history of seroprevalence were considered (Figure 5).

Based upon these factors, the five areas identified for surveillance in the coming years include: The Northern extent of the Big Horn Mountains on the Crow Reservation, the Southern Tendoys, the Greeley Creek/Deer Creek/Boulder River area, the Red Lodge/Silver Run area, and the Tobacco Roots. Because some of these areas overlay small landowner parcels, helicopter captures may not be the most appropriate method of surveillance. As a result, FWP and MDOL will be looking to utilize hunter harvest samples to accomplish some surveillance needs.

Recent captures have met some reluctance from landowners and producers to participate. For non-livestock-owning landowners, the reasons for this reluctance are varied but include the perception that use of a helicopter for elk capture activities is harassment of the elk and concern over damage to fences. For livestock owning landowners, an additional reason for unwillingness to participate is rooted in concern about what will happen if brucellosis is found in the surveilled elk populations. This concern is an important one to address. If the disease is present in elk populations outside of the boundary of our DSA and we have a detection of brucellosis in livestock as a result, the impacts to our industry may be more substantially widespread and cumulatively impactful than the impact of an expanded DSA boundary, especially if that detection were to occur in an animal that had been shipped out of Montana. If you practice in proximity to any of the planned surveillance areas, having conversations with clients about the value of wildlife surveillance ahead of time may contribute to the success of capture efforts and our ability to accomplish our fundamental program goals. ¤

TUBERCULOSIS AND INTERFERON GAMMA RELEASE ASSAY TESTING

Brenee Peterson, DVM

Veterinarians who issue international health certificates for cattle should be aware of Canadian import requirements for tuberculosis testing, specifically, the Interferon Gamma Release Assay (IGRA). This test is required for export of United States cattle for the following breeds: Corriente, Brahman, Texas Longhorn and American Bucking Bull to Canada for any purpose. The IGRA is required prior to exporting and is IN ADDITION to the caudal fold test (CFT).

IGRA is a blood test used to detect bovine tuberculosis. This test works by measuring the amount of interferon gamma that is produced by lymphocytes in response to the PPD tuberculin. Results will be classified into negative, positive and suspect. Suspect animals may require re-testing in 30 days. Time is critical when dealing with the IGRA test, including knowing exactly when the animals are leaving and when the CFT was performed. The IGRA test must be performed within 3-30 days of the CFT injection date. If the 30-day period is missed, you will have to wait 60 days prior to performing another CFT along with the IGRA test. Test performance also requires samples to arrive at the laboratory within 30 hours of collection. Samples are submitted to the National Veterinary Services Laboratory (NVSL) in Ames, Iowa and are only run on specific days of the week. Contact United States Department of Agriculture Animal and Plant Health Inspection Services (USDA-APHIS) for assistance with coordination and shipping should you need to complete this test for export purposes. Questions should be directed to the local USDA office at 406-437-9450. ¤

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