



Stock Quotes: Animal Health Newsletter

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State Veterinarian Notes

AFRICAN SWINE FEVER (ASF) – LESSONS FROM EUROPE: This fall I have a whole new appreciation for the potential impact of ASF and preparedness. The large feral swine population in the United States (US) can also serve as a potential reservoir for the disease, make eradication impossible, and serve as an anchor on US production of livestock products for decades. I write about my recent trip (on page 3 and 4) to learn about how several countries in Europe have dealt with these challenges. The article also describes actions livestock owners and veterinarians can take to reduce the impact of a serious disease incursion and the interconnectedness of preparedness efforts.

RABIES SUBMISSION CONCERNS: Department of Livestock (DOL) has received reports that some veterinary clinics make it prohibitively expensive to submit animal specimens for rabies testing. We provide more context in the rabies article on page 2, however, I want to categorically express that as veterinarians, our public health mission is a foundation of the profession and a critical priority. Our expertise in animal health, husbandry, epidemiology, disease control methods, and zoonotic disease compels us to contribute to the well-being of the community, not just at the single patient level.

BRUCELLSIS TESTING REIMBURSEMENT ADJUSTMENT: The Board of Livestock (BOL) approved an increase in reimbursement for brucellosis testing at livestock markets by \$1.50 per head effective January 1, 2023. The increase is to address inefficiencies of testing animals at markets.

BRUCELLA CANIS (*B. canis*): Canine brucellosis is both more prevalent and more difficult to manage than we previously appreciated. We're developing resources to help veterinarians navigate these difficulties with their clients, including an owner disclosure form for veterinarians to present to their clients. All of these resources are available from DOL and will be presented at the upcoming Montana Veterinary Medical Association (MVMA) meeting ☞

By Marty Zaluski, DVM

Secure Beef Supply (SBS) Plans

Foot and Mouth Disease (FMD) is likely to be a problem in the United States (US) in the future. If this happens, the financial losses to the US will be staggering. While mitigating all potential losses is impossible, cattle producers can prepare now to minimize the damage to their operations should we suffer an outbreak such as FMD. Those same preparations can also reduce the burden of endemic disease.

Addressing biosecurity risks now makes your client's operations more resilient, more resistant to disease introduction, and more confident that they'll be able to market their products (germ plasm, animals, and commodities) through an outbreak. After the detection of a national-scope disease event, producers that can verify low risk of infection through individualized, documented Secure Beef Supply (SBS) Plans can re-enter commerce earlier and will therefore have the smallest impact to their businesses.

SBS plans include biosecurity measures tailored to your clients' resources and management to reduce disease risk and to lift movement restrictions as soon as they can demonstrate freedom from infection. Planning includes ways to:

1. Limit exposure of animals to disease through enhanced biosecurity .
2. Mitigate risk of disease spread when livestock move through commerce .
3. Enable movement from control zones under permit from regulatory officials.
4. Maintain business continuity for all sectors of the beef industry during an outbreak of a potentially devastating disease.

Preparing a SBS plan is one component to getting your clients back into commerce if an outbreak occurs and you can help them create their own plans now. Refer to the African Swine Fever (ASF) article by Dr. Martin Zaluski and the table that illustrates the criteria for swine producers to restart product movement after a disease outbreak on page 3 and 4. Movement restrictions and

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Rabies and the Public Health Mission

Veterinarians play a unique role in their community - often serving as a local subject matter expert regarding zoonotic diseases. Cases involving zoonoses present an opportunity to educate animal owners of precautions to best assure safety for them and others in their households. In this article, we provide updated guidance on your role when dealing with rabies, a reportable and zoonotic disease with serious implications.

Confirmed and suspected rabies cases are jointly overseen by Department of Livestock (DOL) and Department of Public Health and Human Services (DPHHS); DOL manages animals that are potentially exposed and local public health officials handle human exposure. When a person reports a concern about a domestic animal with potential rabies exposure, DOL should be notified. If there is human exposure, the local health official will have primary oversight of the animal that exposed the human. Case management will ultimately be determined by exposure, diagnostic testing, and vaccination status.

DOL has received reports from human health officials stating that veterinary clinics around Montana have declined to participate in specimen submission or are charging prohibitively high amounts for rabies specimen submission - one clinic charging more than \$350 for shipping the sample to the Montana Veterinary Diagnostic Laboratory (MVDL) for testing. MVDL loses money performing rabies tests to support the unique interconnectedness of human and animal health and does not make a profit on rabies testing as they consider it a public health service; currently rabies testing is \$35. MVDL also provides a low-cost shipping label on their website, which can be accessed through the Lab Portal and currently costs \$7. (See One Health Handout for more detailed guidance on submission of samples.) For potential exposures of humans, some local health departments have funding to pay for the cost of sampling, especially in cases where the exposed person cannot afford testing.

The cost for rabies testing should be manageable, not only for owners of domestic animals, but also for people that submit wildlife. In cases of exposure without rabies testing, the exposed person may be required or elect to undergo preventative treatment, which is costly and not without risk.

DOL understands the fear of exposure when handling possibly infected animals. However, veterinarians are trained in prevention of spread of disease, proper animal handling, humane and appropriate euthanasia, and tissue sampling for testing; therefore, are the most qualified community members for these tasks.

The veterinarian's main roles include client education, vaccination, physical evaluation of animals under quarantine, and tissue sample submission for laboratory testing. It is important to remind animal owners that rabies is spread through contact with infected saliva. The most likely opportunity for exposure is from an animal bite or scratch. Veteri-

narians should also be prepared to educate clients regarding clinical signs to watch for following an exposure; abnormal behavior is the most consistent sign of the disease in animals. Including fearfulness, aggression, excessive drooling, difficulty swallowing, staggering, paralysis, and seizures. Timely notification to DOL and DPHHS is critical.

Per the 2016 Compendium of Animal Rabies Prevention and Control and DOL regulations, any dog, cat, or ferret, this guidance applies regardless of current rabies vaccination status, which bites or otherwise exposes a person must be confined and observed at an animal shelter, veterinary facility, or other adequate facility for ten days from the date of exposure.

If the animal is vaccinated, has an established veterinary relationship, and the owner understands reasoning for quarantine, the animal may be allowed to quarantine at home if the veterinarian and local health official deem appropriate. If any sign of illness develops in the isolated animal, it is to be evaluated by a licensed veterinarian and if warranted, the animal may be humanely destroyed, and the brain or other suitable tissue tested in a qualified laboratory for rabies. Any stray or unwanted wild or domestic animal that bites a person may be euthanized immediately and the appropriate tissues submitted for rabies testing. Any dog, cat, or ferret that is subject to confinement and observation, and that does not have a current rabies vaccination, should not be vaccinated during the ten-day confinement period. If testing protocols cannot be followed, please reach out to DOL or DPHHS for further information and assistance.

Situations that lead to a domestic animal being submitted for rabies testing can be highly emotional - usually involving a human getting bit and a pet being euthanized. Not only does the human-animal bond suffer, but people become fearful for their own health. When rabies testing of wildlife or a domestic animal, despite vaccination status, is requested due to bite exposure it should not be cost prohibitive.

DOL asks that veterinarians recognize the public health component of our profession, be available to help with laboratory submission of wildlife, and maintain a reasonable balance when it comes to charging for rabies testing. ☞

By Merry Michalski, DVM

African Swine Fever (ASF)

Since African Swine Fever (ASF) was confirmed in the Dominican Republic and Haiti in 2021, the disease is closer to the United States (US) than it has been in 40 years. When ASF is detected in a country, it has a dramatic impact on the swine industry, and the entire agriculture sector. Costs of production increase due to increased mortality, ramped up regulatory standards, and investments in biosecurity. Income is reduced because of reduced access to international markets.

I recently had the privilege of spending a week in Europe to learn from producers and agriculture officials from Poland, Germany, Belgium, Denmark, and Romania as part of an educational trip sponsored by the National Pork Board. These countries have either made massive investments in exclusion measures, or suffered the costs of ASF, or both; and their experiences have helped identify priorities for preparedness for the US. Much of Europe has wild boar (WB) which is a reservoir for ASF in Europe, so the extensive range of feral swine in the US makes the European experience highly relevant. Montana's efforts to prevent feral swine incursion into the state becomes even more crucial.

THE EXPERIENCES FROM EACH OF THE FIVE COUNTRIES IS DIFFERENT AND YET CONSISTENT:

Denmark was the only country with no ASF and has constructed a 40 mile-long hog fence along their southern border with Germany, to prevent WB movement into the country. Germany has had cases in both WB and domestic swine and have been slow to react to the threat from infected WB and human migrant traffic from the east. Their swine industry is on the decline due to ASF and restrictive regulations. Poland has accepted that ASF is endemic in WB and has focused on enhancing biosecurity of commercial premises



Figure 1. German poster, "The virus is not the problem. You are." Animal health authorities try and educate people about their role in spreading African Swine Fever Source: German Agriculture Ministry

and recovering export markets. Belgium has found ASF in WB only (no domestic swine incursions), and has created a fenced exclusion zone to eliminate WB and removed commercial swine within that perimeter. Romanian officials described findings of ASF in WB and commercial swine in much of the country, and acknowledged a priority being placed on hunting interests over agriculture. Romania was the only country ineligible to sell products to the European Union (somewhat analogous to interstate commerce in the US) due to lack of internal control of the disease. No country that has had an ASF incursion, either in WB or domestic swine, has fully recovered their export markets at a cost of \$10-20 per carcass.

PREPAREDNESS GOALS FOR THE US:

- Educate public and industry about prevention measures and impact of ASF in US .
- Emphasize that significant route of disease expansion is by human movement and discarded meat products.
- Prepare industry for significant direct costs of response and eradication.
- Enhance biosecurity practices (truck washes, limiting access, etc.) so infrastructure and habits are in place when biosecurity has to be significantly ramped up in an ASF outbreak.
- Work on regionalization to allow unaffected areas of the US to continue to market products.
- Ensure rapid detection - ASF is highly lethal, but surprisingly slow spreading while not causing unique clinical signs. We need to make sure producers and veterinarians are familiar with the disease and its nuance.
- Work on Secure Pork Supply plans which make the operations more resilient to disease, and ease obstacles to entering commerce during a disease event.

RESPONSE GOALS:

- Enhance education, biosecurity, and traceability.
- Engage the public to recognize that people are a major contributor to the spread of ASF.
- Implement Secure Pork Supply plans.
- Veterinary resources will be scarce, therefore, we need to identify roles that are uniquely veterinary, and delegate as many roles as possible to non-veterinary staff.
 - * Train lay persons to sample for disease by implementing a Certified Swine Sample Collector program in Montana.
- Focus on surveillance of sick or dead animals. Sampling 'healthy' populations for detection has shown little benefit in Europe.

FOR AN ASF DETECTION IN FERAL SWINE ONLY:

- Focus surveillance on feral swine mortalities.
- Remove carcasses from landscape to prevent infection of susceptible animals.

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African Swine Fever (ASF), continued

(Continued from page 3)

- Determine the geographical range of African Swine Fever (ASF) affected feral swine. If possible, create an exclusion area to fence out hunting and hiking to prevent dispersal of pigs and disease to the broader area. Feral swine can be eradicated within fence.
- Be clear with the industry that costs are going to be significant if we hope to eradicate from the wild. Belgium experienced a cost of \$20 million for a 247 sq mile control area => \$81,000 per square mile.

RECOVERY:

- No country with ASF has fully recovered exports, especially the Chinese market that purchases low marketability - high profit products such as pig tails, feet, ears.
- Regionalization and compartmentalization are a criteria to limit impact to affected areas.
- The United States (US) swine industry will need to accept a new norm of a higher cost of pork production while receiving lower income.

WHAT THIS MEANS FOR YOU AND YOUR CLIENTS:

Throughout the 2022 Highly Pathogenic Avian Influenza (HPAI) outbreak, the National Poultry Improvement Plan (NPIP) has a proven track record. In an event that has affected more than 56 million birds in 47 states, the US has been able to maintain export markets through 'regionalization' where we can document non-infected areas through routine testing. The same principle will reduce the impact of ASF, and other diseases. See Figure 2 below for a summary of work that can be done at the producer level in peace time to prepare.

Secure Beef Supply (SBS) and Secure Food Supply Plans—Animals don't stop growing when a disease outbreak happens, and marketing of livestock and animal products must continue in order to feed people. When an operation is within a restricted zone, it will be barred from commerce until it can prove that it is not affected. Producers with a SBS plan will be the first to gain market access because much of the work to document biosecurity and traceability was done ahead of time. See the column on SBS trainings on page 5. SBS plans will not only help reduce business interruptions during a disease event, but also have the potential to reduce the introduction of production diseases such as Johne's, Bovine Viral Diarrhea (BVD), and Bovine respiratory complex.

Swine Health Improvement Plan (SHIP)—Modeled after NPIP, the swine industry is deploying SHIP which will in the future establish negative status for a variety of disease that can cause disruption in animal movement and trade. While Secure Beef (and Pork) Supply enhance biosecurity and help prevent introduction of disease, SHIP will help document an elevated health status during normal commerce and will be helpful to provide assurances for movements that are not in a control area. See more information on the Swine Health Improvement Plan on page 5 of this newsletter.

WHAT THIS MEANS TO DEPARTMENT OF LIVESTOCK (DOL):

Our task list is long and includes training in the Incident Command System (ICS) which allows multiple partners to coordinate a response. We've drafted numerous documents, including a draft Governor's emergency declaration order and depopulation and disposal plans. We need to work on public education efforts, surveillance and biosecurity plans, and continue to practice and update our response strategy. Additionally, we recognize the value of regionalization plans that have been so helpful in HPAI. ☒

By Martin Zaluski, DVM

	Sampling	Biosecurity Plan	Traceability		SHIP
PREPARE NOW (Pre-event)	1) No testing required; Visual monitoring for illness/disease; 2) Acquire training certificate for lay person sampling (CSSC) - as veterinarians may be limited during outbreak	1) Create SPS plan: determine line of separation, prepare C&D stations, establish movement patterns and access points that limit disease spread	1) Enroll in AG View or comparable program. Must be able to document at least 30 days of animal movement electronically.	→	Enroll in SHIP by meeting these criteria
IMPLEMENT DURING DISEASE EVENT <i>*Finding ASF, CSF, FMD will result in a 72 hour stop movement nationally.</i>	1) Animal testing by Certified Sampler; 2) Initial testing sent to MVDL to demonstrate disease freedom.	1) Apply SPS plan. 2) Lockdown movement on and off premises.	1) Provide movement data for animals and animal products to state animal health officials.	→	SHIP enrollment becomes passport to restart movement if all aspects are adhered to and suitable to state animal health officials

Figure 2. Summary of Producer Preparedness Programs. Source: Merry Michalski, DVM

Swine Health Improvement Plan (SHIP)

Department of Livestock (DOL) is excited to announce that Montana will be participating in the pilot United States (US) Swine Health Improvement Plan (SHIP). SHIP is modelled after the National Poultry Improvement Plan (NPIP), a collaborative effort involving industry, state, and federal partners providing standards for certifying the health status of greater than 99% of commercial scale poultry and egg operations across the US.

SHIP aims to establish a similar platform for safeguarding, improving, and representing the health status of swine across participating farm sites, supply chains, states, and regions. Such a working system is needed to support the future needs of the 21st century US pork industry.

The initial objectives of SHIP are to implement an African Swine Fever (ASF) and Classical Swine Fever (CSF) Monitored Certification of US pork production operations (farm sites and slaughter facilities) modelled after the NPIP's H5/H7 Avian Influenza Monitored certification of US Commercial Poultry operations.

The SHIP ASF-CSF Monitored certification aims to mitigate risks of disease introduction and means for demonstrating evidence of freedom of disease (outside of foreign animal disease control areas) in support of ongoing interstate commerce and a pathway towards the resumption of international trade over the course of a trade impacting disease response and recovery period.

In short, SHIP will establish technical standards and associated certification recognized across participating states that centers on disease prevention and demonstration of freedom of disease outside of control areas in support of animal health, commerce, and trade.

SHIP is designed to be applicable across the full spectrum of US pork industry participants from the small show pig farmer to the large commercial producers and slaughter facilities. Pork producers will be asked to have a premises number, Secure Pork Supply Biosecurity Plan, and the ability to provide traceability through electronic means.

DOL hopes that Montana swine producers will recognize the benefit of this new program. DOL will provide additional details in upcoming meetings, which will be co-sponsored by Montana Pork Producers Council and will focus on SHIP and the Certified Swine Sample Collector (CSSC) program that DOL also plans to rollout in 2023. Please contact DOL, your SHIP Official State Agency, with questions and to enroll your pork production site or slaughter facility in SHIP.

More information can be found at usswinehealthimprovementplan.com ☞

By Merry Michalski, DVM

Secure Beef Supply (SBS), continued

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production losses for the cattle industry during a Foot and Mouth Disease (FMD) outbreak will mirror the problems that other countries have faced due to ASF and Classical Swine Fever (CSF) in swine.



Figure 3. Secure Beef Supply Source: securebeef.org

Department of Livestock (DOL) received a National Animal Disease Preparedness and Response Program (NADPREP) grant to conduct ten meetings across Montana for producers and veterinarians to start creating Secure Beef Supply (SBS) Plans. Meetings will be in Lewistown, Dillon, Billings, Miles City, Malta, Great Falls, Sidney, Missoula, Shelby, and Livingston. Each meeting will begin with an overview of FMD, move through considerations for FMD vaccination and National Veterinary Stockpile utilization to explanations of the benefits of SBS plans, steps to complete SBS plans, and conclude with a tabletop exercise. The tabletop exercise will exemplify common points of biosecurity failure with small toys modeling pasture, feedlot and working facility layouts. The entire meeting will last four to five hours, and lunch will be provided. Dates and locations will be announced via email.

Each meeting will explain:

- Evidence of disease freedom: How can your clients gather and present evidence their cattle can safely enter trade?
- Biosecurity: How does this work in wide-open settings?
- Lines of Separation (LoS): What is separated from what?
- Movement logs: How do we track exposure opportunities?
- Isolation: What, when, where, and how long?
- Disease surveillance: How can we match effort and expense with transmission risk?
- Vaccination considerations: Don't we just do it?
- Control zones: How do we control transmission when we find infection?
- Permitted movement: How do clean operations near infected operations keep going?

Each attending cattle producer can work with a trained veterinarian to develop and implement an individualized SBS Plan at no cost as long as grant funds are available. Each veterinarian who attends an SBS Planning meeting will be eligible for \$500 compensation for each operation for which he or she assess on-farm biosecurity and submits a completed SBS Plan. ☞

By Brad De Groot, DVM

Cattle Ear Tagging Procedures

Department of Livestock (DOL) regularly receives calls from veterinarians and producers regarding tagging protocols. Below is quick summary of tagging information and protocols, for cattle:

Official Identification (ID)

- USDA Metal Clip Tags (NUES)
 - * USDA Silver NUES Tags (Example 81ABC1234)
 - * USDA Orange vaccination tags (For brucellosis calfhood vaccination only).
 - * **Placement:** Metal NUES tags should be placed in the right ear.
- 840 series Radio Frequency Identification (RFID) tags (United States origin)
 - * 840 series RFID tags can be purchased and applied by producers or veterinarians.
 - * **Placement:** These tags should be placed in the left ear, middle rib, to the inside of the management tag.

Please remember 900 series RFID tags are not official identification and cannot be used as identification for interstate movement or regula-

tory testing. Cattle with 900 series tags should have these tags removed to prevent scanning an unofficial tag and should then be correlated with the replacement 840 series RFID tag.

Important Reminders About Official ID

- If animals have a metal NUES tag and you would like to tag them with an 840 RFID tag, please leave the metal tag in place and record/correlate both tag numbers in your tagging records.
- If cattle have an 840 RFID tag, DO NOT double tag with a metal clip tag to avoid having to read the 15 digit RFID tags. An exception to this is producers who want a visual orange metal tag for calfhood vaccines. If a vaccine tag is applied, both forms of ID must be recorded.
- Canadian origin cattle will have electronic ID that starts with a 124 to denote Canadian origin animals. If these animals lose their official ID, an 840 tag may NOT be applied to Canadian origin animals. Instead, please use a silver metal NUES tag for official ID purposes. ☒

By Brooke Hoopes

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