StockQuotes: Animal Health Newsletter

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

Dec 2014

Volume 7, Issue 4

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CALENDAR OF EVENTS:

Deputy Veterinarian Training:
Jan 22, Helena

Board of Livestock:
Jan 26-27, Helena

MVMA 2015 Winter Meeting:
January 30 - 31, Bozeman

Montana Legislature:
January 5th, 2015

State Veterinarian Notes

It's been an active season at the Department of Livestock. Recent brucellosis findings, rulemaking, and budget challenges have taken much of our time.

BRUCELLOSIS FINDINGS: We're conducting epidemiological investigations on two brucellosis affected herds. Both herds use the Designated Surveillance Area (DSA) seasonally. One is located in Madison County while the other herd grazes in south Park County but is headquartered in Carbon County. The Madison County herd was found as part of a herd test, while the Park County herd tested as a DSA movement test to return home. Montana has detected affected cattle herds in five of the previous eight years.

RULEMAKING: We've been working on several administrative rules; one of which should be in place by the time you receive this newsletter. This rule rescinds the requirement for brucellosis vaccination of imported cattle and will take effect on December 25. More on this in the brucellosis column.

The other rulemaking would allow the department greater discretion to grant exemptions to rules on a case by case basis. For example, a horse that has an expired Coggins by even one day has to be retested prior to import. Currently, no accommodations can be made for delay in travel due to a vector season, vehicle breakdown, or other extenuating circumstances. No provisions exist where a horse could be tested after arrival.

Exemptions to standing rules should not be taken lightly, but help regulations work for livestock and their owners. The state veterinarian should be able to use his/her expertise to evaluate the special requests based on need and the potential risk to resident livestock. This rule should be published for comment sometime in February, 2015.

LEGISLATIVE SESSION: We're getting ready for the legislative session. MDOL has just one agency bill up for consideration, LC0447, titled, "Generally revise laws related to the regulation of feral hogs." This bill makes it illegal to hunt feral swine, and establishes notification requirements if swine running at large, or swine that appear feral are observed. The law would also provide MDOL additional authority to eradicate feral swine. Because of the potential impact of feral swine, the law includes penalties.

MDOL will be making a request for general fund to address a sizable budgetary shortfall due to brucellosis testing costs, falling brands enforcement revenue, and deficit at the veterinary diagnostic laboratory. More in the budget column in this issue.

ULTRA HIGH FREQUENCY (UHF) ID PROJECT: Dr. Szymanski, a contract veterinarian, and two market veterinarians in Billings have been evaluating the use of UHF tags in a pilot project at two livestock markets.

While standard RFID tags require that the reader be within inches of the tag, the UHF technology allows recording of tags on groups of cows from several feet away.

For sale barns, UHF can be a game changer. Currently, animals are processed prior to sale (to check for pregnancy status, age, and possibly brucellosis testing), and then again after the sale to complete the health certificate on groups of cows for specific destinations. UHF technology has the potential to make the after-sale chute work unnecessary, thereby saving wear on cattle, and hours of work for veterinarian and crew. So far, the pilot project has been a limited success. Dr. Szymanski will provide a full review as we get further into the project.

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WHAT'S NEW:

1. Input requested on client administered rabies vaccination (p3).
2. Requirement for brucellosis vacc of imports is rescinded effective Dec 25 (p3).
3. Update on MDOL's budget (p2).

MDOL Budget Update

Several news articles recently documented financial troubles for MDOL. In the simplest terms, revenues to MDOL have decreased, while expenses have increased. Several factors contribute to this, including Designated Surveillance Area (DSA) brucellosis testing, decreased general fund to the veterinary diagnostic laboratory, and falling revenue in the Brands Enforcement Division.

DESIGNATED SURVEILLANCE AREA: With brucellosis found in livestock in 2007 and 2008, and subsequent implementation of the DSA, significant funds were committed to pay for brucellosis testing. In fact, between the years of 2009 and 2012, just over $1M of MDOL funds were expended on testing cattle as part of routine surveillance, or epidemiological investigations.

Source: https://farm8.staticflickr.com/7056/6869762317_78487198aa.jpg

VETERINARY DIAGNOSTIC LABORATORY: While brucellosis was exerting significant pressures on the department, the veterinary diagnostic laboratory also became a greater financial liability. Recognizing that much diagnostic testing includes zoonotic diseases, the public health role of the lab justifies general fund in the diagnostic lab's budget. However, the portion of general fund to the laboratory decreased from 45% in the 1990's to the current level of approximately 15%, so to keep the facility operating, MDOL funds (primarily per capita and cash reserve) make up the difference of up to $750,000 annually.

BRANDS ENFORCEMENT DIVISION: The revenue for the Brands Enforcement Division (BE) includes brand inspection fees and per-capita fees which are the annual per head assessment on livestock. Traditionally, brand inspection fees have covered 60% to 70% of the division's budget with the remainder coming from per-capita assessments. However, cattle inventory has been on the decline due to changes in land ownership and greater efficiencies in the beef industry, and therefore, revenue has been decreasing.

At the same time, costs for fuel, healthcare, and personnel costs (even with staff on payroll decreasing from 71 in 2002 to 60 in 2014), have maintained a steady increase. Consequently, cash and per-capita have had to cover an additional $500K of the brands inspection fees shortfall in 2014 because the fees now cover just 50% of the division's budget.

BUDGET GOING FORWARD: To fill the budget shortfall, several actions are being made.

- Cuts are being made at DOL: These include furloughs, leaving open positions unfilled and reducing operating costs which allow for a savings of approximately $400K.
- Increase in fees: The Board of Livestock increased laboratory fees by 5%, raised the per capita fee, as well as increased the brand inspection fee to $1.00 for a projected increase of $550K in revenues.
- In the 2013 legislative session, DOL successfully requested that general fund cover DSA testing costs. The investment in testing DSA cattle benefits all livestock producers and the state of Montana. We will be making the same request in the 2015 legislature.
- MDOL will also be asking the legislature to restore the general fund share to the veterinary diagnostic laboratory budget back to 50%.

If veterinarians, ranchers, and DOL succeed in convincing the Montana Legislature that maintaining veterinary diagnostic laboratory operations is worth the general fund investment, a critical part of the budget crunch will be alleviated. It's difficult to foresee the laboratory being a sustainable entity without such support.

It may also be time to rethink the funding model for the Brands Enforcement Division. In the face of decreasing cattle numbers, raising per capita fees is only a stopgap measure to cover the shortfall in brand inspection revenues. Additional fees from livestock sales as well as fees for markets, dealers, and other licenses may need to be more commensurate with costs. Alternatively the use of volunteer brand inspectors (of which there are approximately 550 in Montana) may need further consideration.

What I can tell you is that we acknowledge the current financial challenges, and are working hard to get them addressed. ¤

By Christian Mackay, Executive Officer of the Board of Livestock

Brucellosis Issues

BRUECELLOSIS AFFECTED HERDS: Approximately 60% of all brucellosis tests are conducted in the last quarter of the calendar year. So it's not surprising that fall is also when we're most likely to find brucellosis affected herds as is the case this year in Madison and Park Counties.

Both herds operate seasonally in the Designated Surveillance Area (DSA). Previous cases of brucellosis in cattle have been linked to elk exposure through a comprehensive epidemiological investigation that included testing of adjacent and contact cattle herds, reviewing location in relation to the known range of brucellosis positive elk and, conducting genetic analyses of the *Brucella* isolate.

Based on seasonality of elk calving and behavior, we've categorized the period between June 15 and January 15 as lower risk. However, the positive cow in the Madison County herd went into the DSA on June 16 and was still exposed. Therefore, we may need to reevaluate our approach to seasonality and perhaps consider July 1 as being a more certain cutoff for risk of brucellosis exposure.

ELK COLLARING: Fish, Wildlife and Parks is continuing to monitor collared elk in and around the boundaries of the DSA. This project is expensive, but has been highly successful in delineating the range of brucellosis positive elk. In one case, the DSA boundary was adjusted prior to the detection of a brucellosis positive livestock herd in the very same area on a subsequent year. For 2015, the capture effort will focus in hunting district (HD) 317, and 560. Elk are being collared in HD317 to find out more about distribution of elk in the Paradise Valley and possible connectivity to areas outside the DSA. Elk in HD560 are being collared and tested because of questions about movement and brucellosis status of elk in the Absaroka Range.

The state of Wyoming is looking into performing a similar project in the Big Horn Mountains where a small number of seropositive elk have been tested through hunter harvest over the last several years outside Wyoming's DSA.

BRUCELLOSIS VACCINATION IMPORT REQUIREMENT: MDOL has proposed to remove the brucellosis vaccination requirements for imported cattle imported from states that

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Rabies Update

Administration of rabies vaccine in Montana is currently limited to veterinarians. This restriction is set by MDOL policy and follows the recommendation of Compendium of Animal Rabies Prevention and Control. However, we regularly receive feedback that many livestock (horses in particular) are not vaccinated because the vaccine is restricted to veterinarian administration.

Therefore, we're considering the expanded use of rabies vaccine for large animals and would like your input. In the context of a veterinarian client patient relationship (VCPR), we would like to permit the sale of vaccine by veterinarians to their clients for administration to livestock (horses, cattle, sheep, etc.).

By making this change, we would like to increase the number of large animals immune to this disease. Making the vaccine available to the public is not unprecedented (please see the survey summary below), and we anticipate that many additional animals would become vaccinated that would not be otherwise.

For public health reasons, these animals would not be considered official vaccinates; an owner-vaccinated animal exposed to an animal positive for rabies may still be subject to quarantine. Likewise, owner-vaccinated large animals that subsequently expose a person to rabies still may be subject to euthanasia and testing based on a risk review by MDOL. Please note, this would not apply to dogs, cats, and ferrets.

To see what other states are doing, we conducted a poll (see Figure 1 below). Forty percent of responding states allow vaccination of large animals by non-veterinarians with many states stipulating that vaccine administered by non-veterinarians is not considered official; similar to what Montana is considering.

¤ By Tahnee Szymanski, DVM

The rabies compendium states that "livestock, including species for which licensed vaccines are not available, that have frequent contact with humans (e.g., in petting zoos, fairs, and other public exhibitions) should be vaccinated against rabies."

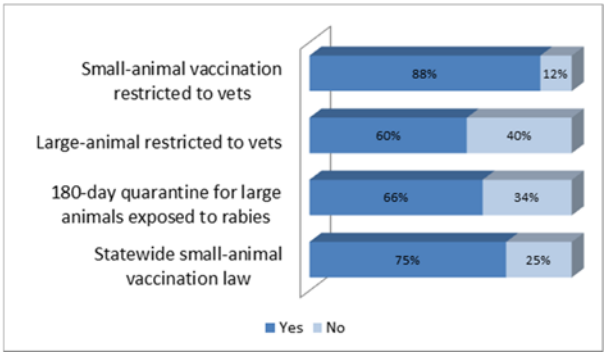


Figure 1. Results of a survey of state veterinarians and/or public health departments regarding administration of rabies vaccine.

Animal Disease Traceability – Monitoring and Compliance

We are approaching the two year anniversary of USDA's final rule on animal disease traceability (ADT), published on January 9, 2013, and effective on March 11, 2013. The rule covers cattle and bison; horses and other equine species; poultry, sheep and goats; swine; and captive cervids. When moved interstate, these species, unless otherwise exempt, are required to be officially identified and accompanied by a Certificate of Veterinary Inspection (CVI). Identification and complete documentation are the cornerstones of traceability.

USDA-APHIS-VS-MT and the MDOL have a keen interest and a responsibility to monitor and enforce ADT compliance. Based on field inspections (livestock markets, tagging sites, and slaughter facilities) and an ongoing review of CVIs issued by Montana accredited veterinarians we're glad to report a high level of ADT compliance in Montana – we appreciate all your efforts!

However, there are three areas where we continue to see ADT compliance issues related to interstate cattle shipments. These include: a) the use of more than one official eartag, b) lack of official IDs on ICVIs, and c) failure to appropriately document on ICVIs when official ID is not required.

USE OF MORE THAN ONE OFFICIAL EARTAG: We understand that it is often easier to apply another metal clip tag than read an existing tag. However, <u>when additional tags are applied to animals that are already identified, any previous documentation associated with the original ID is no longer linked, and traceability information is lost</u>.

No more than one official eartag may be applied to an animal except as follows:

- If the second eartag has the same official ID number as the existing one.
- In specific cases when the need to maintain the identity of an animal is intensified and the double tagging is done with USDA or MDOL approval.
- RFID eartag ("840" tags) may be applied to animals already officially ID'd with brucellosis vaccination eartags or silver USDA eartags, provided the person applying the RFID eartag records the date applied, the official ID numbers of existing ID and newly applied RFID, and maintains the records for five years.
- A brucellosis vaccination eartag may be applied to an animal that is already officially ID'd, provided the person applying the vaccination eartag records the date applied, the official ID numbers of existing ID and newly applied tag, and maintains the records for five years.

OFFICIAL ID NUMBER OF EACH ANIMAL MUST BE LISTED ON ICVI, except as follows:

- If an alternative form of ID has been agreed upon by the sending and receiving States. As an example, the State of Montana has agreed with Idaho, Oregon, Utah, Washington, and Wyoming to permit individually identified animals traveling on a brand inspection not have the individual IDs listed on the CVI.
- If a group of individually ID'd animals are moving under a Group ID Number (GIN), only the GIN must be listed on the ICVI.

In these instances when animals are required to be officially ID'd, but not required to be listed on the ICVI, <u>the ICVI must state that all animals are officially identified.</u>

DOCUMENTING ON ICVI WHEN OFFICIAL ID IS NOT REQUIRED. An ICVI may not be issued for any animal that is not officially identified if official identification is required. <u>If the animals are not required by regulations to be officially identified, the ICVI must state the exemption that applies, such as:</u>

- Animals are going directly to an approved tagging site – to be ID'd upon arrival. It is the Accredited Veterinarians responsibility to ensure the destination listed on the ICVI is an approved tagging site in the destination state.
- Animals are moving as a commuter herd. In addition to stating this exemption on the ICVI, <u>the movement must be accompanied by a copy of the commuter herd agreement</u> or other documents as agreed to by the shipping and receiving States or Tribes.

One final note – please stay informed of any state-specific agreements or ADT-related requirements. Thanks for all your efforts and cooperation in making ADT successful! ¤

By Tom Linfield, Assistant District Director, USDA-APHIS-VS

Strip of silver metal clip tags conforming to the NUES (National Uniform Eartagging System) standards.

Laboratory Corner—Abortion Workup

We are moving into winter now, when pathologists often face one of the more challenging categories of diagnostic workups of the year; livestock abortion investigations.

Despite the advancement in diagnostic testing, the number of abortion cases in which a definitive diagnosis is reached can be frustratingly low. This is because of the vast array of factors that can impact the development of the fetus throughout the gestational period. Although infectious causes of abortion often receive the biggest headlines, other factors such as herd dynamics, noninfectious maternal disease, inclement weather, toxins, nutrition likely account for the majority of abortions.

Dr. Layton addressed livestock abortions in the December 2010 StockQuotes newsletter, where he recommended use of our abortion kits, and I'd like to expand on the subject in this article.

Given the large number of potential causes of abortion, the best way to maximize your chances of reaching a diagnosis is to submit samples that are as relevant and high quality as possible. One would not expect much from a pneumonia workup in which no lung was submitted, and in the same way, an abortion workup should always include a complete set of fetal tissues (including abomasal fluid for culture), placenta, and a detailed history. Maternal serology can be useful as well, but more so when paired samples are evaluated. Obviously, the ideal collection of specimens is not always available, but as the list of submitted specimens shrinks, so do the chances of diagnostic success.

When attempting to diagnose the cause of an abortion outbreak, some things to keep in mind and share with the pathologist include:

- Nutritional status of the herd
- Vaccination history
- Recent management changes
- Percentage of affected animals in the herd.

Gestational age of the aborted fetus(es) and degree of autolysis is highly significant. Gestational age can be estimated via crown to rump length and the extent and distribution of hair development. The degree of fetal autolysis can vary significantly with many infectious causes of abortion; but in general, advanced autolysis is associated with abrupt fetal death, rather than one that resulted from antemortem illness in the dam, fetus, or both. Mummified fetuses are an extreme example in which parturition does not occur until long after fetal death. The number of affected animals and the herd size is important, as obviously three abortions in a herd of 10 is very different than three abortions in a herd of 1000.

As you are likely aware, distinctive gross lesions are rare in abortions, and , many causes of abortion do not result in recognizable changes. In these situations, a complete herd history becomes even more important. For example, isocupressic acid from pine needles can cause late-term abortion in the absence of lesions, and diagnosis is difficult without a history of exposure or identification during a site visit.

That being said, there are certain things to keep your eye out for when collecting fetal samples. Raised skin plaques could suggest a mycotic infection; multifocal hepatic necrosis could indicate herpesviral or *Campylobacter* infection; and cotyledonary necrosis with intercotyledonary exudate can be suggestive of a *Brucella* abortion. To successfully recognize the subtle congenital changes associated with abortion or early intra-uterine viral infection, you must also have an appreciation for normal anatomy.

One great resource for those wanting to learn more is "Kirkbride's Diagnosis of Abortion and Neonatal Loss in Animals." It's a small, but valuable book that's packed with excellent information and photos, and I'd highly recommend adding it to your library.

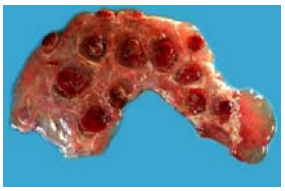
Also, if you have any questions about sample submissions or how to work up an abortion, we are certainly available for consultation here at the veterinary diagnostic lab – just give us a call! ¤

Steve Smith, DVM, DACVP

Montana Veterinary Diagnostic Laboratory

Mummified fetus.

Source: http://www.uoguelph.ca/~rfoster/repropath/FOP/flag05.jpg



Bovine placentitis – Brucella abortion

Source: http://research.vet.upenn.edu/Portals/61/images/reproductive/BV%20fetus%20placenta%20chorionitis%20Brucella%20JMKsmall.jpg

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State Veterinarian Notes

(State Veterinarian Notes continued from page 1)

SUICIDE SURVEY: In the Montana One Health insert, Dr. Randy Nett summarizes the veterinarian survey on suicide. The survey received an incredible response nationally, and Dr. Nett describes Montana's results. There are some concerning indicators including 11% of veterinarians reporting "current serious psychological distress"; certainly the topic deserves further study.

ADDENDUM TO ANNUAL REPORT: Since 2011, Animal Health Division has been publishing an annual report documenting activities during the previous year and making the reports publicly available. Our reports have been based on a calendar year, but to make these data most useful for budgeting, we have transitioned to a state fiscal year that will cover July 1 – June 30, 2014. This report catches us up to a fiscal year by covering January-June, and is available on the Animal Health page. Thank you, Cinda Young-Eichenfels, for work on these reports.¤

mz

Brucellosis

(Brucellosis Issues continued from page 3)

have been brucellosis Class Free for 10 years or more.

Most of the comments we received on this proposal were in support of this rule change. The comments cited the low risk of brucellosis from other states, unnecessary government intervention, additional costs on Montana ranchers due to import quarantines and vaccination costs, and interest in being able to receive a broader range of cattle from other states.

<u>The rule is being published on December 24th, and will take effect on Christmas day.</u>

Vaccination requirements for the four counties which contain the DSA would remain unchanged. Cattle imported from out of state into those four counties would be treated the same way as cattle coming from other parts of Montana. ¤

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