

TIMELY TOPICS

OSU EXTENSION - NORTHEAST DISTRICT
January 2024 – Volume 44 – Issue 1



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Breeding Soundness Exam

Barry Whitworth, DVM, Senior Extension Specialist, Department of Animal and Food Sciences

Fall calving season should be coming to an end which means that it is time to get the bulls ready to turn out for breeding. All bulls should have a breeding soundness exam (BSE). A BSE is a procedure performed by a veterinarian that ensures a bull has met a minimal set of standards that reflect his reproductive potential. The exam is not a guarantee that the bull will breed cows because some bulls are not aggressive breeders. However, the test does ensure that the bull has the potential to breed cows. The exam does have limits. The exam is only true at the time of the test and cannot ensure results for the future. The exam has three components. A physical exam is performed to ensure that the bull is in good health. A reproductive exam evaluates the health of the reproductive organs. The final component is an evaluation of the semen for motility and normality. This small investment in a BSE to ensure a fertile bull may reduce the number of cows found open when they are pregnancy checked.

The BSE begins with a general physical exam. The breeding bull should have a body condition score of 6. Since a good aggressive breeding bull will most likely lose weight, a bull in poor body condition may not service cows as the breeding season progresses for lack of stamina. A bull will be on the move during the breeding season, so good mobility is essential. Any feet, joint, or leg problems would be considered not satisfactory. A bull should have good eyes for finding those cows in heat. Any abnormality in the physical exam is a cause for concern.

Next, the veterinarian will evaluate the internal and external reproductive organs. A rectal exam is performed to assess the internal organs for any abnormality. Organs that are abnormal will likely affect semen quality. The scrotum is examined and measured. The testicles should be of similar size and move freely in the scrotum. The testicles should not be soft or have any palpable abnormalities. A scrotum that only has one testicle is a disqualification. The skin is examined for abnormalities such as frost bite. Problems in the skin could result in problems regulating the temperature of the testicles. Variations in temperature could result in abnormalities in the sperm. The size of the scrotum is measured in centimeters. A scrotal measurement of 30 cm is required for bulls of 15 months of age and the minimal size increases with age up to 2 years which is 34 cm. Scrotal size gives an estimate of the daily sperm production. During the collection process, the penis will be examined for any growths, hair rings, warts, or damaged which may affect the bull's ability to breed.

The final part of the BSE is the evaluation of the semen. Once a sample is obtained, the veterinarian will place a drop of semen diluted with saline on a slide and examine it under the microscope for motility. A motility score will be based on individual progressive motility. Progressive motility means that the sperm are moving in one direction and not just spinning in a circle. The minimal acceptable score is 30% of the sperm have progressive motility. The veterinarian will next examine the morphology of semen. Morphology is looking for normal and abnormal sperm. A minimal score requires that 70% of the sperm must be normal. Producers should refrain from assuming that if a bull has a high motility and morphology score that this makes the bull a superior breeder. The breeding ability of the bull is not improved based on a higher score.

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Once the exam is completed, the bull will be classified as a “satisfactory potential breeder”, “unsatisfactory potential breeder”, or “deferred”. The “satisfactory potential breeder” has met the minimal levels for scrotal circumference, sperm motility, and sperm morphology. As well as the bull’s physical and reproductive exams were acceptable. An “unsatisfactory potential breeder” has not met the minimal standards and/or has a physical or reproductive problem that is highly unlikely to improve over time. A “deferred” classification means that the bull did not meet the minimal standards and/or has a physical or reproductive problem that with time may improve. “Deferred” bulls should be retested at a later date. The “deferred” classification is not uncommon for immature bulls.

A BSE does not detect infectious diseases that might be present in the bull. These diseases may cause infertility or other reproductive problems. Testing for diseases such as Trichomoniasis or Persistently Infected Bovine Virus Diarrhea might prevent unwanted infections in the cow herd. This is a convenient time to obtain the samples necessary to complete these tests.

Studies have been done that compare untested bulls to those that have passed a BSE. Bulls turned in with cows that passed a BSE get more cows settled than untested bulls. Also, BSE tested bulls get cows settled earlier in the breeding season. Earlier pregnancy equals calves being born early in the calving season. Producers should consider the cost of a BSE as insurance. For more information about BSE, please contact the local veterinarian or the local Oklahoma State University County Extension Agriculture Educator.

Home Grown – Hort Tips for January

Laura Payne, Horticulture Educator, Payne County

I hope everyone had a safe holiday season. Spring will be here soon. Until then, here are a few tips to get you through January.

- For those with tall fescue lawns, this is a good time to remember to go out and stir around any tree leaves still remaining on the ground. Heavy accumulations of leaves will tend to smother the turfgrass, depriving it of air and light.
- It’s a good idea to check on the status of your rain gutters, drainage grates, etc. to make sure your drainage systems are functioning properly before the spring rains.
- If you have plants that have suffered from heavy infestations of scale insects, consider making a dormant oil application when the daytime temperature is over 40 degrees. Do not apply dormant oil to evergreen plants as damage will result.
- Warm January days are a good time to control winter broadleaf weeds in your dormant bermudagrass lawn. Use a combination of a broad leaf control product and a non-selective product containing glyphosate. See OSU Factsheet HLA-6421 for more information. As always, follow label directions carefully when using all pesticides.
- Prune out tree seedlings while they are obvious in the winter landscape.
- Now is a good time to look at the bones of the garden and start planning to fill in gaps in the landscape or remove plant material if it’s too crowded.

For more information on this or any other horticultural topic, you can contact your local OSU Extension Educator.

The Cattle on Feed Report

Scott Clawson, Area Ag Economics Specialist

The Cattle on Feed (COF) report is one of the constant pieces of information that cattle producers get to chew on every month. It is one of the items that the market, both futures and/or cash, will react to as the report is determined to be bearish or bullish for prices. It is important to know specifically who is being surveyed and what specifically the report tells us about the current cattle feeding situation.

The COF report conducted by the USDA's National Agricultural Statistics Service (NASS) is a survey of cattle feeding operations with over 1,000 head of inventory. The survey is done in 16 cattle feeding states. Collectively, this survey reaches most of the cattle being fed in the United States. The report is conducted monthly and helps those outside the feed yards understand what is going on in the pens. The data is reported in per head numbers as well as a percentage of the previous year.

There are three areas of the survey that receive the bulk of the attention. These are inventory, placements, and marketings. The inventory measure tells us the number of cattle in feeding facilities. This number itself is helpful in predicting our near-term supply. Placements refer to the cattle coming into the pens. A helpful part of the placements number is that it is broken down by weight. This again helps the market predict future supplies. Current events can reveal themselves in the report. An easy example is a drought. When drought sets in and forage supplies dwindle, an early summer movement of cattle to the feedlot can be observed. Marketings refer to the cattle leaving the feedlot to go the packer.

A notable item to consider in the COF report is how the market reacts to the information. The major pieces of the report are estimated by analysts prior to the release of the monthly report. Once the report is released, the market then will react to the number reported compared to the predicted number. If the number is close to the consensus of the analysts, then the report is usually viewed as neutral. At the same time, there could be bullish or bearish undertones depending on how the number relates to the expectations.

At the end of the day, the COF report is a great way for those of us not directly involved in cattle feeding operations to keep up to date on what is happening further down the production line. It also helps with transparency on the supply side of the equation. Understanding the implications of the COF report will help producers navigate the price swings that can come up around the release time.

Publication EC850 from the University of Nebraska-Lincoln is a good in-depth publication to dig deeper into the COF report. It can be found online at <https://extensionpublications.unl.edu/assets/pdf/ec850.pdf>.

Farm Management Resources

Brent Ladd, Extension Assistant, Department of Agricultural Economics

The e-Farm Management website catalogs resources to help inform producers about farm financial management and production, marketing, and risk management topics. This site contains videos, tools, and publications for farmers and ranchers to hone their farm management skills.

One example is the Using the Ag Business Plan Tool video. This video explains how to use the AgPlan tool to build a business plan over time with as much cooperation, and collaboration as desired, and also allows the plan developers to ask for input from whatever outside stakeholders that they want. The tool is designed to interact with a couple of financial management tools to streamline the process of developing the financial component of the business plan.

To view this video and find additional information on developing a farm business plan, visit:

<https://extension.okstate.edu/programs/farm-management-and-finance/e-farm-management-training/developing-a-farm-business-plan/>.

More information on this and other farm management topics may be found: 1) by contacting your nearest Extension Educator 2) on the e-farm management website (<https://extension.okstate.edu/programs/farm-management-and-finance/e-farm-management-training/index.html>) or 3) on the OSU Ag Econ YouTube Channel (<https://www.youtube.com/user/OkStateAgEcon>).

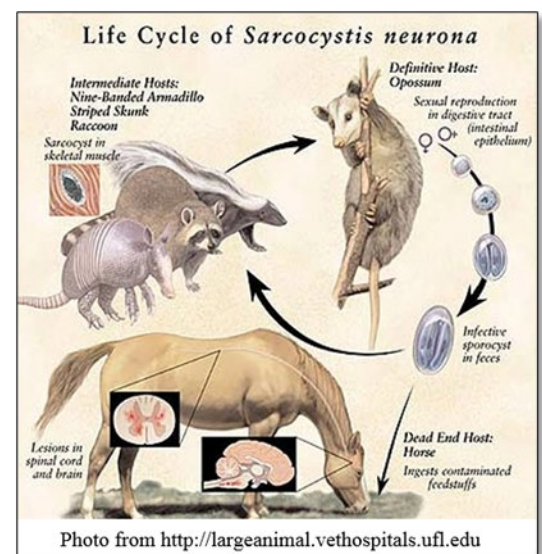
Equine Protozoal Myeloencephalitis (EPM)

Earl H. Ward, Area Livestock Specialist

No matter if you live in town or in the country, I am sure we have all had an encounter with a opossum. They seem to be everywhere. Now I love critters, but opossums are a huge threat to equine even though they are not malicious about it. Equine Protozoal Myeloencephalitis (EPM) is a degenerative neurological disease of the central nervous system in horses. This horrible disease is transmitted from the opossum to equine.

The American Association of Equine Practitioners estimate that 50 percent of all horses in the US may have been exposed the organism that causes EPM. The organism that causes this disease is a protozoal parasite called *Sarcocystis neurona*. It is spread from its definitive host, the opossum, to the equine through its feces. The equine comes in contact with the protozoa by consuming it through contaminated feed, hay, or water. It cannot be transmitted from horse to horse.

The symptoms of EPM are greatly variable and can be commonly misdiagnosed. The severity of the symptoms are dependent on the location of the lesions on brain, brain stem, or spinal cord. The equine could exhibit incoordination, lameness, stiff movements, and muscle atrophy. The muscle atrophy (loss of muscle mass) is most noticeable along the back and in the hindquarters. The animal may indicate difficulty in swallowing, but a lot of the time the animal will be found



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having seizures or collapsed. If you notice any of these symptoms, please consult with your veterinarian.

It is extremely difficult to get a definite diagnosis of EPM because there is not a specific assay for the disease. Treatments of EPM can be expensive, but if found early the chances of the horse's full recovery increases. Many horses treated properly can return to normal activity. Your veterinarian may prescribe an anti-protozoal drug, anti-inflammatory drug, and vitamin E supplementation. This treatment could last for months depending on the animal's response to the treatment.

There are things a person can do to help prevent this disease. There is a vaccine against the protozoal parasite, but the effectiveness of this vaccine is still being studied. The simple things a person could do to help prevent this disease transmission are:

1. Keep your feed and feed buckets secure and clean.
2. Keep water tanks fresh and clean.
3. Inspect the hay that you are feeding.
4. Keep a steady appointment with your veterinarian.
5. Keep the animal in optimal health.

Just like any disease, prevention and catching it early is the key. My family has battled EPM in the past and had at least two animals with what our veterinarian diagnosed as EPM and they have all made a full recovery, but it was a long road to get them there. I currently have a 22-year-old gelding that was my father's, and he has been dropping weight since summer and has some muscle atrophy in his neck, back, and hip. As of now, all things are leaning towards EPM as the potential problem. Hopefully, we are ahead of all other symptoms and treat it properly. Keep a close eye on your horses and keep a good relationship with your veterinarian.

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*****No cattle price information due to markets closing over the holidays.**



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