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Foot Rot in Ruminants: Review and Preventative Measures

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Inside this issue:

Special Points Of Interest

- Upcoming Events

This past winter and spring, the weather left continual wet conditions in most regions. Unfortunately, a soggy environment can lead to a greater incidence of foot rot. Some producers are already seeing higher rates from persistent muddy pens. Moving into summer, more animals on pasture will likely need treatment for this disease.

Foot rot is a subacute or acute necrotic (decaying) infectious disease of ruminants that causes swelling and lameness in one or more hooves. If not treated immediately, the deeper structures of the hoof become affected and the disease can become chronic with lesser probability of recovery. Typical symptoms are lameness, foul-smelling discharge, reddened tissue above the hoof, and possibly swelling of the hoof and spreading of the claws. It is a painful condition for the animal and negatively affects performance.

The causes of foot rot can vary. However, the main cause is believed to be injury to a soft and thinning interdigital (between the claws) skin. Continual exposure to wet conditions (common in spring and late fall) and/or standing in bodies of water (pond, creek, and long-lasting mud holes) are environmental precursors that soften and weaken the interdigital skin. This weakened skin may separate from normal activity or be more easily penetrated by objects, such as stones, plant stubble, thorns, stray metal/trash or others. The opened skin allows entrance of the infectious agents that create the disease.

In cattle, a common bacteria known as *Fusobacterium necrophorum* is the organism most often discovered in an infected hoof, but it also can be found in non-diseased, interdigital skin. In sheep and goats, foot rot is caused by the bacterium *Bacterioides nodusus*. These bacteria produce toxins that cause necrosis or decay of the infected tissues. Once skin integrity is lost, the bacteria enter subcutaneous tissues, and rapid multiplication begins. Production of bacterial toxins then increases, bacterial multiplication continues, and penetration of the infection into deeper structures of the hoof occurs.

Continued On Page 2...

…Continued From Front Page The primary source of *F. necrophorum* is thought to be other infected cattle contaminating the environment. *F. necrophorum* can reportedly survive for several months, meaning the disease can repeatedly occur in areas where no cattle or foot rot cases were present for a period of time.

There are other conditions that can cause lameness in cattle and be mistaken for foot rot. These include laminitis, interdigital dermatitis (hairy heel warts), sole ulcers, sole abscesses, sole abrasions, infected corns, fractures, septic arthritis, and inflammation or infection of tendons and tendon sheaths. Fescue toxicity can cause loss of blood circulation to the hooves and subsequent lameness. Lame cattle grazing endophyte-infected fescue pastures are often mistaken as having foot rot. Please note, the aforementioned types of lameness require different treatments. If you are unsure of the diagnosis, reach out to your veterinarian for confirmation.

For cattle, sheep and goats, no feed-through antibiotics are approved for foot rot. The only way to treat hoof issues is a veterinarian-prescribed method of treatment, such as an injection.

Taking preventative steps to keep spread of the disease low is the best practice. The most important defensive measures are centered on protecting interdigital skin health. Sound preventative measures can dramatically reduce the expense of a foot rot outbreak and may be the most cost-effective method available.

- If possible, reduce the amount of time animals spend standing in wet areas. Grade pens so water does not collect and turn into mud holes, which are a good retention point for bacteria. Pastures, low-lying, swampy areas and small ponds are also bacterium collection points. If possible, fill in or fence off these areas.
- Look for objects that may cause injury by puncturing, scratching, slicing, etc. Focus on areas where animals are processed, moved and transported (e.g. trailer floors). In the Flint Hills there are rocks everywhere that can cause injury and little can be done to prevent it. Thus, building hoof integrity is the best preventative measure.
- Supplemental zinc is important in maintaining skin and hoof integrity and may reduce the incidence of foot rot. Adequate dietary zinc should be provided to help minimize foot rot and other types of lameness. An increased concentration of zinc in supplements has been shown to improve hoof health.
- Feeding organic sources of iodine also proves effective. Iodine from EDDI (*Ethylenediamine dihydroiodide*), an organic source, is believed to be effective in preventing foot rot, although it should not be routinely fed at elevated levels year-round.

For stockers, healthy hooves prior to turn-out is ideal. To help maintain healthy hooves, MFA offers the best, balanced and proven stocker mineral with options of increased zinc and iodine. Flint Hills Cow/Calf and Ricochet minerals provide optimum trace minerals and vitamins for solid, year-round protection.

If you have questions concerning your livestock, don't hesitate to contact the committed and experienced livestock resources of MFA.

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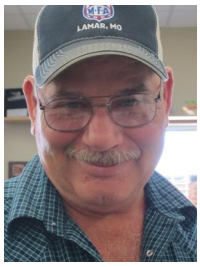
Brush Control

Doug Fast, Range & Pasture Specialist



The time for brush control will be upon us shortly, so let's go over some control options. Keep in mind that brush hogging is great for sizing grass and removing seed heads, but it does little for controlling brush.

To begin, spray blackberries in the fall. Mid-September is a good starting point. An effective treatment to spray in the fall is 2.5 oz. of Chaparral™ per acre and one quart of Astute™ per 100 gal. of water. In the spring, follow with a treatment of 1.5 pints of GrazonNext®, and one pint of Remedy® with Astute. This regimen will reduce blackberries to a point where a spot treatment of Chaparral the next fall should eliminate them.

For buckbrush, spray before June 15. A good mix for buckbrush control is 2.5 ounces of Chaparral per acre plus one quart of 2, 4-D Amine and Astute.

Multiflora rose can be controlled from May to August with GrazonNext or Chaparral. Grazon is my go-to. I like adding one pint of 2, 4-D Amine to the mix.

Controlling locust sprouts depends on how many times they have been cut. One quart of GrazonNext should work. If they have been cut many times, add one pint of Remedy to the mix.

Hedge sprouts can be controlled with one quart of Remedy plus Astute. Time the application between June and late September.

Oak and Hickory are tough to control. You must commit to a treatment plan that takes multiple applications. A combination of three pints Remedy Ultra, three pints of Tordon® 22K, and three pints Astute will be a good starting point. Adding one quart of 2, 4-D to this mix could also help. As with all brush and weed control, good coverage is vital. It will take two to three years of this kind of treatment. Surviving brush can be treated with Spike® pellets or a basal-bark treatment of Remedy and diesel.

Expectations for brush control should not be too high as it has taken it several years to grow and will take several years to control. When controlling brush, it's good to make a plan and a budget and stick with it. Your local MFA staff can help build a plan for your needs.

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We at AGChoice hope that all of our customers have a very happy 4th of July!

2019 MFA Foundation Scholarship Winners

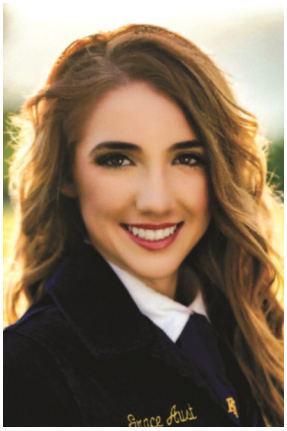
The MFA Foundation is a non-profit, philanthropic corporation established in 1958 with an initial gift of $28,000 from the estate of Robert O. Wurmb. The primary purpose of The Foundation is to provide greater educational opportunity for the youth in our trade territory.

The Foundation's major activity is its Scholarship Program, which has provided financial assistance to nearly 10,000 college and university students from rural communities since its initiation in 1965. The MFA Foundation Scholarships are offered to high school seniors in communities where MFA agencies (such as MFA AGChoice, MFA Oil Company Bulk Plants & Propane Plants, and other MFA agencies) are located and are willing to contribute $350 to the MFA Foundation as joint sponsors of the scholarship.

The amount of the scholarship is $2,000 and is applied toward the student's freshman year of college. It is not renewable.

The scholarship winner is selected by a local committee of 3 to 5 persons and should include a farmer, a businessman and a high school official. In making its selection, the committee considers the applicant's:

- Interest in furthering his/her education in studies that relate to agriculture or other fields of study that benefit rural life;
- Participation and leadership in school, church and community activities;
- Reputation for good citizenship and good moral character;
- Financial need, sources of income and willingness to work;
- Satisfactory academic progress.



Grace Emmaline Aust, daughter of Janell and Brad Aust, graduated from Prairie View High School. She plans to attend Kansas State University in Manhattan, KS.

Hannah Paige Ballard, daughter of Rachel and Clint Ballard, graduated from Madison High School. She plans to attend Kansas State University in Manhattan, KS.

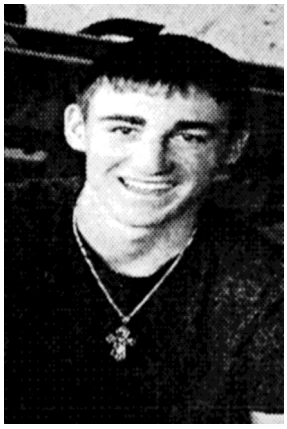
Kylee Breanne Barney, daughter of Amanda and Jeremy Tyler, graduated from Labette County High School. She plans to attend Pittsburg State University in Pittsburg, KS.

Claire Irene Crawford, daughter of Amy and James Crawford, graduated from Eureka Osage City High School. She plans to attend Emporia State University in Moran, KS.

Kreed Elliott Curran, son of Kim and Joe Curran, graduated from Girard High School. He plans to attend Kansas State University in Manhattan, KS.

Haddie Jo Gideon, daughter of Amy and Gary Gideon, graduated from Columbus Unified High School. She plans to attend Labette Community College in Parsons, KS.

Camden Shane Hoelting, son of Trish and Eric Hoelting, graduated from Olpe High School. He plans to attend Northeastern Oklahoma State University in Alva, OK.



Chandler W. Hurst, son of Mary and Keith Hurst, graduated from Chelsea High School. He plans to attend Northeastern Oklahoma A&M College in Miami, OK.

Julie Ann Martin, daughter of Becky and Kenny Martin, graduated from Southeast High School. She plans to attend Kansas State University in Manhattan, KS.

Aubry Rose O'Neal, daughter of Toni O'Neal, graduated from Uniontown High School. She plans to attend Fort Scott Community College in Fort Scott, KS.

Creep Feeding

Jon Roberts, Area Feed Sales Manager

Many producers toy with the notion of whether or not to creep their calves each year. They wonder if it will pay a return beyond the cost. Will the increased gain be offset by a lower price per pound? The fact of the matter is that producers who leave the auction barn with a check seldom wish that their cattle would have weighed less so they could have made more money. Outside of the obvious fact that creep feeding adds weight to your cattle, there are a whole host of benefits.

Let's see if any of these 10 things appeal to you.

1. Cows nursing creep-fed calves have better conception rates as a general rule, especially cows that are challenged by immaturity, low body condition or short feed supply.
2. Calves on creep have a better opportunity to reach their maximum genetic potential.
3. You can increase your stocking ratio in a creep scenario and maximize limited natural resources, particularly in situations where there is low-quality forage or short supplies of forage that need to be diverted to the cow herd.
4. Creep feeding creates an opportunity to deliver feed additives for problems such as bloat, founder, coccidiosis, pneumonia, pinkeye and foot rot.
5. The creep feeder can be used as a device to attach a back-rubber or other pesticide dispenser to address external parasites like flies, ticks and lice.
6. Creep-fed calves exhibit less stress when weaned because they are accustomed to a feed concentrate and make the transition away from mother's milk more readily.
7. Creep-fed calves sold directly off the cow shrink less, especially if they can be fed at the auction barn prior to selling, and they tend to make an easier transition in the receiving yard.
8. Creep-fed calves tend to grade better and have a higher marbling score.
9. Creep feeding can give some producers the opportunity to utilize home-grown grain.
10. Creep feeding with Cadence will allow the producer to deliver a targeted intake of 1% body weight and help the producer manage the cattle for a specific endpoint.

MFA has feed products that consistently deliver a 4-to-1 feed conversion. Put another way, every ton of feed delivers 500 pounds of gain. At $300 per ton, the breakeven on the cost of gain is $0.60.

With calf prices where they are today, creep feeding represents a tremendous opportunity to increase profit. Stop by any of our locations or give me a call to discuss ideas for increasing your profit. Best of luck from our outfit to yours.

Jon Roberts
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Summer Recipe

Strawberry Shortcake Cake Roll

For the Cake

3 large eggs

3/4 c. granulated sugar

1 tsp. baking powder

1/4 tsp. salt

1 tsp. vanilla extract

3/4 c. all purpose flour

Powdered sugar (to aid in rolling)

For the Filling & Topping

8 oz. cream cheese (softened)

1/2 c. granulated sugar

1 tsp. vanilla

2 c. cold heavy whipping cream

1 lb. fresh strawberries (or any fruit)

Directions

1. Preheat oven to 350°F. Line a 10x15" or 10.5x15" cake/jelly roll pan with foil and spray with floured nonstick cooking spray
2. Place eggs in a large bowl or the bowl of an electric mixer. Beat at medium speed with mixer for 5 minutes until foamy and yellow. Add sugar and mix for 2 more minutes, until the mixture is thickened slightly. Mix in baking powder, salt, and vanilla. Then add the flour and mix slowly until just combined. Pour into prepared pan, spreading as needed with a spatula. Tap the pan twice on the counter to release air bubbles, then bake for 10-15 minutes, or until the top is browned and the cake springs back when touched lightly.
3. While the cake is baking, lay out a clean kitchen towel onto the counter. Spread with about 1/4 cup powdered sugar.
4. Remove the hot cake from the oven and carefully, using oven mitts so you don't burn yourself, flip the cake onto the towel. This might make a mess, but that's okay. Carefully remove the pan and foil (they're hot!) and then, using the towel, roll up the cake from the short side. The towel will be rolled into the cake. Let this cool completely before continuing. Note: you can wrap the cooled cake in plastic wrap and let it sit overnight before finishing.
5. Make the filling: place cream cheese and sugar in a large bowl or the bowl of an electric mixer. Use mixer to beat the cream cheese and sugar until it's smooth and fluffy, then beat in vanilla. Slowly add the heavy whipping cream, then turn the mixer up to high and beat until stiff peaks form.
6. To fill cake: wash and dry the berries very well. Slice about 3/4 of the pound into small pieces, then pat the pieces dry. Carefully unroll the cake. Spread with some of the whipped cream mixture and top with the chopped strawberries. Carefully roll the cake back up as tight as possible, unsticking it from the towel as you go. Wrap the cake roll in plastic wrap and chill until ready to top and serve.
7. To serve: frost with remaining whipped cream and remaining berries. I used a 1M tip to create roses all over the cake, but you can just frost it if you wish.
8. This cake is best eaten the day it is made, because of the fresh berries. It will last, fully made, overnight in the refrigerator (wrap it loosely) but the berries might weep a bit.

AGChoice Locations

Blue Mound: (913) 756-2210
Emporia: (620) 342-4775
Emporia Grain & Feed: (620) 343-7562
Hepler: (620) 368-4347
Madison: (620) 437-2138
Moran: (620) 237-4668
Olpe: (620) 475-3801
Osage City: (785) 528-4632
Parsons: (620) 421-5110
Weir (east): (620) 396-8559
Weir (town): (620) 396-8554

Check Us Out on the Web at www.AGChoice.net

Upcoming Events...

Ozark Fall FarmFest
October 4-6
Ozark Empire Fairgrounds
Springfield, MO

The AGChoice newsletter is coordinated by MacKenzie Oswald and Tammy Westervelt. It is printed through MFA Inc. in Columbia, MO. If you have any agronomy, feed, seed, animal health, or grain topics you would like us to address, please call Tammy at (620) 396-8554 or send an e-mail to tswestervelt@mfa-inc.com.