

The Back Forty News



FULTON COUNTY U OF A COOPERATIVE EXTENSION SERVICE NEWSLETTER

April 2016



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FROM THE COUNTY AGENT'S DESK...

I suppose that spring is officially here, but the last week of temperatures hasn't really felt like it. Bermudagrass is trying to break dormancy, and there is some green up close to the soil surface. It is too late for a dormant application of Roundup, though. Fescue is definitely off and going, and with it, all of those winter annual weeds. Now is an ideal time to spray those. Trying to work around the wind and wet field conditions is the biggest challenge, so have the herbicide and sprayer ready to go once Mother Nature will cooperate. Don't hesitate to call if you need something identified, need an herbicide recommendation, or a sprayer calibrated!



Also, keep in mind that we are entering the season for true armyworms. Keep a close eye on cool season grass pastures, as these are the species of forages most affected. I have heard of a few scattered reports, but this last cool spell may have set them back a bit. If you suspect a problem, then give me a call. We'll get a positive identification on them and determine if an insecticide application is justified.

Bloat Prevention

Written by Paul and Melissa Beck

Make no mistake, it is a shocking sight to drive past a lush pasture and see cattle with swollen egg-shaped protrusions from their sides and dead swollen carcasses. To avoid this, producers simply need a little education, a plan and a supplement.

Bloat facts

Frothy bloat is a preventable disease issue for cattle grazing high-quality pastures that can result in traumatic death losses and reduced performance. The rapid onset of pasture bloat and the short window from the occurrence of initial symptoms and death may be the scariest part of this disease.

Bloat can be an issue on small-grain pastures such as wheat – and legume pastures such as white and Persian clover or alfalfa – and can impact both calves and mature cows.

Death losses in bloat-provocative pastures have been reported to be as high as 15 to 20 percent of cattle on a pasture, which can be a massive economic loss for the producer.

Lost production from subclinical bloat may actually be greater than producers realize, but a lot of the costs associated with bloat are from lost production due to the producer's fear of encountering bloat.

Cattle grazing on small-grain pasture can gain in excess of 2.5 to 3 pounds per day without added supplementation, so avoiding the use of legume or small-grain pastures based on a fear of bloat is

unreasonable, especially when there are affordable and user-friendly methods for control.

Causes of bloat

Frothy bloat is caused by the formation of a stable foam in the rumen that disrupts the normal eructation (belching) patterns in the rumen. This foam traps gas in the upper area of the rumen, covering the esophageal orifice and not allowing gas to escape the rumen via eructation which, in turn, builds up in the rumen. Death occurs because of pressure buildup on the animal's diaphragm and lungs and results in suffocation.

High-quality forages (clovers, alfalfa and wheat pasture) are commonly associated with this issue because they are very high in soluble cell contents (proteins and sugars) that are rapidly released in the rumen.

These compounds are broken down by ruminal microbes and form a stable protein matrix, which traps ruminal gases produced in the normal function of bacterial breakdown of forages, creating the stable foam.

Bloat is often associated with pastures in the late winter that have regrown in warming days in the waning winter. The pastures are very high in leaf content and nutritive quality.

When a cold snap occurs that freezes these plant tissues and ruptures plant cells, the soluble cell contents are even more rapidly available in the rumen of grazing cattle, exacerbating the bloat potential of the forages. Bloat can occur as soon as one hour after cattle have been placed on bloat-provocative pasture but often occurs within three hours.

Grazing management alternatives

There are several grazing management alternatives that can be used to decrease the incidence of bloat. Because this is a bigger issue for cattle that are able to consume large amounts of these high-quality forages in a short period of time, overstocking cattle on pastures to a point that forage intake is limited has been used in the past.

Alternatively, where rotational grazing is used, cattle can be placed on pastures after the forages have accumulated sufficient growth and maturity. This will increase the fiber content of the forages and, as a result, limit the bloat-provocative nature of the forages.

Offering hays or straws is often suggested as a management option to decrease bloat of cattle grazing high-quality pastures. Research conducted with calves grazing wheat pasture indicates that offering straw to supplement fiber in the diet and increase ruminal contractions has not offered benefits in reducing bloat, possibly because of the low intake of the supplemental straw.

Nutritional supplement options

Research conducted in Oklahoma and New Mexico indicates that the ionophore monensin decreases the incidence and severity of bloat for calves grazing wheat pasture. This option is attractive because ionophores increase average daily gains by 10 to 15 percent for a cost of about \$0.03 per day above the cost of the carrier supplement, which is an economic benefit to stocker cattle producers.

Even though it decreases the incidence and severity of frothy bloat on pastures, it does not eliminate the issue altogether.

Providing monensin in a carrier supplement (such as corn or soybean hulls) is an attractive option for producers because it provides additional degradable organic matter relative to the degradable nitrogen present in the rumen of cattle grazing wheat forage, as well as improving gains and subsequently the economics of the supplementation program, and finally reducing the incidence and severity of bloat more effectively than other ionophores.

In New Mexico, it was found that feeding steam-flaked milo with 170 mg of monensin per day to calves grazing irrigated wheat pasture in early April decreased the incidence of frothy bloat by 40 percent (from 61 to 37 percent) due to increased ruminal pH, forage digestibility and fluid passage rate from the rumen.

Poloxalene is a surfactant and works to disrupt the froth which can form in the rumen causing bloat. Research shows that monensin works fairly well at preventing bloat, but poloxalene has been proven to be a more effective remedy for frothy bloat than monensin.

Providing poloxalene in a self-fed supplement (blocks or other supplements) costs \$0.15 to \$0.20 per calf per day depending on the cost of the supplement.

If poloxalene is fed only during the period that forages are most bloat-provocative, then the total cost of bloat control can be covered by the prevention of the loss of a single animal. As a management strategy, producers may consider using monensin until you

have confirmed bloat issue, then switching to poloxalene once cattle show clinical signs of bloat.

Studies have been conducted since the late 1960s that indicate poloxalene at 1 to 2 g per 100 pounds of bodyweight per day dramatically reduces the incidence of bloat. If poloxalene is provided in the form of a mineral block, it is important to remove all other sources of salt and begin offering it several days before cattle are put on provocative pastures.

Cattle producers don't have to live with the threat of bloat, and they don't have to sacrifice quality forage systems in order to avoid it. There are options that make economic sense; producers have choices and simply need to find the plan that fits best with their production goals.

Paul Beck, Ph.D., is an animal science professor at the University of Arkansas Southwest Research and Extension Center. He specializes in grazing stocker calves, cow-calf production systems, forage management, forage quality and livestock nutrition. Email Paul Beck or call at (870) 777-9702.

Melissa Beck is a full-time stocker operator, a freelance writer and owner of Beck Media. She has a background in animal science and is a former extension educator.

Lime Research Plots Update

Brad Runsick, Fulton County Extension Agent

Back in late January/early February, the Fulton County Extension Office started a 3 year pasture lime project to look at the effects varying rates of pelletized and ag lime have on soil pH. However, as many farmers are aware, not all lime is the same. To adjust for that, we use a value known as the Effective Calcium Carbonate Equivalent, or ECCE. It is

reported as a percentage and is calculated from the purity and fineness of the material. This allows us to compare different materials for what their actual neutralizing ability is. Often, the cost reflects that. For example, see the cost of the 53% ECCE ag lime compared to the cost of the 77% ECCE ag lime. It is 4 times the cost but roughly only 50% more neutralizing power. But (and there is always a "but"), you also need to take into account availability, transportation, and spreading cost. And, what about how fast you need it to work? Limestone that is not very fine takes longer to work. If you've waited around too long about testing the soil and getting the lime applied, it may be worth the extra cost to get the pH changed quicker ahead of a new planting.

Another thing to note, all of our soil tests provide lime recommendations assuming average lime quality values from around the state. That value is an ECCE of 47%. Therefore, adjustments need to be made for how much you apply if the lime available to you is greater or less than 47% ECCE. I can help you figure that out, and either save you some money or keep you from under-applying limestone.

So, what we are going to do with this project is look at how good of a job each rate of different materials affects the pH. We are going to look at the pH prior to application, at 3 weeks after treatment, 3 months after treatment (MAT), 6 MAT, 9 MAT, 1 year, 18 months MAT, 2 years, 30 MAT, and 3 years. As of now, we've only got the 3 weeks after treatment results in. We did see an initial bump in pH of the samples. This may have been partly due to a lack of rainfall in those 3 weeks. Much of the surface applied lime would have wound up in the sample and may not have actually changed the pH of the soil below. Regardless, the results are shared in the table below.

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Keep in mind; these are only the 3 week results. We won't make any long term determinations based solely off of these results, but they may lend some insight into the short range effects of lime applications.

Also, as the weeks and months pass, those pH values are going to rise, maybe too high, on the plots with large amounts applied, particularly the high rates of ag lime. The three months after treatment results should be ready to report in the July newsletter!

So, the goal is to balance the cost per acre with what the actual change to pH is. In the short term (3 weeks), the only applications that saw much increase were the ones that might not be very cost effective.

<u>Treatment</u>	<u>Lime rate (lbs/acre)</u>	<u>Cost per ton</u>	<u>Application cost (per acre)</u>	<u>Average initial pH (prior to application)</u>	<u>Average pH 3 weeks after treatment</u>
1. Check - no lime	0	n/a	n/a	5.30	5.36
2. Pelleted lime (46% ECCE)	100	\$224.00	\$11.20	5.37	5.37
3. Pelleted lime (46% ECCE)	500	\$224.00	\$56.00	5.23	5.33
4. Pelleted lime (46% ECCE)	1000	\$224.00	\$112.00	5.27	5.60
5. Ag lime (53% ECCE)	2000	\$10.30	\$10.30	5.17	5.63
6. Ag lime (53% ECCE)	4000	\$10.30	\$20.60	5.30	5.73
7. Ag lime (53% ECCE)	6000	\$10.30	\$30.90	5.23	5.97
8. Ag lime (53% ECCE)	8000	\$10.30	\$41.20	5.17	6.23
9. Pelleted lime (64% ECCE)	100	\$200.00	\$10.00	5.33	5.60
10. Pelleted lime (64% ECCE)	500	\$200.00	\$50.00	5.20	5.60
11. Pelleted lime (64% ECCE)	1000	\$200.00	\$100.00	5.27	5.73
12. Ag lime (77% ECCE)	2000	\$40.00	\$40.00	5.23	6.20
13. Ag lime (77% ECCE)	4000	\$40.00	\$80.00	5.37	6.23
14. Ag lime (77% ECCE)	6000	\$40.00	\$120.00	5.50	6.63
15. Ag lime (77% ECCE)	8000	\$40.00	\$160.00	6.03	6.93

Spring Brucellosis (Bangs) Vaccinations

The spring brucellosis vaccinations are coming up soon. Livestock and Poultry technician, Franky Sharp, and I will tentatively be out on Tuesday, April 12th. If you have heifers to be vaccinated, please let us know by Tuesday, April

Return by: _____

To: County Extension Agent – Staff Chair

In reply to your inquiry, I have _____ heifer calves, 4 to 12 months of age, which I would like to have vaccinated for Brucellosis (Bang's Disease).

Name _____

Address _____

Phone _____

Community _____

Location of Farm _____

CES-443 Brucellosis Vaccination Reply Card (8-01)

5th. Return the enclosed cut-out card to our office at P.O. Box 308, Salem, AR 72576 or call us at 870-895-3301.

Include detailed directions to where the heifers will be. **Please don't assume that Franky and I necessarily know where you'll be. We both visit lots of farms throughout the year, and the names and locations start to run together sometimes!**

Vaccinations are free of charge. Heifers must be at least 4 months old but not older than 12 months old to be eligible for vaccination. We will use the same procedure as in the past and notify you by letter before you are scheduled for vaccinations. You will need handling

facilities to confine and work the calves. Also, you or a representative for you must be present at the time of vaccination or the technician will not vaccinate the heifers. If no one is there, we'll have to move along to the next stop. Remember, the time that we schedule for your stop could be give or take an hour or so. It depends on how fast or held up we are at prior stops.

Spring Weed Control & Sprayer Calibration

Brad Runsick, Fulton County Extension Agent

It's only January, but it is by no means too early to start thinking about spring weed control. No doubt, it is much too early to be considering doing any spraying, but it'll be here before you know it.

Weed control is one of the cheapest, most beneficial practices that a livestock/pasture farmer can do, yet many don't. At present prices, a rate of 1 quart/acre of 2, 4-D amine will run you right around \$4 per acre. No other practice out there will give you more bang for your buck than a good spray program. Weed control allows for

thicker stands of beneficial grasses, and it improves the overall quality of the forage's TDN and crude protein numbers. Not to mention the problems associated with toxic weeds, such as perilla mint.

For northern Arkansas, a treatment of 2, 4-D amine or Grazon P+D at a rate of 1 quart per acre in late February-early March will clean up the majority of your winter annual weeds, including buttercup and thistles. 2, 4-D and Grazon, which contains 2, 4-D, are restricted use pesticides in Arkansas, and they requires a license to purchase. Bear in mind, you'll probably need to plan on spraying again in April-May to catch those late season winter annuals and warm season weeds.

In addition to the correct weed identification and herbicide selection, timing is equally important. These dates are rough estimates, but let your own eye be your guide. Soil temperatures and moisture play a big role in the germination of weed seeds. Late February and early March may sound too early. You look out there in the field as you drive by and say, "I don't see any weeds. Spraying can wait." However, get out there and look close under that dormant grass and you'll usually find small, green, actively growing buttercups and thistle rosettes. Most winter annuals are readily controlled when the plants are at 2-4". Thistles are best controlled in the rosette stage when they are lying flat on the ground. Wait until they get too tall and you're looking a buying a more expensive herbicide or not controlling them at all. Keep in mind, these are fairly general recommendations. If you have questions about a specific weed problem or if you want me to come out and take a look, feel free to give me a call at 870-895-3301.

Dates and locations for private applicator trainings for licensing are listed above. For more specific weed species recommendations, feel free to give me a call at 870-895-3301.

In addition to making sure you've got the weed correctly identified, correct herbicide, and correct application timing, it's also a good idea to check the calibration on your sprayer. You'd be surprised how many calls a county agent gets asking how much herbicide to dump into the tank, yet the gallons per acre output of the sprayer is unknown. Without knowing how much the sprayer is putting out, it's tough to figure out what your actual herbicide amount per acre is. Not knowing results in reduced effectiveness of the application or over applications that are a waste of money, hard on the environment, or cause eventual resistance buildup by the weeds.

It's a fairly simple process that requires a little calculating, but we have some great fact sheets and handouts that will walk you through the process. If that sounds like too much trouble, and you just want a little help, I don't at all mind to come out and assist getting one calibrated. The only thing I ask is that the sprayer be in working order ahead of time. Make sure that everything is cleaned out and working right.

North Arkansas Beef and Forage Conference

On Thursday, April 21st, Fulton, Sharp, Izard, and Independence Counties will be hosting the 2016 North Arkansas Beef and Forage Conference at Satterfield Farms near Evening Shade, AR. All producers are welcome to

attend. If you are interested in riding with me, let me know. My truck can hold 3 more people, fairly comfortably. First come-first serve.

There is no cost to attend and lunch will be provided. However, pre-registration by April 11th is required, so we'll have an accurate head count for lunch. Just call the Fulton County Extension Office at 870-895-3301 to let us know.

Jeremy Huff, with NRCS, will be present to demonstrate their rain simulator. We will also be talking bull selection and haylage, with demonstrations on harvesting, baling, and wrapping (weather permitting). See the flyer for more details. Lunch is provided courtesy of Satterfield Farms.

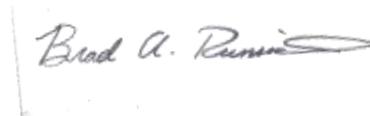
Batesville Field Day : Managing Breeding and Feeding

The annual field day will be on Tuesday, April 19, at the Livestock and Forestry Research Station. Registration begins at 8:30 a.m. Program will begin at 10:00 a.m. For details, see the attached flyer!

The registration and meal at noon are provided free of charge. If you are interested in riding with me, let me know. My truck can hold 3 more people, fairly comfortably. First come-first serve. For more information, you can call the Fulton County Extension Office at 870-895-3301 or visit the web site at www.batesvillestation.org.

4-H Rabies Clinic

The Fulton County 4-H Rabies clinic will be held on Saturday, April 30th from 9-11 a.m. at the Fulton County Fairgrounds. Half of the proceeds go to benefit the Fulton County 4-H Foundation. Please consider using this opportunity to get your dogs and cats vaccinated for this year and support your county 4-H program at the same time! There is no need to call ahead to pre-register. Just show up that day with cash or check ready! The clinic is being held in conjunction with Shaw Veterinary Clinic.



Brad Runsick

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All of the meetings and activities listed in the newsletter are open to all interested individuals.

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OFFICIAL BUSINESS

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