

American Galloway Journal



Gene Editing Riggit update Grazing Alfalfa Drought Strategies

REMINDER

Zottis is still a good option for DNA and genetic testing. Most of the people working for you when you use that lab have been there for many years and have the knowledge to help you get things sorted.

Zoetis has moved to only creating SNP reports for the samples that you submit.

Even if you are not currently using a bull for breeding it may be prudent to collect DNA samples of tail hair on important animals in your herd in case you may need the DNA later.

(Old Style) STR 12 markers (New style) SNP more than 100 markers

Either way, don't forget to get samples sent in for the DNA "Fingerprint" required on bulls if you plan to register any of their offspring.

AGBA is Looking for people interested in producing the newsletter. We have had one submission of a proposal but would like to hear from a few more people that may be a good fit for this opportunity. Traditionally it has been done voluntarily by the editor and any compensation to the editor is generated by ads placed.

Contact: Leslea Hodgson for more details if you are interested, hodgsonranch@aol.com





"L" is the 2023 Prefix for your ID Numbers.

Don't forget to tag those calves while you still know who they belong to. If you already don't know who is who, you can tag them with a number, then watch to see who they nurse off of, then record the cow/calf pair. There's more than one way to tag/ID a calf.



When life gives you fat, make Wieners!

Opportunity knocks for grassfed producers when we can get good bologna and wieners made with a high fat content, and 30% fat is where we like to be.

This exceptionally fat cow had plenty to spare and rendered us ~200 lbs. (8) boxes, of beautiful grass

fed tallow. I know this because I told our processor that I wanted him to "save the fat" and he boxed it all up for me and tried to send me home with it, well once I realized what he was putting in the van I quickly took the boxes back out, there is never enough freezer space. After some wrestling he agreed to keep it at his place and we went on to use it in bologna, wieners and 80/20 ground made with the lean trim off of one of our bulls.

Certainly sounds simple enough

->8----

Our past AGBA president Steve Castner sent over a recent Wall Street Journal article, "The Political Battle Over the Future of Your Prime Rib" by Liz Essley Whyte. In it she discusses the debate about just who should regulate gene edited cattle. What? Yes cattle are now among the three lucky species of gene edited animals for food that have been approved by the FDA. A fast growing Salmon was first, then a pig whose meat supposedly won't trigger allergic reactions in people with the alpha-gal syndrome, a sensitivity to eating red meat brought on by tick bites. And most recently black cows that will be infused with a bit of even shorter hair which is expected to in turn, increase heat tolerance.

Who should be regulating these new innovations applied to our beloved bovines? The USDA is one potential agency tasked with regulation of gene edited food animals. Some say the USDA is too close to the industry, while others prefer the idea of the USDA as being faster and cheaper. Currently the FDA is the agency approving gene edited animals for food and through reading from their website they appear to be accommodating to the new technology. The potential for genetically modifying animals is infinite, whichever agency takes the project on it will become a large one.

Heat tolerance in cattle is a problem for feedlots and has, for some time been the focus of genetics companies. In 2015 Drovers reported that Climate Adaptive Genetics had employed gene editing and a white hair gene from "Silver Galloways" and a short hair gene from Senepol cattle to create an type of bioengineered Angus with a short, light colored hair coat.

Scientists don't really have a lock on what exactly is the sequence or mechanism by which a bovine's body activates heat tolerance measures when needed, but they have isolated a couple of genes that are involved in the multi faceted physiological process and are now experimenting on cattle to see if their initial choice of genes to work was a good one, and to learn what the intentional genomic alterations (IGAs) will do in practice.

Slick coated, gene edited black bulls, are being collected and black gene edited females flushed for embryos, the offspring retain the genetic alteration and the FDA currently backs the developers claim that these genes will not escape into the environment. Hopefully this work goes in the right direction and not the way of the polled dairy cow experiment that gave the bioengineering firm Recombinetics, antibiotic resistant bacteria in the cow in addition to the hornless condition they had hoped for.

The bioengineering of animals, and cattle in particular is touted as the solution to just about every problem lurking in our planet's future. It is claimed that the animals will be healthier, they will be more humanely raised and they will use less natural resources, all of that and ridding us of old out dated management practices, so stay tuned!

Steve shared the article and expressed his concerns that in going forward we need to think about ensuring the safety of Galloway genetics, we can't allow edited genes to creep into what we hold dear. He added that when he was AGBA president he was told by one of the genetic testing lab technicians that "the genetic techs find Galloway in the foundation of all the major British breeds, including Angus, Shorthorn and Hereford" reminding us that those breeds were created in the 19th century by natural selection of Galloway traits. And in comparison, that the danger of genetically engineered livestock in the laboratory is the production of overnight Frankenstein surprises and the unintentional ruin of foundation breeds such as Galloway.

Steve concludes with this sentiment: "The AGBA can take a leadership position among

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livestock registries by prohibiting registration of animals that have been influenced by Intentional genomic alterations (IGAs). The AGBA cannot stop a genetic freak show in the livestock industry, but we can protect the purity of the Galloway breed as we have done for more than a century."

Steve Castner was the AGBA president from 2005 through 2007, he and his wife Kay raise registered Galloways and direct market their Gourmet Grassfed beef out of rural Cedarburg, Wisconsin.

Grazing Alfalfa for Rookies

Hello Rebecca, Because Alfalfa is so drought tolerant we have a last chance at grazing a few more acres this fall as long as we graze nearly straight alfalfa. Can you tell me a bit about what goes on inside the cow with bloat and what do you think of trying to graze the alfalfa into the fall?

The physiology of pasture bloat

Bloat can cause sudden and unexpected death in cattle. When the rumen is unable to expel gases produced as by-products of rumen fermentation, the rumen expands pushing on the diaphragm. This pressure on the diaphragm can inhibit the lungs' ability to take in and distribute oxygen and the animal ultimately succumbs to suffocation. Bloating is a common issue when grazing alfalfa. Pasture bloat is characterized by the foamy rumen contents.

In the rumen

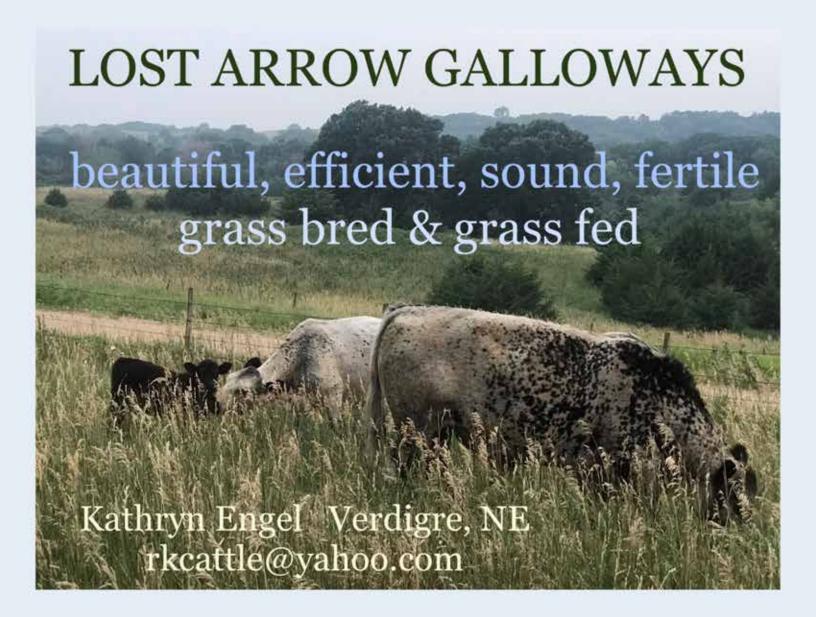
Alfalfa is a high-quality forage providing a high concentration of protein as well as energy! However, this is also what makes grazing alfalfa a bloat risk. Once the highly available or soluble protein and short-chain carbohydrates (think sugars) hit the rumen, microbes go bananas. Legume forages are mostly leafy. Therefore, they are lacking in fiber and lignin which slow the microbial process of colonizing and breaking down forage particles. So, rumen microbes are provided with an abundance of nutrients. The microbes use soluble protein and simple carbohydrates to produce a slimy by-product. This slimy by-product entraps gases produced by microbes. These gases would normally escape the rumen through belches. But instead, the gases are caught in the foam and the rumen becomes distended.



Tips for grazing alfalfa

Unfortunately, the only way to avoid all risk of pasture bloat is to avoid grazing alfalfa all together. However, sometimes circumstances force producers into utilizing forages in ways that aren't always preferable. Circumstances including drought, army worms and lack of forage availability can push producers into grazing alfalfa. So, if you find yourself with few options, here are some tips to reduce pasture bloat risk:

- Fill cattle up on grass hay or allow them a full day grazing a grass pasture before moving them on to an alfalfa stand. Hungry cattle are more likely to overindulge and bloat.
- 2. Acclimate cattle slowly by only allowing access to an alfalfa stand for grazing a few hours a day. Gradually increase time on the stand.
- 3. Graze alfalfa in late bloom. Early bloom is the highest risk for developing bloat from grazing alfalfa. At this growth stage soluble proteins and available carbohydrates are at their peak. As plants mature, cell walls increase along with lignin levels. Higher fiber and lignin content of the forage will slow microbial breakdown, thereby preventing bloating.
- 4. Never graze after a frost. Frost ruptures cells releasing soluble proteins and carbohydrates. The already broken-down cell walls allow easier access to the rumen microbes. Without the fibrous barrier or the plant cell walls, microbes can produce their slime even quicker.
- 5. Supplement with poloxalene. This surfactant breaks up soluble protein froth and prevents pasture bloating. It can be offered to grazing cattle through a lick tub. However, individual consumption can be variable, so it can not be your only strategy for legume bloat mitigation.
- 6. Plant 'bloat-free' varieties or alternative legume species for emergency grazing. While 'bloat -free' varieties of alfalfa are not 100% effective, they do reduce bloat risk. Taking this a step further, planting alternative legume species may be the best option. One such alternative which has gained popularity in western states is sainfoin. Many producers who I have spoken with about this unique forage brag about how they can graze it without bloat risk. This is because sainfoin contains tannins. Tannins precipitate soluble protein and prevent the accumulation of slimy froth in the rumen.
- 7. Observe animals when moved onto an alfalfa paddock. If you see signs of discomfort such as belly kicking, stomping of feet, labored breathing or even a large left side, call the vet immediately!



Grazing Alfalfa Cont'd

In conclusion, grazing alfalfa is certainly not an ideal situation to be in as a beef producer. However, when the situation does arise, there are strategies you can implement to lower your risk of pasture bloat. Unfortunately, there is no number on a forage report that can tell you a stand is "safe" from bloat risk. Unlike nitrates or prussic acid, bloat caused by alfalfa is the result of several characteristics of the forage as well as surrounding circumstances.

Rebecca Kern-Lunbery, MS, PAS Animal Scientist



4007 Cherry Ave.

Kearney, Nebraska 68847

Phone: 308-234-2418 or 800-887-7645

And the Ayes Have it, Riggits are in!

The inclusion of Riggit marked Galloways into The American Galloway family has come to fruition. In a meeting of the directors on July 9th it was decided that a committee would be formed to make a proposal to amend the Herd book rules to include a Section IV to accommodate the addition of Riggits. The committee members were Sarah Bowman, Kathy Engel, Karen Parsley, Joe Schumacher and the chairperson was Richard Serr. About mid-September the committee had created a proposed set of requirements for the registration of Riggits and on September 20th the secretary/treasurer reported that a Section IV had been approved.

With nearly half of the board of directors attending the World Galloway Conference, Richard Serr, chair of the Riggit committee was able to put together an electronic vote provided for in the AGBA bylaws. This made it easier to cast votes without all of the board members gathering on one date to vote. The vote was close at first due to a somewhat short deadline of three days from the motion being made and trying to get the attention of the board members who were at that time touring in Switzerland. The majority voting in favor was reached in an 8 out of 12 board members voting in favor of the new section IV before the deadline and then one threw in his support of a section IV after the deadline.

Registration forms will now need to be created for breeders to fill out when sending in for registrations. The Riggit is not an easy pattern to describe in simple words and there may

be a steep learning curve once the forms come into play and a few kinks to be ironed out.

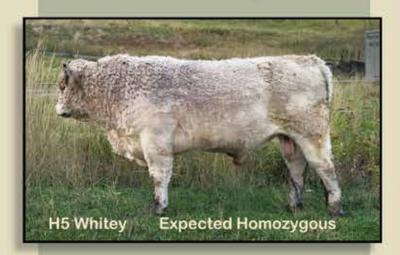
Surely a milestone in the history of the American Galloway Breeders Association to now include this mysterious color pattern shown in this rendering of a Galloway from all the way back in 1804.



A Fat Galloway Heifer, at Smithfield Christmas Show 1804 George Garrard RA (1760-1826)

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Value Added Chuck

The Farmers Markets have been great this summer, having discontinued one and increasing to two days a week at the other. If you like talking to strangers about Galloways, beef, cooking beef and whatever, the market is a good place to do it. Soon the people who were once strangers to you become your customers.

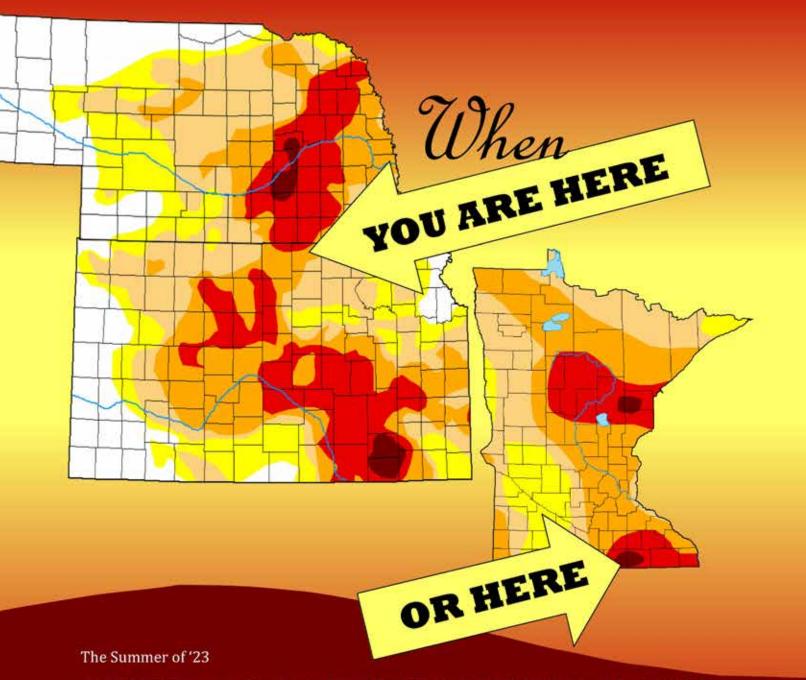
At the start of market season we found we had plenty of chuck roasts, because of this, we asked our processor to deconstruct the chuck primal as much as possible on our next two cows. When he was finished working his wonders we had a much wider selection of steaks for our customers to choose from. Because, you can't stand there and sell Rib Eyes all day, you'll run out!

Flat Iron, Sierra, Petite Tender, Denver & Boneless Chuck short ribs. Most of these can be grilled whole and then sliced for a group of people or you can have them cut into steaks for the people looking for smaller steaks.

A few other good selling, steaks that are not in the chuck are Flank, Skirt, Tri-Tip and Bavette. All bigger steaks that can be shared.

One of our customers has a CSA (community supported agriculture) program with lamb and wants to add beef to his offerings, he threw a party for his members to choose which breed they wanted to use for the beef. He prepared both Galloway and Scottish Highland, our Galloway won hands down!

When you are ready to have that cull boned out for burger consider some of the higher value cuts out of the chuck, rather than just grinding all of that section for ground beef, why not make steak?



Our LaNina winter may have been a bit milder last year, but it didn't do the midwestern Galloway breeders any favors once early summer rolled around. The small amount of spring precipitation had been used up by the grasses by mid June and nothing was in sight. That lack of rain has persisted throughout the most important grazing months, and persists yet today. During these weather challenges we are faced with the questions of how we are going to weather a serious drought while raising purebred cattle, not to mention a rare breed. So to help us better understand how some of our fellow Galloway producers are getting through it the Marcotts put together a collection of photos and their story to share insight about what they are doing on their farm in north central Kansas.

Terry Marcott, AGBA Treasurer & Secretary, and Annette Marcott, AGBA promotional team member, farm and raise Galloways outside of Belleville, Kansas.

Dry in the Sky- Drought Management

Areas of north-central Kansas have experienced three years of drought, at best receiving fifty percent of average annual moisture with spotty rains and little snowfall. After drought year number one and with La Nina showing no signs of abating, we implemented our drought management plan for the Galloway herd.



Actually, we found that our previous decision to raise Galloways had been the first step in surviving the drought. With their moderate size and feed efficiency we were able to keep our cows satisfied on marginal pastures as they would happily eat a variety of weeds and the tender shoots of thorny trees. The cows weaned slightly lighter calves and lost a little body condition, but successfully bred back efficiently. Our main pasture purchased 3 years previously had been overgrazed and was inundated with an incredible number of large Eastern Red Cedar trees and Hedgeapple trees. Hand clearing the 30 acre pasture of trees commenced in 2021 which increased the percentage of grazeable acres and reduced the competition for moisture.



As drought year number two reared its ugly head, we implemented additional measures. First of all, we reduced the cowherd to remove any cows that were calving out of sync with the majority of the herd. It's not fun to watch favorite cows move on to other producers, but it increased our overall efficiency, including being able to feed lower quality baled forage. Any mother cow that expressed anxiety or ran away from human contact also was moved down the road. Yearling cattle were moved into a separate pen where they received the better-quality hay routinely. The rest of the herd, including the bulls were fed 2/3 marginal quality old hay interspersed with a better green brome bale. In the last third of gestation, the better-quality bale was stemmy alfalfa. Seeing no end to the drought, we did not graze one of the cleared pastures in 2022, but allowed the native grass to build up reserves. Hay production was dismal, we did plant dryland corn for the grain, but mostly for the stalk residue to graze in late fall.

Pictured are piles of Eastern Red Cedar

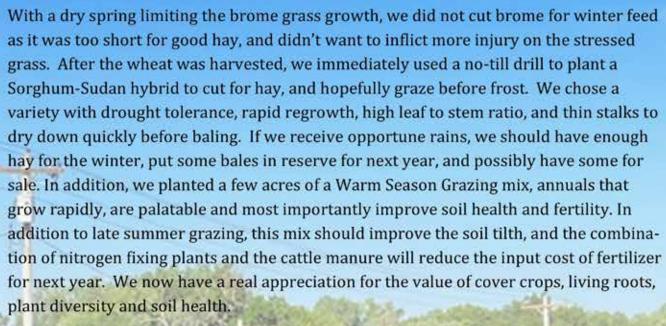
In early 2023, the third year of the drought, La Nina was stubbornly hanging on, but predictions were for it to weaken mid-year. We became 'professional meeting attendees' and signed up for every conservation or drought management meeting that we could find.

We were introduced to the concept of rotational grazing, and found it to be easier than we had previously thought. Upon the presenter's recommendations we purchased a couple rolls of Gallagher Turbo Wire, plastic step-in temporary posts, and hand operated geared wire winders.

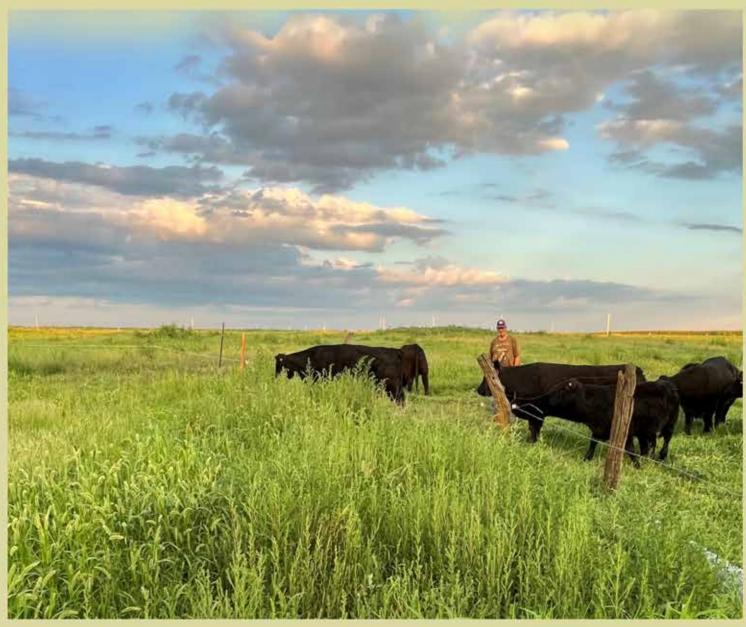
The plastic step-in posts will easily penetrate hard ground where rod posts or tposts have difficulty. Pastures are quickly divided into 3-4 day allotments with this system.

The cattle seem to eat less palatable weeds better with the rotation system and quickly
learn when the pastures are ready for the next grazing segment. The Turbowire has high
visibility, great conductivity and is easily re-wound on the reel. To ensure the recovery of
the pastures, we don't graze the pastures short, but leave 3-4 blades/leaves for plant
recovery. This system has worked very well and we will continue using it in the future.

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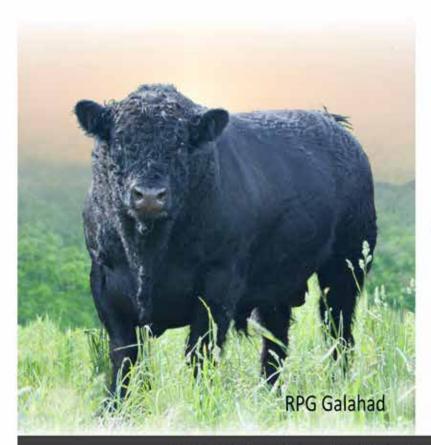
Cattle management involves keeping the first calf heifer pairs separate and rotation grazing them on the better pastures, which will include the Warm Grazing Mix. Drought year 2023 also involved hand cutting Cedars and Hedgetrees from an additional 40 acres of native pasture and allowing the grass a year to rest and recover. Efficient water management for the pastured cows was also an obstacle, a topic for another time.



Above: The area on the left was grazed May 25 to June 5th and then the cows were moved to another area. This paddock is brome grass and some weeds. We try to graze the pastures down to no less than 3-4 leaves so that the plant has enough leaf area for photosynthesis. Total rainfall from the first of the year for this field was about 2 inches, which came in .30 inch or less increments. We have now had a week of temperatures over 100 degrees, and no rainfall, but the grass is healthy enough that the morning dew seems to revive it.

Right: Brome grass grazed high for a quick recovery.





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