APRIL 2025 ISSUE

Cooperative Extension Service

AGRICULTURE & NATURAL RESOURCES NEWSLETTER

A Monthly Newsletter by Fleming County Extension Office

Cooperative Extension Service
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IN THIS ISSUE:

A Note From Your Agent:

I hope this newsletter finds you all doing well.

2025 has certainly started off with a bang. Hopefully things settle down and we can have a normal rest of the year. We're currently wrapping up our winter educational programs. During the summer we slow down on those types of education opportunities since everyone will be busy in the fields and with family vacations and all. We do have a few things planned throughout the spring and summer but not at the intensity that we do in the fall and winter. You can find more information throughout this newsletter as well in future editions as well.

We're giving the Hay Production Field Day a go again this year. Both dates last year were rained out so we're hoping this year the weather will be perfect. This is for anyone that produces hay and for those that only purchase hay to see what all goes into production and how to identify quality! We hope you can join us on May 9th!

April Wilhoit

Timely Tips

Les Anderson, Extension Professor, University of Kentucky

Spring-Calving Cow Herd

- Watch cows and calves closely. Work hard to save every calf. Calves can be identified with an ear tag while they are young and easy to handle. Commercial male calves should be castrated and implanted. Registered calves should be weighed at birth.
- Cows that have calved need to be on an adequate nutritional level to rebreed. Increase their feed after calving. Do not let them lose body condition. Keep feeding them until pastures are adequate.
- Do not “rush to grass” although it can be really tempting. Be sure that grass has accumulated enough growth to support the cow’s nutritional needs before depending solely upon it. Cows may walk the pastures looking for green grass instead of eating dry feed. This lush, watery grass is not adequate to support them. Keep them consuming dry feed until sufficient grass is available to sustain body condition. We’ve spent too much money keeping them in good condition to lose it now!
- Prevent grass tetany! Provide magnesium in the mineral mix until daytime temperatures are consistently above 60oF. Mineral supplement should always be available and contain a minimum of about 14% magnesium. Make sure that your mineral mix also contains adequate selenium, copper, and zinc. You can ask your feed dealer about the UK Beef IRM High Magnesium Mineral.
- Make final selection of heifer replacements. Strongly consider vaccinating with a modified-live BVD vaccine.
- Purchase replacement bulls at least 30 days before the breeding season starts. Have herd bulls evaluated for breeding soundness (10-20% of bulls are questionable or unsatisfactory breeders). Get all bulls in proper condition (BCS 6) for breeding.
- If you are going to use artificial insemination and/or estrous synchronization, make plans now and order needed supplies, semen, and schedule a technician.
- Prebreeding or "turnout" working is usually scheduled for late April or May between the end of calving season and before the start of the breeding season (while cows are open). Consult your veterinarian about vaccines and health products your herd needs. Decide now on the products needed and have handling facilities in good working order. Dehorn commercial calves before going to pasture.

Fall Calving Cow Herd

- Determine pregnancy in your herd now and cull open ones at weaning especially if the open cows are older than 6 years of age.
- Re-implant feeders.
- Consult with your veterinarian about preweaning working of the herd.
- You may let calves creep-graze wheat or rye if it is available. Calves will benefit from extra feed until spring grass appears.
- Plan marketing strategy for feeder calves.

Stockers

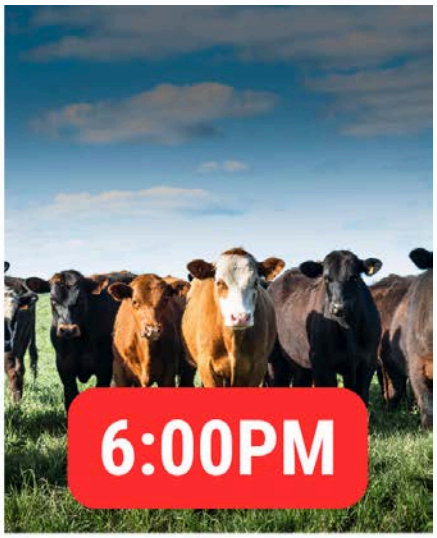
- Do not go to pastures too soon, give plants some growing time. Then stock at two to three times the July rate and rotate rapidly.
- "Condition" purchased calves prior to grazing. They should be processed and fed a conditioning diet prior to being placed on pasture. You can also use this time to introduce them to electric fences used in rotational grazing.
- Provide a good mineral supplement which contains a rumen modifier (Rumensin, Bovatec, etc.) along with adequate levels of copper and selenium.

General

- We have made a muddy mess this winter, so be prepared to reseed bare spots. Our forage group has some excellent information on restoring heavy-traffic areas.
- Make plans to improve hay feeding areas to avoid muddy conditions like we have faced this winter. Consider geotextile fabric with gravel or concrete feeding pads.
- Prepare for the grazing season. Check fences and make necessary repairs. Check your corral, too.
- Get everything ready to make high quality hay in May! Have equipment serviced and spare parts on hand. Order baler twine now. Be prepared to harvest an adequate supply of hay when you have the opportunity. Re-supply the extra hay that you fed out of the barn. This past winter caused most producers to exhaust their hay supply, so it is time to re-stock.
- Plan now for fly control ... decide what fly control program that you will use but do not put insecticide eartags on cattle until fly population appears.

Cooperative Extension Service

CATTLE GRADING



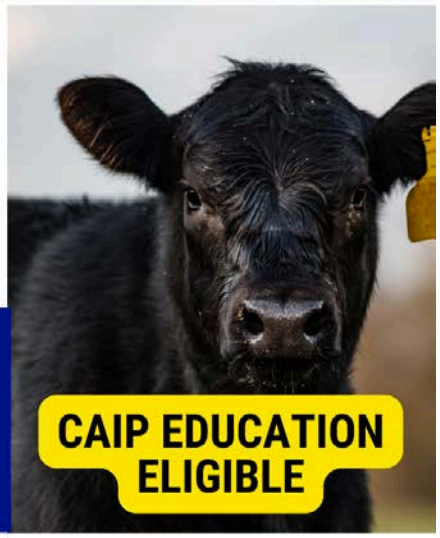
APRIL 22, 2025

FARMERS STOCKYARDS

255 HELENA RD, FLEMINGSBURG

Speaker: Mr. Jim Akers

- Live feeder grading demonstration
- Price determination
- What causes discounts
- Cow condition scoring
- Market outlook



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- ROBERTSON CO.: (606) 724-5796

COUNTS FOR 2 HOURS FOR 4-H LIVESTOCK EDUCATIONAL HOURS

Upcoming Forage Events

https://forages.ca.uky.edu/events

- Apr. 22– KY Fencing School, Owensboro, KY
- Apr. 24 – KY Fencing School, Tompkinsville, KY
- Apr. 29-30 – Beginning Grazing School, Russellville, KY
- Apr. 21-23 – Southern Pasture Conf., Corpus Cristi, TX
- May. 9 – Fleming Co. Hay Field Day, Flemingsburg, KY
- Sept. 24-25– Intermediate Grazing School, Versailles, KY
- Oct. 28 – KY Grazing Conf. East, Winchester, KY
- Oct. 29– KY Grazing Conf. West, Leitchfield, KY
- Jan. 11-13, 2026 – AFGC Annual Conf, Asheville, NC

CAIP EDUCATION OPPORTUNITIES- FLEMING COUNTY

ONLINE AT ANYTIME:

- Visit: https://anr.ca.uky.edu/caip-training for instructions
- Visit: https://campus.extension.org/enrol/index.php?id=1970 to access the online training site

ADDITIONAL OPPORTUNITIES:

- Programs listed in this newsletter

****BEGINNING JULY 1, 2025 ONLY UK EXTENSION EVENTS & EDUCATIONAL PROGRAMS WILL COUNT TOWARDS CAIP EDUCATION*****

CONTACT: (606) 845-4641 OR APRIL.WILHOIT@UKY.EDU FOR MORE INFO

Banana Split Breakfast Bowl

Servings: Makes 2 servings

Serving Size: 1 banana with toppings

Directions:

1. Wash hands with warm water and soap, scrubbing for at least 20 seconds.
2. Place one banana in bottom of small bowl.
3. Spread half of the yogurt on top of split banana.
4. Add half of the strawberries and pineapple tidbits.
5. Top with half of the granola, nuts and berries.
6. Repeat with other banana half and remaining toppings.
7. Refrigerate leftovers within 2 hours.

Source: Christy Blevins, Bell county NEP Assistant Senior, University of Kentucky Cooperative Extension

Nutrition Facts Per Serving: 310 calories; 8g total fat; 1.5g saturated fat; 0g trans fat; 5mg cholesterol; 70mg sodium; 58g total carbohydrate; 5g dietary fiber; 35g total sugars; 7g added sugars; 8g protein; 0% Daily Value of vitamin D; 10% Daily Value of calcium; 6% Daily Value of iron; 15% Daily Value of potassium.

INGREDIENTS

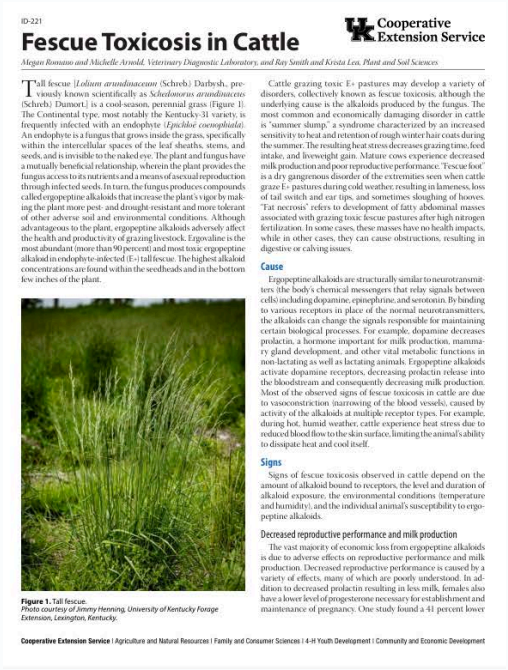
- 2 medium bananas, peeled and sliced lengthwise
- 1/2 cup low-fat vanilla yogurt, divided
- 1/2 cup diced or sliced strawberries, divided
- 1/2 cup pineapple tidbits-drained, divided
- 4 tablespoons granola, divided
- 2 tablespoons of nuts (optional)
- 6 blueberries, raspberries, blackberries or cherries (optional)

Forage Timely Tips: APRIL

- Sign up for an April KY Grazing or Fencing School.
- Graze winter annuals that were seeded last fall.
- Graze cover crops using temporary fencing.
- As pasture growth begins, rotate through pastures quickly to keep up with the fast growth of spring.
- Creep-graze calves and lambs, allowing them access to highest quality pasture.
- Finish re-seeding winter feeding sites where soil disturbance and sod damage occurred.
- As pasture growth exceeds the needs of the livestock, remove some fields from the rotation and allow growth to accumulate for hay or haylage
- Determine need for supplemental warm season forages such as pearl millet or sudangrass. Wait till May to plant though.
- Flash graze pastures newly seeded with clovers to manage competition.

Pub of the Month: Fescue Toxicosis in Cattle-ID221

UK's "Fescue Toxicosis in Cattle" publication was recently updated by lead authors Megan Romano (UK toxicologist) and Michelle Arnold (UK ruminant extension veterinarian). We are highlighting this pub in April because fescue toxicosis can become apparent on cattle farms in KY a few weeks after fescue starts active spring growth (typically mid to late April). It contains a detailed description of the endophyte in tall fescue and the alkaloids it produces (primarily ergovaline). This pub provides details about the classic signs and symptoms of fescue toxicosis in cattle including decreased reproductive performance, decreased milk production, and heat stress. It describes the effects of heat stress on average daily gain. This comprehensive article also describes the severe effects sometimes evidenced in cattle including fescue foot and fat necrosis. Finally, ID-221 details some of the reasons for lower reproductive performance such as lower conception rates from lower progesterone, poor embryo quality, and decreased sperm motility.



ID-221

Fescue Toxicosis in Cattle

Cooperative Extension Service

Megan Romano and Michelle Arnold, Veterinary Diagnostic Laboratory, and Ray Smith and Krista Lea, Plant and Soil Sciences

Tall fescue [*Lolium arundinaceum* (Schreb.) Darbysh., previously known scientifically as *Schedonorus arundinaceus* (Schreb.) Dumort.] is a cool-season, perennial grass (Figure 1). The Continental type, most notably the Kentucky-31 variety, is frequently infected with an endophyte (*Epichloë coenophiala*). An endophyte is a fungus that grows inside the grass, specifically within the intercellular spaces of the leaf sheaths, stems, and seeds, and is invisible to the naked eye. The plant and fungus have a mutually beneficial relationship, wherein the plant provides the fungus access to its nutrients and a means of asexual reproduction through infected seeds. In turn, the fungus produces compounds called ergopeptine alkaloids that increase the plant's vigor by making the plant more pest- and drought-resistant and more tolerant of other adverse soil and environmental conditions. Although advantageous to the plant, ergopeptine alkaloids adversely affect the health and productivity of grazing livestock. Ergovaline is the most abundant (more than 90 percent) and most toxic ergopeptine alkaloid in endophyte-infected (E+) tall fescue. The highest alkaloid concentrations are found within the seedheads and in the bottom few inches of the plant.

Figure 1. Tall fescue.
Photo courtesy of Jimmy Henning, University of Kentucky Forage Extension, Lexington, Kentucky.

Cattle grazing toxic E+ pastures may develop a variety of disorders, collectively known as fescue toxicosis, although the underlying cause is the alkaloids produced by the fungus. The most common and economically damaging disorder in cattle is "summer slump," a syndrome characterized by an increased sensitivity to heat and retention of rough winter hair coats during the summer. The resulting heat stress decreases grazing time, feed intake, and liveweight gain. Mature cows experience decreased milk production and poor reproductive performance. "Fescue foot" is a dry gangrenous disorder of the extremities seen when cattle graze E+ pastures during cold weather, resulting in lameness, loss of tail switch and ear tips, and sometimes sloughing of hooves. "Fat necrosis" refers to development of fatty abdominal masses associated with grazing toxic fescue pastures after high nitrogen fertilization. In some cases, these masses have no health impacts, while in other cases, they can cause obstructions, resulting in digestive or calving issues.

Cause

Ergopeptine alkaloids are structurally similar to neurotransmitters (the body's chemical messengers that relay signals between cells) including dopamine, epinephrine, and serotonin. By binding to various receptors in place of the normal neurotransmitters, the alkaloids can change the signals responsible for maintaining certain biological processes. For example, dopamine decreases prolactin, a hormone important for milk production, mammary gland development, and other vital metabolic functions in non-lactating as well as lactating animals. Ergopeptine alkaloids activate dopamine receptors, decreasing prolactin release into the bloodstream and consequently decreasing milk production. Most of the observed signs of fescue toxicosis in cattle are due to vasoconstriction (narrowing of the blood vessels), caused by activity of the alkaloids at multiple receptor types. For example, during hot, humid weather, cattle experience heat stress due to reduced blood flow to the skin surface, limiting the animal's ability to dissipate heat and cool itself.

Signs

Signs of fescue toxicosis observed in cattle depend on the amount of alkaloid bound to receptors, the level and duration of alkaloid exposure, the environmental conditions (temperature and humidity), and the individual animal's susceptibility to ergopeptine alkaloids.

Decreased reproductive performance and milk production

The vast majority of economic loss from ergopeptine alkaloids is due to adverse effects on reproductive performance and milk production. Decreased reproductive performance is caused by a variety of effects, many of which are poorly understood. In addition to decreased prolactin resulting in less milk, females also have a lower level of progesterone necessary for establishment and maintenance of pregnancy. One study found a 41 percent lower

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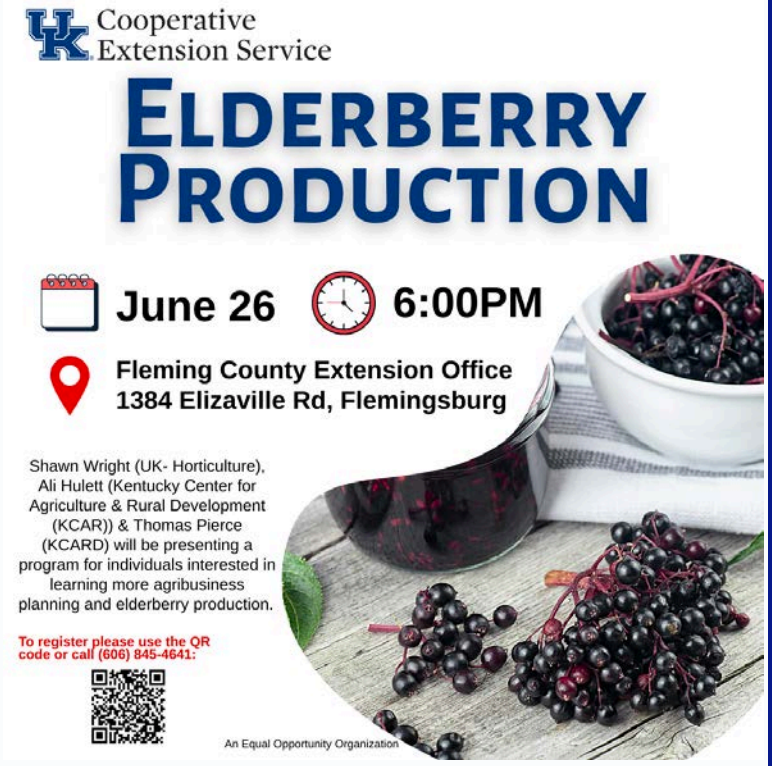
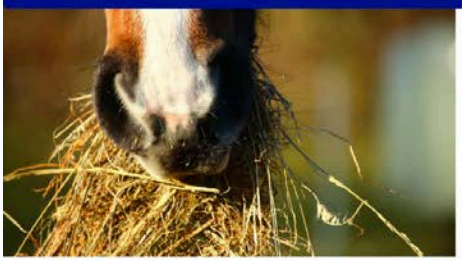
The authors outline how KY cattlemen can collect and submit fescue samples for testing including endophyte percentage in a pasture and ergovaline analysis in order to assess risk. The remainder of the publication describes prevention and control of fescue toxicosis from simple procedures such as a good mineral program to improving the overall diet. It outlines other management practices that involve more detailed planning like avoiding fescue at certain times of the year when ergovaline is highest, removing seedheads (which are high in ergovaline), and using intensive rotational grazing. Lastly, it describes the complete cure for fescue toxicosis, that is, completely replacing the stand with novel endophyte tall fescue varieties. The effort and expense of this may not be needed by many KY producers, but when fescue toxicosis is causing major reproductive or animal gain losses, this practice may make sense. To download this pub go to the UK Forage Website under Animal Disorders or use the following link: https://publications.ca.uky.edu/id-221



QUALITY HAY PRODUCTION

FIELD DAY



FRIDAY, MAY 9, 2025

LOCATION: 1965 MARTHA MILLS RD, FLEMINGSBURG

9:00AM-3:00PM

RAIN LOCATION: FLEMING CO. EXTENSION OFFICE

- **9:00AM:** REGISTRATION, DONUTS, & VENDORS OPEN
- **10:00AM-NOON:** UK SPECIALISTS COVER VARIETY OF TOPICS ON WEED ID, VISUAL COMPARISONS OF HAY QUALITY AND MORE!
- **NOON:** LUNCH & VENDORS
- **12:30PM:** LOCAL EQUIPMENT DEALERSHIPS DEMOS

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PLEASE REGISTER BY: MAY 3RD

Fescue Article from The Horse

Another useful publication/article recently appeared in the periodical The Horse. It is entitled “The Pros and Cons of Tall Fescue” and describes this plant as the most resilient grass we have for KY horse pastures, but also as a nemesis for late-term pregnant broodmares. Fortunately, KY-31 tall fescue is a very useful pasture for the typical pleasure horse farm, but broodmare farms are increasingly favoring stand replacement with novel endophyte varieties.

The following is the Take-Home Message of this publication. Because tall fescue is a popular and well-established grass across pastures in the U.S., eliminating the risk of toxicosis in broodmares is nearly impossible. The only way to avoid fescue toxicosis is to understand the nature of the plants in your pasture. Know when ergovaline levels will be high, and choose the most beneficial management options to reduce the risk to broodmares. Download or view this at https://thehorse.com/1125530/the-pros-and-cons-of-tall-fescue/

Be Aware of Frothly Bloat Risk in Spring Pastures

Dr. Michelle Arnold, DVM-Ruminant Extension Veterinarian (UKVDL)

Ruminant animals produce large volumes of gas through the normal fermentation process during forage digestion. This gas is predominantly belched up (eructated) as it passes through the gastrointestinal tract. If something interferes with gas escape from the rumen, pressure builds up and causes an obvious distension in the left flank of the abdomen, a condition known as “bloat” (Figure 1).

Photo: Belinda Walker, NSW DPI

Figure 1: Frothy bloat. From “Bloat in Cattle and Sheep” September 2014 Primefact 416 3rd edition Dr Graham Bailey, Senior Veterinary Officer, NSW Department of Primary Industries

The swollen rumen occupies a large amount of space within the abdomen, resulting in compression of the lungs and diaphragm which interferes with breathing and tissue oxygenation, obstruction of blood flow to vital organs, and potentially the rapid death of the animal. Bloat may be classified into one of two types, “free gas” or “frothy”, with both types possible in cattle whether on pasture or in a confinement feedlot setting. Free gas bloat in pastured cattle is most often due to obstruction of the esophagus (choke) with rapid onset of bloat and death if not addressed quickly. Free gas bloat from choke can be relieved by passing a tube down the esophagus into the rumen, simultaneously clearing the esophageal obstruction and releasing the trapped gas. Frothy bloat, on the other hand, results when fermentation gases become trapped within a stable foam in the rumen (like the head of a beer) and the animal is no longer able to belch up the gas. Simply passing a tube into the rumen will not solve the problem because the froth prevents gas from leaving the pressurized rumen. For effective relief, anti-foaming agents must be delivered directly into the rumen to disperse the foam and allow the gases to escape

Frothy bloat occurs in cattle when grazing forages high in soluble protein and low in fiber, most commonly pastures with a high percentage of immature legumes (alfalfa, white clover) or succulent, vegetative wheat or rye pastures. This disorder is caused by the interaction of many factors including environmental conditions, the structural and chemical composition of the forages present, and physiologic factors within the animal. Because the disorder is multifactorial, frothy bloat occurrence is sporadic, unpredictable and very difficult to completely prevent. It is most reported when cattle, especially yearlings, graze legume or legume-based pastures (over 50% legumes) in the late winter and early spring. Bloat incidence varies year-to-year depending on the relative presence or absence of clover; years with low residual grass cover in the fall, especially after fall drought, and sufficient moisture in the spring will favor clover dominance. Frothy bloat is also a significant cause of death in wheat pastured stocker cattle. The protein content of wheat forage is influenced by plant growth stage and level of nitrogen fertilization. Vegetative wheat has crude protein (CP) values ranging from 18–34% and low neutral detergent fiber levels of 30–40%. Forage samples from bloat-prone wheat pastures contain less dry matter and total fiber while CP and soluble nitrogen fractions are significantly higher. Death losses from pasture bloat are believed to be approximately 2% annually but are sometimes much higher (10-20%) on individual pastures. Costs of bloat include not only losses of livestock but also decreased productivity from avoidance of the most nutritious pastures due to bloat risk.

Figure 2: Poloxalene treatment for frothy bloat. (Accessed via Google Images 3/6/2025)

fermentation and production of ruminal gas, the digesta passage rate, and the foaming properties of rumen contents. For example, a slower passage rate allows more time for foam formation and a higher chance of bloat. Similarly, the abundance of certain salivary proteins within saliva decreases that animal's formation of rumen foam. Some animals have a genetic predisposition to bloat, and chronic bloaters should be culled.

Figure 3: Rumen Trocar (above) and Cannula (below). Accessed via Google Images 3/6/2025

The signs of bloat are easily recognized if observed; the problem is an animal may go from normal to dead within an hour. Cattle with early bloat display a distended left flank, they stop grazing, they may kick at their belly and be reluctant to move. As bloat advances, the animal may appear distressed (may vocalize, eyes may bulge), stand up and lie down repeatedly, strain to urinate and defecate, exhibit rapid and open mouth breathing, grunting, staggering, and in advanced cases the animal will go down. Death is rapid at this stage due to compression of the lungs, diaphragm, and major organs by the distended rumen. Animals that are mildly affected can be drenched orally or through a stomach tube with a liquid anti-bloat preparation containing the surfactant poloxalene (Therabloat®, Zoetis; Figure 2). After dosing, it is encouraged to keep the animal moving to allow the preparation to mix with the frothy rumen contents. Severely bloated animals in distress need immediate veterinary attention. his may be achieved by inserting a wide bore trocar and cannula (Figure 3) into the rumen at the highest point on the left flank (where the swelling is greatest). After gas and froth is released, an anti-bloat preparation can be poured through the cannula into the rumen to help break down all remaining froth/foam. If poloxalene is unavailable, vegetable oil (250–500 mL) or mineral oil (100–200 mL) can be used. In most cases of advanced frothy bloat, a trocar and cannula will quickly plug up with foam and will not be adequate to relieve the pressure. In those cases, a 10–20 cm incision will have to be made using a scalpel or clean, sharp knife inserted into the highest point of the left flank. It may be necessary to manually remove the frothy material from the rumen. In these emergency cases there is usually no time to wait for a vet to arrive, so livestock owners will have to do this themselves. Veterinary attention is still necessary to irrigate the abdominal cavity, clean and stitch the wound and begin antibiotic treatment to prevent serious infection.

Bloat Guard®

Type A Medicated Article

Description:
Bloat Guard controls legume or wheat pasture bloat in cattle and is effective for at least 12 hours after a single dose. *Bloat Guard* has no adverse effect on reproduction, rumen function or milk production.

Bloat Guard is intended for use on individual rations of ground feed using the Mixing and Directions for use shown below.

Active Ingredient:
Poloxalene 53%
(Each 2/3 oz. by weight contains 10g of poloxalene)

Registered Claims:
For prevention of legume (alfalfa, clover) and wheat pasture bloat in cattle.

Mixing and Directions for Use:
The dose of *Bloat Guard* is proportional to body weight and also depends upon the severity of the bloat-producing conditions. The dose of 1g poloxalene per 100 lb of body weight is recommended for cattle under moderate bloat-producing conditions. For cattle under severe bloat-producing conditions, the dose should be doubled (2g of poloxalene per 100 lb of body weight).

Use the measure enclosed in the *Bloat Guard* bag, which is equal to 1/4 of a standard measuring cup and holds approximately 2/3 oz of *Bloat Guard* by weight. Each 2/3 oz by weight contains 10 g of poloxalene (the active drug ingredient).

Daily Dose

Animal weight (lb)	Number of measures	Dose (grams)
500	1/2 to 1	5 to 10
1000	1 to 2	10 to 20
1500	1 1/2 to 3	15 to 30
2000	2 to 4	20 to 40

Bloat Guard is to be consumed daily. *Bloat Guard* should be sprinkled on individual rations of ground feed, starting 2 or 3 days before animals are exposed to bloat-producing conditions.

Repeat the feeding of *Bloat Guard* when animals are exposed to bloat-producing conditions more than 12 hours from the last feeding of *Bloat Guard* but do not exceed the higher dose level in any 24-hour period.

If your animals do not accept *Bloat Guard* readily, stir the recommended amount into their feed. After animals become accustomed to the change in diet, sprinkle *Bloat Guard* on top of the feed.

Store at or below 25°C (77°F), excursions permitted up to 40°C (104°F).

Caution:
It is essential that each animal consumes the total recommended dose of *Bloat Guard* daily for adequate protection.

Warning:
The normal life of this product is at least 24 months. However, when the product is subjected to extreme temperatures (38° C/100° F) for long periods of time (6 months), spontaneous combustion may occur. The product is not combustible unless it develops a strong, irritating odor. If this occurs, flush with water and discard immediately.

Caution:
Certain components of animal feeds, including medicated premixes, possess properties that may be a potential health hazard or source of personal discomfort to certain individuals who are exposed to them. Human exposure should, therefore, be minimized by observing the general industry standards for occupational health and safety.

Precautions such as the following should be considered: dust masks or respirators and protective clothing should be worn; dust-arresting equipment and adequate ventilation should be utilized; personal hygiene should be observed; wash before eating or leaving a work site; be alert for signs of allergic reactions-seek prompt medical attention if such reactions are suspected.

Not for Human Use

HEALTHY ANIMALS. HEALTHY FOOD. HEALTHY WORLD.

Phibro

Figure 4: Bloat Guard® Type A Medicated Article. (Accessed via Google 3/27/2025)

The anti-foaming agent of choice for prevention of frothy bloat is the feed additive poloxalene (Bloat Guard®, Phibro Animal Health; Figure 4), a surfactant that reduces the surface tension of foam, decreases foam formation in the rumen and releases entrapped fermentation gases. It is important to remember that to be effective, adequate amounts of poloxalene must be consumed daily to reduce foam formation. This may require mixing or top-dressing poloxalene at 2 grams per 100 pounds of body weight in feed and offering it daily during the periods of highest risk. Additional poloxalene-containing products are available for use in grazing programs, including mineral supplements, bloat blocks, and liquid feeds. Because of cost, it is generally not economically feasible to feed poloxalene continuously throughout the spring grazing period. Alternatively, feeding the ionophore monensin (Rumensin®) will decrease the amount of stable foam produced during fermentation and reduce bloat risk, along with the added benefits of increasing weight gain and improving feed efficiency.

To be most effective, it is recommended to begin feeding monensin products 10-14 days prior to grazing risky pastures.

The current advice to beef producers to prevent frothy bloat is to:

- Avoid grazing cattle on lush, rapidly growing, immature legume or wheat pastures; this is exceptionally important if the forage is wet from dew or rain. Moisture plays a role in a forage's bloat potential. Hungry cattle graze more aggressively when moved to a new pasture, so they should not be moved to new pastures with high legume content until midday—after the dew has dried and after they have grazed or consumed hay in the morning.
- Watch cattle closely for the first few days on new pasture. Bloat onset may be observed within an hour after introduction to new pasture, but cattle more commonly bloat on the second or third day (or longer) following introduction. Observe animals closely following any abrupt change in the weather;
- Slow the movement of cattle to new paddocks when practicing rotational grazing to offer cattle more mature forages in pastures;
- Provide cattle with free-choice access to anti-bloat blocks or offer feed daily that is top-dressed or mixed with poloxalene;
- Ensure cattle always have palatable grass hay available;
- Provide additional calcium to growing cattle grazing wheat pasture. Cereal grains are notoriously low in calcium; ruminal and gut motility is greatly compromised in animals with subclinical deficiencies of blood calcium;
- Always provide a good trace mineral mix to grazing cattle as high potassium and low sodium levels in the rumen are associated with bloat;
- Provide access to a clean water source;
- Grow grass-legume mixtures and/or incorporate bloat-resistant legumes into pastures.

Tomato “Blight” (PPFS-VG-38)

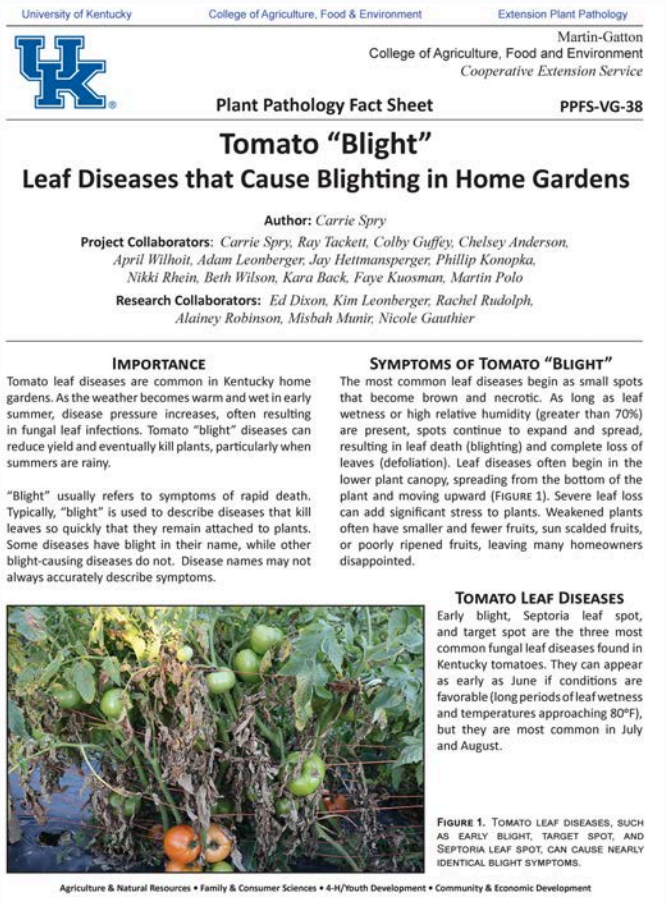
By Cheryl Kaiser, Plant Pathology Extension Support, and Nicole Gauthier, Plant Pathology Extension Specialist

Tomato “Blight” – Leaf Diseases that Cause Blighting in Home Gardens (PPFS-VG-38) is a new Plant Pathology Extension fact sheet focusing on the three most common leaf spot diseases occurring on the most common vegetable crop grown in residential gardens. These tomato “blight” diseases (early blight, Septoria leaf spot, and target spot) weaken plants, reduce yields, and can ultimately kill entire plants.

Each disease is discussed separately in terms of symptoms and cause; however, disease management options included in the fact sheet are the same for all three diseases. The table of common cultivars and their disease risk is based on field trials in 14 Kentucky counties during the 2022 and 2023 growing seasons.

Tomato “Blight” – Leaf Diseases that Cause Blighting in Home Gardens (PPFS-VG-38) is available online.

For publications on vegetable diseases, visit the UK Plant Pathology Extension Publications webpage.



University of Kentucky | College of Agriculture, Food & Environment | Extension Plant Pathology

Martin-Gatton College of Agriculture, Food and Environment
Cooperative Extension Service

Plant Pathology Fact Sheet PPFS-VG-38

Tomato “Blight”
Leaf Diseases that Cause Blighting in Home Gardens

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Importance

Tomato leaf diseases are common in Kentucky home gardens. As the weather becomes warm and wet in early summer, disease pressure increases, often resulting in fungal leaf infections. Tomato “blight” diseases can reduce yield and eventually kill plants, particularly when summers are rainy.

“Blight” usually refers to symptoms of rapid death. Typically, “blight” is used to describe diseases that kill leaves so quickly that they remain attached to plants. Some diseases have blight in their name, while other blight-causing diseases do not. Disease names may not always accurately describe symptoms.

Symptoms of Tomato “Blight”

The most common leaf diseases begin as small spots that become brown and necrotic. As long as leaf wetness or high relative humidity (greater than 70%) are present, spots continue to expand and spread, resulting in leaf death (blighting) and complete loss of leaves (defoliation). Leaf diseases often begin in the lower plant canopy, spreading from the bottom of the plant and moving upward (Figure 1). Severe leaf loss can add significant stress to plants. Weakened plants often have smaller and fewer fruits, sun scalded fruits, or poorly ripened fruits, leaving many homeowners disappointed.

Tomato Leaf Diseases

Early blight, Septoria leaf spot, and target spot are the three most common fungal leaf diseases found in Kentucky tomatoes. They can appear as early as June if conditions are favorable (long periods of leaf wetness and temperatures approaching 80°F), but they are most common in July and August.

Figure 1. Tomato leaf diseases, such as early blight, target spot, and Septoria leaf spot, can cause nearly identical blight symptoms.

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Important Dates

- **April 15 |** BQCA | Fleming Co. Ext. Office | 5:00PM
- **April 22 |** Cattle Grading | Farmers Stockyards | 6:00PM
- **April 25 |** Eden Shale Farm Tour
- **May 9 |** Hay Production Field Day | 1965 Martha Mills Rd | 9:00AM
- **May 17 |** Up the River with a Paddle | Blue Licks | 9:00AM
- **May 17 |** Fleming Co. Conservation District Field Day | 10:00AM
- **June 7 |** Small Ruminant Workshop | 2496 Taylor Mill Rd | 9:30AM
- **June 14 |** Farmers Market Opening Day | Fleming Co. Ext. | 8:00AM
- **June 26** | Elderberry Production | Fleming Co. Ext. Office | 6:00PM