THE SCOOP

AGRICULTURE | GARDENING | COMMUNITY

IT'S FALL, Y'ALL!

The Scoop is a quarterly newsletter that is mailed out to inform you about all things agriculture, gardening, and community. The information in this newsletter will be relevant to our producers and reliable through research of the University of Arkansas Extension Services. Please feel free to call the office at (870) 895-3301, or email me at abarnett@uada.edu if you have any questions.
This edition focuses on tips and tricks for producing beef, forages, and gardens from October through December.

Upcoming Events

October 03 - NRCS Field Day, 9:00 AM, Fulton County Fairgrounds
October 20 - Private Pesticide Applicator Training, 5:30 PM, Fulton County Fairgrounds
October 27 - Fulton County Bang's Clinic, By Appointment
October 31 - Arkansas Forage and Grassland Council Conference, 8:30 AM, Conway, AR

Perilla Mint: Noxious Weed

Perilla Mint is an annual broadleaf weed that is highly toxic to cattle and other grazing livestock. It causes emphysema-like symptoms which may be fatal. Signs of illness develop within 24 hours of consumption of perilla mint.
This is not a forage that is highly sought after by livestock, but with limited forages available, they will consume it. Herbicide applications and bush-hogging can be used to clear toxic weeds from pastures, but keep livestock out of the field until the weeds are completely dead and fully withered.

DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
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MASTER GARDENER

NITRATES AND PRUSSIC ACID POISONING

I have been out and about in the county the past few weeks testing for Nitrates and warning producers of prussic acid poisoning. Here are some things to keep in mind.

- There are no visual signs of toxicity in forages.
- Nitrate poisoning in cattle is caused by the consumption of an excessive amount of nitrate or nitrite from grazing crops, hay, silage, weeds, drinking water, lubricating oil, fertilizer, etc.
- Excessive fertilization with poultry litter or animal manure is the most common cause of nitrate buildup in plants.
- Johnsongrass, pearl millet, and sorghum/sudangrass are the forages most often found with high nitrate levels, but others can accumulate high nitrate under stressful conditions.
- Any stress on the plant which causes abrupt stoppage of growth can also contribute to nitrate buildup (drought, herbicide damage, even late afternoon wilting).
- Nitrates will persist in the grass when hayed. Prussic acid does not. If considering cutting for hay, consider a nitrate test first, especially if field received heavy N fertilization.
- Nitrates are higher in younger plants than older ones. Higher concentrations are in the stem and lower third of the plant.
- Prussic acid is also higher in young plants than older ones, but it concentrates more in the leaves than the stems.
- Regrowth contains the most nitrates and prussic acid.
- If haying, raising the mower even a couple of inches could make a difference in hay nitrate content. Grazing brand new regrowth after bushogging or cutting isn't recommended, especially if the field received heavy N fertilization.
- Prussic acid is also known as hydrocyanic acid.
- Prussic acid dissipates after being hayed. For this reason, testing anywhere but directly in the field isn't very reliable.
- Fields that received a lot of N, but are deficient in P and K are susceptible to toxic concentrations of nitrate.

We can test for nitrates in forages. If you would like your forages tested, please give me a call and we can schedule a visit. There is not a testing available from our office for prussic acid.

How Can I Prevent Nitrate Poisoning in Cattle?

1. Follow recommendations for nitrogen fertilization, and be careful not to exceed 2 tons of poultry litter yearly per acre on pastures, especially on johnsongrass or warm-season annual grasses.
2. When a crop is grown under conditions that cause nitrate accumulation, delay harvest of the crop until conditions improve to permit nitrate content to drop to a safe level.
3. Consider making silage of drought damaged forage. The ensiling process reduces the nitrate level 40 to 60 percent.
4. If high levels of nitrate have accumulated in plants, raise the cutter bar and leave more stem, the portion of the plant with the highest concentration of nitrate, in the field.
5. Have suspected forage tested before harvesting for hay or feeding to cattle.
6. Dilute toxic forage by mixing it with nontoxic forages and/or energy feeds such as molasses or corn. Use forage nitrate analysis to determine dilution rates. Energy feeds, such as shelled corn, when fed daily at a minimum of 2 pounds per head, will offset production losses as long as the average forage NO_3-N concentration does not exceed 1,500 ppm.
7. Feed a nutritionally balanced ration. Iodized salt and vitamin A or green feed supplementation lessen the toxicity of nitrates.
8. Adapt cattle slowly to elevated levels of nitrate. Allow animals to graze only a couple hours per day for a few days on suspected fields. Never turn hungry animals in to a suspected field – allow them to graze other pasture first or feed hay before turn-in. Never exceed maximum recommended levels of nitrate intake.
9. Feed suspect forage in small amounts several times a day rather than all at one feeding.
10. If forages are high in nitrates, ask your county agent about an analysis of the drinking water.
11. Be aware that forage regrowth and volunteer plants are highly suspect following nitrogen fertilization and drought.
12. Observe animals closely for signs of toxicity, and call a veterinarian immediately if symptoms are observed.

How to Prevent Prussic Acid Poisoning

1. Do not allow animals to graze fields with succulent, young, short growth. Graze only after plants reach a height of 18 to 24 inches.
2. Do not graze drought damaged plants in any form, regardless of height, within four days following a good rain. It is during this period of rapid growth that accumulation of prussic acid in the young tissue and of nitrates in the stems is most likely to occur.
3. Do not graze wilted plants or plants with young regrowth.
4. Do not rely on drought damaged material as the only source of feed. Keep either dry forage or green chop from other crops available at all times. Uneven growth as a result of drought can best be utilized as silage or hay.
5. Do not use frost damaged sorghum as pasture or green chop during the first seven days after the first killing frost.
6. Delay pasturing for a least seven days or until the frosted material is completely dried out and brown colored. Do not rely on frosted material as the only source of feed. Do not graze at night when frost is likely.
7. Do not turn hungry cattle onto a pasture of sorghum, sorghum sudan hybrid, or johnsongrass. Fill them up on hay or other forage first, and begin grazing in the late afternoon.
8. An option for using potentially toxic forage is to harvest it as hay or silage. Prussic acid levels decline in stored forages. Well cured hay is safe to feed.

October Beef Tips:

General Considerations

- Monitor cattle closely for any signs of lameness. Fall is a very common time for foot rot and interdigital dermatitis. Foot rot can extend deep into the tissues; therefore, early treatment is critical for recovery.

Tips for Spring Calving Herds

- Weaned feeder calves can be implanted and all retained calves given access to supplements fortified with Bovatec, Gainpro or Rumesin to improve weight gain. These products work independently from the implants and each result in a 10% or more increase in growth performance.
- Now is a good time to sort cows into winter feeding groups. Cows should be grouped according to stage of production and/or body condition score (BCS). Cows in thin body condition will require additional supplementation to make sure they are in a BCS 5 to 6 by calving.
- Average quality hay in Arkansas (12% protein and 54% TDN) is adequate in nutrient composition for non-lactating cows that are in moderate to good body condition.
- Plan replacement heifer development program. Heifer should be fed to achieve 55 to 65% of mature weight by breeding. Estimate mature weight can be from cow size records or heifer frame size (frame size x 75 + 800 = estimated mature weight).
- Purebred breeders should consider bull development programs to aid in yearling performance evaluation. On-farm bull test or bull station performance test can provide growth data and possibly feed efficiency data for a contemporary group of bulls that will aid in genetic selection.
- Pregnancy test cows. It is very expensive to feed an open cow.
- Vaccinate heifers that are 4 to 12 months old for Brucellosis.
- Forage test hay to determine nutrient value. This will provide much needed information when determining the proper supplementation program.
- Provide free choice mineral and fresh water.
- Cull open, old and non-performance cows and heifers.

Tips for Fall Calving Herds

- Evaluate sire(s) for fall breeding season. If you use AI, now is the time to order semen.
- Perform breeding soundness exam (BSE) and Trichomoniasis testing on breeding bulls.
- Fall calving cows need to be monitored closely for calving difficulties. Facilities and equipment need to be readily available for dystocia.
- Be sure newborn calves receive adequate amounts of colostrum for proper disease protection. Care of newborn calves include dip navels, ear tag, castrate, etc.
- Body condition score cows. Cows should be in BCS 5 to 6 at the time of calving.
- Forage test hay to determine nutrient value.
- Provide free choice mineral and fresh water.

November Beef Tips:

Tips for Spring Calving Herds

- Have bulls tested for breeding soundness. Remember 20% (1 out of 5) bulls fail breeding soundness examination.
- Fall calving season should be coming to an end.
- Vaccinate cows prior to the breeding season.
- Breed heifers 20 to 30 days before the mature cow breeding season.
- Check cow's and heifer's body condition. It is very important to maintain body condition through the lactating period and breeding season to ensure high re-breeding rates.
- Care of newborn calf-dip navels, ear tag, castrate, etc.

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Tips for Fall Calving Herds

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- Forage test hay to determine nutrient value.
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December Beef Tips:

General Considerations

- Winter is a good opportunity to catch up on equipment maintenance including lubrication and fluid change of tractors, packing wheel bearings on trailering equipment and checking tires on trailers, field equipment, etc., and replacing floors in stock trailers.
- During December, some days are better spent indoors than outdoors. Now is a time to summarize herd records for the year and compare to previous year to determine the production direction of the herd. Valuable summaries include changes in 205-day adjusted weaning weights, monthly calving distributions, culling percentages, calf crop percentages, cow age and body condition and calving interval changes.
- December is a good month to summarize your financial records. Determine your cost for mineral, supplemental feed, vet medicine, fertilizer, hay, weed control, etc. Knowing your cost to maintain a cow per year is very important and will aid in marketing decisions.
- Plan next year's budget and production plans.
- Proper free choice mineral and fresh water is just as important in the winter time as in the summer time.
- Deworm cattle to prevent weight loss and inefficient use of hay and feed supplements going into the winter.
- Monitor cattle closely for signs of respiratory disease. The large variations in temperatures can contribute to decreases in respiratory immune function which may lead to pneumonia.

Exclude cattle from access to oak trees whenever possible. Acorns are falling and are toxic to cattle causing kidney damage and death.

Tips for Fall Calving Herds

- Turn bulls in with cow herd. Watch bulls behavior carefully. Be sure they are seeking cows in estrus and are able to mount and breed cows.
- Breeding fall calving heifers should be about over by the end of December. It is important for heifers to breed early in their first breeding season and it's a good idea to breed heifers 30 days before the mature cow herd.
- Monitor body condition especially if December is cold and wet. Winter weather can bring an increase in TDN and dry matter intake. Additional hay and supplement maybe necessary to maintain proper body condition and performance.

FORAGES

General Fall Considerations:

- Fall and winter is a good time to correct imbalances in pH
- Soil fertility and pH should be monitored regularly
  - pH in pasture soil drops relatively fast because of leaching of calcium carbonates and lack of soil mixing like in a cropping system with frequent tillage
  - Correcting pH will take several months so it is wise to check lime requirements before next year's growing season
  - Collect at least 15 subsamples per pasture using a zig-zag course
  - Mix the subsamples then submit one composite sample to the county Extension office

October:

- Begin strip grazing stockpiled bermudagrass
  - Strip grazing improves forage utilization and may double the number of grazing days compared to continuous grazing.
  - Plant winter annuals and clovers in warm-season grass sod
  - Defer grazing of stockpiled cool-season grasses until late November or early December.
  - Plant clover in short-grazed fescue in early October
  - Graze out crabgrass before a killing frost
    - Crabgrass becomes very unpalatable after a killing frost and is usually avoided by grazing animals.
    - Rotational graze cool season perennial grasses by mid to end of October or when canopy height reaches at least 6 inches.
  - Plant winter annuals between mid-October to late October for grazing in February or early March.
- Setup of grazing paddocks and watering devices

November:

- Stockpiled bermudagrass.
  - Use grazing methods that avoid trampling of forage and ensure high forage utilization, such as strip grazing. Strip grazing improves forage utilization and may double the number of grazing days compared to continuous grazing.
  - Graze out stockpiled bermuda by mid to late December.
- Stockpiled fescue
  - Begin grazing mid to late November.
  - Use grazing methods that avoid trampling of forage and ensure high forage utilization, such as strip grazing.
- Winter annual small grains/ryegrass.
  - Begin grazing once canopy reaches height of 8 inches.
  - Use grazing methods that avoid trampling of forage and ensure high forage utilization, such as rotational grazing or limit-grazing (limiting cow access time to annuals).

Hay Management:

- Protect hay when feeding to reduce waste. Feed hay in rings to reduce hay waste. Unrolling hay increases hay waste unless it is done on a limit- feeding basis.
- It is very important to forage test each cutting of hay. Knowing the nutrient values (crude protein and TDN) of each cutting of hay will determine the proper supplemental feed and the amount to feed. In addition, knowing which cutting is the highest quality, it can be fed to the group of cows with the highest nutritional demand (i.e., first calf heifers or lactating cows).

FALL HOME FLOWERS - PLANTING GUIDE

October:
- Fall bulbs (tulips, daffodils, etc.)
- Garlic bulbs
- Wildflowers (from seed or transplant)
- Pansies
- Violas
- Ornamental kale
- Ornamental cabbage
- Swiss chard

November:
- Daisies
- Sunflowers
- Zinnias
- Cosmos
- Marigolds
- Black-Eyed Susans
- Coneflowers
- Lantana
- Pentas
- Gomphrena
- Moss Rose

December:
- Spring bulbs
- Garlic
- Wildflowers
- Pansies
- Violas
- Flowering kale
- Purple mustard

Fun Fact:
Spring blooming bulbs need to go through a chilling process in order to reach their full potential. Typically a minimum of 12-16 weeks of temperatures between 35 and 50 degrees Fahrenheit are required for the bulbs to stretch and elongate a stem and leaves. Without natural chilling outdoors or forced chilling in the refrigerator, the bulbs rarely exceed a couple of inches in height and shatter their blooms.

FALL HOME GARDEN VEGETABLES - PLANTING GUIDE

October:
- Mustard greens
- Kohlrabi
- Turnips
- Spinach
- Strawberries
- Lettuce
- Shallots
- Leeks
- Garlic
- Collards

November:
- Strawberries
- Garlic
- Collards
- Turnips
- Salad Greens

December:
- Strawberries
- Garlic
- Salad greens (protected)
- Cabbage
- Swiss chard

OTHER CONSIDERATIONS:

- Chrysanthemums like a cooler climate, and they love full sun. For the longest lasting mums, choose plants whose buds are still closed. This means they will last longer into the fall season.
- Avoid hard pruning at this time as many plants, namely spring-blooming plants, are setting buds for next year.
- Rake leaves, if desired. Leaves should be collected as they fall to avoid covering plants and grass you want to keep healthy. Throw leaves into a compost pile or use them as mulch for your plants.
- Cover vegetables and other plants when the temperature drops 28°F or below with an overturned box or large flower pot. When plants are frozen, avoid touching them until the temps are above freezing again. If snow is weighing down your plant, gently remove it to lighten the load. Do not prune damaged leaves, as this will expose more of the plant to the cold. Avoid pruning until February.
- When you buy a poinsettia, punch holes in the decorative foil to allow drainage and prevent soggy conditions. Place these beauties in a plant dish to catch any excess water, and provide even moisture for the plant.
- Poinsettias love a well-lit spot in bright sunlight. Be sure to place your poinsettia in a place where night temperatures do not drop below 50–60°F.

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PESTICIDE APPLICATOR TRAINING:

We will be having a pesticide applicator license course on October 20th, 2025 at the Hickinbotham-Miller Building at the Fulton County Fairgrounds. If you want to be be licensed or renew your licence, please call our office. (870) 895-3301. The Pesticide Applicator Training is a two-hour course to license and/or recertify Arkansas agricultural producers who wish to purchase and apply Restricted Use Pesticides (RUP's). This training is NOT for recertification of commercial (for-hire) pesticide applicators. The class is $20 per person which can be paid the night of the training. We will accept only checks or exact cash. The course fee is not related to the licensing fees charged by the State Plant Board. The additional fee for the license is $10 for one (1) year or $45 for five (5) years, which you will mail to the State Plant Board after the training.

BRUCELLOSIS (BANG'S) VACCINATIONS:

Fall Bang's vaccinations are coming up on October 27th. Please call our office at 870-895-3301 to get on our list. Include your name, address of where the heifers will be, and a head count for vaccinations. 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 of when you are scheduled for vaccinations. You will need handling facilities to confine and work the claves.Also, a representative must be present at the time of vaccination or the heifers will not be vaccinated.

THAT'S THE SCOOP!

Feel free to call or drop by the office for any questions or additional information!

Sincerely,

Anna Barnett

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