

Forage Team Newsletter



UNIVERSITY OF GEORGIA
EXTENSION



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Successful Tall Fescue Conversion - Part II

By Roger Gates
Whitfield County

(Part I of this series article can be found in the March 2021 edition of the Forage Team Newsletter.)

Conversion of toxic Kentucky-31 pastures and hayfields to a non-toxic, novel endophyte variety represents one of the most financially beneficial decisions available to livestock producers in areas where tall fescue is adapted. Research, over many years and locations has documented that consumption of tall fescue forage containing toxic compounds reduces both reproduction and growth. For cattle producers that means a reduced calving rate and lighter calves. “Fescue cattle” are likely to be discounted when marketed, further reducing the revenue from fewer pounds available for sale.

cont'd p.2

Replacement of existing stands of toxic tall fescue with non-toxic tall fescue infected with novel endophyte is the most certain procedure to overcome the liabilities and limitations to production resulting from tall fescue toxins.

Research has demonstrated that two applications of a non-selective herbicide are the most effective means to remove an existing stand of toxic tall fescue. Proper glyphosate application will effectively eliminate tall fescue vegetation. Proper application includes sprayer calibration. Recommendations are available from UGA for calibration of boom:

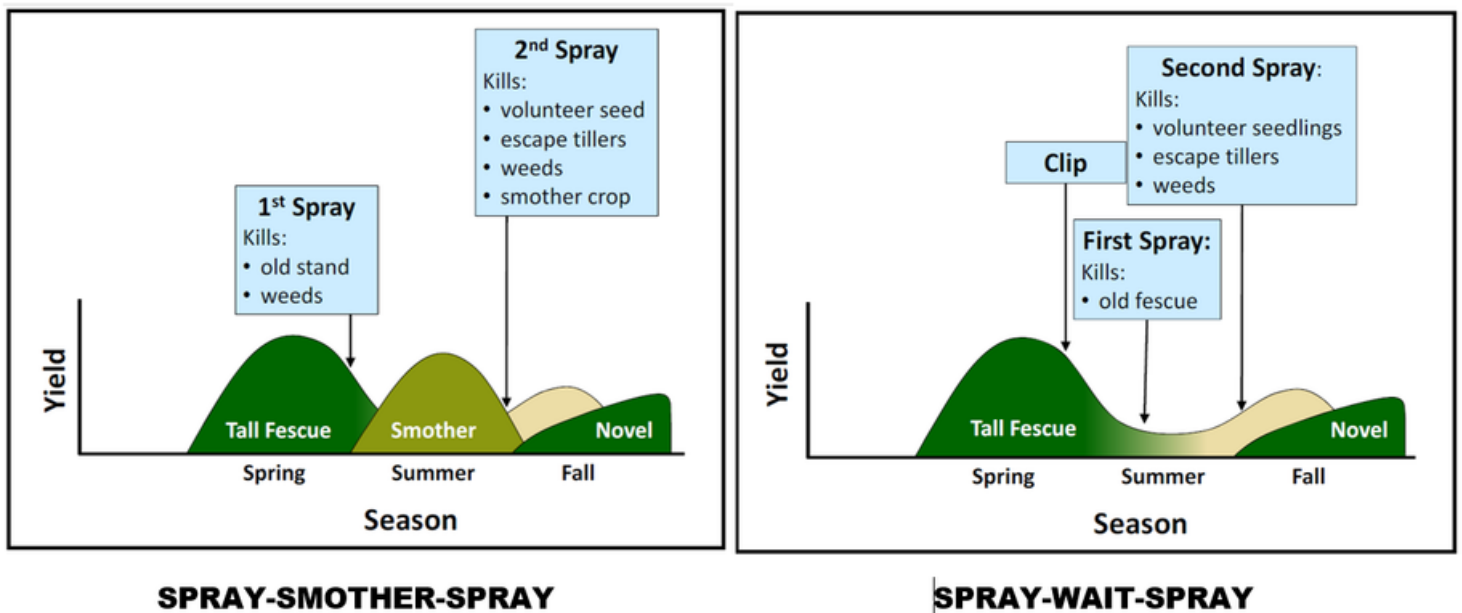
<https://athenaeum.libs.uga.edu/bitstream/handle/10724/35653/1-128%20Acre%20Sprayer%20Calibratio.pdf?sequence=1&isAllowed=y>

and boomless sprayers:

<https://www.jocogov.org/sites/default/files/documents/PWK/boomlesscalibrate128.pdf>.

Herbicide application will not prevent the establishment of toxic plants from “carry over” seed. Preventing the production of seed from the existing stand is essential to establishing a new stand of uniformly non-toxic plants.

Two accepted methods of removing the existing stand and establishing novel endophyte tall fescue are described in the figure below. In preparation for planting novel endophyte tall fescue, the area to be planted must have either been managed to prevent seed production (clipping seedheads) from an existing stand of toxic tall fescue [SPRAY-WAIT-SPRAY], OR the area was sprayed with non-selective herbicide (glyphosate) to eliminate existing plants and a warm-season annual forage was overseeded in late spring or early summer [SPRAY-SMOTHER-SPRAY].



Recalling guidance from Part I – “In the Piedmont and northern Georgia, UGA Extension recommends planting tall fescue between September 1 and October 15.” As soon as the decision to convert a stand to novel endophyte tall fescue, soil samples should have been analyzed and soil fertility amendments (lime to raise pH, P and K) should have been made.

If a warm-season annual was planted, it should have been grazed and/or hayed to adequately control the level of residue prior to spraying in preparation for fall planting of novel endophyte tall fescue. In addition to providing livestock feed, shading from the warm-season annual canopy will limit development of any toxic tall fescue seedlings that emerge from the seed bank. That canopy must be limited prior to the second glyphosate application to ensure good herbicide contact with any toxic tall fescue plants that have germinated and emerged. Maintaining some residue will provide soil cover and limit soil erosion while the new, novel endophyte stand is establishing.

The alternative approach to conversion is termed “spray-wait-spray.” A late summer glyphosate application reduces the existing toxic tall fescue stand and a second application at planting time ensures the elimination of any escapes from the initial application. This approach depends on summer production from the existing toxic stand but has the advantage of delaying a planting decision.

Seed of a named variety, adapted to the locale, should have been reserved for pick up ahead of the intended planting date. Only certified seed of an established variety should be planted. It should also bear a tag of the Alliance for Grassland Renewal, assuring adequate infection with viable novel endophyte. Seed labeled as “low endophyte” or “endophyte free” should not be used. Seed from these sources will not persist and will likely result in stand loss within the second or third year.

Scheduling or preparing planting equipment is a vital step in preparation. For many producers the best option is renting a no-till drill from an equipment dealer or local conservation district. With rental equipment, schedule plenty of time to ensure that equipment is clean and operating properly. Procedures for drill preparation and calibration are available from UGA Extension https://secure.caes.uga.edu/extension/publications/files/pdf/B%201510_2.PDF. Drill calibration should insure distribution of seed at the proper seeding rate. Proper inspection and operation is also necessary to be certain seed is delivered at the proper seeding depth.

The following table from the Alliance reviews errors to be avoided in proper establishment of a new stand of novel endophyte infected tall fescue:

Why Novel Endophyte Seedlings Fail: Main Reasons
Poor kill <ul style="list-style-type: none">• Tillers and seedlings must grow and contact herbicide
Bad Seed <ul style="list-style-type: none">• Use “Alliance Approved” seed
Too deep <ul style="list-style-type: none">• Should see some seed on top of ground
Carryover herbicide <ul style="list-style-type: none">• Affects new seed; preserves old seed and tillers
Legume competition <ul style="list-style-type: none">• No clover until later
Moisture conditions <ul style="list-style-type: none">• Drought or Waterlogging
Soil Fertility <ul style="list-style-type: none">• Phosphorus and pH are critical

Stands planted in the fall should not be heavily grazed or hayed during the first spring. This is the period of most active growth of establishing plants and critical to long term persistence. Short-term, light grazing or haying could be conducted if plants are establishing well and growing conditions are favorable. Because novel endophyte tall fescue is no longer toxic, palatability will increase. Animals are very likely to consume more tall fescue than is typical with toxic plants. Grazing must be carefully monitored to avoid overgrazing. If cut for hay, be certain that a residue remains with at least a 4-inch stubble height.

Excessive grazing during the first summer can be very detrimental to stand persistence. Monitor and control weeds while the new stand is establishing.

It is unlikely that all stands of toxic tall fescue on an operation are converted simultaneously. This introduces the risk of contamination of newly established, novel endophyte stands with seed from toxic plants. Care must be taken to avoid introducing contaminated seed which could happen by feeding hay containing toxic seed or moving animals directly from toxic pastures with seedheads to novel endophyte pastures. Viable seed can pass through the grazing animals digestive tract and be deposited in manure.

Because tall fescue plants infected with the toxic endophyte are less palatable, if they become established in a pasture planted with novel endophyte tall fescue, they will be avoided during grazing and produce mature seed, further increasing the potential for contamination.

Following the first growing season, fertilizing for fall growth will contribute to good establishment of the new stand. Nitrogen will stimulate growth and adequate potassium will contribute to stand persistence.

The potential revenue benefits resulting from removal of toxic tall fescue and establishment of non-toxic, novel endophyte tall fescue are sufficient to justify careful preparation and planning, as well as proper planting and following management.



Horse Grazing Strategies

By Peyton Sapp
Burke County

As a horse owner & County Extension Agent, I hope that you will find value in my mixture of “by the book recommendations” and personal experience. One thing I would like to encourage horse owners and trainers to do is engage with their local Extension Agent. Pasture management, it seems, has a different meaning for every horse owner/manager. I want to focus on things you can do to have the potential for better grazing for your horses.

We need to remember a few basic things. First, a horse has basic nutritional requirements that are determined by stage of growth, breed & work load. As a “horse feeder” you will have to decide whether you want to utilize pasture to help meet these nutritional requirements OR whether you just want better ground cover in your turnout areas & pastures. A rule of thumb is that a horse should consume at least 1 percent of its body weight in hay or an equivalent amount of pasture daily. For example, a “typical” quarter-horse weighs 1,150 pounds and would therefore require a minimum of 11.5 pounds of hay daily.

Secondly, there are certain physiological characteristics of grass that are the reason “we see what we see” in our pastures. Grass roots basically look like the part of the plant that is growing above ground. Resting or allowing grass to have a period of time to regrow without grazing pressure is always best. As grass is allowed to grow, the roots will grow proportionately, resulting in a healthier plant. The function of the root system is to deliver nutrients (water included) up to the above ground portion of the plant so that it can function properly.

The third basic thing to keep in mind is the grazing habit of horses. Horses graze closer to the ground than cattle. Also, they typically graze in the same spot, avoiding manure piles and undesirable grass species and weeds. Dragging manure piles will help. We know horses are “close grazers”, but, there is a difference in close grazing and over grazing. Their grazing habits almost make it a must to intensively manage pastures in order to allow grass to survive, much less thrive. A minimum grazing height of 4 inches is best for most of the forage species that will work for horses.

So, with all that said, we can now discuss grazing strategies! I’d say the first & most commonly seen grazing strategy is continuous grazing.

In the south east, this typically means there is a warm season perennial grass that horses are allowed access to continuously. For continuous grazing systems, stocking rate is the most important thing to consider. Supplying supplemental feed or hay will influence stocking rate to some degree. Generally, 1 ½ to 2 acres per horse is required to keep an acceptable stand of grass. Over seeding winter annual forage species (grasses & or appropriate legumes) can be beneficial in continuous grazing systems. Also, maintaining proper soil fertility & weed control are necessary. Many horse owners who use continuous grazing systems do not allow a rest period for grass. Often times a simple cross fence that allows grass a couple weeks to regrow would be beneficial.

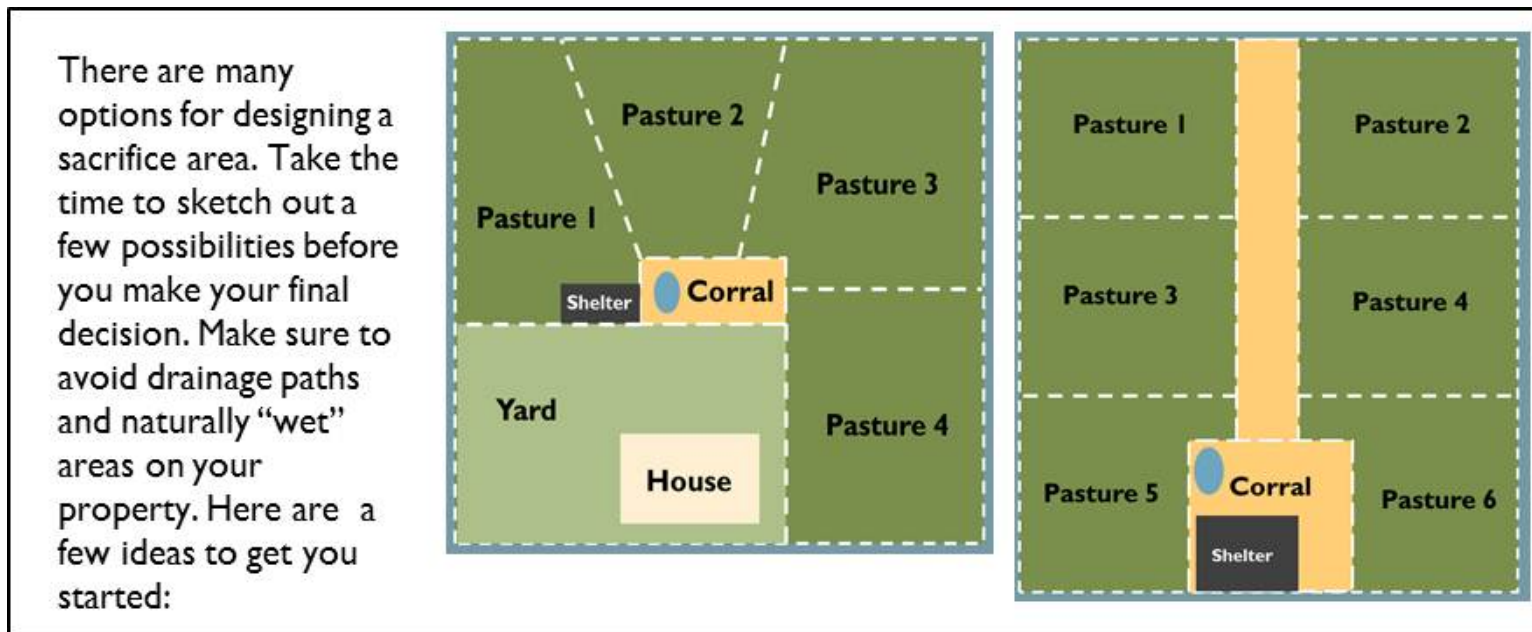
Rotational grazing systems are going to call for more emphasis on management. Your pastures will be subdivided into smaller areas with the intent to allow for the proper minimum (“stop grazing”) grazing height and rest period. Stocking rate will determine the number and size of paddocks needed. As an example, if your grass is Bermuda, each paddock should be grazed down to approximately 4 inches and then rested for around 4 weeks. When conditions allow for optimum growth, the rest period may be shortened, more horses could be grazed or hay could be harvested from the paddocks that have excess growth.

Limited turnout is another grazing strategy that can be useful in maintaining healthy grazing areas. This strategy simply limits grazing time to 1 or 2 hours during a 24 hour period. Dividing a larger paddock into smaller areas and limiting grazing time will still allow areas to rest and regrow. Incorporating a sacrifice area will likely be necessary in this system. A sacrifice area still allows an area for turnout, however, the emphasis here is not necessarily on growing grass. It is simply an area that can be utilized at any time and will not be expected to maintain optimum forage cover. The following link has a good example of a limited turn out design: <https://sfyl.ifas.ufl.edu/media/GrazingStrategies.pdf>.



Rotational grazing paddocks & fencing.
Photo Laura Kenny, Extension Educator, Equine
Penn State University

Below is a second example of the use of a sacrifice area and limited turnout from the North Carolina State Horse Blog posted by Liz Joseph in 2017.



As I said before, the folks who manage horses don't often consider good grazing management as “first on their list”. The need to keep individual horses separate, convenience or simply a lack of understanding often lead to mismanaged or failing pastures. Talk to your local County Extension Agent and ask them for advice. Give them enough information about your operation so they know who to refer to if they don't know how to help initially. They have access to so much information on anything from how to soil sample, types of fencing, equine health & nutrition to forage varieties.

Additional resources for grazing strategies:

https://secure.caes.uga.edu/extension/publications/files/pdf/B%201224_4.PDF

<https://extension.psu.edu/grazing-systems-for-livestock-and-horses>

<https://extension.psu.edu/how-to-make-rotational-grazing-work-on-your-horse-farm>

<https://extension.msstate.edu/publications/forage-management-considerations-for-horses-mississippi>



Tips for feeding baleage

By Jeremy Kichler
Colquitt County

Baled silage, or "baleage," is an excellent way for livestock producers to harvest, storage, and feed forage. Feeding baleage is much different than feeding hay due to the higher moisture content. This higher moisture content makes it much more susceptible to deterioration. Let's discuss some ways to decrease waste during the feeding of your baleage.

Cattle or forage producers should never leave silage exposed to the air for more than two days during feeding. If the daytime temperature exceeds 60 degrees F, please do not leave it exposed for more than one day. It is critical for producers who use an in-line bale wrapper since this determines the feed-out rate. If you have made baled silage using an in-line bale wrapper, you must have enough animals to feed at least one bale per day in the winter. While using an in-line wrapper, when the producer feeds one bale, the next bale is exposed to air. Individually wrapped bales are usually not subject to exposure before feeding, and thus the feeding schedule is somewhat more flexible.

Here are some additional "rules of thumb" on how to feed silage bales or, in some cases, what not to do.

- Ensure that the storage site does not increase the chances of exposure to air. Some storage sites increase the likelihood of punctures to the plastic wrap. Areas around trees are great places to find dropped limbs, weed stubble, rodents, and other varmint dens. Many of these areas may create punctures that go unnoticed until it is too late.
- Ensure that the forage is between 40-60% moisture before it is wrapped and ensiled. Baling when the crop is too dry is the most common problem for producers. Often the forage may start at the correct moisture and end up being too dry. Dry forage does not provide enough moisture to allow bacteria to provide sufficient fermentation. But, it does allow fungi to grow during storage and feeding that can lead to deterioration and increases the risk of mold formation. However, baling at too much moisture may reduce forage quality and will increase the risk of (undesirable) butyric acid formation.
- Please do not spear into bales after they have been wrapped. Squeeze carriers or handlers are better, but may still stretch, tear, or puncture bales. Any hole in the plastic barrier can lead to small areas or even entire bales that spoil.

- If you are using an in-line wrapper, simply spear into the bale, lift, and pull away. When feeding the bales, producers should cut over the top and peel the plastic off in one large section. To feed an individually wrapped bale, cut a large X at one end of the bale and pull back the flaps. Spear the bale, lift and cut across the top and down the other flat side to peel the plastic off in one piece. Net wrap from the bales should be removed before placing the bale feeding ring around it in the paddock. Waste and refusal are rarely an issue when feeding baled silage unless a bale is being fed to too few animals. If silage remains for a long period, please put out a fresh bale. Forcing animals to eat waste or refused silage can lead to animal health issues. Factors such as the number of animals and the feed-out rate can help determine bale size before harvest season starts.
- The ensiling process usually completes within 4-6 weeks, depending on numerous factors. The feeding rate should still be relatively quick, however, as excessive heating, as well as spoilage, could be significant if exposed for days or even hours.

If you have any questions about baleage please contact your local county Extension agent.



Grazing Gadgets

By Carole Knight
Madison County

The fact that rotational grazing systems are a more efficient use of forages than continuous grazing should not be a novel idea. Years of research have proven that giving forages ample time to rest and recuperate between grazing times, produces more, higher quality yield.

Installing a rotational grazing system is not quite as easy as it may sound, but it doesn't have to be complicated. There are all kinds of "gadgets" and tools available to help make rotational grazing a simpler process, saving time and resources.

The advancement of temporary electric fencing technologies has made implementing a more managed grazing system about as easy as taking a walk across the pasture. Temporary fencing technology involves the utilization of non-permanent, easy-to-handle and mobilize step-in posts, poly-wire or poly-tape, fence handles, and a charger or energizer. There are a multitude of electric fence post options. Each one designed for a specific situation. Fencing companies have made temporary or portable posts lighter and smaller. Ideal for rotational grazing, these posts work great as in-line posts and are constructed with hooks that will handle most poly-tapes, poly-ropes, and wire. No additional clips or insulators are usually required with these posts since they are made from products with insulation properties. Pig tail fence posts are another fencing option you might consider. The pig tail step-in post is ideal for managed intensive grazing applications due to its lightweight, portable construction. The little loop at the end of the post resembles a pig's tail, hence the name. Similar to the step-in posts, pig tail posts require no additional clips or insulators. Pig tail posts work great as in-line posts for cross-fencing, but typically are designed for one string and work better for cattle.

There have been advancements in poly-wire too. One way to differentiate products is to check for the number of filament lines in a given product. One product sold has nine conductive lines running through it, and is therefore able to carry more electricity and make better contact than twine that only has six filaments. There are better options to handle that fencing as well. Using reels will save time when erecting the fence, when taking it down and when you need to move the fence. A reel will allow you to wind up the wire without any knots. Reels come in different types and sizes. This has to do with the amount of wire/rope/tape that will fit on a reel. A geared reel will allow you to wind up your wire up to 3 times as fast. With regular reels the drum of the reel turns at the same speed as the lever you use to wind up the reel. With geared reels, the gear will make the drum turn three times as fast. So, for every turn of the lever, the drum turns three times.

Do you want to move your fence without taking it down and then putting it back up? Then a Tumblewheel might be the right tool. Rotational graziers can move an entire fence line from one location to another using Tumblewheels.



The Tumblewheel system allows producers to move temporary electric fences with ease with no line or step-in posts. This fence consists of a number of “hot” or electrified spoked, spacer wheels that hold up the fence, and roll making the fence simple and easy to move. The wheels are held up by the tension of the hot-wire which passes through the center. When one or both ends of the fence is moved, the wheels roll along. This system enables you to quickly and easily roll a fenceline to a new position. It is ideal for strip grazing cattle.

Ever had your electric fence short out and spent hours trying to find where the problem was? A fence fault finder could be the answer to your problem, quickly helping you identify where the fence is working and where it isn't. Available from many fence equipment manufacturers, almost all are universal and work with all brands of fence chargers.

For anyone that works off the farm, rotational grazing is often limited by the number of daylight hours. Making sure that animals get moved to the next paddock on time can be troublesome. There is a device with the ability to automatically open gates. It is called a ‘Batt-Latch.’ A Batt-Latch is an electronic locking device that incorporates a timer that can release the gate latch at a preset time. It's a solar-powered and all-weather device that you can program it for up to 30 days out and set it for the specific time you want to open a new paddock. Then at the designated time, the latch disconnects from the spring gate, and your cattle or other animals can go to the side of the fence to fresh grass. There are limits though, it cannot close the gate behind the animals and it cannot monitor a pasture's growth and development and make management decisions for the grazing farmer.



There are so many cool gadgets and tools to help producers implement rotational grazing into their operations. These are just a few of the options out there. Explore what's available and use one or all of these technologies to more efficiently utilize your forage resources.

G **GRASSMASTERS**

September 28: Intro- Lucy Ray

October 5th: Fertilization: Carole Knight

October 12th: Forage Quality + Tall Fescue: Roger Gates

October 19th: Hay Production + Precision Ag: Savannah Tanner

October 26th: Pest Management: Steve Morgan

November 2nd: Grazing Management + Rainfall Simulator:

Charlotte Meeks + Philip Brown

**TUESDAYS @ 6:00 AT
NORTH GEORGIA TECHNICAL COLLEGE**

Please contact White County Extension to register:
\$25 Registration Fee (includes all materials)

Please make checks payable to:
White County Extension
and mailed to: 1241 HELEN HWY Suite 110 Cleveland, GA 30528

Registration must be postmarked by September 17th.

There will be a nightly \$10 fee at the door for dinner.

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The UGA Forage Extension Team presents

G **GRASSMASTERS**

SPOTLIGHT SERIES



Options for Extending the Grazing Season

Tuesday, September 28, 2021
6:30pm - 7:30pm
Online via Zoom

Speakers include:
Dr. Lisa Baxter - UGA Forage Extension Specialist

To register visit the link below or use QR code:
https://ugeorgia.ca1.qualtrics.com/jfe/form/SV_eFOfm2u7gh9yF6u




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