



## ESTABLISHMENT OF TALL FESCUE

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Tall fescue may be established on a clean-tilled seedbed or by no-till methods into an existing sod. Both methods will be considered in this leaflet.

A Clemson University study has shown that most tall fescue pastures in South Carolina are fungus-infected, with an infection rate typically greater than 80 percent. Special consideration must be made if fungus-free tall fescue is to be reestablished into a pasture where fungus-infected tall fescue has been growing. This is called (fescue) pasture renovation, because not only must the existing tall fescue be killed but seeds from these infected plants must be kept from establishing plants in the new pasture.

### Clean Till Seeding

Where there is little erosion potential and the cropping sequence fits the overall management plan, a good pre-establishment scheme to kill the old stand and prevent germination of seeds from the old stand is to plow out the existing pasture in the winter or early spring and crop the area during the summer. Forage sorghums, millets, sudangrasses, and other summer crops may be planted as long as they can be harvested in time to prepare the land for a mid-September to mid-October tall fescue planting.

Special care must be taken if herbicides are to be used on the summer crop to avoid herbicide residue

that may damage the tall fescue seedlings. Banvel and 2,4-D can be used either singly or in combination (Weedmaster) on the summer annual grasses with no carryover effects on the fall seeding. Atrazine should be avoided and is not labeled for use on the summer annual grasses.

If the land going into pasture has been cropland, then with a little planning during the last crop year, weeds that will be a serious problem in the new pasture can be controlled thereby reducing weed populations and weed seed numbers in the soil. Also, herbicides can be selected to reduce potential for herbicide carryover.

A soil sample should be taken and tested in late summer to determine the pH, phosphorus, and potassium status of the soil on the land to be seeded. Lime should be applied to maintain a pH of 6.0 if the tall fescue is to be a pure stand or 6.5 if clovers are to be planted with the tall fescue. It is strongly recommended that a clover be included with any new tall fescue seeding.

Lime, potassium, and phosphorous can be applied to the soil while the seedbed is being prepared and should be incorporated into the top four to six inches. The entire amount of recommended potassium can be added at this same time. However, if the amount of potassium recommended exceeds 70 lb/ac, it may be better to split the application and apply half the potassium with a later nitrogen

application. Potassium is quite soluble and may leach from the root zone.

Up to 40 lb/ac of nitrogen may be applied prior to planting. Large applications of nitrogen should be avoided as they will encourage weed growth.

**Keep in mind that nitrogen, applied to a grass/clover mixture, favors the grass and makes it more competitive against the clover.**

The land should be smoothly and finely prepared, firmed, and made as weed-free as possible. The weed-free aspect is particularly important if clovers are to be planted with the tall fescue because there are no herbicides that can be utilized on the grass/clover mix. The pasture will last many years if done correctly, so this is no time to skimp if one or two more field operations are needed to prepare an optimum seedbed. The recommended seeding time is in September or October, preferably when the soil moisture status is good.

Drill 8 to 12 lb or broadcast 15 to 20 lb of tall fescue seed per acre. Drilling is preferred because it requires less seed than broadcasting due to more controlled seed placement. Seed should be planted 1/4 to 1/2 inch deep with the soil firmed over the top. If seeds are broadcast, they should be firmed into the soil using a cultipacker or similar implement. A clover can be included in the pasture by drilling 8 to 10 lb of tall fescue seed per acre in 12 to 16 inch rows and broadcasting 3 lb/ac of white clover seed as uniformly as possible. The area can then be tilled with a drag harrow or rolled with a cultipacker to cover the clover seed no more than 1/4 inch deep and to disturb the fescue seed placement as little as possible.

### **No-Till Seeding**

No-till seeding tall fescue into an existing fescue sod begins in the spring. At this time every attempt should be made to stop seedhead formation of the old stand of tall fescue, either by heavy grazing or mowing to decrease the amount of seed from the old stand in the soil when the new stand is seeded. Control of seedhead formation is very important if the previous stand contained fungus-infected tall fescue because the seed it produces will contain the fungus and will produce fungus-infected plants.

If not in cropland the summer prior to seeding, it is best to either make hay frequently or to keep heavy grazing pressure on the pasture through the summer so that it is stressed. However, the animals applying this grazing pressure may perform poorly due to low forage availability, poor forage quality, and fungal infestation of the tall fescue.

Soil test in the summer and apply lime to maintain a pH of 6 for fescue or 6.5 for a fescue/clover mixture. Apply recommended fertilizer, including 20 to 40 lb N/ac prior to seeding.

In late August remove the animals and chemically treat the old fescue sod to kill it. A cost-efficient method is to use a split application of Gramoxone (paraquat). Apply Gramoxone in early September to burn the fescue back.

Two weeks after the first application or when sod greenup has occurred, repeat with a second application to complete the destruction of the sod. This may often take longer than two weeks. Reports of 5 percent escape have been reported, either from new plants germinating from seed from old plants or old plants not killed. Roundup has provided excellent kill of the infected tall fescue in past comparisons with Gramoxone, but has been expensive. With Roundup prices constantly decreasing, it should be considered for pasture renovation.

A no-till drill may be used to seed fungus-free fescue any time after the second application of Gramoxone. Use 12 to 15 lb of fungus-free seed per acre. This is a higher rate than with the clean till drill because sod-seeded tall fescue seedlings tend to be less vigorous. Again, it is strongly recommended that a clover, probably white clover, be seeded with the tall fescue. Most no-till drills have clover boxes. There is considerable debate as to whether or not the clover should be seeded at the same time as the fescue, which will put it into the same drill row or seeded in a separate operation at right angles to the fescue rows. There is no clear-cut answer at present, but studies are underway.

### **Establishment in Presence of Common Bermudagrass**

A further point to consider is the case where the fescue is to be established in an area of common bermudagrass, either a pure stand or mixed in with other pasture species. Most fescue pastures

are quickly invaded by common bermudagrass in the Piedmont of South Carolina. No-till planting of tall fescue without good control of the bermudagrass will hasten loss of tall fescue to the bermudagrass. Common bermudagrass has an extensive system of rhizomes which will initiate new growth even if all the top growth is removed. Further, without excellent chemical control, usually with multiple applications, complete kill of the rhizomes will not be achieved, and they will initiate growth faster than new seed in the ground. Optimally, if an area of common bermudagrass is to be put into tall fescue, it should be cropped first for at least two seasons. Needless to say, this requires substantial advanced planning. Common bermudagrass produces a large quantity of seed, and the two cropping seasons will help decrease the seed pressure on the new tall fescue stand.

## Weed Control

There are a limited number of options for weed control if tall fescue becomes weedy during establishment, so it is especially important to seed into a weed-free seedbed. When weeds infest fescue/clover mixtures during establishment, there are no options available other than mowing or heavy grazing. The idea is to apply enough grazing pressure so as to encourage the cattle to nonselectively remove all standing herbage down to a particular grazing height, but to remove them before much damage occurs to the tall fescue and clover.

In a pure tall fescue stand, early winter weeds such as henbit and chickweed can be controlled with low to medium rates of 2,4-D. In all cases identify and know the target weed species and, most importantly, read and follow all labeled

instructions. Some pasture herbicides may injure or stunt tall fescue. More information on this is provided in Forage Leaflet 17 "Weed Management in Perennial Pastures and Hay Fields." The best weed control is proper site selection and excellent site preparation. **Do not use Banvel or Ally on tall fescue seedlings.**

## Management of New Seedlings

Delay grazing young seedlings until the root system is well established. Usually the top growth should be 6 inches tall before the roots are well established and firmly attached in the soil. If possible, deferring grazing until spring would be best. A second application of 20 to 30 lb of N/ac may be needed in mid-winter, if conditions are right for good growth. The primary goal of the first year is establishment, first and foremost; the next 10 to 20 years will be for production. **Do not apply N during the summer.**

## When to Renovate a Fungus-Infected Stand?

Unfortunately, the question mark at the end of this section heading says it all; there is no clear answer to the question of when to go to the expense of killing an infected stand and establishing a noninfected stand. The best answer at present centers on animal performance. If you feel that your livestock are genetically capable of better performance than you are seeing, and you are willing to increase the level of forage management, then the fungus-free tall fescue will probably be a good investment.

However, always keep in mind that there are more ways to manage around the fungus. These will be discussed in a forthcoming forage leaflet.