

# Renovating to a novel endophyte tall fescue

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Most tall fescue stands found in Georgia have a fungus that lives in the plant and can be transmitted in the seed. This fungus (*Neotyphodium coenophialum*) is called an endophyte because it lives inside the plant (endo means within, phyte means plant). The endophyte is commonly referred to as fescue fungus or fescue endophyte.

This endophyte has some benefits including pest resistance, drought tolerance, and persistence under grazing. However, the wild- or native-type endophyte (E+) produces toxins called ergot-alkaloids that can cause cattle to suffer from Fescue Toxicosis.

Renovation is strongly encouraged when the toxic endophyte is present or more than 50% of the pasture or hayfield has thinned out, has exposed soil, and/or covered in noxious weeds. It is *strongly recommended* to rotate to an annual summer crop for at least one season before planting a new stand of tall fescue. This is called the spray-smother-spray method and is described in detail at the end of this article. The best way to ensure the old stand and noxious weeds have been removed is from shading of a competitive summer annual such as sorghum or millet. Multiple herbicide applications may be required as well, especially if using the spray-spray-plant method. The existing material must be fully controlled before the new tall fescue is planted to prevent contamination and competition.

## ***Recommended Varieties***

Novel endophyte varieties are strongly recommended for use in Georgia. These currently include varieties with the MaxQ II novel endophyte such as Jesup MaxQ II, Texoma MaxQ II, and Lacefield MacQ II. This novel endophyte was selected by AgResearch and has been inserted into several varieties of tall fescue. Jesup Max Q II was developed by the University of Georgia and was selected to be used in the southeastern US in the eastern regions of the fescue belt. At this time, this is the most preferred tall fescue variety for use in Georgia. Other novel endophytes are available but require more evaluation. Older varieties with the original MaxQ endophyte still exist and are suitable for their continued use. Endophyte free varieties are not recommended in Georgia because of their poor persistence.



The novel endophyte helps alleviate symptoms in grazing livestock associated with fescue toxicosis but have reduced plant persistence and vigor compared to endophyte-infected varieties. Therefore, these varieties require more intense or careful management compared to common ecotypes of fescue or old stands of Kentucky 31.

### ***Planting Instructions***

When to plant: September to October

Planting depth: ¼ inch deep

Planting rate: 15-20 lbs PLS/ac when planted with no-till drill, broadcast not recommended

Planting methods: no-till plantings are most common, fields should be prepped using spray-smother-spray or spray-spray-plant method

### ***Fertility at Establishment***

Nitrogen: Apply 20-50 pounds of N per acre after the seedlings emerge and start to grow. Do not apply N at or before planting because this may increase competition from annual grass weeds.

Phosphorus: Apply after planting according to soil test recommendations.

Potassium: Apply after planting according to soil test recommendations.

Lime: Apply 6-12 months before planting according to soil test recommendations. Incorporate into soil if possible.

### ***Weed Control at Establishment***

It is critical to control weeds during the establishment phase since young tall fescue cannot compete with broadleaf or grass weeds. However, the tall fescue needs to be at least 6-8" tall and well-rooted before 2,4-D or other labelled broadleaf weed control options can be applied. There are no herbicides to selectively control annual grasses in newly established tall fescue (under one year old). There are also no pre-emergent herbicides currently labeled for use in seeded tall fescue during establishment.

Mowing is often the best option for controlling problematic weeds during the establishment phase. The mowing height should be adjusted so little (if any) of the tall fescue foliage is cut. Do not graze or cut the fescue below 6". Plan to mow at least once per month, depending on the level of weed competition. Once established, tall fescue can suppress most weeds and mowing may not be necessary if proper field management is followed.

### ***Steps for the Spray-Smother-Spray method***

- 6-12 months before planting - test soils and apply lime (if required based on soil test results)
- Spring before planting - mow or graze to prevent seedhead development
- April or May before planting - spray non-selective herbicide

- 1-3 weeks later – after herbicide has taken effect (based on label instructions), plant summer annual smother crop
- Summer before planting – graze or harvest summer annual as normal
- 1-3 weeks before planting (August/September) – spray non-selective herbicide
- 1-3 weeks later – after herbicide has taken effect (based on label instructions), plant tall fescue
- May to Fall after planting – to avoid early stand loss, graze lightly with a small number of animals during short periods.

### ***Steps for the Spray-Spray-Plant Method***

- 6-12 months before planting – test soils and apply lime (if required based on soil test results)
- Spring before planting – mow or graze to prevent seedhead development
- 8-10 weeks before planting – spray non-selective herbicide
- 2-8 weeks before planting – allow field to remain fallow for 4-6 weeks before next herbicide application
- 1-3 weeks before planting (August/September) – spray non-selective herbicide
- 1-3 weeks later – after herbicide has taken effect (based on label instructions), plant tall fescue
- May to Fall after planting – to avoid early stand loss, graze lightly with a small number of animals during short periods.

### ***For more information***

For more information on fescue management in Georgia, please see our [Tall Fescue Production Guide](#).

Want to learn more about the tall fescue endophyte? Check out the Oregon Seed publication on [“Understanding the Tall Fescue Endophyte: Practical Solutions to the Fescue Toxicity Problem”](#).

You can also find the results of our 2022 statewide survey of endophyte infection levels across Georgia [clicking here](#).

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