**The Next Generation of Novel Endophyte Tall Fescue**

- The First Non-Toxic Endophyte Tall Fescue Developed by the Noble Foundation
- Can Produce Double the Pounds of Beef per acre compared to KY-31
- Superior Performer throughout the Fescue Belt – High Yields and Excellent Persistence
- Excellent Seedling Vigor and Rust Resistance

**% Cover 2 yrs Clipping - Athens, GA**

- **Texoma MaxQ II™**
- **Kentucky 31**

**Dry Matter Yield (lbs/acre)-2 yrs Lexington, KY**

- **Texoma MaxQ II™**
- **Kentucky 31**

**Stocker Gains - Spring 2009 Prairie, MS**

- **Texoma MaxQ II™**
- **Kentucky 31**

**2 Years Grazing - Ardmore, OK**

- **Texoma MaxQ II™**
- **Kentucky 31**

---

**GET THE COOL-SEASON ADVANTAGE!**

Forage Seed Division  
Pennington Seed, Inc.  
P.O. Box 290, Madison, GA 30650  
Phone: 800-277-1412  Fax: 706-342-8071  
www.penningtonseed.com
Texoma MaxQ II™ features advanced technology that combines a non-toxic endophyte with a proven variety of tall fescue. Texoma MaxQ II™ offers the plant persistence of toxic fescue varieties like KY 31 but with no detrimental effects on animal performance and health. It is adaptable throughout the traditional fescue belt of the U.S.

Texoma MaxQ II™ Tall Fescue
Festuca arundinacea shreb

**WHERE TO PLANT:**

![Map of the United States showing the areas where Texoma MaxQ II™ is adapted and adapted to some sites with irrigation.](image)

**TYPE:** Cool season perennial grass

**ENDOPHYTES:** Endophytes (fungi) are important to the tall fescue plant. The fungus is only transmitted through infected seed. There is no fungal transmission through the air or in pollen. The fungus enables the plant to be more tolerant of heat and drought stress and enhances tolerance to some insects and diseases. However, the fungus in most fescue varieties produces toxins that are harmful to livestock. The MaxQ II™ endophyte provides all the benefits to the plant without producing any harmful toxins. Other benefits of the endophyte to plants include seedling vigor, less seedling root rot, increased tillering, tolerance to grazing, more efficient use of nitrogen, increased phosphorus uptake, improved competitiveness, and longer growing season compared to fungus-free tall fescue.

**ADAPTATION:** Grows well where KY 31 tall fescue is grown and better than KY 31 in the south central U.S. Best adapted to moisture retentive, fertile, clay or clay loam soils. Tolerant to soil acidity and poor drainage, but performs best on well drained soils having good water holding capacity and a pH of 6.0-6.5. Relatively tolerant to drought. Not suited to drought prone, low fertility, sandy soils. Suitable for some sites west of the I-35 corridor under irrigation.

**USES:** Texoma MaxQ II™ enhanced tall fescue provides excellent permanent pasture for all classes of grazing livestock including cattle, sheep and horses. With adequate soil moisture, it provides high quality, abundant forage throughout the fall months into spring and early summer. The highest productivity is September-December and March-June. When cut in the early boot stage of maturity, Texoma MaxQ II™ produces high quality hay. Excellent for fall stockpiling and managed grazing during the winter months.

**NUTRITION:** With proper soil fertility and good management, tall fescue can produce crude protein levels of 15-16% or more with a total digestible nutrient content of 60% or higher; however, environmental conditions and management practices will determine individual results.

**PLANTING:** For best results and benefits, all toxic tall fescue should be killed before establishing Texoma MaxQ II™ (See Pennington pub. Texoma MaxQ II™ User Planting Guide) If cheatgrass (Bromus tectorum), annual ryegrass (Lolium multiflorum) or rescue grass (Bromus catharticus) are expected, a two step treatment – (1) in spring (May) prior to seedhead formation to kill existing vegetation and eliminate seed production and (2) in fall (October) to kill any weed escapes or volunteer seedlings - with glyphosate herbicide is highly recommended for successful stand establishment. A firm seedbed is important for good stand establishment. Seed can be drilled into a prepared firm seedbed, no-till into sod with a no-till drill or surface broadcast on a prepared seed bed and packed in with a culti-packer. Place seed at a depth of ¼” to ½”. Planting too deep will result in poor stand emergence.

**SEEDING RATE:** 15 lbs/acre in clean-tilled prepared seedbed or 20 lbs/acre sod-seeded or broadcast.

**SEEDING RATE:** South Central U.S. Oct. 1 to Nov. 15; Southeast Sept. 15 to Nov. 1; Mid-South, Midwest and Northeastern states: Aug. 15 to Oct. 1 or spring planted in March and April. Do not graze or cut seedling stand until 6”-8” tall. Use only light rotational grazing in the first year and do not graze or cut closer than 2”. During periods of heat and drought stress, rotate grazing cattle more frequently.

**PLANTING DATES:**

- Texoma MaxQ II™ features advanced technology that combines a non-toxic endophyte with a proven variety of tall fescue.
- Texoma MaxQ II™ offers the plant persistence of toxic fescue varieties like KY 31 but with no detrimental effects on animal performance and health. It is adaptable throughout the traditional fescue belt of the U.S.

**The Texoma Story**
The Samuel Roberts Noble Foundation is an independent, nonprofit institute headquartered in Ardmore, Okla. Founded in 1945, the Noble Foundation conducts direct operations, including assisting farmers and ranchers, and conducting plant science research and agricultural programs, to enhance agricultural productivity regionally, nationally and internationally. Texoma MaxQ II™ was developed from a population of tall fescue that has persisted for some 30 years on a Foundation research farm. Partnering with NZ’s AgResearch and Pennington Seed, a new novel endophyte, MaxQ II™, was inserted into Texoma to create Texoma MaxQ II™. Years of on-farm and small plot research have revealed Texoma MaxQ II to have wide adaptability across the traditional fescue belt and better suited than traditional fescue varieties for the Central and south-central U.S. east of the I-35 corridor.