

Summer-Dormant Tall Fescue Management and Use for Texas

Plant Materials Technical Note



Cattle grazing summer-dormant tall fescue

Background

Tall fescue (*Lolium arundinaceum*) is a cool season, introduced perennial grass which can provide valuable fall and spring forage for livestock. Until the advent of summer-dormant tall fescue, its use as a forage plant has been limited to the northeastern United States. Recently, plant research and development focusing on summer-dormant tall fescue has provided additional plant material alternatives for livestock producers who are looking for additional fall grazing options.

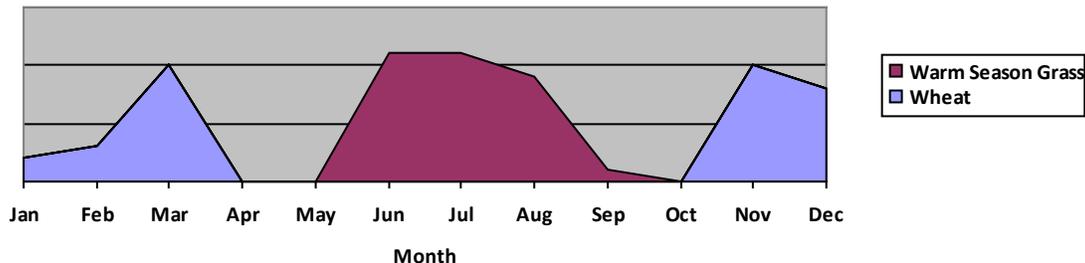
Purpose

The purpose of this technical note is to provide management information relative to summer-dormant tall fescue for use as a forage species in areas within north Texas and the Texas panhandle.

Application

The predominant forage species for fall and spring grazing in north Texas and the Texas panhandle has historically been limited to wheat. Typical wheat management includes: 1) planting in September, 2) grazing beginning in November and 3) removing cattle in March for wheat grain production. Due to this required management there exists a forage availability void between the months of March and May as well as September and November (Table 1.)

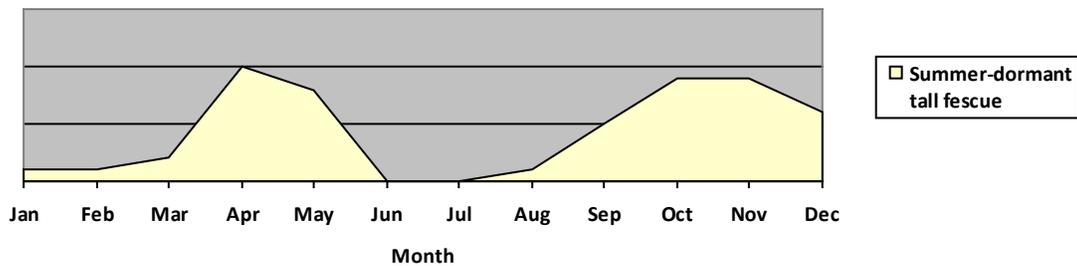
Table1. Forage Availability Curve



Until recently there has not been a cool-season forage option for Texas. All of the available introduced, cool-season, perennial grasses were selected from cool, dry climates in Europe and Asia (Humphries, 2007.) Texas summers are too hot for these varieties to persist and develop adequate fall growth. However, in recent years summer dormant tall fescue has become commercially available in the United States. Summer-dormancy is a mechanism triggered in the plant in response to increasing day length and temperature in late spring. This dormancy remains regardless of fluctuating soil moisture (Malinowski et al., 2006, Malinowski et al., 2009). Summer-dormancy allows the tall fescue to survive Texas summers and resume fall growth.

Summer-dormant tall fescue can help fill the fall and spring forage availability void in north Texas and the Texas panhandle. These species provide available grazing in October through November and again in March through May. Summer-dormant tall fescue complements grazing forage from wheat and oats during the winter and early spring as well as provides spring grazing until warm-season grass pastures are ready (Table2.)

Table2. Forage Availability Curve - summer-dormant tall fescue



Summer-dormant tall fescue (left) growth vs wheat (right) in November

Management – Year 1

Summer-dormant tall fescue should be planted as a monoculture in the fall at a rate of 15 PLS pounds per acre. Refer to Texas Plant Materials Technical Note TX-PM-10-7 Seedbed Preparation

(http://www.tx.nrcs.usda.gov/technical/pmc/docs/tx_pm_10_07.pdf) for information relative to proper seedbed preparation. First year plantings should only be grazed lightly (if any) to facilitate plant establishment. These plants should be grazed to a height no less than 6 inches the first spring and not grazed at all during the summer. Broadleaf weeds should be monitored in the fall and summer and treated as necessary.



Summer-dormant tall fescue growth in the Spring.

Management – Year 2

Fertilizer should be applied according to soil test beginning in the fall and again the following spring. Summer-dormant tall fescue should not be grazed until the average pasture height reaches 8 inches. During the winter, summer-dormant tall fescue should be maintained at a height of 4 to 8 inches using prescribed grazing methods. During the spring, summer-dormant tall fescue should be grazed in such a manner as to keep the plant vegetative and leafy. Spring grazing in year 2 and subsequent years can be at a heavier rate than year one; maintaining an average stubble height of at least 4 inches. Broadleaf weeds should be monitored and treated as necessary.



Summer-dormant tall fescue fall recovery

****Note*** The preceding management suggestions are merely guidance and do not replace the need for constant monitoring and adjustments according to site specific conditions.*

Livestock Considerations

Older varieties of tall fescue can become infected with an endophyte that produces a toxic alkaloid. The toxic alkaloid may cause disorders in ruminants and horses that consume large amounts of tall fescue (Agriculture, 2011).

Summer-dormant tall fescue alleviates this concern. Summer-dormant varieties are either endophyte free or infected with a novel endophyte which has no detrimental effects on livestock.

Conclusion

Summer-dormant tall fescue may be a viable cool season alternative to fill a forage void for livestock producers in north Texas and the Texas panhandle. Due to the season of growth this plant can fill an important niche in helping land managers bridge a gap between livestock and wheat production.

Photos by Dr. Dariusz Malinowski. Texas AgriLife Research

References:

Aljoe, H. (September 1998). The Samuel Roberts Noble Foundation, Ag News and Views. In Winter Pasture Options Following Drought Conditions. Retrieved August 31, 2011, from: <http://www.noble.org/Ag/Forage/PastureOptions/index.html>.

Humphries, E., 2006. Fall Fescue for Forages. In *The Cattleman. Texas and Southwestern Cattle, Inc.*

Malinowski, D.P., Kigel, J., Pinchak, W.E.. 2009. Water deficit, heat tolerance, and persistence of summer-dormant grasses in the U.S. Southern Plains. *Crop Science* 49:2363-2370.

Malinowski, D.P., Kramp, B.A., Kigel, J., Pinchak, W.E. Mechanisms of summer dormancy in cool-season perennial grasses. P. 124-128. In *W. Alison et al. (ed) Proc. American Forage and Grasslands Council Conference*, 10-14 March 2006. San Antonio, TX.

University of Kentucky College of Agriculture. (August 22, 2011). The Horse, Endophyte-Infected Tall Fescue and its Effects on Broodmares. In *The Horse.com*. Retrieved September 1, 2011, from <http://www.thehorse.com/ViewArticle.aspx?ID=18709>.