## Plan and Plant for July and August

Dr. Gary Bates, Director UT Beef and Forage Center

"News Flash: It's going to be hot and dry in July and August." That could be the opening sentence of every summer article I have written. No one is surprised if there is a drought in the late summer. In reality, the best thing to do is to plan on a drought. From a forage standpoint, we can plant some forage species that may be able to minimize the impact of drought on the farm. These grasses are generically called 'warm-season grasses.'

Most of these grasses developed in the tropical and subtropical regions of the world, and have several characteristics that give them an advantage over cool-season grasses during the summer. Warm-season grasses can produce energy through photosynthesis faster, which allows them to use more of the sunlight that fall on their leaves. They use water more efficiently, plus they have deeper root systems than cool-season grasses. Another characteristic that helps warm-season grasses is that their optimum temperature is about 90 F, while cool-season grasses perform best at about 70 F. All of these factors work together to make warm-season grasses more productive during the summer.

**Bermudagrass** - perennial grass that grows and spreads by above ground stems known as stolons. Good hay or grazing forage. Very tolerant of close, continuous grazing. There are several different varieties of bermudagrass. Some varieties can be planted from seed, while others do not produce viable seed and have to be planted by planting live, vegetative material from another stand. Cold tolerance needs to be a major consideration when selecting a variety. Winter-kill can cause severe stand loss in bermudagrass. Hybrid bermudagrasses are highly responsive to fertilizer, and can produce high quality forage if harvested at early stage of maturity. Should be harvested every 4 weeks.

Warm-season perennial bunch grasses - include big bluestem, indiangrass, eastern gamagrass and switchgrass. The forages produce high quality forage early in the season, but forage quality decreases as plants mature, just as with any of the other warm-season grasses. Stand establishment can be a challenge with these grasses. Grazing management is important for stand persistence. Do not graze below 8 inches, paying particular attention to grazing height in mid-July and August.

**Crabgrass** - annual grass that was selected for higher yield from native crabgrass populations in Oklahoma. Research in Oklahoma indicates yield and animal performance are both excellent on this forage. Experience in Tennessee indicates that it can make an excellent pasture for stocker animals during the summer. Because it is an annual, allowing plants to produce seed for the next year's stand is necessary. Red River and Quick-N-Big are two varieties that have worked will in Tennessee.

Sorghum x sudangrass hybrid and pearl millet – both of these are annual grasses. They are relatively tall growing grasses that can be quite productive with timely summer rains. Sorghum x sudangrass hybrids can tolerate a cooler soil temperature, so they can be planted earlier than pearl millet. Sorghum x sudangrass hybrids release prussic acid (cyanide) after a frost, so you cannot graze them as long as pearl millet. When there is a potential for even a light frost, do not graze a sorghum x sudangrass hybrid. Only cut it for hay, which will allow time for the prussic acid to break down.

**Teffgrass** - annual grass used in most of the world as a grain crop. Has very fine leaves and stems, making it a high quality, palatable hay crop. The seed for this species is extremely

small, so seeding depth is critical during establishment. Seed should be planted no more than 1/8 inch deep.

Will they work for you? Warm-season grasses have the potential to provide forage when tall fescue pastures are not being productive. However, the growing season is shorter with these plants compared to tall fescue, and there is considerably more risk with them. If you decide to try one, be reasonable in the amount of land and resources you commit. Tall fescue should remain the primary forage on the farm. A good rule of thumb is to have 70 percent of your acreage in cool-season grasses like tall fescue. Thirty percent can be sown to a warm-season grass. Your goal should be to provide grazing during late June through early September.

Most producers should think about planting a portion of their acreage to some type of warm-season forage. Although they do not eliminate all of the problems associated with drought, they will help minimize some of the forage production problems we may face in the future.