Annual Grasses

Common annual grasses adapted to the Southeast region include the following:

- **Warm-season species:** crabgrass, pearl millet, sorghum, sorghum sudangrass hybrids, and sudangrass
- **Cool-season species:** rye, oats, wheat, triticale, and ryegrass

WARM-SEASON SPECIES

CRABGRASS

Crabgrass produces high-quality forage and is widely adapted to the Southeast. While it is considered a weed in row crops and even in some forage production systems, it can be a valuable forage plant.

There are several crabgrass species, but the two most used are large or hairy crabgrass (*Digitaria sanguinalis*) and smooth crabgrass (*D. ischaemum*). Large crabgrass is the most common species that volunteers or is planted for forage. Crabgrass requires well-drained soils and pH ranging from 5.5 to 7.5. Recommended seeding rate is 3 to 5 pounds PLS per acre and seeding depth is ¼ to ½ inch.

Crabgrass requires proper soil fertility to sustain forage yield and quality. The nitrogen rate should be at least 120 pounds per acre applied in split applications. Crabgrass generally has around 15 percent crude protein and up to 60 percent TDN. It also is easy to manage for reseeding for the following growing season, and it can be used for grazing or hay production.

PEARL MILLET

Pearl millet (figure 15) has potential to produce high-quality and high-quantity feed during spring and summer months. It can be used for hay, as a silage crop, or for grazing. It grows well on a variety of soils, but yield is better on well-drained and fertile soils. It is adapted to sandy soils with low fertility and is reasonably tolerant to drought.

The recommended seeding rate is 15 to 25 pounds per acre and the seeding depth is ½ to ¾ inch. Pearl millet can grow from 3 to 8 feet tall but requires adequate fertility to yield well.

Weed control prior to planting is essential since weed competition may compromise stand establishment. It is important to scout for insects and diseases that may need to be controlled to avoid yield and quality decline. Be aware of the potential for nitrate toxicity buildup, which compromises animal health when consumed by livestock.

Figure 15. Pearl millet grows throughout Alabama.

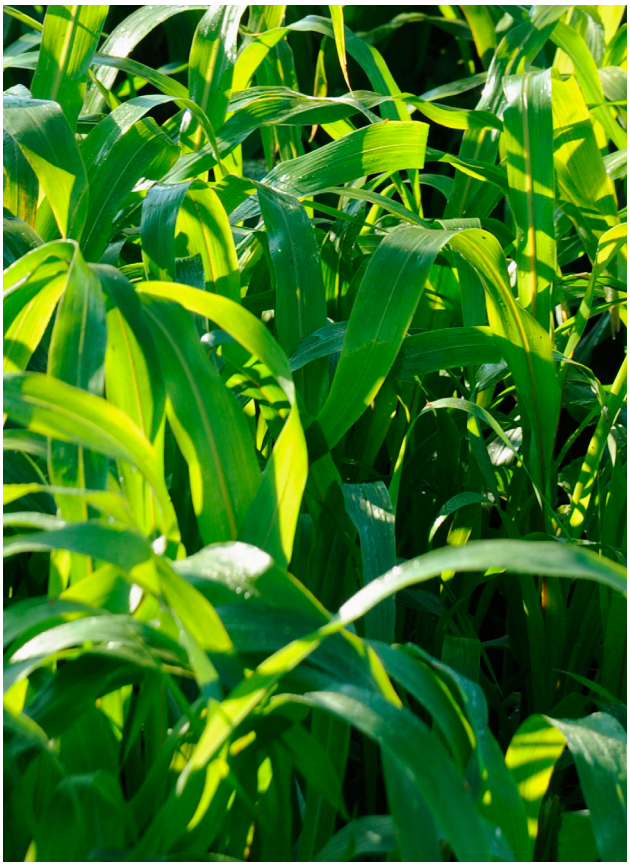

Figure 16. Sorghum grows throughout the state..

Figure 17. Sorghum-sudangrass hybrids are found throughout the state.

SORGHUM

Sorghum (figure 16) is best adapted to warm regions and is a potentially high-yield forage. It requires proper soil fertility since expected yields are up to 20 tons per acre. Optimal soil pH is 6.5. The recommended seeding rate is 8 to 12 pounds PLS per acre and seeding depth is 1 to 2 inches.

Prior to planting, weed control is crucial to avoid competition during establishment. The planting window starts when soil temperature reaches 65 degrees Fahrenheit at the 4-inch depth. Crude protein ranges from 8 to 12 percent and TDN expectation is up to 60 percent. It is important to scout for insects and diseases to enable application of control strategies as needed since they can reduce both yield and quality.

Forage sorghum hybrids vary in yield, quality, and maturity; therefore, it is important to choose a variety that properly meets the needs of your forage system. You need to be aware of the potential for prussic acid poisoning or nitrate toxicity under droughty conditions or following a frost.

SORGHUM-SUDANGRASS HYBRIDS

Sorghum × sudangrass (*Sorghum bicolor* L. Moench × *Sorghum* × *drummondii*) (figure 17) is a cross between sorghum and sudangrass. It is a potentially high-yield forage, is tolerant to heat and drought, and has a growth habit similar to pearl millet.

This forage species is more severely affected by drought than pearl millet and is less tolerant of poor soil conditions and soil pH values less than 5.8. The recommended seeding rate is 12 to 15 pounds PLS per acre and seeding depth is 1 to 2 inches.

As with sorghum, you need to be aware of the potential for prussic acid poisoning or nitrate toxicity following periods of plant stress. Sugarcane aphid (SCA) (*Melanaphis sacchari* [Zehntner]) has emerged as a significant pest in *Sorghum spp*, compromising forage production and quality. Efforts are ongoing to determine proper insecticides and their respective use rates to control SCA, with the aim to decrease yield and economic losses.

COOL-SEASON SPECIES

ANNUAL RYEGRASS

Annual ryegrass is a bunchgrass with shiny, smooth leaves. It is a high-quality forage that tolerates close grazing and also can be used for hay. It tolerates wet, poorly drained soils better than small grains do and is quite responsive to nitrogen fertilization. Peak growth is generally around March and April in the southern region.

The recommended seeding rate is 15 to 30 pounds PLS per acre and the seeding depth is ½ to ¾ inch. The recommended planting window is late August to November 1. A common practice is to overseed ryegrass into perennial warm-season pastures.

Ryegrass can be planted either alone or in a mixture with other cool-season species. This can extend the grazing season in late winter and spring. It is important to remember that annual ryegrass and cereal rye are not the same species.

OATS

Oats (figure 18) can be grown for forage, grain, hay, or silage. They are generally more cold-sensitive than other small grains and can be susceptible to winter-kill. Compared to wheat, oats have more fall growth, head out slightly later in spring, and typically have slightly lower dry matter yield than other small grains.

Recommended seeding rate is 90 to 120 pounds PLS per acre and seeding depth is 1 to 2 inches. The recommended planting window is from late August to November 1.

Figure 18. Oats are the most palatable of the small grains.

Figure 19. Cereal rye grows across Alabama.

CEREAL RYE

Cereal rye (figure 19) is native to the Middle East. The majority of rye grown is the United States is used as a cover crop, pasture, or hay. Rye is well-adapted to sandy or acidic soils characteristic of those in the Southeast. Optimum soil pH is 5.8 to 6.5. Rye is more cold-tolerant than other small grains and is often a popular choice among producers for this reason.

Recommended seeding rate is 90 to 120 pounds PLS per acre and seeding depth is ½ to ¾ inch. Grazing may be initiated when the plant reaches approximately 6 inches in height and should be terminated at 3 to 4 inches in height.

Figure 20. Triticale is mostly used for silage or baleage but can be grazed.

TRITICALE

Triticale (figure 20) is a cross between wheat and rye and is increasing in popularity in the Southeast. Triticale retains the palatability of wheat with the growth vigor of rye. Forage variety tests indicate that triticale, while not as cold tolerant as rye, often produces dry matter yields similar to rye but with a heading date later than rye. Triticale is typically used to produce hay or silage.

Figure 21. Wheat is more cold tolerant than oats.

WHEAT

Wheat (figure 21) is an annual cool-season grass that can be used for grazing, hay, or haylage/silage. While wheat grown in the United States is utilized predominantly for human consumption, it also is grown as a feed source for animal production. Wheat shows active growth in the fall, winter, and spring. It grows well under a soil pH range of 5.5 to 8.0. The recommended seeding rate is 90 to 120 pounds PLS per acre and seeding depth is 1 to 2 inches.