

Southeast
AGRISEEDS^{LLC}

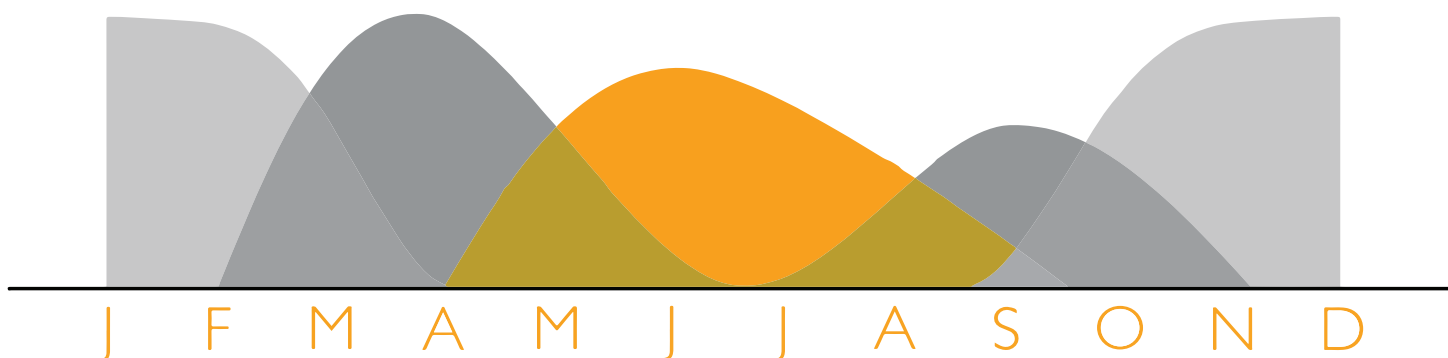


Helping you optimize productivity on every acre!

SUMMER **ANNUAL** — **MANUAL**

WHY SUMMER ANNUALS?

- Rapid growth during the hot, humid weather
- Fills the “summer slump” of cool-season perennials
- Higher quality than perennials during the summer
- Crop rotation
- Pasture renovation tool
- A break for cattle grazing KY-31 fescue
- Rotation allows for rest and protection of perennial grasses



WHAT TO EXPECT

When managed properly, summer annuals can produce substantial, high quality forage in the span of 90-120 days. This is often harvested in 1-4 substantial cuts or grazings of high energy forage. Time to first harvest for multicut annuals is generally 45-60 days, depending on weather conditions. As long as enough residual is left behind, subsequent growth will be ready to harvest more quickly, with that window tightening to 30-45 days. This rapid growth will require aggressive harvesting to prevent the stand from getting rank or low quality. For ideal growth and nutrient density, nitrogen fertilizer can be added after emergence and, if needed, between each harvest.

WARM SEASON ANNUAL GRASSES

Single cut: Forage sorghum, grain sorghum

Multicut: Sudangrass, sorghum-sudan, improved millet, teff, improved crabgrass

WARM SEASON LEGUMES

Single cut: Cowpeas, forage soybean, Sunnhemp

Multicut: Lespedeza

BROADLEAVES AND BEYOND

Single cut: Buckwheat, sunflowers

Multicut: Brassicas, multi-species mixes



WHAT TO KNOW

Planting

Prior to planting, terminate the existing stand of pasture. Although some pastures may seem thin or uncompetitive, they often provide too much competition for summer annuals to thrive. Take the time to terminate existing grasses prior to seeding to set yourself up for success. Always make seeding adjustments with the weather. Temperature and moisture considerations are key for summer annual success. Most summer annuals need 65 degree soil temperatures in order to germinate. Planting into moisture is highly encouraged, especially when working with smaller seeds like millet or crabgrass that require shallow seeding depth. Correct seeding depth for seed size can make or break the crop.



Red: Fescue stand terminated with glyphosate prior to planting, sorghum sudan fertilized with 60 units of N after emergence

Yellow: Fescue stand mowed very short prior to planting, sorghum sudan fertilized with 60 units of N after emergence

Blue: Fescue stand mowed very short prior to planting, sorghum sudan not fertilized

Fertilization

- Refer to the most recent soil test for phosphorous, potassium, and micronutrient recommendations
- Apply nitrogen after emergence for best success
- Application rates of 40-70lbs/A of nitrogen between harvests will maximize quality and yield

Harvest Timing

Depending on species and use (cover crop or forage for various classes of livestock), most should be taken fairly early in their growth, prior to or at boot stage. This will maximize quality and prevent stands from getting “rank”, or low quality.

Grazing

Rotational or strip grazing is the most cost effective way to manage summer annual forage. Sudangrass and millet have the best regrowth, but sorghum-sudan and even forage sorghums can be grazed. Crabgrass is also an excellent summer pasture crop that readily reseeds itself and volunteers the following year. Diverse mixtures like Ray’s Crazy Mix or Summer Feast are also popular for grazing while increasing soil health.

Concerns

Prussic acid is a concern with sorghum and sudangrass products, but not millets. Never harvest and feed immediately after a frost or big rain event following a droughty period. 18 inches of growth is the preferred minimum height for grazing. If you harvest for ensilage immediately after a frost, allow 30 days for a full fermentation process and for cyanide to “gas off” before feeding. Nitrate poisoning can also occur with all summer annuals. Typically, this occurs from excessive nitrogen fertilization or untimely nitrogen fertilization. Consumption of heavy nitrate concentrations can cause death within 24 hours in extreme cases, so forages should be tested for nitrates prior to being fed.



THE IMPORTANCE OF BMR



BMR (Brown Mid Rib) is a gene mutation, named by its showy brown mid rib, which reduces lignin content and improves whole plant fiber digestibility and was conventionally bred into summer annuals like corn, pearl millets, and sorghum products. BMRs do have some drawbacks, but these have been managed with better genetics and handling in the field. Lignin content can mean reduced standability, which has been addressed by breeding for dwarf structure.

Brachytic dwarf plants are shorter and leafier, so they have more leaf material in proportion to stalk tissue – a bonus for both field performance and fiber digestibility. This gene is named for the phenotypic characteristics. Plus, with more plant material per inch of height, they can rival traditional taller sorghums for yield.

Yield drag is another concern that sometimes afflicts BMR products. Our trials generally show slightly higher yields for non-BMR forage sorghums and sorghum-sudans, as well as superior and rapid regrowth. But looking closer at the nutritional data makes us question the edge these standard products truly provide.

- NDFd and TTNDFD are higher
- Each % increase in NDFd causes an average increase in milk production by 0.55lb/day
- BMR forages increase animal intake by 0.37lb/cow/day

BMR sorghum products and millets can also fit nicely into a rotation where corn would struggle. Since they need to be planted later, in warmer soil temperature, the timeline for harvesting a double crop small grain is more generous. The bonus is that the sorghums handle hotter, drier conditions that might knock corn yield back. With their lower lignin content, BMR products also generally have improved palatability, so cows eat more of the stem and leave less leaf litter on the ground. BMR is a good indicator but not a guarantee of better quality.

PRODUCT HIGHLIGHTS

MILLETS

With a drier stalk, millet is one of the easier summer annuals to use for a multicut dry hay system, although it is also excellent in a grazing or wet hay system. When placing millets on the farm, remember that most are extremely useful in their range of adaptability – we would argue that range is even broader than sorghums or sorghum-sudans. Despite their tolerance of the hot, dry conditions of peak summer, millets can do well in wetter, more acidic soils than their sorghum counterparts can tolerate. One major advantage of millets is that they currently have no susceptibility to sugarcane aphid. They also don't produce any Prussic acid with frost as crops in the sorghum family do. Millet is safe for horses. However, millets do typically have a 10-15% yield lag in comparison with sorghum sudan and sudangrass. No quality lag will be seen if a BMR millet is planted. Millets are very small seeded, so they should be established by drilling no deeper than 0.5 inch.



BMR Hybrids

Prime 180 - A wide leaf, dwarf BMR variety with a strong disease package. Heavy tillering and strong regrowth.

Prime 360 - A second dwarf BMR millet with very similar characteristics to Prime 180. Tends to grow taller late season, recommended for haylage and baleage.

Non BMR Hybrids

Tifleaf 3 - A dwarf pearl millet with fair rust resistance.

Wonderleaf - A taller pearl millet with high leaf count.

SUDANGRASS

Like sorghum sudan, sudangrass handles drought very well, but has finer stalks, aggressively tillers, and has a more favorable leaf to stem ratio. It is arguably the most flexible summer annual crop because it performs well as a dry hay crop, haylage and baleage, as well as grazing. It is quick to establish and has the best regrowth in the lineup. Drill at 0.5-0.75" deep when soil temperatures reach 65 degrees. Harvest between 2-5ft tall for ideal quality and yield.



BMR hybrids

AS9301 - A powerful product with strong disease resistance and drought tolerance that maintains dry stalk characteristics instead of a thin stem

AS9302 - The same strength of 9301, but with a dwarfing characteristic that makes this hybrid more forgiving of lower harvest heights.

SORGHUM SUDAN

Sorghum sudan is a hybrid between forage sorghum and sudangrass and carries the same drought tolerance and high yield. Sorghum sudan is one of the tallest summer annuals and tends to have a stalk size more similar to forage sorghum. Because of this, we suggest sorghum sudan to be used for grazing, wet hay, or silage production. The large stalk size, especially at tall harvest heights, can make dry down difficult and result in poor quality dry hay. Sorghum sudan has an incredibly aggressive seedling vigor and strong regrowth. Drilling is recommended at 0.5-1 inch deep. Harvest for haylage or silage at waist height, begin grazing around 24" tall. Leave behind at least 6" of stubble height to encourage regrowth.



BMR Hybrids

AS6401 - The variety with the strongest disease and drought tolerance.

AS6402 - A high yielding dwarf sorghum sudan. High grazing tolerance due to brachytic characteristics.

ADV6504 - A photoperiod sensitive variety, which means it does not put out a seed head until the days get shorter. This allows which allows you to lose quality slower.

KF Sugar-Pro 55 - A dry stalk sorghum sudan with quicker drying time. Ideal for wet hay and silage production.



PRODUCT HIGHLIGHTS

CRABGRASS

This forage breaks all of the summer annual rules. Crabgrass is a reseeding annual that grows more like the perennial grasses, with a maximum height of 3ft tall and only 3" residual height needed to regrow. It is the only summer annual that consistently establishes and is productive when interseeded into thinning perennial stands. As one of the smallest seeds in the lineup, it can be broadcasted or drilled. No matter the method of seed distribution, it should be kept shallow and never be placed deeper than 0.25 inch. The crabgrass we work with has been coated at 50% to increase the size of the seed and aid in seed dispersal, in both drilling and broadcasting. This coating is equipped with absorptive materials that draw water to the seed for fast germination and contains a fungicide to aid in early season fungicide prevention. Broadcasted seed should be firmed into the seed bed in some manner- whether that be by cultipacking, irrigation, running the livestock densely across the field, or dragging. If allowed to go to seed during the growing season, crabgrass will reseed itself. Count on emergence the following spring when soil temperatures break 55 degrees. Crabgrass is one of the lowest yielding summer annuals, with no more than 2.5 tons across the growing season. Its flexibility and reseeding capacity has made crabgrass an important forage across the Southeast.



Mojo - Coated with Yellow Jacket seed coating to improve seedling vigor, Mojo brand is Barenbrug's improved crabgrass.

Coated Red River - Red River crabgrass has excellent reseeding and regrowth capacity. Known for its ability to spread and cover ground.

FORAGE SORGHUM

Forage sorghum is an excellent choice for one cut systems on marginal corn ground or after double crops. It uses 30 to 50% less water than corn and less nitrogen for similar tonnage. Ideal harvest time for direct chop silage is at soft dough stage, which will maximize starch content and yield. Forage sorghum is also well suited for haylage and baleage production using a "cut and wilt" system at boot stage. It is recommended to increase seeding rate to improve yield. For both systems, it is always recommended to use varieties with the BMR trait to improve energy concentration of the feed. Forage sorghum can be sown 1-2" deep and seeding rate is variety dependent.



Direct Chop

AF7401 - A full season BMR gene 6 variety with 110-115 days until soft dough stage.

The brachytic dwarf characteristics keep this hybrid from lodging and improves the leaf to stem ratio.

KingFisher Fiber Pro 70 FS - A strong brachytic dwarf BMR gene 6 variety with superior standability and reduced lignin for better feed value. Good disease package. It will be in the soft dough stage at 110-115 days.

AF8301 - A dwarf non-BMR forage sorghum with a high stand yield. Excellent for dry cows and heifers.

Cut and Wilt

AF7101 - An 82-85 day dry stalk BMR gene 6 variety ideal for lower productivity soils. A great choice for mid-summer plantings to produce haylage or baleage.

AF7102 - An 85-89 day brachytic dwarf BMR gene 6 variety that keeps lodging potential low. Another great option for quick haylage or baleage production.

AF7201 - Dry stalk BMR gene 6 variety with 90-95 days until soft dough. Performs well on dryland and with limited irrigation.

PRODUCT HIGHLIGHTS

TEFF

Teff is a very small seeded summer annual that has large interest amongst the equine community. Known for its low non-structural carbohydrate content, this is a fine leaf and stem grass that is native to Africa. Must be seeded into a prepared seed bed, broadcasted, and then firmed into the seed bed for perfect establishment. The first harvest should be taken for dry hay due to the young root system and high potential for pulling up the plants completely under grazing pressure. Once established, teff requires very little. It is drought tolerant and needs only 30lbs/A of nitrogen to produce a good crop. Needs to be harvested prior to boot stage for ideal quality and palatability.

Moxie Teff - A high yielding teff blend that has been coated with Yellow Jacket for improved germination and seedling vigor.



MIXTURES

Ray's Crazy Summer Mix

A seven species mixture developed to build soil health, increase available nitrogen while producing a high protein forage for livestock. Ideal behind cleared land or for use in pasture renovation.

Summer Feast

A balanced two-way mixture of hybrid brassica and pearl millet for high-quality forage. The hybrid brassica mines for nutrients deep in the soil and provides quality, while the millet acts as effective fiber. An excellent mixture for developing heifers, grazing stocker calves, and putting weight on cows.

Summer Breeze

BMR sorghum sudan and cowpea work together to provide high yielding and higher protein forage. A great choice for the producer looking to increase diversity, minimize nitrogen fertilization, and get livestock off of Kentucky 31 during the hot summer months.

Summer Solar

A diverse legume-forb cover crop mix of aggressively growing summer annuals, with possible dual use for wildlife food plots. The mix includes four very different components—buckwheat, cowpeas, sunflower, and sunn hemp. Seeding rate is 35-60lbs/A and should be drilled between 0.5-0.75" deep.

**Looking for something different?
Custom mixes available.**

Southeast AgriSeeds works with you to formulate the perfect mixture for your needs. Only 500lbs needed for a quick, accurate custom mix named after you, designed by you.





Helping you optimize productivity on every acre!



Joshua Baker
General Manager



Paige Smart
Regional Support Manager



LaDon Bandy
Business Manager



Curtis Howard
Warehouse Manager



Southeast AgriSeeds is a sister company to King's AgriSeeds.

MISSION

To serve southeast agriculture producers by equipping local dealers with the products, services and support needed to optimize productivity per acre.

TESTIMONIALS

"I turned heifers out into a pasture with sections of Tifleaf III and Prime 180. They finished the BMR millet before they moved to Tifleaf."

- Larry Hadden, Stapleton GA

"By God's grace I am a cow/calf farmer in North Carolina. My job is to provide a diverse variety of foliage and the cows know their role. By partnering with Southeast AgriSeeds I am able to use the latest seed technology, get ongoing technical support and produce the optimum number of grazing days. Through Southeast's help I am also continually improving the quality of my baled hay."

- Jim Anderson, Eden NC

Products used: Ray's Crazy Mix, Pasture Booster, triticale, annual ryegrass



"A picture is worth a thousand words"

- Richie Herman, Statesville NC

Products used: Mojo and Red River Crabgrass