

Southeast  
AGRISEEDS<sup>LLC</sup>

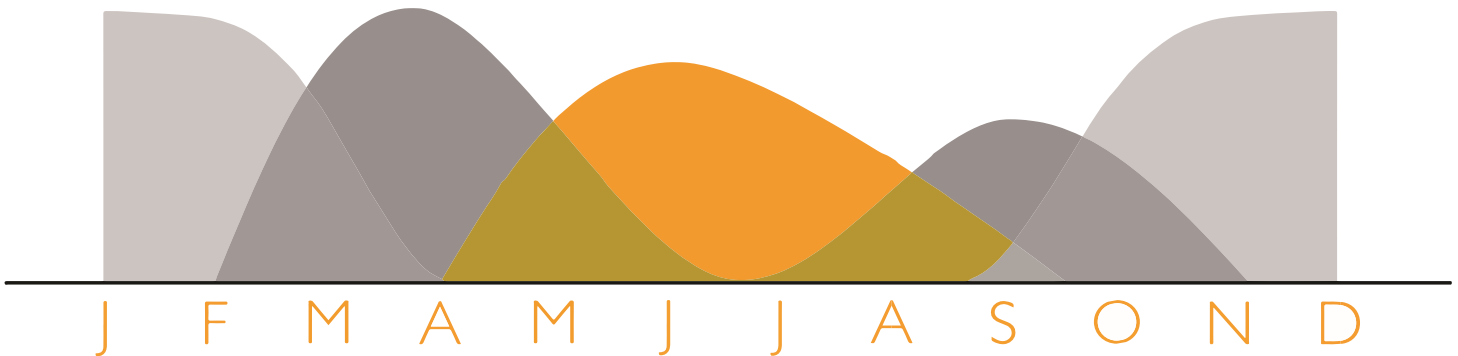


Helping you optimize productivity on every acre!

SUMMER  
ANNUAL  
MANUAL

# WHY SUMMER ANNUALS

- Crop rotation
- Rapid growth during the hot, humid weather
- Fills the “summer slump” of cool-season perennials
- Higher quality than warm season perennials during the summer
- Condition land for perennial establishment
- 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 75-120 days. 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 harvest:** Forage sorghum, grain sorghum

**Multiple harvests:** Sudangrass, sorghum-sudan, improved millet, teff grass, improved crabgrass

### WARM SEASON LEGUMES

**Single harvest:** Cowpeas, forage soybeans

**Multiple harvests:** Lespedeza, sunn hemp

### BROADLEAVES AND BEYOND

**Single harvest:** Buckwheat, sunflowers

**Multiple harvests:** Brassicas, multi-species mixes

## Summer Annual interseeding trial

### 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.

### FERTILIZATION

- Refer to the most recent soil test for phosphorous, potassium, and micronutrient recommendations.
- Apply nitrogen after emergence for best success: a general rule of thumb is one lb. of nitrogen per growing day.
- Application rates of 40-60lbs/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 'dual purpose' in that they provide 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.



**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





**As you browse through this manual, you'll come across some key terms that will help you determine what species and varieties will work best for you. Take a moment to familiarize yourself with these defining characteristics.**

**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. This means pound for pound more available energy to your livestock. Available in sudangrass, sorghum sudan, forage sorghum, and millet products.

**Brachytic dwarf** plants are defined by the shorter distance between internodes of the plant. Resulting plants stay shorter than their non-dwarf counterparts, but do not show lower yields. This improved leaf to stem ratio translates to less fiber overall. This characteristic also improves the standability and regrowth. Seen in sorghum sudan, sudangrass, forage sorghum, and millet hybrids.

**Aphid tolerance** is a characteristic that has been identified as a result of the sugarcane aphid. While this is not true resistance, hybrids identified as either AphidAxe or Aphix have been tested and proven to be not preferred by the aphid. Available in sorghum sudan and forage sorghum products.

**Photoperiod sensitivity** is defined as hybrids that flower in response to day length. This means that the plant won't produce a seedhead until the days start getting shorter. This results in longer stretches of vegetative growth so you can capture quality forage for longer periods of time. Available in sorghum sudan hybrids.

**iGrowth** sorghum contains a proprietary non-GMO imidazoline tolerance technology, which allows farmers to spray a companion imidazoline herbicide from UPL (currently under EPA review) for pre- or post-emergence control over broadleaf and grass weeds without causing damage to the crop.

**AphidAxe** is a designation of sugarcane aphid tolerance. While this is not true resistance, it is a measure that proves that this variety is less likely to be impacted by the aphids. Paired with other key management strategies, it will help reduce losses to the aphid tremendously

## **IMPROVED FORAGE MILLETS    DRY HAY - WET HAY - GRAZING**

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 and are safe for horses. Millets are very small seeded, so they should be established by drilling no deeper than 0.5 inch or by broadcasting into a firm, prepared seed bed.

### **BMR Hybrids**

**KF 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. *Available in coated!*

**KF Prime 180-** A BMR dwarf millet with excellent tillering and disease resistance.

### **Non BMR Hybrids**

**Leafy T** - A dwarf pearl millet with fair rust resistance.

## **COVER CROP/ONE CUT MILLETS**

**Browntop-** A short millet best for attracting birds or for a one cut system.

**Japanese Millet-** Cover crop/grazing millet. Great for wildlife.

**Proso-** A widely adapted millet. Great for wildlife/birds.

## SUDANGRASS DRY HAY - WET HAY - GRAZING

Sudangrass handles drought very well, but has finer stalks and a more favorable leaf to stem ratio than sorghum sudan. It is arguably the most flexible summer annual crop, 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, yield, and regrowth.

### BMR hybrids

**AS 9301** - A powerful product with strong disease resistance and drought tolerance that maintains dry stalk characteristics instead of a thin stem

**AS 9302** - The same strength of 9301, but with a dwarfing characteristic that makes this hybrid more forgiving of lower harvest heights.

**KF EnergyPro 93** - Sudangrass that dries down quickly with superb quality and yield.



## CRABGRASS DRY HAY - WET HAY - GRAZING

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. 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 have made crabgrass an important forage across the Southeast.

**Mojo** - Coated with Yellow Jacket seed coating to improve seedling vigor, Mojo brand is a blend of Red River and Impact varieties.

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

## **TEFF DRY HAY - GRAZING**

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 blend of warm season annual teff grasses.

**Corvallis Teff** - Small seeded summer annual grass, good for dry hay.

## **GRAZING CORN**

A very palatable, single grazing option. Livestock will seek out corn over many other summer annual options. High sugar content makes this a great option for those seeking milk production or trying to add weight to livestock. It does require more water to be productive compared to sorghum sudan and sudangrass. No prussic acid risk.

**BMR Grazing Corn**– One crop summer annual grazing corn.

## **FORAGE SORGHUM WET HAY - SINGLE GRAZING**

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**

**AF 7401**- a full season BMR gene 6 variety with 110-115 days until soft dough stage.

**KingFisher Fiber Pro 50**- An 85–89-day brachytic dwarf BMR gene 6 variety that keeps lodging potential low. Another great option for quick haylage production or planting after corn for a double crop.

**SFS 232 DC**– SFS 232 DC is a medium season BMR forage sorghum with excellent yield for maturity and superior forage quality potential.

**KF Fiber Pro 74**- A full season dwarf forage sorghum with superior standability. 110-115 days to soft dough direct harvest.

**SFS 4450 DC**- An excellent forage sorghum with Aphix-level, elite sugarcane aphid tolerance and a high degree of versatility in various climates.

**ADV F8484IG**- Ideal selection for producers looking for next-generation technology and superior yield potential. Conventional midrib with brachytic dwarf characteristic brings great standability and harvest performance for those looking to feed silage.

### **Cut & Wilt**

**KF Fiber Pro 72**– A medium brachytic dwarf hybrid. 105-110 days to soft dough stage.



## **SORGHUM SUDAN WET HAY - GRAZING**

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. 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.

**SS 2180 RG**— A medium-early maturity sorghum sudan with excellent regrowth potential.

**SS 3400 PPS**- A PPS BMR. Extremely drought tolerant.

**SS 3300 PPS AphidAxe**- A BMR, photoperiod sensitive variety with drought tolerance.

**SS 4440 WL**- BMR dwarf replacing 6402.

**ADV 6525**- BMR photoperiod sensitive. APHIX.

**Payload AphidAxe**— NEW! BMR, wide leaf, fast regrowth. Conventional plant height.

**Heavyweight with AphidAxe**- Aphid tolerant BMR variety with great yield and agronomic characteristics.

**SS 275 with AphidAxe**- Aphid tolerant non-BMR variety.

**AphidAxe Blend**- A blend of our top aphid tolerant sorghum sudans.

**KF Rapid Pro 64**— Quick regrowth, good disease tolerance.



**Heavyweight with AphidAxe**



## DIVERSE MIXTURES   GRAZING - WET HAY

**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.

**Southern Summer Mix-** A mixture of cowpeas, sorghum sudan, pearl millet, sunn hemp, buckwheat, radish, and brassica. A higher percentage of grasses than Ray's Crazy. Formerly SE Summer Mix.

**Millet/Crabgrass Mixture—** Millet/coated crabgrass mixture for easy spreading and quick cover.

**Warm Diversity Mix-** A 'catch all' mix with crabgrass, bermuda, buckwheat, millet, and annual lespedeza.



**NOTE: Mixture formulas/ components are subject to change due to stock/ availability.**

**Top left:** *Summer Solar*

**Top Right:** *Summer Breeze*

**Bottom Right:** *Custom mix of millet, sorghum sudan, sunn hemp, and TRaptor brassica*



**Bottom Left:** *Ray's Crazy Summer*



**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.

## **LEGUMES WET HAY - GRAZING - SOIL BUILDING**

Legumes are unique plants that have a symbiotic relationship with bacteria that allows them to create their own nitrogen. Once grazed or terminated, this excess nitrogen will be released and is available to other plants. Can be mixed with other grasses or grown as a standalone crop. These legumes cannot produce nitrogen without their species-specific bacteria- make sure you coat seeds in the inoculant for that species.

**Iron & Clay cowpeas-** A very drought tolerant, palatable plant. Grows best with a tall grass that it can vine up. Limited regrowth after grazing or harvesting. Seed 12-15lbs/A within a mix or 25-35lbs/A alone.

**Dixie Lee Cowpeas-** Early maturing variety. 65 day RM.

**Korean Lespedeza-** A single harvest, low growing species popular for its deworming properties.

**Goliath RR Soybean-** 140K size group 8 Roundup Ready forage soybean for wildlife.

**Cheraw RR Soybean-** Group 8 Roundup Ready traditional soybean.

**Titan RR Forage Soybean-** 140K size Group 7 Roundup Ready forage soybean for wildlife.

**Sunn Hemp-** The fastest growing summer annual legume. Grows upright on a single stem, can become large and stemmy if not harvested frequently enough. Regrows fairly well after grazing or harvest. Seed 10-12lbs/A in a mix or 20-25lbs/A alone. Harvest before seeds are produced.

**Mung Beans-** A substitute for cowpeas. Less vining characteristics, but similar yield.

**Derry Forage Soybean-** A good option as a stand-alone legume crop. Not ideal for mixing with tall grasses as it gets easily outcompeted. Seed 140K kernels per acre, equivalent to one bag.

**Tara Forage Soybean-** 140K forage soybean untreated group 5 soybean for wildlife.

**Alyce Clover-** Summer annual legume for wildlife and forage. Reseeds well.

## **GRAIN SORGHUM GRAIN PRODUCTION**

Grain sorghum is an excellent alternative to corn production. Lower nitrogen requirements and tolerance to drought are two of the primary characteristics that is drawing producers to this lower cost option. Aphix tolerance will help reduce the chance of sugarcane aphid damage.

**ADV G1203 Aphix-** A 63 day, red grain hybrid. APHIX.

**AG 1201-** A 63 day, early maturing bronze grain variety.

**SEAG 117GS-** A 73-day RED grain, great yields dryland and irrigated. APHIX.



## Want to see more products?

Visit us online at [www.SoutheastAgriSeeds.com](http://www.SoutheastAgriSeeds.com) to learn more, view more products, and start your order!

Follow **WARM SEASON** forages with a **COOL SEASON** forage.

Mixtures like **LURE** and **ENTICE** or perennials like **BROMEGRASS** and **KINGFISHER ALFALFA**.

### Wildlife Mixtures

It just makes sense— give wildlife the buffet they are looking for. Hedge your bets against nature and have a better chance at attracting and feeding deer, pheasants, and other wildlife.

**Habitat-** A mixture of sunn hemp, browntop millet, and bayou kale. A smaller seeded mix intended to be broadcasted or drilled shallow. Seed 25lbs/A.

**Opening Day-** A legume heavy mix of forage soybeans, cowpeas, sunflower, buckwheat, and sorghum sudan. This mix contains larger seeds- it's best to be drilled OR broadcasted and incorporated in. Seed 50lbs/A.

### Warm Season Perennials

**Chufa**— This perennial sedge is slower to establish, but will feed turkeys for years after establishment. Seed 25-35lbs/A.

### Warm Season Annuals

**Egyptian Wheat-** A quick to establish grass, very heat and drought tolerant. A member of the sorghum family. Seed 15 to 25lbs/A. Will grow to an average of 8-12ft tall.

**Wildlife Grain Sorghum-** Quick to bloom and a prolific seed producer. Will attract deer and game birds in late season. Seed 100-120K seeds per acre.

**Lab Lab-** A legume primarily used for attracting wildlife.



ABOVE: Habitat Mix



## Summer Cover Crop; Case Study on the Home Farm. By Josh Baker

In the late summer of 2019, I purchased a piece of property adjacent to my farm. It was a neglected piece of ground that had been overgrown and overgrazed periodically. The base grass was K-31 fescue. A few months later the property sat empty and I was scheduled to receive a small group of bred heifers. Thinking I could get away with it, I dropped those heifers off at this property. They were from south GA and had never seen fescue, especially not K-31. The endophyte did it's job and the heifers suffered. I pulled them off to recover and made the decision to start the annual rotation to convert to a non-endophyte pasture. There were other reasons I made this decision:

1. Weed cleanup– woody and non woody stemmed weeds.
2. Compacted/Boggy Ground- the ground held water very bad.
3. Improved forage production– I needed annuals in my program.

### The Impact of the Summer Cover

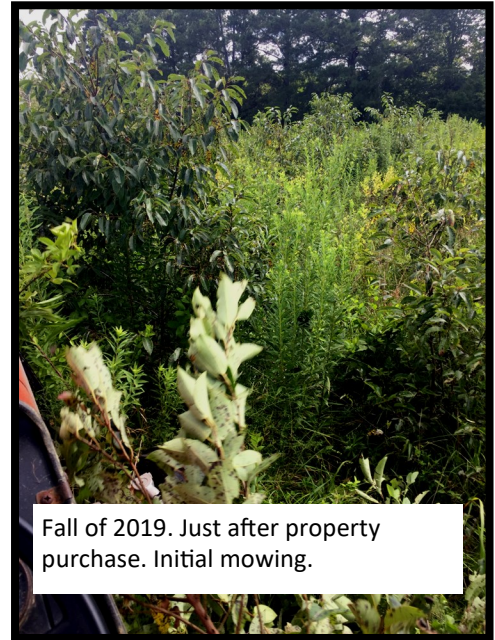
It's been a few years since beginning this project and while I have planted winter annual forages on the ground, the summer annuals have yielded the most improvement. After the first year of summer cover crops, I saw a noticeable difference in water infiltration. After a couple of years I noticed that it was easier to get a stand of forage. The ground was softer and more forgiving when I did graze it while wet. After multiple years of back to back covers, all of which were grazed, the ground is in good enough shape to seed into a perennial. However, at this point I plan to continue the annual production, because I appreciate the quality of forage that I'm getting from the annuals. Below shows the layout of summer cover/forage that was planted. The initial planting shows the primary reason for planting each of the species listed.

### 2020– Summer Cover Crop:

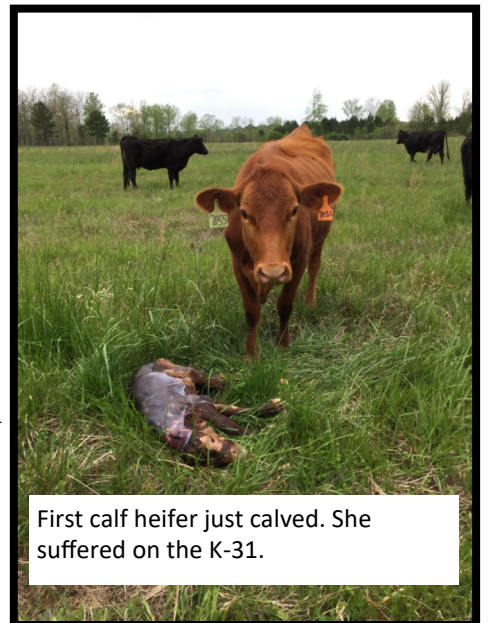
- Sorghum Sudan Base– Fibrous roots, root exudates, volume/yield, quality/energy.
- Sunn Hemp– Nitrogen, yield, protein.
- Buckwheat– Rapid growth, tolerant of variable conditions, flowering for pollinators.
- Millet– Tolerant of low pH, Fibrous roots.

### 2021– Summer Cover Crop:

- Sorghum Sudan Base
  - Sunn Hemp
  - Buckwheat
- Millet was eliminated because of the lack of success in 2020.



Fall of 2019. Just after property purchase. Initial mowing.



First calf heifer just calved. She suffered on the K-31.



First planting of summer annual forage in spring 2020.



- Growth was spotty, so I broadcasted brassicas and crabgrass into some open spots to help fill in. The crabgrass went to seed.

**2022– Summer Cover Crop:**

- Sorghum Sudan Base
- Sunn Hemp
- Buckwheat
- Brassicas– Looking for tap root. Growth was spotty, but there was definite late season value.
- Crabgrass– Crabgrass did well in 2021 and provided good late season grazing. It also helped hold the land together so that I could plant the cool season forage after fall rains without rutting the ground.

**Right and Below:** The summer annual stand for 2022 was much thicker and more robust. This picture was taken late in the year and a lot of the material has been trampled from frequent grazing. The ground is more productive and the plants are healthier.



### **Crabgrass**

Mojo  
Red River

### **Sudangrass**

AS 9301  
AS 9302  
KF EnergyPro 93

### **Mixtures**

Ray's Crazy Summer  
Southern Summer Mix  
Summer Feast  
Summer Breeze  
Summer Solar  
Millet/Crabgrass Mixture  
Warm Diversity Mix

### **Millet**

KF Prime 360  
KF Prime 180  
Leafy T  
Browntop  
Japanese Millet  
Proso

### **Forage Sorghum**

SFS 232 DC  
AF 7401  
KF Fiber Pro 74  
KF Fiber Pro 50  
KF Fiber Pro 72  
SFS 4450 DC  
ADV F8484IG

### **Sorghum Sudan**

SS 2180 RG  
SS 3400 PPS  
SS 3300 PPS AphidAxe  
SS 4440 WL  
ADV 6525  
Heavyweight with AphidAxe  
Payload AphidAxe  
SS 275 with AphidAxe  
Aphid Axe Blend  
KF Rapid Pro 64 DR

### **Legumes**

Iron Clay Cowpeas  
Dixie Lee Cowpeas  
Korean Lespedeza  
Mung Beans  
Sunn Hemp  
Derry Forage Soybean  
Tara Forage Soybean  
Titan RR Forage Soybean  
Goliath RR Soybean  
Cheraw RR Soybean  
Alyce Clover

### **Grain Sorghum**

SEAG 117GS  
ADV G1203 APHIX  
AG 1201

### **Forbs**

Clearfield Sunflowers  
Peredovik Sunflowers  
Koto Buckwheat  
Lifago Buckwheat  
Clemson Spineless 80 Okra  
Baldy Safflower