



## Georgia Grain Sorghum Production Quick Guide

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**Field Selection** - Sorghum grows best in well drained soils with a pH range between 6.0 and 7.8. Consider herbicide carryover from previous crops. Do not plant sorghum where Reflex, Envoke, Brake FX, Staple LX or other products with similar active ingredients were previously used.

**Land Preparation Prior to Planting** -- The goal is to have the land free of weeds and previous live crop plants at the time sorghum is planted.

- **Tillage** – If tillage is used to kill weeds and other plants, the final tillage operation should leave the soil surface relatively level and firm so that the seed can be placed at a uniform depth with soil tightly packed around it.
- **Reduced or No-tillage** – Sorghum works well in reduced or no-till management systems as long as seed can be evenly distributed and planted in a way that ensures good seed to soil contact. All weeds should be controlled prior to planting.

**Hybrid Selection** - Consider sugarcane aphid (SCA) tolerant hybrids if they are adapted to the area. UGA provides good SCA tolerance data for regionally productive hybrids. Anthracnose resistance is also important.

**Planting** - Sorghum seed is small and requires good seed to soil contact for uniform germination and emergence. Be sure and use the **proper sorghum plates** to insure uniform distribution and minimize the occurrence of skips and doubles. Ideal seeding depth is 1.5 inches; however, when possible plant seed to a depth that achieves 0.25 inches of moist soil above the seed. Sorghum can be planted once soil temperature is greater than 60°F.

**Row Spacing** – Row spacing may vary depending on tillage and available planting and harvesting equipment.

**Seeding Rate** - The amount of seed planted should be tied to the yield potential of the location. 50,000 to 60,000 seed per acre is adequate for a yield goal between 85 and 145 bu/ac.

**Water Requirement** - Sorghum has the ability to withstand short periods of drought yet responds well to additional rainfall or irrigation. The actual total water required for sorghum to reach its yield potential will vary with environment from 18 to 28 inches. A good rule of thumb in any given environment is that sorghum will require 70 percent of the water used by corn to obtain maximum yield. However, a single timely irrigation can significantly boost sorghum yield.

**Fertilizer Requirement** - Typical N requirement for sorghum is 1.2 lb/ac N for every bushel of yield. A 120 bu/ac yield would require 144 lb/ac N minus any soil residual N. Maintain a soil level of 60 to 80 lbs

of phosphorus ( $P_2O_5$ ). If P fertilizer is needed, rates can be reduced if banded. Sorghum potassium ( $K_2O$ ) requirements are similar to that of nitrogen. In soils with a high sand content, N and K can leach out of the plant root zone under high rainfall or irrigated conditions. In these soils a split application is recommended. Keep in mind that no more than 8 lb of N and K should ever be applied directly with the seed in the seed furrow. It is best to apply fertilizer at least 2 inches away from the seed.

**Weed Control** - It is very important the field is free of weeds before planting sorghum. A good pre-emergence program is essential.

- **Pre-emergence** - Either S-metolachlor (Dual), acetochlor (Warrant) or dimethenamid (Outlook) should be applied at or just after planting. Sorghum seed **MUST BE TREATED WITH CONCEP safener**. Consider adding 0.75 to 1.0 qt of atrazine 4L to the pre-treatment mix if allowed based on soil type. If atrazine cannot be applied pre, it should be applied at 1.2 qt/ac early post emergence and applied with crop oil to control any emerged weeds and to provide residual broadleaf weed control.
- **Post emergence** -No herbicide should be applied until the sorghum has 3 fully expanded leaves. Normally herbicides can be applied 7 days after all of the sorghum plants have emerged. If atrazine was not applied pre-emergence it should be applied now. If a high broadleaf weed population is present, or weeds are greater than 3 inches tall, consider adding 2 to 4 oz of dicamba to the atrazine. This should be applied before the sorghum is greater than 10 inches tall. On larger weeds consider a mix of Huskie plus a low rate of atrazine but expect some injury to the sorghum. These injury symptoms will dissipate in a few days.
- Visit with UGA extension weed specialists for other herbicide options as needed.

#### **Common Insect Issues**

- Sugarcane aphid (SCA) must be controlled with either Sivanto Prime or Transform. Treat as soon as 25 percent of the plants are infested with 50 or more SCA per leaf.
- Midge is particularly a problem in late-planted sorghum and attacks sorghum during the bloom stage which can last 10 to 14 days. Treat when 1 midge/head is observed after 25 to 30% of the heads are blooming. Several products are effective. Visit with UGA entomologists for specifics.
- Headworms (fall armyworm, corn earworm, sorghum webworms) may attack sorghum heads following bloom through the soft dough stage. Treat when an average of 1 or more (1/2" or larger) corn earworms or fall armyworms are found per grain head. For sorghum webworms treat when an average of 5 or more small (1/4") larvae are found per grain head. It is best to use Prevathon or Blackhawk if sugarcane aphids are also present in the field.

**Diseases** - Hybrids can differ considerably in their tolerance to the most prominent foliar diseases which include anthracnose and leaf blight. These diseases can be partially controlled with fungicide applications. Unless these leaf diseases are severe early in the season, it is often not necessary to apply a fungicide. There are several fungicides that may be utilized to control or suppress diseases in sorghum. If treatment becomes necessary use a combination of a Strobilin and Triazole fungicides.

**Harvest** - Grain sorghum will typically reach maturity 40 to 45 days after grain heads have bloomed. Consider using glyphosate to kill the plant and facilitate drying after the grain has reached a moisture content of approximately 20 percent.

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