

Sorghum (*Sorghum vulgare*, L.) Weed Control



Ragweed, crabgrass, and morning glory seedlings are frequently seen weeds in sorghum in eastern Virginia.

Integrated weed management is the best option to effectively control weeds in sorghum. That is because at seedling stage sorghum is relatively ‘weak’. This in combination with cooler temperatures in early spring, if sorghum is planted as a full crop, or high temperatures in early summer, if planted as a double crop, can diminish its survival. Therefore, number one step is to plant in a weed-clean field by using a pre-emergent herbicide and after treating the seed with an herbicide ‘safener’. Metolachlor and S-metolachlor herbicides, for example Dual, can have adverse effects on germinating seed of sorghum if seed is not treated with a ‘safener’, such as Concep or CSI Safener 500 FS. Application of a pre-emergence herbicide is very important for weed control in no-till or reduced-till fields. Field cultivation will also help with reducing weed number. For this situation, the last tillage before planting should be shallow to avoid bringing new weed seed on the top of the soil. Finally, crop rotation as opposed to monoculture reduces weed pressure for all types of tillage and consistently throughout the growing season. In our area, soybean and wheat are two good crop selections for rotating with sorghum to maintain weeds under control, in particular perennial weeds. Peanut may also be a good rotating crop with sorghum.

Common weeds in eastern Virginia include broadleaf annuals such as ragweed, morning glory, velvetleaf, cocklebur, and eclipta. Common grassy weeds are crabgrass, bermudagrass, and Johnsongrass. Perennial weeds are difficult to control. Cultivation between rows, directed herbicide applications with dropped nozzles, and certain herbicides will help, but for these weeds crop rotation is probably the most important management strategy.

In March or early April, atrazine and 2,4-D are good herbicide choices when weed pressure is light. In heavier infested fields Roundup and 2,4-D can be applied prior to planting. At planting, Dual and atrazine can be applied but in this case atrazine should not exceed 1 pound per acre due to potential loss in water runoff during May and June. Good alternatives for post-emergence weed control are 2,4-D and dicamba, but the common mistake at this time of herbicide application is waiting too long and until weeds become hard to kill. To reduce potential sorghum injury, applications should be made when sorghum is no taller than 8 inches and with drop nozzles. Also attention should be given to the drifts that may harm neighbor crops. Huskie was registered for sorghum in July 2012. It appears that drifts from Huskie are not detrimental for nearby cotton. In addition, Huskie can control palmer amaranth and other pigweed species if used when weeds are no taller than 4 inches.

Before herbicide applications, labels should be read carefully and instructions followed rigorously. Also, note the maximum number or quantities allowed per season.

Table 1. Suggested weed control herbicides labeled for sorghum

Herbicide Trade Name (rate/ac. Broadcast)	Herbicide Common Name (a.i./ac.)	Comments
<u>Pre-emergence</u>		
Dual II Magnum 7.64 EC (1-1.67 pt.)	Metolachlor (0.96-1.6 lb.)	Use seed treated with Concep. Use for annual grasses and small-seeded broadleaf weeds.
Intrro 4EC (1.5-2.5 qt.)	Alachlor (1.5-2.5 lb)	Use seed treated with Concep. Use for annual grasses and small-seeded broadleaf weeds such as pigweed. Alachlor has restricted use.
Outlook (12-21 fl. oz.)	Dimethylamide (0.56-0.98 lb.)	Use seed treated with Concep. Use for annual grasses and small-seeded broadleaf weeds. It may cause temporary stunning.
<u>Post-emergence</u>		
Huskie (13-16 fl.oz.)	Pyrasulfotole, bromoxynil, mefenpyr	Direct spray when sorghum is 14 in. tall. It covers 50 broadleaf annuals including palmer amaranth (no taller than 4 in.) and other pigweed species. Compatibility with other pesticides for tan mixes should be tested prior to its application.
2,4-D Amine (0.5-1 pt.)	2,4-D (0.24-0.48 lb.)	Broadcast over-the-top when weeds are small and sorghum has 6-8 in. DO NOT apply when sorghum is over 8 in. tall.
Atrazine 4L (4 pt.)	Atrazine (2 lb.)	Weeds should be no taller than 1.5 in. For broadleaf annuals.
Banvel 4/Clarity (0.5 tp.)	Dicamba (0.25 lb)	Over-the-top from 3-leaf stage until sorghum in 8 in tall. If applied after 25 days after emergence it has potential to reduce yield. Make only ONE application per season.
Basagran (1.5-2 pt.)	Bentazon (0.75-1 lb.)	Over-the-top when sorghum has 1-5 leaves to control broadleaf weeds. Sorghum is tolerant to basagran up to the boot stage, but NO MORE than 2 pt. per ac. per year.
Prowl 3.3 EC (1.8-3.6 pt.)	Pendimethalin (0.74-1.5 lb.)	Cultivate with weep or rolling cultivators to throw at least 1 inch of soil over the base of sorghum. Direct spray after sorghum is 6 in. tall. Effective on late-emerging grasses.
Gramoxone Inteon 2 (16 fl. oz.)	Paraquat (0.25 lb.)	Postemergence direct spray when sorghum is at least 15 in. tall. Paraquat will control many broadleaf weeds and grasses. DO NOT spray on windy days.

Disease and weed tables were prepared from the 2012 recommendations for sorghum by the Alabama Cooperative Extension

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