

Sorghum

Grain and Forage Weed Control

Controlling weeds in sorghum may require a combination of cultural, mechanical and chemical methods. Make sure to plant high quality seed of a sorghum cultivar adapted to your area in a properly prepared seedbed at the recommended depth and plant populations after the soil has warmed to a temperature favorable for quick germination to ensure sorghum emerges quickly and has a competitive advantage over weeds. Lime and fertilize sorghum fields according to soil test recommendations to avoid a soil environment that slows sorghum growth. Plant in narrow rows to produce a canopy early in the season to minimize the amount of sunlight that reaches seedling weeds in the row middles. Timely cultivation will eliminate weeds in the row middles. Be careful to avoid plowing so close to the row that roots of sorghum plants are damaged. If all weed management tactics are ignored, weeds will infest the sorghum field and reduce yield, interfere with harvest, contaminate the harvested grain with debris, and reinfest the soil with fresh seed.

The number of herbicides currently available for weed control in sorghum production is not as broad as it is for cotton, corn or soybeans. More herbicides are labeled for application to sorghum grown for grain than for sorghum grown for forage or juice for syrup. Illegal pesticide residues that do not occur on sorghum harvested for grain may occur in forage or juice. Be sure to follow the herbicide label instructions.

You can control winter weeds before planting with pre-plant foliar herbicides or tillage. You should kill live weeds before sorghum planting to avoid early season competition that causes the greatest yield losses. Preemergence herbicides minimize the harmful effects of early season competition from small seeded broadleaf weeds such as the pigweed complex, common lambsquarters, common purslane, carpetweed and annual grasses such as crabgrass, barnyardgrass, goosegrass and johnsongrass from seed. Postemergence herbicides will control many of the emerged weeds in the sorghum fields. Many postemergence herbicides control broadleaf weeds in sorghum, but few control emerged grasses.

Broadcast applications of preemergence or postemergence may be necessary in fields where you use minimum tillage practices, but in fields that are cultivated, banded applications will reduce production costs and minimize the amount of herbicide used. Since there are no selective herbicides to control perennial grasses such as johnsongrass and bermudagrass in sorghum, fields that do not have populations of these weeds should be considered for sorghum production. Treat fields targeted for sorghum production that contain johnsongrass or bermudagrass populations the previous fall with an application of Roundup Ultra to help suppress competition from these perennial grasses the following season.

Consult labels for approved adjuvants.

**Weed resistance to recommended use-rates of certain herbicides has been documented in Mississippi .
For more information, obtain a copy of Extension Publication 1907 Herbicide Resistance–Prevention and Detection.**

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast	Time of application	Weeds controlled	Special instructions and remarks
Preemergence				
alachlor at 2.5 to 3.0 to 3.5 lb/A	2.5 to 3.0 to 3.5 qt of 4 lb/gal in 15 or more gal water per acre by ground.	At planting.	Annual grasses and small-seeded annual broadleaves.	Apply only to fields planted with seed treated with flurazole seed protectant. See label for restrictions.
metolachlor at 1.5 to 2.0 to 2.5 lb/A or 0.95 to 1.43 to 1.59 lb/A	Dual II 8E — 1.5 to 2.0 to 2.5 pt and Dual Magnum 7.65 E or Dual II Magnum 7.62 E 1 to 1.5 to 1.67 pt in 10 gal or more water by ground or 2 gal or more water by air.	At planting.	Most annual grasses and small-seeded broadleaf weeds.	Apply only when the sorghum seed has been properly treated with Concep or Screen seed protectant. See label for rotation restrictions.
alachlor at 2.0 to 2.25 + atrazine at 1.25 to 1.5 lb/A or 2.0 + 0.75 to 1.0 lb/A (see right column)	4 lb/gal — 2.0 to 2.25 qt + atrazine - 1.25 to 1.5 qt 4L or 1.5 to 1.9 lb 80W or 1.4 to 1.7 lb 90 WDG in 15 gal water or more per acre by ground or 3.3 to 4.0 qt Lasso/atrazine pre-mix.	From time of planting to 5-in. sorghum.	Most annual grasses and broadleaf weeds preemergence or emerged weeds with 2 or fewer leaves.	Do not apply atrazine at 1.25 lb/A or above on sand, loamy sand, or sandy loam soils. Atrazine at 0.75 to 1.0 lb/A may be applied to coarse soils (other than sand) with less than 3% organic matter. Apply only to fields planted with seed treated with flurazole seed protectant. See label for the use of additional Lasso or atrazine for hard-to-control species.
metolachlor at 1.5 to 2.0 or 0.95 to 1.43 + atrazine at 1.2 to 1.6 lb/A	Bicep II 6L — 1.8 to 2.4 qt or Dual II 8E — 1.5 to 2.0 pt or Dual Magnum 7.64 E or Dual II Magnum 7.62 E 0.95 to 1.43 pt + atrazine — 1.2 to 1.6 qt of 4L formulation or 1.5 to 2.5 lb of 80% WP formulation or 1.3 to 2.2 lb of 90% WDG in a minimum of 10 gal water.	At planting.	Most annual grasses and broadleaf weeds.	Use with sorghum seed properly treated with Concep or Screen seed protectant. Do not use on sand, loamy sand, or sandy loam. On medium to fine-textured soils with 1.0 to 1.5% organic matter, use low rate; above 1.5% organic matter, use high rate. Do not use on any soil with less than 1.0% organic matter.
atrazine at 1.6 lb/A	3.2 pt of a 4 lb/gal or 2 lb of 80% wettable powder or 1.78 lb of 90% WDG in a minimum of 10 gal of water for ground application and 3 gal for aerial application.	At planting.	Most annual grasses (except signalgrass) and broadleaf weeds.	Do not use on sand, loamy sand, or sandy loam or any soil with less than 1% organic matter. On soil containing 1.0 to 1.5% organic matter, use low rate; on soil with over 1.5% organic matter, use high rate. Do not plant crops other than corn or sorghum until the year after treatment. If treatment is made after June 10 crops other than corn or sorghum should not be planted the following year. Do not graze or feed forage from treated areas for 21 days following application. Thorough soil tillage after harvest minimizes the possibility for crop injury the following year. Do not exceed 2 lb ai/A/yr.

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast	Time of application	Weeds controlled	Special instructions and remarks
dimethenamid - P	Outlook 6EC – 16 to 20 oz in 20 or more gal/A spray solution	At planting.	Annual grasses and small-seeded annual broadleaves.	DO NOT USE ON FORAGE SORGHUM. Apply only to sorghum planted with seed treated with a chloroacetamide herbicide safener. See label for tank-mix application with atrazine. See label for restrictions.
Postemergence				
bromoxynil 0.25 to 0.375 lb/A	0.5 to 0.75 pt Buctril 4E in 10 to 20 gal water by ground or 5 gal by air.	After sorghum is in the 3-leaf stage to 12 in. tall.	Many annual broad-leaf weeds in the 2- to 4-leaf stage. Pigweeds should be 2 inches or less.	A contact herbicide, coverage is extremely important. Apply with at least 30 PSI. Will not control sicklepod, weak on prickly sida. Do not add surfactant.
2,4-D at 0.3 to 0.5 lb/A	2,4-D amine — 0.66 to 1.0 pt of 4 lb/gal formulation.	Apply as directed spray when plants are 4 to 12 in. tall.	Small broadleaf weeds.	Use a directed spray from the side of the drill to keep the spray out of the whorls of the plants. Labels vary on method of application. Do not apply before sorghum is 4 inches tall. Some labels permit over-the-top applications on 6- to 8-inch sorghum. If applied over-the-top use only the low rate. All labels suggest directed spray after sorghum reaches 8 inches tall.
atrazine at 2.0 lb/A	atrazine — 4 pt of a 4 lb/gal or 2.5 lb of 80% WP or 2.22 lb of 90% WDG in a minimum of 10 gal of water for ground application and 3 gal for aerial application.	After sorghum is completely emerged but before 12 in. tall and before weeds are over 1.5 in. tall.	Most annual grasses and broadleaf weeds.	Do not exceed 2 lb ai/A/yr. Do not use on sand or sandy loam soils. Do not use when sorghum is under stress or crop is wet and succulent from recent rainfall. Do not graze or feed forage for 21 days after application. If applied after June 10, do not plant with crops other than corn or sorghum the following year. See label for restrictions.
atrazine at 1.2 lb/A+ crop oil concentrate	atrazine — 2.4 pt of a 4 lb/gal or 1.5 lb of an 80% WP or 1.3 lb of 90% WDG + 1 qt crop oil concentrate in a minimum of 10 gal water per acre by ground.	Sorghum 4 to 12 inches tall.	Same as atrazine at 2.0 lb/A.	Same as atrazine at 2.0 lb/A. Be sure oil is not contaminated or crop injury may result. Do not exceed 2 lb ai/A/yr. See label for restrictions.
linuron 0.5-1.0 lb/A	1 to 2 lb linuron 50 DF or 1 to 2 pt 4L. Add 2 pt surfactant to each 50 gal spray. Apply in 20 to 30 gal water per acre.	Apply as a directed spray to 12- to 15-in. sorghum if shields used and after 18 in. tall if drop nozzles used. Apply when weeds are 2 to 4 in. tall.	Most annual grasses and broadleaf weeds that are actively growing.	Use shields and/or gauge wheels to accurately direct the spray to the base of the sorghum. Keep spray off the leaves. Use the low rate on small sorghum and weeds. Use high rate for large sorghum and weeds. Keep spray pressure low to prevent injury to sorghum. Do not graze or feed plants to livestock within 3 months after application.

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast	Time of application	Weeds controlled	Special instructions and remarks
bentazon 0.5 to 1.0 lb/A	1 to 2 pt Basagran 4E in 20 gal water over-the-top or directed spray	After sorghum has completely emerged but before boot.	Cocklebur, small prickly sida, smartweed, ragweed.	Particularly useful where 2,4-D cannot be used because of nearby sensitive crops. Use low rate for up to 4-leaf cocklebur and stage when weeds are small and actively growing and high rate for 6- to 10-leaf cocklebur and other broadleaf weeds. Control may be poor if applied under drought stress. Rainfall after application may reduce effectiveness. Crop oil concentrate or surfactant may be used in accordance with label.
paraquat 0.25 to 0.47 lb/A	0.675 to 1.3 pt of 3.0 lb/gal Gramoxone Max in 20 gal water plus 1 pt nonionic surfactant per 50 gal spray.	After sorghum is 12 in. tall.	Small annual grasses and weeds.	Apply as a directed spray so that no more than the lower 3 inches of the sorghum plant are sprayed. Do not exceed 30 PSI. Use lower rates for weeds less than 2 to 3 inches tall. Do not spray under windy conditions.
halosulfuron 0.032 lb/A	Permit 75DF — 0.67 oz in 10 or more gal/A spray solution. Add 1 pt surfactant or 4 pt crop oil for each 50 gal spray.	Over the top to sorghum from 2-leaf to head emergence.	Annual broadleaf weeds and nutsedge suppression.	See label for tank mixture with atrazine, Banvel, Buctril, or 2,4-D, and restrictions.
prosulfuron 0.43 or 0.57 lb/A	Peak 57 WDG 0.75 or 1.0 oz in a minimum of 2 gal of water by air or 10 gal by ground. Add 1 pt nonionic surfactant for each 50 gal spray mix.	Over the top when sorghum is 5 to 30 in. tall.	Most annual broadleaf weeds.	DO NOT USE ON FORAGE SORGHUM. See label for rate to use on weed height. Improved weed coverage with directed/semi-directed application to sorghum 20 inches or taller. See label for tank mixtures with atrazine, dicamba, 2,4-D, or bromoxynil using 0.5 or 0.75 oz/A. See label for restrictions. Plant only STS soybeans the year following application; apply only the low rate if cotton will be planted the year following application; allow 10 months between application and planting for both cotton and soybeans.

At Harvest for Weeds

sodium chlorate at 6.0 lb/A	1 gal of 6 lb/gal or 2 gal of 3 lb/gal in 15 to 20 gal water by ground or 5 gal by air. Add 2 pt surfactant per 50 gal mix for aerial and 1 pt surfactant per 50 gal mix for ground application.	After sorghum grain has 25% or less moisture.	Grasses.	Apply on a bright sunny day when air temperature is above 85 degrees and relative humidity is below 65%. Broadleaf weeds may be defoliated but there will be little desiccation.
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Estimated Weed Control Ratings of Herbicides

Ratings	Expected Control	Application Method	Crabgrass	Goosegrass	Signalgrass	Seedling johnsongrass	Fall panicum	Pigweed	Cocklebur	Morningglory	Prickly sida	Sicklepod	Hemp sesbania	Lambsquarter	Crop Tolerance
0-3	slight														
4-6	fair														
7-8	good														
9-10	excellent														
Dual*		pre	9	9	7	8	9	8	0	0	4	5	2	6	G
Bicep*		pre	9	9	8	8	8	9	6	6	8	6	6	9	G
alachlor*		pre	9	9	8	7	8	9	0	5	6	6	0	8	G
alachlor* + atrazine		pre	9	9	9	8	8	9	6	7	9	6	7	9	G
atrazine		pre	9	6	5	4	4	9	9	8	8	8	7	9	F
Outlook		pre	9	9	9	7	8	9	0	6	6	-	-	8	G
Permit		post	3	3	3	3	3	8	9	5	7	4	4	5	G
atrazine		post	7	5	6	3	4	8	9	8	8	7	6	8	G
atrazine + oil		post	8	6	7	3	5	9	9	8	9	8	7	9	F
2,4-D		post	0	1	0	0	2	9	9	9	8	8	9	9	F
bentazon**		post	0	0	0	0	0	5	9	2-9	8	0	4	7	G
paraquat***		post	8	8	8	8	8	8	5	5	6	9	2	7	F
Peak		post	0	0	0	0	0	9	9	8	9	8	8	8	G
linuron		post	8	7	8	6	8	8	7	8	8	8	8	9	F
Buctril***		post	0	0	0	0	0	6	9	8	5	4	8	9	G

*Sorghum seed must be treated with seed protectant to prevent damage from alachlor, metolachlor (Dual, Bicep) or dimethenamid - P (Outlook)

**Control of morningglory varies among species.

***Small weeds

msu*cares.com*

The information given here is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended to other products that also may be suitable and have label clearances. Always read and follow current label restrictions on pesticide use.

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