

GRAIN SORGHUM^{1,2}

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
PREPLANT:¹			
dicamba @ 0.25 lb/A	Banvel, Clarity @ 0.5 pt/A Banvel SGF @ 1 pt/A	Most broadleaf weeds; see label	Apply at least 15 days prior to planting for emerged weeds. Effective for controlling broadleaf weeds which have emerged before planting: henbit, smartweed, etc. If grass is present, mix with glyphosate or paraquat.
PREEMERGENCE:			
atrazine @ 1.6-2.0 lb/A	Dry products (80%) @ 2.0-2.5 lb/A on med-heavy soil 4L products @ 3.5-4 pt/A on med-heavy soil 5L products @ 2.5-3.2 pt/A on med-heavy soil	Most annual small seeded broadleaf weeds and some grasses	Apply after planting before weeds and crop emerge. Do not apply to soils with less than 1% OM or to soils of lighter texture than silt loams. Only sorghum or corn should be planted within 1 year on soil treated with atrazine. Do not exceed 2.0 lb ai/A/applications or 2.5 lb ai/A/year. Follow the label concerning maximum atrazine rates.
s-metolachlor @ 1.0-1.9 lb/A	Dual II Magnum, Dual Magnum, Cinch @ 1.0-1.33 pt/A on light soil 1.33-1.5 pt/A on medium soil 1.33-1.67 pt/A on heavy soil	Most annual grasses and some broadleaf weeds	Apply after planting before weeds and crop emerge. Do not apply to light soils or any soils with less than 1% organic matter. Must use safened seed.
s-metolachlor @ 0.75-1.25 lb/A + atrazine @ 1.0-1.63 lb/A	Bicep II Magnum @ 1.6 qt/A on medium soil 2.1 qt/A on heavy soil	Most small seeded annual grasses and broadleaf weeds	Apply after planting before weeds and crop emerge. See comments for atrazine and s-metolachlor. Use Bicep Lite if another atrazine application will be needed at layby. Do not use on coarse textured soils. Must use safened seed.
s-metolachlor @ 0.75-1.25 lb/A + atrazine @ 0.6-1.0 lb/A	Bicep Lite II Magnum @ 1.1-1.5 qt/A on medium soil 1.5 qt/A on heavy soil		
dimethenamid @ 0.56- 0.84 lb/A	Outlook 6L @ 12-14 oz/A on coarse soil 14-18 oz/A on med-heavy soil	Most annual grasses, pigweeds, and some sedges	Apply after planting before weeds emerge. Must use safened seed. Do not use on sweet or forage sorghum. If soil organic matter 3% or more, consult label for proper rate.
dimethenamid @ 0.53-0.85 lb/A + atrazine @ 1.0-1.65 lb/A	Guardsman Max @ 3-4 pt/A on med-heavy soil	Most annual small seeded grasses and broadleaf weeds	Apply after planting before weeds emerge. See comments for dimethenamid and atrazine. Adjust rates per label if OM > 3%. Apply at planting. Must use safened seed. Do not use on sweet or forage sorghum. Do not use on coarse textured soils.
alachlor @ 2.0 - 3.0 lb/A	Micro-tech @ 2.5 qt/A on coarse soil 2.5-3 qt/A on med-heavy soil	Most annual grasses including signalgrass, seedling johnsongrass and pigweeds	Apply after planting before weeds emerge. Poor control of most large seeded broadleaf weeds. Mix with atrazine for improved broadleaf weed control; consult label. Adjust rate per label if OM > 3%. Must use safened seed

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PREEMERGENCE: continued alachlor @ 1.25-2.3 lb/A + atrazine @ 0.75-1.4 lb/A	Lariat @ 2.0-3.0 qt/A on medium soil 2-3.75 qt/A on heavy soil	Most small seeded annual grasses (including fall panicum) and broadleaf weeds	Apply after planting before weeds emerge. See comments for alachlor and atrazine. Adjust rates per label if OM > 3%. Do not use on coarse textured soils. Must use safened seed.
POSTEMERGENCE: 2,4-D amine @ 0.5 lb/A	2,4-D amine @ 1.0 pt/A	Small broadleaf weeds	Apply after sorghum is 4-6" tall until flowering. Use directed application taken care to keep 2,4-D out of whorl once sorghum is 10"-12" tall. Do not use when sorghum is flowering.
atrazine @ 1.25 - 2.5 lb/A	4L formulations @ 2.4 pt/A on sandy loam soil 4.0 pt/A on med-heavy soil 5L formulations @ 2.0 pt/A on sandy loam soil 3.2 pt/A on med-heavy soil	Most effective on broadleaf weeds	Apply before weeds are 1 1/2" tall and after sorghum has completely emerged. Weeds larger than 1.5 inches tall may not be killed. Low rate for broadleaf control only. Do not apply to coarse textured soils. Preferred application as directed spray but may be applied overtop where sorghum is not under stress. Sorghum should not be grazed within 21 days. Do not apply more than 2.5 lb ai/A/season. Follow label restrictions concerning maximum atrazine rates.
atrazine @ 1-2.0 lb//A	24L formulations @ 2-4 pt/A 5L formulations @ 1.6-3.2 pt/A 2.0 pt/A on sandy loam soil 3.2 pt/A on med-heavy soil Apply with COC @ 1 gal/100gal	Most effective on broadleaf weeds	Apply before weeds are 1.5 inches tall and after sorghum is 4 to 6 inches tall. Weeds larger than 1.5" tall may not be killed. Do not apply to sandy loam or lighter soil textures. Preferred application as directed spray but may be applied overtop where sorghum is not under stress. Sorghum should not be grazed within 21 days. Don't exceed 2.5 lb ai/A/season. Follow label restrictions concerning maximum atrazine rates.
quinclorac @ 0.25-0.375 lb/A + atrazine @ 0.5-1.0 lb/A	Paramount @ 5.3-8 oz/A + 1-2 pt/A atrazine (4L) Apply with COC @ 2 pt/A	Broadleaf weeds controlled by atrazine plus improved grass control	See comments for atrazine plus crop oil above. Paramount can be applied to grain sorghum from emergence up to 12 inches tall. Apply when weeds are small and actively growing. See label.
dicamba @ 0.25 lb/A	Banvel, Clarity @ 0.5 pt/A Banvel SGF @ 1 pt/A	Most broadleaf weeds; see label	Apply at Spike to 15" tall sorghum. Optimal timing is 3-5 leaf sorghum, when weeds are less than 3" tall. Effective for controlling small broadleaf weeds like morningglory, smartweed, etc. Mixing with atrazine adds to residual control (up to 12" tall sorghum). Use drop nozzles if sorghum is taller than 8".
halosulfuron @ 0.031-0.047 lb/A	Permit @ 0.67-.0 oz/A Apply with COC @ 1 gal/100gal or NIS @ 1 qt/100 gal	Selected broadleaves and sedges	Apply to Sorghum 2-leaf to layby (before grain head emergence). Use only a single application with the total rate not to exceed 1.0 oz/A per season.

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halosulfuron @ 0.031-0.047 lb/A + dicamba @ 0.14-0.21 lb/A	Yukon 67.5 WSG @ 4- 6 oz/A Apply with NIS @ 1 qt/100 gal or COC @ 1 gal/100gal	Nutsedge, morningglories, ragweed.	Apply to 2 leaf to 15 inch sorghum. Do not exceed 8 oz/a/season.
bromoxynil @ 0.25-0.375 lb/A	Buctril 2EC @ 1.0-1.5 pt/A	Many broadleaf weeds	Apply to sorghum from the 3 leaf to pre-boot stage. Do not use the 1.5 pt/A until grain sorghum has 4 leaves. Best when used on small weeds (2-4 leaf). May serve as a replacement for 2,4-D in phenoxy sensitive areas. Consult label for additional information.
PREHARVEST:			
Sodium chlorate @ 4.5-6 lb/A	Various products; consult label for rates.	Desiccation of green vegetation.	Apply 7 to 10 days prior to harvest. Follow label directions.
carfentrazone @ 0.016 lb/A	Aim @ 1.0 oz/A	Desiccation of morningglories	Apply 3 days prior to harvest. Thorough coverage is essential; use at least 10 GPA. Tank mixture can include sodium chlorate.
Spot treatment for control of johnsongrass and other weeds. Mix 1 to 2 gallons Roundup Ultra ⁴ per 100 gallons of water. Spray weeds to point of drip before grain sorghum heads. Sprayed sorghum and weeds will be killed. Apply with caution to prevent excessive crop injury.			

FOOT NOTES

¹ Refer to the burndown section of this guide for suggestions on managing cool season weeds.

² Refer to the herbicide resistance section of this guide for suggestions on herbicide resistance management.

³ Dual is manufactured by Syngenta Crop Protection, has been extensively used in corn production and has the common name metolachlor. When metolachlor is manufactured, it contains a 1:1 ratio of two metolachlor isomers; the –R and the –S isomer. The –S isomer has greater herbicidal activity than the –R isomer, which allows for a reduction in the amount of –S isomer herbicide needed to obtain similar weed control compared to the –R isomer herbicide. To differentiate between metolachlor herbicides containing the –R or –S isomer consult the label under the “active ingredients” section. The –R isomer is denoted by metolachlor while the –S isomer is denoted by acetamide –(s). Alternatively, according to the Syngenta Crop Protection labels, if the trade names Bicep or Dual include the word “Magnum” (Dual Magnum, Dual II Magnum, Bicep II Lite Magnum), the –S isomer is an active ingredient. If the trade name does not include “Magnum”, the metolachlor –R:-S isomer ratio is 1:1 (Dual II, Bicep II, Bicep Lite II).

⁴ See “Appendix A” for glyphosate products and their surfactant requirements.