

Early-Season Weed Management Strategies in Grain Sorghum

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Achieving good weed control in grain sorghum is a challenge, and the outcome is often dependant on decisions made early in the season.

Avoid Problem Fields: Avoid weedy fields, particularly those with johnsongrass, shattercane, or perennial broadleaf weeds. Troublesome weeds are especially difficult to control in grain sorghum; therefore, work on the problem fields while in rotation with soybeans or corn before going to grain sorghum.

Preplant Burndown Control: Herbicides commonly used for burndown weed control in grain sorghum include Gramoxone Max or products containing glyphosate. Banvel and Clarity are examples of dicamba products that must be applied at least 15 days prior to planting grain sorghum for burndown control of broadleaf weeds, especially clovers or certain perennials.

Preemergence Broadleaf Weed Control: Atrazine is commonly used in preemergence applications for controlling a broad spectrum of annual broadleaf weeds in grain sorghum. The rate of atrazine is dependant on a number of factors and should not exceed 2 lb ai/A. Although crop injury can occur from atrazine, it is rarely a problem in Kentucky. Situations that may enhance the risk of injury due to atrazine include high rates, high soil pH, sandy soil, or shallow planting. Follow label restrictions concerning setbacks and atrazine rates to help protect ground and surface water.

Preemergence Grass Control: Products approved for preemergence annual grass control in grain sorghum are included in the following list with their active ingredients:

Single Ingredient Products	Premixes
Cinch (<i>S-metolachlor</i>)	Bullet (<i>alachlor+atrazine</i>)
Dual II Magnum (<i>S-metolachlor</i>)	Bicep II Magnum (<i>S-metolachlor+atrazine</i>)
Micro-Tech or Intro (<i>alachlor</i>)	Bullet (<i>alachlor+atrazine</i>)
Outlook (<i>dimethanamid-P</i>)	Cinch AT (<i>S-metolachlor+atrazine</i>)
	Guardman Max (<i>dimethanamid-P+atrazine</i>)

In order to use these herbicides in grain sorghum, the crop seed must be coated with a protectant or safener by the seed company. Concep III (fluxofenim) is an example of a safener commonly used. Sever crop injury will likely occur if these herbicides are applied to fields where grain sorghum seeds were not properly treated with the protectant. The protectant enhances the sorghum's ability to metabolize the herbicide during seed germination and seedling emergence.

Using these herbicides at reduced rates is not a good practice for controlling annual grasses, particularly where fields are heavily infested or have fall panicum. There are no postemergence grass herbicides that can be used as a "back up" where preemergence herbicides fail; therefore, it is important to use the rate recommended for your situation.

Prowl or Prowl H₂O (pendimethalin) in combination with atrazine is approved as an early postemergence treatment only after grain sorghum has reached the 2 - leaf stage and before weeds exceed 1 inch in height. Do not apply Prowl or Prowl H₂O preplant incorporated or preemergence in grain sorghum as severe crop injury can occur. In order to minimize the risk of crop

injury, the seedbed should be firm and free of clods and there should be adequate tillage to provide good seed coverage. Grain sorghum seed should be planted at least 1½ inches deep. Weed control may be less than optimum if rainfall does not occur within 7 days after application.

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