

## News Column

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### **Pre-emergence herbicides for grain sorghum**

Last week my article was on pre-emergence herbicide programs for corn. The role of pre-emergence herbicides is similar in both corn and grain sorghum, and some herbicides are similar. A table summarizing weed species response to various grain sorghum herbicides can be found on page 48 of the K-State Research & Extension, *2020 Chemical Weed Control for Field Crops, Pastures, Rangeland, and Noncropland* (SRP 1155) at: <https://www.bookstore.ksre.ksu.edu/pubs/SRP1155.pdf>

### **Herbicide groups of soil-applied residual herbicides for grain sorghum**

**Triazines (Group 5).** Atrazine is the most widely used triazine herbicide. It is a common component of many pre-plant and pre-emergence herbicide premixes for sorghum. It controls a wide variety of broadleaf weeds, including pigweeds, ragweeds, morningglories, and mustards, as well as some grasses. However, atrazine resistance has been reported for many weed species. Propazine is another triazine herbicide labeled for use in grain sorghum. Use rates of triazine herbicides are influenced by soil type, soil pH, and organic matter, and use is prohibited in instances where water contamination is likely. Unless your situation prohibits atrazine use, it is recommended to include atrazine when you apply HPPD-inhibitor and acetamide herbicides.

**Acetamides (Group 15).** The acetamide products used in grain sorghum include dimethamid-P (Outlook), S-metolachlor (Dual II Magnum), metolachlor, acetochlor, and many premix products containing one of these active ingredients. In general, these products are very effective in controlling most annual grasses and small-seeded broadleaf weeds, except kochia. Though resistance to Group 15 herbicides have been reported in other states, there have been no cases reported in Kansas to date. Acetamide products are most effective when applied with atrazine. Several such premixes are available and should be used instead of acetamides alone, unless atrazine is not allowed.

**HPPD-inhibitors (Group 27).** Mesotrione (Callisto, others) controls kochia, pigweeds, velvetleaf, and many other broadleaf weeds, as well as grasses. Mesotrione should be applied with atrazine, which is often included in premixes (Lexar EZ, Lumax EZ, others). Some mesotrione-resistant weed populations have been identified in Kansas.

**PPO-inhibitors (Group 14).** Saflufenacil (Sharpen) controls pigweeds well; however, it is marginal on kochia. Verdict (saflufenacil + dimethenamid-P) has excellent activity on pigweeds, kochia, and large-seeded broadleaf weeds. However, the length of residual activity can be shorter than other pre-emergence products.

If you have any questions on herbicide weed control in grain sorghum or any of your crops, please feel free to give me a call or email

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