

News Column

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Controlling weeds with fall-applied herbicides ahead of corn and sorghum

With fall upon us it's time to start planning your fall herbicide applications to control winter annual broadleaf weeds and grasses ahead of grain sorghum or corn. Fall applications during late October and through November can greatly assist control of difficult winter annuals and should be considered when performance of spring-applied preplant weed control has not been adequate. A November application is recommended to allow longer residual activity of the herbicide into the spring. Henbit and marestalk frequently are some of the most troublesome weeds we try to manage with these fall herbicide applications.

Fall applications have another side-benefit. While it is always important to manage herbicide drift, herbicide applications made after fall frost have less potential for drift problems onto sensitive targets.

There are several herbicide options for fall application. If residual weed control is desired, atrazine is among the lowest-priced herbicides. However, if atrazine is used, that will lock the grower into planting corn or sorghum the following spring, or leave the land fallow during the summer and come back to winter wheat in the fall.

Atrazine is labeled in Kansas for fall application over wheat stubble or after fall row crop harvest any time before December 31, as long as the ground isn't frozen. Consult the atrazine label to comply with maximum rate limits and precautionary statements when applying near wells or surface water. No more than 2.5 lbs. of atrazine can be applied per acre in a calendar year on cropland.

One half to two pounds (maximum) per acre of atrazine in the fall, tank mixed with 1 to 2 pints/acre of 2,4-D LV4 or 0.67 to 1.33 pints LV6, can give good burndown of winter annual broadleaf weeds -- such as henbit, dandelion, prickly lettuce, Virginia pepperweed, field pansy, evening primrose, and marestalk -- and small, non-tillered winter annual grasses. Atrazine's foliar activity is enhanced with crop oil concentrate, which should be included in the tank mix. Winter annual grass control with atrazine is discussed below.

Atrazine residual should control germinating winter annual broadleaves and grasses. When higher rates of atrazine are used, there should be enough residual effect from the late fall application to control early spring-germinating summer annual broadleaf weeds such as kochia, common lambsquarters, wild buckwheat, and Pennsylvania smartweed -- unless the weed population is atrazine-resistant.

Marestalk is an increasing problem in Kansas that merits special attention. Where corn or grain sorghum will be planted next spring, a late fall-applied atrazine plus 2,4-D or dicamba have effectively controlled

marestail rosettes, and should have enough residual activity to kill marestail as it germinates in the spring. Atrazine alone will not be nearly as effective postemergence on marestail as the combination of atrazine plus 2,4-D. Sharpen can be very good on marestail, but should be tank mixed with 2,4-D, dicamba, atrazine, or glyphosate to prevent regrowth.

Palmer amaranth or pigweed control has become a real challenge due to glyphosate resistance. Research at the Agricultural Research Center – Hays has shown that a late fall application (December) of clarity + atrazine provided good control of kochia as it germinated in the spring but not palmer amaranth, however a late fall application (December) of clarity + Zidua or atrazine + Zidua provided very good control of both kochia and palmer amaranth well into the spring.

If the spring crop will be corn, other residual herbicide options include ALS herbicides such as Autumn Super or Basis Blend. ALS-resistant marestail will survive an Autumn Super or Basis Blend treatment if applied alone. For burndown, producers should mix in 2,4-D, dicamba, and/or glyphosate. Aim + 2,4-D or Rage D-Tech are additional herbicide options for fall application with only the 2,4-D component providing a very short residual.

Winter annual grasses can also be difficult to control with atrazine alone. Success depends on the stage of brome growth. For downy brome control, 2 lbs./acre of atrazine plus crop oil concentrate (COC) has given excellent control, whereas 1 lb./acre has given only fair control. Volunteer wheat and brome species that have tillered and have a secondary root system developing will likely not be controlled even with a 2-lb rate. Adding glyphosate to atrazine will ensure control of volunteer wheat, annual bromegrasses, and other winter annual grassy weeds. Atrazine antagonizes glyphosate, so if the two are used together, a full rate of glyphosate (0.75 lb. ae) is recommended for good control. The tank mix should include AMS as an adjuvant.

Where fall treatments control volunteer wheat, winter annuals, and early-emerging summer annuals, producers should then apply a preemergence grass-and-broadleaf herbicide with glyphosate or paraquat at corn or sorghum planting time to control newly emerged weeds. Soils will be warmer and easier to plant where winter weeds were controlled in fall.

Information provided by Curtis Thompson, Extension Weed Control Specialist.