

News Column

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Controlling tall, thick stands of weeds in wheat stubble

Farmers know that when dealing with mother-nature there is no sure bet. No-till and reduced till farming practices in the Great Plains have many advantages but as with anything in life there are always disadvantages too.

Effective weed control practices in no-till farming have become more challenging as some weed species have become increasingly harder to control due to resistance of some commonly used herbicides. This is really nothing new there have been herbicide resistant weeds in Kansas agriculture dating back to 1976 when some populations of Kochia became resistant to Atrazine.

In parts of Kansas, there are many fields that have become overgrown with broadleaf and grassy weeds this summer.

Some of the broadleaf weeds have flowered and formed seed by now, which will make chemical control more difficult. Another potential problem for chemical control will be getting the spray down through the canopy to reach any weeds or grasses underneath the taller weeds.

The standard treatment over the years to control weeds and volunteer wheat in wheat stubble has been glyphosate plus 2,4-D LVE. If kochia was present, we may have added some dicamba. Where susceptible crops are nearby, it's especially important to manage spray drift, both droplet drift and vapor drift. If a crop sensitive to 2,4-D is adjacent to the weedy field, 2,4-D amine should be used instead of 2,4-D LVE to minimize the potential for damaging volatility drift.

Glyphosate plus 2,4-D and/or dicamba remain the primary options for weed control in stubble, but with the development of glyphosate-resistant weeds, these options certainly don't work as well or quickly as they used to. Glyphosate used to be fairly fool-proof, even on big weeds, but that is no longer the case. Dicamba and 2,4-D probably weren't contributing as much to the weed control in those tank mixes as we may have thought, so now we are struggling with acceptable control. Timing and weed size is much more critical with almost all other herbicides than it has been with glyphosate. Consequently, it is very important to try and apply those treatments before the weeds exceed 4 to 6 inches tall, but that often doesn't happen.

Higher rates of the 2,4-D and dicamba may improve control, but in most cases we probably don't want to exceed 1 qt./acre of 2,4-D or a pt./acre of dicamba. Sharpen is another herbicide tank-mix partner that may help with control of the pigweeds and provide some residual control. Sharpen works best with the addition of methylated seed oil and can provide some pretty good burndown on smaller weeds, but

if the weeds are very big, it tends to burn the tops and plants eventually resume growth. Sharpen requires complete coverage so using 15 to 20 gallons/acre spray solution is important.

One herbicide alternative to glyphosate that has worked pretty well on pigweed and kochia this summer is Gramoxone 2SL (paraquat). Gramoxone is a contact herbicide, so spray coverage is critical. Spray volumes of 20 gallons/acre or higher are preferred, especially on larger and thicker weeds. Gramoxone also needs to be applied with a nonionic surfactant or oil concentrate to enhance surface coverage of the plant foliage. A tank mix with atrazine will enhance control and provide some residual weed control if planning to plant corn or sorghum next spring. Likewise, metribuzin can be tank-mixed with Gramoxone if rotating to soybean to enhance control and provide some residual. If planting wheat this fall, a tank mix with Sharpen is an option to provide some residual control.

Producers should not expect perfect control of weeds and grasses from any treatments if the stands are unusually tall and thick, or if many of the weeds have flowered or formed seed. Producers should also be prepared for a second flush of weeds, and possibly volunteer wheat, once the main canopy is killed, so follow up treatments may be required.

Producers should be aware that burndown herbicides will not affect the viability of mature seeds in broadleaf weeds.

Using a sulfonyleurea herbicide such as Finesse or Rave could improve control of certain broadleaf weeds and provide some residual control if planting wheat this fall, but will limit recropping options to row crops next spring. Many pigweed and kochia populations are ALS resistant- i.e. Ally, Amber, etc., and may not be controlled by the ALS herbicides.

Information provided by Dallas Peterson and Curtis Thompson, K-State Extension Weed Management Specialist.