

## News Column

Stacy Campbell

Cottonwood Extension District, Hays

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### **Control of mustards in wheat - Timely treatment is important**

Too often producers do not notice mustard weeds in their wheat fields until the mustards start to bloom in the spring. As a result, producers often do not think about control until that time. Although it is still possible to get some control at that time with herbicides, mustards are much more difficult to control at that stage and often have already reduced wheat yields by then.

To minimize yield losses, mustards should be controlled by late winter or very early spring, before the stems begin to elongate (bolt). If mustards are present in the fall, they can be controlled with ALS-inhibiting herbicides such as Ally, Amber, Finesse, Affinity, Rave, Olympus, or PowerFlex. Huskie, Talinor, Quelex, 2,4-D, and MCPA can also provide good control of most mustards if the weeds are at the right stage of growth and actively growing, and if the wheat is at the correct growth stage (fully tillered for 2,4-D). Dicamba and Starane are not very effective for mustard control.

In the late winter or early spring, blue mustard is perhaps the most difficult of the winter annual broadleaf weeds to control because it bolts very early. To be effective on blue mustard, herbicides typically need to be applied in late February or early March. Blue mustard is more difficult to control than tansy mustard with 2,4-D because blue mustard has often already bolted by the time 2,4-D can be safely applied to wheat. Thus, 2,4-D often is applied too late to be effective on blue mustard.

Flixweed and tansy mustard should be treated when they are no larger than two to three inches across and two to three inches tall. As these plants become larger, the control decreases dramatically. Ester formulations of 2,4-D and MCPA are more effective on tansy mustard and flixweed than amine formulations. Field pennycress is easier to control than tansy mustard or flixweed. Herbicide applications made before the pennycress bolts are usually effective. Wheat should be fully tillered before applying 2,4-D or tillering will be inhibited and wheat yields may be decreased.

Most ALS-inhibiting herbicides control winter annual mustards very well, although there are populations of bushy wall flower (treacle mustard) and flixweed in Kansas that are ALS-resistant and cannot be controlled by these products. Alternative measures will be needed to control these populations. The best approach to control ALS resistant broadleaf weeds is to use other herbicides or tank-mixes with 2,4-D, MCPA, Huskie, or Talinor. MCPA can be applied after the wheat is in the 3-leaf stage; but as mentioned above, 2,4-D should not be applied until after wheat is fully tillered -- which often does not occur until spring. Huskie and Talinor can be applied from the 2-leaf to the flag leaf stage of growth. None of these herbicides have much

residual control, so the majority of weeds need to be emerged and actively growing at the time of treatment.

Quelex is a premix of a short-lived ALS herbicide and an auxin-type herbicide called halauxifen. It generally can provide good control of most mustard species. Quelex can be applied from the 2-leaf up to flag leaf emergence growth stages of wheat and should be applied in combination with nonionic surfactant or oil concentrate for control of small, actively growing weeds. If ALS-resistant weeds are present, Quelex alone may not be effective.

Some producers commonly apply ALS herbicides with fertilizer in January or February. Unfortunately, MCPA, 2,4-D, and Huskie are most effective when applied to actively growing weeds, so application when weeds are dormant may not provide good control. As a result, if an ALS-inhibitor tank-mix with one of these herbicides is applied to dormant ALS-resistant mustards in the winter, poor control could occur.

ALS-resistant bushy wallflower seems to be present in a number of fields in central Kansas. ALS-resistant flixweed has only been confirmed in the Saline county area, but may also be present elsewhere. Producers should watch for cases of poor control, and consider alternative herbicides or herbicide tank-mixes to help prevent or manage ALS-resistant weeds.

Crop rotation with corn, grain sorghum, soybeans, or sunflowers is a good way of managing mustards as long as they are controlled in the spring prior to producing seed. Crop rotation will usually result in a gradual reduction of mustard populations in the future as the seedbank in the soil gradually decreases.

For detailed information concerning the different mustard species in Kansas, see the article on our web site [www.cottonwood.ksu.edu](http://www.cottonwood.ksu.edu) "Kansas weeds: Know your mustard species".

Stacy Campbell is an Agriculture and Natural Resources agent in the Cottonwood District. You can contact him by e-mail at [scampbel@ksu.edu](mailto:scampbel@ksu.edu) or calling 785-628-9430.