

Controlling broadleaf weeds in wheat after stem elongation

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Stem elongation, a.k.a. jointing, has begun, or will soon begin, in winter wheat throughout the state. The risk of crop injury from growth regulator herbicides such as 2,4-D and dicamba (Banvel[®], Clarity[®]) increases rapidly as the developing winter wheat head starts to travel up the elongating stem from jointing through the boot stage. Unfortunately, many warm-season broadleaf weeds do not emerge until stem elongation has begun. Although growth regulator herbicides can provide low-cost, broad spectrum control of broadleaf weeds, there is a risk of crop injury.

When applied after stem elongation, growth regulator herbicides can cause prostrate growth, sharp bends at internodes, shortened and deformed heads, trapped heads, twisted awns, sterile florets and reduced seed set. The risk of injury is greatest with dicamba and less with 2,4-D, especially the amine formulations of 2,4-D. Reducing use rates will reduce injury as well as control.

A number of herbicides can be applied safely to wheat after jointing and up to the boot stage. Many of these products do not provide control of as broad a spectrum of weeds as 2,4-D or dicamba, but sometimes they can be combined with lower rates of 2,4-D to help provide broader spectrum control while reducing the risk of crop injury.

Herbicide Options

The sulfonylurea herbicides such as Affinity Brodspec[®], Ally[®], Amber[®], Finesse[®], or Peak[®], can be safely applied to wheat up to just prior to the boot stage. These herbicides provide good control of many common broadleaf weeds, but will not control ALS-resistant weed biotypes, such as ALS-resistant kochia, which have become common in many wheat growing areas. If kochia needs to be controlled and a sulfonylurea herbicide is used, the safest option may be to add Starane Ultra or Starane NXT. Many sulfonylurea herbicides also provide soil residual control of later emerging broadleaf weeds, which may be beneficial in poorer wheat stands. Of course this soil residual also may result in re-crop restrictions.

Other herbicides that can be applied safely to winter wheat after stem elongation include Starane[®] Ultra, Bronate Advanced[™], Starane NXT, and Widematch[™]. Starane Ultra provides excellent control of kochia and can be applied to wheat up until flag leaf emergence. Starane Ultra is usually tank-mixed with other products to broaden the range of weeds controlled.

Know how. Know now.



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Bronate Advanced is a premix of bromoxynil and MCPA. Although MCPA is a growth regulator, wheat is more tolerant of MCPA than it is of 2,4-D or dicamba. Bromoxynil is a contact herbicide, that is, it is not translocated in the plant, so good coverage is important with Bronate Advanced. This is accomplished by using higher spray volumes and higher pressure to produce smaller droplets. It also limits the size of weeds that can be effectively controlled. Weeds should be in the 2- to 4-leaf stage at application. Bronate Advanced controls a broad spectrum of broadleaf weeds and can be applied to wheat up until the boot stage.

Starane NXT is a premix of Starane and bromoxynil. It provides excellent control of kochia and other small broadleaf weeds. As with Bronate Advanced, good spray coverage is important for good control. Starane NXT can be applied to winter wheat until flag leaf emergence.

Widematch is a premix of Stinger[®] and Starane. It provides good control of Canada thistle and can be applied up to flag leaf emergence. This provides a longer window for application than Curtail[®], which is a premix of Stinger plus 2,4-D and must be applied prior to jointing.

If broadleaf weeds become a problem in winter wheat after stem elongation, consider the risk of crop injury from growth regulator herbicides such as 2,4-D and dicamba when selecting a herbicide. Several products can provide good control of broadleaf weeds with little risk for crop injury, although the cost of this control will frequently be greater than with 2,4-D.

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