

Bill Johnson

Glenn Nice

Tom Bauman

Purdue Extension Weed Science

Postemergence Control of Grass Weeds in Field Corn

Corn is growing rapidly across much of the state and control of grass weeds with postemergence herbicides is a question we are getting quite frequently. Although several of the postemergence grass herbicides are effective on large weeds, an important point to keep in mind is that most of these herbicides should be applied before the grass weeds are 4 inches tall (except for shattercane and johnsongrass) to assure the most effective control and to minimize yield losses due to weed interference.

If soil-applied herbicides are not adequately controlling grassy weeds or if one is utilizing postemergence strategies for grass control, several herbicides are available that are labeled for postemergence grass control in corn.



Herbicides for grass control include Accent, Basis, Basis Gold, Beacon, Celebrity Plus, Equip, Liberty, Lightning, Northstar, Option, Steadfast, Steadfast ATZ and glyphosate products. To avoid crop injury and yield loss, many of the herbicides that contain an ALS inhibitor (Accent, Accent Gold, Basis, Basis Gold, Beacon, Celebrity Plus, Lightning, Northstar, Option, and Steadfast) should not be broadcast over the top of corn after it has 5 or 7

exposed leaf collars. This is the growth stage of corn when reproductive processes are initiated, and disruption of the physiology of corn at this stage can result in incomplete pollination, malformed ears (pinched ear syndrome) and yield losses.

For Free Herbicide Labels

www.cdms.net

and

www.greenbook.net

Accent can be applied as a broadcast spray on corn that is up to 20 inches tall or has up to 6 exposed leaf collars, or it can be applied as a directed spray to corn that is 20 to 36 inches tall or exhibits 9 or fewer exposed leaf collars. Do not apply to popcorn or seed corn that is more than 20 inches tall. Accent controls most annual grasses, except for crabgrass, and also controls johnsongrass and shattercane. The best results will be obtained when it is applied to foxtails, barnyardgrass, and fall panicum 2 to 4 inches tall; shattercane and seedling johnsongrass 4 to 12 inches tall; and rhizome johnsongrass 8 to 18 inches tall.

Basis can be applied as a broadcast spray on corn in the spike through the 4-leaf or 2-exposed-collar growth stage. Do not apply to corn that has 3 fully exposed leaf collars or is more than 6 inches tall. Apply to foxtails and fall panicum up to 2 inches tall.

Basis Gold can be applied as broadcast sprays on corn that is up to 12 inches tall or before 6 exposed leaf collars are present, whichever occurs first.

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These herbicides control most of the same grasses that are controlled by Accent alone, but the Accent rate in both products is lower than typically used with Accent alone. Thus, they should be applied earlier to smaller grass weeds for effective control. Basis Gold has slightly more activity on smooth and large crabgrass than Accent because of the atrazine in Basis Gold. Apply to foxtails, barnyardgrass and fall panicum 3 inches tall or less; shattercane 6 inches tall or less; and seedling johnsongrass 8 inches tall or less. Additional Accent or Beacon can be added either as a tankmix or sequentially for additional activity on shattercane and johnsongrass.

Beacon can be applied as a broadcast spray to corn that is between 4 and 20 inches tall or has 2 to 6 exposed leaf collars, or up to tasseling if using drop nozzles. Applications to corn less than 4 inches tall can be injurious to the crop. All applications to inbred lines and popcorn should be directed between the rows to avoid placement in the whorl. Beacon provides control of johnsongrass and shattercane but is weaker than Accent, Option, Equip, and Steadfast on most annual grasses. Apply to shattercane or seedling johnsongrass 4 to 12 inches tall, and rhizome johnsongrass 8 to 16 inches tall.

Celebrity Plus can be applied as a broadcast spray on corn that is between 4 and 24 inches tall or up to 6 exposed leaf collars, whichever comes first. Applications to corn less than 4 inches tall can be injurious to the crop. Since Celebrity contains Accent, it should be applied to foxtails, barnyardgrass, and fall panicum 2 to 4 inches tall; shattercane and seedling johnsongrass 4 to 12 inches tall; and rhizome johnsongrass 8 to 18 inches tall.

Equip can be applied as a broadcast spray to corn that has up to 5 exposed leaf collars. It can be used as a directed spray with drop nozzles on corn up to 36 inches tall or 8 exposed collars. Equip is much like Accent and controls many of our common annual grasses plus johnsongrass and shattercane. The best results will be obtained when it is applied to foxtails, barnyardgrass, and fall panicum 2 to 4 inches tall, and shattercane and johnsongrass up to 8 inches tall.

Liberty can be applied as a broadcast spray on Liberty Link corn that is up to 24 inches tall or has up to 7 exposed leaf collars, or it can be used as a directed spray on corn that is 24 to 36 inches tall. Liberty ATZ can be applied to corn up to 12 inches tall. Liberty is very effective on large foxtails up to 10 inches tall, but it can be weak on barnyardgrass and yellow foxtail if they are more than 4 inches tall at application. Apply to shattercane and seedling johnsongrass that is 6 inches or less in height.

Lightning can be applied as a broadcast spray on Clearfield, IMI, IT or IR corn that is up to 20 inches tall or has 2 to 6 exposed leaf collars. Lightning controls many of the same grasses as Accent. Apply Lightning to giant foxtail up to 6 inches tall; green and yellow foxtail and fall panicum up to 3 inches tall; and shattercane, seedling and rhizome johnsongrass up to 8 inches tall.

Information listed here is based on research and outreach Extension programming at Purdue University and elsewhere. The use of trade names is for clarity to readers of this publication and does not imply endorsement of a particular brand nor does exclusion imply non-approval. Always consult herbicide labels for the most current and up-to-date precautions and restrictions. Copies, reproductions, or transcriptions of this document or its information must bear the statement "Produced and prepared by Purdue University Extension Weed Science" unless approval is given by the author.

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Northstar can be applied as a broadcast spray to corn that is between 4 and 20 inches tall or has 2 to 6 exposed leaf collars, or with drop nozzles to corn up to the tasseling stage. Applications to corn less than 4 inches tall can be injurious to the crop. Northstar contains Beacon which provides control of johnsongrass and shattercane but is weaker than Accent, Option, Equip or Steadfast based herbicides on most annual grasses. Apply to shattercane or seedling johnsongrass 4 to 12 inches tall, and rhizome johnsongrass 8 to 16 inches tall.

Option can be applied as a broadcast spray to corn that is up to 16 inches tall or has 5 exposed leaf collars. It can be used as a directed spray with drop nozzles on corn that is 16 to 36 inches tall. Option is much like Accent and controls many of our common annual grasses plus johnsongrass and shattercane. The best results will be obtained when it is applied to foxtails, barnyardgrass, and fall panicum, 2 to 4 inches tall, and shattercane and johnsongrass, 12 to 16 inches tall.

Most Glyphosate products (see label to determine if a specific product is labeled for use on Roundup Ready corn) can be applied as a broadcast spray to Roundup Ready corn that is up to 30 inches tall or has 8 exposed leaf collars. A number of products can be applied to the Roundup Ready Corn 2 line up to 48 inches tall to keep spray out of the whorls. Apply to foxtails, up to 20 inches tall, and fall panicum, shattercane, and johnsongrass, up to 18 inches tall. Several glyphosate premixes can be applied postemergence on Roundup Ready corn as well. Expert can be applied to corn up to 12 inches tall, Field Master can be applied to corn up to 11 inches tall, Ready Master ATZ can be applied to corn up to 12 inches tall.

Steadfast can be applied as a broadcast spray on corn that is up to 20 inches tall or has 6 exposed leaf collars. Do not apply to popcorn, sweetcorn, or seed corn. Steadfast controls many of the same grasses as Accent, but it also has some activity on crabgrass. Steadfast ATZ can be applied to corn up to 12 inches tall or 6 exposed collars. Apply either product to foxtails, fall panicum, and barnyardgrass, up to 4 inches tall; johnsongrass, up to 8 inches tall; shattercane, up to 6 inches tall; and crabgrass, up to 1 inch tall.

Other Considerations:

- 1) Check the label to determine if these products can be used on popcorn, seed corn, sweet corn. The information presented in this article is specific to use on field corn.
- 2) Be sure to use the appropriate adjuvant with these products, particularly when tankmixing with other products for broadleaf weed control. Certain adjuvant systems will increase the activity of these herbicides and the potential for crop injury. Occasionally, different adjuvant systems are required for grass:broadleaf tankmixes versus specific products used alone.

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- 3) Check the label to determine if restrictions exist regarding the use of soil or postemergence insecticides with postemergence grass herbicides. Some insecticides slow the corn plants ability to metabolize (or detoxify) these herbicides and crop injury can result. You may not have planned to use a postemergence grass herbicide and use of certain herbicides may not be allowed after certain soil insecticides.
- 4) This is the time of the year when we will begin to see spray tank contamination problems. If glyphosate was used in the previous load, be sure to properly clean out the tank and empty the sumps. Corn that doesn't not contain the Roundup Ready gene is very sensitive to low rates of glyphosate and the resulting crop injury is sometimes confused with injury from ALS herbicides such as Accent, Option, Equip, Steadfast, etc.
- 5) There are a number of websites available to quickly obtain information from herbicide labels.
 - a. CDMS <http://www.cdms.net/pfa/LUupdateMsg.asp>
 - b. Kelly Solutions <http://www.kellysolutions.com/>
 - c. Office of the Indiana State Chemist <http://www.isco.purdue.edu/>

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