

Now is the time to start thinking about fall applied herbicides to control winter annual weeds in corn and soybean production. Use of fall applied herbicides should be considered if winter vegetation prohibits soil drying and timely planting in the spring. Also some evidence exists that specific weeds can serve as an alternative host for black cutworm and soybean cyst nematode. The specific goal of a fall applied program is usually to serve as a replacement for a burndown or tillage used in the spring to manage winter annuals. If the program used doesn't serve as a burndown replacement, the use of a fall applied program won't necessarily be advantageous unless you are using it to reduce infestations of insect pests or SCN.

The most common winter annual weeds found in Indiana are henbit, purple deadnettle, chickweed, and in some areas of the state marehail (horseweed). In Table 1, we have listed the commercially available programs that have provided 80% or more control of these weeds in University research trials and whether or not they will suppress or control dandelion. Most of the commercially available programs offer flexibility in growing either corn or soybean in the following cropping season. This is because their rotational intervals on the label are shorter than the time frame between a fall application and traditional planting dates in April and May of the following year. Specific programs mentioned below that do not offer crop rotation flexibility include Backdraft and Canopy XL (must grow soybean in 2004), and Princep or simazine (must grow only corn in 2004).

Going into the 2003 season, a number of areas in Indiana were experiencing severe problems with dandelion. Dandelions are controlled much more effectively with fall applied programs than with spring applied herbicides. All programs listed will provide control or suppression of dandelion. The key in most of the programs is the use of 2,4-D or glyphosate. Control of dandelion with 2,4-D is rate responsive. If dandelion infestations warrant fall treatment, use 2,4-D alone or with the other products at 1 qt/A unless you are using Canopy XL. If using Canopy XL, then the 2,4-D rate can be reduced to 1 pt/A. Glyphosate is much more effective on dandelion in the fall than in the spring. Use 22 oz/A of Roundup Weathermax, or 32 oz/A of the other 3 lb acid equivalent/gallon formulations.

Marestail is also controlled effectively by many fall applied programs. Managing this weed with fall applied programs should be strongly considered in areas with known infestations of glyphosate-resistant populations. All of the programs listed below will provide control or suppression of glyphosate-resistant marestail except Backdraft and glyphosate alone. The addition of 2,4-D to these products will greatly increase control of glyphosate resistant populations. (see related article for more information on glyphosate resistant marestail).

Fall applied herbicide treatments can be applied from mid October until early December. Products that do not have appreciable residual activity in soil (glyphosate, 2,4-D, or Gramoxone alone) should be applied late enough to so that weed reemergence after application is minimal. However, foliar activity with these products is better when applications are made during a period of several days of daytime air temperatures of 50 degrees or greater. For dandelion control, applications should be about the time of the 1<sup>st</sup> killing frost (typically late October to early November). Products with residual activity in the soil have more flexibility in application timing and can be applied as soon as the crop is removed from the field.

Table 1. Fall applied herbicide programs which should provide 80% or more control of henbit, purple deadnettle, and chickweed into April or 2004:

Herbicide Program	Labeled for fall application before corn	Labeled for fall application before soybean	Control or suppression of dandelion	Control or suppression of marestail
Backdraft	No	Yes	Yes	Yes if not glyphosate resistant
Backdraft + 2,4-D	No	Yes	Yes	Yes
Basis + 2,4-D	Yes	No <sup>1</sup>	Yes	Yes
Canopy XL + 2,4-D	No	Yes	Yes	Yes
Canopy XL + Express + 2,4-D	No	Yes	Yes	Yes
Dicamba (Banvel/Clarity/Sterling)	Yes	Yes	Yes	Yes
Dicamba + 2,4-D	Yes	Yes	Yes	Yes
Express + 2,4-D	Yes	Yes	Yes	Yes
Glyphosate	Yes	Yes	Yes	Yes if not glyphosate resistant
Glyphosate + 2,4-D	Yes	Yes	Yes	Yes
Gramoxone + Sencor + 2,4-D	Yes	Yes	Yes	Yes
Harmony Extra + 2,4-D	Yes	Yes	Yes	Yes
Princep + 2,4-D	Yes	No	Yes	Yes
Valor + 2,4-D	Yes	Yes	Yes	Yes
Valor + Express + 2,4-D	Yes	Yes	Yes	Yes

<sup>1</sup>Not to be used before a planned soybean year, however, in a failed corn year, you can replant to soybean.

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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 site, does not imply endorsement of a particular brand nor does exclusion imply non-approval. Always consult the herbicide label for the most current and update 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.