

**Travis Legleiter**

*Weed Science Program Specialist*

**Bill Johnson**

*Professor of Weed Science*

*Purdue University*

*Extension Weed Science*

## Starting Next Year Now: The Utility of Fall Herbicide Applications

The 2014 harvest season has started and should be in high gear within the next week. As producers begin harvest they will need to be thinking about many management plans for next seasons crop. Herbicide programs and weed management strategies will be one of those topics that producers need to consider this fall as harvest wraps up this current growing season.

Fall herbicide applications should be considered by Indiana's no-till farmers, especially those who have had past problems with marestail. The focus of a fall application for most winter annual weeds should be to control the weeds that are present in the field in the fall rather than plants that will emerge next spring. This fall is likely to give us a lot of winter annual weed emergence since we have had high amounts of precipitation in August and September. In most cases, a properly timed application of glyphosate, 2,4-D, and/or dicamba from mid-October to mid-November will control the weeds that emerged this fall and provide fields with lower densities of smaller weeds next spring that can be more easily controlled with a spring burndown, than fields that did not receive a fall burndown.

The necessity of a residual herbicide in the fall is always in debate amongst producers and weed scientists. A residual herbicide applied later in the fall can keep fields cleaner longer in the spring, and can in some years provide enough activity to keep fields clean up to planting. With the cold, harsh winter we experienced this past fall, residual herbicides persisted well into the spring planting season. There were several cases this year where residuals persisted too long and soybean injury occurred because of additive effects from the remnant fall residual and a spring residual that was applied. The success of this past years fall residual herbicides will not occur every year, it all depends on the weather and we all know it's improbable to predict what the winter and next spring will bring. In a year with a warmer than usual winter and early spring the residuals will quickly break down and allow winter annuals to emerge into the planting season, which will require another burndown and another residual herbicide to control weeds into the soybean growing season. This is why our general recommendation from year to year is to save the residual until the spring when you know that it will persist into the soybean-growing season.

The recommendation from Purdue has been and will remain to be that fall applications should consist of products that will control the weeds that are present and to save the use of a residual herbicide until as close to planting as possible in the spring. This eliminates the guessing game of what the winter and spring will bring and whether or not an additional residual application will be needed. A planned fall burndown without residual followed by a spring burndown with residual assures that the residual will still be present into the growing season. However, given our continual struggle to control marestail throughout much of the state, we are revising this recommendation in areas where additional horsepower is needed for marestail control.

## Fall Herbicide Applications

September 26, 2014

The use of a fall application, regardless of whether or not it includes a residual, is a must if you are trying to control marestail in no-till soybean. The emergence pattern of marestail in fall as well as in the spring and summer means that multiple herbicide applications are needed and these applications need to start in the fall. Again the fall application needs to focus primarily on controlling the marestail rosettes that emerged in the fall and we will like to see a low-cost residual component added to the foliar product. The residual component should not be expected to provide residual control of marestail in the spring for more than 2 weeks. A program like this will make the spring burndown more effective as there will be less marestail plants to control and the plants present will be the smaller spring emerged rosettes, rather than large bolting fall-emerged plants.

The included chart shows the need not only for multiple burndown applications, but also the need for residual herbicides to effectively manage marestail in no-till soybean. The data in the chart was collected from treatments applied at the Southeast Purdue Agriculture Center in North Vernon, IN during this previous growing season. Treatments were grouped by when applications were made and whether or not they included one of the following residual herbicides that are recommended by Purdue for marestail control: flumioxazin (Valor), sulfentrazone (Authority), or metribuzin (Sencor). Treatments that included many of the popular ALS-inhibiting fall residual herbicide were not included, as these are not generally recommended for marestail control, though they do provide utility for many other winter annuals.

The chart includes error bars (whiskers) that can for simplicity be considered as consistency indicators. The larger the error bar the more inconsistent the treatment was when rated across multiple replications.

The treatments that included two burndown applications with a residual included in at least one of those applications (Three middle bars) not only had the highest control of marestail, but also the most consistent. The treatments that included fall residuals were the highest and most consistent, again this is due to the delayed spring and extended persistence that will vary from year to year. The treatment that did not include any residual herbicides (Far left bar) had the lowest amount of control and was the least consistent. This again solidifies the need not only for multiple burndown applications, but also for the use of residual herbicides to manage marestail in no-till soybean.

More in depth information on control of marestail and products that are recommended for both fall and spring are outlined in the "Control of Marestail in No-Till Soybean" publication:

<https://ag.purdue.edu/btny/weedscience/Documents/marestail%20fact%202014%20latest.pdf>.

Information listed here is based on research and outreach extension programming at Purdue University and elsewhere.

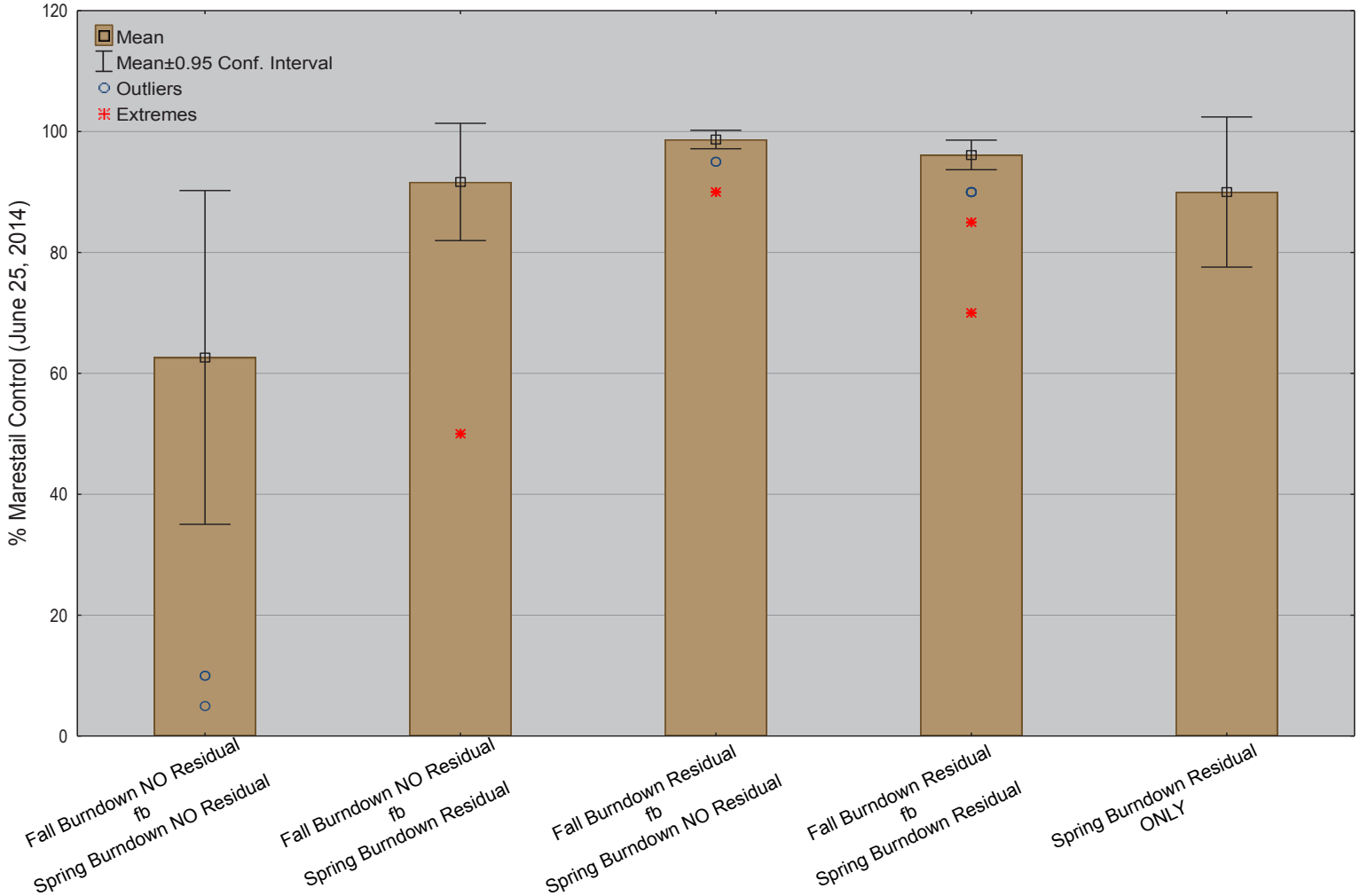
The use of trade names is for clarity and does not imply endorsement of a particular product, nor does exclusion imply non-approval.

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:

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Influence of Residual Herbicide Application Timing on Marestalk Control  
Combined Data from North Vernon, IN (SEPAC), 2014



-"Fall Burndown Residual" or "Spring Burndown Residual"=Burndown applied with one of the following residual herbicides: flumioxazin, metribuzin, or sulfentrazone  
-fb = followed by

