

## **IMPORTANT REMINDERS FOR CHEMICALLY TERMINATING COVER CROPS**

Cover crop species and stage, weather, weeds and the following cash crop are all important factors to consider when terminating cover crops with herbicides.

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Spring is here and with the field season beginning it is time to think about terminating any overwintered cover crops. At this year's [Midwest Cover Crops Council](#) meeting in Grand Rapids, Michigan, keynote speaker Dale Shaner presented a talk titled, "[Cover Crop Termination: Considerations when Selecting Herbicides and the Potential for Resistance](#)."

Below is a brief summary of some of the important factors to consider as you plan your herbicide-based cover crop termination strategy.

### **Select an herbicide that will effectively terminate your cover crop species or mixture of species**

Glyphosate, for example, is a popular choice for cover crop termination due to its lack of residual activity, however it may not be the best choice for legume cover crops such as medium red clover or hairy vetch. A better choice for a legume monoculture may be 2,4-D ester. If the legume is growing with another cover crops species or weeds also need to be controlled during the burndown, 2,4-D could be tank-mixed with glyphosate.

You can compare the effectiveness of burndown herbicides (used before corn and soybean) for terminating rye, wheat, clover and hairy vetch in Tables 1J and 2N of the "[Weed Control Guide for Field Crops](#)" ([Michigan State University Extension](#) bulletin [E0434](#)). Remember to include the necessary additives as directed on the herbicide label to optimize performance.

[Hard copies](#) of the "[Weed Control Guide for Field Crops](#)" are available for purchase through the [MSU Extension Bookstore](#).

### **Look at the rotation restrictions for the herbicide you will be using to ensure you can safely plant your cash crop at the desired time**

For example, if 2,4-D is used as part of your termination strategy, make the application 30 days or more prior to soybean planting if applying at the 1 quart per acre rate or seven days or more before planting if applying at 1 pint per acre. If dry beans are to be planted following your cover crop termination, 2,4-D should not be used. Review the herbicide label for rotation restriction information or consult Table 12 of the most recent "[Weed Control Guide for Field Crops](#)."

### **Wait until the cover crop is actively growing**

Many herbicides are systemic, meaning they need to be moved within the plant to maximize their effectiveness. Therefore, plants that are dormant or not growing much may not be successfully terminated. This is particularly important for glyphosate and synthetic auxin herbicides (Group 4, e.g. 2,4-D and dicamba).

### **Terminate the cover crop prior to flowering**

Plants that have reached the reproductive stage may be difficult to control as the movement of photosynthates change, thereby altering the movement of herbicides that are translocated in the phloem. Also, older vegetative tissues often absorb less herbicide compared to younger tissues due to thicker cuticle development.

### **Consider the weather conditions**

Cool, cloudy and drought conditions can all negatively impact the efficacy of herbicides. Diffusion of herbicides into the plant can be reduced under adverse conditions. Also, these conditions limit plant growth, photosynthesis and transpiration, therefore limiting the movement of the herbicides within the plant.

### **Consider any weeds that need to be controlled prior to cash crop planting, especially if you have herbicide-resistant species**

Target any weeds that may be present while terminating the cover crop to ensure you are planting the cash crop into a clean field. If you have confirmed (or suspect) you have herbicide-resistant weeds, be sure that the class of herbicides chosen will also effectively control the resistant weed. For example, if you are terminating a cereal rye cover crop prior to soybeans but you also have glyphosate-resistant marestail in the field, consider combining glyphosate and Sharpen (PPO inhibitor, Group 14) in your termination application. An application of Sharpen alone will not terminate cereal rye.

### **Leave time in the event another herbicide application or different termination method is required**

Occasionally, multiple herbicide applications will be required to successfully terminate a cover crop. Early termination allows for flexibility should a second application be needed. Other options available for terminating cover crops that are not discussed in this article include tillage, roller crimping and mowing.

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