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Spring Burndown Applications To Weeds And Cover Crops

This spring so far has been cold and wet with short spurts of warm sunny days in-between. This weather cycle for the most part kept producers out of field and allowed the winter annual weeds to flourish the past couple of weeks. As we look ahead to the next couple of weeks in hope of getting out to the fields to do spring no-till burndown applications, there are a couple of things to keep in mind.

Winter Annual Weeds

The warm periods of weather, particularly the last two weeks, along with the ample soil moisture have been beneficial for winter annual weed growth and early emerging summer annuals. A few winter annual weeds that we have noticed are chickweed, purple deadnettle, and henbit that are for the most part already flowering in much of the state. Cressleaf groundsel has begun flowering in southern Indiana.

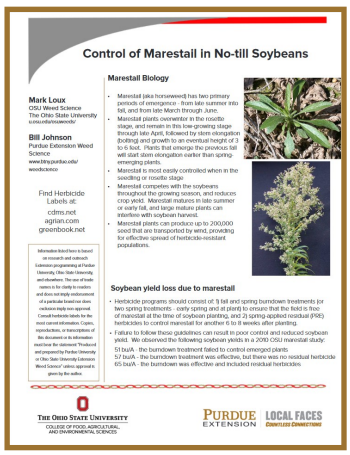
Producers will need to make winter annual burndown applications quickly, once conditions allow them to get into fields. These weeds, specifically chickweed, can create mats that slow soil drying and delay planting. Although these annuals may already be flowing and nearing the end of their life cycle a timely burndown application will speed up the desiccation processes for quicker soil drying and timely planting.

A mixed stand of flowering winter annuals and bolting marestail.

Marestail

This weed has no doubt been the biggest weed problem across Indiana the last couple of years and this spring is setting up to give it an advantage again. Any fall emerging marestail that survived the winter or was not controlled by a fall herbicide application has likely already begun to bolt and will be difficult to control if not treated soon. The spring emerging cohorts of marestail have likely started to emerge and will be very quickly gaining size if producers are kept out of fields by continued wet conditions.

Producers need to be aware of the size of marestail populations in fields and plan burndown treatments accordingly. The majority of marestail populations are glyphosate-resistant and must be controlled with other herbicides. Producers need to be aware of appropriate tank mixes and rates to control larger marestail populations that are glyphosate resistant.



Control of Marestail in No-till Soybeans

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Find Herbicide Labels at:
cdms.net
agian.com
greenbook.net

Marestail Biology

- Marestail (aka horseweed) has two primary periods of emergence - from late summer into fall, and from late March through June.
- Marestail plants overwinter in the rosette stage, and remain in this low-growing stage through late April, followed by stem elongation (bolting) and growth to an eventual height of 4 to 6 feet. Plants that emerge the previous fall will start stem elongation earlier than spring-emerging plants.
- Marestail is most easily controlled when in the seedling or rosette stage
- Marestail competes with the soybeans throughout the growing season, and reduces crop yield. Marestail matures in late summer or early fall, and large mature plants can interfere with soybean harvest.
- Marestail plants can produce up to 200,000 seed that are transported by wind, providing for effective spread of herbicide-resistant populations.

Soybean yield loss due to marestall

- Herbicide programs should consist of: 1) fall and spring burndown treatments (or two spring treatments - early spring and at plant) to ensure that the field is free of marestall at the time of soybean planting, and 2) spring-applied residual (PRE) herbicides to control marestall for another 6 to 8 weeks after planting.
- Failure to follow these guidelines can result in poor control and reduced soybean yield. We observed the following soybean yields in a 2010 OSU marestall study:

51 bu/A - the burndown treatment failed to control emerged plants
57 bu/A - the burndown treatment was effective, but there was no residual herbicide
65 bu/A - the burndown was effective and included residual herbicides

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For more details on marestail control, specifically in no-till soybean, refer to our Control of marestail in no-till soybean publication.

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Find the latest weed Management information and tools from Purdue:
https://ag.purdue.edu/btny/weedscience

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Cover Crops

The state of Indiana, according to personnel with NRCS, had approximately 1 million acres of cover crops planted this last fall. Some of the cover crop species are designed to be winter killed, although several will need to be terminated prior to corn or soybean planting.

Producers who seeded cover crops need to be aware of the proper timing, herbicides, and rates for termination applications for each specific cover crop species. Many of the cover crops are relatively easily controlled with 0.75 lb ae/A of glyphosate in early spring prior to corn or soybean planting.

The one cover crop that poses a larger challenge is annual ryegrass. When allowed to grow extensively in the spring annual ryegrass can be very difficult to terminate with herbicides and can become a weed itself. Producers need to make applications prior to annual ryegrass reaching 6 inches to ensure a successful termination. Much like marestail, the combination of the warm spells and wet soils keeping producers out of the field can lead to annual ryegrass cover crops growing beyond manageable heights.

Regardless of the size of the annual ryegrass there are a couple of keys that producers need to keep in mind when making their termination applications. Glyphosate is the most commonly used herbicide to terminate annual ryegrass and must be applied at 1.5 lb ae/A (2 quarts of a 3lb ae/gal glyphosate product) to ensure complete termination. Application of glyphosate also need to be applied when the annual ryegrass is actively growing or during a period in which nighttime low temperatures are greater than 45 F.

It would also be a good idea to scout fields that have cover crops and see if marestail is present as well. If it is present do not rely just on glyphosate to terminate the cover crop. You will need to add sharpen, 2,4-D, or dicamba to glyphosate to control the marestail.

For more information on cover crop termination refer to our "Terminating Cover Crops: Successful Cover Crop Termination with Herbicides" publication

For more information specifically on annual ryegrass termination refer to our "Successful Annual Ryegrass Termination with Herbicides" publication

Application

The increase in acres infested with glyphosate resistant weeds means many producers are making burndown applications with other herbicides and/or tank mixes. Some of the popular tank mixes contain contact herbicides like gramoxone and sharpen. When applying a contact herbicide, producers need to keep in mind that complete spray coverage is essential. To ensure complete coverage producers need to use carrier volumes of at least 15 to 20 gallons per acre (GPA). The use of proper adjuvants and spray nozzle tips as listed by the product label will also ensure optimal coverage and efficacy.

The slight delay in the planting season has likely given some of our winter annuals and early emerging summer annuals a head start this year, but with the proper herbicides, rates, and application methods producers will be able to get their no-till fields cleaned off and ready for a successful growing season.

Dicamba Preplant Ahead of Roundup Xtend Soybeans

In order to control marestail and other broadleaf winter annual weeds, many producers may choose to use dicamba in their burndown applications ahead of planting Roundup Xtend soybeans. There is no specific "Roundup Xtend soybean" section on the labels of older dicamba products, so they must be treated like any other soybean. It is important to know that with the exception of Xtendimax, Engenia, and FeXapan, all other dicamba products must follow the label restrictions ahead of planting ALL soybeans. The requirements after application are for 1-inch of rain, then a 14-day waiting period for 0.25 lb ae/A of dicamba (8 ounces of a 4 lb ae/gal dicamba product), and 1-inch of rain, then a 28-day waiting period for 0.5 lb ae/A of dicamba (16 ounces of a 4 lb ae/gal dicamba product).

When using Xtendimax, Engenia, or FeXapan in a burndown ahead of Roundup Xtend soybean, the requirements for rainfall and a waiting period do not have to be observed. For Xtendimax and FeXapan, up to 44 oz/A (1 lb ae/A) can be applied preplant through emergence. This can be either through two applications of 22 oz/A (0.5 lb ae/A) or a single application of 44 oz/A. For Engenia, a total of 25.6 oz/A (1 lb ae/A) can be applied preplant through emergence. The Engenia label does not allow for more than 12.8 oz/A (0.5 lb ae/A) in a single application. When choosing to tank-mix these products in a burndown application, be sure to check their respective websites within 7 days of application to make sure the tank-mix is approved.
(www.xtendimaxapplicationrequirements.com)
(www.engeniatankmix.com)
(www.fexapanapplicationrequirements.dupont.com)

Dicamba applied preplant on glyphosate-resistant marestail