

Importance of selecting proper burndown to combat herbicide resistance

Nufarm's Bob Bruss shares the top tools for early-season resistance management

Your in-crop herbicide strategy is paramount when considering methods to combat resistant weeds, but your resistance strategy should start long before your crops emerge. Effective resistance management starts at a proper burndown, explains Bob Bruss, Director of Technical Services for Field Crops for Nufarm.

THE RESISTANCE PROBLEM

"Glyphosate became so widely and solely used as a tool over the last two decades that we can no longer utilize it as a stand-alone weed control option," says Bruss.

"Glyphosate resistance is the number one resistance concern for growers today, but we do have effective solutions to combat it."

Glyphosate may be the biggest problem, but it's not the only one. Resistance to Group 2 or ALS inhibitors is also a growing concern.

Several key weeds have taken the forefront of the resistance issue, including winter annuals marestail, cutleaf evening primrose and henbit.

"When glyphosate first came out, it worked well on very large marestail that had been growing since the fall and through spring," says Bruss. "But they weren't completely controlling some of these big plants which produced resistant seeds and lead us to the current glyphosate resistant marestail."

Inadequate glyphosate application and application at late plant growth stages has heightened the tolerance and resistance of aggressive weeds like these, says Bruss.



*Cutleaf Evening Primrose ,
John D. Byrd, Mississippi State
University, Bugwood.org*

ON-FARM SOLUTIONS

Farmers are approaching the herbicide resistance challenge through a variety of chemical and non-chemical practices. Many now utilize Multi-Mode of Action (MMOA) herbicides and combinations of herbicide actives, adjusting planting dates for earlier season canopy,

selecting seed varieties that are tolerant to other chemistries, and incorporating a burndown to get early-season control.

"We're seeing more and more uses of soil herbicides ahead of using post-emergent herbicides, as well as MMOA to control the variety of weeds that may have resistance to a number of classes," says Bruss.



Marestail

THE BURNDOWN FACTORS

"The proper burndown is a combination of the right chemistry, at the right time and in the right weed growth stage," says Bruss. "Treating the weeds when they're small, before they have too extensive of a root system, is key."

Bruss also explains the simple pitfall of a glyphosate-only burndown system – "it's likely not to work."



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"It's harder to kill a weed that has escaped or recovered from an inadequate application than to try and get it right the first time," says Bruss. "Even if you stunt the plant or knock it back, the roots are still growing. So by the time you see it's recovered and you didn't kill it, you actually have an even bigger root system and it's even harder to kill the second time around."

Burndown timing is also critical, ensuring that soil temperatures will allow for a proper length of residual coverage and understanding the unique freezing patterns in your geography.

"There are maybe three windows for burndown: fall of the previous year after harvest, very early spring, and what I call the mid-spring window," says Bruss.

"The difference between an application in November and an application in February, from a biological standpoint, is really not much different because the growth comes to a stop in January and February due to freezing.

"In late fall and early spring, you can use heavy rates of things like BurnMaster™ and WeedMaster® to control the bigger weeds. You've got marestail germinating during that period so you want to take care of it at the right time. In the mid-spring window when you're still a few weeks away from planting but you're seeing weeds coming up, it's a mistake to wait until planting when they're even more competitive. This is where a product like Spitfire® works great."

A SUITE OF SOLUTIONS

"Growers should look for burndown formulations with non-resistant or overlapping modes of action to properly control winter annuals like marestail and henbit," says Bruss.

Spitfire, BurnMaster and WeedMaster are leading non-glyphosate solutions from Nufarm, each with a different fit and function for your farm. All three products provide excellent burndown with relatively short rotational crop restrictions as compared to residual herbicides.

CONCLUSION

Selecting the right burndown – the right chemistry, at the right time, in the right weed growth stage – is critical to your overall weed and resistance management strategy. By utilizing the best chemical and non-chemical options available to you, you'll improve your crops chances for high yields in the coming season.

The logo for Spitfire features the word "Spitfire" in a bold, green, sans-serif font. Above the letter "i" in "fire" is a stylized red flame icon.

Spitfire provides true below-ground burndown of broadleaf weeds, including some of the most troublesome herbicide-resistant species. Fields treated with Spitfire will benefit from weed control that will ease planting and ensure optimum yields, all while managing the risk of herbicide-resistant weed populations. The reduced amount of dicamba in Spitfire allows applications closer to planting soybeans than many similar products.

The logo for WeedMaster features the word "WeedMaster" in a bold, green, sans-serif font. Above the letter "M" is a stylized green leaf icon.

WeedMaster is a selective, post-emergent herbicide that provides broad-spectrum control of tough annual, biennial, and perennial broadleaf weeds and brush in grass forages and selected row crops. The growth regulating effects of 2,4-D and dicamba allow WeedMaster to interfere with the normal development of broadleaf weeds, ultimately causing plant death.

The logo for BurnMaster features the word "BurnMaster" in a bold, green, sans-serif font. Above the word is a stylized green and brown flame icon.

BurnMaster delivers exceptional control of more than 65 broadleaf weeds, including herbicide resistant species like kochia, pigweed and marestail. Designed for optimal performance – even in cool weather – BurnMaster is the ideal choice for fall and early spring burndown programs.

The logo for Credit Xtreme features the words "Credit Xtreme" in a bold, brown, sans-serif font.

Nufarm also offers a concentrated premium glyphosate, **Credit Xtreme**, for tank mixing with other modes of action. Credit Xtreme is a patented glyphosate formulation containing dual salt technology.



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