

Can Cover Crops Lower Your Herbicide Costs in Corn?

Cover crops have many benefits, including suppressing weed emergence. Planting soybeans in a standing cover crop (and then eliminating the cover crop) can prevent weeds without harming yield. Corn, however, is trickier since competition from the cover crop, failure to remove it in a timely manner and improper nitrogen management can reduce corn yield.

Iowa State University Extension Field Agronomist Meaghan Anderson uses a corn-after-rye example to illustrate the potential issues. "If your goal with cereal rye ahead of corn is reducing winter annual weeds, that can be successful when you burn down the rye in a timely manner ahead of corn planting so it doesn't compete," she says. "But if you're targeting a later-emerging weed like waterhemp, you'd need a thick cover that lasts into late June. If you're planting corn the third week of April, there's no way rye could grow to that size without sacrificing crop yield," she adds.

Some farmers are looking to cover crops to save on herbicides as input costs rise. Anderson recommends following best management practices to control weeds in corn planted into cereal rye, including terminating rye at least seven days before planting, ensuring available nitrogen at planting and scouting for pests. According to the Iowa Soybean Association, cereal rye

should be terminated by the time it reaches 8 to 12 inches high to avoid impacting corn yield.

Preventing yield loss in corn planted into cereal rye also depends on nitrogen management. Nitrogen timing is important, so plan for 30-50% of corn's nitrogen need to be supplied as nitrate before the V6 growth stage when using cereal rye ahead of corn. Early season nitrogen applications with the planter, early sidedress and post-planting broadcast applications of urea plus AMS provided a 10- to 20-bushel-per-acre advantage compared with no cover crops.

In some cases, a different cover crop might be the right solution. University of Nebraska researchers used a hairy vetch cover crop ahead of corn that suppressed weeds in season without sacrificing corn yield. However, Anderson adds that "I would suspect their observed weed suppression levels would still not change the herbicide program."

While cover crops won't replace a corn herbicide application, they can make weeds easier to control. "Cover crops can reduce the weed population and delay weed emergence," Anderson says. "That benefit gives growers a bigger window of opportunity to treat them in a timely manner."

"There's not a lot of farmers taking the risk of letting cereal rye get too big in corn," Anderson says. "But farmers in southeast Iowa, for example, are doing it where they have a conservation culture and a mindset to make it work."

These growers have a deep passion for no-till and cover crops. They're making cover crops in corn work – from letting the cover crop grow tall before terminating it to interseeding multispecies cover crops in corn. "The majority are still terminating the rye early ahead of corn, but they're used to doing things differently and testing to make these practices work," Anderson adds.

Search for cover crop articles
and related information in our
The More You Grow library.



™ & © Trademarks of Corteva Agriscience and its affiliated companies.

© 2023 Corteva.