

Sudangrass recommended to combat Canada thistle

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Farmers who don't rely on or want to minimize the use of chemical herbicides need creative solutions to win the battle against aggressive perennial weeds. In ongoing research at the University of Illinois on Canada thistle, Sudangrass is proving to be a worthy contender as a summer smother crop.

"Sudangrass get very tall. It outcompetes the thistle for light. The Sudangrass creates shade so [photosynthesis](#) cannot occur in the thistle," said U of I weed scientist John Masiunas.

"In our test plots, primarily in the northern part of Illinois, we've seen 95 percent control, so farmers can plant a cash crop the following year in the patch that had been infected with Canada thistle."

Planting time of the smother crop of Sudangrass is critical, said Masiunas. "It's got to be seeded in the first couple of weeks in June. If you get much past the mid-to late June, the Sudangrass is not able to compete adequately because the thistle grows rapidly in that time period."

A combination of mowing and tilling the thistle before planting the Sudangrass is also recommended.

"Tilling and mowing the thistle interrupts its [life cycle](#) so that it can't put energy back into the roots," Masiunas said. Mowing the Sudangrass is important for several reasons. "You can mow to prevent seed heads from

forming on the Sudangrass and reseeding itself, and mowing helps to control the amount of residue. If you let the Sudangrass grow the entire season, you'll have a plant seven or eight feet tall, with a lot of shoot tissue, a lot of [biomass](#) to deal with. So when you mow it, you just leave it as a surface mulch."

Research on the use of Sudangrass conducted by graduate student Abram Bicksler originated from questions from organic farmers about Canada thistle. "Particularly for sustainable or organic farmers, Canada thistle was becoming very difficult to manage and was becoming the problem weed," Masiunas said.

After Bicksler's project was completed, Masiunas received funding from Sustainable Agriculture Research and Education (SARE) for additional research with farmers around the state. For the past three years research specialist Dan Anderson has been working with from 9 to 20 farmers each summer on environmentally friendly ways to control Canada thistle.

"The farmers I've been working with are primarily in the northern part of Illinois," Anderson said. Because of the weed's adaptation, Canada thistle needs a longer day, so it's not as much of a problem in southern Illinois, Georgia, Mississippi, or Alabama.

"I've seen some horrible fields in northern Illinois, just full of thistle. "The Sudangrass was planted on patches of ground where Canada thistle was prevalent, some larger patches and some smaller. That's one of the advantages to this is you don't have to devote the entire field to this." Masiunas stressed that the problem is usually found in patches. "What we're aiming at is to eliminate a problem in patches that occur in a field. Our purpose is not to manage Canada thistle on 100 acres but in areas that might be 100 square feet," he said.

"The hope is that the farmer would catch the Canada thistle in a

relatively small patch in an intensively managed farm. If they're doing a lot of tillage, they're not going to have as severe a case of Canada thistle. If they're doing reduced tillage and staying on top of the weeds, they might have a small patch of Canada thistle, but it shouldn't have taken over a whole field."

Anderson said that some of the farms he has been working with also have a livestock component. "The Sudangrass can be mowed and left as a smother crop, or it can be grazed," he said.

Is this a strategy that a conventional farmer would consider trying?

Masiunas said that conventional farmers might incorporate Sudangrass as an integrated pest management approach if they're trying to diversify their management strategies. "You're generally not going to get 100 percent control with any type of herbicide that you can use against Canada thistle - 95 to 98 percent control is about the best you'll get with the best application of herbicides. And we're getting a similar level of control with Sudangrass."

Farmers who participate in the weed project are paid \$250 at the beginning of the study and the remaining \$250 at the end after they submit a report.

"It helps us a lot because we've been able to explore what works and what doesn't work on actual farms," Masiunas said.

Provided by University of Illinois College of Agricultural, Consumer and Environmental Sciences

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