

Two Onion Farm

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NEWS RELEASE

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Wisconsin Orchardists Study Organic Control of Canada Thistle

BELMONT, Wisconsin – Organic apple growers Chris and Juli McGuire were concerned about the proliferation of Canada thistle in their Lafayette County, Wisconsin apple orchard.

The McGuires raise 2 acres of apples together as well as other fruits and market them through a community-supported agriculture (CSA) program and to local grocery stores. Like most apple growers today, they raise dwarf apple trees because the compact dwarf trees are easy to work with and they bear fruit quickly, providing a rapid return on investment.

But dwarf apple trees also have shallow roots and can't withstand competition from weeds. The McGuires spread a thick layer of bark mulch under the trees, which keeps most weeds at bay, but they've struggled to control Canada thistle. "Canada thistle is a perennial weed that spreads from deep roots," says Chris McGuire. "Once a patch gets established in our mulch, it proliferates. It's impossible to dig it out without uprooting the nearby fruit trees. As certified organic growers, we don't spray systemic herbicides to kill it."

After years of struggling with Canada thistle and watching it spread through their orchard, the McGuires received a USDA-SARE Farmer Rancher grant to trial organic methods for controlling the troublesome weed. Over the 2019 and 2020 growing seasons, they were able to reduce Canada Thistle populations from over 1300 shoots to zero in experimental plots within their orchard.

"The key," says Chris McGuire, "is that you have to repeatedly kill the thistle shoots every three weeks. They grow back, and then you kill them again three weeks later. We found that any method of killing the shoots is effective – cutting, pulling, or spraying with an organic herbicide. In the past, we would chop out thistle patches every 5-8 weeks, and that's not often enough. The short, three week interval exhausts the plants and depletes their strength, gradually killing them. By the end of a single growing season, only a few straggler plants remained in our plots, and by the end of the second year, they were all eradicated."

Killing thistle plants repeatedly can be time-consuming and expensive. The McGuires tracked their time using different techniques and found that cutting the thistles close to the ground with a gas-powered string trimmer and slicing them off with a diamond hoe were the most cost-effective techniques. Hand-pulling the shoots (while wearing gloves!) was much more time-consuming. Spraying an organically-approved herbicide (Avenger Weed Killer brand) was quick, but expensive because of the high cost of the product.

The McGuires have shared their results with other farmers through the internet and conference presentations. They've received many calls and emails from others interested in their findings. "We're really glad that this information is useful to other growers," says Chris McGuire. They've shared a full report of their project online at www.twoonionfarm.com/research.