

Cover Crop Termination

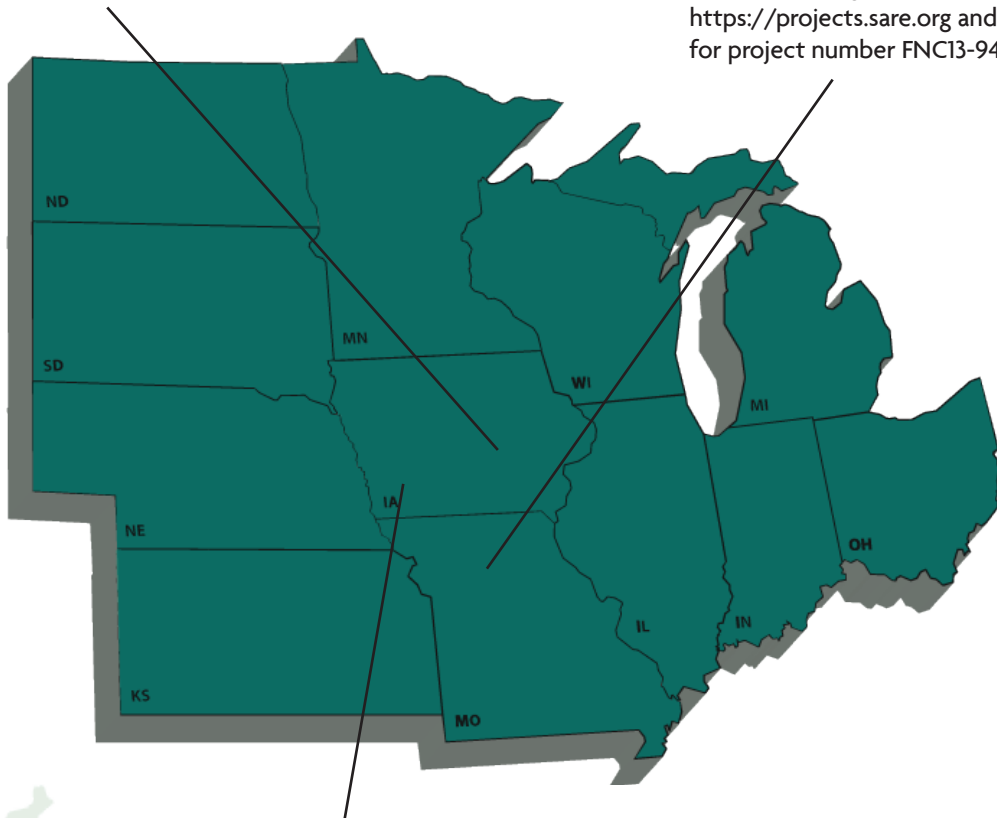
Farmers use cover crops to slow erosion, improve soil health, enhance water availability, smother weeds, help control pests and diseases, and increase biodiversity on their farms. Although cover crops can be partially grazed or used as forage, they are usually terminated before planting production crops. While row crop producers tend to prefer using herbicides to terminate, most vegetable/horticulture crop producers employ tillage as their primary means of termination. Some organic no-till producers use roller-crimpers to kill the cover crop and leave the mulch on the soil surface to conserve water. NCR-SARE has supported various research projects that have explored the advantages and limits of various cover crop termination strategies.

NCR-SARE Project Sampler

To view SARE's entire cover crop termination portfolio, or just the North Central region's, visit <https://projects.sare.org>. For selected NCR cover crop termination grants, see the reverse side.

A farmer experimented with cover crops and no-till to improve the sustainability of a corn and soybean system. In the tilled plot, the soybeans grew normally, as did the weeds. Within a month, the soybean growth in the no-till field matched the growth in the tilled field. See <https://projects.sare.org> and search for project number FNC16-1055.

A producer investigated the use of a roller-crimper on hilly, terraced, and irregularly shaped fields. It was found that rolling and crimping while planting on terraces was easiest on straight terraces. See <https://projects.sare.org> and search for project number FNC13-940.



Over a two year period, field research was conducted to compare two organic, cover crop-based reduced tillage systems with conventional tillage in the production of bell pepper and broccoli. Research was conducted on organic no-tillage and strip tillage, which relied on terminating a cover crop with a roller crimper. See <https://projects.sare.org> and search for project number GNC14-189.

NCR-SARE's Cover Crop Termination Portfolio

Selected Grants

FARMER AND RANCHER GRANTS

Developing Sustainable Roller Crimped Cover Cropping Systems for Corn and Soybean Production: Effects on Cover Crop Winter Hardiness, Biomass, N Mobilization, Weed Suppression and Yields

Billy Sammons, Sammons Custom Farming, Iowa, FNC16-1055, \$14,893

Organic No-Till Pumpkins with Roller/Crimper Rye and Oat Cover Crops

Nelson Smith, Springtown Ranch, Iowa, FNC15-1014, \$3,751

Cover Crop-Based Reduced Tillage for Fall Production of Cabbage, Cauliflower and Broccoli Using a Roller-Crimper and No-Till Planting Aid

Thomas Ruggieri, Fair Share Farm, Missouri, FNC14-973, \$7,480

Evaluating the Roller-Crimper for Cover Crop Control in Corn and Soybeans on Terraced Ground

Michael Willis, Missouri, FNC13-940, \$4,000

GRADUATE STUDENT GRANTS

No-Till and Strip-Till Systems for Enhanced Soil Health and Profitability in Organic Broccoli and Pepper Production

Dana Jokela, Iowa State University, Iowa, GNC14-189, \$9,946

PARTNERSHIP GRANTS

Use of Tarps to Terminate High-Residue Winter Hardy Cover Crops Before No-Till Organic Vegetables

Claire Strader, University of Wisconsin Extension, Wisconsin, ONC17-033, \$29,998

Use of High-Residue, Winter-Killed Cover Crops in No-Till Organic Tomatoes

Claire Strader, FairShare CSA Coalition, Wisconsin, ONC16-022, \$29,998

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For information on more SARE-funded cover crops termination projects search the SARE project database: <https://projects.sare.org>.



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