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

**Project Titles:** Cover Crop-based Reduce Tillage for Fall Production of Cabbage, Cauliflower and Broccoli Using a Roll-Crimper and No Planting Aid

**Coordinators:** Thomas Ruggieri

**Location:** Kearney, Missouri

**SARE Grants:** \$7,480

**Duration:** 2014-2015

To read the full project reports, go to [www.sare.org/projects](http://www.sare.org/projects) and search for project number FNC14-973.

Cover crops can reduce erosion, improve soil health, slow weeds, enhance nutrient and moisture availability, control pests, and offer other benefits to vegetable producers. After vegetable grower, Thomas Ruggieri, planted cover crops on his farm in rural Clay County, Missouri in 2004, he noticed dramatic improvement in soil fertility and plant health. Ruggieri and Rebecca Graff run Fair Share Farm, a diversified vegetable farm with a 140- member CSA in Kansas City. They wondered if they could also use cover crops to minimize labor by reducing the need to hand-mulch crops, and received a \$7,480 NCR-SARE Farmer Rancher grant to conduct a cover crop mulch experiment.

“Summer heat and drought require mulch to conserve moisture, minimize labor associated with weeding, and keep the soil cool,” said Ruggieri. “Growing our mulch in place using reduced tillage methods will save considerable time, energy, and money, while adding fertility to the soil.”

During the course of the project they seeded cover crops, fabricated a no-till planting aid (NTPA), rolled and crimped cover crops, and planted vegetable crops into the rolled beds. They found that it was difficult for rolled/crimped beds to keep weeds smothered during the period between rolldown in late-May and brassica



Field Day on August 28th, 2015.  
Photo Credit: N/A

planting in mid to late-July. However, the rolled cover crop beds used for summer tomato planting fared better.

“A comparison between a rolled/crimped bed and one where the cover crop was incorporated and beds hand-mulched showed the latter scenario to produce a significantly higher yielding crop of tomatoes (over 300% difference),” reported Ruggieri.

# NORTH CENTRAL SARE

For more information on Ruggieri's NCR-SARE Farmer Rancher grant project, visit the SARE project reporting website. Simply search by the project number, FNC14-973, at [www.mysare.sare.org](http://www.mysare.sare.org), or contact the NCR-SARE office.

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