



www.sare.org

What is SARE?

Since 1988, the Sustainable Agriculture Research & Education (SARE) program has been the go-to USDA grants and outreach program for farmers, ranchers, researchers and educators who want to develop innovations that improve farm profitability, protect water and land, and revitalize communities. To date, SARE has awarded over \$11.5 million to more than 334 initiatives [1].

SARE is grassroots with far-reaching impact

Four regional councils of expert practitioners set priorities and make grants in every state and island protectorate.

SARE communicates results

SARE shares project results by requiring grantees to conduct outreach and grower engagement; and by maintaining an online library of practical publications, grantee-produced information products and other educational materials.

SARE: Advancing the Frontier of Sustainable Agriculture in...

Michigan

Project Highlight: *Physical Weed Control Strategies for Midwest Vegetable Growers*

Managing and controlling weeds can be a challenge and frustration for farmers, no matter the farm size or crop. Michigan State University's Daniel Brainard knows that weed management represents a significant barrier to the sustainable production of field and vegetable crops and has been researching and demonstrating tools and techniques for physical weed control.

"Advances in material science and engineering have resulted in new tools and techniques for physical weed control (PWC) that can help address these constraints and simultaneously improve profitability and environmental health in the North Central region," said Brainard.

Brainard works with a network of farmers and researchers that has been working to generate practical, farm-tested, and detailed observations on the best methods and tools for managing in-row weeds. The team has explored in-row, mechanical cultivation with torsion weeders, flex-tine cultivators, finger weeders, and disk hillers in crops like squash, carrots, beans, and beets. With support from SARE, they have created videos of the various tools in action and recorded interviews of farmers and manufacturers describing the tools. They have also hosted multiple Midwest Mechanical Weed Control Field Days, the nation's largest event devoted to weeding tools.

A Brainard lab alumnus and horticulture instructor at Lakeshore Technical College, Sam Hitchcock Tilton, says the greatest expense in vegetable production is weed control, especially within the crop row. He says these in-row tools can substantially reduce hand-weeding costs for vegetable growers.

For more information on these projects, see sare.org/projects, and search for project numbers [GNC16-223](#), [ONC17-025](#), [GNC19-284](#), and [GNC21-324](#).

SARE in Michigan

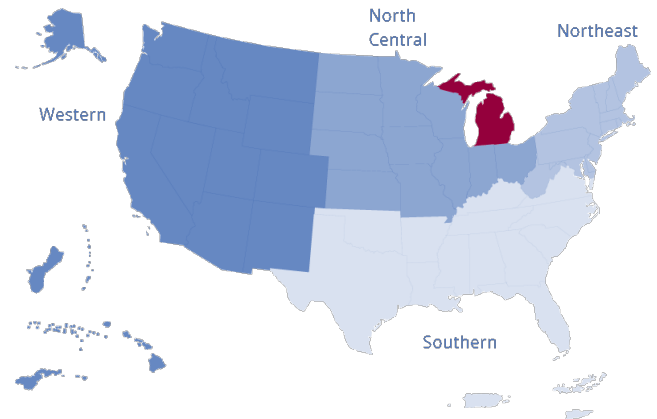
northcentral.sare.org/state-profiles/michigan/

\$11,515,495
in total funding

334 grant projects

(since 1988 [1])

For a complete list of grant projects state by state, go to projects.sare.org/state-fact-sheets/



[1] These totals reflect available data; complete information may not be available for all grant programs prior to 2016.

SARE in Michigan, 2020–2025

This is a summary of recent SARE-funded activities and impacts in the state. To search all SARE projects visit projects.sare.org. For a list of all projects in this state visit projects.sare.org/state-fact-sheets/.

Grants awarded

Total awards: **66 grants**

- 15 Farmer/Rancher
- 11 Research and Education
- 7 Professional Development Program
- 7 On Farm Research/Partnership
- 14 Graduate Student
- 9 Youth Educator
- 3 PDP State Program [2]

Total funding: **\$4,294,078**

- \$184,677 Farmer/Rancher
- \$2,359,379 Research and Education
- \$744,870 Professional Development Program
- \$331,079 On Farm Research/Partnership
- \$213,672 Graduate Student
- \$50,458 Youth Educator
- \$409,943 PDP State Program [2]

[2] The Professional Development Program (PDP) State Program is a non-competitive award that funds the activities of the state coordinator(s). See more below.

For a complete list of awards by state, visit: projects.sare.org/state-fact-sheets/

Farmer and rancher impacts

SARE grantees have reported the following impacts from their projects:

6,311 farmers participated in a SARE-funded project

553 farmers reported a change in knowledge, awareness, skills or attitude

160 farmers changed a practice



Learn about local impacts at: northcentral.sare.org/state-programs/michigan/

Contact Your SARE State Coordinator

SARE sustainable ag coordinators run state-level educational programs for Extension and other ag professionals, and many help grant applicants and recipients with planning and outreach. Visit northcentral.sare.org/state-profiles/michigan/ to learn more.

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