

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 \$273 million to more than 6,800 initiatives.

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 the SARE Learning Center—a library of practical publications, grantee-produced information products and other educational materials.



www.sare.org

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

Montana

Project Highlight: *Improving the Benefits of Applied Nitrogen*

Broadcast applications of urea are a common management practice for large-acreage, no-till, dryland winter wheat producers in Montana. But when urea is applied to the soil surface, a significant amount of nitrogen can be lost when it converts to ammonia gas and enters the atmosphere in a process known as volatilization. Farmers face economic losses due to reduced yield or crop quality from inadequate nitrogen fertility, and ammonia emissions contribute to environmental pollution and nitrogen enrichment of natural ecosystems.

With SARE funding to address the problem, Montana State soil scientist Richard Engel conducted on-farm trials over four seasons to identify soil and environmental conditions under which

urea applications were most susceptible to ammonia loss, and to identify management practices to reduce those losses. Based on the findings, Engel's team recommends against surface-applying fertilizer to frozen or wet ground, particularly during the over-winter period. Applying it during the spring following thaw resulted in lower ammonia volatilization loss. By following the team's recommendations to fertilize in the spring and incorporate the fertilizer into the soil when possible, a majority of Montana's wheat growers are reducing air pollution and saving about \$5 million a year through reduced fertilizer loss and increased yields.

For more information on this project, see www.sare.org/projects, and search for project number SW10-050.

SARE in Montana

www.westernsare.org/montana

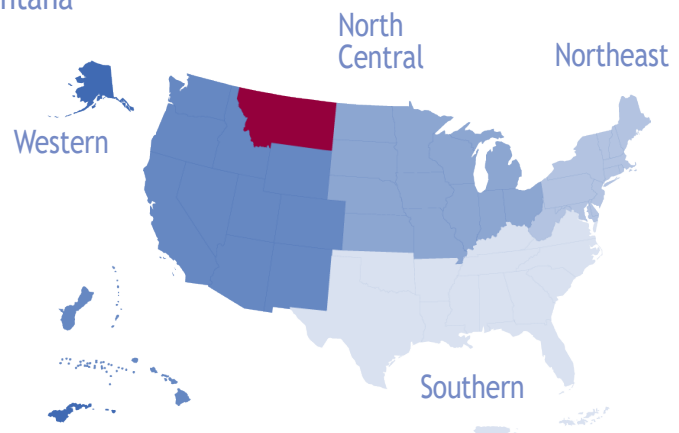
\$7 million in total funding

110 grant projects

(since 1988)

For a complete list of grant projects state by state, go to

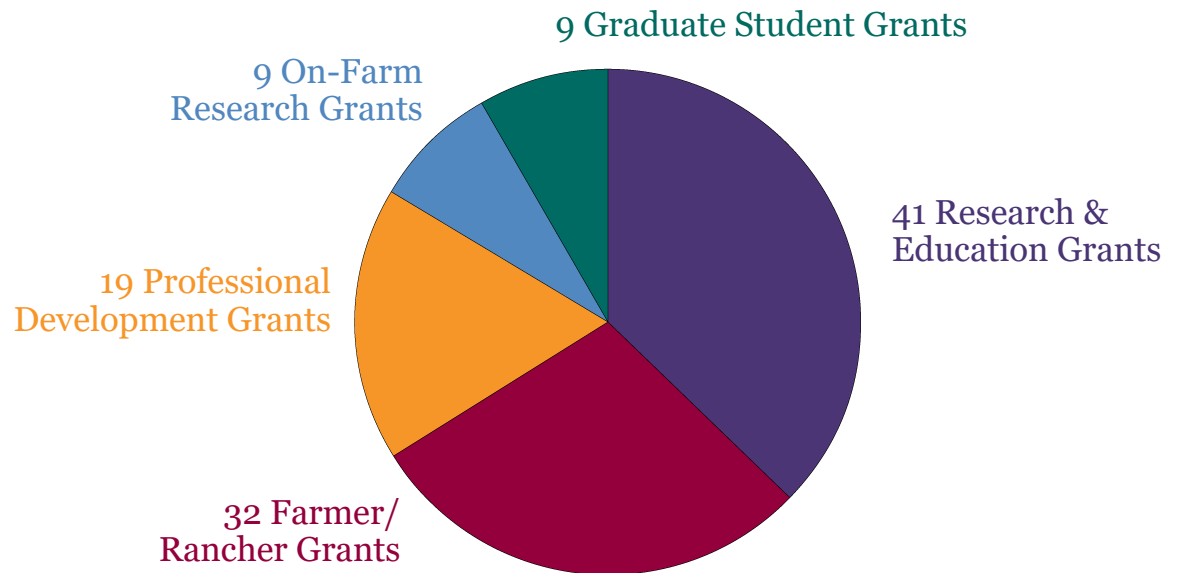
www.sare.org/state-summaries



SARE's four regional programs and outreach office work to advance sustainable innovations to the whole of American agriculture.

SARE Grants in Montana

SARE has
awarded a
total of
110 grants
in Montana
since 1988



SARE's Impact



53 percent of producers report using a new production technique after reading a SARE publication.

79 percent of producers said they improved soil quality through their SARE project.

64 percent of producers said their SARE project helped them achieve higher sales.

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 www.westernsare.org/montana to learn more.

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For detailed information on SARE projects, go to

www.SARE.org