



25 YEARS OF...

# SARE

SUSTAINABLE AGRICULTURE RESEARCH AND EDUCATION

ADVANCING INNOVATIONS IN  
SUSTAINABLE AGRICULTURE



United States  
Department of  
Agriculture

National Institute  
of Food and  
Agriculture



# 25 YEARS AT THE FOREFRONT OF INNOVATION

In 1988, responding to a growing call for greater investment in sustainable agriculture, Congress provided the first funding for USDA's **Sustainable Agriculture Research and Education (SARE)** program: a **science-based, regionally directed, problem-solving** competitive grant program. Since then, SARE grantees—farmers and ranchers, researchers, ag educators and many others—have led the way to advance sustainable agriculture systems that simultaneously value and improve **productivity, profit, stewardship and quality of life** for farmers, ranchers and society as a whole.



**COVER CROPS.** Since its inception, SARE has consistently funded research and outreach on cover crops, including a 1989 Maryland project that showed farmers could **save \$27 per acre** in today's dollars through reduced fertilizer use. More recently, farmers like Keith and Brian Berns (left) have used SARE grants to advance cover crop adoption: After a 2007 project, the Bernses **started a vibrant cover crop seed business** on their Nebraska farm, creating new jobs in their rural community. A North Central SARE-funded survey of 759 farmers found that in the areas hit hardest by the 2012 drought, **corn and soybean yields were 11 percent and 14.3 percent better**, respectively, when planted after cover crops.



**ROTATIONAL GRAZING.** In 1988, SARE funded pioneering research on rotational grazing in Vermont, which found that graziers **could earn 33 percent more per cow** than their conventional counterparts. Today, consumer interest in grass-fed beef has exploded. Diana Endicott (left), a 2008 SARE grantee, **leads a 100-member cooperative of small farms and businesses** that sells grass-fed beef and other products in the Kansas City area. In the West, rangeland health and ranching economics remain critical issues. Using a 2010 SARE grant, Nevada rancher Agee Smith **slashed hay purchases by 50 percent and promoted biodiversity** by training livestock to eat a wider variety of rangeland plants.



**LOCAL AND REGIONAL MARKETING.** SARE funded some of the earliest educational programs to develop community supported agriculture (CSA) programs and expand farmers' markets, such as a 1997 project teaching legislators and community groups in Kentucky about local-food marketing strategies. As a result, **new farmers' markets sprang up throughout the state**. Today, a major focus is on improving the infrastructure that allows more products to be marketed locally. Supported by a 2010 SARE grant, South Carolina-based GrowFood Carolina (left) aggregates and distributes the produce of 40 local farmers, **giving them the volume they need to break into high-value markets** like grocery stores and restaurants.



**LARGE-SCALE AGROECOSYSTEM RESEARCH.** Over the years, SARE has supported multidisciplinary, farmer-driven research projects that study complete production systems. For example, a 1996 SARE grant at the University of California Davis helped establish a 12-year comparison of organic and conventional production of tomatoes, corn and other crops, **the first study of its kind in the country**. In the Texas Panhandle, a team of researchers and ranchers used a 1997 SARE grant to compare cotton and livestock forage rotations (left) to cotton monocultures. Aided by another grant in 2008, they are finding that the integrated crop/livestock system **maintains profitability while using significantly less water and energy**.

**THE LIST GOES ON...** Conservation tillage, ecological pest management, organic agriculture and more—to discover all 25 years of SARE's cutting-edge research, visit [www.SARE.org/Projects](http://www.SARE.org/Projects).

# SARE's IMPACTS

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

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

**53%** of producers **used a new technique** after reading a SARE publication.

## LOOKING TOWARD THE FUTURE

The SARE grant-making model—**competitive, integrated, outcomes-oriented, farmer-tested, regionally administered**—has proven its value time and again. Here are some of the many ways SARE and its recent grantees are meeting the challenges of 21<sup>st</sup> century agriculture:

**SMALL-SCALE MEAT PROCESSING.** During a 2009-2012 SARE project, nine Massachusetts farmers **used a shared mobile facility to process 14,000 birds**, earning a combined \$300,000. Another 23 farmers got a license for their own on-farm processing. Iowa State University graduate student Arion Thiboumery's 2007 SARE-funded study of livestock processing infrastructure **led to the creation of a vibrant online network** of stakeholders seeking to expand the small-scale meat processing industry by supplying the information needed for success (available at [www.extension.org/pages/19249](http://www.extension.org/pages/19249)).

**ENERGY INDEPENDENCE.** Extension educators are using SARE grants to teach each other about alternative energy and energy efficiency—for example, in Wisconsin in 2007, North Carolina in 2008, Montana in 2010 and Maine in 2011—**sharing knowledge that will be passed along to thousands of farmers**.

**WATER SCARCITY.** Responding to stakeholder priorities, Western SARE held a conference in the midst of the 2012 drought on some of **the latest, most promising technologies and techniques in water-use efficiency**.

**THE NEXT GENERATION.** The newest grant program in all four SARE regions, Graduate Student Grants are **cultivating the farmers, ranchers, educators and researchers of tomorrow**. For example, a Virginia Tech student is using a 2012 grant to evaluate the impact of high-density “mob” grazing—a practice of emerging interest—on soil health and water quality.



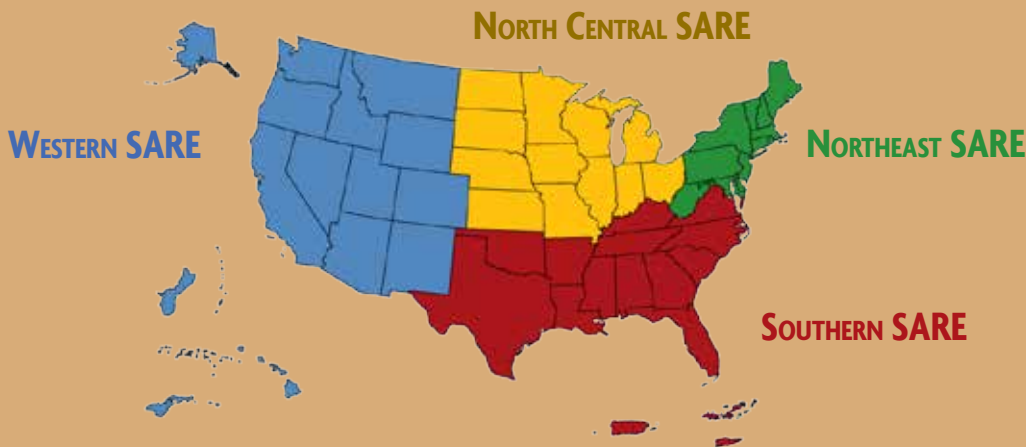
**Cover photo credits (clockwise from top):** Eric Brennan; University of Vermont Extension; Mandy Rodrigues; Edwin Remsburg; Charlie Jackson; Brad Mayhugh; Philippe Van Os. **Opposite page (from top):** Mandy Rodrigues; Bob Cunningham; GrowFood Carolina; Vivien Allen. **This page (from top):** Growing Power; Edwin Remsburg; University of California Davis; Montana State University; Samara Akers. **Back page:** Kelly Weber.

# SCIENCE-BASED, GRASSROOTS SOLUTIONS



**Farmers lead the way.** Recognizing that innovation emerges from the field, farmers and ranchers are key to the SARE program. Whether conducting their own trials with a SARE Farmer/Rancher Grant, as a collaborator on a university-led Research and Education project, or as a member of one of SARE's regional Administrative Councils, there are many ways that farmers and ranchers have contributed to SARE's success and relevance.

**Local leadership, national impact.** Four regional councils—including farmers, scientists, state and federal agencies, NGOs and other stakeholders—set priorities and make grants.



**A diversity of grants.** SARE offers several types of competitive grants to support the innovative applied research and outreach efforts of key stakeholders in U.S. agriculture.

**Farmer/Rancher Grants**—these grants help farmers and ranchers test innovative ideas in the field, oftentimes in advance of the research community.

**Research and Education Grants**—for interdisciplinary, in-depth exploration of critical sustainable agriculture issues that both respond to and anticipate the needs of farmers and ranchers.

**Professional Development Program Grants**—fund training programs on sustainable agriculture for professionals in Cooperative Extension, USDA field office staff and industry field representatives.

**Graduate Student Grants**—support the research conducted by tomorrow's science leaders.

**Education and engagement.** SARE shares project results by requiring grantees to conduct outreach and grower engagement; and by maintaining the SARE Learning Center—a library of practical books, bulletins, grantee-produced information products and other educational materials.



[www.SARE.org](http://www.SARE.org)

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