

## 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 \$410 million to more than 8,827 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 an online library of practical publications, grantee-produced information products and other educational materials.



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

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

# Kentucky

### Project Highlight: *Training Ag Professionals on Sustainable Vegetable Production Methods*

Kentucky is home to numerous small, limited-resource farms. More than 75 percent of the state's 85,000 farms are smaller than 180 acres and 80 percent have an annual income under \$25,000, according to the USDA Census of Agriculture. Tobacco used to be an attractive option for these growers because it was highly profitable at small acreages compared to other crops, but that has changed with the elimination of price supports and marketing quotas.

Extension professionals at state universities in Kentucky and Tennessee are working to fill the void left by tobacco by increasing the acreage of sustainably farmed and certified organic vegetables. For this to happen, training in sustainable and organic vegetable farming for agricultural professionals who work closely with small-scale farmers is critical. With a SARE grant, a team led by the University of Kentucky collaboratively sponsored hands-on workshops, regional farm tours, training materials, videos and websites for farm educators.

The team trained 150 ag professionals and 150 growers. Prior to the training, many of the participants expressed their discomfort with organic vegetable production. Yet nearly 200 attended a field day heavily featuring organic production just a few years later, indicating a growing interest on their part.

For more information on this project, see [sare.org/projects](http://sare.org/projects), and search for project number [ES10-101](#).

## SARE in Kentucky

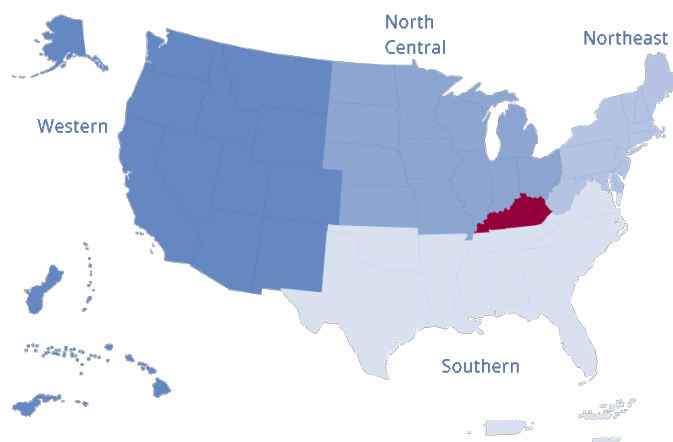
[southern.sare.org/state-profiles/kentucky/](http://southern.sare.org/state-profiles/kentucky/)

**\$1,148,366**  
**in total funding**

**17 grant project**

(since 1988)

For a complete list of grant projects state by state, go to [www.sare.org/state-summaries](http://www.sare.org/state-summaries)



# SARE in Kentucky

## Grants awarded 2019-2024

Total awards: **17 grants**

- 4 Farmer/Rancher
- 2 Research and Education
- 4 Professional Development Program
- 4 On Farm Research/Partnership
- 1 Graduate Student
- 2 Education Only

Total funding: **\$1,148,366**

- \$48,108 Farmer/Rancher
- \$615,669 Research and Education
- \$302,037 Professional Development Program
- \$77,105 On Farm Research/Partnership
- \$16,447 Graduate Student
- \$89,000 Education Only

Find a complete list of projects on page 3.

## Farmer and rancher impacts 2019-2024

SARE grantees have reported the following impacts from their projects:

**14,502 farmers participated in a SARE-funded project**

**374 farmers reported a change in knowledge, awareness, skills or attitude**

**8,209 farmers changed a practice**



Learn about local impacts at:  
[southern.sare.org/sare-in-your-state/kentucky/](https://southern.sare.org/sare-in-your-state/kentucky/)

## 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 [southern.sare.org/state-profiles/kentucky/](https://southern.sare.org/state-profiles/kentucky/) to learn more.

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SARE is funded by the USDA's National Institute of Food and Agriculture (NIFA).

This report includes summaries of competitive grant programs only. Some competitive grant programs that are no longer offered may be included or excluded from the totals in this report depending on the grant program and SARE region.

For detailed information on SARE projects, go to  
[www.SARE.org](https://www.SARE.org)



# AGRICULTURE PROJECTS FUNDED IN KENTUCKY

by USDA's  
Sustainable Agriculture Research and Education (SARE) Program

Kentucky has been awarded \$5,087,229 grants to support 98 projects, including but not limited to, 15 research and/or education projects, 24 professional development projects and 29 producer-led projects. Kentucky has also received additional SARE support through multi-state projects.

## RESEARCH AND EDUCATION GRANTS

Project #	Project Title	SARE Support	Project Leaders
LS23-384	Evaluation of Soil Solarization as a Sustainable Management Method for Pests, Pathogens, and Weeds in Southeastern High Tunnels	\$383,000	Dr. Rachel Rudolph University of Kentucky Dr. Nicole Gauthier University of Kentucky Zachariah Hansen Dr. Erin Haramoto University of Kentucky Jonathan Larson University of Kentucky Dr. Margarita Velandia Dept. of Agric. & Resource Economics, University of Tennessee Dr. Annette Wszelaki Dept. of Plant Sciences, University of Tennessee
LS19-319	Development of Local Small Grain Value Chains for Kentucky and the Mid-South	\$232,669	Dr. David Van Sanford University of Kentucky
LS18-300	Extending Roots of Fresh Stop Markets Across the Southeast Region	\$271,831	Dr. Keiko Tanaka University of Kentucky
LS16-272	Cover Crops Under Cover: Evaluating Costs, Benefits, and Ecosystem Services of Cover Crops in Year-Round High Tunnel Production Systems	\$241,615	Krista Jacobsen University of Kentucky
LS14-265	Jump Starting New Pawpaw Variety Production for the Industry: Developing Grafting and Top Working Approaches for Growers	\$203,395	Kirk Pomper Kentucky State University
LS12-251	Mapping Sustainable Farm Systems: An Integrated Focus on Upper South New Producers as Catalysts of "Good Stewardship"	\$270,000	Dr. Keiko Tanaka University of Kentucky

LS06-185	Biofumigation for soil health in organic high tunnel and conventional field vegetable production systems	\$170,000	Dr.Michael Bomford Kentucky State University
LS03-151	Development of Organic Production Practices for Pawpaw on Selected Rootstocks	\$153,698	Kirk Pomper Kentucky State University
LS03-182	Review of SSARE-funded Soil and Water Quality Projects: 1988-2003	\$50,000	Victoria Mundy Bhavsar University of Kentucky Research Foundation
LS01-127	Organic Management of Cucumber Beetles in Cucurbits	\$134,038	John Sedlacek Kentucky State University Gary Cline Kentucky State University
LS99-098	Organic Vegetable Production for Limited Resource Farmers	\$19,100	Gary Cline Kentucky State University
LS99-104	Enhancing Farmers' Income through Polyculture of Paddlefish with Catfish in the Southern Region	\$140,135	Stephen D. Mims Kentucky State University
LS99-105	Enhancing Feasibility for Range Poultry Expansion	\$175,740	Steven Muntz Heifer International
LS97-089	Integration of Freshwater Prawn Nursery and Growout Systems Into Diversified Farm Systems	\$155,197	James H. Tidwell Kentucky State University
LS92-050	Participatory Assessment for Strategic Planning in Sustainable Agriculture Research and Education	\$183,550	James V. Worstell Community Farm Alliance

**PROFESSIONAL DEVELOPMENT PROGRAM GRANTS**

<b>Project #</b>	<b>Project Title</b>	<b>SARE Support</b>	<b>Project Leaders</b>
SPDP21-02	Learning About Equity & Inclusion in the Food System Through a Storytelling Curriculum and Training for 4H Agents & Middle School Agriculture Teachers	\$80,000	Dr.Nicole Breazeale University of Kentucky Michelle Howell Need More Acres Farm Heather Hyden University of Kentucky Ashley Smith Black Soil: Our Better Nature Dr.Stacy Vincent University of Kentucky

SPDP21-05	Creating a Specialty Crop Sustainable Production Community of Practice for Kentucky Agriculture Professionals	\$77,733	Cindy Finneseth, PhD Kentucky Horticulture Council
ES20-158	Helping Agricultural Professionals and Mentoring Farmers to Train Previously Unreached Farmers about Sustainable Agriculture	\$80,000	Cynthia Rice Kentucky State University Dr.Maheteme Gebremedhin Kentucky State University Dr.Buddhi Gyawali Kentucky State University Dr.Shawn Lucas Kentucky State University Dr.Marion Simon Kentucky State University Dr.Leigh Whittinghill Kentucky State University
ES19-148	Experiential High Tunnel Training for Cooperative Extension Service Agents in Kentucky	\$64,304	Dr.Rachel Rudolph University of Kentucky
ES17-133	Ecological Livestock Production: Integration of nutrient cycling, pasture management, winter feeding, and watering systems	\$79,064	Greg Halich University of Kentucky
ES16-130	Training Extension agents in Kentucky and Oklahoma on the Food Safety Modernization Act and food safety, sanitation, and good hygiene practices related to products for sale at farmers market	\$78,166	Paul Priyesh Vijayakumar University of Kentucky
ES10-101	Developing a Training Program in Sustainable Vegetable Production for Agricultural Professionals in Kentucky and Tennessee	\$59,532	Dr.Timothy Coolong University of Kentucky
ES07-087	Kentucky Sheep and Goat Herder Curriculum - Phase I	\$90,000	Ricky Yeargan University of Kentucky Cooperative Extension Service
ES05-080	Small-Scale Poultry Production: Sustainability Training	\$129,530	Steven Muntz Heifer International
ES05-081	Regional Meat Goat Production and Marketing Project: Phase 2	\$9,578	Dr.Marion Simon Kentucky State University
ES05-082	Regional Meat Goat Production and Marketing Project: Phase 2	\$20,000	Dr.Marion Simon Kentucky State University

ES04-072	The Value-added Microprocessor Project	\$94,228	Sandra Bastin University of Kentucky
ES04-074	Enhancing Alternative Niche Market & Retail Opportunities for Agricultural Products	\$47,127	Betty King University of Kentucky
ES04-075	Regional Goat Production and Marketing Project	\$84,550	Dr.Marion Simon Kentucky State University
ES03-070	Barriers and Opportunities for Adding Value to Small Ruminant Animals	\$44,490	Betty King University of Kentucky
ES02-063	Adding Value with Small-Scale Fruit and Vegetable Processing	\$41,965	Betty King University of Kentucky
ES01-052	“The Third Tuesday-Thursday Thing”: Building on Kentucky’s Experiences and Expanding the Sustainable Agriculture Educational Model into Tennessee	\$50,000	Dr.Marion Simon Kentucky State University
ES00-048	Training in Size Appropriate Technology for Hill Farmers	\$84,686	Betty King University of Kentucky
ES00-049	Nutrient Management Plans as Tools to Achieve Sustainable Animal Waste Utilization	\$83,056	Stephen Coleman Kentucky Division of Conservation
ES97-015	Kentucky Cooperative Extension System Training Project	\$50,000	Dr.Marion Simon Kentucky State University
ES97-026	Community Food Security and Marketing Capacity Development in Kentucky	\$79,970	Karen Armstrong-Cummings Commodity Growers Cooperative
ES97-028	Grass-roots Empowerment in Kentucky’s Local Conservation Districts: Leadership Training on Sustainable Land and Water Quality Management Practices	\$86,280	Stephen Coleman Kentucky Division of Conservation
ES97-032	Responding to Expressed Needs: SARE/ACE Regional Training with the Sustainable Dairy Systems Manual and Software	\$48,500	Dr.Clark Garland University of Tennessee Steve Isaacs University of Kentucky

LST96-011 Southern Gathering on Agricultural Problem Solving \$52,000 Ronald J. Hustedde University of Kentucky

**FARMER/RANCHER GRANTS**

<b>Project #</b>	<b>Project Title</b>	<b>SARE Support</b>	<b>Project Leaders</b>
FS23-352	Improving Yak Artificial Insemination Conception Rate and Providing Data for Informed Decision-making for Improving Farm Sustainability	\$15,000	Gregor Dike Cave Run Area HfH
FS23-357	Explore Average Daily Gain of Warm Season Perennial Grasses for Commercial Meat Goats	\$14,700	Fatima Jackson Action Jackson Farms
FS21-335	Development of AI for Yak Semen and the Potential Economic Benefits to Southern Region Yak, Small Acreage Farmers and Beef Producers	\$14,998	Gregor Dike Cave Run Area HfH
FS19-318	Using Maple Sugarbush Management Practices to Increase Walnut Syrup Production	\$3,410	Mark Justin Moore Cedar Hill Homestead
FS18-311	Evaluating Sweet Sorghum and Poultry Alley Cropping in Agroforestry as an Economical and Sustainable Alternative to Tobacco Crops	\$9,436	Matthew Wilson Rindlewood Farm
FS17-301	Using Lotus as an Alternative Crop to Generate Farm Income	\$9,696	Cheryl Pan Cheryl's Farm
FS14-279	A comparison of organic no-till and traditional tillage/cultivation systems on a small-scale vegetable farm	\$2,344	Maggie Bowling River Bend Farm
FS12-258	Soil Analysis Directed Ground Cover Approaches to Excessive Canopy and Weed Control in Southern Vineyards	\$7,007	Dr.David Hall Eddy Grove Vineyard, Inc
FS06-204	Developing Dual Purpose Quail for Small Farmers	\$7,600	Martin H. Meers Black Forest Poultry Farm
FS04-182	Control of Internal Parasites in Goats with Rotational Grazing of Sericea Lespedeza	\$7,289	Wayne Kirby

FS03-168	Kentucky Coordinated Poultry Alliances	\$7,086	Matthew D. John Shady Lane Poultry Farm, Inc.
FS02-148	Market Enhancement and Outreach Project	\$12,800	Janet Eaton Farm & Garden Market Cooperative Association
FS01-130	Improving Salad Mix Quality and Yield Through Soil Management and Post Harvest Techniques	\$9,600	Carol Cassedy C/O Whitestone Organic Farm
FS01-137	Marketing Edamame Soybeans in Kentucky	\$9,133	Sara McNulty Wildwood Acres
FS01-141	Pastured poultry production	\$7,003	Mac Stone
FS01-144	Opti-Maizing Beef Cattle Profits and Environmental Quality	\$12,716	Beth Wilson Pulaski County Ag. Advancement Council
FS00-109	Marketing Timber After Adding Value Through the Use of One-Person Sawmills and Solar Kilns	\$10,000	Michael Best
FS00-126	Locally Produced Chicks for Use in Pastured Poultry System	\$9,869	Laura Rogers
FS99-084	Utilization of Wood Waste and Agricultural By-products in High-value Gourmet Mushroom Production	\$9,507	Gary Anderson
FS99-100	Alternative Pollinators	\$3,475	Roger Smith
FS98-066	Adding Value to Kentucky Grown Produce Through Season Extension and Market Development	\$8,670	Ann Bell Elmwood Stock Farm
FS97-046	Sustainability Starts at Home-Building Regional Self Reliance through Agritourism	\$9,580	Karen Armstrong-Cummings Commodity Growers Cooperative
FS97-055	Overwintering Survival of Kentucky Honeybees	\$5,283	Mark Q. Lee
FS97-056	Managed Grazing System to Increase Sustainability	\$2,630	Evan McCord Madison County Beef Cattle Association



FS97-062	Maximizing Corn Production in the Mountains of Southeast Kentucky	\$4,955	David Teague Henderson Settlement
FS96-039	Group Strategic Alliances for Carroll County Feeder Calves	\$10,000	Tim Hendrick Kentucky Cooperative Extension Service
FS96-040	Technical Assistance for Meat Goat Marketing	\$8,900	Neil Hoffman Eastern Kentucky Goat Producers Association
FS95-031	Improving Quality of Slaughter Hogs as a Marketing Strategy for Small Producers	\$9,150	Judy Williams Bluegrass Pork Producers
FS94-017	Shrimp Polyculture in Existing Farms	\$3,109	Mark & Carolyn Straw Straw Ridge Farm

#### GRADUATE STUDENT GRANTS

Project #	Project Title	SARE Support	Project Leaders
GS19-213	Investigating the Effects of Grass-legume Winter Cover Crop Mixtures on Soil Nitrogen Supply in Rolling Agricultural Landscapes	\$16,447	Hanna Poffenbarger University of Kentucky Sam Leuthold Colorado State University
GS18-183	Improving Sustainable Weed Management in Soybean Agroecosystems Through Cover Cropping	\$16,490	Dr.Erin Haramoto University of Kentucky Ryan Collins University of Kentucky
GS13-125	Economic Analysis of Commercial Aquaponic Production Systems	\$9,975	Dr.Timothy Woods University of Kentucky Kevin Heidemann University of Kentucky
GS08-065	Effects of organic amendments on aggregation and microbial community dynamics in soils	\$10,000	Elisa D'Angelo University of Kentucky Mark Williams University of Kentucky Shawn Lucas University of Kentucky - Dept. of Plant and Soil Sciences
GS08-072	Sustainable Management for Scarab Pests Impacting Grape Production in the Southern Region	\$9,750	Dr.Daniel Potter Dept. of Entomology Dr.Derrick Hammons University of Kentucky
GS02-014	Streambank Erosion Associated with Grazing Activities in Kentucky	\$9,836	Dwayne Edwards University of Kentucky Carmen Agouridis University of Kentucky

GS00-003	Resilience of Nitrogen Availability and Retention in Soils of Kentucky Certified Organic Farms	\$6,900	Mark Coyne University of Kentucky Victoria Bhavsar University of Kentucky
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**ON FARM RESEARCH/PARTNERSHIP GRANTS**

<b>Project #</b>	<b>Project Title</b>	<b>SARE Support</b>	<b>Project Leaders</b>
OS23-161	Urban BIPOC Farms Mentoring Program	\$29,961	Tiffany Bellfield Kentucky Black Farmer Cooperative
OS22-157	Yaks Add Farm Diversification	\$19,979	Dr.Jeff Lehmkuhler University of Kentucky
OS19-130	Integration of Predator Releases with Insecticidal Soap Sprays for Management of the Sugarcane Aphid	\$14,913	Jonathan Larson University of Kentucky
OS19-127	Bale Grazing: On-farm evaluation in the upper South	\$12,252	Greg Halich University of Kentucky
OS16-097	Brassicaceous Cover Crops to Reduce Root Knot Nematode and Improve Soil Quality in Protected Tomato Production Systems	\$14,990	Emily Pfeufer University of Kentucky
OS16-099	Alternative Substrate for Soilless Production of Vegetables	\$12,834	Dr.John Snyder University of Kentucky
OS14-092	A New Appropriate Technology Machine System to Benefit the Sustainability of Local Organic Vegetable Production	\$14,906	Dr.John Wilhoit University of Kentucky
OS13-070	Clinical Mastitis Incidence in Compost Bedded Pack Barns as Compared to Freestall Barns	\$13,750	Dr.Jeffrey Bewley University of Kentucky
OS13-076	Elucidating the Spread and Transmissibility of Blueberry Mosaic Virus, a New Disease of Blueberry in the Southeastern U.S.	\$15,000	Dr.Nicole Ward Gauthier University of Kentucky
OS09-047	Sweetpotatoes: A profitable crop for small farms in rural Eastern Kentucky	\$14,791	Dr.Timothy Coolong University of Kentucky Sarah Fannin University of Kentucky Cooperative Extension

OS04-019	Production Costs and Techniques for Blueberry Establishment in Eastern Kentucky	\$3,764	Matt Ernst University of KY
OS03-008	Limiting Grazing Cattle Access to Ponds to Improve Water Quality, and water and Feed Intake	\$14,945	Stephen Workman University of Kentucky
OS03-009	Year Round Beef Cattle Grazing Strategy to Eliminate or Reduce the Use of Stored Feeds	\$15,000	David Ditsch
OS03-011	Goat Friendly Pastures	\$14,975	Terry Hutchens Univ of Kentucky & Kentucky State Univ
OS03-014	Kentucky Blueberry Market Development	\$4,786	Dr.Timothy Woods University of Kentucky

#### SUSTAINABLE COMMUNITY INNOVATION GRANTS

Project #	Project Title	SARE Support	Project Leaders
CS09-069	New opportunities on the Farm - Community and Farm Revitalization in Five Eastern Kentucky Counties	\$10,000	Gayle Clevenger East Kentucky Foothills Eco-Agritourism, Corp
CS07-052	Growing healthy markets: healthy farms, healthy food project	\$10,000	Donald Van Erden Community Farm Alliance Elizabeth Ledford Community Farm Alliance
CS04-020	Women Taking the Lead for Kentucky Agriculture	\$9,900	Gae Broadwater Kentucky Women in Agriculture, Inc.
CS04-025	Aquaculture Development in the Pine Mountain Region of Southeast Kentucky	\$10,000	Paul Pratt Southeast Community College
CS03-013	Expanding Community-Based Retail Opportunities for Agricultural Products Through the Woodford County Farmers' Market Association	\$9,700	Betty King University of Kentucky
CS02-006	Keen on Beans: Establishing Edamame Awareness and Demand for Kentucky Consumers and Growers	\$8,712	Martha Lee U of KY Cooperative Extension Service--Davies Co.

#### EDUCATION ONLY GRANTS

Project #	Project Title	SARE Support	Project Leaders
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EDS23-045	Adaptive Apiary for the Education of Appalachian Military Veterans	\$41,000	Dr.Amanda Skidmore Morehead State University Dr.Tammy Potter Commonwealth of Kentucky- Department of Agriculture Polly Rafferty Veterans' Outreach Dr.Silas Session Morehead State University
EDS21-27	Principles of Soil Health in a Variety of Market Farming Frameworks: Best Practices from the Field with Experienced Regenerative Farmers	\$48,000	Jackson Rolett No-Till Growers Jesse Frost No-Till Growers

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**Total funding from the USDA SARE program to  
Kentucky  
\$5,087,229**

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For further information on projects, contact 770-412-4787 or [ssare@uga.edu](mailto:ssare@uga.edu). Sustainable Agriculture Research and Education (SARE) is funded by USDA's National Institute of Food and Agriculture (NIFA).