

# FOIA MARKER

**This is not a textual record. This is used as an  
administrative marker by the William J. Clinton  
Presidential Library Staff.**

---

**Collection/Record Group:** Clinton Presidential Records  
**Subgroup/Office of Origin:** Council on Environmental Quality  
**Series/Staff Member:** Kathleen (Katie) McGinty  
**Subseries:**

---

**OA/ID Number:** 17806  
**FolderID:**

---

**Folder Title:**  
[Sustainable Agriculture Research and Education Program] [Loose]

---

|               |             |                 |               |                  |
|---------------|-------------|-----------------|---------------|------------------|
| <b>Stack:</b> | <b>Row:</b> | <b>Section:</b> | <b>Shelf:</b> | <b>Position:</b> |
| <b>S</b>      | <b>61</b>   | <b>5</b>        | <b>4</b>      | <b>2</b>         |

KATIE'S ANNOTATED

AGENDA

FOREST CONFERENCE FOLLOW-UP  
EXECUTIVE COMMITTEE

APRIL 30  
9:00 - 11:00

INTRO: WE ARE MAKING LOT'S OF PROGRESS ON MANY FRONTS. WE DON'T HAVE TIME TODAY TO GET INTO ALL OF THE TOPICS IN DEPTH. I WANT TO MAKE SURE YOU HAVE A FEEL FOR WHAT IS GOING ON. BUT I WANT TO MAKE SURE WE HAVE TIME FOR CHUPKA OR YU TO GO INTO DETAIL ON THE ECONOMIC TEAM'S ANALYSIS.

FIRST, GO AROUND THE ROOM IF THERE ARE NEW FACES.

-- Instructions to technical working groups McGinty

INDICATE THAT WE ARE DRAFTING A COVER LETTER FROM THE CABINET SECRETARIES TO WORKING GROUPS LAYING OUT THEIR ASSIGNMENTS. WE SHOULD HAVE A VERSION FOR YOUR REVIEW EARLY NEXT WEEK.

-- Approach for the Administration's proposal McGinty

WE HAVE BEEN DISCUSSING WITH CONGRESS AND OTHERS HOW MUCH OF THE PRESIDENT'S PROGRAM WE CAN ACCOMPLISH ADMINISTRATIVELY AND HOW MUCH WE NEED LEGISLATION. CONGRESS' RESPONSE NOT UNIFORM. WE ARE EXPLORING THESE OPTIONS. WE'D LIKE YOUR IDEAS ON THE MIX OF ADMINISTRATIVE/LEGISLATIVE PROPOSALS TO GET TIMBER SALES.

-- Update from technical working groups  
Social and economic team (handout) Yu  
Forest management team Lyons  
Agency coordination Pipkin

-- Update from outreach programs  
Congressional and governmental Solien  
Public outreach Tuchmann

-- Issue Teams McGinty

LYONS AND MARK GAEDE KNOW MORE ABOUT THESE THAN I DO. GAEDE IS BRINGING LISTS OF WHO IS WORKING ON WHICH TEAM.

- Products and dates McGinty
  - To President
  - To Congress and public

WE ARE DEVELOPING A TIMELINE OF ALL THE NUMEROUS ACTIVITIES WHICH ARE OCCURRING. WE ANTICIPATE ALL OF THE REPORTS BEING COMPLETED BY JUNE 1 FOR PRESENTATION TO THE PRESIDENT. HE WILL GET SUMMARIES AND A COMPREHENSIVE DECISION MEMORANDUM. WE ALSO ARE WORKING ON OTHER DOCUMENTS WE CAN RELEASE TO THE PUBLIC AND CONGRESS.

- Next Executive Committee meeting McGinty

DO YOU WANT A WEEKLY OR BIWEEKLY MEETING ?

DRAFT  
4-29-93

MEMORANDUM

To: Members of the Agency Coordination Working Group

One lesson that has emerged from recent court decisions and from the presentations made at the Forest Conference is that too often in the past the various government agencies that have responsibility for some aspect of managing the forests of the Pacific Northwest (including northern California) have acted in isolation and at times even at cross-purposes. This problem becomes even more critical as we move toward an ecosystem approach to forest management, where a number of agencies must be involved in planning and implementing the management strategy. We must improve the working relationships among federal and state agencies in the region and eliminate impediments that stand in the way of coordinated action. To that end, we ask that you:

- (1) Identify structural and procedural problems that have made coordinated action difficult in the past, and suggest solutions (or procedures for reaching solutions) to those problems;
- (2) Identify ways in which the federal land management agencies (particularly the Forest Service and the Bureau of Land Management) can and should work together in the future to achieve coordinated management strategies that take into account the statutory mandates of those agencies;
- (3) Identify and suggest ways for dealing with issues concerning agency coordination with respect to implementation of the strategy currently being developed by the Forest Ecosystem Management Working Group;
- (4) Identify ways to improve the process in which the land management agencies, private landowners, and others are required to consult with the Fish and Wildlife Service and the National Marine Fisheries Service concerning their responsibilities under the Endangered Species Act;
- (5) Identify ways to improve coordination between the land management agencies and EPA; and
- (6) Identify ways to improve working relationships between federal and state agencies in the region and suggest a course of action for involving those state agencies in the implementation of the strategy currently being developed by the Forest Ecosystem Management Working Group.

You should draw on personnel from the Forest Service, the Bureau of Land Management, the Fish and Wildlife Service, the National Marine Fisheries Service, the Environmental Protection Agency, and others as appropriate, as well as advice from the states in the region, as you develop your recommendations.

You are requested to present your assessment and recommendations to the Secretaries issuing these instructions on June 1, 1993.

---

President's FY 94 Budget request for SARE

\$ 6.911 million -- essentially the same  
amount provided by Congress in FY 93.

It is, however, a 55% increase over the  
Executive Budget request for FY 93.

---

# Produced With SARE Funding...

Annual SARE and ACE reports, as well as other project summaries, are available free from the national SARE office or from regional SARE coordinators. Here are some other items you might be interested in.

Many of these are available on diskette in Folio Infobase through the Sustainable Agriculture Network or through Dr. V. Philip Rasmussen Jr., Ag Systems & Technology Dept., UMC 2300, Utah State Univ., Logan, UT 84322-2300.

> *Agriculture in Concert with the Environment.*

Introductory brochure. 1993. Free. Harry Wells, Pollution Prevention

Program, U.S. EPA, 401 M St. SW, MC7409, Washington, DC 20460.

> *The Sustainable Agriculture Network.*

Introductory brochure. 1993. Free. Gabriel Hegyes, Room 304, National Agricultural Library, 10301 Baltimore Blvd., Beltsville, MD 20705-2351.

> *Management Guide for Low-Input Sustainable Apple Production.* Northeast SARE

Apple Production Project. 1991. \$10. Lorraine P. Berkett, Dept. of Plant and Soil Science, Hills Bldg., Univ. of Vermont, Burlington, VT 05405. Also, Cornell Univ., Rutgers Univ., Rodale Institute Research Center, Univ. of Massachusetts.

> *Strategies for Sustainable Agriculture* (six-part, farmer-to-farmer video series: Field Crops, Rotational Grazing, Vegetables, IPM for Vegetables and Small Fruits, IPM for Apples, High-Value Marketing). 1992. \$29.95 each, \$149.95 set. Rooy Media, Frederick, MD; Rodale Institute, Emmaus, PA.

The following three items are available from: **Sustainable Agriculture Publications, Dept. of Plant and Soil Science, Hills**

**Bldg., Univ. of Vermont, Burlington, VT 05405.**

> *Managing Cover Crops Profitably.* Sustainable Agriculture Handbook Series No. 1. 1992. \$9.95. Sustainable Agriculture Network.

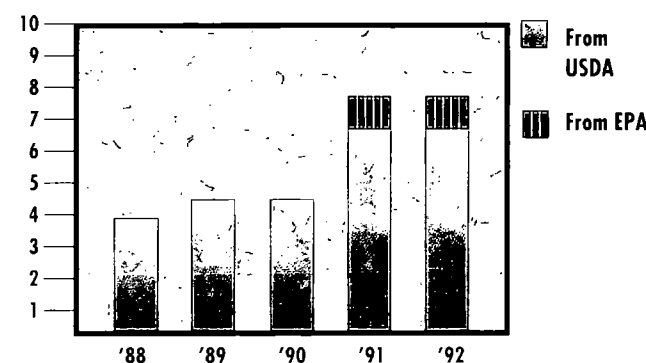
> *Sustainable Agriculture Directory of Expertise — 1993.* \$14.95. Sustainable Agriculture Network.

> *Showcase of Sustainable Agriculture Information & Educational Materials.* 1991. Sustainable Agriculture Network. \$4.95.



## SARE FUNDING

(In Millions)



Although the 1985 Farm Bill mandated funding for the Low-Input Sustainable Agriculture Program (LISA), the program didn't receive any money until 1988. In 1990, LISA changed its name to SARE, reflecting its broader mission to strengthen family farms and rural communities. In '91 and '92, the EPA added \$1 million per year to SARE's budget for "Agriculture in Concert with the Environment," a program administered jointly with USDA/SARE.

To get additional copies of this brochure, write to the SARE contact in your region.

## SARE Contacts

**NATIONAL DIRECTOR**  
George Bird  
CSRS-USDA  
342 Aerospace Bldg.  
14th & Independence Ave. SW  
Washington, DC 20250-2200

**ASSOCIATE DIRECTOR**  
Patrick Madden  
Univ. of California  
P.O. Box 10338  
Glendale, CA 91209-3338

### REGIONAL OFFICES

**WEST**  
David Schlegel, Coordinator  
Univ. of Calif. — DANR  
300 Lakeside Dr., 6th Floor  
Oakland, CA 94612-3560

Kristen Kelleher,  
Communications  
Univ. of California  
258 Hunt Hall  
Davis, CA 95616

**NORTH CENTRAL**  
Steve Waller, Coordinator  
207 Agriculture Hall  
Univ. of Nebraska  
Lincoln, NE 68583-0704

Lisa Jaso, Communications  
207 Agriculture Hall  
Univ. of Nebraska  
Lincoln, NE 68583-0704

**SOUTH**  
William Brown, Coordinator  
Ag Experiment Station  
Louisiana State Univ.  
P.O. Box 25055  
Baton Rouge, LA 70893-5055

Diana Jerkins,  
Communications  
Univ. of Georgia  
107 Conner Hall  
Athens, GA 30602

**NORTHEAST**  
Fred Magdoff, Coordinator  
Plant & Soil Science Dept.  
Univ. of Vermont  
Burlington, VT 05405

Beth Holtzman,  
Communications  
Plant & Soil Science Dept.  
Univ. of Vermont  
Burlington, VT 05405

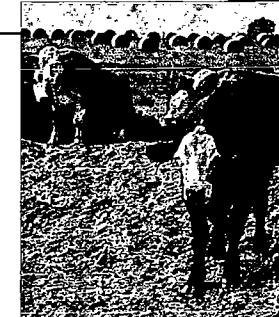


Printed on recycled paper. 10% post-consumer waste.

# 1993 NATIONAL OVERVIEW SARE

Sustainable Agriculture  
Research and Education Program

**SARE IS MAKING WAVES IN AGRICULTURE.** The 6-year-old program devoted to the advancement of sustainable agriculture has funded hundreds of farmer-focused research and communication projects throughout the U.S. Its good work, including this Missouri project exploring better pasture management, has earned kudos from the U.S. General Accounting Office.



## Grants For Farmers Only

A new mini-grant program in the North Central region awarded a total of \$85,349 to 26 farmers to test innovations and share what they learn. "We now have 26 farmers who are project leaders — not just participants. This is clearly a producer-driven program," says Dr. Steve Waller, SARE coordinator for the region. Farmers provided more than \$250,000 in matching funds.

The 109 proposals received provide a reality check for other SARE projects, adds Waller. "We heard directly from farmers what questions they have. Their proposals will help set the agenda for future research."

Nearly half of the funded projects will provide answers about **rotational grazing**. Farmers are testing forages and seeding methods and evaluating confinement vs. forage-based systems for dairy heifers. Other livestock projects are looking at the best rations for organic beef and testing fly traps.

**Nutrient management and weed control** proved nearly as popular. Farmers are measuring nitrogen from cover crops, comparing soil-building legumes, and testing different methods of liquid manure application. Others are evaluating the economics of rowed and drilled soybeans, comparing ridge-till with and without herbicides, and testing weed biocontrol.

In other projects:

> A **Minnesota** grower is adapting ridge-till to plant **sugar beets** into cover crops.  
> A **Kansas** cattleman is constructing a heated sprayer to apply melted beef tallow to round bales to protect the **hay**.  
> An **Indiana** grower is testing seed-er modifications to plant **vegetables** into hairy vetch.  
> A **North Dakota** farmer is developing equipment to plant **sunflowers** into small grain residue.

All SARE regions will have similar farmer-initiated projects this year.

## Is SARE Giving Us Our Money's Worth?

In a word, Yes. And that's from an impartial government agency with a penchant for exposing boondoggle programs.

The U.S. General Accounting Office (GAO), which measures how much bang America gets for its tax buck, conducted an audit of the SARE program in late '91 and early '92 at the request of Reps. Mike Synar (D-Okla.) and Fred Grandy (R-Iowa). "The report came out in September '92, and we were delighted with it," says Dr. Patrick Madden, SARE associate director. "GAO clearly recognizes the great progress we've made despite many obstacles. And they offered many good suggestions for improvement — all of which we're already implementing." Here's a summary of GAO's findings and recommendations.

### SARE's Accomplishments

> Leverages funds by attracting matching dollars from state governments and private organizations.  
> Forges links between farmers, nonprofit groups, agribusiness and public and private research institutions.  
> Emphasizes farmer involvement, thereby helping more farmers implement or test sustainable agriculture innovations.  
> Makes researchers more receptive to farmers' ideas, concerns and expertise.  
> Unique in funding interdisciplinary and systems-oriented research.  
> Causes institutional changes at universities to better accommodate sustainable agriculture.

### Ways To Improve SARE ...

> Disseminate project results regionally and nationally, instead of just locally, as is often the case now.  
> Establish a departmental policy for sustainable agriculture at USDA, to ensure that SARE's goals and activities are coordinated with those of other agencies involved in sustainable agriculture.  
> Mobilize the two SARE-governing bodies mandated by the 1990 Farm Bill: the National Sustainable Agriculture Advisory Council (NSAAC) and the Agricultural Council on Environmental Quality (ACEQ).  
> Establish a consistent reporting system through the regions and national office, to allow for more accurate and timely accounting and monitoring of program activities.  
> Ensure that more SARE projects involve systems-oriented research.



**ENHANCED BIOLOGY  
MAKES UP FOR CHEMICALS**

A study of 20 **California** farms found that enhanced biological processes on organic farms compensated for the absence of synthetic fertilizers and pesticides. Researchers found that **tomatoes** grown on organic farms suffered less root disease compared with those grown conventionally, suggesting that organically managed soils suppressed pathogens. Organic farms also had higher and more diverse populations of beneficial insects, and similar yields and insect damage. (West Region project LW88-3.)

**COVERS CUT  
PESTICIDES**

**Pecan** growers could reduce insecticide sprays by two-thirds and eliminate nitrogen fertilizer applications if they plant a mix of crimson clover and hairy vetch under their trees. Studies in **Georgia** and **Oklahoma** show that pea aphids infect these two legumes, attracting



lady beetles, lacewings and other aphid predators. These beneficial insects later migrate into the pecan canopy to devour yellow and black-margined aphids. Researchers estimate that the legumes produce 130 to 160 pounds of slow-release nitrogen per acre, saving growers \$28 per acre. (South Region project LS91-36.)

**LEGUMES REPLACE FALLOW**

A **Montana** study is identifying the best legume green manures and practices to replace summer fallow in **cereal grain** systems. Researchers have screened more than 40 legumes to find which are best-adapted to local conditions and use water most efficiently. Instead of leaving the ground bare, farmers plant the legumes and allow them to grow until they've used up their share of soil moisture. If water is adequate, farmers can harvest forage, or seed crops in the case of peas and lentils. Researchers say this system can reduce erosion, pests and saline seep. (West Region project LW89-14.)



# SARE AROUND THE COUNTRY

**CUT COW-CALF COSTS**

A **Missouri** study is helping **beef** producers manage pastures to reduce purchased feed, fertilizer and winter hay needs while increasing profits and protecting the environment. Researchers are testing different stock densities and rest periods in



pastures that are subdivided into 3, 12 or 24 paddocks, and are comparing systems that provide water in each paddock with centrally located waterers. They'll monitor cow-calf and stocker performance, pasture productivity and persistence, nutrient cycling and the economics of each system. (North Central Region project LNC91-38.)

**COVERS FOR COTTON**

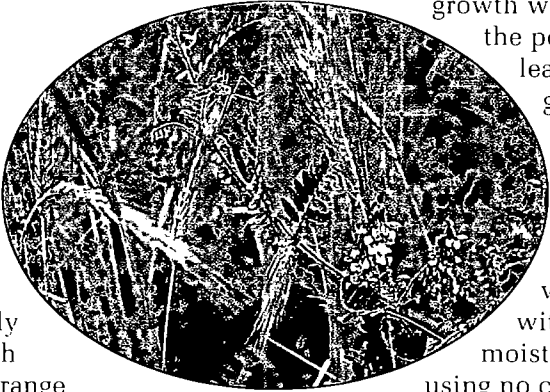
Many **cotton** growers fear cover crops encourage pests. But early findings from seven sites across the **South** showed that fall-planted hairy vetch generally did not increase populations of insects, weeds, soilborne pathogens or nematodes compared with winter fallow. In fact, vetch *reduced* black root rot in cotton. Only root-knot nematodes increased where vetch was used. Researchers point out that long-range studies show covers increase lint production. (South Region project LS 91-40.)

**CATTLE BOOST HOG PROFITS**

Adding a pasture-based **stocker cattle** enterprise can increase profits for **swine** producers and help them protect the environment. A **North Carolina** study found that intensively grazed Bermudagrass pastures fertilized with liquid hog manure can produce 1,000 to 2,000 pounds of beef per acre — and net about \$300 per acre. Additional site monitoring will help researchers better understand the fate of nitrates in surface- and groundwater. They suggest that planting rye in pastures over winter could increase the system's productivity and uptake of residual soil nitrogen. (South Region project LS 90-26.)

**RYE AND VETCH: A GREAT PAIR**

When it comes to preventing groundwater pollution and cutting fertilizer costs, a cover-crop mix of rye and hairy vetch gives **corn** growers the best of both worlds. A **Maryland** study shows that if excess nitrogen is left in the soil after corn harvest, rye



growth will dominate and reduce the potential for nitrate leaching. If leftover nitrogen is low, vetch dominates and fixes additional N that can be used by the next corn crop. Researchers also found that planting vetch alone or in a mix with rye conserves soil moisture compared with using no cover crop or rye alone. A pure vetch cover can eliminate the need for N fertilizer, they add. (Northeast Region project LNE89-13.)

**NO-CHEMICAL DAIRIES  
MAKE MORE MONEY**

Most **Wisconsin** dairy farmers fear they'll sacrifice profits if they cut chemicals. But a myth-busting study by the Wisconsin Rural Development Center shows that's not necessarily true. Economic analyses of 30 farms revealed that no-chemical farmers had a net return on their crops that was 56 percent more per acre than their conventional counterparts. Researchers attribute the advantage to quicker rotations, lower input and capital costs and greater reliance on pastures and small grains. The no-chemical group also made \$1.92 more profit per hundredweight of milk. The project also featured information-sharing sessions for all the farmers. Researchers say that may be one reason why, during the course of the three-year study, the conventional farmers cut their chemical and fertilizer costs by as much as one-third, even though prices for those inputs rose. (North Central Region project LNC88-12.)

*Contact regional SARE offices for more information on these and other projects.*

**HELPING HAND FOR BIOCONTROL**

**Michigan** scientists are investigating the importance of the size and shape of fields and nearby border habitat for biological control of insects and weeds. For example, researchers using the emerging discipline of landscape ecology observed that wildlife removed half of all surface weed seeds within 5 meters of a hedgerow. They also found that the wasp *Eriborus terebrans*, an important parasite of European **corn** borers, was two to three times more effective in close proximity to wooded borders than in the center of fields or near herbaceous borders. Researchers suspect that wooded borders provide more nectar and other food for adult wasps, as well as a more favorable microclimate. (North Central Region project LNC91-39.)

**THESE SARE PROJECTS SPAN REGIONAL BOUNDARIES**

**Farming for better living.** Sustainable agriculture is more than bushels, dollars and biological options. It's also about better quality of life. A national research team is studying how well individual SARE projects achieve this goal. *1992 SARE funding:* \$50,000. *Contact:* Dr. John Ikerd, Center for Sustainable Agriculture, 200 Mumford Hall, University of Missouri, Columbia MO 65211.

**Suppose all farmers adopted sustainable methods?** What would happen to our economy and environment? USDA's Economic Research Service is tackling that question by analyzing results of farm and ranch studies across the country. *1992 SARE funding:* \$1.2 million total for three years, shared by six universities. *Contact:* Greg Gajewski and Linda Calvin, USDA-ERS, 1310 New York Ave., Room 1301, Washington DC 20005-4788.

**SARE's very own communications staff.** That's the purpose of the Sustainable Agriculture Network. Formed in 1990, SAN supports a variety of efforts designed to promote effective, decentralized communication about sustainable agriculture. *1992 SARE funding:* \$115,000. *Contact:* Gabriel Hegyes, Room 304, National Agricultural Library, 10301 Baltimore Blvd., Beltsville MD 20705-2351.

**They specialize in alternatives.** Housed at the National Agricultural Library, the Alternative Farming Systems Information Center uses database searches and other means to help you learn about most any sustainable ag topic — from crop rotations and legumes to reduced tillage and biological pest control. *1992 SARE funding:* \$110,000. *Contact:* Jane Gates, Coordinator, AFSIC, National Agricultural Library, Room 304, 10301 Baltimore Blvd., Beltsville MD 20705-2351.



- Section 1612 (Nat. Ctr. for Sus. Agric. Res. & Training)
- Section 1615 (National Competitive Research Initiative)
- Section 1619 (SARE Purpose and Definitions)
- Section 1620 (Repeal of Agric. Productivity Research)
- Section 1621 (Research and Extension Projects)
- Section 1622 (Program Administration)
- Section 1623 (Federal-State Matching Grant Program)
- Section 1624 (Authorizing Appropriations)
- Section 1627 (Integrated Management Systems)
- Section 1628 (Sus. Agric. Tach. Dev. & Transfer Program)
- Section 1629 (National Training Program)

There are authorized to be appropriated for each fiscal year \$40 million, \$20 million and \$20 million for Chapter 1 (Sec. 1621-1624), Chapter 2 (Sec. 1627) and Chapter 3 (Sec. 1628-1629) of Subtitle B of Title XVI of FACTA of 1990, respectively.

### *Most Frequently Asked Questions*

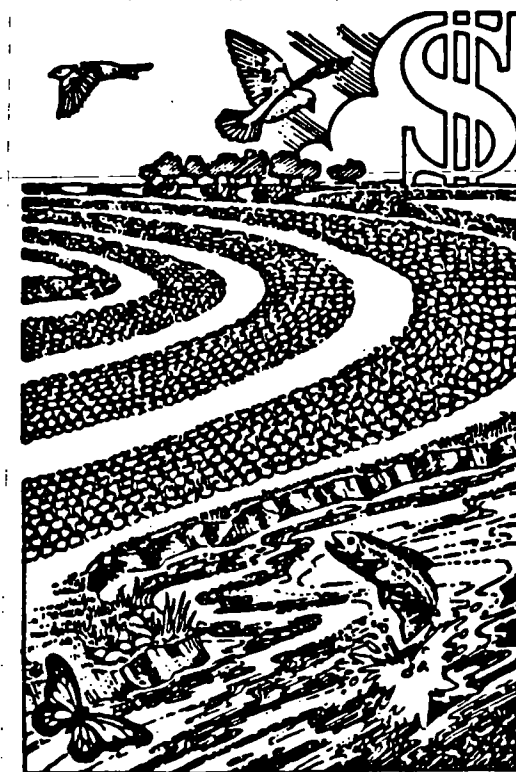
- Whatever happened to LISA? The name has changed, but the program and progress are still going strong. That's right. What you once knew as LISA is now SARE, the Sustainable Agriculture Research and Education Program.

- How many SARE pre-proposals were submitted from 1988-1991? There were 1,376 pre-proposals requesting \$145.1 million. -- How many full proposals were received from 1988-1991? SARE evaluated 1,059 proposals requesting \$91.1 million.
- How many regional projects were funded from 1988-1991? SARE approved 164 regional projects for total funding of \$17.7 million. This includes 21 projects funded in 1991 at 7 million through the joint USDA-EPA Agriculture in Concert with the Environment Program (ACE).
- Since sustainable agriculture research and demonstration frequently require long-term efforts, how many projects have received continuation funding since 1988? Some 56 projects have received continuation funding totaling \$5.6 million
- How many national initiatives have been approved since 1988? SARE has funded 31 national projects for total funding of \$1.9 million.
- What is the trend in quality of proposals? The quality of proposals improves each year. Consequently, a growing number of potentially valuable projects go unfunded.

George Bird, Director  
Sustainable Agriculture Research and Education  
Program  
United States Department of Agriculture  
Cooperative State Research Service  
The Aerospace Center  
Washington, DC 20250  
(202) 401-4640  
(202) 401-5179 FAX

January 1993

# SUSTAINABLE AGRICULTURE RESEARCH AND EDUCATION PROGRAM



---

## **Sustainable Agriculture Research and Education Program**

---

### ***Program Overview***

The Sustainable Agriculture Research and Education Program (SARE), initiated in 1988 and known as the Low Input Sustainable Agriculture Program (LISA), is authorized under Subtitle B of Title XVI of the Food, Agriculture, Conservation and Trade Act of 1990 (FACTA). The program is currently funded at \$6.7 million annually and managed through four regional administrative councils composed of farmers and ranchers, and representatives of non-profit private, agribusiness, government and academic organizations. Most funded projects have meaningful involvement of farmers or ranchers. Sustainable agriculture teams are used to conduct site visits to review progress and evaluate continued funding. In 1992, GAO conducted an audit of SARE and other USDA programs related to sustainable agriculture. The results of the audit were released at a Senate Committee on Agriculture, Nutrition and Forestry Subcommittee on Agricultural Research and General Legislation Hearing on Sustainable Agriculture on September 17, 1992.

### ***Coordination of Scientific Efforts***

SARE efforts are coordinated by the four regional administrative councils with federal agency representation from ARS, CSRS, ES, SCS, EPA and USGS. Each council also has representation from SCES, SAES and State Departments of Agriculture. The councils appoint Regional Technical Committees to review proposals and conduct site reviews of funded projects. A major sustainable agriculture research conference is scheduled for 1993. One SARE region funded farmer-initiated research projects in 1992. The National Sustainable Agriculture Advisory Council (NSAAC) is mandated in Section 1622 of FACTA, and has 28 members as de-

scribed in Department Regulation 1043-34. Fourteen of the members are from the private sector, and 14 represent federal and state agencies or academic institutions. EPA and SARE annually contribute \$1.0 million each for a joint research and education initiative known as Agriculture in Concert with the Environment (ACE). During the past five years, many private sector organizations known as Sustainable Agriculture Working Groups (SAWG) and sustainable agriculture coalitions have formed to promote sustainable agriculture.

### ***National Agenda***

SARE is designed to provide both a research and an education base for the future economic viability of U.S. agriculture. Special emphasis is placed on whole-farm systems research and economic impact assessment. Additional projects are funded in the areas of experimental component research and exploratory research. An economic assessment project led by ERS consists of six regional microeconomic initiatives and one national macroeconomics effort. An integrated decision-support system (PLANETOR) was developed as a national initiative for assessment of on-farm economics.

The FACTA definition of sustainable agriculture states that farming practices must "enhance environmental quality and the natural resource base upon which the agriculture economy depends" and "make the most efficient use of non-renewable resources and integrate, where appropriate, natural biological cycles and controls." The research and education projects funded by SARE have strong environmental quality components and most place emphasis on the use of on-farm resources. SARE interacts with the USDA initiatives in IPM, animal waste management, and water quality.

Human resource development is approached by SARE through national and regional initiatives on the quality of life for farmers and ranchers, members of rural communities, and society as a whole. A national task force has developed a program for increasing interaction among biophysical and social scientists. The program is being

offered for the first time during the winter of 1993. NSAAC membership includes farm family, human nutrition and food safety representatives.

### ***Scientific Issues and Opportunities***

The most difficult scientific issues facing SARE include whole-farm systems analysis, environmental assessments, regional and national economic impacts, and quality of life programs. A whole-farm systems task force will soon complete a protocol for use by the sustainable agriculture community. Economic impact and quality of life issues are under the leadership of national task forces. Disciplines such as weed science, nematology and soil microbiology do not have adequate baseline resources to provide necessary contributions; whereas, economics, entomology and plant pathology have enough critical mass to readjust to new priorities.

SARE has identified a number of unique emerging issues that need evaluation. These include local value-added processes, on-farm participation and encouraging a grassroots understanding of sustainable agriculture. It is becoming apparent that the research and education needs of the industrial agribusiness farm, the family farm, and the part-time farm differ, and can not be addressed through a single initiative.

### ***Authorizing Legislation***

The following Sections of FACTA mandate initiatives related to sustainable agriculture:

- Section 1456 (Composting Research and Education)
- Section 1602 (Purpose of Title XVI)
- Section 1603 (Definition of Sustainable Agriculture)

# Sustainable Agriculture

Research and Education Program

## 1992 National Overview

Report No. 92-13 May 1992

# Whatever happened to LISA?

The name has changed, but the program and progress are still going strong.

That's right. What you once knew as "LISA" is now "SARE" — the Sustainable Agriculture Research and Education program of the Food, Agriculture, Conservation and Trade Act of 1990. With the new name comes an expanded mission.

SARE continues to stress practical research that helps farmers reduce or eliminate the misuse of agricultural chemicals. But now it also tackles the broader issue of strengthening family farms and rural communities.

In this report we spotlight examples of how SARE projects continue to help farmers raise high-yielding crops and healthy livestock with greatly reduced chemical costs.

You'll read about projects that help our producers:

- ◆ Save up to \$100 per acre on pesticides.
- ◆ "Grow their own" fertilizer.
- ◆ Safeguard groundwater.
- ◆ And much more.

Equally noteworthy is how SARE remains a catalyst for similar projects. More than 30 states now have sustainable agriculture centers or programs at land grant universities and other facilities. The scope and quality of SARE research and educational efforts has improved markedly.

These accomplishments are a great source of pride for the thousands of farmers, researchers and other dedicated people who have worked on SARE since it was first funded by Congress in 1988. We hope you share that pride.

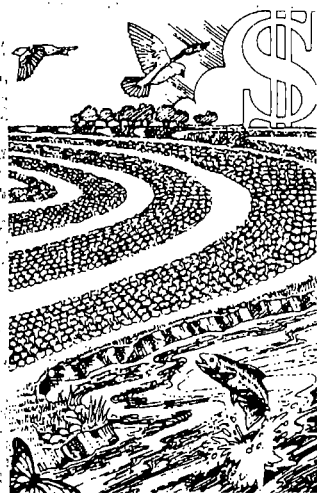
## Get the whole story

The 1992 Annual Report for SARE consists of six separate documents:

- National Overview (this report)
- Northeast regional report
- Southern regional report
- North Central regional report
- Western regional report
- ACE Grants report (Agriculture in Concert with the Environment, funded jointly by U.S. Environmental Protection Agency and CSRS/USDA)

For more information about SARE or ACE, or for copies of the full Annual Reports from 1988-91, contact: Sustainable Agriculture Research and Education Program, CSRS/USDA,

342 Aerospace Center, Washington DC 20250-2200. Phone (202) 401-4640. FAX (202) 401-5179.



## Trends to watch

A growing number of SARE projects focus on **whole-farm or ranch systems**. In FY92, the Western region's "Call For Proposals" was limited to this type of project, and other regions are giving it top priority. **Farmers and ranchers continue to play a key role** in shaping and operating the SARE program. The Administrative Council of the North Central Region elected North Dakota farmer Fred Kirschenmann as Chair.

Farmers in all regions serve on proposal review teams, help design and implement projects, and participate in whole-farm systems studies. As always, **on-farm studies** provide essential insights into the opportunities and problems of sustainable farming. Statistically valid methods of on-farm testing have been developed in the Palouse area of Washington. Farmers select relevant topics and grow crops with alternative treatments in harvester-width strips 300 feet long or more.

But **companion studies in greenhouses and laboratories** are important too. They provide "backup" when on-farm trials are disrupted by adverse growing conditions. They also provide statistically valid findings that can later be tested on farms. **Interdisciplinary teams** conduct most projects, the exceptions being high-priority studies of specialized topics such as crop disease control.

USDA and EPA's emphasis on **pollution prevention in agriculture** is a central theme for the ACE grants program. Projects emphasize research and demonstrations on alternative practices that benefit ground and surface water and aquatic and terrestrial habitats. The Administrative Council of the Western Region elected the EPA representative, Harry Wells, as Chair. Finally, **Extension personnel** play major roles in a total of 54 projects, serving as project coordinator for 30 of those.

# SARE at work ...

## ... Boosting livestock profits

Low-input techniques can match or beat conventional systems in both profit and cattle weight gain. That's the preliminary conclusion of a long-term trial in **Virginia**. Begun in 1988, the study compares two crop-livestock farming systems: one that relies on conventional fertilizers and pesticides, and one that largely replaces chemicals with on-farm resources such as manure, forage legumes and crop rotation. (*Southern Region report, p. 19.*)

Livestock producers share field-proven advice on low-cost, intensive pasture management in a series of videos being distributed **nationwide**. A professional camera crew filmed the videos on many farms during the course of a growing system. The videos show how skilled pasture management can greatly reduce the need for fuel, machinery and chemicals. (*Northeast Region report, p. 12.*)

Led by the Alternative Energy Resources Organization in **Montana**, a team of 80 producers compiled low-input alternatives for managing livestock in the Northern Rockies and Plains. Seven ranchers presented ideas at a western states conference attended by 75 farmers. Hundreds more received the proceedings. (*Western Region report, p. 65.*)

## ... Improving dryland farming systems

"What happens when I cut chemicals?" Nine case-study farmers in the drought-prone **Northern Plains and Rockies** are helping answer that and other key questions about sustainable farming. Researchers chose the farms based on experience in sustainable agriculture (4 to 15 years), recordkeeping, representation of local conditions, and other factors. Six of the farms are certified organic. Enterprise budgets show all nine farms are profitable, and profits don't depend on premium prices for organic crops. (*Western Region report, p. 32.*)

## ... Cutting chemicals on produce

Cucumbers and red potatoes break even at a lower price when grown organically than when grown with chemical inputs, according to a study in **Oregon and Washington**. Broccoli and sweet corn had about the same break-even price regardless of farming method used. Peas were the only crop in which organic methods caused lower yields and a higher break-even price. (*Western Region report, p. 7.*)

Twenty **California** tomato growers are finding effective, profitable ways to control pests and weeds with fewer chemicals. The growers, whose methods range from organic and low-input to conventional, took part in an interdisciplinary study evaluating many aspects of their farms. Beneficial insects and predators were more abundant on organic farms. No Phytophthora root rot was observed on organic or low-input farms, but 12.8% of tomato plants on conventional farms were infected. (*Western Region report, p. 16.*)

Farmers may be able to eliminate insecticides for earworm if they plant sweet-corn varieties that are naturally resistant to the pest, according to a study at Prairie View A&M in **Texas**. Two varieties (SENECA SENTRY and JUBILEE) had less than 2% damage from earworm. "Up to 21 or more applications of pesticides may be required to obtain the same or greater levels of protection on a more susceptible variety," scientists say. (*Southern Region report, p. 9.*)

"Save \$100 per acre, and earn a higher price for your crop!" No, it's not a tabloid headline. It's the benefit that eggplant growers can get when they substitute biological pest control for pesticides. The savings come from spraying just once instead of the normal 15 to 20 times, say researchers at Rutgers University in **New Jersey**. The premium price can be an indirect result of better-looking fruit whose luster hasn't been marred by insecticide carriers, scientists speculate. (*Northeast Region report, p. 47.*)

The Northeast LISA Apple Production project has reached more than 21,000 people through a series of 74 meetings, tours, workshops and conferences. The project involves staff from five institutions: Cornell University (**New York**), Rutgers University (**New Jersey**), Rodale Institute Research Center (**Pennsylvania**), University of **Massachusetts** and University of **Vermont**. The group also has produced an 84-page "Management Guide for Low-Input Sustainable Apple Production." More than 1,100 copies were sold in 1991. (*Northeast Region report, p. 6.*)

Thirty **Northeast** strawberry and raspberry growers are testing ways to control weeds and with few or no chemicals. The project has yielded numerous benefits, including: the production of a small-fruit newsletter with more than 450 readers; cover crops that replace herbicides, fumigants and other chemicals; and the identification of fruit varieties that naturally resist certain diseases. (*Northeast Region report, p. 49.*)



▲ "Let's talk!" Farmers swap questions and ideas at SARE-sponsored field days around the country.



► Rotary hoeing is one of several mechanical techniques farmers can use to control weeds with fewer chemicals, according to SARE research.

▼ Biological pest control, a mainstay of SARE research, can reduce or eliminate insecticides in many crops. In this example, a tiny wasp (harmless to humans) lays its eggs in alfalfa weevil larvae.





### ... Building soil fertility

"On-farm research in **Virginia** has shown that rye and hairy vetch cover crops can substantially reduce N fertilizer needs and provide increased weed control in corn silage production systems," conclude scientists at Virginia Tech. Another highlight of this study: No-till corn planted into hairy vetch mulch netted \$22 more per acre than no-till corn planted into rye and treated with 125 pounds of nitrogen fertilizer per acre. The vetch treatment required just half as much non-renewable energy. (*Southern Region report, p. 19.*)

### ... Controlling weeds with fewer herbicides

Chickens can control weeds in **Michigan** orchards as effectively as herbicides. Not only does the idea cut chemical costs, but it also provides farmers with another marketable crop when the chickens are full-grown. (*North Central Region report, p. 71.*)

### ... Reducing water pollution

Cranberry growers in a **Massachusetts** study cut insecticides by 56%, fungicides by 28% and herbicides by 65%. They also reduced nitrogen fertilizer by 38% — all without yield loss. The result, according to water-quality studies, was lower levels of chemical residue coming into and out of bogs. (*Northeast Region report, p. 85.*)

Rye captures soil nitrates in the root zone for next year's crops, protecting groundwater and streams. Subsequent corn yields are not reduced. These studies, conducted in **Maryland**, **Delaware** and **Pennsylvania**, have justified ASCS cost sharing for cereal cover crops to reduce nitrate leaching. (*Northeast Region report, p. 16.*)

Legume cover crops offer many water-saving and soil-building benefits in the crop rotations developed by scientists in **Montana** and **Wyoming**. If these rotations were used widely in the Northern Great Plains and Intermountain region, they'd capture 3 to 4 million acre-feet of precipitation, greatly reducing soil erosion and groundwater contamination. They also would replace 120,000 tons of N fertilizer (worth \$24 million) a year, and reduce tractor fuel fills by 50% to 80%. (*Western Region report, p. 39.*)

To help answer farmers' questions about cover crops, the Sustainable Agriculture Network sponsored the publication of a handbook titled "Managing Cover Crops Profitably." The first of a series, this highly readable, 114-page paperback offers practical advice from farmers and researchers nationwide. The handbook was overseen by SARE's Northeast Regional Coordinator, Dr. Fred Magdoff of the University of **Vermont**. It's being publicized by press releases to farm magazines and other outlets. (*See back page of this report for more information.*)

### ... Broadening the horizons of science

At least three dozen land grant universities have added a focus on sustainable agriculture to their agricultural research and education programs.

### ... Sharing information

SARE continues to provide resources for the Alternative Farming Systems Information Center at the National Agricultural Library in **Maryland**. In addition, a non-centralized, multi-media Sustainable Agriculture Network is being developed under the leadership of Dr. Jill Auburn at the University of **California-Davis**. PLANETOR, a farmer-oriented decision-support program originally developed by Dr. John Ikerd at the University of Missouri, is being further developed by scientists at the University of **Minnesota**. Farmers and ranchers are testing the program to be sure it meets their needs.

Recognizing that sustainable agriculture requires new human resources, the Center for Rural Affairs in **Nebraska** has formed a Beginning Farmer Support Network. In the first year (1991), 15 beginning farmers helped design and carry out the study; 12 are providing whole-farm case studies. Lacking start-up capital but possessing skilled management and a keen awareness of environmental problems, these farmers are adopting holistic and site-specific management strategies. (*North Central Region report, p. 52.*)

### ... Strengthening the link to IPM

A close link is developing between the SARE program and the IPM initiative mandated in Section 1650 of the 1990 Farm Bill. A major IPM forum is planned for summer 1992. Two new SARE projects include biological control for whitefly.

### ... Proving itself to society

A three-year study will estimate the **national** environmental and economic impact of sustainable farming. The study, scheduled to begin in summer '92, is being led by USDA's Economic Research Service (ERS). Regional projects will be selected in May 1992 to collect and analyze location-specific data. Findings from various studies will be included in the database, along with national surveys conducted by ERS.



Photos courtesy of The New Farm magazine, Rodale Institute

# Farmer-Ready information

In addition to regular research summaries and its Annual Report, the SARE program helped several organizations put low-input farming information into print and video formats in 1991. Some examples:

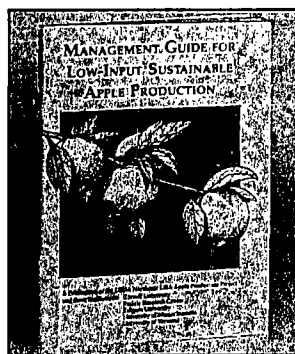
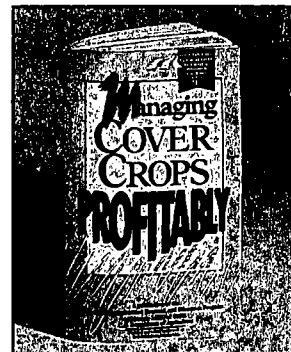


● *Sustainable Agriculture Research and Education in the Field*, Board on Agriculture, National Research Council. 1991, National Academy Press.

● *Managing Cover Crops Profitably*, Sustainable Agriculture Network Handbook Series No. 1. 1992, Sustainable Agriculture Network, Crop and Soil Sciences, Univ. of Vermont, Burlington VT 05405.

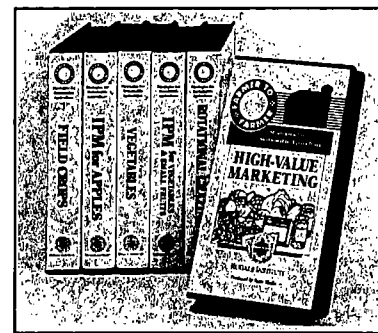
● *Management Guide for Low-Input Sustainable Apple Production*, Northeast LISA Apple Production Project. 1991, Cornell University, Rutgers University, Rodale Institute Research Center, University of Massachusetts and University of Vermont.

● *Strategies for Sustainable Agriculture* (six-part, farmer-to-farmer video series: Field Crops, Rotational Grazing, Vegetables, IPM for Vegetables and Small Fruits, IPM for Apples, and High-Value Marketing). 1992, Rooy Media, Frederick, MD, Rodale Institute, Emmaus, PA.



## Also available:

● *Sustainable Agriculture Research and Education Program and EPA-USDA Agriculture in Concert with the Environment*. Data Base, SARE, LISA and ACE Projects, available on diskette in Folio Infobase. Sustainable Agriculture Network, Dr. V. Philip Rasmussen Jr., Soils and Biometeorology Dept., Utah State University, Logan, UT 84322-4820. Phone 801-750-2179. Email address SOILCOMP@CC.USU.EDU.



## In case you're wondering ...

**Which regions solicit pre-proposals?** Three: the Southern, Western and North Central regions.

**How many pre-proposals have been submitted since 1988?** There have been 1,376 pre-proposals requesting a total of \$145,145,253.

**How many full proposals have been received since 1988?** We have evaluated 1,059 proposals requesting a total of \$91,093,406.

**How many proposals were of acceptable quality?** Through FY91, about half the proposals we've received are of high enough quality to warrant funding. Another 25% would qualify after appropriate revision.

**How many regional projects have been funded since 1988?** We have approved 164 regional projects for total funding of \$17,704,000 (not including matching funds from other sources). This includes 21 projects funded in '91 at \$1,960,000 through the ACE grants program.

**Since research often requires long-term efforts, how many projects have received continuation funding since 1988?** Some 56 proposals received continuation funds totaling \$5,552,551.

**How many national projects have been approved since 1988?** We have approved 31 national projects for total funding of \$1,904,964.

**What is the trend in quality of proposals?** The quality of proposals improves each year. Consequently a growing number of potentially valuable projects are being rejected due to lack of funds.

Administered by Cooperative State Research Service, USDA in cooperation with Extension Service, USDA and the Environmental Protection Agency Pursuant to Title XVI, Research, Subtitle B of the Food, Agriculture, Conservation, and Trade Act of 1990 (PL 101-624)

George W. Bird  
Director, SARE, USDA/CSRS

William H. Brown  
Coord., Southern Region, Louisiana State Univ.

Dixon Hubbard  
Prog. Ldr., Competitiveness & Profitability  
USDA/ES

J. Patrick Madden  
Associate Director, SARE, Univ. of California

Frederick R. Magdoff  
Coord., Northeast Region, Univ. of Vermont

David E. Schlegel  
Coord., Western Region, Univ. of California

Steven S. Waller  
Coord., North Central Region, Univ. of Nebraska

Harry W. Wells  
Coord., ACE Program, EPA

---

## **Clinton Presidential Records Digital Records Marker**

---

This is not a presidential record. This is used as an administrative marker by the William J. Clinton Presidential Library Staff.

This marker identifies the place of a publication.

---

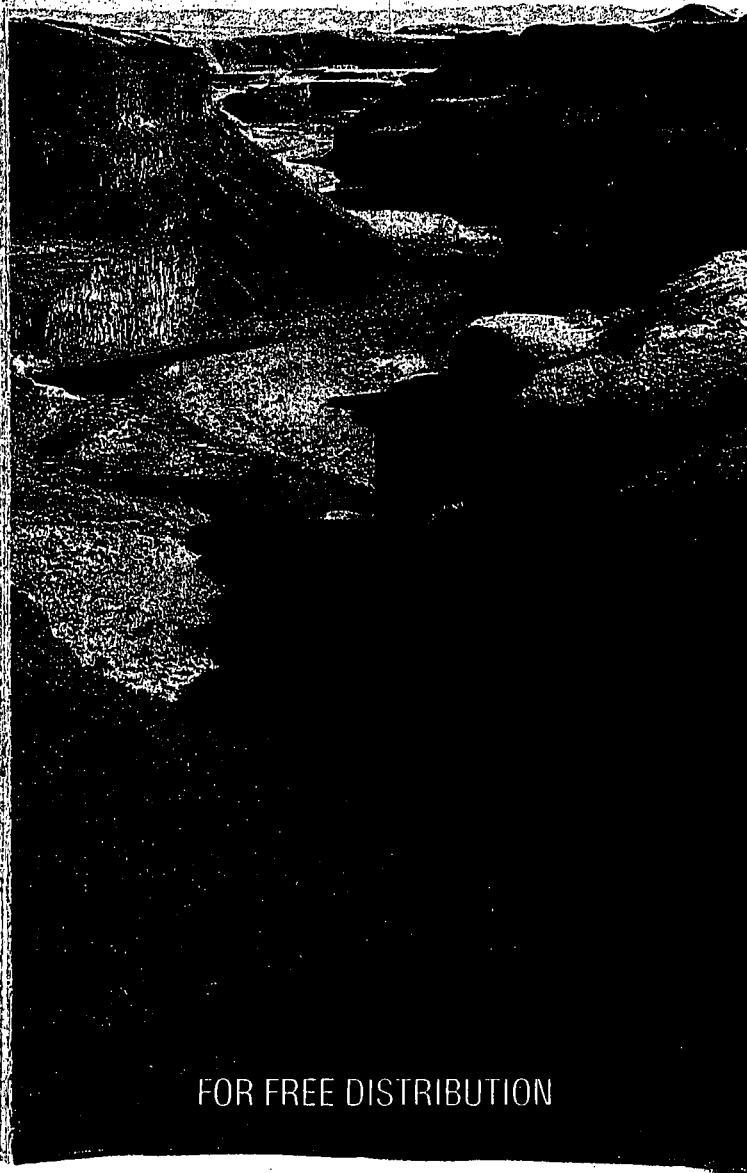
Publications have not been scanned in their entirety for the purpose of digitization. To see the full publication please search online or visit the Clinton Presidential Library's Research Room.

---



# Washington

OFFICIAL STATE HIGHWAY MAP



FOR FREE DISTRIBUTION