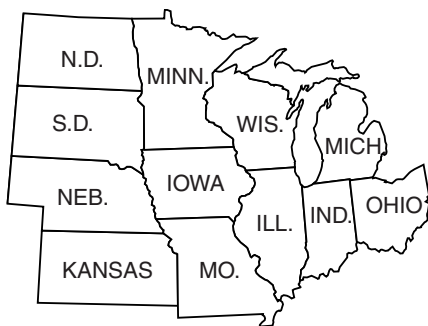




North Central Region Sustainable Agriculture Research and Education (SARE) Program



Research and Education Grant Program

1988 — 2004 Impacts

Principal Investigator Survey Results

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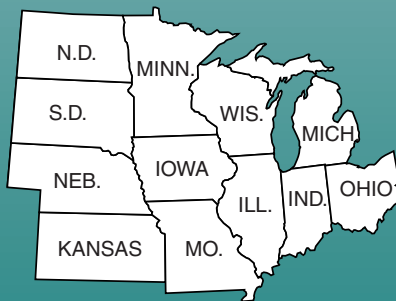
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Acknowledgements

This survey was initiated by the North Central Region Sustainable Agriculture Research and Education (NCR-SARE) program through a targeted call for proposals. Michigan State University conducted the survey with coordination, oversight and administration from the NCR-SARE evaluation committee and Mr. Al Kurki, survey project coordinator. The individuals involved in the effort include:

Dr. Bill Wilcke, Regional Coordinator, NCR-SARE and the NCR-SARE staff

Dr. Doug Karlen, Chair of NCR-SARE Administrative Council Evaluation Committee

Dr. Hans Kandel, Extension Agronomist, North Dakota State University

Dr. Jill Auburn, National SARE Coordinator, USDA-CSREES

Ms. Paula Ford, Professional Development Program Coordinator, NCR-SARE

Mr. Al Kurki, Survey Project Coordinator & PDP Associate Training Coordinator, Western Region SARE

We acknowledge the support we received from these individuals in the finalization of the survey instrument and relevant feedback to the survey results. It should be noted, however, that as stipulated in the RFP we used the grant recipient survey developed in Western Region SARE. Although several small and regionally specific changes were made to the prototype survey, but there were no major modifications per the guidance researchers received from project funders.

We greatly appreciate the cooperation and support from all the NCR-SARE Principal Investigators who took time to complete and return this survey.

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The North Central Region Sustainable Agriculture Research and Education (NCR-SARE) program is one of four regional competitive grants programs funded by the United States Department of Agriculture. North Central Region's SARE Research and Education (R&E) grants program funds research and educational projects that include outreach and educational components to disseminate project findings to farmers and ranchers, extension personnel, other pertinent user groups such as Natural Resources Conservation Service and Soil and Water Conservation District professionals and other agencies or nonprofit organizations supporting sustainable agriculture. Many North Central Region SARE-funded projects involve scientists, farmers/ranchers and others in an interdisciplinary approach.

The North Central Region SARE program has funded approximately 330 Research and Education projects to 260 principal investigators across its 12 states since its inception. Grantees submit annual progress reports and final project reports. In 2006, North Central Region SARE initiated a more systematic process to assess the reach and measurable impacts of all of its grants programs. This study is conducted as part of that evaluation initiative.

The overarching goal of this evaluation is to determine the quantifiable impacts of these R&E grants and the reach or diffusion of the grantees' efforts to farmers, ranchers, and other pertinent user groups particularly in the general locale of the funded project. The specific objectives are to:

- 1) Determine if the scientific community accepted the research of R&E grants in the form of refereed publications and research reports.
- 2) Determine what impact adopting the change may have had on some facet of farming/ranching operations (e.g., profitability, increase or decrease in labor or management, fertilizer costs, yields per acre, soil/air/water quality changes). (Impact)
- 3) Determine how many other farmers or ranchers attended field days or had personal visits with the researchers/educators.
- 4) Estimate how many of those visiting farmers or ranchers also tested or adopted a practice or technology.
- 5) Determine if changes in the grant-making, contracting or reporting process, or requirements are necessary to make the program more user-friendly, based on the comments of grantees.

The Center for Evaluative Studies in Michigan State University's Department of Community, Agriculture, Recreation and Resource Studies (MSU CARRS) responded to the 2006 Targeted Request for Proposals (RFP) from the North Central and Southern SARE Regions. The grant recipient survey instrument developed in Western Region SARE was used for data collection. Only small and regionally specific changes were made to the prototype survey per direction from the project coordinator and regional evaluation committee.

A survey was administered to all North Central Region SARE R&E grant recipients in winter and spring 2007. Principal investigators were contacted through a series of postal and electronic mailings. In each mailing the survey webpage link and unique access code were provided. In the electronic mailings, respondents could link directly to the survey from within the emailed message. Follow-up reminder mailings were used to increase overall response rate. During the 18 weeks of data collection, non-responders received a paper version of the questionnaire in their reminder mailing. The sequence of mailings was initiated on February 9, 2007 and contacts continued through June 19, 2007. The overall response rate was 50.4% by principal investigator (n=111) and 46.3% by project (n=128).

Data from on-line surveys were electronically entered in the survey database established using Vovici software. Data from paper surveys were entered manually by project team members. Data were downloaded into SPSS from Vovici for analysis. Descriptive statistics including frequency counts, percentage,

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range, mean and standard deviation were used to describe the findings. One-way analysis of variance and t-tests were used, as appropriate, to determine differences in mean scores by respondent groups.

Major findings:

- Farmers or ranchers were involved in most NCR-SARE funded research and education projects. Participation in project planning was the most common type with 80.2% of respondents indicating farmers or ranchers involved in this way. The next three most common types of farmer/rancher involvement were speaking about the project at a meeting or field day (63.5%), active involvement in on-farm research or demonstration (58.7%), and providing for land/equipment for test plots or site for a tour (57.1%). Much less common were farmers/ranchers co-authoring a paper or other project (12.7%) or acting as the project's principal investigator (10.3%). Although the percentage of farmer/rancher PI's was only 10.3%, that level is still noteworthy because most PI's for SARE Research and Education projects are university faculty members or nonprofit organizational staff members.
- Extension personnel were involved in most NCR-SARE funded R&E grants. Interactive learning from project results was the most common type with 78.6% of respondents indicating Extension personnel involved in this way. That was closely followed by 75.4% reporting Extension participation in project planning, 73.0% reporting Extension speaking about the project, and 64.3% reporting that Extension was involved with applied research or demonstrations. Over two-fifths (43.7%) reported that Extension personnel were principal investigators and 42.1% of respondents indicated Extension personnel involvement in authoring or co-authoring Extension materials. Over one-third (35.7%) reported Extension personnel involvement in authoring or co-authoring scholarly articles or papers.
- Graduate and undergraduate students were involved in most R&E grants. Most respondents reported student involvement of some sort with 71.4% reporting that students were employed or otherwise worked on the project. 38.9% of respondents reported that students made a presentation related to the project and 33.3% that they authored or co-authored a scholarly paper or article. 22.2% reported that students authored or co-authored Extension materials and 15.1% reported student involvement in other ways.
- Respondents listed key impacts or results of their projects. Categories and examples of each, categorized by several major types of outcomes and impacts that NCR-SARE projects typically produce, were:
 - 9 respondents provided project impact statements that dealt mostly with **increased awareness about various aspects of sustainable agriculture**. For instance, "An opportunity to study the feasibility of wheat blends. A chance to show the results to farmers. A chance to interact with the seed industry regarding wheat blends."
 - 3 respondents provided project impact statements characterizing projects as **creating increased interest**. For example, "Student participants develop an appreciation of the complexity of farming and of the potential for sustainable agricultural practices to improve society."
 - 65 of the impact summaries — well over half — focused mainly on **increased knowledge or skills** as the significant project impacts. For example, "Organic matter management correlated strongly to the success of organic fruit farming systems." Or "Low cost input beef production systems are economical and sustainable."
 - 15 project impact statements described **changed behaviors or practices**. For instance, "The key impact, from memory, was the construction and utilization of a greenhouse."
 - 8 respondents provided impact statements that focused on **changing a system**. For example, "The project was instrumental in developing a base

location for integrated applied on-farm research. It also established a network of personnel and information for doing on-farm research. Moreover, the initial work resulted in a significant gift to the university to continue applied research.

- Over two-fifths (43.0%) of the respondents noted unanticipated impacts or results that they attributed to the NCR-SARE research and education program. The most frequent responses included lack of project success, unanticipated support and prompting of further work.
- As comprehensive as any initiative tries to be, no project can resolve every possible issue for every possible participant. Over half (53.5%) of respondents noted issues which they felt had been left unresolved after their NCR-SARE project conclusion. Frequently mentioned issues included the need for more and better networking, difficulties with documentation of findings, identification of areas needing further study, and need for more funding. Some respondents noted that the SARE efforts were not effective. For example, “Still cannot control thistles without herbicides.”
- SARE helps create networks which can deal with future issues. These networks can be among colleagues or institutions. Data show that interpersonal collaborations were most frequently reported: collaboration with a new colleague (70%), collaboration with a colleague previously worked with (64%), and influence on the direction of a colleague’s work (60%). However, extra-institutional collaborations were less frequently reported: collaboration between a Land Grant and a non-profit (58%), collaboration between an 1862 and 1890 Land Grant (8%), collaboration between an 1862 and 1994 Land Grant (5%) and collaboration between an 1862 and 1994 Land Grant (5%).
- Over half (54%) indicated that they were able to use their North Central Region SARE project to leverage other funds for their project. 50.0% reported that they launched a new project that built on their NCR-SARE project and that used other sources of funds. 8% reported other funding advantages that resulted from their NCR-SARE project.
- Respondents who had reported any funding advantage from their North Central Region SARE project were further asked to indicate how many different funding sources they had tapped and how much funding they had leveraged. Almost half (48%) of respondents reported no additional funding. 27.1% reported funding from one source, 17.1% from two sources, and 7.8% from three sources. The amount of funding varied considerably with 34.6% of respondents reporting \$1 to \$10,000, 24.3% reporting \$10,001 to \$50,000, 15.9% reporting \$100,000 to \$200,000, and 14.9% reporting \$200,000 or more. In all, respondents reported leveraging \$10,528,816 with their NCR-SARE funded projects. A mean of \$123,591 and median of \$40,000 was leveraged.
- Leveraged funding sources included USDA, other federal government, land grant institutions, other state government, foundations, non-profit organizations, food/ag businesses, farmer/rancher/commodity organizations, and miscellaneous sources. USDA and other federal sources each accounted for approximately 35% of the total amount leveraged, with all other funding categories making up the remaining 30%.
- SARE outreach activities are crucial to ensure that the maximum number of farmers is reached using provided resources. Findings indicate that each NCR-SARE project reached an average of 308 farmers or ranchers of whom 77 are female, two African American, two Hispanic, and four Native Americans.
- Spreading NCR-SARE’s message through various forms of media was assessed. Journal articles, Extension publications, fact sheet, websites, and book or chapter in a book were frequently used media.

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■ An attempt was made to document the perceived impacts on farmer production and marketing practices through an open-ended question. Responses were analyzed and findings categorized according to the general type of impact that research and education projects generally produce:

- 5 respondents noted **increased awareness of more sustainable approaches**. For example, "It created more awareness among conventional farmers regarding ecological and economic function of organic fruit farming systems."
- 5 respondents noted **increased interest in more sustainable approaches**. For example, "Increased interest in alternative swine rations and alternative cropping systems."
- 11 respondents noted increased knowledge about more sustainable approaches. For example, "The project pointed out a newly recognized advantage of using row covers on muskmelon: suppression of an economically important disease (bacterial wilt). This is in addition to the known advantages of yield enhancements and earliness of yield."
- 43 respondents noted **changed behaviors or practices leading to greater sustainability**. For example, "Increased the use of compost amendments for tomato production," and "some of the participants decided to move forward with aspects of the project and form a pork marketing cooperative."
- 5 respondents noted **systemic impacts** — impacts that changed infrastructure and can potentially affect an entire industry or commodity or state. For example, "We now have 8 certified organic acres at university experiment station campus," and "improved quality increases the competition among processors for milk."

■ Over half (53.6%) reported that their NCR-SARE project did not focus on net income change and nearly one third (32.8%) did not respond to the question about project impacts of farmer net income. Some 12% of respondents estimated that farmer net income increased and 1.6% that it decreased.

Personal and Institutional impacts

■ Respondents were asked how participating in an NCR-SARE project had affected their promotion and tenure. Over half (53.3%) reported a somewhat or very positive effect. Less than one-third (30.5%) reported no effect and 3.8% said they did not know. Few respondents (3.8%) reported a somewhat negative effect. About one in ten (8.6%) reported that they did not work within a university setting.

■ When asked to assess any change in support for sustainable agriculture research and extension at their institution, about two thirds (67%) reported that support had somewhat or greatly increased. 14.5% reported that support had somewhat or greatly decreased. 10.7% reported no effect, 7.8% reported that the question did not apply to their situation.

■ Could the support of sustainable agriculture within their institution be attributed to the North Central Region SARE grants program? Of those responding, 64.5% strongly or somewhat agreed; 9.6% strongly or somewhat disagreed; and 16.3% neither agreed nor disagreed. In addition, 2.9% reported "does not apply" and 6.7% reported that they did not work within a university setting.

■ NCR-SARE funded projects have made systematic impacts in teaching agricultural science as the findings or experience have been used in several classroom settings. Many researchers indicated that the findings or experience have been incorporated into the regular ongoing college/university course work. Others indicated giving special one time presentations in the classroom.

- Respondents were asked to rate various aspects of applying for North Central Region SARE funds. On a scale of 1 being very poor and 5 being excellent, most of the mean ratings for the application process were between good and excellent. Respondents rated ease of obtaining grant application forms the highest, with a mean rating of 4.47.
- When asked to rate various aspects of North Central SARE's grant-making process using the same scale as above, highest rated was interaction/ communication with NCR-SARE staff members with a mean rating of 4.31. It was closely followed by responding to the post-awarded requests in a timely manner (4.24). Next were providing timely official notification of review process outcomes (3.96) and keeping applicants informed on the status of their application and the funding decision (3.94). Somewhat lower were timeliness of distributing funds for awarded projects (3.72); reporting requirements that eliminate redundancy (3.66); clarity of feedback from the review process (3.42); and nature and number of requirements and provisions relative to size of grants (3.39).
- How satisfied were researchers with North Central SARE programs and services? 84.8% of those responding reported being very or somewhat satisfied with NCR-SARE programs and services, with only 7.6% reporting that they were very or somewhat dissatisfied. 4.8% reported being neither satisfied nor dissatisfied and 2.8% reported no opinion.
- To what extent do North Central Region SARE programs and services meet their expectations? About half of those responding (48.1%) reported that NCR-SARE programs and services meet their expectations; 28.3% reported that they somewhat exceed their expectations, and 11.3% reported that they greatly exceed their expectations. No respondents reported that NCR-SARE programs and services greatly fall short of their expectations, but 8.5% reported that they somewhat fall short of their expectations and 3.8% reported "no opinion."
- What one thing should North Central Region SARE do to improve its program services? 58.8% of respondents wrote a suggestion. The top suggestion was providing more money. Next were shortening the time between application and funding and having a pool of better grant reviewers. Others included better reporting of findings, simplifying the process, and more farmer representation on Administrative Council.

In summary, North Central Region SARE has funded approximately 330 R&E grants to 260 principal investigators. Most of the projects were planned in collaboration with agricultural producers and Extension staff. Graduate and undergraduate students were hired to implement the project activities. The findings were widely shared with farmers, Extension personnel, and students through journal articles, newsletters, bulletins, workshops and classrooms presentations. Farmers and ranchers have actively participated in field days and workshops and received research-based information through Extension publications.

Over the past 20 years, NCR-SARE has made a systematic attempt to develop sustainable agricultural technologies and practices and disseminate these to farmers, ranchers and agribusinesses. Researchers have formulated new ideas that prove to work and they have been able to share these ideas through networking. Results of NCR-SARE have been instrumental in shifting market dynamics to more sustainable and/or local agriculture. Integrated pest management, matching nutrient requirement of the cow through rotational grazing, marketing of agricultural products locally are some frequently mentioned areas where researchers have made impacts. Impact on enhanced farm income has not been the focus of many research projects. However, many researchers indicated that their research project has contributed to increased net returns.

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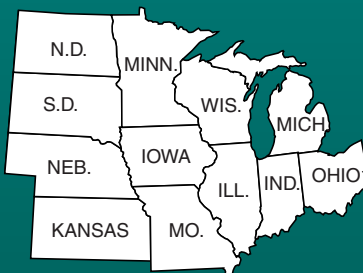
The art and science of sustainable agriculture is rapidly evolving. NCR-SARE has been a pioneer in supporting this initiative through research and education grants. Findings of this survey show that researchers, educators, agricultural producers, agribusinesses and nongovernmental organizations have been collaborating in testing new ideas and developing a knowledge base to address agricultural sustainability. Continuity of support to this novel effort is required to strengthen the knowledge base and disseminate the new information to the end users.

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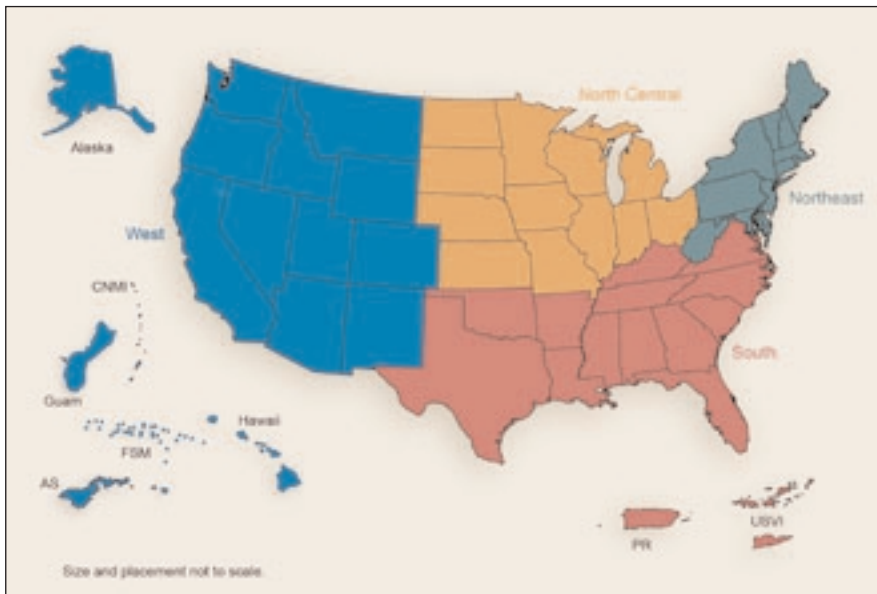
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The North Central Region Sustainable Agriculture Research and Education (SARE) program is one of four regional competitive grants programs funded by the United States Department of Agriculture (USDA). The goal of the SARE program is to enable the full spectrum of American farmers and ranchers to move profitably toward production systems that are compatible with the concepts of sustainable agriculture. The North Central SARE region comprises 12 states (see tan section of Figure 1).

Figure 1. SARE Regions



The North Central Region SARE program administers grants in several categories that aim to increase knowledge about sustainable agricultural practices and to help farmers and ranchers adopt those practices. Sustainable agriculture is an integrated system of plant and animal production practices that will, over the long term, satisfy human food and fiber needs; enhance environmental quality; make efficient use of non-renewable and on-farm resources; sustain economic viability of farm operations; and enhance the quality of life for farmers, ranchers, and society as a whole. SARE works toward these goals by funding research, education, on-farm research, and professional development activities.

The North Central Region's SARE Research and Education (R&E) grants program was established in 1988 to support farmers, ranchers, and agribusinesses seeking to learn about sustainable agriculture production systems or marketing approaches. North Central Region's SARE R&E grants program funds research and educational projects that include outreach and educational components to disseminate project findings to farmers and ranchers, extension personnel, other pertinent user groups. Many North Central Region SARE-funded projects involve scientists, farmers/ranchers and others in an interdisciplinary approach. Projects might involve on-farm research trials with crops and/or livestock, quality of life, agricultural marketing, integrated farming systems, or soil and water conservation. Each grant is selected through a competitive review process and encompasses between one and three years.

Specifically, North Central Region SARE guidelines for funded projects include:

- The R&E grants are built by collaborative teams.
- Producers are key participants in grant activities.
- Projects focus on farm and ranch profitability.

Background to the Evaluation

Background to the Evaluation

- Researchers are encouraged to explore social, environmental and economic aspects of whole systems.
- All projects include a strong outreach component (NCR-SARE, 2007).

The North Central Region SARE program has funded approximately 330 Research and Education projects to 260 principal investigators since its inception. North Central Region SARE has gathered results-based data directly from grant recipients in the form of annual progress reports and final project reports. In 2006, North Central Region SARE began a more systematic process to assess the reach and measurable impacts of all of its granting programs. This evaluation is a portion of the overall effort.

Evaluation purpose and objectives

The purpose of this evaluation, as set forth in the 2006 Request for Proposals, is to determine the quantifiable impacts of these R&E grants and the reach or diffusion of the grantees' efforts to farmers, ranchers, and other pertinent user groups particularly in the general locale of the funded project. The primary research objectives are to:

- 1) Determine if the scientific community accepted the research (refereed publications). (Impact)
- 2) Determine what impact adopting the change may have had on some facet of farming/ranching operations (e.g., profitability, increase or decrease in labor or management, fertilizer costs, yields per acre, soil/air/water quality changes). (Impact)
- 3) Determine how many other farmers or ranchers attended field days or had personal visits with the researchers/educators. (Reach)
- 4) Estimate how many of those visiting farmers or ranchers also tested or adopted a practice or technology. (Reach)
- 5) Determine if changes in the grant-making, contracting or reporting process, or requirements are necessary to make the program more user-friendly, based on the comments of grantees. (Customer Service)

Evaluation methodology

The Center for Evaluative Studies in Michigan State University's Department of Community, Agriculture, Recreation and Resource Studies (MSU CARRS) responded to the 2006 Targeted Request for Proposals (RFP) from the North Central and Southern SARE Regions. The RFP stipulated that researchers use a grant recipient survey already developed in Western Region SARE. Several small and regionally specific changes were made to the prototype survey, but there were no major modifications per the guidance researchers received from project funders. Members of the four-person North Central Region SARE evaluation committee reviewed and approved the survey draft once it was finalized.

A survey of all North Central Region SARE R&E grant recipients was conducted in winter and spring 2007. In a second phase of the evaluation, farmers and ranchers who were involved in the various projects or were directly impacted by the results of project is planned in winter 2008. The results from the farmer and rancher survey will be presented in the companion report.

The R&E grant recipient survey questionnaire had two main sections. In the first section each recipient, or the principal investigator for the project, was asked to respond to questions about how the project was administered, what were its main activities and overall impacts, what products were produced as a result of the project and how the products were disseminated. If the principal investigator had more than one North Central Region SARE R&E projects, he/she was asked to fill out this section for each project. In the second section of the survey, recipients were asked about their general impressions of the proposal submission and review process and the overall grant administration through North Central Region SARE.

Background to the Evaluation

Evaluation implementation

Once the questionnaire was finalized, it was programmed into a web survey format using Websurveyor (now Vovici). A paper and pencil version was also formatted and printed. Each respondent was assigned a unique identification/access code for the survey. This number provided a way to track returns, to follow up with non responders, and to limit access to the survey to only those who were asked to participate.

Principal investigators were contacted through a series of postal and electronic mailings. In each mailing the survey webpage link and unique access code were provided. In the electronic mailings, respondents could link directly to the survey from within the emailed message. Follow-up reminder mailings were used to increase overall response rate. During the 18 week of data collection, non-responders received a paper version of the questionnaire in their reminder mailing. The sequence of mailings was initiated on February 9, 2007 and contacts continued through June 19, 2007.

Survey description

The survey was based in large part on a similar survey developed by Western Region SARE as was specified in the call for proposals to conduct this evaluation project. MSU researchers reviewed the Western Region survey, suggesting and making several minor changes.

Table 1: Sample size, dates of initial invitation and reminders and response rate.

Sample Frame	
By principal investigator	260
By project	330
Valid Sample Frame^a	
By principal investigator	232
By project	296
Survey Process Dates	
Invitation letter (mailed)	February 9, 2007
First reminder letter (mailed)	April 4, 2007
Second reminder (electronic)	May 2, 2007
Third reminder (electronic)	May 18, 2007
Fourth reminder(electronic)	May 31, 2007
Closing date (official announcement)	June 19, 2007
Closing date (cancelled electronic access)	June 25, 2007
Number of Respondents	
By principal investigator/project leader	111
By project	128
Number of Denials	
By principal investigator/project leader	6
By project	9
Response Rate^b	
By principal investigator	50.4%
By project	46.3%

^aExcludes 4 PIs who were deceased; 23 PIs who were not reached because of wrong/missing contact information and 1 contact that was not a PI (28 PIs with 34 projects)

^bNumber of respondents plus denials over valid sample.

Background to the Evaluation

Identification of survey participants

The North Central Region SARE office provided researchers with a spreadsheet containing Research and Education project information from 1988 through 2006. There were 260 principal investigators (PIs) or project leaders who were responsible for 330 distinct projects. After excluding four principal investigators who were deceased, 23 who were not reached because of wrong/missing contact information and one contact that was not a PI (28 PIs with 34 projects) 232 principal investigators with 296 projects comprised the valid sample.

Survey procedure

Researchers sent a letter to each individual who was identified by NCR-SARE as a Research and Extension project leader. The letter listed title(s) of the project(s) for which they were PI and provided a brief description of the survey and its purposes. The letter provided a web address where PI's could complete the survey as well as a telephone number and e-mail address where they could request a paper copy of the survey. An identification number was assigned each individual R&E project. PI's were required to use that identification number to enter the on-line survey.

The survey schedule was:

Invitation letter (mailed)	February 9, 2007
First reminder letter (mailed)	April 4, 2007
Second reminder (electronic)	May 2, 2007
Third reminder (electronic)	May 18, 2007
Fourth reminder(electronic)	May 31, 2007
Closing date (official announcement)	June 19, 2007
Closing date (cancelled electronic access)	June 25, 2007

The response rate was 50.4% by principal investigator (n=111) and 46.3% by project (n=128).

Table 2: Award years and states of responding projects.

	# of Grants Awarded	Respondents
Year the Grant was Awarded		
Early (1988-1993)	107	25
Middle (1994 – 1999)	138	42
Recent (2000 – 2006)	115	60
Unknown (Planning Projects)	0	2
Total (N)	360	129
Response Rate for Participating States		
Illinois	12	6
Indiana	11	4
Iowa	41	14
Kansas	21	12
Michigan	32	12
Minnesota	52	18
Missouri	19	8
Nebraska	38	19
North Dakota	19	9
Ohio	38	14
South Dakota	18	4
Wisconsin	46	8
Total	360	128

^aThese cases were dropped from further analysis

Data entry

Data from on-line surveys was electronically entered in the survey database established in Vovici. Data from paper surveys was entered manually by one of the project team members.

Data analyses

Data were downloaded into SPSS from Vovici. Data were randomly checked for accuracy using frequency analysis. Data were analyzed using SPSS.

Threshold for reporting has been 5 respondents. Hence, there is n/a when a question had four or less respondents.

Descriptive statistics including frequency counts, percentage, range, mean and standard deviation were used to describe the findings. One-way analysis of variance and t-tests were used, as appropriate, to determine differences in mean scores by respondent groups.

Background to the Evaluation

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NCR-SARE Project Assessment

(Responses by Project)

Farmer/rancher involvement

Respondents were asked to indicate whether, how and how many farmers or ranchers were involved in the project. Respondents were presented seven types of possible project involvement — planning, on-farm research or demonstration, provision of land or equipment, public speaking, co-authoring, principal investigator, and other. For each possible type of involvement, respondents were asked whether or not farmers or ranchers were involved in their project in that manner and if yes, how many farmers or ranchers. Table 3 presents data on farmer/rancher involvement in NCR-SARE research and education projects.

Participation in project planning was the most common type with 80.2% of respondents indicating farmers or ranchers involved in this way. The next three most common types of farmer/rancher involvement were speaking about the project at a meeting or field day (63.5%), active involvement in on-farm research or demonstration (58.7%), and providing for land/equipment for test plots or site for a tour (57.1%). Much less common were farmers/ranchers co-authoring a paper or other project (12.7%) or acting as the project's principal investigator (10.3%). Although the percentage of farmer/rancher PI's was only 10.3%, that level is still noteworthy because most PI's for SARE Research and Education projects are university faculty members or nonprofit organizational staff members. Many (41.1%) of respondents indicated other ways in which farmers or ranchers were involved.

The numbers of farmers/ranchers who were involved in various ways had fairly large ranges. Examining the median number of farmers/ranchers involved in each way may provide a more useful way to understand actual farmer/rancher involvement in the projects. Of respondents reporting farmer/rancher involvement in these ways, there was a median of one farmer per project who was principal investigator and one per project who co-authored a paper or other product. The median for farmers who spoke about the project at a meeting or field day was four and a median of four farmers participated in project planning. The median number of farmers who were actively involved in on-farm research or demonstrations was six, and the median number of farmers who provided land/equipment for test plots or a tour site was five.

Appendix A contains a list of all the "other" ways in which farmers or ranchers were involved in the projects. General categories included provision of resources and/ or data; developing instructional materials; participation in surveys or interviews; acting as teachers or mentors; provision or project guidance; participation in meeting; farmers learning groups; survey development; and miscellaneous.

The primary responses in the explanation of these other types of involvement were in efforts to teach and also efforts to act as mentors to farmers that might be new to particular programs. Examples of such responses were:

- "Each of the eight farmers that provided a tour site also spent 2-3 hours with the class explaining how their farm operates, and why they do what they do. They articulated, in their own way, their philosophy of farming."
- "They worked as mentors to participants of the program; experienced expert in seminars."

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NCR-SARE Project Assessment

(Responses by Project)

Table 3: Whether farmers or ranchers were involved in the NCR-SARE project and the number involved.

Ways of Involvement (n=126)	Involved (%)		Number Involved ^a		
	Yes	No	Range	Mean	Median
Participated in project planning	80.2	19.8	1 – 100	8.3	4.0
Actively involved in on-farm research or demonstration	57.1	42.9	1 – 45	9.4	6.0
Provided land and/or equipment for test plots or site for a tour	58.7	41.3	1 – 63	8.7	5.0
Spoke about the project at a meeting or field day	63.5	36.5	1 – 450	13.3	4.0
Co-authored a paper or other product	12.7	87.3	1 – 42	6.5	1.0
Principal investigator is/was active farmer ^{10.3}	89.7	1 – 2	1.1	1.0	
Other ways of involvement ^b	41.1	58.9	1 – 500	30.1	10.0

^aOnly include those respondents who had farmers or ranchers involved in this way.

^bSee appendix A for description.

Extension involvement

Question 3 asked whether, how and how many Extension farmers or ranchers were involved in the project. Respondents were presented eight types of possible project involvement - planning, applied research or demonstration, public speaking, co-authoring a scholarly article or paper, co-authoring Extension materials, interactively learning project results, principal investigator, and other. For each possible type of involvement, respondents were asked whether or not farmers or ranchers were involved in their project in that manner and if yes, how many farmers or ranchers. Table 4 presents data on Extension personnel involvement in Southern SARE research and education projects.

Interactive learning from project results was the most common type with 78.6% of respondents indicating Extension personnel involved in this way. That was closely followed by 75.4% reporting Extension participation in project planning, 73.0% reporting Extension speaking about the project, and 64.3% reporting that Extension was involved with applied research or demonstrations. Over two-fifths (43.7%) reported that Extension personnel were principal investigators and 42.1% of respondents indicated Extension personnel involvement in authoring or co-authoring Extension materials. Over one-third (35.7%) reported Extension personnel involvement in authoring or co-authoring scholarly articles or papers. and over one-fifth (21.4%) reported other types of Extension involvement.

The numbers of Extension personnel who were involved in various ways had fairly large ranges. Examining the median number of Extension personnel involved in each way may provide a more useful way to understand actual involvement in the projects. Of respondents reporting Extension personnel involvement in these ways, there was a median of one Extensionists per project who was principal investigator. Extensionists who authored/co-authored Extension materials, who authored/co-authored scholarly materials, who were involved with applied research or demonstrations, participated in project planning and spoke about the project at a meeting or field day all had a median of two per project. A median of 20.0s Extensionists interactively learned from project results, and four were involved in other ways.

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Appendix B contains a list of the “other” ways in which Extension personnel were reported to be involved in the projects. General categories included instruction (7); Extension as project leader/ PI (4); Extension facilitated contacts (4); contributions to research (3); and miscellaneous (4).

Table 4: Whether Extension personnel were involved in the NCR-SARE project and the number involved.

Ways of Involvement (n=126)	Involved (%)		Number Involved ^a		
	Yes	No	Range	Mean	Median
Participated in project planning	75.4	24.6	1 – 23	3.4	2.0
Involved with applied research or demonstrations	64.3	35.7	1 – 13	3.0	2.0
Spoke about the project at a meeting or field day	73.0	27.0	1 – 30	3.3	2.0
Authored/co-authored a scholarly paper or journal article	35.7	64.3	1 – 6	1.8	2.0
Authored/co-authored Extension outreach materials	42.1	57.9	1 – 6	2.1	2.0
Learned from the project results through in-service education, discussion with project leader, or other interactive means	78.6	21.4	1 – 200	31.5	20.0
Principal investigator is/was an Extension employee	43.7	56.3	1 – 7	1.6	1.0
Other ways of involvement ^b	21.4	78.6	1 – 10	5.3	4.0

^aOnly include those respondents who had extension personnel involved in this way.

^bSee appendix B for description.

Graduate/undergraduate student involvement

University assistance was a necessary part of the research and education portion of the NCR-SARE research project. Help was provided by faculty and other extension personnel, but integral assistance was also provided by students from both undergraduate and graduate programs.

Question 4 asked whether, how and how many undergraduate or graduate students were involved in the project. Respondents were presented five types of possible project involvement - employment, making a project presentation, authoring/co-authoring a scholarly article, authoring/co-authoring Extension materials, and other. For each possible type of involvement, respondents were asked whether or not students were involved in their project in that manner and if yes, how many graduate and undergraduate students. Table 5 presents data on student involvement in North Central Region SARE research and education projects.

Most respondents reported student involvement of some sort with 71.4% reporting that students were employed or otherwise worked on the project. 38.9% of respondents reported that students made a presentation related to the project and 33.3% that they authored or co-authored a scholarly paper or article. 22.2% reported that students authored or co-authored Extension materials and 15.1% reported student involvement in other ways. Although both graduate and undergraduate students commonly worked on projects and made project presentations, undergraduate students typically did not author or co-author either scholarly or Extension materials nor were they generally involved in other ways.

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The numbers of students who were involved in various ways had fairly large ranges. Examining the median number of students involved in each way may provide a more useful way to understand actual involvement in the projects. Of respondents reporting student involvement in these ways, there was a median of two undergraduate and graduate students working on each project that reported student involvement. A median of one graduate student and two undergraduate students were reported making project presentations. A median of one graduate student were reported to have authored/co-authored a scholarly publication and one to have authored/co-authored an Extension publication. A median of four graduate students were reported to have been involved in other ways.

Appendix C contains a list of the “other” ways in which students were involved in the projects. Over 40% of respondents indicated that students were involved in one or more of these “other” ways and provided a brief description of the nature of their involvement. Types of “other” student involvement included:

- Research assistance (5)
- General assistance (4)
- Course work (3)
- Outreach assistance (2)

Table 5: Whether undergraduate or graduate students were involved in the NCR-SARE project and the number involved.

Ways of Involvement (n=126)	Involved (%)		Undergrad. Involved (#) ^a			Grad. Involved (#) ^a		
	Yes	No	Range	Mean	Median	Range	Mean	Median
Employed or otherwise worked on the project	71.4	28.6	1 – 20	4.4	2.0	1 – 18	2.3	2.0
Made a presentation related to the project	38.9	61.1	1 – 50	5.9	2.0	1 – 10	2.2	1.0
Authored/co-authored a scholarly paper or journal article	33.3	66.7	n/a	2.0 ^b	2.0	1 – 4	1.6	1.0
Authored/co-authored Extension outreach materials	22.2	77.8	1 – 2	1.1	2.0	1 – 5	1.5	1.0
Other ways of involvement ^c	15.1	84.9	1 – 30	8.4	4.5	1 – 10	4.7	4.0

^aOnly include those respondents who had students involved in this way.

^bNone or too few cases to report

^cSee appendix C for description.

See appendix C for description.

Key impact and/or results

There were 114 responses to question 5, which asked for a three-sentence summary of the key impacts or results of the project. Responses were analyzed and findings categorized by several major types of outcomes and impacts that NCR-SARE projects typically produce. The categories of impacts included:

- 9 respondents provided project impact statements that dealt mostly with **increased awareness about various aspects of sustainable agriculture**. For instance, “An opportunity to study the feasibility of wheat blends. A chance to show the results to farmers. A chance to interact with the seed industry regarding wheat blends.”

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- 3 respondents provided project impact statements characterizing projects as **creating increased interest**. For example, “Student participants develop an appreciation of the complexity of farming and of the potential for sustainable agricultural practices to improve society.”
- 65 of the impact summaries — well over half — focused mainly on **increased knowledge or skills** as the significant project impacts. For example, “Organic matter management correlated strongly to the success of organic fruit farming systems.” Or “Low cost input beef production systems are economical and sustainable.”
- 15 project impact statements described **changed behaviors or practices**. For instance, “The key impact, from memory, was the construction and utilization of a greenhouse.”
- 8 respondents provided impact statements that focused on **changing a system**. For example, “The project was instrumental in developing a base location for integrated applied on-farm research. It also established a network of personnel and information for doing on-farm research. Moreover, the initial work resulted in a significant gift to the university to continue applied research.
- 4 responses were difficult to categorize in a meaningful way and were retained in a **Miscellaneous** category.

The entire list of key impacts can be found in Appendix D

Unanticipated impacts/results

Nearly half (55 researchers or 43.0%) of the respondents noted anticipated unanticipated impacts or results that they attributed to the NCR-SARE research and education program. The most frequent responses can be grouped into the following categories:

- 10 respondents noted that their **efforts were not effective**. For example, “The community food network per se was not successful. However, the project did lay the groundwork for several successful projects.”
- 8 respondents noted **unanticipated support** for the new project. For example, “More interest than we anticipated by the public and organizations on the issue of local food, which has led to a number of opportunities.”
- 6 respondents were enthused that their **efforts prompted further work and research**. For example, “The project appeared to widen interest in some crops (e.g., edamame, popcorn) and the interplay between varieties and growing conditions among some farmers and others.”
- 4 respondents **created publications** and were excited to use other publications. For example, “Ran out of books very quickly-huge demand. Had to leverage funding for another print!”
- 2 respondents were surprised that **new market options were developed**. “As other members of the Co-op learned about marketing strategies, they shared and mentored others not of the Co-op with emerging bison herds-not and expected result.”

The entire list of unanticipated impacts can be found in Appendix E

Unresolved issues

As comprehensive as any initiative tries to be, no project can resolve every possible issue for every possible participant. Over half (69 respondents or 53.5%) of respondents noted issues which they felt had been left unresolved after their NCR-SARE programs conclusion. These issues were categorized:

- 6 respondents said that there is a definite **need for more/better networking**. For example, “These are the ways the Heartland Network could be expanded or taken in a slightly different direction: Match beginning and experienced farmers in a mentoring or coaching relationship. Provide busi-

ness planning training and networking farm entrepreneurs to provide management and marketing coaches.”

- 6 respondents noted that the **SARE efforts were not effective.** For example, “Still cannot control thistles without herbicides.”
- 5 respondents commented on **difficulties with documentation.** For example, “This project involved collecting economic facts and figures from farms. While the group achieved consensus, there was some disagreement among participating farms on what data to collect and how it should be analyzed.”
- 5 respondents also identified **areas needing further study.** For example, “There is still much to learn about what key factors and what interactions dictate perennial ryegrass winter survival.”
- 4 respondents mentioned the **need for more funding and information.** For example, “Challenge was that after the project was completed, additional funding was not secured to take the project to the next level.”

The complete list of unresolved issues is available in Appendix F.

Collaboration

SARE’s efforts do not only focus on improving the lives of individual farmers, they also help to create networks which can serve to deal with future issues. These networks can be among colleagues or institutions.

Question 8 asked whether or not the project had led to various types of collaborations. Six specific types of collaboration plus “other” were provided as options. Data displayed in Table 6 show that interpersonal collaborations were most frequently reported: collaboration with a new colleague (70%), collaboration with a colleague previously worked with (64%), and influence on the direction of a colleague’s work (60%).

Institutional collaborations were less frequently reported: collaboration between a Land Grant and a non-profit (58%), collaboration between an 1862 and 1890 Land Grant (8%), collaboration between an 1862 and 1994 Land Grant (5%). Respondents also reported other types of influences or outcomes (17%). A complete list of these “other” responses may be found in Appendix G.

Almost all explanations of other influences had to do with some sort of new or improved collaboration among different parties.

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Table 6: Cooperation and partnership opportunities that NCR-SARE projects opened.

This NCR-SARE project led to...	N	Yes (%)
A new collaboration with a colleague previously worked with	125	64
A new collaboration with a new colleague	125	70
An influence on the direction of a colleague’s work	124	60
Collaboration between an 1862 and 1890 Land Grant	123	8
Collaboration between an 1862 and 1994 Land Grant	123	5
Collaboration between a Land Grant and a non-profit	125	58
Any other types of influences or outcomes ^a	119	17

^aSee appendix G for description.

Funding opportunities

Question 9 asked respondents whether they were able to use their North Central Region SARE project to secure funding in several ways. As displayed in Table 7, 54% reported that they were able to leverage other funds for their NCR-SARE project. 50.0% reported that they launched a new project that built on their NCR-SARE project and that used other sources of funds. 8% reported

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other funding advantages that resulted from their NCR-SARE project. The other funding opportunities included:

“Idea development for better chance at funding.”

“Provided background and baseline data for others work.”

“Willingness of a private funder to enhance project if required.”

A complete list of these “other” funding advantages is available in Appendix H.

Table 7: Funding opportunities derived from this NCR-SARE project.

This NCR-SARE project gave you the opportunity to ...	N	Yes (%)
Leverage other funds for the same project	125	54.0
Launch a new project that built on this one using other sources of funds	124	50.0
Any other types of outside funding advantages ^a	118	8.0

^aSee appendix H for description.

Question 10 asked respondents who had reported any funding advantage from their North Central Region SARE project how many different funding sources they had tapped and how much funding they had leveraged. Table 8 presents data about the sources and dollar amounts of funding derived from projects. Almost half (48%) of respondents reported no additional funding. 27.1% reported funding from one source, 17.1% from two sources, and 7.8% from three sources.

The amount of funding varied considerably with 34.6% of respondents reporting \$1 to \$10,000, 24.3% reporting \$10,001 to \$50,000, 15.9% reporting \$100,000 to \$200,000, and 14.9% reporting \$200,000 or more. In all, respondents reported leveraging \$10,528.816 with their NCR-SARE funded projects.

When the leveraged funding sources were listed and sorted, the general types of sources included USDA, other federal government, land grant institutions, other state government, foundations, non-profit organizations, food/ag businesses, farmer/rancher/commodity organizations, and miscellaneous sources. USDA and other federal sources each accounted for approximately 35% of the total amount leveraged, with all other funding categories making up the remaining 30%.

A complete list of the sources and dollar amounts of leveraged funds appears in Appendix I.

Table 8: Sources and dollar amounts of any funds derived from this NCR-SARE project.

	N	Percent	Descriptive
Number of Funding Sources by Project^a			
None	62	48.0	
One	35	27.1	
Two	22	17.1	
Three	10	7.8	
Total	129	100.0	
Amount of Funds Leveraged^b			
Mean			\$123,591
Median			\$40,000
Range (Min. – Max.)			\$50 – \$2,900,000

^aFor the list of funding sources, please go to Appendix I.

^bThese are dollar amounts of 107 funds derived from 67 projects.

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Project outreach

SARE outreach activities are crucial to ensure that the maximum number of farmers is reached using provided resources. Although farming and ranching in the North Central Region has been predominantly carried out by white males, the face of agriculture in the region is changing and broadening. Question 11 asked respondents to estimate the number of farmers/ranchers who attended outreach events as a part of the Southern SARE project.

Table 9 shows the number of total farmers as well as female, African American, Hispanic and Native American Farmers reached through these SARE Research and Education projects' outreach events.

Table 9: Estimate of farmers or ranchers reached through outreach events that were part of this NCR-SARE project.^a

	Descriptive ^a
Total Estimate of Farmers Reached	Total Estimate of Farmers = 29,245 Respondents' Number (N) = 95
Mean number of farmers	307.84
Median number of farmers	150
Range (Min. – Max.) number of farmers	0 – 5,000
Estimate of Female Farmers Reached	Total Estimate of Female Farmers = 5,200 Respondents' Number (N) = 68
Mean number of farmers	76.47
Median number of farmers	20
Range (Min. – Max.) number of farmers	0 – 2,000
Estimate of African American Farmers Reached	Total Estimate of African American Farmers = 127 Respondents' Number (N) = 68
Mean number of farmers	1.87
Median number of farmers	0
Range (Min. – Max.) number of farmers	0 – 50
Estimate of Hispanic Farmers Reached	Total Estimate of Hispanic Farmers = 132 Respondent's Number (N) = 60
Mean number of farmers	2.2
Median number of farmers	0
Range (Min. – Max.) number of farmers	0 – 50
Estimate of Native American Farmers Reached	Total Estimate of Native American Farmers = 217 Respondents' Number (N) = 54
Mean number of farmers	4.02
Median number of farmers	0
Range (Min. – Max.) number of farmers	0 – 100
Estimate of Other Racial Groups Reached^b	
Other	n/a

^aOnly include those respondents who knew or were able to estimate the number of farmers/ranchers attended to their outreach events.

^bNone or too little information was collected on this regard.

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NCR-SARE Project Assessment

(Responses by Project)

Impacts on farmer production, marketing, net income

Question 13 asked respondents to tell how the North Central Region SARE project has impacted farmers' production or marketing practices. The 88 responses were analyzed and findings categorized according to the general type of impact that research and education projects generally produce. The categories of impacts were:

- 5 respondents noted **increased awareness of more sustainable approaches**. For example, "It created more awareness among conventional farmers regarding ecological and economic function of organic fruit farming systems."
- 5 respondents noted **increased interest in more sustainable approaches**. For example, "Increased interest in alternative swine rations and alternative cropping systems."
- 11 respondents noted increased knowledge about more sustainable approaches. For example, "The project pointed out a newly recognized advantage of using row covers on muskmelon: suppression of an economically important disease (bacterial wilt). This is in addition to the known advantages of yield enhancements and earliness of yield."
- 43 respondents noted **changed behaviors or practices leading to greater sustainability**. For example, "Increased the use of compost amendments for tomato production," and "some of the participants decided to move forward with aspects of the project and form a pork marketing cooperative."
- 5 respondents noted **systemic impacts** — impacts that changed infrastructure and can potentially affect an entire industry or commodity or state. For example, "We now have 8 certified organic acres at university experiment station campus," and "improved quality increases the competition among processors for milk."

A complete list of responses to this question may be found in Appendix J.

Question 14 asked how many farmers/ranchers have changed their production or marketing practices as a result of the Southern SARE project.

Respondents were further asked to estimate the number of farmers or ranchers who changed their production or marketing practices as a result of their NCR-SARE funded project. Of the 55 respondents to this question, ten (18.2%) indicated that their project was not applicable to production or marketing practice changes and five (9.1%) that no farmers or ranchers changed practices. The 39 respondents who did report that some farmers changed practices estimated that a mean of 151 and a median of 29 farmers per project changed production or marketing practices, as a result of the project. Further, 29 respondents reported that farmers increased net income—a mean of 59 farmers and a median of 18 farmers per project. Two respondents reported that farmers or ranchers lost net income. Table 10 displays data from the responses.

Table 10-a and Figure 2 display data about the number of farmers/ranchers whom PI's estimated changed their production or marketing practices and their net income as a result of the NCR-SARE project.

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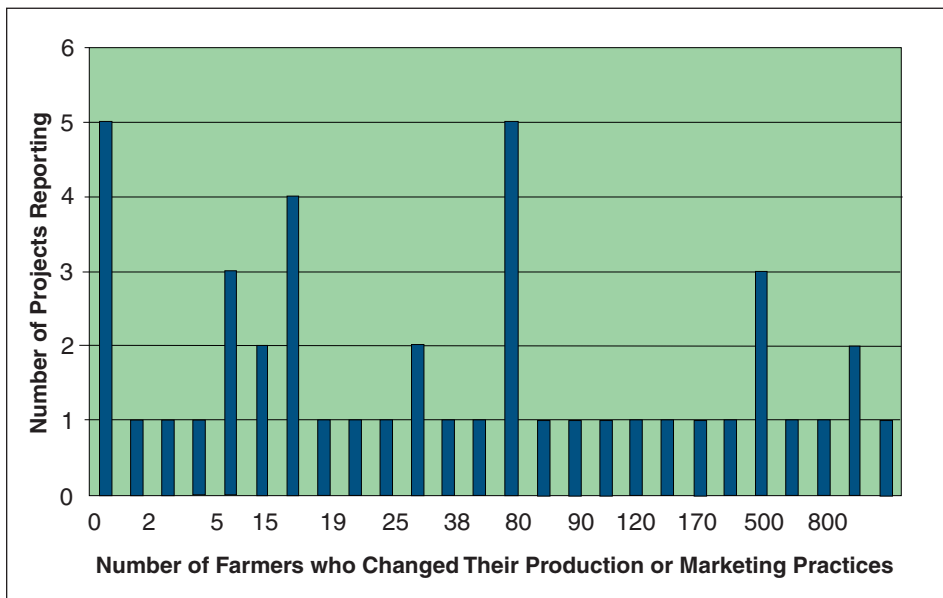
NCR-SARE Project Assessment

(Responses by Project)

Table 10-a: Number of farmers or ranchers whom principal investigators estimated changed production or marketing practices.

Number of Farmers who Changed Their Production or Marketing Practices	Total Number of Farmers = 6,643
Mean and Standard Deviation in the parenthesis (in number of farmers)	151 (346)
Median (in number of farmers)	29
Range (Min. – Max.) (in number of farmers)	0 – 2,000

Figure 2: Number of farmers or ranchers whom principal investigators estimated changed production or marketing practices resulting from NCR-SARE project involvement.



Question 15 asked how many farmers/ranchers increased their net income as a result of being involved with this Southern SARE project.

Table 10-b and Figure 3 display data about the number of farmers/ranchers whom PI's estimated changed their production or marketing practices and their net income as a result of the NCR-SARE project.

Table 10-b: Number of farmers or ranchers whom principal investigators estimated increased their net income.

Number of Farmers who Increased Their Net Income	Total Number of Farmers = 1,715
Mean and Standard Deviation in the parenthesis (in number of farmers)	59.14 (107.86)
Median (in number of farmers)	18
Range (Min. – Max.) (in number of farmers)	0 – 500

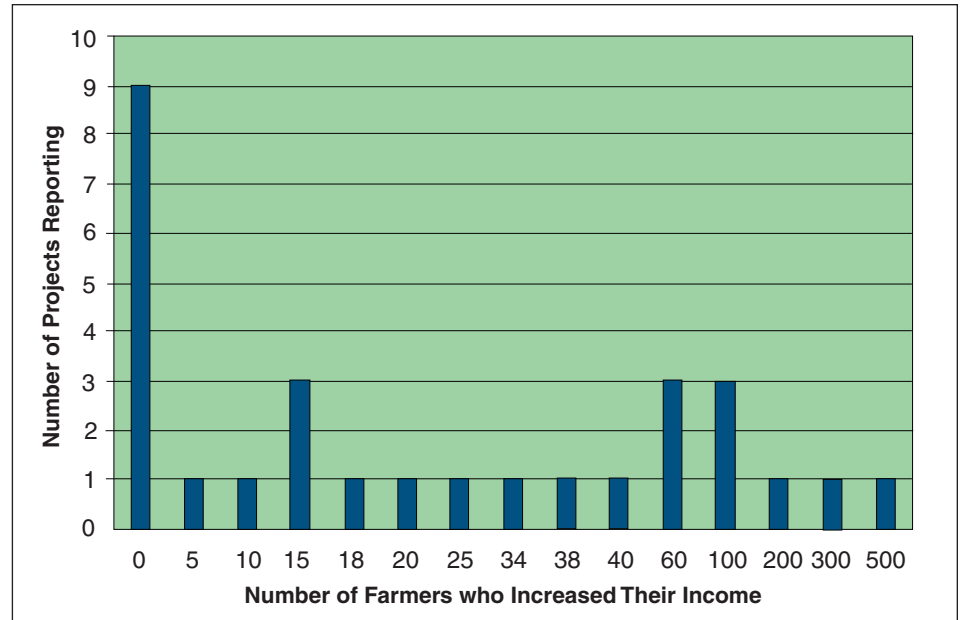
^aOnly include those respondents who knew or were able to estimate the number of farmers/ranchers who changed their production or marketing practices or increased their net income.

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(Responses by Project)

Figure 3: Number of farmers or ranchers whom principal investigators estimated increased their net income resulting from NCR-SARE project involvement.



Impacts on farmer net income

Question 16 asked respondents to estimate the average change in net incomes resulting from farmer involvement in this North Central Region SARE project. Tables 11 and 12 display data from the responses. Half (50.0%) reported that their project did not focus on net income change and nearly one third (32.8%) did not respond to the question. 12% of respondents estimated that farmer net income increased and 1.6% that it decreased.

Table 11: Estimates changes in farmers/rancher net income as a result of NCR-SARE projects.

	Respondents	Percent
Project did not focus on net income change	67	50
Farmers/ranchers net income increased	15	12
Farmers/ranchers net income decreased	2	1.6
Did not answer	41	32.8
Total	125	100.0

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NCR-SARE Project Assessment

(Responses by Project)

Table 12: Net incomes increased/decreased by farmers as a result of NCR-SARE projects.

	Dollar Amount (\$)	Unit of Measure	Number of Units	Total Increase (\$)
Net Income Increased				
Case 1 (Producer Mentoring Network)	26,000	Farm	500	13,000,000
Case 2 (Enterprise Diversification)	16,000	—	—	—
Case 3 (Improve Milk Quality)	11,000	Farm	30	330,000
Case 4 (Value Added Enterprise)	5,000	Farm	200	1,000,000
Case 5 (Feeder Pig Production)	5,000	Farm	—	—
Case 6 (Disease, Weeds and Insect Management)	2,500	—	25	62,500
Case 7 (Organic Tomato Processing)	2,000	Farm	20	40,000
Case 8 (Vegetable Production System)	200	Acre	40	8,000
Case 9 (Management Intensive Grazing--Dairy)	140	Animal	—	—
Case 10 (Vegetable Diseases)	100	Acre	5,000	500,000
Case 11 (Phosphorus Mobilization and Weed Suppression)	46	Acre	860	39,560
Case 12 (Use of Legumes)	30	Acre	1,800	54,000
Case 13 (Ladino Clovers and Perennial Grasses)	30	Acre	20,000	600,000
Case 14 (Disease Resistance in Oats)	10	Acre	20,000	200,000
Case 15 (Small Grain Variety Development)	8	bu/acre	—	—
Net Income Decreased				
Case 1 (Perennial Grass Cover)	480	Acre		2
Case 1 (Vegetable Production)	15	Acre		10

Comments about changes in farmer/rancher net incomes were provided by 28 respondents.

Table 13 displays the comments grouped in themes. Five of those responding provided an explanation of how they arrived at an estimate of net income changes. Five indicated that it was too early in the course of their project to evaluate net income changes. Seven provided some sort of qualitative statement about trying to evaluate net income changes. Four explicitly stated that they did not collect this data and four others reported that their projects were not focused on changing farmer/rancher net income. Two stated explicitly that they did not know and one requested a copy of the survey questions.

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(Responses by Project)

Table 13: Comments regarding change in net incomes that farmers or ranchers may have experienced as a result of NCR-SARE projects.

Comments about Farmer/Rancher Net Income Changes (N=28)

Explanations

A survey of XXXXX ranchers in 2001 showed 41% of 1523 ranchers were feeding about 1,600 pounds/year less harvested forage per cow compared to findings of a 1991 survey. We estimate increased net returns of about \$32.50 per cow for ranchers feeding less harvested forage.

At ~\$40 per ton, not applying gypsum is an expense not made, which could be viewed as a savings. Not applying 1 ton/A leaves \$40 per acre for other uses.

These are wild guesstimates. In year 1, we had a 7 bu/ac increase in oat yield in the blend relative to the average of pure lines. That is worth about \$10. Potentially blending oat could affect upwards of 400,000 acres in Iowa and Minnesota.

This project had a strong focus on income and monitoring income changes, but it is a stretch to suggest that the project alone accounts directly for all increases or decreases among the participants. There were specific examples, however, of farms that made changes in part due to what they learned through participating in the project that led to positive changes in both income and/or quality of life. For example, one farm increased their net income per acre by \$3,749 over three years after observing that they were under-mechanized compared to farms in their scale range. A CSA farm recognized that they needed to hire more outside labor and worked with their CSA membership to increase prices. This resulted in their net income (which they felt was satisfactory) remaining steady while they increased their payroll. They reported a vast improvement in terms of their quality of life.

This project was a response to producers who asked us to investigate how to make a profitable living from range. We used a 100 cow calf herd and showed a return to land, labor and management of \$26,534.29 and a return to management of \$9,489.59.

Too early

Project is still ongoing.

Since the project is still occurring, we do not have any data to provide here.

This portion of the project has not been evaluated yet.

Too early to estimate.

We should have something to say on the above at the end of the project but not yet.

Evaluation challenges

Economic impact has been quite small.

Dollar amounts were not provided. Many responses related to better forage production, reduced expenses, new markets, new enterprises that allowed more profits.

Greatly variable — "Average" is a wild guess.

As I commented on the previous project, it is difficult to know the extent to which information gained under this project is contributing to increased farm income. We did not focus on increased income as an outcome of the project, though it would have been good to do so.

Extremely difficult to evaluate.

The project focused on financial decisions by beginners, but their recordkeeping was inadequate, and small market fluctuations had major income impacts, so we were unable to determine financial changes through the project.

This is an excellent question but very difficult to answer quantitatively as asked. The use of improved varieties can have multiple, direct and indirect effects on farm income through increases in yield or access to markets. Controlled tests of farm performance with and without such varieties are challenging. Yet, examining yield alone, the use of an improved variety can result in 10-25% more product to sell while reducing fertilizer and other inputs.

Did not document

Data were not collected during this project.

It is very likely that income increased for producers who received training or participated in some other way under this project. However, we were not set up to evaluate this outcome, and it would be rather difficult, other than for new producers (where income would go from nothing to something), to attribute the proportion of any increase in income reported by a producer, to training done under this project.

(continued on page 27)

Table 13: (continued from page 26)

My knowledge of Q14 & Q15 is by word of mouth. Data were not collected to explicitly evaluate Q16.
We did not collect records at that scale.
Not focused on income
It was a regional SARE grant evaluation project.
Project did not focus on direct impacts on farm income.
We were focusing on water quality not production per se.
The project focused on sharing results of SARE projects but did not include any evaluation component to see how participants used the information shared.
Don't know
Don't know
No idea.
Miscellaneous
I would like a copy of this survey so that I can incorporate some of these questions in our workshop assessments. Workshops are planned for spring 2008.

Project instructional products

Another crucial element to spreading SARE's message is through various forms of media. Question 17 asked what main written or electronic products were produced from the project and question 18 asked respondents to categorize the products. Respondents were asked to list up to five products and to categorize each by type. Table 14 displays data about the number and types of products resulting from Southern SARE projects. 31% of respondents noted that no products were produced by the project. The next highest percentage is where one product was produced (27.1%) then two, then three and so on. The most common type of product produced was a journal article (29%), followed by extension publications (15.2%), and then fact sheets (9.2%). A complete list of the titles of instructional products reported appears in Appendix K and a list of the other types of products reported appears in Appendix L.

Section I

NCR-SARE Project Assessment

(Responses by Project)

Section II

NCR-SARE Institutional Assessment

(Responses by Principal
Investigators)

Table 14: Number and type of main written or electronic products produced from NCR-SARE projects.

	Respondents	Percent
Number of Products Produced by Project^a		
None	40	31.0
One	35	27.1
Two	26	20.2
Three	15	11.6
Four	10	7.8
Five	3	2.3
Total	129	100.0
Types of Products^b		
Book (or chapter in a book)	10	4.6
Handbook	2	.9
Work book	4	1.8
CD-ROM	2	.9
Video	2	.9
Fact sheet	20	9.2
Manual	2	.9
Newsletter	10	4.6
Extension publication	33	15.2
Software	1	.5
Website	17	7.8
Journal article	63	29.0
Other ^c	51	23.5
Total	217	100.0

^aRefer to Appendix K for the name of products.

^bThese are the types of 217 products derived from 89 projects.

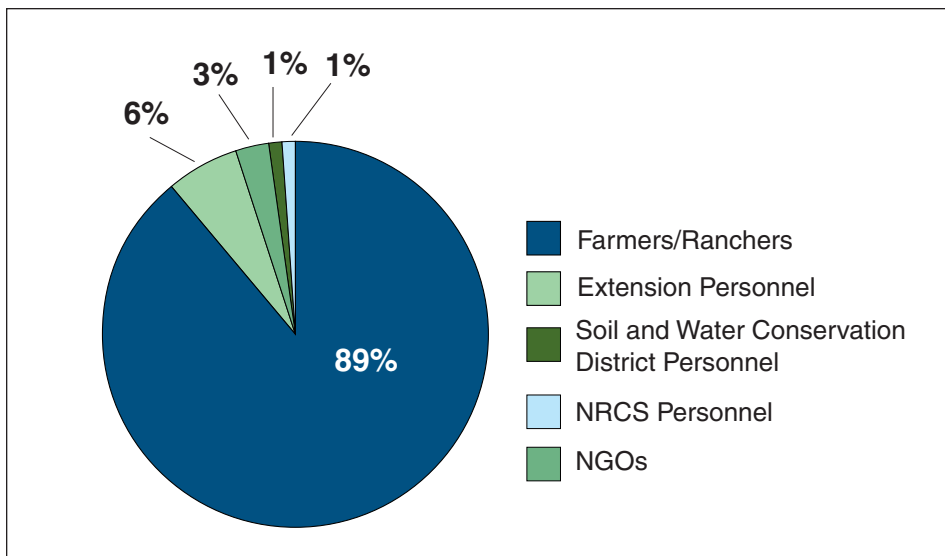
^cSee Appendix L for details on other types of products.

Question 19 asked respondents to estimate how many of each product was distributed to various SARE client groups. Table 15 and Figure 4 display data from their responses. By far, products were most frequently and abundantly distributed to farmers, who comprised almost nine of every ten recipients. The next most frequent recipient of such products was Extension personnel. The number of products to soil and water conservation district personnel, NRCS personnel and NGO's was significantly less.

Table 15: Type of written and electronic products distributed by NCR-SARE projects.

Types of product	Number of Projects Responding	Number of products distributed to the following groups				
		Farmers/Ranches	Extension Personnel	Soil and Water Conservation District Personnel	NRCS Personnel	NGOs
Book	10	4458	800	20	520	545
Handbook	2	18	10	0	0	15
Work book	4	270	45	15	15	5
CD-ROM	2	250	5	0	0	100
Video	2	5	55	3	0	27
Fact sheet	20	40800	1050	162	142	500
Manual	2	428	55	0	0	52
Newsletter	10	2330	595	162	96	135
Extension publication	33	31145	1453	241	240	229
Software	1	1500	1500	0	0	150
Website	17	2240	202	18	31	191
Journal article	63	1072	1502	210	291	727
Total		141144	9475	1232	1706	4079
Mean		1196.1	76.4	14.2	19.4	44.3
Median		150	30	5	10	16
Range (Max.-Min.)		35000	1500	100	250	600

Figure 4: Distribution of instructional products generated from NCR-SARE Project to Stakeholders.



Section I

NCR-SARE Project Assessment

(Responses by Project)

Section II

NCR-SARE Institutional Assessment

(Responses by Principal
Investigators)

Personal and Institutional impacts

Question 21 asked respondents how participating in an NCR-SARE project had affected their promotion and tenure. Over half (53.3%) reported a somewhat or very positive effect. Less than one-third (30.5%) reported no effect and 3.8% said they did not know. Few respondents (3.8%) reported a somewhat negative effect. About one in ten (8.6%) reported that they did not work within a university setting.

Question 22 asked respondents to assess any change in institutional support for sustainable agriculture research and extension at their institution over the past decade. About two thirds (67%) reported that support had somewhat or greatly increased. 14.5% reported that support had somewhat or greatly decreased. 10.7% reported no change, 7.8% reported that the question did not apply to their situation.

Question 23 asked respondents the degree to which they agreed or disagreed that support of sustainable agriculture within their institution could be attributed to the North Central Region SARE grants program. Of those responding, 64.5% strongly or somewhat agreed; 9.6% strongly or somewhat disagreed; and 16.3% neither agreed nor disagreed. In addition, 2.9% reported “does not apply” and 6.7% reported that they did not work within a university setting.

Table 16 displays data from responses to Questions 21, 22 and 23.

Table 16: Institutional and larger community impacts of NCR-SARE projects.

Performance Indicators	Respondents	Percent
Impact on Promotion and Tenure		
Very negative	0	0.0
Somewhat negative	4	3.8
No effect	32	30.5
Somewhat positive	27	25.7
Very positive	29	27.6
Don't know	4	3.8
Have not worked within university setting	9	8.6
Total	105	100.0
Change in Support for Sustainable Agriculture Research and Extension at Institutions (10 years)		
Greatly decreased	6	5.8
Somewhat decreased	9	8.7
No change	11	10.7
Somewhat increased	40	38.9
Greatly increased	29	28.1
Does not apply	8	7.8
Total	103	100.0
Perception that Increased Institutional Support for Sustainable Agriculture can be Attributed to NCR-SARE Grants Program		
Strongly disagree	5	4.8
Somewhat disagree	5	4.8
Neither agree or disagree	17	16.3
Somewhat agree	41	39.5
Strongly agree	26	25.0
Does not apply	3	2.9
Have not worked within university setting	7	6.7
Total	104	100.0

Teaching impacts

Question 24 asked respondents whether or not the results of their NCR-SARE funded project(s) had been used in several classroom settings. Table 17 displays data from their responses. 'N' refers to how many respondents noted either yes or no when prompted on their use in the following settings.

Two thirds (68%) of respondents reported that project results had been used in special, one-time classroom presentations. Half (52.5%) reported use in regular, ongoing college or university coursework and 7.3% in regular, ongoing kindergarten through twelfth grade coursework.

Table 17: Use of NCR-SARE funded project results in classroom settings.

Types of Use in Classroom Settings	N	Yes (%)
Regular, ongoing college/university coursework	99	52.5
Special, one-time classroom presentations	94	68.0
Regular, ongoing K-12 coursework	82	7.3

Application and grant-making processes

Question 25 asked respondents to rate various aspects of applying for North Central Region SARE funds. Table 18 displays data from the responses. On a scale of 1 being very poor and 5 being excellent, most of the mean ratings for the application process were between good and excellent. Respondents rated ease of obtaining grant application forms the highest, with a mean rating of 4.47. Following closely were ease of finding information about NCR-SARE funding opportunities, policies and procedures (4.38); ease of finding information about NCR-SARE-funded projects (4.17); and adequate time between grant announcement and deadline to submit proposals (4.11). The only aspect of application that was rated slightly below 4.0 or "good" was clarity of grant application forms, selection criteria and instructions at 3.97.

Question 26 asked respondents to rate various aspects of North Central SARE's grant-making process using the same scale as above. Highest rated was interaction/ communication with NCR-SARE staff members at a mean rating of 4.31, closely followed by responding to your post-awarded requests in a timely manner (4.24). Next were providing timely official notification of review process outcomes (3.96) and keeping applicants informed on the status of their application and the funding decision (3.94). Somewhat lower were timeliness of distributing funds for awarded projects (3.72); reporting requirements that eliminate redundancy (3.66); clarity of feedback from the review process (3.42); and nature and number of requirements and provisions relative to size of grants (3.39).

Table 18 displays data from responses to questions 25 and 26.

Section II

NCR-SARE Institutional Assessment

(Responses by Principal
Investigators)

Section II

NCR-SARE Institutional Assessment

(Responses by Principal
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Table 18: Assessment of NCR-SARE application and grant-making processes.

Performance Indicators	Percent reporting						Mean ^{ab}
	Very Poor	Poor	Fair	Good	Excellent	No Opinion	
Grant Application Process (N = 103)							
Ease of finding information about NCR-SARE funding opportunities, policies and procedures	1.0	0.0	5.8	45.6	45.6	1.9	4.38
Ease of finding information about NCR-SARE-funded projects	0.0	0.0	12.6	56.3	29.1	1.9	4.17
Ease of obtaining grant application forms	0.0	0.0	4.9	42.2	50.0	2.9	4.47
Clarity of grant application forms, selection criteria and instructions	0.0	5.8	13.6	55.3	22.3	2.9	3.97
Adequate time between grant announcement and deadline to submit proposals	0.0	1.9	12.6	53.4	27.2	4.9	4.11
Grant Making Process (N = 102)							
Keeping applicants informed on the status of their application and the funding decision	0.0	0.0	18.6	60.8	12.7	7.8	3.94
Providing timely official notification of review process outcomes	1.0	1.0	17.8	53.5	18.8	7.9	3.96
Clarity of feedback from the review process	2.9	7.8	36.3	39.2	6.9	6.9	3.42
Nature and number of requirements and provisions relative to size of grants	2.0	11.9	33.7	37.6	6.9	7.9	3.39
Timeliness of distributing funds for awarded projects	2.0	4.9	23.5	51.0	12.7	5.9	3.72
Reporting requirements that eliminate redundancy	4.0	6.9	14.9	58.4	8.9	6.9	3.66
Responding to your post-awarded requests in a timely manner	0.0	1.0	5.9	53.5	29.7	9.9	4.24
Interaction/communication with NCR-SARE staff members	0.0	1.0	9.8	42.2	40.2	6.9	4.31

^aThis excludes those who did not provide an opinion.

^bUsing a five-point Likert-type scale anchoring 1=very poor and 5=excellent.

Overall satisfaction and expectations

Question 27 asked respondents how satisfied they were overall with North Central SARE programs and services. Table 19 and Figure 5 display data from the responses. 84.8% of those responding reported being very or somewhat satisfied with NCR-SARE programs and services, with only 7.6% reporting that they were very or somewhat dissatisfied. 4.8% reported being neither satisfied nor dissatisfied and 2.8% reported no opinion.

Question 28 asked respondents the extent to which North Central Region SARE programs and services had met their expectations. Table 19 and Figure 6 display data from the responses. About half of those responding (48.1%) reported that NCR-SARE programs and services meet their expectations; 28.3% reported that they somewhat exceed their expectations, and 11.4% reported that they greatly exceed their expectations. No respondents reported that NCR-SARE programs and services greatly fall short of their expectations, but 8.5% reported that they somewhat fall short of their expectations and 3.8% reported “no opinion.”

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Table 19: Assessment of NCR-SARE program service.

Performance Indicators	Respondents	Percent	Descriptive ^a
Overall Satisfaction			
Very satisfied	49	46.7	
Somewhat satisfied	40	38.1	
Neither satisfied or dissatisfied	5	4.8	
Somewhat dissatisfied	6	5.7	
Very dissatisfied	2	1.9	
No opinion	3	2.8	
Total	105	100.0	
Range (Min. – Max.)			1 – 5
Mean ^b			1.72
Median			2
Expectations Assessment			
Greatly falls short of expectations	0	0.0	
Somewhat falls short of expectations	9	8.5	
Meets expectations	51	48.1	
Somewhat exceeds expectations	30	28.3	
Greatly exceeds expectations	12	11.3	
No opinion	4	3.8	
Total	106	100.0	
Range (Min. – Max.)			2 – 5
Mean ^c			3.46
Median			3

^aThis excludes those who did not provide an opinion.

^bUsing a five-point Likert-type scale anchoring in 1 = very satisfied and 5 = very dissatisfied.

^cUsing a five-point Likert-type scale anchoring in 1 = somewhat falls short of expectations and 5 = greatly exceeds expectations

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Figure 5: Overall satisfaction with NCR-SARE programs and services.

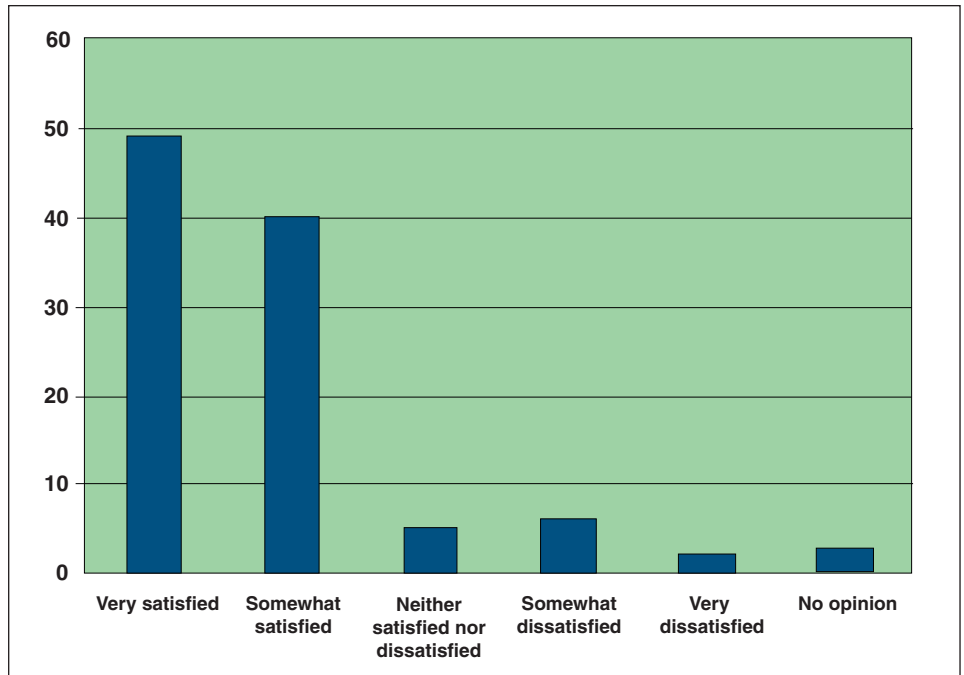
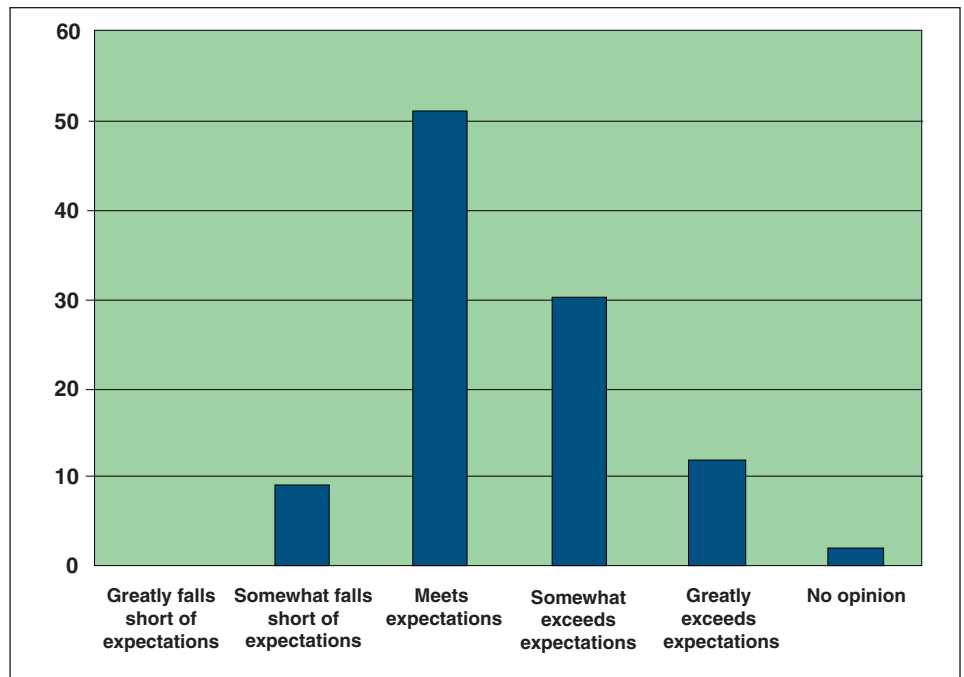


Figure 6: Extent to which NCR-SARE programs and services met expectations.



Improvements

Question 29 asked respondents what one thing North Central Region SARE should do to improve its program services. 58.8% of respondents wrote a suggestion. It comes as little surprise that the number one improvement was providing MORE MONEY!

This suggestion and others were analyzed and categorized. The categories and an example of each appear below:

- 10 respondents noted that the program could be improved if there was an

increase in available funding. For example, “More funding for research/extension on vegetable and fruit crops/”

- 8 respondents would like to see **less time between application and funding.** For example, “It took nearly a year and a half between the time that we submitted the application and the time we received funds.”
- 8 respondents would like to see **better grant reviewers.** For example, “Overall the project review process; I question the qualifications of some of the reviewers.”
- 7 respondents offered suggestions related to **simplifying the process.** For example, “The service is fine; the requirements of the proposals are often unrealistic.”
- 4 respondents would be interested in seeing **more farmer representation** on administrative council. For example, “Place nonprofit and farmer representation on the administrative council in equal proportion to the land grant and agency representation. This would help SARE be more innovative and responsive to farmer and rancher services.”
- 2 respondents indicated **problems in reporting** project results. For example, “I’ve had the website crash on me a couple times when trying to update reports.”

A complete list of responses to this question may be found in Appendix M.

Familiarity

Question 30 asked respondents whether they were familiar with other NCR-SARE-funded projects. Table 20 displays data from their responses. Of those responding, 60.9% reported being somewhat familiar with other NCR-SARE-funded projects. 14.5% reported that they were not familiar and 13.6% that they were somewhat unfamiliar. Just 10.9% reported that they were very familiar with other NCR-SARE-funded projects.

Section II NCR-SARE Institutional Assessment (Responses by Principal Investigators)

Table 20: Awareness of results from NCR-SARE funded projects.

Level of Awareness	Respondents	Percent
Not familiar	16	14.5
Somewhat unfamiliar	15	13.6
Somewhat familiar	67	60.9
Very familiar	12	10.9
Total	110	100.0

Question 31 asked respondents who reported being as least somewhat familiar whether or not they had learned about other projects in any of several ways. The 21 displays data from their responses. The most common way to learn about other NCR-SARE projects was through www.sare.org, with 89.7% of respondents using the site. Closely following were word of mouth (84.9%) and professional meeting presentations (83.7%). Less frequent ways were the ag press (52.4%), journal articles (48.2%), and field notes (47.6%). 10.2% of respondents indicated learning in other ways. The list of their responses appears in Appendix N.

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NCR-SARE Institutional Assessment

(Responses by Principal
Investigators)

Table 21: Ways respondents learn about results from NCR-SARE funded projects.^a

	N	Yes (%)
Project reports at www.sare.org	87	89.7
Journal article	83	48.2
Field Notes	82	47.6
Professional meeting presentation	86	83.7
Word of mouth	86	84.9
Ag press	82	52.4
Other way ^b	59	10.2

^aThis only includes those respondents who were somewhat unfamiliar, somewhat familiar or very familiar with results from NCR-SARE funded projects (see Table 24)

^bSee appendix N for description.

Question 32 asked respondents what one thing North Central Region SARE could do to increase their awareness of other projects. The 55 responses were analyzed and categorized. The categories and an example of each appear below in Table 22. Nearly half of those who offered suggestions recommended increased use of newsletters or e-mail. Other general types of suggestions included increased use of both agricultural and popular press; NCR-SARE involvement to help bring people together for interpersonal interaction; and more timely posting of information on the web. Some respondents felt that NCR-SARE is currently doing well to stimulate awareness of its programs.

Table 22: Suggestions to increase awareness of NCR-SARE projects (Open-ended).

Frequency	Category	Example
21	Greater use of e-mail and/or newsletters	"Use field notes to publish sharp blurbs on current work or even field notes to publish titles and program numbers."
8	Publish results in press	"Mass media press releases, with pictures and 'down-to-earth' results."
6	Bring people together	"Increase or initiate collaboration with the NC IMP center. Host symposia regional meetings of professional societies such as entomological society of America."
5	Post information on web	"Demand grant recipients to submit reports in a timely manner and post them quickly."
9	SARE is doing well now	"I think awareness materials are readily available."
6	Miscellaneous	"Require that it be credited with funding work."

A complete list of responses to this question may be found in appendix O.

Comments

Question 33 invited respondents to write additional comments about the questionnaire or about North Central Region SARE. The 38 responses were analyzed and categorized. The categories and an example of each appear below in Table 23. Nearly half commented on problems the respondents had experienced while trying to complete the survey, which was generally perceived as too long and difficult to answer.

Table 23: Comments about this questionnaire or additional comments about NCR-SARE (Open-ended).

Frequency	Category	Comments
4	Suggestions for SARE	“Essential to focus on environmental and social issues for future.”
18	Problems responding to survey	“Questionnaire is way too long.” “A long time between project and questionnaire; I retired 3 years ago.”
4	Survey duplicates other reported information	“I suggest getting answers first from publications and reports first. . . .”
9	Miscellaneous	“Don’t ever compromise the principles of sustainability in an effort to gain academic or institutional credibility.”

A complete list of responses to this question may be found in Appendix P.

References:

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Section II

NCR-SARE Institutional Assessment (Responses by Principal Investigators)

Section III Appendices

Appendix A: Other ways farmers/ranchers were involved in the NCR - SARE project (Open-ended, supports Table 3).

Other Ways of Involvement (N=47)
Providing resources, data
Data collection and observations
Providing soil samples
Recording detailed inputs on whole farm operation.
Recorded and shared financial data
Provided labor and other ranch records for field days and to compare to project data.
Provided native plant materials for the studies
This project was carried out in three states; XXXXX. At least four farmers in each state provided actually data for their farms or helped assemble data designed to exemplify sustainable farming systems.
Securing identification of grazing dairy herds.
Provided a large amount of on-farm logistical support for research activities
Materials development
Ongoing consultation and review of manuscripts prior to publication.
Review of draft DVD
Reviewers of 2 publications
Provided expertise in transferring information to other farmers. Provided expertise in developing publications.
of farmers who submitted photography for the concert
They were part of the film that we made and then showed it in their communities
Interviews & surveys
Farmers interviewed about practices for project summary.
Interviewed and ideas included in the video.
Interviews, financial data collection
Graduate research assistant also an active farmer; SARE farmers interviewed.
They were interviewed at the farms or in the community. Thus there was about 5+ hours of interviewing combined with participant observation on part of investigator
Helped design subsequent project. Answered surveys at Ag Fairs
Teachers, mentors
Discussed their farming practices and why they are doing it. This information has become part of our presentation to folks who are not familiar with animal agriculture. Provided names of other producers who could participate in our comparison study.
Each of the 8 farmers that provided a tour site also spent 2-3 hours with the class explaining how their farm operates, and why they do what they do. They articulated, in their own way, their philosophy of farming.
Mentors to participants of the program; experiential experts in seminars
Host farmers who provided individualized training to apprentices on their farms.
Served or offered to serve as host farmers, providing one-on-one training to apprentices
Transitional learning through mentoring others not members of the Coop
Project guidance
Farmers interest & questions led to the proposal submission
Gave some input and ideas on what the research should include.
They were on the steering committee which guided the management of the model farm in terms of when to market cattle and how to background and finish them. Also how to manage the whole farm enterprise for wintering the livestock.

(continued on page 39)

The program has continued on with classes being offered annually. A steering committee of mostly farmers guides the program and over 200 people have participated in class series
Meetings & workshops
A workshop was held to disseminate the results.
Provided training
Sponsored educational meeting
We took our research out to winter meetings across Michigan
Farmer learning groups
Lead farmer groups
Learning groups
Survey development
Survey design and survey participation.
They helped in the survey development process — pre-testing of survey.
Miscellaneous
Grower will be involved in an on-going organic advisory board to the University
Marketing organic produce.
Provided learning and work experiences for students
This is a curriculum for use by teachers. Case studies of sustainable farmers are an important part of the curriculum.
Traveled to help carry out the research on marketing alternatives
We evaluated the questions that went to ATTRA and linked them to the grants and the results of farmers SARE grants in the NC region

Appendix B: Other ways of Extension personnel were involved in the NCR-SARE project (Open-ended, supports Table 4).

Other Ways of Involvement (N=23)
Extension contributions to instruction
Publication production, workshop planning, development, and execution
Review of finished DVD
Review of manuscripts prior to publication
Reviewed 2 publications
Advised local learning groups
Collected images at the county extension office. Hosted a radio program on the subject.
Authored a local news release on the project.
Developed and taught a school for ranchers using findings from the project.
Extension as PI
I have an extension appointment as a university professor.
At our outstate R/E Center, the line between research and Extension appointments is very blurry.
PI an extension employee
Co-investigator is an Extension employee and has asked for input from Extension colleagues. However, the primary project audience is high school teachers.

(continued on page 40)

Section III Appendices

Appendix B: (continued from page 39)

Extension facilitated contacts
Contacts to obtain leads for prospective mentors; contacts for possible seminar presenters and for leads to experienced farmer experts for seminars
Extension personnel helped lined up the producers for our comparison study. We could not have done it without their help.
Regional extension personnel helped to coordinate efforts within their region related to the project.
XXXXX has a watershed network that is led by extension. We cooperated with them and our project is a model of collaborative partnering for them.
Extension contributions to research
Survey design and survey participation.
Conducted interviews to collect financial data
Shaped work with their questions
Miscellaneous Extension contributions
Attended field tours or other meetings
Meat processing lab
Few processing lab
No extension people in bison education

Appendix C: Other ways that students were involved in the NCR-SARE project (Open-ended, supports Table 5)

Other Ways of Involvement (N=16)
Student research assistance
Assisted with field experiments
Collected research data
Hourly research assistants
One was employed as an intern to research curriculum materials for the teaching segment of the program.
Assisted in evaluation data collection at the concerts
Course work
Ag. teachers who took a continuing education course at XXXXX tested parts of the curriculum in their classes as part of their course work
Course work participation
Participated in the course.
Student outreach assistance
Poster presented at annual meeting of ASA
All sorts of public outreach in our metro area
General project facilitation
Helped in viewing and discussing the rough cut and scripting, as well as in fact checking and making arrangements for filming.
International exchange visitor
project management, esp. meeting arrangements, mailings, other administrative tasks, assist with photos for publication
Undergraduate significantly helped plan and host follow up; graduate significantly helped design survey and implement.

Appendix D: Key Impacts or results from the NCR-SARE projects (Open-ended).

**Section III
Appendices**

<p>Key Impacts (N=114)</p>
<p>Increased awareness</p> <p>This project has exposed approximately 200 people to planning necessary before embarking on a production agriculture career. It has helped some start new ag enterprises and helped others realize production agriculture is not an appropriate career for themselves.</p> <p>Financial Indicators of Sustainability developed at U. Minn. were applied in a Michigan farm case study. Farmers, Extension Educators, and constituents of sustainable agriculture organizations in state were exposed to concept.</p> <p>An opportunity to study the feasibility of wheat blends. A chance to show the results to farmers. A chance to interact with the seed industry regarding wheat blends.</p> <p>The project provided a forum to raise issues in crafting Native/traditional marketing dynamics amongst Indian people/demographics.</p> <p>Looked at cost of production</p> <p>We were able to help in the linking farm level research to more general questions.</p> <p>The project demonstrated the important role of women in sustainable agriculture. It inspired others to be involved and gave students a new view of the possibilities for social change.</p> <p>This project explored and provided business planning for 129 farmers.</p> <p>Demonstrated the economic viability of intensive rotational grazing. Demonstrated the concept to farmers.</p>
<p>Increased interest</p> <p>Student participants develop an appreciation of the complexity of farming, and of the potential for sustainable agricultural practices to improve society. High school teachers are inspired and equipped to bring sustainable agriculture into their classrooms. Faculty and farmers are encouraged to continue their respective work.</p> <p>In early years of LISA/SARE, there was much doubt about how useful this approach could be. The video project gave confidence to many younger faculty and extension people that this strategy was worthwhile. We think the impact was mostly on university faculty.</p> <p>The Heartland Network stimulates local solutions to problems in agriculture through farmer-to-farmer clusters. These clusters choose to explore innovations such as management intensive grazing, pasture finishing, pasture farrowing, cover crops in crop rotations, organic farming, complementary on-farm and on-station research, relationship marketing, fresh produce subscription services, and cooperative marketing. In order to learn about these changes, clusters used their mini-grant resources for libraries in the local extension offices, field trips, training, on-farm demonstrations, market research, consultation, trade shows and publications. These activities provide opportunities to observe, make comparisons and judge innovative farming practices for themselves.</p>
<p>Increased knowledge, skills</p> <p>Enhanced learning by faculty and farmers</p> <p>We are showing that oat variety blends can reduce crown rust in oat. This result should lead to greater oat production in the upper-midwest, which would help diversify cropping systems. The method of blending crop varieties may have broader application to other crops.</p> <p>We found that deployment of spun-bonded row covers until bloom significantly reduced incidence of bacterial wilt on muskmelon in Iowa. In addition, the row covers enhanced yield and earliness of muskmelon. The row covers merit additional study as profitable IPM tools for muskmelon growers.</p> <p>The project demonstrated that the Australian Ley Farming concept can be adapted to the U.S. Northern Great Plains region.</p>

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We are improving the quality and availability of information available on biological pest management in the NCR. We are providing information targeted to growers who are using advanced management systems already (biointensive, organic.) We are working as a team at the regional level.

Small-grain cultivars best suited to organic production methods in Minnesota and North Dakota were identified.

Pasture improvement and renovation systems that reduce tillage intensity, increase the diversity for forage species and make efficient use of manure will protect the environment and improve farm profitability. Slurry seeding of grassland and pasture will increase the land base and windows of opportunity for manure land application. Slurry seeding will improve the profitability of grazing dairies and livestock farms in the Great Lakes region by providing a more dependable supply of high quality forage and increase the environmental sustainability of grazing dairy and livestock farms through more effective recycling of manure nutrients and maintenance of a dense, vegetative cover to prevent nutrient and sediment runoff.

1. Antibiotic feeding of food animals does increase antibiotic resistance in manure. 2. Led to new research area that land application of antibiotic containing manure may be contaminating our food supply. 3. Producers, scientists, students, and general public are very much aware of the issue of antibiotic use in food animal production and its impact of antibiotic resistance.

Leafy greens and lettuce are most susceptible for E. coli contamination than other vegetables. The microbiological safety and quality of organic vegetables is not significantly different from that of conventional produce. Use of cattle manure or composting is associated with E. coli contamination in vegetables.

High school teachers interested in teaching about sustainable agriculture now have a user-friendly resource available to them.

We developed a tool to evaluate the Producer Grant Program. We also offered an example of social impacts of SARE projects.

Those who adopt sustainable farming systems do not have a "paradigm shift." They have a father or other relative who did sustainable practices before they were called that. In addition it was statistically significant that they were conservation minded in household practices -- in all aspects of their lives.

The key impacts of this project were: 1) compost amendments suppressed foliar disease and increased yield in tomatoes; and 2) the effect of compost on tomatoes was variety dependent; and 3) compost teas were as effective as compost amendments in increasing yield in tomato, but the effects of amendment and tea were not additive. Further, we began to recommend compost amendments for tomato production for disease suppression and improved yield in both organic and conventional tomato production.

We identified that legumes tested were not suited for fall seeding in the region.

This project identified several aspects of farm startup through extended and repeated interviews with beginning farmers: identified importance of off-farm jobs during farm startup (and interdependence of small towns and young families); need for mentors during farm startup; importance of peer networks during farm startup.

The DVD provides easy to use, visual training that approximates hands-on field experience and that enables new scouts to see the changes that occur in orchard pest management over a complete growing season. The training video takes the viewer through the various stages of apple orchard development, identifying and highlighting the key pests and scouting required throughout the growing season.

1. Participants in this project learned how to identify 17 major indicators of rangeland health. Learned the importance of record-keeping and the importance of early adaptation and innovation.

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Matching nutrient requirements of the cow to nutrients in grazed forage by adjusting calving date from a traditional March to non-traditional June calving date resulted lower feed and labor costs and increased net returns by about \$70.00 per calf.

In a June calving system with year-long grazing, biostimulation (e.g. exposure of cows to sterilized bulls before the breeding season) in combination with grazing subirrigated meadows (meadows traditionally used to produce hay) improved pregnancy rate and net returns compared to cows receiving no biostimulation and grazing range. In a March calving system feeding cows protein supplement during winter grazing on rangeland increased subsequent survival of calves born after winter grazing and increased carcass weight of steers following finishing compared to calves from cows not fed protein supplement during winter grazing.

Organic matter management correlated strongly to the success of organic fruit farming systems. Economics and ecological function differed between conventional and organic fruit farming systems.

1. Increased knowledge among growers, researchers, and Extension about prevalent organic fertility management practices on vegetable farms. 2. Information about the costs and impacts of various soil fertility strategies. 3. Enhanced awareness of key issues and concerns of organic vegetable growers and resulting integration into University research projects.

Provided an educational opportunity for producers/farmers and educators to discuss sustainable ag production systems and identify teams/networks to lead sustainable ag research and extension programs in respective states.

We found that energy inputs were not needed by the strip system we used, but profitability could be impacted. Corn yields were improved and soybean yields suffered somewhat. Therefore, with higher corn; soybean price ratios, profitability was enhanced

Four processing tomato production systems, varying in levels of chemical inputs and cover crops presence were field tested in NW and Central Ohio. Crop growth/yield, fruit quality, pest levels and economic were thoroughly examined. Results suggest site-specific effects exist in the early transition period from conventional to organic production.

Farmers do not work well in a volunteer effort without direct impact to their work. They do work well in a collaborative effort producing results early on.

Recognition of the potential for ruminant animal production on crop farms. Discovery of the feed value of virtually all crop biomass in ruminant diets.

Animal gains were documented on pasture. Effect of grain supplementation on pasture was documented. Eating quality of PFB was documented.

Gypsum is highly promoted as an amendment for improving soil quality. Results of these on-farm large scale studies indicate that gypsum application has little effect on corn/soybean yields or on soil aggregate stability, bulk density or infiltration rate. And the long-term effect on the Ca:Mg ratio is small.

Better understanding of grass fed production, processing, marketing preparing. Discovery the perils of the under financing. Discovery of the need for professional management.

Extension bulletin developed from on-farm trials describing process leading a significant (usually about 50%) reduction in pesticide use while maintaining field equivalent to a normal pesticide application.

Socio-economic components of wetland management were investigated and published. Policy issues were addressed.

Demonstrated all of the inputs involved in nutrient and pest management on the farm. Quantified change in inputs required if behavior changed to more sustainable practices.

This project demonstrated that for specific traits in dairy cattle, there is very limited evidence of genotype by environment interaction. Therefore, graziers may select from among

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usual AI bulls in the dairy genetics industry.

We were able to establish endophyte-free and non-toxic endophyte tall fescue in Ohio. We were able to measure production on E- and Novel-E pastures. Novel-E pastures were not always profitable.

Since this project is ongoing, no final results are available, however we did determine that thiamin is not effective in reducing the impact of high-sulfate water. Another compound, clinoptilolite shows great promise, and will be studied beginning in summer 2007.

Grass species vary in their organic matter production when planted in riparian buffer strips. Grass species vary greatly in rooting capacity in riparian filter strips. Soil enzyme activity correlated very highly with root density.

Swine rations substituting field peas for part of the corn and soybean meal is a viable option for swine producers in Iowa. Peas double cropped after winter wheat is not a viable crop rotation in southern Iowa. Peas followed by double cropped soybeans or milo may be a viable crop rotation for southern Iowa.

Weeds were effectively suppressed by rye in no-till organic soybeans. Seed extracts were effective as preemergence bioherbicides.

We learned about the in-field application of cover crops in crop rotations.

Using crop rotation, with or without large/recommended doses of inputs, increased yield and profits. Cover crops were marginally effective; low input productions were not economically sustainable.

1) Providing comparison of six different farm environmental management programs; 2) Six case studies of successful farmer-level decision-making regarding sustainability; 3) General information on how sustainability is achieved across larger spectrum of farm management approaches.

This project allowed us to gather yield and profitability information in actual on-farm studies of alternative crops. We were able to engage farmers directly in identifying constraints to adopting crops of interest. We educated producers and ag advisors through field tours, winter meetings, and media outreach.

Low cost input beef production systems are economical and sustainable.

Students gain experience in the area of sustainable agriculture on farms, in non-profits and in the government sectors that without this grant would have been financially difficult to achieve.

This project allowed us to conduct the first US research on denitrification below MIG paddocks on sandy soils. We were also able to assess the forms of denitrified gases to determine if they were problematic greenhouse gases.

Herbicide rates were reduced without corn yield reduction where no-till cultivation and cover crops were used. There are interactions between cover crops, cultivation, and timing of operations that make it difficult to generalize about the effectiveness of these factors.

1) Demonstrate organic production sequesters C at rates => those reported for no-till in most long-term trials. 2) Legume based systems perform as well as manure or compost based. 3) Accumulation in per fraction might be the best test for organic.

1) Marketing jointly can overcome independence with strong leadership. 2) Joint marketing increased visibility of organic produce grown locally.

Pasture inclusion produced higher levels ($P < 0.05$) of total CLA than the feedlot diet on a mg/g fat basis for cooked samples while maintaining acceptable eating quality. Meat from all finishing regimes was considered acceptable by consumers. Profit potential exists for supplemented pasture systems, but is dependent on sound gains and grazing management and targeted marketing to consumers willing to pay a premium for CLA enhanced beef.

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Buckwheat increased the soil P concentration on land planted to buckwheat two years previously. The concentration increase appears to be proportional to the amount of biomass. Buckwheat is very competitive and effectively eliminates weed competition if an adequate stand is established. Buckwheat is an effective attractant for beneficial insects.

The study attempted to evaluate the use of a vegetative filter as an alternative manure management method (compared to lagoon or other storage). The project also measured the amount of manure that had to be handled in a pasture-based dairy system. Because of the small amount of manure deposited in the holding area and milk barn, the vegetative filter appeared to be suitable alternative manure handling system.

We learned that there was no satisfactory method yet available to control Canada thistle. Four years rotation of wheat-clover-corn-soybean provided sufficient N to produce optimum corn yields. Applying manure once during rotations was sufficient to supply nutrients to all crops, if applied at rate to supply N to corn before corn planting.

We learned from sustainable farmers, agriculture educators; and agriculture lenders that each needs hands-on exposure to experience with sustainable farm enterprises; records; a mutual understanding of "planning for profit"

A series of 16 workshops presented the following skills through hands-on learning: business and market planning; record keeping and enterprise analysis; marketing value-added products; small engine repair and maintenance; market garden and flower production; small frame construction; concrete and foundation work; hoophouse construction; soil quality; fence selection and construction; animal wellness and low-stress animal management; and recreational services provided on farms and ranches. These workshops were targeted to women farmers and generally limited to 20 participants. This series of 16 workshops drew 228 participants. All but one of the workshops were led by a woman trainer.

The techniques developed in this research show promise for reducing injury to corn by European corn borers. These methods should be most useful for sweet corn growers that are willing to interplant millet with their corn.

Some aspects of soil quality (aggregation, infiltration) were improved by growth of the cereal (wheat or rye) cover crops in the mixtures. The effect of one season of cover crop growth on soil microbial communities was small but observable. On many soils, several years of cover crop growth may be needed for significant changes to occur.

Beginning farmers are interested in sustainable agriculture practices. However, these families face extreme challenges in available time, limited finances and risk of failure. They find few support systems for information on the challenges.

Provided farmers with best combinations of grass/legumes for their pastures. Provided farmers with best legume to use for long-term pastures. Provided farmers with information on the most persistent and highest yielding perennial grass varieties/species.

Developed on-farm procedures and methods for reducing inputs and verifying on-farm site specific results.

This project showed that shredded newspaper with no chemical herbicides was as effective as herbicides alone in controlling weeds.

A multi-state team wrote and produced 2000 copies each of books about poultry and dairy management options (plus on-line version). The project increased farmers' awareness of livestock management options available to them. About 50% of surveyed readers said that as a result of reading the book, they planned to do more research, incorporate changes, and/or share the book with others.

Preliminary analysis showed that a single sample of 200 bees adult bees per colony provided the best precision level (0.25) to determine the mite (*Varroa destructor*) load and to make management decisions for an apiary. These conclusions will be verified through further sampling. Guidelines will be developed to help beekeepers make educated treatment

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decisions based on the sampling plan. Our line of bees bred for both Hygienic Behavior and Suppression of Mite Reproduction had significantly lower mite levels compared to an unselected line of bees demonstrating that this line can reduce mite loads and thus the frequency of pesticide application.

The incorporation of the trait, Suppression of Mite Reproduction (SMR), into our line of honey bees bred for hygienic behavior significantly reduced infestation of Varroa destructor mites within two commercial beekeeping operations relative to the pure hygienic line and a control line. We demonstrated that the mechanism of SMR is through adult bee removal of pupae on which mites are reproductively successful, more so than through physiological suppression of mite reproduction by bee pupae. We are developing a web-based course for beekeepers that emphasizes treating colonies for diseases and mites only as a last resort.

The project helped fill a glaring need for new market farmer training in the KC area. Training of new producers in organic and sustainable production and marketing techniques was a significant impact of the project. Additionally, improving the skills of existing farmers was an added benefit.

This is a continuation of a previous SARE R+E Project and is continuing the impacts of that effort. That is, we are training new market farmers for the Kansas City Food Shed. Also, the annual series of workshops we conduct is well attended by area producers who learn much from the lectures and farm tours.

Perennial ryegrass winter survival is highly variable, but often better than its reputation. However, we've never seen it persist for more than 3 winters. Perennial ryegrass can be a valuable contributor in a pasture mix, but should not be expected to persist well when grown as the sole grass.

To our knowledge, this project was the first of its type to document the performance of numerous varieties of various vegetable crops under a range of organic production conditions. The data will assist researchers, extension personnel and farmers, particularly as they work to understand genotype-environment interactions in organic vegetable systems. The data affirm that all varieties are not equally suited for organic systems and that a soil amendment may be needed to maximize yield.

Changed behaviors, practice

The project enhanced the decision making capacity of the group regarding new marketing arrangements. Some members of the group formed a sub-group that organized as marketing cooperative.

The most important thing was that the community came to believe that by receiving its first grant funding(SARE)the members of the KBFA came to realize (for the first time)that they had (in their farming history)something of value. We developed communications and a network beyond Kansas. Marketing is not easy!

Showed successful silivpastoral agroforestry practice

The key impact, from memory was the construction and utilization of a greenhouse.

SARE grant recipients from MI, OH, IL and IN gathered to discuss results of their projects. They exchanged ideas and networked around topics of mutual interest. Conference outputs included elements of a common vision, innovative farming practice inventory, barriers to greater sustainability, and potential areas of future collaboration.

Open-pollinate corn awareness. Open pollinated corn availability. Interstate cooperation

The purpose of this research was to explore the cultivation of non-timber forest products to enhance Appalachian farm owner income. Our research provided the detailed information needed to germinate the seeds of these species which have complex dormancy mechanisms. Local farmers have already begun cultivation of some of these herbs using our methods.

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1) Improved communication and understanding; 2) Best management practices; 3) developing a process for discussion of this issue.

The project demonstrated that sustainable farming systems have greater positive economic impacts on their local communities than do conventional farming systems. A computer-based community impact assessment model was developed to assist communities that might want to evaluate the potential impacts of shifting to sustainable farming systems on their communities. Publications evaluating actual community impacts on local communities in Nebraska, Minnesota, and Missouri were widely distributed and frequently cited in other work related to community impacts of sustainable farming.

The project was fundamental in getting us off the ground. The accomplishments keep growing. see: www.uni.edu/ceee/foodproject

1) Documented group lactation in a bedded setting; 2) Documented group gestation in a hoopbarn; 3) helped launch pork niche market production

Improved profitability by improved milk quality and reduced production costs.

Developed effective seed treatment for control of seedling, damping-off of cucurbit crops, caused by *Phytophthora capsici*. Developed effective IPM strategies for *Phytophthora* blight of cucurbits and peppers. Developed necessary methods for establishing cropping rotation systems for managing *Phytophthora* blight of cucurbits and peppers.

This grant was our first grant that helped create stakeholder teams in three subwatersheds of Sugar Creek. Since then the Sugar Creek farmers have implemented many conservation measures and become the model for watershed restoration in Ohio. The two SARE grants for projects 2168a&b were the foundation for more than \$6 million in grants in Sugar Creek. (I am only filling out one report since they are really years one and two of the same project).

Thirty-four participating farmers shared in a series of nineteen conference calls among their peers in distance learning. The conference calls involved eight mentor farmer marketers who coached farmers to improve marketing skills. Direct marketing is challenging with a sharp learning curve. Often there is little opportunity for producers to learn from other producers in these niche markets. This learning experience has been very positive with cooperators.

Systemic impacts

Increasing knowledge of weed management in cropping systems. Increasing farmer involvement with on-farm research and demonstration. Providing the results in a format that farmers will be interested in reading.

We were able to build trust with the organic farming community. We initiated a long term research project that is 10 years old now. We developed a new way to conduct research at KBS, farmer driven research.

This project contributed invaluable information about the economics of fresh market vegetable farming to a literature that is long on production information but short on how to make market farming a viable business enterprise. Participants in the project were able to assess and hone their farming and marketing systems based on the results and new growers are now better able to understand the income potential, labor demands, and investment levels of various scales of vegetable farming. This project also enabled small-scale organic growers to have direct input and impact on University research and outreach.

This project has supported development and execution of an innovative, field-based "immersion" course that serves as a 'prototype' for educators who seek to foster greater understanding of agroecosystems analysis. Seventy-six students, 10 faculty, and resources from eight institutions of higher learning participated. Students developed appropriate, multiple indicators of sustainability and then utilized the indicators to critically analyze the sustainability of nine different farming systems in Iowa, Nebraska, and Minnesota. Students reported a very high level of satisfaction in the course and would recommend the course to

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another person. Several courses have been developed or planned based on this experience.

We have expanded understanding of and interest in locally, sustainable grown foods. We have launched sustainable rural tourism in Minnesota that will have positive impacts on rural communities and sustainable farmers. We have made progress in strengthening the infrastructure for the local food system in the state.

The project was instrumental in developing a base location for integrated applied on-farm research. It also established a network of personnel and information for doing on-farm research. Moreover, the initial work resulted in a significant gift to the university to continue applied research.

A new sense of community identity linking agriculture and the arts was created. The local community received considerable national/ international attention as a result. A model has been developed and is being utilized by other rural communities.

Indigenous knowledge was recognized as important, captured and integrated into on-going program.

Miscellaneous or no documented impacts

The primary product of the project was basic research, thus broad impact was broad. The tendency of NCSARE to fund site-specific applied research has the unfortunate effect of narrowing the impact and applicability of the work they support.

(Project started in June06 with delivery beginning Nov06) Engagement of all key farmer organizations on an advisory council; enrollment of 22 farmers new and transitioning in a 15 development program partnered with 19 mentor farmers; capacity building within organization and state to serve diverse group of new and transitioning farmers.

This project is new—only 12 months old—so we will report significant finding in the near future. Our initial findings show higher soil quality when forages are included in the rotation.

It is too early to determine any impacts. Funding began in Fall 2007.

Appendix E: Unanticipated impacts or results from the NCR-SARE projects (Open-ended).

	Respondents	Percent
No unanticipated impacts or results	55	43.0

Unanticipated support

There have been spin-off projects started in three other states.

Low input farmers learned to appreciate organic farmers. Organic farmers began to appreciate low input farmers. This project has led to 1.5 million dollars in additional grant money.

Numerous educators outside the Midwest seem to be accessing the website, based on our web tracking program

More interest than we anticipated by the public and organizations on the issue of local food, which has led to a number of opportunities — including coordinating a Healthy Local

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Foods exhibit at the Minnesota State Fair and a Minnesota Cooks Stage at the Twin Cities Food & Wine Expo.

Yes, as other members of the Coop learned about marketing strategies, they shared and mentored others not of the Coop with emerging bison herds-not an expected result.

National and international interest in the project

We got an unexpected result where endophyte-free pastures persisted better than expected.

Engagement of farmers as mentors who were not in sponsor or advisor organizations' network.

Efforts prompted further work and research

Several courses have been developed or planned based on this experience.

Limitations of mechanically killing some cover crops caused a search for modified equipment

Further work spun out of this on-farm effort dealing with technology and GPS systems for increasing efficiency and reducing per acre inputs.

The project appeared to widen interest in some crops (e.g., edamame, popcorn) and the interplay between varieties and growing conditions among some farmers and others.

High level of interest in whole-farm planning processes such as Holistic Resource Management.

Also, helped develop new procedures for variable rate application methods and precision agricultural machinery coordination.

Created publications

DVD script was used repeatedly as articles for extension newsletters. The DVD was translated into Russian for use by an international agricultural aid program in central Eurasia.

The video generated much discussion, and then uncovered existing myths about sustainable agriculture.

The USDA Foreign Ag Service sponsored the development of a DVD of the concert for use in trade shows and other marketing endeavors.

Ran out of books very quickly — huge demand. Had to leverage funding for another print run.

Efforts were not effective

Strategies to deter cucumber beetle activity and bacterial wilt in muskmelon by the use of trap crops, and to deter weeds by living mulch (hairy vetch plus rye) were unsuccessful. We concluded that we need to better understand cucumber beetle ecology in order to make the trap-crop strategy effective, and that the living mulch strategy is probably not suitable for application in areas as far north as Iowa.

We were unable to identify growth traits that correlated consistently to cultivar performance in organic environments.

Yes, since we expected them to produce better in the spring than spring seeded legumes and they did not.

The community food network per se was not successful. However, the project did lay groundwork for several successful projects.

Hairy vetch posed some significant management and planting problems and did not improve corn production on N use efficiency.

The large volume of inputs involved in nutrient and pest management may well be a deterrent to behavior change at the farm level.

We expected that thiamin would be effective, however it was not.

Neither fall nor spring mustards were effective in establishment and weed suppression, especially in comparison with rye.

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The Illinois N test (hydrolysis based test of N fert does not show promise as an indicator of N-acorral (transition success) in organically managed soil.

The methodology employed to measure shallow, subsurface ground water did not function as expected.

New market options were developed

Showed the potential of an underutilized crop (birdsfoot trefoil) as a grazed forage in the northern Great Plains.

New market options were developed

Miscellaneous

We don't know yet.

Same as above.

Surrounding farmers and communities did not jump on board (buy into our project) just because we got funding from SARE.

Animal producer families who use antibiotics showed concerned how this practice may be impacting their health.

The Santee Bison Farm.

No pathogenic bacteria were found. A decrease in E. coli contamination in August and September as compared to June and July.

Participants developed a close network for sharing ideas and problem-solving. Some participants radically revised their career goals through the project processes.

Regular compost amendments reduced blossom end rot in tomato, probably as a result of improved water retention in amended soils.

The sense of community that develops among course participants during the week-long class.

The difficulty of managing a whole-farm enterprise. We produced an economic analysis which encompassed two years of birth to plate analysis. We feel that this may serve as a model for producers interested in whole enterprise management. A careful internet search indicated that very few such models exist.

A rancher school was developed (e.g. The Nebraska Ranch Practicum) which utilizes concepts of the project as demonstration and curriculum. The Nebraska Ranch Practicum is now in its eighth year. Reaching hundreds of cattle producer, and hundreds of thousands of acres and cattle.

Increased calf survival and increased carcass weight of steers after feeding protein supplement to the pregnant cow during winter grazing.

Too early to tell.

The primary reason for collecting data in the three states was to support development of the impact assessment model. However, the individual state reports received greater attention and probably had a greater impact and use than did the community impact assessment program.

Lack of tenderness of PFB was not a problem.

Policy (conservation programs) provided the best management practices both environmentally and economically.

Total carbon dioxide production by soils was similar among C3 and C4 grasses. Smooth brome (*Bromus inermis*) had a remarkably shallow root zone.

Information on how regulations can be educational regarding environment.

Market conditions changed for two of the alternative crops we worked with, amaranth and canola, greatly reducing the opportunity for farmers to profitably grow these crops in Missouri.

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We found how many of the projects were never completed, which surprised us.

The main ones had to do with the interactions with students as the developed materials were used and discussed in classes — both related to agriculture and related to rural sociology and community development.

We thought it would be a lot easier than it was. Mostly, we learned how important it is to have precise timing of operations to achieve success. This precision is not always possible due to rainfall or lack of rainfall.

Unwillingness of producers to vary planting times to meet market demand.

Too early to say.

a) larger than expected dependence on credit cards; b) poor exposure by extension to sustainable farming; c) the timely needfulness of fixing what we learned is as strong today as ever, 5 years later; d) some willingness on part of ag lenders; nearly more on part of educators to understand sustainable agriculture.

1. We did not anticipate the 3 separate farm teams in different subwatersheds contacting each other and learning from each other. 2. We had no idea that it would result in the level of funding. 3. The level of collaboration between the researchers and farmers was not anticipated.

We learned about how to use the NxLevelL curriculum.

Cover crops were again shown to increase risk for the farmers, due to difficulties in establishment and then termination, such that farmers may have a disincentive to grow them.

Surprisingly (at least to me), farmer/trainers reported that their own farming operations and skills improved somewhat as a result of having apprentices.

Appendix F: Unresolved issues that resulted from the NCR-SARE projects (Open-ended).

	Respondents	Percent
No unresolved issues	58	45.3

Unresolved Issues (N=69)

Need for more funding and information

Challenge was that after project was complete additional funding was not secured to take project to next steps.

More years of study/funding needed to fully assess transition into organic production system.

The joint marketing stopped when project funding ceased as internal leadership did not take over.

The grant was a start but no one so far wants to continue an organized and structured effort.

SARE efforts were not effective

The suitability of birdsfoot trefoil to persist under an extended drought period was not determined.

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Appendix: F: (continued from page 51)

We still have not been able to stand alone as a viable entity and maintain our existence from within and support our community.

Contributions of the Environmental Management System not clearly beneficial.

Still cannot control thistles without herbicides.

a) Ease and reliability of establishment are still an issue. b) The mixtures didn't work well, but only the cereal crop got established well. How to identify a mixture that with within the time windows available.

There is still much to learn about what key factors and what interactions dictate perennial ryegrass winter survival; in particular how defoliation frequency, intensity, and timing during the season affect persistence.

Efforts were not properly documented

We did not plan for an adequate assessment of the project's impact. While we intend to survey farmers about the usefulness of workshops presented, ideally we would approach them after a year to follow up on whether or not they implemented biocontrol strategies in their operations.

This project involved collecting economic facts and figures from farms. While the group achieved consensus, there was some disagreement among participating farms on what data to collect and how it should be analyzed.

The issue of record keeping for most producers. A simple method of record keeping needs to be either found or developed.

Pasture finishing, gains from different types of pastures was not documented.

Used two different evaluation methods to obtain reader feedback. Unclear which generated "better" data.

Need for more/better networking

We could not reach to the farmer community at large. There was little interest from most of the farmers to participate in the outreach part of the project.

Tension between traditional pork producers and alternative pork producers. Continued differences in level of trust/support for Univ. of Missouri Extension regarding extension's role in rural/community development. Extension is/was perceived as being biased towards large-scale operations.

All agree that there is benefit to networking across state lines, but efforts to build on acquaintances made at the conference were not, for the most part, successful.

a) I was unable to convey farmers and lenders to share how each plans for profit not without trying — I just couldn't get bankers on-board. Though I slowly was eventually able to identify farmers willing to talk. b) Why is extension/MN so disinterested in this field???

Areas needing further study... A self-guided planning curriculum that helps develop smaller farm marketing cooperatives. This curriculum should assist both with business planning and understanding the leadership and group dynamics necessary for a functioning cooperative. A tool to help calculate prices for meat cuts based upon farm production and marketing costs. Tools to help farmers build "win-win" partnerships with small town meat processing plants that improve the quality of meat products direct marketed. A "consumers report" type of assessment of home-based meat processing equipment and facilities. Economic enterprise budget sheets for direct marketed, sustainably raised meats.

These are ways the Heartland Network could be expanded or taken in a slightly different direction: Match beginning and experienced farmers in a mentoring or coaching relationship. Provide business planning training and networking farm entrepreneurs to provide management and marketing coaching. Provide training and dispute resolution services for farmers' markets. Create links between multifunctional agriculture and rural economic development. Create a web-based sustainable farm product directory. Emphasize how sustainable agricultural practices can protect water quality.

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Areas needing further study

The major unresolved issue concerned the impact of cucumber beetle behavior on the risk of transmission of bacterial wilt in muskmelon. We feel strongly that epidemiological studies of bacterial wilt transmission are needed under both laboratory (controlled) and field conditions are needed in order to shed light on this key process and how it can be suppressed.

It may not be clear if blend yield enhancements were the result of reduced rust or other blend effects.

More work is needed to determine if modern cultivars outperform old cultivars consistently in organic environments.

The study was designed for individual traits. There remains to be a determination of the best selection index for graziers to use.

There was great variability among grass species, with respect to their establishment success in our streamside plots. A much broader survey of species x site compatibilities is needed.

Miscellaneous

Issues of philosophy between partners became a bit of an issue. One partner in the program has become politically active in a manner that is often in conflict with the University of Minnesota Extension Service, which has made continuing the partnership an impossibility. The program itself continues on, however.

Participants identified needs but not solutions to farm startups, such as mechanisms to facilitate farm transfer and land access for beginners.

The website needs to be constantly checked and updated and promoted. Although we anticipated some of this, we did not fully appreciate how much this would be necessary to maintain its quality.

This project is on-going so these issues may arise. At this point, there are none.

Land application of antibiotic containing manure may be contaminating our food supply. This is important in organic farming industry where there is heavy dependence on manure for plant nutrients.

We went on to use more spring seeded legumes (peas) in our systems.

No

Development of heifers in the June calving system.

Too early to tell

High pre-wean mortality of piglets in bedded farrowing systems

Sure, many issues surfaced. The frustration of "getting the word out" was paramount.

How to put a monetary value on behavior change.

Recruitment of grazing herds was more difficult than anticipated.

Since this project is not yet finished, it is still too soon to determine if unresolved issues remain.

There are always unresolved issues. One is perennial weeds that start coming into the rye, and there is no good organic approach to kill them. Another question is finding the right rotation crop, since corn does not form as effective a canopy as soybeans and it is a high-energy-input crop. Another question is whether seed extracts as 'natural' herbicides would be accepted by the organic community and whether they would be practical.

Spread of the pathogen, phytophthora capsici in long distance.

Yes, we were only able to conduct this research on several farms therefore it was not clear if the results were regionally applicable.

We were left with issues about involving women land owners with the quality of life issues involved in managing their lands.

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Appendix F: (continued from page 53)

This project was conducted before glyphosate tolerant crops were a major part of the landscape. So it is not clear whether results are relevant to current cropping systems. The issues we addressed were those that many others have studied, and I think added to the general understanding of how to reduce herbicide rates and the practical issues involved in use of cover crops or high residue cultivators in no-till.

Development of test measures to help farmers tailor practices to their farm/system needs.

Effective programming for groups of new and transitioning farmers whose participants either work full time in other jobs or full time in farming (conflicts of schedule — wkends vs. wkdays)

See above.

Too early to say.

More than anything, the video raised questions about "what is sustainable", "sustainable under what condition" and for how long?

The potential benefits of sequestering soil P may be less important with regular applications of manure.

There is a need for a business planning curriculum that fits better into the busy lifestyles of farmers. There is also a need for short videos that could be used in classes to illustrate key concepts and success stories.

Some of the women in this project want to develop an ongoing network of women entrepreneurs who are developing small enterprises on their farms with their children. This network would provide both technical skill development and psychological support. A valuable outcome could be a speaker's bureau of women available to teach skills to other women. Also needing development are planning exercises that help farm families integrate the management and interpersonal skills integral to being both a family and a business.

How large is continuing demand for the services provided by the project (new farmer training). Also, the need to make the project fee-based. We actually have a continuation of this project under another SARE grant, and are attempting to address these questions and issues.

We still need to make our educational program sustainable by establishing a realistic fee structure that will allow us to continue.

Appendix G: Explanation of other ways of cooperation and partnership opportunities that the NCR-SARE projects opened up (supports Table 6).

Other Ways of Cooperation (N=21)

Collaboration again where relationships were strained or broken

Collaboration between land grant and private industries

Collaboration with a private college and non Land Grant state institution

Collaboration with Michigan Integrated Food and Farming Systems

Collaboration with private consultant

Collaboration with Tsynhehkwa

Collaborations with private industry

Development of new rural leaders by encouraging these beginners

Eventual involvement with new regional efforts on cover crops.

Excellent and on-going connection to lending community.

Increased attention by the media

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Appendix G: (continued from page 54)

international exchange with other groups doing similar research
Land grant + grower/producer organization in members
Lots of collaboration with local agencies such as SWCDs, county health departments, and industry
New marketing cooperative.
Npsas
Opportunity to work with XXXXX
Put me off of NCSARE
State Government, private companies
Substantial support for national discussion about performance agriculture/policy reform.
We are working with faculty at a 2-yr college.

Appendix H: Other funding opportunities derived from this NCR-SARE project (supports Table 7).

Other types of funding opportunities derived from this NCR-SARE projects (N=10)
Bush funding
Combined money with wheat board funds to increase wheat variety research.
Help establish a significant gift/endowment
Idea development for better chance at funding
Provided background and baseline data for others work
Springboard to other advanced market grants
To raise sponsorship from corporations to continue some of this work.
We plan to pursue other funding to continue but have not done so yet
We received pieces of funding from a variety of universities, other SAREs and NGOs
Willingness of a private funder to enhance project if required

Appendix I: Funding Sources Leveraged from NCR-SARE projects (supports Table 8).

Source	Amount	
USDA		\$3,880,000
2USDA's 2501 program	100,000	
CSREES — NCR — IPM	89,000	
ARS Post-doc program	80,000	
Extension RMA	30,000	
National Organic Program (pending)	50,000	
National Research Institute	240,000	
NCR-SARE — CC's pumpkin	10,000	
Organic grant	150,000	
Other USDA programs.		
RMA funding	10,000	
SARE	100,000	
SARE	129,000	
SARE Dissertation Grant	10,000	

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Appendix I: (continued from page 55)

Several additional SARE grants	180,000	
Social Science office of NRCS	20,000	
USDA	70,000	
USDA	160,000	
USDA	230,000	
USDA Crops at Risk (CAR)	571,000	
USDA CSREES Special Research Grant	375,000	
USDA FAS	10,000	
USDA NRI	342,000	
USDA ORGANIC	750,000	
USDA Special Project Funds	100,000	
USDA Special Project Funds	660,000	
USDA Sustainable Agriculture Grant	46,000	
USDA/NRI Competitive Grant Program	117,000	
Other Federal		\$3,895,900
Administration for Native Americans (HHS)	260,000	
EPA 319	475,479	
EPA both SD and U.S.		
EPA SAIG program	46,000	
National Science Foundation	400,000	
NSF Biocomplexity	99,900	
NSF GK-12	2,900,000	
U.S. Department of Commerce	190,000	
Land Grant		\$934,336
Agriculture Experiment Station	60,000	
Experimental station		
Illinois CFAR Competitive Grants — 3 grants	320,000	
Funding sources from the state (Illinois) — CFAR	90,000	
Hatch funds	10,000	
Iowa State University		
ISU, U of MN, U of NE — travel funds	5,000	
Leopold Center for Sustainable Agriculture	50,000	
Leopold Center for Sustainable Agriculture	20,000	
Michigan Agricultural Experiment Station	28,000	
Michigan Animal Industry Coalition	62,903	
MSU Project GREEN	10,000	
MN Agriculture Experiment Station	50	
MN Agriculture Experimental Station	75,000	
North Dakota State Board of Agric. Research	42,000	
North Dakota State Board of Agric. Research	3,000	
Purdue Agricultural Research Programs	40,000	
State Extension dollars for Sustainable Ag Team	5,000	
University of Missouri	78,000	
University of Minnesota	4,000	
University of Minnesota	6,383	

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University of Nebraska		
Warner Endowment for Sustainable Agriculture	5,000	
WY AES	20,000	
Other State		\$124,000
IL Department of Agriculture	63,000	
MDA Specialty Crop grant	20,000	
Minnesota Dept. of Agriculture	23,000	
Public state agency	8,000	
WIS Dep. of Agriculture Trade and Consumer Rot.	10,000	
Foundations		\$663,738
Joyce Foundation		
Kellogg Foundation		
Minneapolis Foundation	75,000	
National Fish & Wildlife Foundation		
National Wildlife Federation		
WK Kellogg Foundation Grant to CRA, UNL, NSAS	583,738	
Turner Foundation	5,000	
Non-Profit		\$372,942
American Farmland Trust	150,000	
Center for Rural Affairs other grant funds	207,942	
Farm Aid	5,000	
Heifer Project International		
OFRF	10,000	
Food/Ag Businesses		\$275,000
Industries	200,000	
Kraft Foods	5,000	
Monsanto	50,000	
Seed company	20,000	
Farmer/Rancher/Commodity Organizations		\$382,900
Dairy Farmers of America (formerly MidAm)	20,000	
Missouri Dairy Association	15,000	
NA Buffalo Association	10,000	
National Bison Association	10,000	
Nebraska wheat board	10,000	
Ohio Dairy producers Inc	15,000	
Ohio Farm Bureau Federation	5,000	
Oregon Ryegrass Growers' Seed Commission	97,000	
Private Grower organization	900	
Producer organization	200,000	
Miscellaneous		\$635,750
Ag Products Utilization	24,000	
Bush	70,000	
Bush	9,000	
Center for Applied Rural Innovation	3,000	

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Center for Global and Regional Environmental Research	12,000	
Farmer-cooperator in-kind	3,000	
Farmer in-kind time	7,500	
Farmer in-kind time	180000	
Graduate School	25,000	
Hatme Alt Tomato Trials	500	
JBT scholarship	40,000	
MALWEG	5,500	
MALWEG	50000	
Mid-American Food Processors Assoc	8,000	
Multi-agency common funds pool	900	
NAAB	10,000	
Ohio Vegetable and Small Fruit R&D Program	2,000	
Ohio Vegetable and Small Fruit R&D Program	2,000	
On-going fundraising efforts		
Organic Valley	20,000	
Other grant funds	42,350	
Private donations	3,000	
Rapid Agriculture Respond Fund	55,000	
Rood Trust fund	48,000	
Rural Coalition		
Rural Catholic Ministries		
User fees	10,000	
User fees	5,000	
Total		\$10,528,816

Appendix J: Impacts of the NCR-SARE projects on production or marketing practices (Open-ended).

Farmer Production / Marketing Impacts (N=88)

Increased awareness

Increase awareness of the use of low-disturbance tillage and manure application on forage and grassland production. We have not been able to assess this fully; the project is on-going.

There is more awareness that antibiotic feeding of food animals may be having some impact on the environment. There was more energy in conversation with producers who did not use antibiotics. They were thinking of this as marketing tool. In fact, we have seen labels on chicken sold in Grocery stores that says no antibiotics used. We can not say that it is the result of our study but definitely our study is making producers and consumers aware of this issue.

It enhanced awareness of new ways to grow and sell agricultural products.

It created more awareness among conventional farmers regarding ecological and economic function of organic fruit farming systems.

Several farmer participants were encouraged in their sustainable farming pursuits and others were encouraged to consider the same.

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Increased interest

Stimulated interest in growing organic and becoming involved in "sustainable"

Stimulated interest in wheat blends by members of the seed industry

Interest and use of cover crops, reduced fertilization of stems ha steadily increased in OH and other Great Lakes states/provinces in past 10-15 years.

Increased interest in alternative swine rations and alternative cropping systems

Some of the farmers/ranchers were interested in grass feeding for goats and sheep.

Increased knowledge

The project pointed out a newly recognized advantage of using row covers on muskmelon: suppression of an economically important disease (bacterial wilt). This is in addition to the known advantages of yield enhancements and earliness of yield.

OP corn has been demonstrated as a viable alternative

Producers learned how to improve their range management to maximize sustainable forage production. This project also provided a model for calculating the economic returns from back grounding and finishing their livestock.

Greatest impact was the effect of feeding protein supplement to cows during winter grazing (before the calf was born) on subsequent increase in carcass weight of over 50 pounds for steers after finishing. The value of the added carcass weight is well over \$50.00 per steer at a cost of about \$15.00 per cow in feed costs annually.

They saw the need for additional management inputs with the strip crop systems and chose to not adopt them.

It's helped them learn how to evaluate there own production system and to look at ways to reduce overall input use thru integrated crop/livestock systems.

The project helped build awareness and document alternative bedded swine production for pork niche markets.

Cost of production to know what alternatives to evaluate

I have used the data in numerous presentations. Presentations were well received and interest continues to generate.

Many ranchers were hopeful that thiamin would be effective in reducing the impact of high-sulfate water on cattle performance. They are now watching our study very carefully to see if clinoptilolite will be more effective. If it is, many will likely begin to supplement their grazing cattle with clinoptilolite.

Bulletin produced during project provided a rather comprehensive guide to alternative crop production strategies, not previously available in Ohio.

Changed behaviors, practices

Several new farmers have taken advantage of beginning livestock loans offered in partnership with Heifer Project Int. Some of our class graduates have embarked on entirely new enterprises including home-based bakeries utilizing their homegrown products, marketing to ethnic groups, and formation of new marketing cooperatives to handle their organic dairy products.

Organic growers changed cultivars being grown as a result of this project.

Some of the participants decided to move forward with aspects of the project and form a pork marketing cooperative.

Growers in the project kept better records. Some growers adjusted their farming enterprise based on results. For example: some increased their outside labor, some decided to increase their level of mechanization, some raised prices, and some adjusted their marketing strategies.

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Participants learned about new/alternative markets and marketing practices, which several then applied during and after the project period (e.g. direct marketing of produce and live-stock).

Increased the use of compost amendments for tomato production.

Switch from attempts to use fall seeded legumes to spring seeded legumes.

They use it as a guide for pest management decision-making.

Using tools we developed as part of this project to market.

It helped the Co-op take a serious look at more traditional "Indian-friendly" marketing dynamics

Methods have now been developed to germinate seeds of the target herb species. Farmers are now putting this information into practice.

Extended grazing which reduced the amount of harvested forages fed. spring. Matching nutrient requirements of the cow to nutrients in grazed forages (e.g. matching high requirements of milk production to the nutrients in immature grazed forages.

Increase in collaborative marketing

Producers are starting to work with their neighbors on planting intentions and best management practices for co-existence.

More cattlemen market residues through cows, with are purchases of crop residues more common

Increased sales to institutions

Farmers have reconsidered the application of gypsum.

Part of the group joined with a much longer, better financed group to raise and market grass-feed beef.

As a result of this work farmers have built buffers around wetlands or enrolled them in conservation programs.

1) More sustainable nutrient and pest management practices adopted. 2) Practices adopted for nutrient management to protect water quality.

More US of US genetics among grazers recently.

Several farmers at field days reported that they have tried organic no-till soybeans using similar approaches. I don't know if they were inspired by this project or not. Some report that they have been doing it for many years.

New ideas about efficiency, environment risk and alternatives that use less energy in production, adoption of some new practices that lower costs and risks.

Some farmers diversified the crops they are growing from just corn and soybeans to grow sunflowers or another alternative crop.

More than 90% of processing pumpkins in the US are produced and processed in Illinois. Phytophthora blight almost devastated processing pumpkin industry. As a result of this study and other related projects not only the industry did not disappear but also its production was doubled during 2000 and 2005.

Some impact as a few producers did see the need to vary planting times to meet market demand even though total production decreased.

This alternative manure management is considered an important part of the overall pasture-based dairy system. This type of dairying has grown in popularity, resulting in 14,000 additional dairy cows in the state and \$28 million in new development in the region.

The group of non-Amish farmers helped think through alternative marketing niches. The group of Amish farmers formed an organic cooperative (Green Field Farms) which is becoming a successful marketing group.

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The 38 farms involved with the training project 28.75 new jobs within the next five years. They expect to double the percentage of value-added sales from their farm and increase the direct market sales by half. They estimate they will increase their overall sales by 55% resulting in an increase of income of over \$16,000 per farm.

An important contribution revealed in the exit interviews were the personal network connections people made and maintained. Follow up contacts were made to other farmer participants and mentor marketers. One participant also connected his neighbor farmers with a mentor marketer. The direct, personal connections in the field trips added depth to learning.

The project evaluation surveys indicate the most common outcomes were the generation of ideas, networking with other people and building personal confidence. For approximately a quarter of the participants, increased planning and problem-solving abilities were important new skills learned. Another quarter of the participants attended the workshops to build or implement a specific technology. Hoop houses for horticultural production drew the most interest.

The XXX Network works with 340 farmers and 232 farms or ranches. Extended season and time-controlled grazing practices have been the most adopted sustainable agricultural practice. Nine of clusters focus on grazing management. The second most attractive change has been alternative markets. Five clusters work with farmers markets and five clusters work with some form of cooperative marketing. Marketing allows farmers to capture more profit, however marketing has significant challenges (especially in larger retail volumes) . The attached article on the XXXX Producers cooperative identifies these barriers. There is a growing interest in farmers' markets. This is a low, entry-level approach for farmers exploring direct marketing. Two clusters focused on cover crops and trials. There has been very limited adoption of cover crops within crop rotations. Barriers have been establishment, inconsistent level of nitrogen fixation and the financial and moisture risk associated with cover crops in areas with undependable rainfall.

One of our farmer cooperators is using a cover crop regularly now; especially on new land he obtains, to improve soil quality. Also, he started raising grass-fed beef, which is not a direct result of cover crop work but which gave him more interest and incentive to consider cover crops.

Beginners learned about and used sustainable farming practices. They also learned and used farm record/keeping systems.

Farmers began adapting growing new varieties/species of perennial grasses and legumes in their pastures.

40% of dairy book readers said they planned to incorporate ideas they learned from the book. 60% of poultry book readers planned to incorporate changes. [4000 books x 50% — at least 2000 operations

Beekeepers are purchasing queens bees from our MN Hygienic line of bees

Through field days, workshops and individual training, many producers have learned from one another and from extension instructors. Additionally, a number of trainees have started their own farms using organic/sustainable production practices.

Similar impacts to the previous XXX project (first phase). New producers are starting to grow and existing producers are improving skills in production and marketing. All of this contributes to impact

The methods help reduce insecticide inputs and were especially useful to organic producers.

Effects production of organic growers who are looking for organic mulches

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It enables farmers without access to manure to enhance soil P concentration without purchased fertilizer.

This project has provided an option to reduce input costs in crop production.

Systemic impacts

Really, mostly it has opened up doors. We now have 8 certified organic acres at university experiment station campus.

Ohio has an active sustainable Ag team and a newly formed direct Ag Marketing team which works closely with farm families to identify high impact educational programs following this mid 1990 conference.

Improved quality increases the competition among processors for milk.

This project developed a partnership with an experiment station to conduct research on cover crops.

Several farmers involved with sustainable systems were delighted to find the university [finally] becoming involved.

No impacts documented

The project is still underway and this information has yet to be collected systematically. Anecdotally, the project has assisted farmers in being more successful with variety selection and aspects of soil management.

n/a : we are still in the early stages of the project

don't know

This project was not intended to influence production and marketing practices of farmers

Such impacts are forthcoming as this project has much more to do in terms of direct interaction with farmers.

If results in years 2 and 3 confirm those of year 1, we think farmers will more readily plant blended varieties of oat.

Not the intent of the project.

The primary emphasis of this project was to provide information and assistance to rural community leaders rather than farmers. Impacts of farmers would have been indirect, by making rural communities more supportive and accommodating of sustainable farmers.

none

This project was one of many that raised the issues of how to reduce the environmental impact of grain crop production. What individual farmers have done with this information I do not know.

Too early to report

Too early to say

no impact was measured

Who knows? A survey is a 1-shot instrument. Our follow-up work (separate) and could offer you insight but any answers. Would be sheer conjecture as to how a survey impacted participants.

Because the project only began in Fall 2006, it is too early to discuss impacts.

Little affect, I'm afraid.

Project not completed yet

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Appendix K: Name of Products Resulted from NCR-SARE projects (supports Table 14).

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13. Rodrigues ACO, DZ Caraviello and PL Ruegg. 2005. Management and Financial Losses of Wisconsin Dairy Herds Enrolled in Self-Directed Milk Quality Teams. J. Dairy Sci. 88 2660-2671.

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4 Journal articles

4 marketing manuals

8th Great Plains Sunflower Insect Workshop

A practical guide to scouting apple orchards

A Sustainable Approach to Controlling Mite Pests of Honey Bees

AES bulleting on project

Agriculture and the Arts DVD

Alternative Ag paradigms, Rural Sociology

Annual legumes as green manures and forage crops in winter canola

Annual medic and Berseem clover in rotation with clover

Annual variety performance report

Articles in Midwest Vegetable Variety Trial Report 2004-2006

Association of Farm Management Practices with Risk of Escherichia coli Contamination in Pre-harvest Produce Grown in Minnesota and Wisconsin

Beginning Farmers

Biological Control of Insects and Mites

Bison Research Report

Blending oat varieties

Border effects on yields in a strip-intercropped soybean, corn and wheat production system.

Canola: an emerging oilseed alternative

Children's coloring book

Coexistence website

Community Economic Impact Assessment Program

Comparative analysis of goldenseal (*Hydrastis canadensis* L.) population re-growth following human harvest: implications for conservation

Comparing five farming systems

Comparison of organic and Inorganic mulches for Heirloom Tomato Production

Conference proceedings

Conjugated linoleic acid content of beef varies by feeding regime and muscle.

Consultations

Cover crop research

Cover crops and cover soil physical properties

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Cover crops and Rhizosphere bacterial community
Crop production alternatives
CSA directory for the land stewardship project
Dairy Your Way
Difference in local purchases of sustainable and conventional farmers
directory of farmers
Dornbush, M. E., T. M. Isenhardt and J. W. Raich. 2002. Quantifying fine-root decomposition: An alternative to buried litterbags. <i>Ecology</i> 83: 2985-2990
Dornbush, M.E., and J.W. Raich. 2006. Soil temperature, not aboveground plant productivity, best predicts intra-annual variations of soil respiration in central Iowa grasslands. <i>Ecosystems</i> 9: 909-920. DOI: 10.1007/s10021-005-0093-7
Draft descriptions of farmer practices — not published
Dry lot beef cow production
Eating quality of PFB — Pasure Walk
Economic and Biological synergies of crop livestock integration
Effect of Compost Amendments on Disease Severity and Yield of Tomatoes in Organic and Conventional Production Systems.
Effect of inoculative releases of <i>Trichogramma ostrinae</i> on populations of <i>Ostrinia nubilalis</i> and damage to sweet corn and field corn. <i>Biological Control</i> 23: 149-155.
Effects of dry storage on seed dormancy and survivorship in black cohosh (<i>Actaea racemosa</i> L.) and goldenseal (<i>Hydrastis Canadensis</i> L.)
Evaluating your projects' impact
Evaluation of NCR-SARE Producer Grant Program
Excellent story about the project at www.kansasruralcenter.org
Extension bulleting. A-1275
Fact sheet on ecological/economic function of organic fruit farming systems
Family factors affecting adoption of sustainable farming systems"
Family, Community and Sustainability in Agriculture
Farm Beginnings Curriculum book
Farm Beginnings website
Final Report
Financial summaries by production system
Fine root decay: a comparison among three species. M.S. thesis, Iowa State University.
Fit for a pig — low cost strategies of the sourceful hog farmers
Forage legumes: clovers, etc.
Francis, C., G. Lieblein, S. Gliessman, T.A. Breland, N. Creamer, R. Harwood, L. Salomonsson, J. Helenius, D. Rickerl, R. Salvador, M. Wiedenhoeff, S. Simmons, P. Allen, M. Altieri, C. Flora, and R. Poincelot. 2003. <i>Agroecology: The Ecology of Food</i>
Fresh market vegetable farms at three scales of production
Fungicide seed treatment effects on seedling damping-off of pumpkin caused by <i>Phytophthora capsici</i>
Getting Milk: A Tail of Two Dairies
Gleason, M.L. In preparation. Row covers suppress bacterial wilt on muskmelon. In preparation for publication in <i>Vegetable Growers News</i> .
Grain amaranth: a lost crop of the Americas
Grass/Legume Ecology of Pastures

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Green House
Green Resources Handbook
Green Routes Regional Brochures (6 to-date)
Green Routes Website
Grower to Grower: Creating a Livelihood on a fresh market vegetable farm
Growing Growers
Growing Growers Training Program
Growing Growers Training Program description
High Plains Ag Lab Update
http://www.appalachianforest.org/Plants_to_watch_index.html
Identifying and managing cucurbit pests, diseases, insects, weeds
Impact of narrow alternate strip crop system on crop yield and residual cover
Impact of thiamin on cattle production
Impacting the future of Agriculture in Nebraska
Integrated pest management for diversified fresh market vegetable producers in New Jersey, New York and Pennsylvania: An IPM Initiative Project.
Intensive Rotational Grazing
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Journal article
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Labels
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lots of earned press
Manure Slurry-Enriched Seeding of Cover Crops in Diverse Cropping Systems
MDA
Medic planting date effect when clear seeded on intercropped with corn
Midwest Plan Service AED-44
Milk Money' Shows Byoms They're Doing Things Right
Milk Money Manual for Grazers
Millet preference, effects of planting date on infestation, and adult and larval use of proso millet by <i>Ostrinia nubilalis</i> (Lepidoptera: Crambidae). <i>J. Econ. E</i>
Model Farm Program: An Economic Analysis
Motivation theory
Moving small-grain variety testing onto organic farms.
Mueller, D.S., Gleason, M.L., Sisson, A.J., and Massman, J.M. 2006. Effect of row covers on suppression of bacterial wilt of muskmelon in Iowa. Online. <i>Plant Health Progress</i> . doi: 10.1094/PHP-2006-1020-02-RS.
MWPS 2004 AED — 47

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Appendix K: (continued from page 65)

National Meeting Poster Session
Natural reseeding of forage legumes following wheat in western North Dakota
Natural reseeding of forage legumes following wheat in western North Dakota.
Newsletter articles
Nicodemus Flour Co-op
NicodemusKansas.com
NSAS Directory
Oat variety blends have lower rust severity than purelines
Ohio sustainable Ag Team Newsletter
On farm research guide
Organic gardening
Pastures that sells your beef — Small Farm Today
Perennial ryegrass in Minnesota? AFGC Proceedings Paper
Perennial Ryegrass in Minnesota? American Society of Agonomy Abstract
Perennial ryegrass in Minnesota? article in forage council newsletter
Performance of a swedish deep-bedded feeder pig production system in Iowa
PhD Dissertation
PHOSPHORUS MOBILIZATION BY BUCKWHEAT
Photochoreographed concert
Phytophthora Blight of cucurbits
Phytophthora Blight of pepper
Phytophthora Blight of Pumpkin
PIH — 138
Popular articles
Poultry Your Way
POWER POINT PRESENTATIONS
PowerPoint
Precise detection and monitoring of Trichoderma hamatum 382 in compost-amended potting mixes using molecular markers
Presentations — "Antibiotic Feeding in Food Animals and Its impact on the Environment.
Proceedings — Sunflower Res-Workshop
Proceedings from Pasture Finished Beef Workshop
Proceedings of High Plains Ag Lab
Production of Pasture Finished Beef — GLCI Conf.
Project manual
Promotional material
Publication
Rangeland Monitoring Activities
Rangeland Monitoring: Seventeen Indicators of Rangeland Health
Reduction of bacterial leaf spot severity on radish, lettuce and tomato plants grown in compost amended potting mixes in the greenhouse
Science meeting abstracts
Seed germination and dormancy in the medicinal woodland herbs <i>Collinsonia canadensis</i> L. (Lamiaceae) and <i>Dioscorea villosa</i> L. (Dioscoraceae)
Several mimeographs for field days/winter schools

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Slow Food
Social Capital and
Soil physical property improvements with cover crop mixtures
Submitted/accepted pieces in bank journals
Sugar Creek Method Website www.sugarcreekmethod.osu.edu
Sunflower Seed weevil Management
Sustainable Agricultural Systems
Sustainable Agriculture as a Rural Community Development Strategy
Sustainable Farmers Support of Local Communities
The emergence of stakeholder consensus: Examining issues in evaluating sustainable agriculture research and extension (SARE)
The KBFA
The Practical Farmer
Torr promotional material
Toward a Sustainable Agriculture
Trap cropping to manage the red sunflower seed weevil.
Turning the Ark — New directions in Animal Agriculture
Vadder sense — low cost strategies of the sourceful dairy farmers
Variation in prevalence and persistence of Escherichia coli in pre-harvest fruits and vegetables collected during the harvest months from Minnesota and Wisconsin farms
Variety selection presentations
Warnock, D. L., Leep, R. H., Bughrara, S. S., and Min, D.-H. 2005. Cold tolerance evaluation of improved diploid and tetraploid cultivars of perennial ryegrass.
Weed suppression by annual legume covers in corn
Wheat cultivar performance on certified organic fields in Minnesota and North Dakota.
Wiedenhoef, M, S. Simmons, R. Salvador, G. McAndrews, C. Francis, J. King, and D. Hole. 2003. Agroecosystems Analysis from the Grass Roots: A Multi-dimensional Experiential Learning Course. J. Nat. Res. Life Sci. 32:73-79.
www.uni.edu/ceee/foodproject
www3.abe.iastate.edu/hoop_structures
Yield and nitrogen uptake of rotated corn in a ridge tillage system.

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Appendix L: Other Types of Products Resulted from NCR-SARE projects (supports Table 14).

	Frequency
2 — 40 page publication	3
30 — page publication	1
A chapter 14 — Book Sustainable Agriculture	1
Book chapter	1
Brochure	1
Central Grasslands Research Extension Center 2006 Grass & Beef Research Review	1
Conference proceedings paper	1
Consultations with farmers, others	1
Directory	1
DVD	1
Educational DVD	1
Evaluation of Impacts of NCR-SARE Projects	1
Fact sheet	1
Farm tour hand-out (included in project final report)	1
Field day publication	1
Final report	1
Labels on jars	1
M.S. thesis	4
Manuscripts have been submitted for publication.	1
Media article	1
Mimeographed handouts	1
Newspaper	1
Ph.D. Dissertation	3
postcard and other promotional material	1
Poster presentation	2
PowerPoint Handouts	1
PowerPoint presentation	2
Presentations at grower meetings, conferences	1
Proceedings	2
Proceedings packet	1
Proceedings paper	1
Public concert can be performed with other audiences	1
Publication in trade journal	1
Published abstract	1
Range Monitoring Kit	1
Research report in field day proceedings	1
Scholarly meeting abstract	1
Slide presentation	1
Technical bulletin	2
WINTER MEETINGS	1
Workbooks for recording inputs on farm	1
Workshops and oral presentations	3

Appendix M: Suggestions to improve NCR-SARE program service (Open-ended).

**Section III
Appendices**

Increase available funding
Funding
Greatly increase funding
Get more funding to fund more projects on sustainable farming.
More funding for research/extension on vegetable and fruit crops.
Effectively expand the program to make more projects possible.
Increase available funding
Increase available funding so that more successful projects can be developed to assist regional ranchers, farmers and producers.
Increase the number of grants provided to encourage more participation.
Provide adequate funding with few strings to support more fundamental research.
Offer applicants more and larger grant opportunities.
Shorten time between application and funding.
Attempt to shorten the time between R&E pre-proposals and funded projects.
Shorten the time between proposal submission and granting of funds.
Shorten time between application/approval and funding.
Shorten time frames between applications and award of funds to start project.
Reduce time lag between proposal submission and rendering of verdicts.
Collapse the time line on grants: set a due date for each category, have the TC meet two weeks later, then the AC one week later, and announce the grants within 30 days from submission. We could make the NCR-SARE unique and very attractive.
It took nearly a year and a half between the time that we submitted the application and the time we received funds. That process time needs to be cut in half.
Perhaps need more staff to get funding quicker--or is this a matter of D.C. involvement?
Better grant reviewers
Better and more objective review of pre-proposals as well as full proposals.
Get knowledgeable reviewers
The review process is problematic; I question the qualifications of some of those reviewing grants — and I feel VERY STRONGLY ABOUT THIS.
All the follow up seem like over-kill sometimes The review process is problematic; I question the qualifications of some of those reviewing grants — and I feel VERY STRONGLY ABOUT THIS.
As part of a tech review process, I was astonished at how much control farmers were given in the grant selection process. If specific reviewers were unable to think beyond their own best interests, this wouldn't pose a problem. But when farmer reviewers supported weak projects on topics of interest to them specifically while much stronger proposals that would not directly benefit their operations were nixed by these reviewers, all the other reviewers refused to challenge them on their narrow self-interested approach. No one should have this kind of power in the review process, even if they are farmers.
Improve proposal review process — not consistent; can't always find appropriate reviewers. I understand why this is difficult but would like improvements.
Select review panel members with broad experience. I have received proposal reviews where members provide 180 degree opposing responses to the same proposal.
Overall the project review process; I question the qualifications of some of the reviewers.

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Appendix M: (continued from page 69)

Problems reporting findings
I've had the website crash on me a couple times when trying to update reports.
I have had some difficulty reporting.
More farmer representation
More proportional farmer and nonprofit representation on the Administrative Council.
Ensure that over 50% of the Administrative Council is either a farmer or representative from a nonprofit sustainable ag organization.
Place more farmers and nonprofits on the Administrative Council in proportion to University and Governmental representation.
Place more farmers and nonprofits on the Administrative Council in relation to University and agency representation.
Place nonprofit and farmer representation on the administrative council in equal proportion to land grant and agency representation. This would help SARE be more innovative and responsive to farmer and rancher services.
Simplify process
Simplify
Simplify requirements for materials to be provided in full grant application. Too many details are requested, especially on impacts, which are difficult to predict.
Try to make its forms simpler
The program service is fine; the requirements of the proposals are often unrealistic.
The service is fine; the proposal requirements are too cumbersome.
Reduce the amount of requirements for proposals (i.e., the logic models, producers in planning, impacts, outreach and large number of requirements, along with expectation of significant impact in short time).
Reduce the overall application/grant writing process. Request less detail in grants.
Miscellaneous
Focus on making its web site much more accessible and complete. Request permission to post successful proposals. Link to news articles and other publications that are developed from funded projects. Consider a regional listserv.
Change regions occasionally so border areas are not penalized.
As a researcher, we are looking for a long-term impact. It appears that SARE project is looking for immediate impact. Most producers generally take time to digest information and then implement what they think will fit in their system. SARE understanding
Clarify what you mean by "outcomes," "outputs," "activities" and "inputs."
Create a Tribally Controlled College and University special set aside and provide the information to the institutions.
Don't send out such long surveys.
Drop farmer driven research. Scientists should be able to figure out how to do their own work.
Expand the scope of priorities
Focus more on "peoples' stories" and less on numbers in assessing impacts of projects. People know when and how they have been helped and will tell you, if you ask them.
Get over the reality that some states submit none or poor proposals and find the good ones that do come to you. There's good work to be done that meets your mission — stop waning about the poor work that doesn't.
Give researchers a clear picture of grant critique process and criteria for rejection
Have a more explicit program to link communities and sustainable agricultural systems
I can not think of anything

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I will be blunt: these surveys are a waste of my time. I have filled out similar surveys at the end of each of my prior grants. Now you're asking me to go back and do them again. I need to spend time doing research and extension — not filling out extremely redundant survey. I am sorry to be so harsh.
I would like to see someone with a regional view approach. The major groups to provide some guidance/encouragement to pursue certain kinds of projects.
Maintain an accurate list of SARE Grant Recipients and send electronic newsletter and new grant opportunities to this list.
Monitor the outcome of progress. I.e., did they meet expectations?
No changes — however I did leave some pages blank in this survey because we are in the middle of the two year grant and I don't have all of the numbers asked for.
Not sure.
Provide PI's with more timely feedback on requests for changes (e.g. change in PI's, no-cost extension, etc.).
Reminders about yearly and final reports more frequently. Unfortunately, like everyone else, this wasn't the only grant I had at the time.
Seek competitive funding that is appropriated for competitive grants specifically for Indian people when you apply for your grant with the government.
Send electronic reminders of reporting deadlines
Synthesize project results into more applied, farmer/user terms.
Transparency in grant selection process. No feedback received on Admin Council processes.
Transparency of final funding decisions.

Appendix N: Other ways respondents learn about results from NCR-SARE funded projects (supports Table 21).

Other ways respondents learn about results from NCR-SARE funded projects (N=5)
At field days, in SARE publications
In class presentations here at Iowa State University
Other web sites
Study we undertook of the projects
Work of colleagues

Appendix O: Suggestions to increase awareness of NCR-SARE projects (Open-ended, supports Table 22).

Ways to Increase Awareness (N=55)
Mass media, press
Ag press stories highlighting project and results
Ag/popular press stories of project results.
Mass media press releases, with pictures and "down-to-earth" results.
Keep focusing efforts on getting articles into the popular press.
More articles in minority publications

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Appendix O: (continued from page 71)

Publish in popular press with backup in abstracts of professional research journals
Publish lay-oriented articles in papers and magazines that farmers read.
Continue to publish summary, overview bulletins from NCR regional office.
E-mail, newsletters
Annual review of funded projects via email listserve.
ATTRA newsletter
Disseminate through ATTRA newsletter
Distribute regular (quarterly?) brief synopsis of completed projects by region
Distribute the title of funded projects thru e-mail.
Electronic Sources — E-mail and keep posting on Grants.gov
Email newsletter
Email newsletter
I guess a little more media would be good. For example, ATTRA does a great job with its weekly newsletter. How about a monthly electronic newsletter of SARE project progress notes. Call it "Making it Sustainable" and see if you can get out more than one.
Newsletters
Perhaps a periodic newsletter highlighting some of the projects.
Perhaps getting more attention to "Field Notes" publication--I've never heard of it.
Provide periodic (quarterly?) e-newsletters that highlight different projects each issue.
Provide periodic updates or list of projects.
Send a newsletter (via e-mail). (Although I could certainly go to website, I usually do not unless I'm specifically looking for something).
Send email listing new projects when they are awarded.
Send newsletter (electronic)
The newsletter that you currently have is a good way.
Use ATTRA newsletter for outreach
Use field notes to publish sharp blurbs on current work or even field notes to publish titles and program numbers.
Send list of current and recent projects funded by NCR-SARE in the state to the state coordinator for distribution.
Website
Demand grant recipients to submit reports in a timely manner and post them quickly.
Force grant recipients to submit reports and publish them on the web in a timely manner
Maintain or increase short summary and photos
Provide easy access on the web.
Provide summary on web. This may be something I need to do as it may be available.
Bring people together
Bring together people working in similar areas.
Have them come to campus
Help foster linkages between PIs of similar projects
Increase or initiate collaboration with the NC IMP center. Host symposia at regional meetings of professional societies such as entomological society of America.
More networking between researchers
More regional conferences.
Doing well now
Doing a good job now.
I assume that this information is on-line and my lack of familiarity is my fault and not the

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SARE programs.
I think awareness materials are readily available.
I think you do a good job.
NCR-SARE does a good job. I just need to pay more attention.
NCR-SARE is doing well.
Projects are already accessible.
Realistically, I believe SARE is doing enough to educate me and others about projects it funds. The searchable, on-line database and direct-mail newsletter-like compendium or update are helpful.
You're doing a fine job.
Miscellaneous
Better integrate funded research and education.
I'd like to see a critical, unbiased evaluation of sustainable ag research to determine if the SARE program is having a positive impact on sustainability.
I did not stay in this area of research. Thus, it's not a relevant issue for me.
Increase the level of scientific creativity and decrease demands for stakeholder involvement in every step.
Not sure but we only have a focus on Indian Indians because we raise the bison differently than our non-Indian counterparts who raise for profit only; that dynamic changes the way the bison are raised and honored, etc.
Require that it be credited with funding work.

Appendix P: Comments about this questionnaire or additional comments about NCR-SARE (Open-ended, supports Table 23).

Comments (N=38)
Suggestions for SARE
Drop the pre-proposal system and just go to a single application for research and education grants.
I'd like SARE to have a focused RFA for bioenergy crop (not corn ethanol) production and small-scale biodigester design.
None at this time. I'd like to see challenge or capacity building grants with less focus on quantitative tangible outcomes.
Essential to focus on environmental and social issues for future.
Problems responding to survey
1) You are going to get a lot of guesses which invalidates this instrument; 2) You could have find some of these answers in our reports which are written in timely relation to the work and are more accurate than these guesses so many years later.
A long time between project and questionnaire; I retired 3 years ago.
I could not answer many of the questions because this project is far from complete and many important activities, events, and publications have not started or been completed.
I inherited this project and so the early stages are unknown to me and I could not comment from experience. Also, the project just started in Jun06 so the outcomes are not yet known.
Lost my interest halfway through
My project was funded 20 years ago and the program has evolved greatly since then. It is very unfortunate that there is little or no input from mains stream population ag today.

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Appendix P: (continued from page 73)

My projects are quite old and have been a full-time administrator for quite a while. I don't have the details you want.

Questionnaire is way too long.

Some of the questions are ill-timed relative to the status of my project and not knowing what questions will be asked until getting into the survey is a hindrance.

Sorry I couldn't be more specific. Questions didn't fit our project and experience well. I am/was willing to make educated guesses but providing some details would have gone beyond.

The questionnaire took two hours not 30 minutes and some of the questions could not be answered without speculation.

The survey is too long. Some questions could be answered just by going to the reports and application. Other questions would take considerable time to find answers.

The survey took longer than the 30 minutes estimated in the letter.

This questionnaire is too long. I suggest the researchers use reports and applications first before doing the survey. Also complete answering of all the questions would take significant time.

This questionnaire is too, too long. It asks some questions that could be answered by reading the reports. Other questions would take significant time to find valid answers (much longer than the 30 minutes stated).

Project participant addresses are not available with my change in jobs. One of the primary involved was XXXXX.

Each page got hung up for a very long time. It made doing the survey much longer than you promised.

I am filling this out for both projects 2168a and 2168b which are years 1 and 2 of the same project. We have additional grants we received but there was not room to list them. We have also received 3 USDA NRI Water Quality grants on XXXXX.

Survey duplicates other reported information

All of the information you need is in my final report for this grant and for all of my grants from SARE. Each year I filled out product reports — please use them to complete this.

I suggest getting answers first from applications and reports first. Then only survey with questions not covered in application or reports. Please keep it short so it can realistically be done in 15 minutes.

Lots of this info was contained in final project report. I postponed responding to survey for this very fact and due to estimated 30 minutes time commitment. Many questions need UNK option.

Wasn't the info on participating producers already provided?

Miscellaneous

It is very early in the grant process for me.

Keep up your good work and do all you can to increase your effort.

Thank you for your support of this project!

Don't ever compromise the principles of sustainability in an effort to gain academic or institutional credibility.

Please see my previous response about this questionnaire.

No. SARE has been by far the easiest government-connected agency to work with. All staff have been friendly and helpful.

No

None

None at this point of time.

Appendix Q: NCR-SARE Research and Education Grant recipient survey cover letter

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9 February 2007

Title & Name
Organization
Address
City State Zip



Dear

The North Central Region Sustainable Agriculture Research and Education (SARE) Program is evaluating the impact of its Research and Education (R&E) grant program. An important part of that effort is a survey of North Central SARE R&E grant recipients from 1988 through 2004. Please share your valuable feedback by completing an online survey that will help North Central SARE to assess the impacts of the funded projects and to improve the grant program.

This evaluation is being conducted by Michigan State University. We estimate that the 33 question survey will take about 30 minutes to complete.

To complete the survey, please log on to:

<http://websurveyor.net/wsb.dll/85254/???>

When asked for your access code number, type

()

We encourage you to complete the survey on line. However, if you would prefer to complete the evaluation by mail, using a printed questionnaire, please phone 517-432-0049, leave your name and access code number, and ask for a North Central SARE Research and Education survey.

Your completion of this survey is completely voluntary. You are free not to answer any questions or to stop participating at any time. All responses will be kept confidential by the researchers to the maximum extent allowable by law. There are no individual risks or individual benefits associated with taking this survey. Our reports will not associate any responses with any individual respondents. This survey has been reviewed and approved by Michigan State University's Institutional Review Board for human subject participation. If you have any questions regarding your rights as a research participant, you may contact Peter Vasilenko, PhD, Director of Human Research Protection Programs at Michigan State University (517-355-2180, Fax 517-432-4503, email: irb@msu.edu, or regular mail: 202 Olds Hall, East Lansing, MI 48824).

If you have any questions about this study please contact Dr. Murari Suvedi at (517) 432-0265 or email at suvedi@msu.edu. On behalf of North Central SARE, thank you very much for your assistance! By completing this survey, you indicate your voluntary consent to participate in this study and have your answers included in the evaluation data set.

Sincerely,

Murari Suvedi
Professor

Susan Smalley
Extension Specialist

Carla Barbieri
Research Associate

S-SARE-Eval-First-Letter

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equal-opportunity institution.



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Sustainable Agriculture Research and Education
North Central Region SARE
Research and Education Grant Recipient Survey

North Central Region Sustainable Agriculture Research and Education (NCR SARE), in cooperation with Michigan State University, is conducting a region-wide survey of its Research and Education (R&E) grant recipients from 1988-2004. Through this survey NCR SARE hopes to learn from grant recipients about their experience with the program and the impacts of their grant-funded work. The survey results will help guide and shape the future NCR SARE program.

In the first part of the survey we have a few questions about each of your NCR SARE projects from 1988-2004.

Project 1

Please answer questions 1 to 20 with the following project in mind:

Principal Investigator: [IMPORT NAME]
Award Year: [IMPORT YEAR]
Project number: [IMPORT NUMBER]
Project title: [IMPORT TITLE]

Q1. Which of the following categories best describes the status of this project?

- Project is in the initial stages
- Project work is ongoing
- Project is nearing completion
- Project is completed
- Project was funded but I did not continue as PI
 Please provide name and contact information of final PI:

Name:

Address:

City, State, Zip:

Phone:

E-mail:

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Q2. Were/are farmers or ranchers involved in this project in any of the following ways? (Please give us your best estimate)

	Were farmers or ranchers involved?		If yes, number of farmers/ranchers involved
	No	Yes	
Participated in project planning (e.g., involved in decisions on what to do, why, how)?	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="text"/>
Actively involved in on-farm research or demonstration (e.g., managed trials, interpreted results, hosted or led tour)?	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="text"/>
Provided land and/or equipment for test plots or provided the site for a tour?	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="text"/>
Spoke about the project at a meeting or field day (e.g., presentation, panel)?	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="text"/>
Co-authored a paper or other product?	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="text"/>
Principal investigator is/was active farmer?	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="text"/>
Were farmers or ranchers involved in some other way we haven't asked about? <i>Please describe:</i>	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="text"/>
<input type="text"/>			

Q3. Were/are Extension personnel involved in this project in any of the following ways? (Please give us your best estimate)

	Was Extension involved?		If yes, number involved
	No	Yes	
Participated in project planning (e.g., involved in decisions on what to do, why, how)?	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="text"/>
Involved with applied research or demonstrations	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="text"/>
Spoke about the project at a meeting or field day (e.g., presentation, panel)?	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="text"/>
Authored/co-authored a scholarly paper or journal article?	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="text"/>
Authored/co-authored Extension outreach materials?	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="text"/>
Learned of the project results through in-service education, discussion with project leader, or other interactive means?	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="text"/>
Principal Investigator is/was an Extension employee?	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="text"/>
Were Extension personnel involved in any other ways we haven't asked about? <i>Please describe:</i>	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="text"/>
<input type="text"/>			

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Q4. Were undergraduate and/or graduate students involved in this project in any of the following ways? (Please give us your best estimate)

	Were undergraduate or graduate students involved?		If yes, number of undergraduate students involved	If yes, number of graduate students involved
	No	Yes		
Employed or otherwise worked on the project?	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="text"/>	<input type="text"/>
Made a presentation related to the project?	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="text"/>	<input type="text"/>
Authored/co-authored a scholarly paper or journal article?	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="text"/>	<input type="text"/>
Authored/co-authored Extension outreach materials?	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="text"/>	<input type="text"/>
Were students involved in any other ways we haven't asked about? <i>Please describe:</i>	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="text"/>	<input type="text"/>
<input type="text"/>				

NCR SARE hopes to survey graduate students who have been involved in SARE projects. Please list up to three graduate students who were significantly involved in your NCR SARE-funded project. ALL INFORMATION WILL BE KEPT CONFIDENTIAL AND USED ONLY FOR RESEARCH PURPOSES.

- Name:

Address:

City, State, Zip:

E-mail:
- Name:

Address:

City, State, Zip:

E-mail:
- Name:

Address:

City, State, Zip:

E-mail:

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Q5. Please provide a three-sentence summary of what you consider to be the key impacts or results of this NCR SARE funded project?

Q6. Were there any unanticipated impacts or results from this NCR SARE funded project?
(Please list them)

Check here if none.

Q7. Were there any unresolved issues that resulted from this NCR SARE funded project? This may include questions that were not fully addressed in the project and/or those which emerged as a result of the project. *(Please list them)*

Check here if none.

Q8. Did this NCR SARE project lead to ...

	No	Yes
A new collaboration with a colleague you had previously worked with?	<input type="checkbox"/> No	<input type="checkbox"/> Yes
A new collaboration with a new colleague	<input type="checkbox"/> No	<input type="checkbox"/> Yes
An influence on the direction of a colleague's work?	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Collaboration between an 1862 and 1890 Land Grant?	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Collaboration between an 1862 and 1994 Land Grant?	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Collaboration between a Land Grant and a non-profit?	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Any other influences or outcomes we have not asked? <i>If yes, please describe:</i>	<input type="checkbox"/> No	<input type="checkbox"/> Yes

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Q9. Were you able to use the NCR SARE project to ...

	No	Yes
A. Leverage other funds for <u>this</u> project?	<input type="checkbox"/> No	<input type="checkbox"/> Yes
B. Launch a <u>new project</u> that built on this one using other sources of funds?...	<input type="checkbox"/> No	<input type="checkbox"/> Yes
C. Any other funding advantages we have not asked about? <i>Please describe:</i>	<input type="checkbox"/> No	<input type="checkbox"/> Yes

Q10. [If yes to Q9a or Q9b or Q9c] What were the source(s) and dollar amount(s) of those funds?
(Please provide your best recollection)

Source	Amount
<input type="text"/>	\$ <input type="text"/>
<input type="text"/>	\$ <input type="text"/>
<input type="text"/>	\$ <input type="text"/>

Now think about the outreach events that were part of this NCR SARE project

Q11. How many farmers or ranchers attended any outreach events (e.g., presentations, field days, workshops, etc.) that were part of this NCR SARE funded project?
(Please give your best estimate or check the most appropriate response for each group listed)

Group	Estimated Number	None	Don't Know	Not Applicable
Total farmers/ranchers	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Female farmers/ranchers	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
African American farmers/ranchers	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hispanic farmers/ranchers	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Native American farmers/ranchers	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Q12. If farmers or ranchers from other racial, ethnic, or cultural identity groups attended any of your project's outreach events, please indicate which group and the number of farmers or ranchers from that group whom you reached. *(Please give your best estimate)*

Group Name	Number of farmers/ ranchers
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

Q13. Please tell us ways in which this project has had an impact on production or marketing practices of farmers or ranchers you worked with?

Q14. Overall, about how many farmers or ranchers changed their production or marketing practices as a result of this NCR SARE funded project? *(Please give your best estimate)*

Estimated number of farmers/ranchers who changed practices as a result of this project:

None	—
Don't know	—
Not applicable	—

Q15. How many farmers or ranchers increased their net income as a result of being involved with this NCR SARE project?

Estimated number of farmers/ranchers who increased their net income as a result of their involvement with this project

None	—
Don't know	—
Not applicable	—

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Q16. What main written or electronic products were produced from this NCR SARE project (including books, workbooks, CD-ROMs, videos, fact sheets, manuals, newsletters, extension publications, software, websites, journal articles, etc.)

Please list products by title or content/subject.

1.
2.
3.
4.
5.

Q17. Which of the following categories best describes each of the products listed in Q16 above?
(Please check one category for each product)

Category	Product #1	Product #2	Product #3	Product #4	Product #5
1. Book	—	—	—	—	—
2. Handbook	—	—	—	—	—
3. Work book	—	—	—	—	—
4. CD-ROM	—	—	—	—	—
5. Video	—	—	—	—	—
6. Fact sheet	—	—	—	—	—
7. Manual	—	—	—	—	—
8. Newsletter	—	—	—	—	—
9. Extension publication	—	—	—	—	—
10. Software	—	—	—	—	—
11. Website	—	—	—	—	—
12. Journal article	—	—	—	—	—

13. Other product. *Describe:*

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Q18. Approximately how many of each product listed in Q 17 were distributed to each of the following groups? (Please give your best estimate)

List of products from Q16:	Farmers or Ranchers	Extension Personnel	Soil and Water Conservation District Personnel	Natural Resources Conservation Service (NRCS) Personnel	Non-profit Governmental Organizations (NGOs)
Product #1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Product #2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Product #3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Product #4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Product #5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Q19. Please give us your best estimate of the average change in net incomes (e.g., \$ per acre, or per animal unit, farm, etc.), farmers or ranchers may have experienced as a result of your NCR SARE project(s).

Dollar Amount	Increase or Decrease	Unit	Number of these units you estimate were impacted by your project
\$ <input type="text"/>	Increase per	<input type="text"/>	<input type="text"/>
\$ <input type="text"/>	Decrease per	<input type="text"/>	<input type="text"/>

___ Not applicable; project did not focus on income change.

Please comment if needed:

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Q20. North Central Region SARE will be surveying project cooperators and beneficiaries in 2007. Please list up to five farmers or ranchers who were significantly involved in your NCR SARE-funded project and/or who changed their operations as a result of your NCR SARE-funded project(s). ALL INFORMATION WILL BE KEPT CONFIDENTIAL AND USED ONLY FOR RESEARCH PURPOSES.

1. Name:
Address:
City, State, Zip:
Phone:
E-mail:

2. Name:
Address:
City, State, Zip:
Phone:
E-mail:

3. Name:
Address:
City, State, Zip:
Phone:
E-mail:

4. Name:
Address:
City, State, Zip:
Phone:
E-mail:

5. Name:
Address:
City, State, Zip:
Phone:
E-mail:

Project 2

*(REPEAT Q1-Q20 FOR EACH NCR SARE PROJECT LISTED.
Insert the project header as a reference on each screen)*

Institutional / Larger Community Impacts

Q21. How has participating in a NCR SARE project affected your promotion and tenure?

- Very negatively
- Somewhat negatively
- No effect
- Somewhat positively
- Very positively
- Don't know
- Have not worked within university setting

**Q22. Over the last 10 years, how much has support for sustainable agriculture research and extension changed at your institution?
Would you say support has...**

- Greatly decreased
- Somewhat decreased
- No change in support
- Somewhat increased
- Greatly increased
- Does not apply to me

Q23. To what extent do you agree or disagree that increased support for sustainable agriculture within your institution can be attributed to the NCR SARE grants program?

- Strongly disagree
- Somewhat disagree
- Neither agree or disagree
- Somewhat agree
- Strongly agree
- Does not apply to me
- Have not worked within university setting

Q24. Have the results of your NCR SARE funded project been used in:

	No	Yes
A. Special, one-time classroom presentations (e.g., K-12 or college/university)..	<input type="checkbox"/> No	<input type="checkbox"/> Yes
B. Regular, ongoing college/university coursework	<input type="checkbox"/> No	<input type="checkbox"/> Yes
C. Regular, ongoing K-12 coursework	<input type="checkbox"/> No	<input type="checkbox"/> Yes

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Service Quality

Q25. Please rate aspects of applying for NCR SARE funds, using a scale of 1 (Very Poor) to 5 (Excellent).

	Very Poor	Poor	Fair	Good	Excellent	No Opinion
Ease of finding information about NCR SARE funding opportunities policies, and procedures	—	—	—	—	—	—
Ease of finding information on NCR SARE-funded projects (e.g., reports, products).....	—	—	—	—	—	—
Ease of obtaining grant application forms	—	—	—	—	—	—
Clarity of grant application forms, selection criteria and instructions	—	—	—	—	—	—
Adequate time between grant announcement and deadline to submit proposals	—	—	—	—	—	—

Q26. Please rate aspects of NCR SARE's grant making process using a scale of 1 (Very Poor) to 5 (Excellent).

	Very Poor	Poor	Fair	Good	Excellent	No Opinion
Keeping applicants informed on the status of their application and the funding decision	—	—	—	—	—	—
Providing timely official notification of review process outcomes	—	—	—	—	—	—
Clarity of feedback from the review process	—	—	—	—	—	—
Nature and number of requirements and provisions relative to size of grants	—	—	—	—	—	—
Timeliness of distributing funds for awarded projects	—	—	—	—	—	—
Reporting requirements that eliminate redundancy	—	—	—	—	—	—
Responding to your post-award requests in a timely manner (i.e., budget modifications, no-cost extensions of time, etc.)	—	—	—	—	—	—
Interaction/ communication with NCR SARE staff members	—	—	—	—	—	—

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Q27. How satisfied are you are with NCR SARE programs and services?

- Very satisfied
- Somewhat satisfied
- Neither satisfied or dissatisfied
- Somewhat dissatisfied
- Very dissatisfied
- No opinion

Q28. To what extent have NCR SARE programs and services met your expectations?

- Greatly falls short of expectations
- Somewhat falls short of expectations
- Meets expectations
- Somewhat exceeds expectations
- Greatly exceeds expectations
- No opinion

Q29. If NCR SARE could do one thing to improve its program service, what should it do?

Q30. Are you familiar with the results of other projects that NCR SARE has funded?

- Not familiar → Skip to question 33 (below)
- Somewhat unfamiliar
- Somewhat familiar
- Very familiar

Q31. If familiar, did you learn about those other projects in any of the following ways?

	No	Yes
Project reports at www.sare.org	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Journal article	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Field Notes publication	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Professional meeting presentation	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Word of mouth	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Ag press	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Other. <i>Please describe:</i> <input style="width: 150px;" type="text"/>	<input type="checkbox"/> No	<input type="checkbox"/> Yes

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Q32. What is one thing NCR SARE can do to increase your awareness of other projects?

Q33. Do you have any additional comments about this questionnaire or about NCR SARE in particular? *(Please include them here)*

Thank you!