Western Region Sustainable Agriculture Research and Education (Western SARE)

Survey Results From Farmer/Rancher Grant Recipients and Technical Advisors to Assess the Reach and Impact of the Farmer/Rancher Grant Program

Prepared June 2005

This survey was initiated by the Western Sustainable Agriculture Research and Education (Western SARE) program through a targeted call for proposals. The University of Arizona conducted the survey with coordination, oversight and administration from Western SARE. The individuals involved in the effort include:

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Executive Summary

Introduction

In 1994, the Western Region's Sustainable Agriculture Research and Education (Western SARE) Farmer/Rancher Grant (FRG) Program was established to support farmers and ranchers seeking to test, adapt and adopt sustainable agriculture production or marketing approaches. Since its beginning, the program has funded nearly 300 projects throughout the West.

Western SARE program staff and Administrative Council, in cooperation with a research team in the University of Arizona Cooperative Extension Service, conducted a region-wide survey of FRG recipients and Technical Advisors to assess the reach and impact of the FRG Program.

Specifically, the purpose of this study was to determine the impacts of these producer-led efforts on the grantee and the reach or diffusion of the grantees' efforts to other farmers and ranchers in the general locale of the grantee. The primary research objectives were to:

1) Determine if farming behavior of grantees indeed changed as a result of participating in this grant program (Impact)

2) Determine what impact adopting the change may have had on some facet of the grantee's farming operation (e.g., profitability, increase or decrease in labor or management) (Impact)

3) Determine how many other farmers or ranchers attended a field day tour or had personal visits with grantees (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).

All FRG recipients and their Technical Advisors from the states of Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming and the protectorates of American Samoa, Federated States of Micronesia, Guam, Northern Mariana Islands, and Palau were included as potential participants for this mail survey. The surveys were implemented from January through April 2005. One hundred forty-five (145) completed surveys were received from grant recipients, resulting in a 72% response rate. One hundred twenty-five (125) completed surveys were received from Technical Advisors, resulting in a 71% response rate.

Impact

Grantees were asked to indicate how their farming behavior had changed as a result of participating in this grant program. Seventy percent (70%) of grantees indicated that they had sought more information on the use of the approach or technology tested, while nearly half (48%) expanded the use of this approach or technology to other parts of their farm or ranch. Only 7% reported that they had no changes in farming behavior as a result of this grant. Grantees were also asked if the project triggered any new ideas and if they tested those new ideas on their farm or ranch. The vast majority (86%) indicated that the project had triggered new ideas, while 63% indicated that they had tested those new ideas. Over 80% of grantees indicated that they had achieved the results for which they hoped; were still using the idea,

approach or technology they tested; and felt the information gained from the SARE-funded project was very useful.

Technical Advisors were asked about specific actions undertaken by the **grantee** as a result of participating in the Farmer/Rancher Grant program. More than half of the Technical Advisors (56%) indicated that the grantee had sought more information as a result of the project; however, between two-thirds and three-quarters of respondents indicated that the grantees did not expand their approach (63%), change other operations (69%), add new enterprises (76%), or obtain new markets for crops or livestock raised (77%) as a result of the project. Nearly three-quarters of the Technical Advisors (72%) indicated that the project did achieve the results anticipated, and close to two-thirds (63%) reported that the grantee continued to use the approach tested. Nearly three-quarters of the Technical Advisors (72%) indicated that the project achieved the results anticipated, and close to two-thirds (63%) reported that the grantee continued to use the approach tested.

Technical Advisors were also asked about specific actions undertaken themselves as a result of participating in the Farmer/Rancher Grant project. Two-thirds (66%) reported that they suggested the approach to others, while 58% sought more information and 45% reported conducting further tests as a result of the project. More than three-quarters of Technical Advisors (77%) indicated that the project had triggered a new idea, and more than two-thirds (71%) reported recommending that others test the new ideas from their projects.

Grantees were asked how adopting the change impacted various facets of their farming operation (e.g., profitability, increase or decrease in labor or management). With the exception of fencing costs, most grantees reported that costs either decreased or stayed the same. However, at least one-quarter of grantees indicated that costs increased in the following areas: seed costs, hired labor costs, management costs, machinery and equipment costs, building costs, on-farm processing costs, costs associated with on-farm sales, and costs of selling at farmers markets. At least half of the grantees indicated that yields per acre, total animal production per year, and overall gross sales increased. From 47% to 79% reported that soil quality, water quality, and quantity of wildlife habitat increased, while soil erosion decreased. Nearly half (41%) of the grantees reported an increase in net income on their farm or ranch as a result of their Farmer/Rancher Grant Project.

Technical Advisors were asked for their perception on how adopting the change impacted various facets of the **grantees'** farming operation. With the exception of fencing costs, most Technical Advisors reported that costs either stayed the same or decreased. However, approximately one-quarter of those responding to questions concerning costs associated with labor (25%), management (23%), machinery/equipment (25%), and on-farm processing (26%) indicated an increase in costs. A large majority of those responding to items referring to yields per acre (59%), animal production (59%), and gross sales (58%) reported an increase. More than half indicated a decrease in soil erosion (53%) and an increase in soil quality (54%). Many did not know the impact on air quality (39%) as a result of the project. Forty-percent (40%) indicated an increase in water quality and half (50%) reported an increase in quantity of wildlife habitat. Thirty-three percent (33%) reported that net income on the grantee's ranch or farm increased.

Grantees were asked to describe any barriers or difficulties encountered in making changes in their farm or ranch operations (e.g., drought, lack of markets, processing facilities or financing). The most commonly mentioned barriers were: drought (n=35), lack of markets (n=17), financing (n=15), and lack of processing facilities (n=15). Technical Advisors were also asked to describe barriers or difficulties encountered in helping the grantee conduct this project. The most common responses were lack of time (n=7), distance (n=6), problems with communication/language (n=5), and climate or drought (n=5).

Reach

Grantees were asked how many people from various audiences attended a farm tour, heard a presentation about the project at a workshop or conference, or had personal visits with them. A wide range of farmers/ranchers, University or Extension staff, agency staff, and others attended a farm tour, heard a presentation by the grantee at a workshop or conference, or had a personal visit with the grantee. The average number of "others" attending both a farm tour and hearing a presentation at a workshop or conference was the highest (91 and 102, respectively). Farmers/ranchers were the next highest group identified by respondents as attending a farm tour (mean of 54) and hearing a presentation at a workshop or conference (mean of 80). Another question asked grantees how many other farmers or ranchers tried out their idea, approach or technology on their own agricultural operation. Responses ranged from 0 to 100 with a mean of 6.

Technical Advisors were also asked how many people from various audiences visited the **grantee's** farm on tours, field days or personal visits during the course of this project?" Nearly two-thirds (64%) of Technical Advisors reported 25 or fewer farmer or rancher visitors when a tour was conducted. Two-thirds (66%) indicated six or fewer University or Extension staff visitors touring the grantee's farm or ranch. Three-quarters of all Technical Advisors (75%) reported ten or fewer agency staff who visited. Thirty-four percent (34%) indicated that other groups not specified in the survey toured the grantee's farm. Technical Advisors were asked how many other farmers or ranchers tried out the **grantee's** idea, approach or technology on their own agricultural operation and how many were still using the approach. Responses ranged from 0 to 200, with a mean of 7 who tried the grantee's idea and a mean of 5 who were still using the approach.

Technical Advisors were asked how many people from various audiences visited with them as the Technical Advisor about the project. Forty-seven percent (47%) reported five or fewer visits by Farmers/Ranchers and slightly more than half (53%) reported one or two visits by University staff. Twenty-seven percent (27%) indicated that other groups not specified in the survey visited them as Technical Advisor on the project.

Customer Service

Grantees were asked to rate the service they received from Western SARE staff (for example, courteous responses from staff, clear answers and instructions, timely processing of paperwork, timeliness of payments). Nearly half (49%) indicated that they received excellent service from Western SARE staff and 37% thought they received very good service. Nearly two-thirds of the Technical Advisors (65%) rated the service from Western SARE staff as either very good or excellent.

Nearly all grantees (97%) would recommend seeking a grant from Western SARE to others, while 89% would consider seeking another grant from Western SARE themselves. Approximately half (52%) reported that without a Farmer/Rancher grant, they still would have pursued their projects.

Grantees were also asked to rate the helpfulness of the Technical Advisors on their projects. Nearly two-third (63%) rated their Technical Advisors as very helpful. Thirty-five percent (35%) rated them as somewhat helpful and only 2% rated them as not helpful. Technical Advisors were asked to indicate how they helped the grantee. Three-quarters (75%) helped to write the grant proposal. Nearly two-thirds (63%) helped the grantee conduct tests or measurements, while 54% helped publicize the project.

Overall, the results from the Farmer/Rancher Grant Evaluation Survey are very positive and indicate that the grant program has been important to the recipients. These findings will help guide and shape the Western SARE Farmer/Rancher Grant Program in the future.

Introduction

In 1994, the Western Region's Sustainable Agriculture Research and Education (Western SARE) Farmer/Rancher Grant (FRG) Program was established to support farmers and ranchers seeking to test, adapt and adopt sustainable agriculture production or marketing approaches. Since its beginning, the program has funded nearly 300 projects on farms and ranches throughout the West. Western SARE program staff and Administrative Council, in cooperation with a research team in the University of Arizona Cooperative Extension Service, conducted a region-wide survey of FRG recipients and Technical Advisors to assess the reach and impact of the FRG Program.

Specifically, the purpose of this study was to determine the impacts of these producer-led efforts on the grantee and the reach or diffusion of the grantees' efforts to other farmers and ranchers in the general locale of the grantee. The primary research objectives were to:

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Method

Survey Description

Both FRG recipients and Technical Advisors to the projects were surveyed. The FRG recipient survey contained 134 items and included questions on impact, reach, customer service, information needs and sources, and demographics. The Technical Advisor survey contained 109 questions on the same topics.

Validity of Surveys

When examining the results of a survey, it is important to ask, "How accurate is the information that was obtained?" While there is no simple answer to this question, most researchers focus on the validity and reliability, or "quality," of the survey. The quality of the Farmer/Rancher Grant Evaluation Surveys is reflected in the variability and consistency in the data that allowed us to find meaningful patterns. The following paragraphs provide an explanation of how we addressed certain threats to the validity and reliability of the surveys.

Our first concern around validity was to address the question, "Are we measuring what we intend to measure?" In other words, will the information gathered from the survey allow the WSARE staff and Administrative Council to gain insights into the experiences and thoughts of grant recipients and Technical Advisors concerning the Farmer/Rancher Grant Program, as was intended? Several steps were followed to address this validity issue and other important issues such as whether the questions in the survey have only one interpretation (Cook & Campbell, 1976) and make conceptual sense (Patton, 1986). First, WSARE staff developed questions as a starting point and made modifications based on technical assistance provided by the University of Arizona Cooperative Extension Service research team. After several iterations and committee member reviews, the surveys were pilot tested with Extension personnel in Arizona who would not be participating in the evaluation. This additional feedback was incorporated and consensus on survey wording and organization was reached with the committee members.

Table 1. Participating States and State Response Rates Overall

State	Number of Potential Surveys	Number of Completed Surveys	Number of Bad Addresses	Response Rate
Alaska	14	8	4	80%
American Samoa	36	20	1	57%
Arizona	17	9	2	60%
California	48	31	3	69%
Colorado	48	32	10	82%
Federated States of Micronesia	6	4	0	75%
Guam	10	9	0	90%
Hawaii	31	19	3	68%
Idaho	21	13	5	81%
Northern Mariana Islands	8	6	0	75%
Montana	31	24	2	83%
Nevada	1	1	0	100%
New Mexico	22	9	4	50%
Oregon	49	25	11	68%
Palau	2	2	0	100%
Utah	18	12	1	71%
Washington	57	33	12	75%
Wyoming	13	9	2	82%
Other States	6	4	1	80%
Total	**438**	**270**	**61**	**72%**

Another potential threat to validity in survey research is social desirability bias. This occurs when respondents "answer questions in a way that conforms to dominant belief patterns among groups to which the respondent feels some identification or allegiance" (Dillman, 1978, p. 62). One way to minimize such bias is to insure respondent confidentiality. The WSARE team provided the Arizona team with a list of potential participants and their addresses. Each potential respondent was then assigned a code number to maintain confidentiality. It is also important to note that written surveys, as opposed to interviews, provide an additional level of anonymity, and therefore, generally produce the most honest responses (Hotchstim, 1967; as cited in Dillman, 1978).

Nonresponse bias can also be problematic for survey research. Nonresponse bias occurs when those who do not respond to a survey differ greatly from those who do respond. If such a bias exists, then the results of the survey are misleading, since they only represent those unique individuals who answered the survey and not the broader population initially targeted. One way to decrease nonresponse bias is to increase response rates. To accomplish this, we utilized Dillman's (1978) Total Design Method as a framework for developing and implementing surveys. Among other techniques, this method makes use of mailings which both inform potential respondents of forthcoming surveys and remind them to answer and send in the survey materials. This method yielded response rates of 72% for grant recipients and 71% for Technical Advisors, which meet established standards of "good" to "very good" response rates (Babbie, 1973; as cited in Edwards, Thomas, Rosenfeld, & Booth-Kewley, 1997). Table 1, on the previous page, shows the participating states and the overall state response rates for grant recipients and Technical Advisors combined. Because some grantees and Technical Advisors received multiple surveys, please note that the numbers reported refer to surveys rather than to participants. The category "Other states" is included because some grant recipients and Technical Advisors had moved since the time of the original grant.

Table 2. Participating States and State Response Rates for Grant Recipients

State	Number of Potential Surveys	Number of Completed Surveys	Number of Bad Addresses	Response Rate
Alaska	7	3	3	75%
American Samoa	19	9	1	50%
Arizona	7	4	0	57%
California	24	18	0	75%
Colorado	25	16	4	76%
Federated States of Micronesia	1	0	0	0%
Guam	5	4	0	80%
Hawaii	16	9	2	64%
Idaho	12	8	2	80%
Northern Mariana Islands	6	5	0	83%
Montana	17	14	1	88%
Nevada	1	1	0	100%
New Mexico	11	7	1	70%
Oregon	25	15	1	65%
Palau	1	1	0	100%
Utah	8	6	0	75%
Washington	29	19	4	79%
Wyoming	7	5	2	100%
Other States	1	1	0	100%
Total	**222**	**145**	**21**	**72%**

Identification of Survey Participants

All FRG recipients and their Technical Advisors from the states of Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming and the protectorates of American Samoa, Federated States of Micronesia, Guam, Northern Mariana Islands, and Palau were included as potential participants for this survey. The Western SARE team sent

a list of potential participants and their addresses to the Arizona team. In Arizona, each potential respondent was then assigned a code number to maintain confidentiality and anonymity. The code and name lists were only used for follow-up reminders by one member of the Arizona team. From that point on, data entry and analyses were done by team members who had no access to names.

Survey Procedure

Dillman's (1978) Total Design Method was used for this project. First, an introductory letter from V. Philip Rasmussen (Coordinator, Western SARE Program) was sent to all potential participants on January 7, 2005. This letter was sent one week prior to the beginning of the survey process and encouraged them to complete the survey when it arrived. On January 14, 2005, the initial survey packet was sent to all potential participants. This packet included a cover letter that informed participants about the purpose of the project and provided directions on returning the completed survey, a copy of the survey, a self-addressed stamped return envelope, and an order sheet of Sustainable Agriculture Network Publications for participants to return with their surveys. Offering these publications served as an incentive for participants to complete and return their surveys. FRG recipients received an additional $2 incentive enclosed in the initial survey packet. All surveys, identified only by code numbers, were returned directly to Arizona for analysis. A member of the Arizona team who did not see actual survey responses was responsible for tracking participation.

One week later, on January 21, 2005, a postcard follow-up/thank you was sent to all potential participants. Two weeks later, on February 4, 2005, a second letter was sent to those who had not yet responded requesting that they complete and return the survey. Four weeks later, on March 4, 2005, the final packet was sent to those who had not yet returned the survey. This final mailing included a new cover letter, a replacement questionnaire, a self-addressed stamped return envelope, and another order sheet of Sustainable Agriculture Network Publications.

The surveys were implemented from January through April 2005. Two hundred six (206) grant recipients were identified as eligible participants. Introductory letters for two grant recipients were returned due to bad addresses; therefore these individuals did not receive a survey packet. We were unable to find updated addresses for an additional 19 respondents. Thirteen (13) grant recipients received multiple surveys because they had received multiple grants. One hundred forty-five (145) completed surveys were received. After taking all of these numbers into account, the final response rate for grant recipients was 72%. Table 2, on the previous page, shows the participating states and state response rate for grant recipients. Again, the numbers reported refer to surveys rather than to participants.

One hundred seventy-six (176) Technical Advisors were identified as eligible participants. The introductory letter for one Technical Advisor was returned due to bad addresses; therefore this individual did not receive a survey packet. We were unable to find updated addresses for an additional 34 respondents. Twenty-eight (28) Technical Advisors received multiple surveys because they served as a Technical Advisor on multiple projects. One hundred twenty-five (125) completed surveys were received. After taking all of these numbers into account, the final response rate for Technical Advisors was 71%. Table 3, on the next page, shows the participating states and their corresponding response rates for Technical Advisors (numbers refer to surveys rather than participants).

Data Entry

Arizona team members performed data entry using computer software that allowed a scanner to read filled-in bubbles directly from a survey. Once the surveys were scanned, they were converted to numbers to facilitate statistical analysis. To ensure reliability, 10% of the scanned surveys were

manually checked for accuracy. Because no errors were found in these surveys, the remaining surveys were not checked. Each survey also included open-ended questions which allowed participants to write answers in a sentence-based format. Responses to these questions were manually entered into the same data file.

Data Analyses

Frequencies were utilized to gain insights into the experiences and thoughts of grantees and Technical Advisors concerning the Farmer/Rancher Grant Program. Frequencies provide an actual count and a percentage of individuals choosing each response category for a specific question. Frequencies were computed for every item. Please note that percentages reported have been adjusted for missing data. Also, due to rounding, percentages may not sum to 100%. For some items the mean, median, and mode were also calculated. The mean is simply the arithmetic average. The median is the “middle number” when a group of numbers have been put in order from lowest to highest. The mode is the number that occurs most often.

Table 3. Participating States and State Response Rates for Technical Advisors

State	Number of Potential Surveys	Number of Completed Surveys	Number of Bad Addresses	Response Rate
Alaska	7	5	1	83%
American Samoa	17	11	0	65%
Arizona	10	5	2	63%
California	24	13	3	62%
Colorado	23	16	6	94%
Federated States of Micronesia	5	4	0	80%
Guam	5	5	0	100%
Hawaii	15	10	1	71%
Idaho	9	5	3	83%
Northern Mariana Islands	2	1	0	50%
Montana	14	10	1	77%
Nevada	0	0	0	0%
New Mexico	11	2	3	25%
Oregon	24	10	10	71%
Palau	1	1	0	100%
Utah	10	6	1	67%
Washington	28	14	8	70%
Wyoming	6	4	0	75%
Other States	5	3	1	75%
Total	**216**	**125**	**40**	**71%**

A number of the survey questions included open-ended responses. Basic content analysis was used to code the open-ended responses. Coding involves grouping similar responses together into a category. For example, the responses of "need less paperwork," "simplify the bureaucratic portion so there is less paperwork," and "reports are hard to fill out" were grouped into the category "paperwork/forms." Each open-ended question was coded by an individual team member. Results of the coding were then examined by another team member and discussed with the original coder to establish inter-rater reliability.

A crosstabulation is a table that displays the number of individuals falling into each combination of the categories of two or more variables. Crosstabulations were calculated on grant recipient data to look for

relationships between variables. Specifically, demographic variables (age, years farming/ranching, location, number of acres owned, number of acres leased, group affiliations) were crosstabulated with questions on how grantees' farming operations were impacted (questions 2 and 5) and questions on early adoption of new approaches (questions 30 and 31). A Chi-square statistic was also computed to test the hypothesis that the two sets of variables are independent. If the Chi-square is statistically significant (i.e., there is only a 5% or less likelihood that the result occurred due to chance), it means that the variables are not independent. For example, a significant Chi-square obtained for a crosstabulation of "affiliation with a Farmers Union" with "added a new enterprise as a result of this grant" would indicate that these variables are related. Additional analyses are then required to determine precisely where the significant differences lie. For ease of interpretation, only general trends and statistically significant crosstabulation results are reported.

T-tests were also calculated to compare responses between grant recipients and Technical Advisors. T-tests assess whether the means of two groups are statistically significantly different from one another. Grantees and Technical Advisors were compared on questions 2 and 5 (impact) and question 4 (economic increase). Again, note that only statistically significant t-test results are reported.

Structure of the Report

This report presents results in three major sections. First, we describe results from the grant recipient survey. We describe how grantees heard about the Farmer/Rancher Grant Program and then present demographics. We then turn to a description of the grant's impact and reach. The next section focuses on service from Western SARE and then on information sources and needs. The last piece in the grant recipient section presents crosstabulation results described earlier. Next, we present results from the Technical Advisor survey including how Technical Advisors heard about the FRG Program, demographics, impact, reach, service, and information needs and sources. The final section of the report presents comparisons between grantee and Technical Advisor responses.

After presenting the results of the main substantive areas, we conclude with an overall summary. Because results are best interpreted by those familiar with the Farmer/Rancher Grant Program, many of the conclusions from the results are left to the reader.

Finally, we provide an appendix that contains a bar chart for each survey item on the questionnaire, a copy of the survey questionnaire, and copies of the correspondence sent to each participant.

Grant Recipient Survey Results

How Grantees Heard About the Grant Program

Question 1 of the survey asked grantees, "How did you hear about the Western Region Sustainable Agriculture Research and Education (SARE) Farmer/Rancher Grant Program?" Four sources, a category of "Other" and a choice of "Don't Know" were listed as possible responses. Table 4 presents the data on how grantees heard about the WSARE grant.

Table 4. How did you hear about the Western Region Sustainable Agriculture Research and Education (SARE) Farmer/Rancher Grant Program? (Q1)

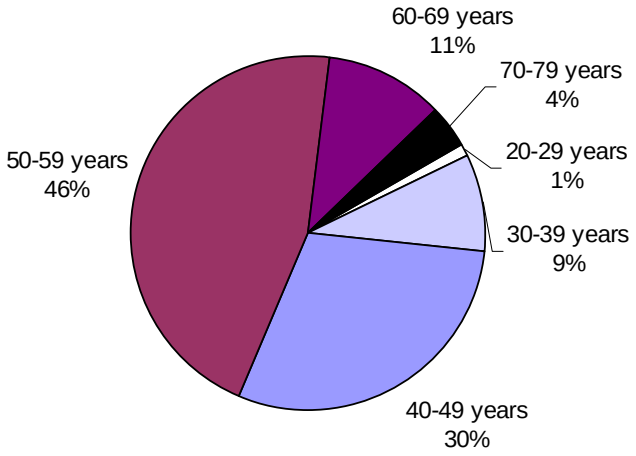
Item	% saying yes
Extension Agent/Educator	57%
Other Growers	15%
SARE Web Site	15%
News Article	16%
Other	19%
Don't Know	3%

Over half of the grantees (57%) indicated that they learned of the grant program from an Extension Agent/Educator. Similar percentages of grantees found out about the program from Other Growers (15%), the SARE Web Site (15%), and News Articles (16%). Very few grantees (3%) did not know how they learned of the program and 19% of the grantees learned of the grant through means not listed on the survey. Grantees reported learning of the grant through SARE mailings, professional organizations, previous SARE participants, conferences, USDA, and the Federal Register.

Demographics

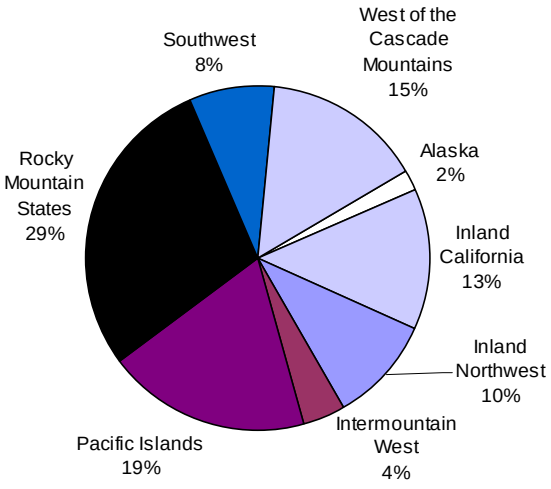
A total of one hundred forty-five (145) surveys were returned for analysis. Question 22 of the survey asked grantees to report their age. Of those who returned completed surveys, almost half (46%) were between 50-59 years of age and nearly one-third (30%) were between 40-49 years of age. Figure 1 shows the ages of the grantees.

Figure 1. What is your age? (Q22)



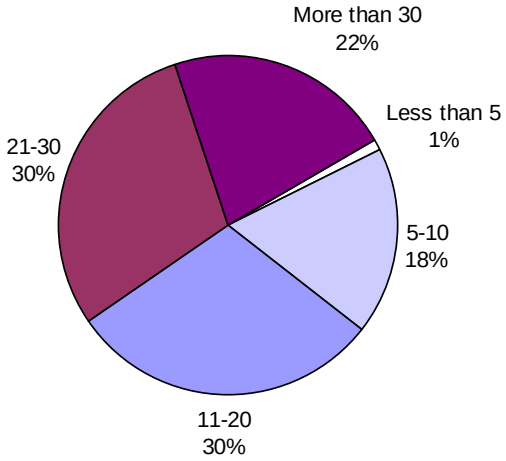
Grantees were asked in Question 25 which geographic area best describes their location. As shown in Figure 2, nearly one-third (29%) of the grantees indicated that the Rocky Mountain States best described their location, while 19% marked Pacific Islands, and 15% reported West of the Cascade Mountains.

Figure 2. Which of the following best describes your location? (Q25)



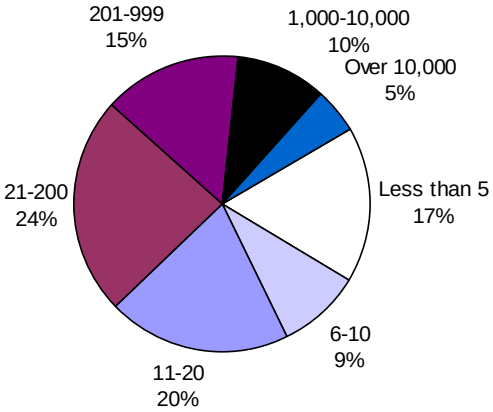
Question 23 asked grantees to indicate how many years they had been farming or ranching. According to Figure 3, thirty percent (30%) of the grantees reported farming or ranching for 11-20 years and 30% reported farming or ranching for 21-30 years. Very few grantees (1%) had been farming or ranching for less than five years, while quite a few (22%) had been farming or ranching for over 30 years.

Figure 3. How many years have you been farming or ranching? (Q23)



Grantees were asked in Question 27 how many acres they owned. As seen in Figure 4, almost one-quarter of the grantees (24%) owned 21-200 acres, while 20% owned 11-20 acres and 17% owned less than 5 acres. Only 5% owned over 10,000 acres. The mean response was between 11-20 acres and 21-200 acres. The most common response was 21-200 acres (n=32).

Figure 4. How many acres do you own? (Q27)



In addition, Question 28 asked grantees how many acres they leased from someone else. Figure 5 shows that a large number of grantees (40%) leased less than 5 acres followed by 21% leasing 201-999 acres. Very few grantees leased over 10,000 acres (3%), 6-10 acres (4%), and 11-20 acres (7%). The mean response was 11-20 acres. The most common response was less than 5 acres (n=38).

Question 24 asked grantees, "What are the crops or livestock produced on your farm or ranch?" Fourteen types of crops and livestock were listed as well as an "Other" category. Grantees were directed to mark all that apply.

Figure 5. How many acres do you lease from someone else? (Q28)

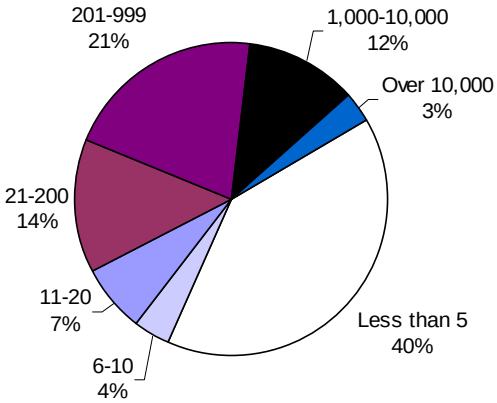


Figure 6, on the next page, shows that Vegetables were the most commonly produced crop with 43% of the grantees marking that response. The other most commonly produced crops or livestock were Fruit (37%), Other (34%), Beef cattle (33%), Hay (32%), and Green manure or cover crops (28%). The types of crops and livestock listed in the "Other" category included herbs, honey, cut flowers, native plants, medicinal plants, wine grapes, canola, fish, eggs, flax, pheasants and bison. Additional analyses based on indicators of diversity as described by WSARE program staff revealed that 78% of grantees have diversified farm or ranch operations. We were unable to determine the diversity of 22% of farms/ranches.

Grantees were asked in Question 26 to indicate what percentage of their farm or ranch products they distribute to four different outlets: 1) Wholesaler or broker (for example, grain elevator, auction yard, sales barn, bulk processor), 2) Retail outlets such as stores, bakeries or restaurants, 3) Directly to consumers (for example, direct sales, CSA's, farmers markets), and 4) For family, personal or cultural use or barter. The question indicated that the percentages should total 100%. Table 5 shows that on average 39% of the grantees' products are sold to wholesalers or brokers and 34% of their products are sold directly to consumers. Only 13% of the grantees' products, on average, are sold to retail outlets and 10% of their products are used for family, personal or cultural use or barter.

Figure 6. What are the crops or livestock produced on your farm or ranch? (Q24)

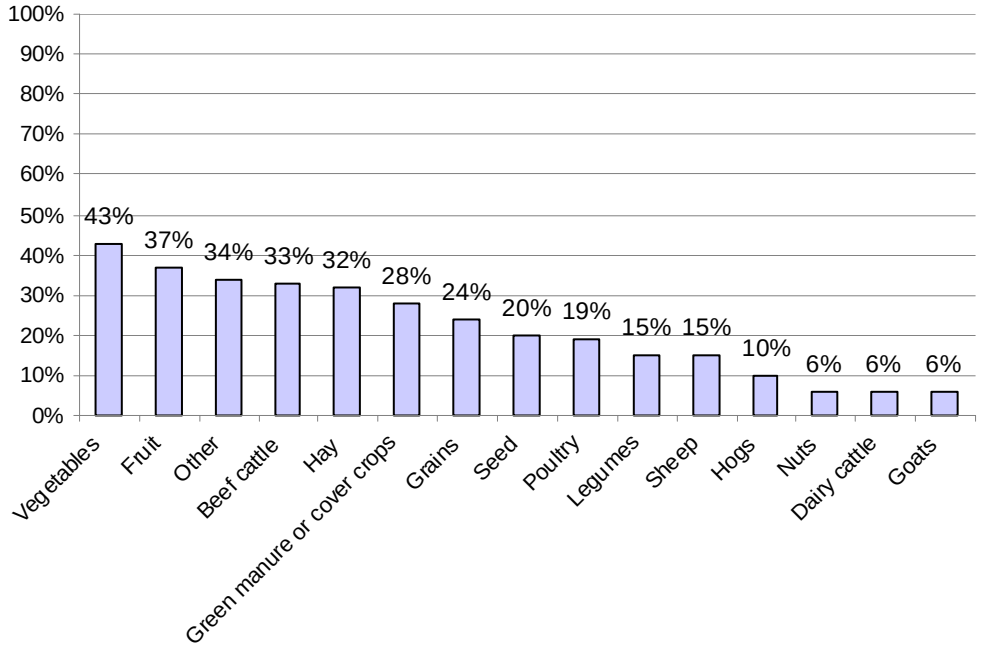


Table 5. What percentage of your farm or ranch products do you sell to these outlets? (Q26)

Type of outlet	Range	Mean	Number of respondents
Wholesaler or broker	0-100	39%	145
Retail outlets	0-100	13%	145
Directly to consumers	0-100	34%	145
For family, personal or cultural use or barter	0-100	10%	145

Figure 7, on the next page, shows the percentage of grantees that marketed their products to none, one, two, three, or four of the possible outlets (n=96). Slightly less than two-thirds (64%) of grantees marketed to two or three outlets.

Question 29a asked grantees about how many family members work on their farm or ranch full time and part time, while Question 29b asked grantees about how many non-family members work on their farm or ranch full time and part time. Table 6 shows the range, minimum, maximum, and mean for the responses to this question. The average number of family members working both full time and part time on farms and ranches was one. The average number of non-family members working full time was two and the average number of non-family members working part time was six.

Figure 7. Percentage of Grantees Marketing Their Products to Multiple Outlets

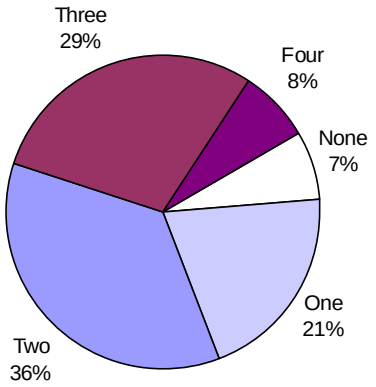


Table 6. How many family members and non-family members work on your farm or ranch full time and part time? (Q29)

Type of employee	Range	Mean	Number of respondents
Family member – Full Time	0-5	1	145
Family member – Part Time	0-10	1	145
Non-family member – Full Time	0-100	2	145
Non-family member – Part Time	0-400	6	145

For Question 21, grantees were asked what farm or natural resource organizations they were affiliated with. Six organizations were listed as possible responses along with an "Other" category. Respondents were instructed to mark all that applied. As shown in Table 7, approximately one-third of the grantees were affiliated with Farm Bureaus (35%), Organic Farmers Groups (33%), and Boards or Commissions (34%). Twenty-eight percent (28%) of the grantees marked both Commodity Group and Other. Types of organizations listed in the "Other" category included non-profit groups, associations (e.g., Cattlemen's Association, Weed Control Association, Nursery and Greenhouse Associations), research foundations, cooperatives, exchanges, NRCS, and USDA.

Table 7. What farm or natural resource organizations are you affiliated with? (Q21)

Type of organization	% saying yes
Farm Bureau	35%
Farmers Union	8%
Organic Farmers Group	33%
Direct Seeding Group	6%
Commodity Group	28%
Boards or Commissions	34%
Other	28%

Impact

Changes in Grantees' Farming Behavior

Grantees were asked to indicate how their farming behavior had changed as a result of participating in this grant program. Question 5 of the survey began with the stem, "As a result of this Farmer/Rancher Grant project, have you…" and ended with seven ways their behavior may have changed. Respondents were asked to mark all that applied. Table 8 presents the results for this question.

Table 8. As a result of this Farmer/Rancher Grant project, have you… (Q5)

Behavior Change	% saying yes
Sought more information on use of the approach or technology tested	70%
Expanded use of this approach or technology to other parts of your farm or ranch	48%
Changed other operations on your farm or ranch	43%
Added a new enterprise to your farm or ranch	28%
Obtained new markets for the crops or livestock raised on your farm or ranch	32%
Other	11%
None	7%

Seventy percent (70%) of grantees indicated that they had sought more information on the use of the approach or technology tested, while nearly half (48%) expanded the use of this approach or technology to other parts of their farm or ranch. Only 7% reported that they had no changes in farming behavior as a result of this grant.

Correlations were calculated to determine if there were any relationships between the behavior changes listed in question 5. Fifty-seven percent (57%) of those who sought information also expanded use of the approach. Fifty-one percent (51%) of those who sought information also changed other operations. Thirty-seven percent (37%) of those who sought information also added a new enterprise. Thirty-five percent (35%) of those who sought information also obtained new markets.

Grantees were also given the opportunity to describe other ways their farming behavior had changed. The comments fell into three broad categories. The first pertained to networking and the sharing of information with others (e.g., increased networking with other farmers, shared information with other farmers, other farmers using approach tested, been asked to teach the system to others, outreach program to grower/neighbors).

Figure 8. Did this project trigger any new ideas for you? (Q6a)

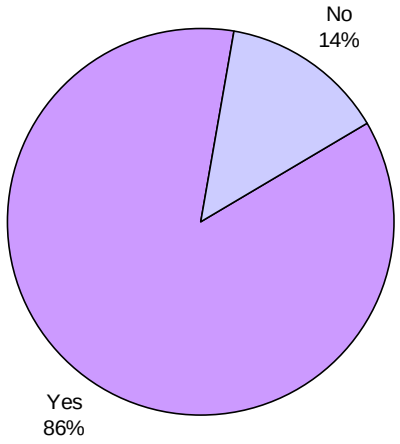
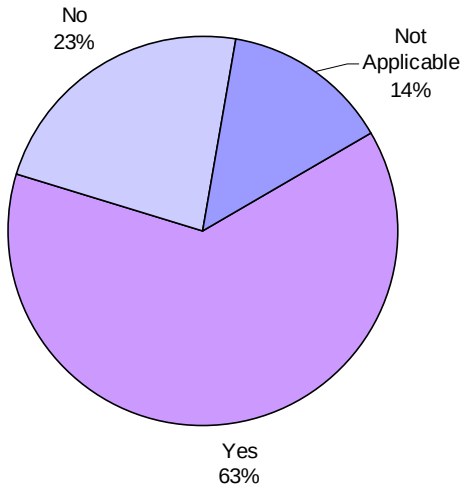


Figure 9. I tested those new ideas on my farm or ranch (Q6b)



The second set included specific changes to the approach or new approaches (e.g., changed overall fertility approach, explored ash and biosolid application, continue project under different conditions). The third set of comments referred more broadly to the status of the project itself (e.g., no longer farming, had to abandon the project, plan to use it in the future).

Grantees were also asked if the project triggered any new ideas and if they tested those new ideas on their farm or ranch. Pie charts (Figure 8 and Figure 9, on the previous page) show the responses to Question 6.

Changes to Grantees' Farming Operations

Grantees were asked how adopting the change impacted various facets of their farming operation (e.g., profitability, increase or decrease in labor or management). Question 3 listed twenty-four facets with the response options of *decreased, stayed the same, increased, don't know,* and *not applicable*. Participants who responded "not applicable" were excluded from analyses. Table 9 presents the data on how the change impacted various facets of the grantees' farming operation.

With the exception of fencing costs, most grantees reported that costs either decreased or stayed the same. However, at least one-quarter of grantees indicated that costs increased in the following areas: seed costs, hired labor costs, management costs, machinery and equipment costs, building costs, on-farm

Table 9. Impact of Idea, Approach or Technology on Various Items on Grantee's Farm or Ranch (Q3)

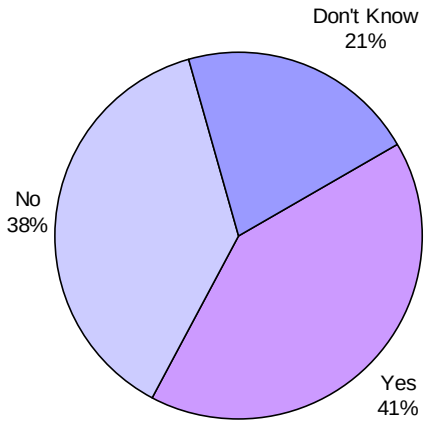
Facet	Decreased	Stayed the Same	Increased	Don't Know	Number of Respondents
Fertilizer Costs	39%	42%	15%	4%	74
Fuel Costs	37%	45%	10%	10%	74
Pesticide Costs	43%	41%	10%	7%	61
Weed Control Costs	38%	44%	17%	1%	79
Seed Costs	8%	62%	29%	2%	63
Feed Costs	49%	28%	21%	2%	43
Veterinary Care Costs	30%	57%	10%	3%	30
Fencing Costs	9%	37%	54%	0%	46
Hired Labor Costs	23%	46%	26%	5%	74
Management Costs	25%	43%	29%	4%	94
Machinery and Equipment Costs	21%	45%	31%	4%	78
Building Costs	10%	61%	29%	0%	41
On-Farm Processing Costs	16%	46%	26%	12%	50
Costs Associated with On-Farm Sales	18%	43%	25%	14%	49
Costs of Direct-to-Consumer Sales	33%	41%	19%	7%	58
Costs of Selling at Farmers Markets	15%	49%	27%	10%	41
Yields Per Acre	8%	24%	56%	12%	91
Total Animal Production Per Year	8%	29%	54%	8%	48
Overall Gross Sales	3%	22%	64%	10%	98
Soil Erosion	58%	24%	10%	9%	71
Soil Quality	6%	12%	79%	3%	90
Air Quality	5%	35%	47%	12%	57
Water Quality	5%	26%	54%	15%	76
Quantity of Wildlife Habitat	3%	23%	69%	5%	78

processing costs, costs associated with on-farm sales, and costs of selling at farmers markets. At least half of the grantees indicated that yields per acre, total animal production per year, and overall gross sales increased. From 47% to 79% reported that soil quality, water quality, and quantity of wildlife habitat increased, while soil erosion decreased.

After examining each item individually, the next logical step is to determine if there are any relationships between items. Table 10, on the next page, shows the results of a correlation analysis. These results reflect only associations that were found to be significant when the *p* value was less than .01 (we have indicated a significant finding using double asterisks **). In other words, we can expect that 99 times out of 100 the results we have found were not due to chance. It is important to remember that correlation does not mean causation.

All of the relationships reflected in this correlation table are positive, which means that as responses in one item increased, so too did the responses in the other item. There were 43 significant associations. Impact on on-farm processing costs had the greatest numbers of significant associations (7). Caution must be taken in interpreting these results in that the item, on-farm processing costs may in fact encompass other similar items such as fuel costs, or feed costs.

Figure 10. As a result of this Farmer/Rancher Grant project, have you seen an increase in net income on your farm or ranch? (Q4a)



Grantees were asked if they had seen an increase in net income on their farm or ranch. Figure 10 presents their responses to Question 4a. Nearly half (41%) of the grantees reported an increase in net income.

A follow-up question (Question 4b) asked grantees to estimate the economic increase per unit (e.g., acre, animal, field, farmstand, farm). Responses varied widely and ranged from:

- $.05 to $2 per pound/animal
- $.25 to $50 per head
- $50 per herd
- $5 to $4500 per acre
- $400 per farmers market sale to $1000 per year at farmers market
- $1500 per farmstand
- $25 to $10,000 per farm
- $300 per 20 treefruits at replanting only
- $500 per crop
- $50 per 10 x 10 yard vegetable plot
- $500 per field
- $60 per 1000 square feet
- $6000 per 1300 plants
- $60,000 per year ranch.

Table 10. Correlation Table of Impact of Idea, Approach or Technology on Various Items on Grantee's Farm or Ranch (Q3)

Impact on…	Fertilizer Costs	Fuel Costs	Pesticide Costs	Weed Control Costs	Seed Costs	Feed Costs	Veterinary Care Costs	Fencing Costs	Hired Labor Costs	Management Costs	Machinery And Equipment Costs	Building Costs	On-Farm Processing Costs	Costs Associated with On-Farm Sales	Costs Direct-To-Consumer Sales	Costs Selling at Farmers Markets	Yields Per Acre	Total Animal Production Per Year	Overall Gross Sales	Soil Erosion	Soil Quality	Air Quality	Water Quality	Quantity of Wildlife Habitat
Fertilizer Costs																								
Fuel Costs	**																							
Pesticide Costs	**																							
Weed Control Costs			**																					
Seed Costs		**		**																				
Feed Costs				**																				
Veterinary Care Costs			**	**																				
Fencing Costs																								
Hired Labor Costs		**				**		**																
Management Costs						**			**															
Machinery And Equipment Costs		**							**	**														
Building Costs						**			**															
On-Farm Processing Costs		**				**		**	**	**	**	**												
Costs Associated with On-Farm Sales										**			**											
Costs Direct-To-Consumer Sales		**												**										
Costs Selling at Farmers Markets														**	**									
Yields Per Acre																								
Total Animal Production Per Year																	**							
Overall Gross Sales																	**	**						
Soil Erosion						**																		
Soil Quality																			**					
Air Quality																					**			
Water Quality																			**		**	**		
Quantity of Wildlife Habitat																					**	**	**	

Question 2a asked grantees if they achieved the results they had hoped for with the SARE grant. Figure 11 shows that 84% of grantees indicated that they had achieved the results for which they hoped.

Question 2b asked if grantees were still using the idea, approach or technology they tested. Figure 12 reveals that 82% of grantees are still using the idea, approach or technology tested.

Question 2c asked grantees about the usefulness of the information gained from the SARE-funded project. Figure 13 indicates that 82% felt the information gained was very useful.

Figure 11. Did you achieve the results you had hoped for with the SARE grant? (Q2a)

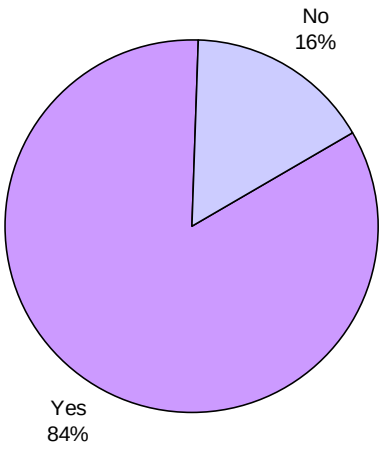


Figure 12. Are you still using the idea, approach or technology you tested? (Q2b)

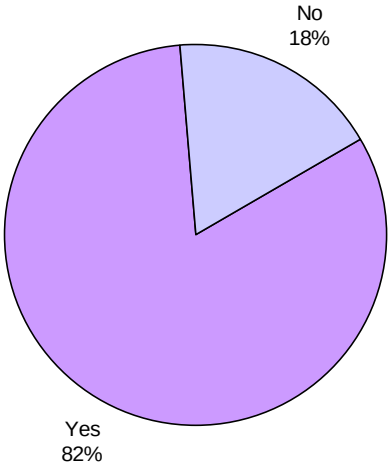
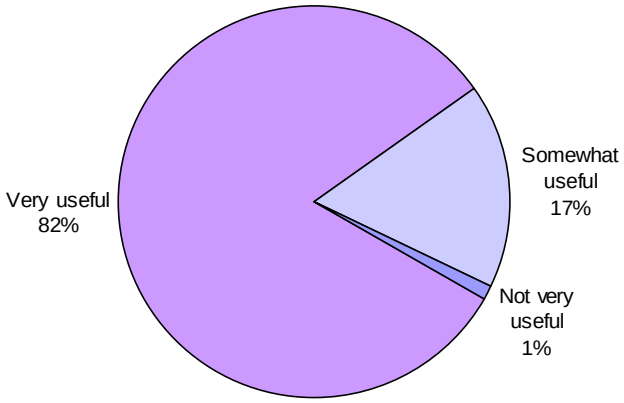


Figure 13. How useful was the information you gained from the SARE-funded project? (Q2c)



Early Adopter

Two questions were used to determine if the grantees were considered "early adopters" of new ideas, technologies or approaches. Question 30 asked, "When a new approach to farming comes along that might be of financial benefit to my farm, I tend to…" Response choices were *try it out right away myself, wait to see if others try it out first then test it myself,* and *wait until an approach is proven and used by lots of neighbors before trying it out myself*. Figure 14, on the next page, shows that 72% of grantees indicated that they would try it out right away.

Question 31 asked, "When a new approach to farming comes along that might be of environmental benefit to my farm, I tend to…" Again, response choices were *try it out right away myself, wait to see if others try it out first then test it myself,* and *wait until an approach is proven and used by lots of neighbors before trying it out myself*. Figure 15, on the next page, shows that 71% of grantees indicated that they would try it out right away.

These findings suggest that a majority of the participants would be considered "early adopters."

Barriers

Question 32 asked grantees to describe any barriers or difficulties encountered in making

changes in their farm or ranch operations (e.g., drought, lack of markets, processing facilities or financing). Eighty-two percent (82%) of grantees responded to this open-ended question. The most commonly mentioned barriers were: drought (n=35), lack of markets (n=17), financing (n=15), and lack of processing facilities (n=15). Responses have been placed into general groupings for ease of reading. No further analyses were done with these groups. Within the following groupings, topics are listed in descending frequency order (e.g., from most to least). Unless otherwise noted, the number of times each item was reported is one.

Figure 14. When a new approach to farming comes along that might be of financial benefit to my farm, I tend to… (Q30)

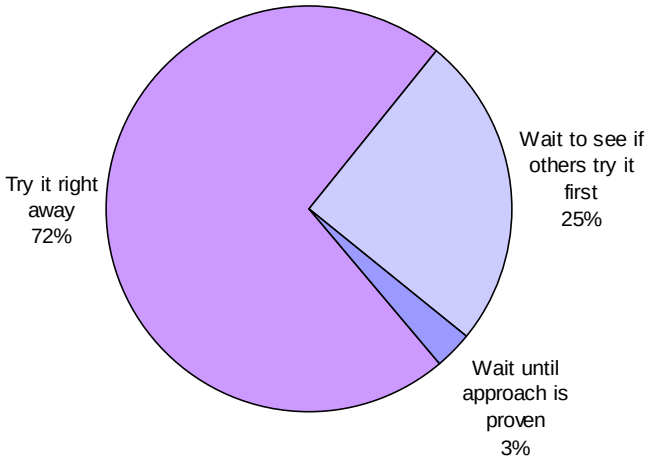
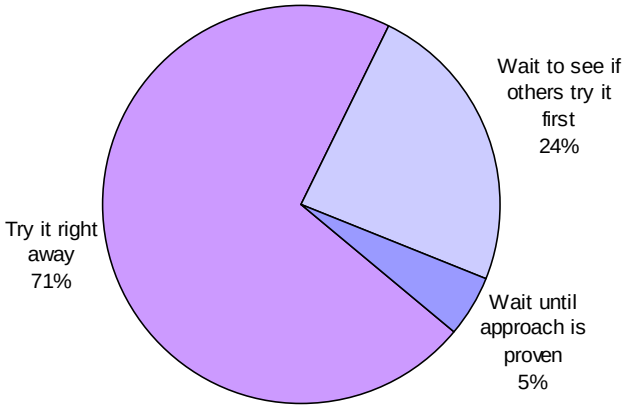


Figure 15. When a new approach to farming comes along that might be of environmental benefit to my farm, I tend to… (Q31)



- Drought (35), Weather (4), Typhoons (3), Forest fire (2), Natural disasters, Hurricanes
- Lack of markets (15), Market is variable and small, Market/demand, Marketing – freight cost is expensive, Marketing against low cost imports, Marketing is antiquated, Distance from major market, Isolation
- Financing (15), Lack of excess funds for research and development, Financing competition, Lack of capital, Bank policies, Obtaining loans
- Lack of processing facilities (15)
- No capital for infrastructure, Lack of infrastructure, Poor infrastructure, Still building infrastructure – make changes slowly, Transportation problems
- Costs (7), Costs relative to benefits (3), Low margins, Prices for commodities, Weak demand, Fair payments from commodity buyers, Yield
- Lack of labor (8)
- Policies and regulations (5), Confusion over what is allowed by WSARE, Changing contracts from year to year, Lack of government support
- Lack of equipment (2), Lack of means of applying compost, Equipment breakdowns, Trying something on a small scale when equipment and practices are geared toward a larger scale
- Getting people involved and keeping them interested, Lack of commitment, Lack of interested growers, Resistance to new ideas
- Lack of help (2), Need help marketing, Lack of help from Technical Advisor, Lack of information on practices costs

- Lack of business plan development, Lack of skilled business management resources, Management
- Lack of time (3), Marketing takes too much attention
- Personal health problems (2)
- Destruction by wild animals (2), BSE scares on cattle
- Collaborators out of business
- Changing thought process to switch to new idea, Moving from conventional to organic farming
- Weeds (2), Weed control
- Development of new products, Lack of organic inputs, new crops
- Environmental impacts (2), Urban sprawl, Organic matter increased, Water management
- Illegal immigration
- Fencing
- Quality
- Theft

Reach

Attendance at Field Day Tours and Workshops/Conferences or Personal Visits by Other Farmers or Ranchers

Questions 7 through 9 asked grantees how many people from various audiences attended a farm tour, heard a presentation about the project at a workshop or conference, or had personal visits with them. Table 11 reveals a wide range in the numbers of farmers/ranchers, University or Extension staff, agency staff, and others attended a farm tour, heard a presentation by the grantee at a workshop or conference, or had a personal visit with the grantee. The average number of "others" attending both a farm tour and hearing a presentation at a workshop or conference was the highest (91 and 102, respectively). Farmers/ranchers were the next highest group identified by respondents as attending a farm tour (mean of 54) and hearing a presentation at a workshop or conference (mean of 80).

Table 11. Number of People from Various Audiences Who… (Q7-9)

	Number of Grantees Reporting	Range	Mean	Median
Attended a Farm Tour				
Farmers/Ranchers	108	2-800	54	12
University or Extension Staff	103	1-500	13	4
Agency Staff	66	1-120	9	3
Others	66	1-1300	91	25
Heard a Presentation at a Workshop or Conference				
Farmers/Ranchers	95	2-1000	80	30
University or Extension Staff	77	1-300	15	5
Agency Staff	50	1-500	21	6
Others	48	1-1000	102	38
Farmers/Ranchers who had Personal Visits	119	1-300	21	6

Visitors who Tested or Adopted Practice or Technology

Question 10 asked grantees how many other farmers or ranchers tried out their idea, approach or technology on their own agricultural operation. Responses ranged from 0 to 100 with a mean of 6 (n=145).

Table 12. Types of Public Recognition Received for Project (Q11)

Type of Public Recognition	% reporting yes
Award	10%
Article in local newspaper	46%
Article in newsletter	42%
Article in magazine	29%
Other	16%
Don't know	21%

Recognition

Question 11 asked grantees about the types of public recognition received for their project. Six categories were listed and respondents were asked to mark all that applied. Table 12 presents the data for this question.

The most commonly received types of recognition were an article in a local newspaper or in a newsletter (46% and 42%, respectively). Grantees were also given the opportunity to list "other" public recognition they had received. Other types of recognition mentioned included: annual bulletin, booklet produced and used in schools and given to other farms, television, radio, book chapter, pamphlets, proceedings of professional meetings, and websites.

Service

Question 12 asked grantees to rate the service they received from Western SARE staff (for example, courteous responses from staff, clear answers and instructions, timely processing of paperwork, timeliness of payments). Possible responses were *excellent*, *very good*, *good*, *fair* and *poor*. Figure 16 presents the results of this question.

It is encouraging to note that nearly half of the grantees (49%) indicated that they received excellent service from Western SARE staff and 37% thought they received very good service. Eleven percent (11%) believed they had received good service while only 3% marked fair.

Figure 16. How would you rate the service you received from Western SARE staff? (Q12)

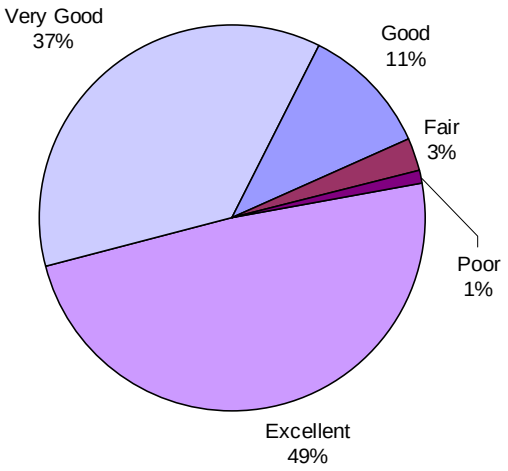
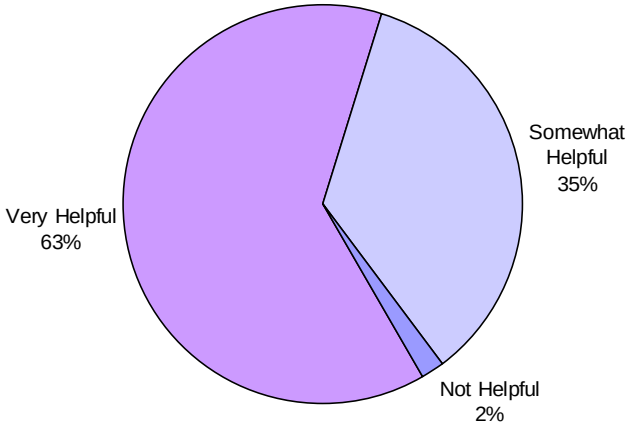


Figure 17. How helpful was the Technical Advisor on your project? (Q16)



In Question 13 grantees were asked, "Would you consider seeking another grant from Western SARE?" and "Would you recommend seeking a grant from Western SARE to others?" Question 14 asked grantees, "Without a Farmer/Rancher grant, would you still have pursued your project?"

As shown in Table 13, 89% of the grantees indicated that they would consider seeking another grant from Western SARE. Similarly, 97% would recommend seeking a grant from Western SARE to others. Approximately half of the grantees (52%) reported that without a Farmer/Rancher grant, they still would have pursued their projects.

Table 13. Responses to Question 13 and 14 (Q13, Q14)

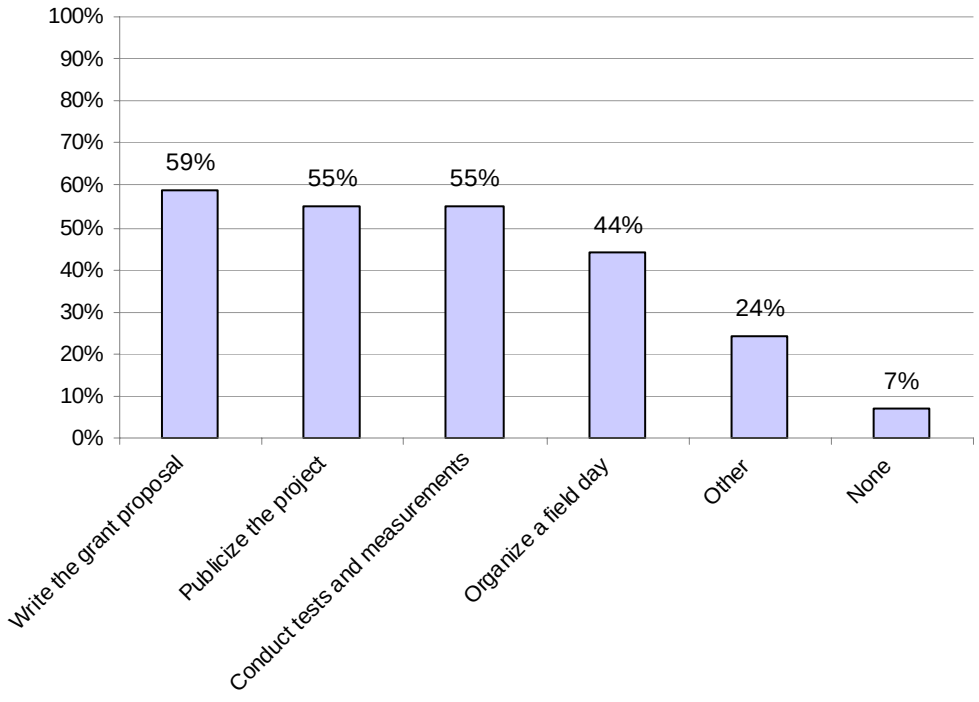
Question	% saying yes
Would you consider seeking another grant from Western SARE?	89%
Would you recommend seeking a grant from Western SARE to others?	97%
Without a Farmer/Rancher grant, would you still have pursued your project?	52%

Grantees were also asked to rate the helpfulness of the Technical Advisors on their projects. Possible responses were *very helpful*, *somewhat helpful*, and *not helpful*. Figure 17, on the previous page, shows that 63% of the grantees rated their Technical Advisors as very helpful. Thirty-five percent (35%) rated them as somewhat helpful and only 2% rated them as not helpful.

Question 17 asked grantees to indicate which tasks their Technical Advisors helped them with. Four tasks, a category of "Other," and a choice of "None" were listed as possible responses. Respondents were asked to mark all that applied.

As seen in Figure 18, for three of the tasks, over half of the grantees indicated receiving help from their Technical Advisors: write the grant proposal (59%), publicize the project (55%), and conduct tests and measurements (55%). For the remaining task listed (organize a field day of the project), 44% reported that their Technical Advisors helped them with this task. Twenty-four percent (24%) marked "Other" indicating that they had received help from their Technical Advisor

Figure 18. What tasks did your Technical Advisor help you with? (Q17)



that was not listed in this question. Responses included: visited site, took photos, used site for demonstration, discussed ideas, provided support, wrote reports, provided additional resources, and answered questions. Seven percent (7%) of the grantees indicated that they received no help from their Technical Advisors.

Table 14. What is your preferred way of getting new information on different farming approaches and programs? (Q19)

Way of getting new information	% saying yes
Internet (the Web)	42%
Extension Agent/Educator	50%
Farm or Commodity Group	10%
Sustainable Ag Group	30%
Farm Publications	37%
Farm Broadcast	7%
Other	15%

Grantees were then asked to describe any changes they would recommend to the Farmer/Rancher Grant Program. Half of the grantees (50%) described changes they would recommend for this program. The most commonly mentioned recommendations had to do with the timing of the funding. Ten grantees (7%) indicated that the timing of the grant allocations should coincide with their growing seasons and/or should be made at the beginning of the project. Seven grantees (5%) indicated that the amount of paperwork and forms related to the program were problematic. Five grantees (3%) recommended that the program provide longer term funding while four grantees (3%) would like to see grant awards in higher amounts. Four grantees (3%) recommended expanding the program and four other grantees (3%) indicated that they would like to see the program continue. Three grantees (2%) believed it would be helpful to have on-site visits by SARE personnel. Nine grantees (6%) had very positive comments about the program and commented on how useful it had been to them.

Information

Information Sources

Question 19 asked grantees to indicate their preferred way of getting new information on different farming approaches and programs. Six ways of getting information were listed as possible responses along with an "Other" category. Table 14 shows that the most commonly preferred ways of getting information were from Extension Agents/Educators (50%), the Internet (42%), Farm Publications (37%), and Sustainable Ag Groups (30%). Only 10% of the participants preferred getting information from Farm or Commodity Groups and 7% checked Farm Broadcasts. Fifteen percent (15%) indicated that they preferred getting new information on different farming approaches and programs from other sources not listed in this question. Most of the responses listed in the "Other"

Table 15. How do you use SAN information? (Q20)

Statement	% saying yes
I am not familiar with SAN publications	61%
Read a SAN publication	32%
Inspired by a SAN publication to explore new production or marketing ideas	10%
Adopted new production or marketing techniques as a result of a SAN publication	6%
Passed SAN publication(s) on to others	15%
Sought more information from the resources listed in SAN publications	17%

category involved getting information from other farmers. Other responses included conferences, books, bulletins, emails, newspapers, farm tours, seminars, and experts.

Question 20 stated, "The Sustainable Agriculture Network (SAN) is the national outreach arm of the SARE program. SAN develops and disseminates information about sustainable agriculture through print and electronic media." Grantees were then given a set of statements regarding SAN and asked to mark all that apply. Table 15, on the previous page, shows the results for this question. Interestingly, 61% of the grantees were not familiar with SAN publications. However, approximately one-third (32%) of all grantees surveyed reported that they read a SAN publication. Seventeen percent (17%) sought more information from the resources listed in SAN publications and 15% passed SAN publications on to others. Ten percent (10%) were inspired by a SAN publication to explore new production or marketing ideas. Six percent (6%) of the grantees adopted new production or marketing techniques as a result of a SAN publication.

Information Needs

Grantees were asked in Question 18 what type of sustainable agriculture information would be helpful to them on their farms or ranches. Eleven types of information were listed as possible responses as well as an "Other" category. Respondents were instructed to mark all that applied. As seen in Table 16, for five of the eleven types of information, over half of the grantees indicated that they would be helpful: ecologically based weed management strategies (67%); soil-building crop rotations, including cover crops (59%); ecologically based insect and disease management strategies (55%); organic agriculture (50%); and producing renewable energy on-farm or on-ranch (50%). Only one-quarter of the grantees (25%) believed that information on agroforestry would be helpful to them. A small number of grantees (12%) marked "Other" with a variety of responses including: alternative ownership arrangements; animal control; biodynamics; biotechnology; conservation; biological control; financial planning; improving irrigation management; internal parasites; marketing and marketing regulations; permaculture; processing fruit juices; riparian restoration; season-extending strategies and technologies; and symphylans research.

Table 16. What type of sustainable agriculture information would be helpful to you on your farm or ranch? (Q18)

Type of information	% saying yes
Soil-building crop rotations, including cover crops	59%
Ecologically based weed management strategies	67%
Ecologically based insect and disease management strategies	55%
Alternative marketing approaches (such as direct marketing)	44%
Organic agriculture	50%
Management-intensive grazing systems	32%
Alternative methods of maintaining livestock	32%
Agroforestry	25%
Economics of alternative farming systems, such as organics	40%
On-farm processing of agricultural products	46%
Producing renewable energy on-farm or on-ranch	50%
Other	12%

Crosstabulations

After analyzing each item independently, the next logical step is to look for relationships between variables. One way to do this is to conduct crosstabulations using the Chi-square statistic for significant differences. Crosstabulations were conducted on select items. Demographic variables (age, years farming/ranching, location, number of acres owned, number of acres leased, group affiliations) were crosstabulated with questions on how grantees' farming operations were impacted (questions 2 and 5) and questions on early adoption of new approaches (questions 30 and 31). Only those that were significantly different are elaborated upon in this report.

Demographics

As shown in Table 17, three pairings out of the 55 examined were significant. Number of acres owned by changed other operations of your farm or ranch (Q5c) showed a significant difference. In order to interpret that difference, the average response for number of acres was examined. Those grantees that reported making changes in their operations tended to also report owning more acres. Number of acres leased by willingness to try innovations when there is a **financial** benefit (Q30) also showed a

Table 17. Crosstabulations by Demographic Information

Item	Age	Years Farming/Ranching	Location	Number of Acres Owned	Number of Acres Leased
Achieved results hoped for (Q2a)					
Still using tested idea (Q2b)					
Sought information on use of approach (Q5a)					
Expanded use of approach (Q5b)					
Changed other operations (Q5c)				*	
Added new enterprise (Q5d)					
Obtained new markets (Q5e)					
Other impact of grant (Q5f)					
No impact of grant (Q5g)					
Approach to farming when financial benefit (Q30)					*
Approach to farming when environmental benefit (Q31)					*

significant difference. In addition, number of acres leased by willingness to try innovations when there is an **environmental** benefit (Q29) had a significant difference as well. To interpret the differences a correlation analysis was conducted. Fewer acres leased was associated with trying innovations sooner.

Affiliation

As shown in Table 18, 16 of the 77 pairs examined were found to have significant differences.

Affiliation with the Farm Bureau was associated with willingness to try innovations when there is a **financial** benefit (Q30) and willingness to try innovations when there is an **environmental** benefit (Q29). The nature of the association was such that those grantees who were not affiliated with Farm Bureau also indicated that they would be willing try out a new approach right away.

Affiliation with Farmers Union was associated with adding a new enterprise to the farm or ranch as a result of the grant project (Q5d). While there were very few grantees indicating both an affiliation with Farmers Union and having added a new enterprise as a result of the project, those affiliated with Farmers Unions were somewhat more likely to also add a new enterprise to their farm than those not affiliated.

Affiliation with a direct seeding group was associated with expanded use of the approach or technology to other parts of the farm/ranch (Q5b) and with adding a new enterprise to the farm or ranch as a result of the project (Q5d). Even though the actual number of grantees affiliated with a direct seeding group

Table 18. Crosstabulations by Affiliation

Item	Farm Bureau	Farmers Union	Organic farmers group	Direct seeding group	Commodity group	Board or commission	Other group
Achieved results hoped for (Q2a)							
Still using tested idea (Q2b)					*	*	
Sought information on use of approach (Q5a)					*	*	
Expanded use of approach (Q5b)				*	*	*	
Changed other operations (Q5c)							
Added new enterprise (Q5d)		*		*	*		
Obtained new markets (Q5e)						*	
Other impact of grant (Q5f)							*
No impact of grant (Q5g)							*
Approach to farming when financial benefit (Q30)	*						
Approach to farming when environmental benefit (Q31)	*						*

and either expanding use of the approach or adding a new enterprise is relatively small, those who were affiliated were somewhat more likely to expand the approach or add a new enterprise.

Affiliation with a commodity group was associated with four of eleven items: still using idea tested (Q2b), sought more information on use of approach (Q5a), expanded use of the approach or technology to other parts of the farm/ranch (Q5b), and added a new enterprise to the farm or ranch as a result of the project (Q5d). Being affiliated with a commodity group was associated with a greater likelihood to continue the idea tested, seek more information, expand the use of the approach or technology, and add a new enterprise as a result of the program.

Affiliation with a board or commission (Q21f), like affiliation with a commodity group, was associated with four of the eleven items: still using idea tested (Q2b), sought more information on use of approach (Q5a), expanded use of the approach or technology to other parts of the farm/ranch (Q5b), and obtained new markets for the crops or livestock raised on the farm or ranch (Q5e). Being affiliated with a board or commission was associated with a greater likelihood to continue the idea tested, seek more information, expand the use of the approach or technology, and obtain new markets.

Affiliation with other, unspecified groups (Q21g) was associated with other impact of grant (Q5f), no impact of grant (Q5g), and willingness to try innovations when there is an environmental benefit (Q29). Due to the variety of "other groups" mentioned (various associations, farmers markets, friendship network) it is difficult to interpret these relationships. Therefore, caution should be taken in any generalization of these results. Those affiliated with a group that was not included among those offered on the survey were also more likely to indicate an impact from the grant that was not specified on the survey or to indicate no impact from the grant. In addition, grantees who indicated affiliation with some other group were also more likely to report waiting until an approach that might be of environmental benefit to the farm is proven and used by neighbors before trying it.

Technical Advisor Survey Results

How Technical Advisors Heard About the Grant Program

Question 1 of the survey asked Technical Advisors, "How did you hear about the Western Region Sustainable Agriculture Research and Education (SARE) Farmer/Rancher Grant Program?" Four sources, a category of "Other" and a choice of "Don't Know" were listed as possible responses. Table 19 presents the data on how Technical Advisors heard about the Western SARE grant.

Table 19. How did you hear about the Western Region Agriculture Research and Education (SARE) Farmer/Rancher Grant Program? (Q1)

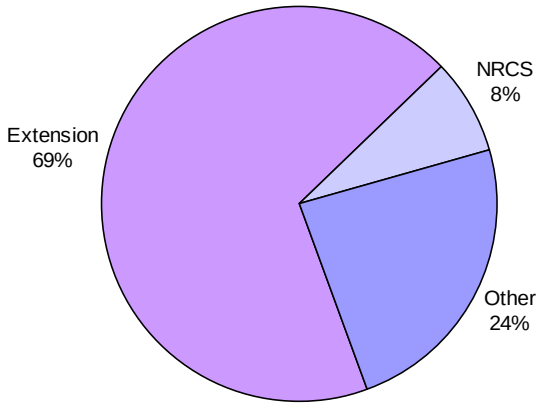
Item	% saying yes
Extension Agent/Educator	53%
Grower/Grantee	18%
SARE Web Site	30%
News Article	11%
Other	22%
Don't Know	6%

Fifty-three percent (53%) of the Technical Advisors indicated that they learned of the grant program from an Extension Agent/Educator. Very few (6%) Technical Advisors did not know how they learned of the program and nearly one-third (30%) learned of the program through the web site. Twenty-two percent (22%) of Technical Advisors indicated that they learned of the grant through means not listed on the survey. Technical advisors reported learning of the grant through SARE trainings, e-mail messages, from the farmer, by being associated with SARE, or through the "scuttlebutt at work."

Demographics

Question 21 asked Technical Advisors about their agency affiliation. Possible responses included Extension and NDCS. Respondents were also permitted to specify another agency if it did not fall under either of those offered. Figure 19 presents the results of this question.

Figure 19. What is the agency for whom you work? (Q21)



Most Technical Advisors indicated that they work for Extension (69%); however, nearly one-quarter of the Technical Advisors (24%) reported affiliation with an entity other than Extension or NRCS. Other responses included: experiment station, various universities, NGO, USDA-ARS, U.S. Bureau of Reclamation, and an independent crop consultant.

Impact

Changes in Grantees' Farming Behavior

Question 5 of the survey asked Technical Advisors about specific actions undertaken by the **grantee** as a result of participating in the Farmer/Rancher Grant Program. Respondents were asked to mark all responses that applied. Table 20 presents the results.

Table 20. As a result of this Farmer/Rancher Grant project, has the grantee… (Q5)

Behavior Change	% saying yes
Sought more information on use of the approach or technology tested	56%
Expanded use of this approach or technology to other parts of his or her farm or ranch	37%
Changed other operations on his or her farm or ranch	31%
Added a new enterprise to his or her farm or ranch	24%
Obtained new markets for the crops or livestock raised on his or her farm or ranch	23%
Other	14%

More than half of the Technical Advisors (56%) indicated that the grantee had sought more information as a result of the project; however, between two-thirds and three-quarters of respondents indicated that the grantees did not expand their approach (63%), change other operations (69%), add new enterprises (76%), or obtain new markets for crops or livestock raised (77%) as a result of the project. Fourteen percent (14%) of the Technical Advisors indicated some other result of the project not listed on the survey, such as encouraged others to use the technology, uncovered otherwise unforeseen obstacles, sought other financial support, and increased likelihood of approaching Extension personnel as a source of funding.

Question 6 asked Technical Advisors about specific actions undertaken by them, the Technical Advisor, as a result of participating in the Farmer/Rancher Grant Program. Respondents were asked to mark all responses that applied. Table 21 presents the results.

Table 21. As a result of your experience as the Technical Advisor on this Farmer/Rancher Grant project, have you… (Q6)

Item	% saying yes
Sought more information on use of the approach or technology tested	58%
Suggested the use of the approach or technology tested	66%
Conducted further tests of the idea, approach or technology	45%
Other	10%
None	9%

Two-thirds of the Technical Advisors (66%) reported that they suggested the approach to others. Furthermore, 58% of the Technical Advisors indicated that they sought more information and 45% reported conducting further tests as a result of the project. Ten percent (10%) of the Technical Advisors indicated some other result of the project not listed on the survey such as publications and continuing research in area.

Question 7 asked Technical Advisors if the project triggered any new ideas or if they had recommended that others test the new ideas. Figures 19 and 20, on the next page, present the results of questions 7a and 7b.

More than three-quarters of Technical Advisors (77%) indicated that the project had triggered a new idea as shown in Figure 20 and more than two-thirds of Technical Advisors (71%) reported recommending that others test the new ideas from their projects as shown in Figure 21.

Changes to Grantees' Farming Operations

Questions 2a and 2b of the survey asked Technical Advisors whether or not the grantee achieved the results they had anticipated and if the grantee still uses the approach that was tested. In question 2c Technical Advisors were asked to explain why an approach was not being used if they responded "No" to question 2b. Figure 22 presents the data on achievement and Figure 23 presents the data on continuation of the project.

Nearly three-quarters of the Technical Advisors (72%) indicated that the project did achieve the results anticipated as shown in Figure 22, and close to two-thirds of the Technical Advisors (63%) reported that the grantee continued to use the approach tested as shown in Figure 23. Responses to question 2c, why the grantee did not continue to use an approach, were varied and involved such explanations as adverse weather conditions, change in status of farmer or rancher (e.g., retired, sold business), technique was inferior to original method, neglect on the part of the grantee, and complexity or labor intensity of method.

Figure 20. Did this project trigger any new ideas for you? (Q7a)

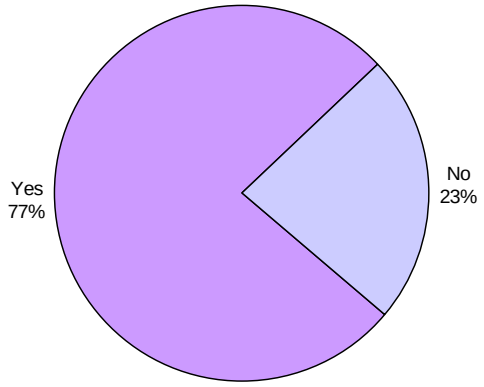


Figure 21. Did you recommend that others test these new ideas on their operations? (Q7b)

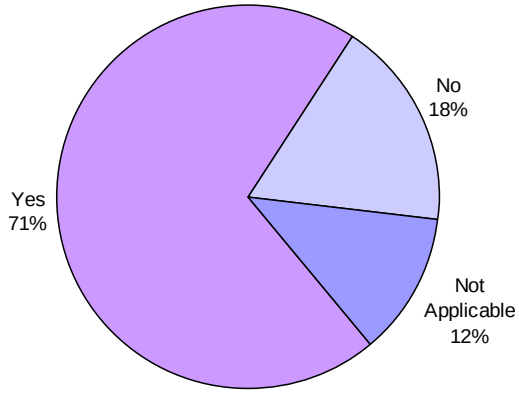


Figure 22. Did the project achieve the results you anticipated? (Q2a)

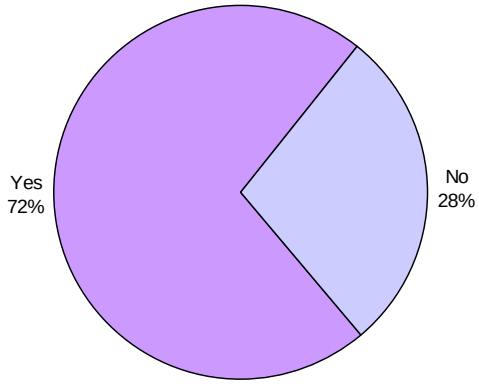
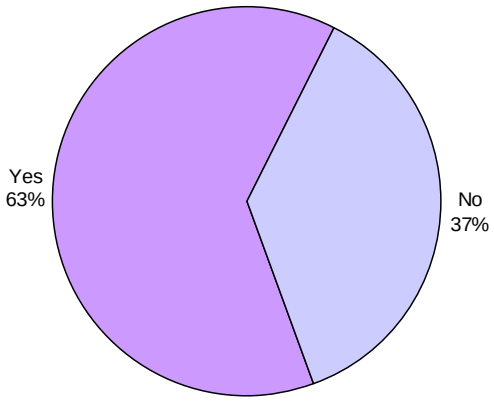


Figure 23. Is the grantee still using the approach he/she was testing? (Q2b)



Question 3 asked Technical Advisors, "If the grantee is still using the idea, approach or technology, what impact has it had on each of the following items on his/her farm or ranch?" Possible responses were *decreased*, *stayed the same*, *increased*, *don't know*, and *not applicable*. Respondents who indicated "not applicable" were not included in these results. Table 22 shows the responses for this question.

With the exception of fencing costs, most Technical Advisors reported that costs either stayed the same or decreased. However, approximately one-quarter of those responding to questions concerning costs associated with labor (25%), management (23%), machinery/equipment (25%), and on-farm processing (26%) indicated an increase in costs. A large majority of those responding to items referring to yields per acre (59%), animal production (59%), and gross sales (58%) reported an increase. More than half of the Technical Advisors who responded to these items indicated a decrease in soil erosion (53%) and an increase in soil quality (54%). Many of the respondents did not know the impact on air quality (39%) as a result of the project. Forty-percent (40%) of the Technical Advisors who reported on water quality indicated an increase in quality and half (50%) of those responding on the quantity of wildlife habitat reported an increase.

Table 22. If the grantee is still using the idea, approach or technology, what impact has it had on each of the following items on his/her farm or ranch? (Q3)

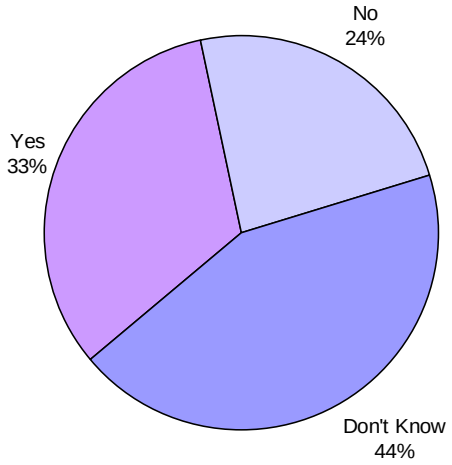
Facet	Decreased	Stayed the Same	Increased	Don't Know	Number of Respondents
Fertilizer Costs	45%	23%	10%	22%	51
Fuel Costs	30%	34%	14%	22%	50
Pesticide Costs	43%	31%	6%	20%	51
Weed Control Costs	46%	30%	11%	13%	56
Seed Costs	5%	53%	20%	23%	40
Feed Costs	47%	22%	8%	22%	36
Veterinary Care Costs	19%	44%	3%	34%	32
Fencing Costs	11%	28%	42%	19%	36
Hired Labor Costs	28%	32%	25%	16%	57
Management Costs	26%	33%	23%	19%	70
Machinery and Equipment Costs	16%	36%	25%	23%	56
Building Costs	3%	65%	11%	22%	37
On-Farm Processing Costs	14%	41%	26%	19%	42
Costs Associated with On-Farm Sales	21%	35%	19%	25%	48
Costs of Direct-to-Consumer Sales	23%	33%	15%	29%	52
Costs of Selling at Farmers Market	17%	46%	10%	27%	41
Yields Per Acre	5%	17%	59%	20%	65
Total Animal Production Per Year	0%	18%	59%	23%	39
Overall Gross Sales	3%	15%	58%	24%	74
Soil Erosion	53%	25%	3%	19%	59
Soil Quality	9%	21%	54%	16%	57
Air Quality	0%	34%	27%	39%	41
Water Quality	8%	29%	40%	23%	52
Quantity of Wildlife Habitat	2%	26%	50%	22%	50

Question 4 asked Technical Advisors, "As a result of this Farmer/Rancher Grant project, has the grantee seen an increase in net income on his/her farm or ranch?" Possible responses included *yes*, *no*, or *don't know*. Figure 24 shows the results. Thirty-three percent (33%) of the Technical Advisors reported that net income on the grantee's ranch or farm did increase, while one-quarter (24%) indicated that there was no increase.

A follow-up question (Q4b) asked Technical Advisors to estimate the economic increase per unit (e.g., acre, animal, field, farmstand, farm). Responses varied widely and ranged from:

- $20 to $20,000 per acre
- $1,000 to $6,500 per farm
- $5,000 to $21,600 per year
- $2 to $80 per animal
- $100 per field
- $6.22 per pound
- 8 bushels per acre
- $30 to $40 direct sales and growing

Figure 24. As a result of this Farmer/Rancher Grant project, has the grantee seen an increase in net income on his/her farm or ranch? (Q4a)

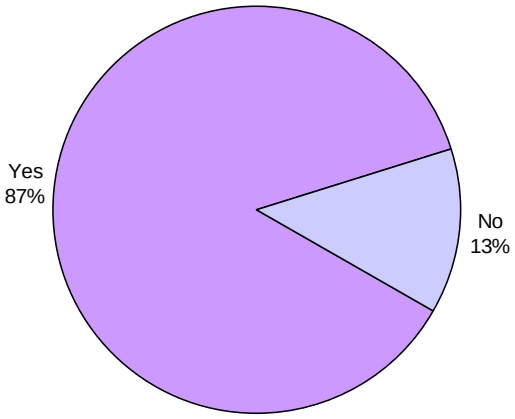


Early Adopters

Question 14 asked Technical Advisors, "Do you consider the grantee to be an early adopter of new ideas, approaches or technologies?" Figure 25 presents the results of this question.

As shown in Figure 25, the vast majority of Technical Advisors (87%) consider the grantee with whom they worked to be an early adopter.

Figure 25. Do you consider the grantee to be an early adopter of new ideas, approaches or technologies? (Q14)



Barriers

Question 20 asked Technical Advisors, "What barriers or difficulties, if any, did you encounter in helping the grantee conduct this project?" There were no set responses to this question, but rather, the respondents were allowed to write down their responses to the question. Therefore, a variety of responses were offered which were then grouped and quantified. Unless otherwise noted, the number of times each item was reported is one.

- Lack of dedication, motivation, focus of grantee (4)
- Lack of cooperation/understanding (4)
- Poor writing skills/record keeping skills (4)
- Problems with communication/language (5)
- Reluctance of grantee to try new practices (4)
- Climate, drought (5)
- Reality of farming vs. research (1)
- Financial considerations (4)
- Lack of time (7)
- Delays (2)
- Distance (6)
- Errors (3)
- Inadequate design
- Changed methods
- Degraded sites (2)
- Trouble adapting equipment (2)
- Mechanical breakdowns
- Lack of workforce (2)
- Illness
- Skeptical agencies
- Moved away (2)
- Lack of reliable information
- Paperwork

Reach

Attendance at Field Days and Tours or Personal Visits

Question 8 asked Technical Advisors, "How many people from each of the following audiences would you estimate visited the grantee's farm on tours, field days or personal visits during the course of this project?" Question 9 asked respondents, "How many people from each of the following audiences would you estimate visited with you as the Technical Advisor about the project?" Table 23 presents the results for these questions.

Table 23. Number of People from Various Audiences Who… (Q8-9)

	Number of Grantees Reporting	Range	Mean	Median
Visited the Grantee's Farm on Tours, Field Days or Personal Visits				
Farmers/Ranchers	95	2 - 1000	60	20
University or Extension Staff	88	1 - 50	7	5
Agency Staff	60	1 - 100	10	5
Others	43	1 - 250	38	12
Visited with You as the Technical Advisor about the Project				
Farmers/Ranchers	91	1 - 1500	32	6
University or Extension Staff	92	1 - 100	6	2
Agency Staff	60	1 - 100	6	3
Others	34	1 - 250	21	5

While the upper range of those reporting visitors to the grantee's farm was 1000, most reported far fewer visitors as part of farm tours. For instance, 64% of Technical Advisors reported 25 or fewer farmer or rancher visitors when a tour was conducted. Two-thirds (66%) of those responding to the number of

University or Extension staff touring the grantee's farm or ranch indicated six or fewer visitors. While the average number of agency staff taking a tour was ten, three-quarters of all Technical Advisors (75%) had ten or fewer visitors in that category. Thirty-four percent (34%) of the Technical Advisors indicated that other groups not specified in the survey toured the grantee's farm.

Slightly less than half (47%) of the Technical Advisors reported five or fewer visits by Farmers/Ranchers and slightly more than half (53%) reported one or two visits by University staff. Twenty-seven percent (27%) of the Technical Advisors indicated that other groups not specified in the survey visited them as Technical Advisor on the project.

Visitors Who Tested or Adopted Practice or Technology

Question 10a asked Technical Advisors, "How many other farmers or ranchers tried out the grantee's idea, approach or technology on their own agricultural operation?" and question 10b followed up that question by asking, "How many are still using this approach?" Table 24 presents the results to these questions.

Table 24. How many other farmers or ranchers tried out the grantee's idea, approach or technology on their own agricultural operation? (Q10a) and How many are still using this approach? (Q10b)

Item	Number of Respondents	Range	Mean
Tried idea	125	0 - 200	7
Still using	125	0 - 200	5

Recognition

Question 11 asked Technical Advisors, "What types of public recognition did either you or the grantee receive for this project?" Six categories were listed and respondents were asked to mark all that applied. Table 25 presents the results for this question.

Table 25. Types of Public Recognition Received by Technical Advisor or Grantee for Project (Q11)

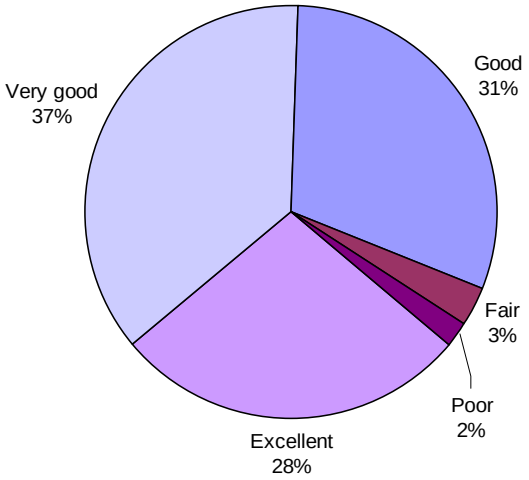
Type of Public Recognition	% reporting yes
Award	12%
Article in local newspaper	46%
Article in newsletter	38%
Article in magazine	22%
Other	26%
Don't know	24%

The most commonly reported type of public recognition involved local newspaper articles (46%) followed by newsletter articles (38%). Other types of recognition noted included presentations, local television reports, journal articles, and other publications.

Service

Question 12 asked Technical Advisors, "How would you rate the service the grantee received from Western SARE staff (for example, courteous responses from staff, clear answers and instructions, timely processing of paperwork, timeliness or payments)?" Possible responses included *excellent*, *very good*, *good*, *fair*, and *poor*. Figure 26 presents the results of this question.

Figure 26. How would you rate the service the grantee received from Western SARE staff? (Q12)



Nearly two-thirds of the Technical Advisors (65%) rated the service either very good or excellent. Very few respondents rated the service as either fair or poor (5% in total).

Question 13 asked Technical Advisors to indicate how they helped the grantee. Possible responses included *writing a grant proposal*, *organizing a field day*, *publicizing the project*, or *conducting testing or measurements*. Results for this question are presented in Figure 27.

Three-quarters of the Technical Advisors (75%) helped to write the grant proposal. Very few Technical Advisors (2%) indicated that they did not help the grantee in any way. Other ways Technical Advisors helped grantees were quite varied and included such activities as: translation, identifying markets, facilitation, event planning, record keeping and reporting, presenting, and consultation.

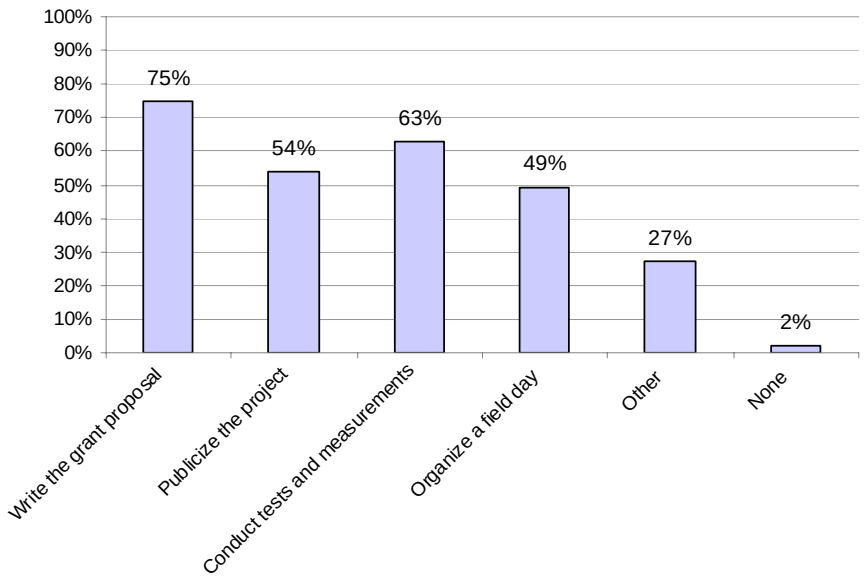
Information

Information Sources

Question 16 asked Technical Advisors "What is your preferred way of getting new information on different farming approaches and programs?" Table 26, on the next page, shows the results of this question.

The most frequently endorsed response for obtaining information involved use of the Internet (64%). Farm or commodity groups and farm broadcasts were the least likely to be selected as a preferred way of getting information (2% for each). Other forms of information access included conferences and Ag meetings.

Figure 27. As the Technical Advisor, I helped the grantee: (Q13)



Question 17 asked Technical Advisors, "How do you use SAN information?" Survey respondents were provided with a brief explanation of the Sustainable Agriculture Network (SAN). Respondents could choose as many as applied from a number of possible uses. Results for this question are presented in Table 27.

Fifty-two percent (52%) of the Technical Advisors indicated that they use SAN for their own information. Most Technical Advisors appear to be familiar with SAN publications as less than one-third (30%) reported not being familiar with such publications.

Question 18 asked Technical Advisors to indicate the approximate number of people trained in SAN materials from the following categories: *Farmers/ranchers*, *Consumers*, *Non-profit educators*, *Researchers*, and *Extension Educators*. Results for Question 18 are presented in Table 28.

While 59% of the Technical Advisors did not report training any farmers or ranchers, 13% of the Technical Advisors indicated that they had trained 50 persons from that category. (Please note that a response indicating 250,000 people trained was removed from these analyses.)

Table 26. What is your preferred way of getting new information on different farming approaches and programs? (Q16)

Possible Responses	% saying yes
Internet (the Web)	64%
Professional Journals	34%
Other Ag professionals	26%
Farm or commodity group	2%
Sustainable Ag group	21%
Farm publications	22%
Farm broadcasts	2%
Other	10%

Table 27. How do you use SAN information? (Q17)

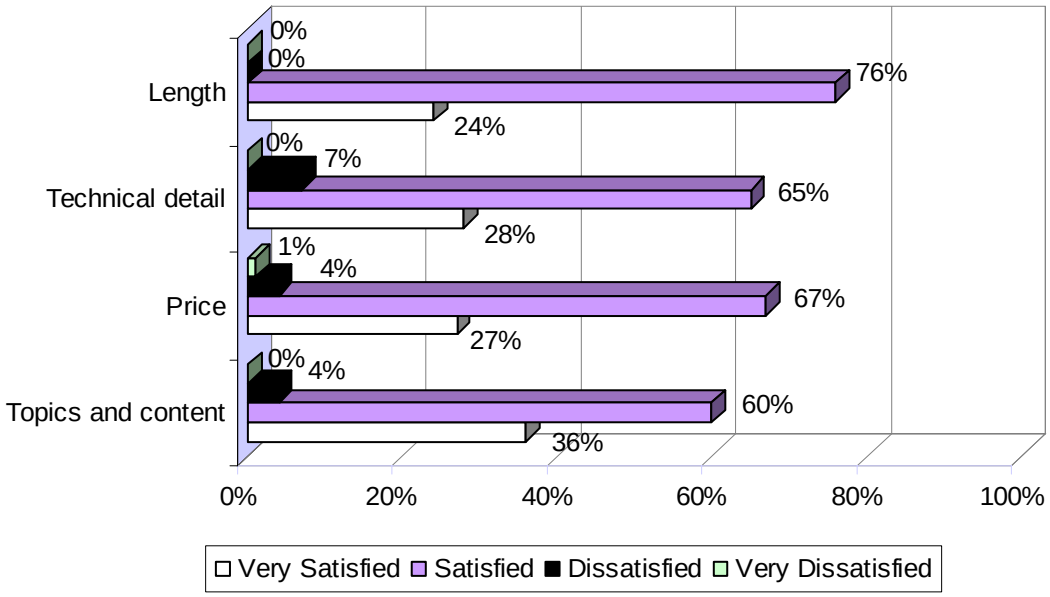
Statement	% saying yes
I am not familiar with SAN publications	30%
For my own information	52%
Incorporated materials into conference or workshop presentation	36%
Passed SAN publication(s) on to others	43%
Referred someone else to SAN publications	42%
Sought more information from the resources listed in SAN publication	27%

Table 28. Please indicate the approximate number of people from each of the following audiences that you trained in SAN materials. (Q18)

Item	Number of Technical Advisors Reporting	% reporting training	Range	Mean	Median
Farmers/Ranchers	51	41%	1 - 1000	32	30
Consumers	18	15%	2 - 200	4	20
Non-profit educators	22	18%	1 - 70	2	6
Researchers	24	19%	1 - 25	1	3
Extension Educators	31	25%	1 - 100	4	5

Question 19 asked Technical Advisors to rate aspects of the SAN bulletins including topics and content, price, technical detail, and length. Possible responses included *very satisfied*, *satisfied*, *dissatisfied*, and *very dissatisfied*. Figure 28 presents the results of this question.

Figure 28. Please rate the following aspects of the SAN Bulletins. (Q19)



Most Technical Advisors are either satisfied or very satisfied with all aspects of the SAN Bulletins. Topics and content received the strongest endorsement with over one-third of the Technical Advisors (36%) indicating that they are very satisfied with that aspect of the bulletin.

Information Needs

Question 15 asked Technical Advisors, "What type of sustainable agriculture information would be helpful to you in working with farmers or ranchers?" Eleven types of information were listed as possible responses as well as an "Other" category. Respondents were asked to mark all that applied. Results are

Table 29. What type of sustainable agriculture information would be helpful to you in working with farmers or ranchers? (Q15)

Type of information	% saying yes
Soil-building crop rotations, including cover crops	54%
Ecologically based weed management strategies	73%
Ecologically based insect and disease management strategies	61%
Alternative marketing approaches (such as direct marketing)	54%
Organic agriculture	56%
Management-intensive grazing systems	40%
Alternative methods of maintaining livestock	35%
Agroforestry	31%
Economics of alternative farming systems, such as organics	50%
On-farm processing of agricultural products	52%
Producing renewable energy on-farm or on-ranch	50%
Other	8%

shown in Table 29, on the previous page.

For eight of the eleven types of information, over half of the Technical Advisors indicated that they would be helpful: ecologically based weed management strategies (73%); ecologically based insect and disease management strategies (61%); organic agriculture (56%); alternative marketing approaches (54%); soil-building crop rotations, including cover crops (54%); on-farm processing of agricultural products (52%); economics of alternative farming systems (50%); and producing renewable energy on-farm or on-ranch (50%). Only 31% thought information on agroforestry would be helpful. Eight percent (8%) of Technical Advisors marked "other." Other types of information included tropical agriculture, team building, irrigation/water management, soil conservation, communication, and information on various techniques or issues.

Comparisons Between Grant Recipients and Technical Advisors

T-tests were computed to compare responses between grant recipients and Technical Advisors. Grantees and Technical Advisors were compared on questions 2 and 5 (impact) and question 4 (economic increase). Relevant response choices were *yes* and *no* for each of these questions, with *no* scored as zero and *yes* scored as one. Only statistically significant t-test results are discussed here. Table 30 shows the means and t-values for all comparisons.

Table 30. Differences Between Grantees and Technical Advisors

Item	Grantee Mean	Technical Advisor Mean	t
Achieved results hoped for (Q2a)	.84	.72	-2.38*
Still using tested idea (Q2b)	.82	.63	-3.47*
Sought information on use of approach (Q5a)	.70	.56	-2.32*
Expanded use of approach (Q5b)	.48	.37	-1.91
Changed other operations (Q5c)	.43	.31	-1.97*
Added new enterprise (Q5d)	.28	.24	-.794
Obtained new markets (Q5e)	.32	.23	-1.57
Other impact of grant (Q5f)	.11	.14	.64
Economic increase resulted from grant (Q4a)	.52	.58	.80

As seen in Table 30, there are four significant differences ($p < .05$). For each of these items (achieved results hoped for, still using tested idea, sought information on use of approach, and changed other operations), grantees were more likely than Technical Advisors to respond yes. It may be expected that the differences would lie in this direction as the items pertain to grantee behavior and the Technical Advisors may not always be aware of how the grantee was impacted.

Overall Summary and Conclusions

The Western SARE Farmer/Rancher Grant (FRG) Program was established to support farmers and ranchers seeking to test, adapt and adopt sustainable agriculture production or marketing approaches. Since its beginning, the program has funded nearly 300 projects throughout the West. The purpose of the current evaluation survey was to determine the impacts of these producer-led efforts on the grantee and the reach or diffusion of the grantees' efforts to other farmers and ranchers in the general locale of the grantee.

This report has provided a description of the methods used to obtain and analyze data, a description of those who responded to the survey, and a detailed account of the results, organized in 3 major sections: 1) results from the grant recipient survey, 2) results from the technical advisor survey, and 3) comparisons between grantee and technical advisor responses.

There are a number of strengths evident in this report that warrant highlighting.

- Seventy percent (70%) of grantees indicated that they had sought more information on the use of the approach or technology tested, while nearly half (48%) expanded the use of this approach or technology to other parts of their farm or ranch.

- Two-thirds (66%) of Technical Advisors reported that they suggested the approach tested on the grantees' farm or ranch to others, while 58% sought more information and 45% reported conducting further tests as a result of the project.

- Most grantees (86%) indicated that their project had triggered new ideas, while 63% indicated that they had tested those new ideas on their farm or ranch operation.

- More than three-quarters of Technical Advisors (77%) indicated that the grantees' project had triggered a new idea for them (the Technical Advisors), and more than two-thirds (71%) reported recommending that others test the new ideas from their projects.

- Over 80% of grantees indicated that they had achieved the results for which they hoped; were still using the idea, approach or technology they tested; and felt the information gained from the SARE-funded project was very useful.

- Nearly half (41%) of the grantees reported an increase in net income on their farm or ranch as a result of their Farmer/Rancher Grant Project.

- A majority of the grantees consider themselves to be "early adopters" of new ideas, technologies or approaches. Technical Advisors also considered most grantees to be "early adopters."

- Grantees were asked to rate the service they received from Western SARE staff (for example, courteous responses from staff, clear answers and instructions, timely processing of paperwork, timeliness of payments). Nearly half (49%) indicated that they received excellent service from Western SARE staff and 37% thought they received very good service. Nearly two-thirds of the Technical Advisors (65%) rated the service from Western SARE staff as either very good or excellent.

Survey participants also provided suggestions for Western SARE program staff and Administrative Council to consider in the future.

- Half of the grantees (50%) described changes they would recommend to the Farmer/Rancher Grant Program. The most commonly mentioned recommendations had to do with the timing of the funding. Ten grantees (7%) indicated that the timing of the grant allocations should coincide with their growing seasons and/or should be made at the beginning of the project. Seven grantees (5%) indicated that the amount of paperwork and forms related to the program were problematic. Five grantees (3%) recommended that the program provide longer term funding while four grantees (3%) would like to see grant awards in higher amounts. Four grantees (3%) recommended expanding the program and four other grantees (3%) indicated that they would like to see the program continue. Three grantees (2%) believed it would be helpful to have on-site visits by SARE personnel. Nine grantees (6%) had very positive comments about the program and commented on how useful it had been to them.

- Grantees were asked what type of sustainable agriculture information would be helpful to them on their farms or ranches. Over half indicated that the following would be helpful: ecologically based weed management strategies (67%); soil-building crop rotations, including cover crops (59%); ecologically based insect and disease management strategies (55%); organic agriculture (50%); and producing renewable energy on-farm or on-ranch (50%).

- Technical Advisors were asked about the type of sustainable agriculture information that would be helpful to them when working with farmers or ranchers. Over half indicated that the following would be helpful: ecologically based weed management strategies (73%); ecologically based insect and disease management strategies (61%); organic agriculture (56%); alternative marketing approaches (54%); soil-building crop rotations, including cover crops (54%); on-farm processing of agricultural products (52%); economics of alternative farming systems (50%); and producing renewable energy on-farm or on-ranch (50%).

The results described in this report are best interpreted by those familiar with the Farmer/Rancher Grant Program. Hopefully, this report will serve as a resource for future discussions and planning sessions.

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Appendix

Contents