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ORIGINAL RESEARCH

Farmer Assessment of the Certified Safe Farm Program

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ABSTRACT. This article summarizes the qualitative findings from a study evaluating a novel agricultural health and safety program called Certified Safe Farm (CSF). Results are presented from focus groups held in 2002 and 2006 as well as mail-out surveys conducted in 2001 and 2002. Focus group participants and survey responders were farmers involved in CSF intervention studies. CSF aims to remove hazards through on-farm safety reviews, detect health concerns through clinical screenings, provide personalized occupational health and wellness education, and provide incentives for meeting farm safety targets. Farmers overwhelmingly felt that CSF was beneficial for their health and safety by improving their knowledge and behaviors. In both the focus groups and questionnaires, farmers felt that occupational health screening was the most important component of CSF, and on-farm safety review was the second most important component. Farmers also helped to identify areas in which CSF could be improved in the future. Major areas of suggested program improvement included increased involvement of entire farm families, increased enrollment of younger farmers, increased program incentives such as reduced insurance premiums, and increased ease of access to program providers (AgriSafe clinics), among other recommendations.

KEYWORDS. Agriculture, qualitative research, occupational health, occupational safety, intervention studies

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INTRODUCTION

Certified Safe Farm (CSF) is an agricultural health, safety, and wellness program aiming to reduce the number and cost of injuries and illnesses in agriculture. The CSF program consists of four main components: occupational health and wellness clinical screenings, on-farm safety reviews, personalized education, and incentives for achieving safety goals. The theory and specific CSF intervention methods are reviewed elsewhere.[1–7] CSF has appropriated lessons learned from similar programs in Scandinavian countries.[8–10] Agriculture remains the most hazardous industry in the United States (measured by occupational fatality rate) and shows no improvement in the past decade.[11] More effective interventions are needed, and sustained multifaceted interventions incorporating several components (like CSF) have shown most promise.[12]

In addition to quantitative measures, qualitative measures can be used to evaluate perceptions of program validity and to identify attitudinal changes resulting from outreach efforts.[2] The use of qualitative information has been integral to CSF since its inception. Development of CSF began in 1996 with a formative evaluation that included a focus group assessment of farmer receptivity to the program, and their recommendations were used in the initial program development.[2] Process evaluation has been ongoing throughout the program by conducting focus groups and surveys. It was clear to the CSF team that the program had to be socially acceptable to the farming population if it was to succeed. We evaluated indicators of success, such as did participants find the program components useful in changing behaviors. Evaluation of the CSF program has also included quantitative outcome assessments. An analysis of the cost-effectiveness of the program revealed that the intervention group received a 27% decrease in self-reported health care costs and a 45% decrease in health insurance claims costs for work-related injury and illness. Further, the amount of savings in health care costs was directly proportional to the safety score of the farm.[13]

As the 1996–2007 CSF study phases transcend from research to practice, it is important to review questions regarding how farmers feel about the program and why they feel that way. As opposed to evaluation of physical outcomes, for example, agricultural injuries and hearing loss,[6,7] evaluation of farmer perceptions of CSF requires a qualitative approach. Focus groups have helped define barriers to adoption of health and safety behaviors in the farm population and have underscored the importance of addressing culturally relevant issues when developing intervention programs in the past.[14] Here, we implemented the focus group technique and mail-out questionnaires to evaluate the participants' experience with the program in changing attitudes and behaviors.

There were several areas in which we sought to understand the farmers' views and reasoning: How do farmers feel about the farm reviewers? would they recommend the program to friends and family? do farmers think they could self-inspect their farms? would farmers continue participation in the CSF program? what value does the program provide for them? what are the best and worst parts of the program? and how does the program relate to existing health services for farmers? These questions could be best evaluated qualitatively. Overall, our goal was to determine whether farmers felt that CSF enabled improvements in their health and safety and why they felt that way.

METHODS

Study Population

The 1996–2007 CSF research program was composed of several separate studies, involving different farming populations. All farmers enrolled in the CSF studies were actively engaged in agricultural production and resided near a specialized agricultural occupational clinic (AgriSafe Clinic of the AgriSafe Network). The AgriSafe Network is composed of affiliated AgriSafe clinics that provide preventive occupational health and safety services to agricultural populations (www.AgriSafe.org). AgriSafe providers are required to attend an

intensive 40-hour agricultural medicine course and pass a certifying exam before they can provide AgriSafe services. This article reports on qualitative data gathered from intervention farmers in the 1999–2003 (n = 150), 2003–2007 (n = 300), and 2004–2007 (n = 150) study groups (Table 1). All intervention farms in the 1999–2003 study received the survey, and farmers in 6 study locations were invited to focus groups in their area.

Focus Groups

Focus groups are well-known qualitative research tools; they focus on how people think or feel about an issue or service.[14] Two sets of focus groups (6 total focus groups) were convened to assess participant perceptions about the CSF program near the end of the intervention study. The purpose of both focus group sets was to document the opinions of participating farmers regarding their experiences in the CSF program and its ability to facilitate change in health and safety. These focus groups were designed and conducted in accordance with recognized methods for developing questions, focus group makeup, moderating of the group, and analysis as described by Krueger and Casey.[14]

The process of conducting focus groups followed the procedure outlined by Krueger and Casey.[14] The focus group questions were designed to be short and open ended, allowing for a range of opinions to be expressed. After a number of questions were developed they were sorted until the questions were chosen, keeping in mind the 5 question categories described in Krueger and Casey[14]: (1) opening questions; (2) introductory questions; (3) transition questions; (4) key questions; and (5) ending questions. The focus groups began with general questions to get participants thinking and speaking, while later questions were more specific and directly targeted to program assessment and modification.

In August 2002, a focus group was held in Spencer, Iowa, at the local hospital. Participants were offered compensation of $30 and a meal following the focus group. Participants were randomly selected from the intervention farmers enrolled in the study at that time. Of the 26 participants invited to participate, 13 attended the session (all were male, age range 35–77). A variety of agricultural operations were represented by the group, including livestock (hogs, beef cattle, dairy cattle, and sheep) and crops (corn and soybeans). Seventeen standard questions were asked. These questions were designed to indicate how CSF staff could improve the program and how to transition the program from a grant-funded research project to a self-sustainable program. The group was moderated by trained University of Iowa CSF staff. Participant responses to questions were recorded by hand by CSF staff in attendance.

In January-February 2006, focus groups were held at 5 AgriSafe clinic locations throughout Iowa. Farmers participating in the 2003–2007 and 2004–2007 CSF studies were invited to attend an educational meeting with a University of Iowa Agricultural Safety Specialist and to attend focus groups afterward. Participants were offered compensation of $25 and a meal following the focus group. A total of 60 participants were recruited out of 450 enrolled in the study to participate in the focus groups. Five focus groups were held, with an average of 12 persons per meeting (range 11–13). Fourteen standard questions were asked in each group. These questions were designed to learn about the farmers' post-intervention perceptions of CSF, and why they held those perceptions. Focus groups were moderated by trained University of Iowa CSF staff and AgriSafe nurses. Participant responses to questions were recorded by hand by additional CSF staff in attendance. The notetaker indicated when a phrase was a direct quote or paraphrased for analysis later.

TABLE 1. CSF Research Projects

Study	Population	Location
Original CSF (1996–1997)	32 Farms	Iowa and Nebraska
Second CSF (1999–2003)	152 Farms	Nine county area around Spencer, Iowa
Third CSF (2003–2007)	300 Farms	10 Sites around Iowa
Fourth CSF (2004–2007)	150 Elderly farms	10 Sites around Iowa

The method of analysis used for the focus group results was the long-table approach described by Krueger and Casey.[14] All notes taken by CSF staff in attendance were compared for accuracy and then a combined set of notes for each focus group was created. Responses from the 2002 focus group were grouped by question first and then reviewed again to check if the response answered the question or answered another question better. All responses from the 2006 focus groups were identified by site and then grouped together by question first. Then the responses were checked to see whether they answered that question or another question. After all responses were in the correct question, we began to look for themes that presented themselves throughout the focus groups based on the 4 categories as described by Krueger and Casey:[14] (1) frequency, (2) specificity, (3) emotion, and (4) extensiveness.

Questionnaires

Qualitative effectiveness of the CSF program was additionally assessed by two mailed questionnaires. The first, administered in 2001, was completed and returned by 100 out of 150 intervention farmers (67%). The second, administered in 2002, was completed and returned by 91 out of 150 intervention farmers (61%). Results from these questionnaires are presented in this article in addition to focus group findings.

RESULTS

Results shown here represent combined responses from the farmer focus groups held in 2002 and 2006 as well as combined results from the written surveys of 2001 and 2002. We found that the focus group responses were largely related to 3 overall themes: CSF program evaluation (on-farm safety review and occupational health screening); CSF impact on farmer work and health habits; and CSF program recommendations for the future. When direct quotations from farmers are shown, they represent the typical farmer response or attitude regarding the issue at hand. Questionnaire results are reported independently within the context of the 3 major themes identified in the focus group sessions.

CSF Program Evaluation

Focus Groups

Occupational Health Screening. Overall, occupational health screening was viewed as the most valued component of CSF by farmers. Many cited this screening as their impetus for enrollment in the CSF program.

> "[I enrolled in CSF] to evaluate health issues with a free screening on issues not normally addressed such as respiratory and hearing hazards."

> "If you can make your life better and live longer, you should so you can spend more time with your family."

Annual screening was of noted importance, and many farmers mentioned the value of monitoring test results over time. A few farmers suggested that screening begin with younger farmers to prevent injury and illness later in life.

> "[I learned] how my blood-work is. I wish I would have known 50 years ago, since it helped to put the mask and ear plugs in perspective."

All currently offered screening services were seen as important by farmers, and prostate-specific antigen (PSA)/prostate exam was often suggested as an additional test to be offered. Mental health screening and referral to mental health services when needed were also noted as a positive feature by some farmers.

> "It is good to have the reminder that they [mental health services] are available at the local hospital."

Nurses providing health services received very positive feedback. Farmers felt they received adequate education regarding specific occupational risks and expressed an increased awareness of the importance of PPE. Many

farmers indicated that they would continue visiting an AgriSafe clinic after the end of the CSF study because screening services are tailored to them. Those farmers described the AgriSafe clinic as "very complete, valuable" and noted "I find out more coming here [compared to a visit to my usual physician]."

On-Farm Safety Review. Overall, on-farm safety review was the second most important component of CSF as determined by farmers. All farmers indicated that annual review was preferred. The following comment reflects the views of many responders:

> "[CSF provides] a chance to look at your farm through someone else's eyes. It's a good idea to see how others see things."

Most farmers felt that safety reviewers did a good job evaluating the farm; however, they noted that some reviewers made unreasonable recommendations.

> "There are some things I can't change. I can't take my skid loader in the building with a roll bar, but I am aware of the hazards when I use my loader now."

In general, farmers were surprised by the level of detail the farm review covered. Feedback from the focus groups indicated that the reviewer provided important and relevant information during the review and then adequately explained each deficiency and methods of improvement. Noted areas of educational value included hydraulic lines, power takeoff (PTO) master guards and shields, slow-moving vehicle (SMV) signs, equipment lighting, and child safety. Most farmers felt that in case they did not pass initially, 6 months was an adequate time period to make corrections and obtain certification status from the time of first review. However, they also felt that certification criteria should remain stable over time in order to prevent an increase in the level of difficulty required for certification. This comment likely stems from more stringent evaluation of lighting and marking features initiated during the study.

One important question was whether self-audits of the farm would be effective. Farmers had different views in regard to the qualifications of on-farm reviewers and whether self-review was possible; however, the overwhelming response was that self-reviews would not be conducted in a timely manner and they would not be as effective as outside review. Most farmers liked the objectivity that an outside farm reviewer provided.

> "Have the reviewer do it [the on-farm safety review] always. They have a different perspective than we [farmers] do."

> "Have the reviewer there the first time, and after the visit, you could do it yourself. You [the farmer] would have to be honest though, and include a random spot check."

Questionnaires

When asked to rank the importance of screening by test type in 2002, lung function was ranked most important, followed by hearing screening, skin cancer screening, cholesterol screening, cholinesterase screening, blood pressure monitoring, vision testing, and back/spine evaluation (Table 2).

TABLE 2. Please Allocate 100 Points Among the 10 Following Services from the Agrisafe Clinic in Spencer According to How Important Each Feature is to you—the More Important a Feature is to you, the More Points you Should Allocate to it

Rank	Service	Sum of Allocated Points
1	Lung function testing	1217
2	On-farm safety review	1067
3	Hearing screening	984
4	Skin cancer screening	972
5	Cholesterol screening	926
6	Cholinesterase testing	905
7	Availability of personal protective equipment	718
8	Blood pressure check	689
9	Vision testing	506
10	Back/spine assessment	470
11	Other (please specify)	159

Of those farmers referred by AgriSafe nurses for additional medical care in 2002, most sought the recommended care. After receiving additional care, farmers cited that they followed physician recommendations including starting new medications/change in dose; diet or lifestyle changes; and vision/hearing evaluation (Table 3).

When asked what farmers would pay out-of-pocket for similar occupational health screening in 2001, the average fee was $64 (range $0–250). The negotiated reimbursement for the clinical screening and review at the time of the study was $135 per person. When asked what farmers would pay out-of-pocket for similar on-farm safety reviews in 2001, the average fee was $38 (range $0–500). The reimbursement (including travel) for each farm review at the time of the study was $100.

CSF Program Impact

Focus Groups

Most farmers viewed CSF as an educational program designed to increase their awareness and knowledge of hazards found on their farms and to decrease the incidence of injuries. Many farmers shared stories of injuries experienced by friends and family and noted how it could have been avoided.

> "[CSF] demonstrates that you can make a difference in safety by increasing education and awareness."

TABLE 3. As a Result of any of the Referral-Based Health Care Provider Visits, did you do any of the Following Recommended by your Family Physician Or Specialist?

Results	# Of farmers
Start a new medication	6
Increase the dose of a current medication	1
Undergo diet or lifestyle changes	7
Have surgery	1
Get a hearing aid	1
Get corrective lenses (glasses or contacts)	1
See a chiropractor	2
Other	7

> "[The purpose of CSF] is to make all farms healthier."

Farmers were asked to specifically report the ways in which their work and health habits have changed as a result of participation in CSF. Noted changes in work habits were most often related to increased use of PPE.

> "I use PPE more often in grain dust and mold. I can tell the symptoms as I get older."

> I never gave bin ladders a thought, but I increased the ladder height to keep my kids off."

Changes related to health habits were less easily assessed. Several farmers noted that media coverage of preventive health issues has increased over time, making it difficult to judge the reasons for increased awareness of such issues. However, examples of better habits mentioned by farmers included improved diet for themselves and their families and increased use of sun protection.

> "[Due to the] blood check and the results, I now wear a respirator, I wear hearing protection, and I have made diet changes."

> "We try to exercise, eat better, and I find myself thinking about what I am doing."

Questionnaires

From those responding to the 2001 questionnaire, the farmers overwhelmingly (99%) stated that they would recommend the CSF program to friends, family, and neighbors (Table 4). Following up on this question in the 2002 questionnaire, most farmers indicated they were either very likely (48%) or highly likely (47%) to continue to apply information learned from CSF in their daily lives and they ranked the existence of CSF and educational programs as very important (55%) or extremely important (18%; Tables 5 and 6). The 2002 questionnaire asked farmers to evaluate their experience in

TABLE 4. Would you Recommend Participation in the Certified Safe Farm program to any of your Friends, Family, or Neighbors?

Yes	90
No	1

TABLE 5. Will you Continue to Apply what you Learned About Agricultural Health and Safety into your Daily Work Life?

Response	# Of farmers
Not at all	0
Somewhat	3
Very	44
Highly	43

TABLE 6. How Important to you is the Existence of an Agricultural Health and Safety Program Like Certified Safe Farm?

Response	# Of farmers
Unimportant	1
Somewhat important	9
Moderately important	17
Very important	54
Extremely important	18

the CSF program with a majority stating that the program was a valuable learning experience that increased their awareness (Table 7).

CSF Program Recommendations

Focus Groups

Farmers were asked about ways in which they would change the CSF program to make it more valuable. Including more education regarding chemicals, manure management, or environmental protection was suggested by some farmers. Other farmers suggested methods to enhance participation rates.

> "Not many people know about the [CSF] program. Go to the grain elevators."
>
> "Include the spouses even if there is a fee."

Many farmers mentioned that young farmers should be encouraged to utilize preventive services such as CSF.

> "Try to get more young people involved—get more 30-year-olds involved. These people are the ones who need to be in the study."
>
> "Target young farmers and prevent problems before they start."

Farmers were also interested in how they can better receive up-to-date safety information and how study staff can better provide study results to participants. Suggestions included sending reminder letters regarding recommended on-farm changes, printing safety information and study results in local publications such as *Iowa Farmer Today*, and conducting an annual meeting.

When asked about program incentives, most farmers preferred cash, although some farmers noted that incentives for the program were unnecessary. Insurance (liability) coverage discounts and other agribusiness discounts for certified safe farms were also mentioned by many as a potential incentive.

Interestingly, many farmers suggested that the best way to recruit new farmers into the program was to utilize their (CSF participants') own experiences. In fact, farmers appeared willing to act as advocates for the program to encourage wide participation in their local communities. Farmers said they would emphasize different aspects of CSF to encourage enrollment in the program.

TABLE 7. Categorical Summary of Responses from Intervention Farmers Regarding their Experience in the CSF Program*

Description of the CSF Experience	Examples	# Responding
1. Learning experience	Informative	24
	A valuable tool	
	Educational experience	
2. Good program	Good program	19
	Worthwhile	
	Positive experience	
	Important study	
3. Increased awareness	Eye-opening experience	16
	There are consequences to my actions	
	Makes you stop and think	
	Alerted me to more dangers	
4. Blank=no response		9
5. Satisfying	I enjoyed it…	8
	Very interesting	
	Very pleasant experience	
	Very satisfying experience	
6. Competent, caring staff	I appreciate the input by CSF staff	5
	Thoughtful and caring people	
	She…provided more info than any doctor I've seen	
7. Thankful	Grateful for help and checkups	4
	Greatly appreciated participating as an intervention farmer	
8. Detect changes over time	…Could compare results each year	2
	Good to know if things were getting worse	
9. Negative response	…We farm on a small scale—much of the information and services don't apply	2
	I'm engaged in alternative farming on a marginal basis…many components barely apply	
11. Other	If insurance would pay I would consider continuing the service	2
Total		**91**

*All responses are mutually exclusive.

"The on-farm review is helpful because you don't have to pay a consultant."

"The better parts of the program are the lung function and hearing tests."

"Emphasize the whole package since everyone has different needs."

Barriers to involvement in CSF noted by farmers included the distance of travel to their local AgriSafe clinic and the timing of services offered. As expected, many farmers noted that they were very busy during harvest time.

Questionnaires

When asked about the most and least beneficial part of the CSF program for the farmers in 2001, they felt that quarterly telephone calls to collect injury and illness outcome information and biannual educational meetings were the least valuable (67%) and the occupational health screening was the most beneficial (62%; Tables 8 and 9). In the 2001 survey, when asked about suggested improvements to the program, most responses were to provide more information and education to the participants on a regular basis (Table 10).

TABLE 8. Which Part of the CSF Program has been **Least** Beneficial Toward Improving your Health and Safety on the Farm?

Response	# Of farmers
Quarterly telephone calls	67
Biannual educational meetings in Spencer	23
Other	4
Blank	3
Farm safety review	2
Occupational health screening	1

TABLE 9. Which Part of the CSF Program has been **Most** Beneficial Toward Improving your Health and Safety on the Farm?

Response	# Of farmers
Occupational health screening	62
Farm safety review	29
Quarterly telephone calls	4
Health screening/farm safety review	3
Biannual educational meetings in Spencer	1
Other	1

DISCUSSION

Our focus groups (2002 and 2006) and mail-out questionnaires (2001 and 2002) were designed to allow farmers to assess the CSF program post-intervention. We found that farmers overwhelmingly viewed CSF as valuable tool for improving their health and safety by motivating behavior change. These findings were similar to those of focus groups from Nebraska CSF farmers.[15]

Occupational health screening was the most valued aspect of CSF according to farmers. In 1990, the Family Farm Survey found that respiratory diseases were one of farmers' major health concerns.[16] Similarly, we found that lung function testing was viewed as the most valued type of screening offered by CSF. Farmers were happy with the overall screening process, but many suggested adding the PSA test to the screening protocol. In addition to physical testing, farmers noted that AgriSafe nurses provided education regarding farm exposures such

TABLE 10. Suggested Improvements to the CSF Program as Identified by Intervention Farmers*

Suggested Improvements	Examples	# Responding
1. Provide information/education	More educational meetings (4)	
	Provide more information on:	13
	• chemicals (3)	
	• project results (2)	
	• H_2O/env. Protection (2)	
2. Other	Involve insurers (2)	13
	Use Internet to do quarterly calls, etc (2)	
	Get program info out to health care workers	
3. Satisfied with program as is		12
4. Increase the # of farmers involved	Include spouses	11
	Include neighbors	
5. Not categorized	The program helped me be more aware	11
6. Provide additional services		
• Medical screening services		
	Prostate exam	7
	Colonoscopy	
• More frequent farm reviews	Diabetes	
	Chest x-ray	
		1
7. Continue the program		5
8. Provide additional training	First aid/CPR	
	Educate my employees on respirator use	
Total		**75**

*67 farmers responded to this question. Eight respondents identified two items for program improvement, thus the total of responses (75) is greater than the number of respondents.

as dust, gases, and chemicals. Most farmers reported increased awareness of these issues and subsequent increased use of PPE. Many farmers reported that they have changed some health habits as a result of education received from the CSF program.

On-farm safety review was viewed as the second most important component of CSF. Most farmers felt that trained farm reviewers were competent and provided relevant information. Some farmers felt that self-review would be possible. Major areas of educational value included hydraulic lines, power takeoff (PTO) guards and shields, slow-moving vehicle (SMV) signs, equipment lighting, and child safety. Many farmers indicated that they have changed their work habits in light of education received from the CSF program that helped connect cause and effect (eg, a heavy dust exposure can cause flu-like symptoms.)

Overall, suggested changes for the CSF program were exclusive of the main program components (occupational health screening and on-farm safety review), indicating that the program in general has been well received. Farmers provided suggestions for ways in which information could be disseminated to them; for example, using existing farm publications. To respond to this request, CSF participants were added to the mailing list of the *Alive and Well Newsletter* (joint publication of Iowa's Center for Agricultural Safety and Health and the Great Plains Center for Agricultural Health), which has an additional 2-page insert on timely issues included for CSF farmers. In addition to the newsletter, a monthly health and safety article was initiated in the *Iowa Farmer Today* magazine. Many farmers also expressed the benefits of enrolling in the program at a younger age. In addition, participants suggested enrolling spouses in the program, and in the 2003 and later studies, we have encouraged spouses and family members to enroll in the program as well. Farmers were asked whether they felt they could conduct a self-assessment and though some felt it was possible, many believed that an outside reviewer would do a more thorough job. Based on these comments, we have continued to employ outside farm reviewers when conducting the on-farm assessments. Of the potential incentives for CSF program involvement, cash and insurance discounts were most often cited. CSF staff are continuing to engage the agribusiness and insurance industries in assisting farmers with discounts for improving health and safety on their farms. The farmers found the quarterly call system to track injuries and illnesses was least beneficial to improving their health and was discontinued after the 1999 study. This system was necessary for collecting evaluation information and not designed to be part of the intervention.

A potential limitation of our voluntary focus group and questionnaire assessment is that farmers who chose to participate may be more satisfied with the program than those who did not participate. Another potential limitation to our focus groups was that the group was moderated and conducted by CSF and AgriSafe nurses, both of which participate in the daily running of the program. Participants may have felt the need to "be nice" since they were face-to-face with the nurse who performs the screening. This may affect the generalizability of focus group findings to all CSF intervention participants and to farmers in general. However, the mailed questionnaires were less likely to be affected by this bias. The participation rates for survey completion were adequate (61–67%) and participants might be less likely to "be nice" in answering written questions compared to focus group participation.

Low recruitment rates in the overall CSF program also affect the generalizability of the study results presented here. Recruitment of farmers into the CSF program has required significant effort and participation rates have been quite low; for example, 3% of eligible farmers participated in 2004–2005. This may reflect the farmers' willingness to participate in studies in general; it is well recognized that farmers are very busy, and many farmers have some level of mistrust toward universities and studies. However, once recruited, we have found overwhelming support and positive attitude towards the CSF program.

The slow response to CSF recruitment could also be explained by well-recognized laws in adopting new innovations among populations.

A new program, such as CSF, will first only interest "innovators" and "early adopters" before "early majority," "late majority," and "laggers."[17] The "stages of change" model has also been widely used in research concerning behavior change. It includes the stages precontemplation, contemplation, action, and maintenance (more stages in some versions).[18] In the case of CSF, many farmers may need time and affirmative information about the benefits of the program before they move to the action stage.

CONCLUSIONS

Although it is impossible to completely capture the ways in which CSF may have impacted the work and health habits of farmers, qualitative data collection can elucidate some of the potential impact. Throughout the CSF program, farmer input has been crucial in the design of the intervention. Our qualitative findings here indicate that participating farmers viewed CSF as a program capable of educating and motivating farmers to consciously improve their health and safety. Specifically, qualitative data collection methods have also helped farmers to identify recommendations for program improvement. Notable recommendations included inclusion of entire families in CSF, increased utilization of CSF in young farmers and their families, provision of insurance and other incentives for CSF participation, providing educational materials more frequently, and increased ease of AgriSafe clinic access, among others.

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