ABSTRACT

One-to-one outreach was used within a targeted watershed to promote the installation of conservation buffers. In this program called “FarmLink”, four farmers/landowners and watershed residents were hired on a part-time basis and given training by Cooperative Extension, Natural Resources Conservation Service, and Natural Resources District personnel. Training topics included basic buffer design and benefits, government support/incentive programs, and “sales” techniques. These “advisors” then contacted their neighbors to explain the need for and benefits of buffers and other conservation practices. Forty-two landowners were contacted, leading to contracts for the establishment of 16 separate conservation buffer practices on 24.8 ha (61.3 acres) of farmland. These included just over 8 ha (20 acres) of grassed waterways or similar plantings and 14 ha (35 acres) of streamside buffers. In addition, because of the information he received in the training sessions, one of the advisors also installed 1.7 ha (4.3 acres) of streamside buffers, 0.45 ha (1.1 acres) of grassed waterways, and established 2.0 ha (5.0 acres) of grasses and forbs on his own land. In aggregate, these practices converted 29 ha (72 acres) of cropland to grass, which will reduce soil erosion by an estimated 325 Mg (360 tons) per year, and create excellent wildlife habitat. The streamside buffers will physically protect 5.3 km (3.3 miles) of stream bank and filter the runoff from approximately 800 ha (2000 acres) of upslope cropland, while the grassed waterways will help filter and control the runoff from in excess of 100 ha (250 acres). Direct payments to the landowners will provide an influx of nearly $100,000 within the local area over the life of these contracts. Thus, this program will have a significant impact both environmentally and economically within the watershed.

During these one-to-one contact sessions, it became apparent that: 1) many farmers and landowners were not familiar with the multitude of USDA and other programs that are available to assist with the installation and maintenance of conservation practices; and 2) landowners generally seemed to like the personal touch of someone coming out to talk directly to them, pointing out specific areas on their land where conservation practices could best be implemented, discussing compensation programs available for taking land out of production and assisting with practice installation cost, as well as management changes needed to help ensure practice success. Although one-to-one programming cannot be used in all cases, it has been an effective tool in this watershed and will continue to be used in two new projects.

KEYWORDS: Conservation, Buffers, Erosion, Education, Educational programs
INTRODUCTION

Northeast Nebraska is influential in determining the water quality of a number of important water bodies, both locally and regionally. Watersheds drain either directly into the Missouri River, or into a series of rivers (i.e. Elkhorn, Loup, Platte, and others) that are tributaries of the Missouri. Land use is dominated by intensive agriculture, with large tracts of row crops, primarily in a corn/soybean (Zea mays L./Glycine max L. Merr.) rotation. Northeastern Nebraska has typically lagged behind other parts of the state in conservation practice adoption, and soil erosion and other non-point source pollution remain as major water quality issues.

In 2000, the United States Department of Agriculture Cooperative State Research, Education, and Extension Service (USDA-CSREES), funded an Extension Education project titled “Accelerating Riparian Buffer Adoption to Enhance Water Quality and Farm Income” (Shelton, et al., 2000). The overall goal of this project was to enhance landowner adoption and installation of conservation buffers using a three-component approach of: 1) a multi-faceted educational program to increase awareness of the environmental, economic, and other benefits of buffers; 2) demonstration sites that included a range of buffer maturities and types, and buffer plant materials that have income-generating potential through the production of specialty bio-based products; and 3) a peer-based outreach component using farmers or other respected community leaders to individually contact other farmers and landowners to promote buffer adoption. The three components of this project were designed based primarily on: 1) previous extension education/demonstration projects that substantially increased the adoption of conservation practices (Dickey et al., 1991; Shelton et al., 1991); 2) the premise that the best way to promote buffer adoption is through personal contacts and demonstrations (Petchenik, 1999); and 3) approaches extensively used in developing countries to promote soil conservation and agroforestry technologies (Bannister and Josiah, 1993; Josiah, 1993; White, 1994).

The Shell Creek watershed drains approximately 121,000 ha (300,000 acres) in parts of Boone, Colfax, Madison, and Platte Counties in northeast Nebraska, and is a tributary of the Platte River. This creek has a history of flooding which has frequently caused damage along its length, and in several adjacent small towns. Erosion and sedimentation are major water quality issues, as well as degradation from other non-point sources and loss of aquatic and wildlife habitat. Shell Creek was on the Nebraska 1998 and 2002 Section 303(d) lists of impaired waters (http://oaspub.epa.gov/waters/state_rept.control?p_state=NE; watershed #10200201). It has also been designated as a priority watershed by the Lower Platte North Natural Resources District (NRD), and was part of the Nebraska Conservation Reserve Enhancement Program (CREP) priority area created in 2002 by the Natural Resources Conservation Service (NRCS). In late 1999, about 20 concerned individuals formed the Shell Creek Watershed Improvement Group (SCWIG) with objectives that included improved water quality and reduced flooding through the promotion and installation of conservation practices. The Shell Creek Watershed was chosen as a target area of the USDA-CSREES project, and the SCWIG provided direction and oversight to many project activities.

Although one-to-one programming was one of the most used Extension education methods for many years, because of budget and other constraints, this approach has generally given way to other techniques. Still, there may be circumstances where one-to-one contact can be very effective and appreciated by clientele. This article describes the peer-based, one-to-one outreach approach referred to as “FarmLink” that was used in the Shell Creek Watershed to promote conservation practice installation and some of the results that were achieved.

METHODOLOGY
**SUB-WATERSHED TARGET AREAS**

University of Nebraska Cooperative Extension (CE) personnel associated with the USDA-CSREES project and SCWIG members jointly agreed that initial contact efforts should be further focused in one or more sub-watersheds in the upper reaches of the Shell Creek Watershed, rather than in the entire watershed. It was felt that the size of this focus area should be on the order of 15,000 ha (35,000 acres). Three tributary stream sub-watersheds having approximately 1,660, 2,500, and 10,200 ha (4,100, 6,200, and 25,100 acres) were subsequently selected. From NRCS records, it was determined that there were nearly 400 “stakeholders” (landowners, farm operators, and landowners/operators) within these three sub-watersheds. An early goal was that a majority of the stakeholders would be individually contacted.

**ADVISOR SELECTION**

The CE Project Coordinator was responsible for selecting the individuals or “advisors” who would be making the on-farm contacts. Selection criteria included:

- **Local farmer/landowner.** We felt that the ideal advisor would be a well-established, full-time farmer in the immediate area who owned and/or operated land adjacent to Shell Creek (or a major tributary thereof).
- **Well-respected and recognized as a leader.** Evidence of this criterion included membership in civic organizations and/or boards.
- **Strong conservation ethic.** Evidence included application of conservation practices on land owned or farmed. NRCS field office personnel were used to help assess this criterion.
- **Good communicator, out-going personality.** Since the individual would be meeting the public (even though the meetings would be one-to-one), good communication skills would be needed.
- **Familiarity with the watershed, local area, and residents.**
- **Well-kept farmstead.** We felt that a neat, well-kept farmstead (buildings, equipment, etc.) would reflect positively on the individual’s neighborhood image, as well as pride in, and commitment to the watershed.

Because of the size of the targeted areas and number of stakeholders, it was decided that at least four advisors would be needed to make the desired contacts in a timely manner. The SCWIG membership represented an obvious pool of potential advisors, and after participating in several of their meetings and other interactions, the CE Project Coordinator was able to identify several individuals who appeared to best fit the above criteria. Five members were then contacted individually to explain the proposed process, expectations, and responsibilities, and to ascertain their willingness to participate. One declined due to other commitments and the fact that he lived in the lower portion of the watershed. The other four eventually agreed, although not without several calls and substantial persuasion by the Coordinator. These individuals generally met the criteria outlined above, although one had recently semi-retired from farming. Each advisor currently serves on local and/or national boards (some elected) and they generally know their neighbors very well.
**Advisor Payment**

Each advisor signed a Participation Agreement Form that outlined what was expected of them and how they would be compensated for their time and mileage while contacting landowners. It was made clear that they would not be an employee of the University and would receive no other benefits. The advisors were paid $30 per on-farm visit and $0.30 per mile for travel to and from a qualified visit. In addition to the per-visit compensation, an additional $100 was paid for each contacted landowner who signed a contract with NRCS/FSA (Farm Services Agency) for the installation of a conservation buffer practice(s). In current and future programs, we intend to also compensate the advisors for their participation in training sessions and travel to-and-from these sessions.

**Advisor Training**

The Project Coordinator met individually with each advisor to provide preliminary information about conservation buffers and USDA, NRD, and other programs that were available to assist with practice installation and maintenance. In another session, NRCS and NRD personnel provided the advisors and other interested SCWIG members with training on interpreting aerial field photos and recommendations on which buffer practices might be suitable in various situations. Aerial photos of the advisors’ own farms were used in this session. Finally, the advisors attended a training session led by CE project personnel. Topics included buffer benefits and design basics, governmental and other program availability, and basic sales or promotion techniques. The training objective was to make the advisors feel as comfortable as possible about promoting conservation buffers and to be able to answer most of the questions that could be expected from fellow landowners.

**Farm Visit Process**

A qualified on-farm visit was defined as being a face-to-face meeting with a farming neighbor at his/her farm. Coffee shop or similar locations did not qualify, although preliminary contact or scheduling could be made in this manner. As a matter of courtesy, “cold” calls were strongly discouraged, advance scheduling by phone or other methods was requested. Similarly, visits were not scheduled during peak times such as planting or harvest; and were typically made during the winter months. Most visits were from one and one-half to two and one-half hours in length, depending on interest level, size of operation, and other factors.

**Farm Visit Content**

There were four primary facets to the farm visits. The first was a discussion of the various types of conservation buffers (i.e. grass filter strips, grassed waterways, riparian forest buffers, field windbreaks, etc.) that are typically used, very basic information on buffer design, and how these practices reduce erosion and improve water quality. Second was a discussion about the availability of various programs such as the NRCS/FSA Continuous Conservation Reserve Program (CCRP) to assist landowners with the installation and maintenance of buffers, as well as providing compensation in the form of rental payments for the land taken out of production. Often, general examples of payment rates (which are a function of soil type) were presented to the landowner. If the landowner was interested in installing a conservation practice(s), he/she was asked to sign an Intent to Participate form that was to be forwarded to the local NRCS field office for follow-up contact. This form also provided CE project personnel with a means of tracking progress of the visits and an initial assessment of impact. Finally, the landowner was encouraged to visit the local NRCS field office to prepare and sign a contract(s) for practice installation. Since NRCS is the only agency authorized to layout and approve conservation practices under the CCRP
and many other comparable programs, the landowner must go to the local field office to initiate/complete the contracting process.

**FOLLOW-UP CONTACT**

As previously mentioned, the initial concept was that the signed Intent to Participate forms would be forwarded to the local NRCS field office, and NRCS personnel would then contact the landowner to ascertain his/her specific desires for conservation practice installation. This did not occur. In a very limited number of cases, the interested landowner went to the local NRCS field office, and no follow-up was needed. In the remainder of the cases, the CE Project Coordinator attempted to schedule a follow-up farm visit, and was successful in doing so with about 75% of the landowners who had indicated an interest in practice installation. During these visits, the Coordinator used aerial photos of the individual’s farm to show where and how specific practices could be used in a conservation system. Examples of payments for practice installation were also presented for the soil type(s) on the individual’s farm. Finally, the landowner was again encouraged to visit the local NRCS field office to prepare a practice installation contract(s).

**ROLE OF PROJECT COORDINATOR**

The CE Project Coordinator played a key role in managing the day-to-day aspects of the FarmLink program. Responsibilities included:

- Locate suitable watershed(s) as target area(s).
- Locate and screen potential advisors.
- Assist with advisor training.
- Compile landowner contact information. Names and addresses of the landowners/operators within each of the three sub-watersheds were obtained from the county NRCS/FSA offices and given to the advisors prior to initiating landowner contact.
- Provide on-going supervision and assistance. The advisors often had questions about the contact program, available assistance programs, and other items. These questions were handled by the Coordinator.
- Process reimbursement claims for contacts and mileage.
- Serve as liaison with NRCS/FSA. This included obtaining answers to very specific questions on assistance programs, delivering/discussing the signed Intent to Participate forms to NRCS, and inquiring about (and encouraging) agency follow-up with interested landowners.
- Contact landowners. As previously discussed, the Coordinator made all of the initial follow-up contacts with those landowners who had expressed an interest in practice installation. In addition, interested landowners were again encouraged to visit the local NRCS field office to prepare and sign a contract(s) for practice installation. The Coordinator also fielded questions from several landowners about various program aspects.
RESULTS AND DISCUSSION

LANDOWNERS CONTACTED AND CONTRACTS SIGNED

The four advisors conducted on-farm visits with a total of 42 landowners. However, the adage of “80/20” was apparent, as the number of contacts made by each advisor was 19, 13, 6, and 4, respectively. The advisor who made the most contacts was the one at the outset who appeared to be the strongest conservation advocate and the most out-going. He was also the one who was semi-retired from farming, so he may have felt that he was able to devote more time to this project. The advisor who made the fewest contacts did encounter conflicts with late winter/early spring calving of his cow herd which greatly reduced the time that he felt he could be absent from his own operation.

Twenty-eight of the landowners who were contacted signed an Intent to Participate form. Three of these individuals almost immediately visited the local NRCS field office to begin the process of contract preparation, practice design, and installation.

All Intent to Participate forms were forwarded to the local NRCS field office with the expectation that field office personnel would quickly follow-up with the landowner to ascertain his/her specific desires for conservation practice installation and begin the contract development process. As previously stated, this did not occur, despite several attempts by the Coordinator to persuade field office personnel of the urgency and need to follow-up with these interested landowners. The indication was that no staff time was available because of other program commitments and deadlines, and that contacting an individual in this manner could be viewed as being discriminatory.

When it became apparent that NRCS personnel would not be able to make these follow-up contacts, we decided that the Coordinator should try to visit the interested landowners instead. Visits were subsequently scheduled and completed with 19 of these landowners. Two individuals did then visit the local NRCS field office and sign up for one or more practices. However, because three to four months had elapsed since the original visit by the advisor and the follow-up visit by the Coordinator, we believe that much of the original momentum and interest may have been lost.

In all, five of the contacted landowners contracted for the installation of 16 specific conservation buffer practices. These were: six streamside grassed filter strips (NRCS, 1998) totaling 12.1 ha (29.9 acres); five grassed waterways (NRCS, 2002b) totaling 4.1 ha (10.1 acres); and five relatively small, often odd-shaped, areas totaling 8.6 ha (21.3 acres) of cropland that were converted to permanent grass cover (NRCS, 2002a). In addition, because of information he learned during the training session, one of the advisors also contracted for the installation of a 0.45 ha (1.1 acre) grassed waterway, a 1.7 ha (4.3 acre) streamside filter strip, and the conversion of a 2.0 ha (5.0 acres) area of cropland to permanent grass cover.

In aggregate, these 19 practices converted 29.0 ha (71.7 acres) of cropland to permanent grass cover. This conversion alone will reduce soil erosion by an estimated 325 Mg (360 tons) annually and provide excellent habitat for certain species of wildlife. One of the odd-shaped areas that was converted to grass cover consisted of 2.0 ha (5.0 acres) within a stream oxbow, and functions similarly to a streamside filter strip. This area plus the seven filter strips will physically protect 5,325 m (17,470 ft) of stream bank, and filter the runoff from approximately 800 ha (2000 acres) of upslope cropland. Three of the odd-shaped areas totaling 4.2 ha (10.4 acres) didn’t exactly fit the design specifications for grassed waterways, but were very similar and serve essentially the same purpose. These, plus the six true grassed waterways will direct and control the runoff from 106 ha (263 acres), based on NRCS practice installation determinations. Additionally, direct payments to the landowners for land rental, maintenance, and other incentives will total approximately $96,800 over the 10 to 15-year life of the contracts. Thus, conservation practice
installation as a result of the FarmLink program represents both an economic and an environmental gain within the watershed.

**Some Reasons for Successes**

Having the SCWIG as an established watershed “advocacy” group greatly contributed to the success in several ways. First, this group was a ready source from which the advisors were selected. The group had also made a concerted effort over several years to make others in the watershed aware of problems and concerns such as flooding, erosion, water quality, etc. Thus, the acceptance of conservation practices was probably improved because of this awareness.

By the fact that the selected advisors were members of the SCWIG, they likely had an above average conservation ethic and concern for the watershed. They were personable, knowledgeable individuals who were generally quite well known and respected. They were “neighbors”, rather than agency personnel. All of these attributes contributed to the acceptance of the conservation message.

Landowners generally seemed to appreciate the personal touch of someone coming out to talk directly to them: 1) pointing out specific areas on their land where conservation practices could best be implemented; 2) discussing compensation programs available for taking land out of production; 3) describing management changes needed to help ensure practice success; and 4) answering specific questions. Many of the contacted farmers and landowners indicated that they were not familiar with the multitude of USDA and other programs that are available to assist with the installation and maintenance of conservation practices. Thus, increasing the knowledge of available programs likely played a role in practice adoption. One contacted landowner made the statement “You have given me more information in this hour and a half than I could have ever gotten leaning across the counter at the USDA Service Center.”

Some of the success may also have been attributable to the fact that the program was designed to promote practice adoption, rather than merely creating an awareness of a problem. One way this was done was by having the landowner sign an Intent to Participate form to indicate his/her interest. Although this form was in no way binding, it did imply a level of commitment. Also, frequently encouraging landowners to visit the local NRCS field office to sign a practice installation contract was another way of encouraging adoption.

Finally, there may have also been a certain amount of guilt associated with practice adoption. It is difficult to tell your neighbor, and possibly friend, that you are not interested in adopting a conservation practice.

**Some Problems Encountered**

Prior to selecting the Shell Creek Watershed as a target area and forming an association with the SCWIG, the Coordinator had attempted to locate a suitable watershed as a target area and screen potential advisors. A few who were contacted indicated that they did not truly think there were significant water quality issues in their watershed and, hence, there really wasn’t a need for this type of program. Several promising individuals indicated that they were already “over committed” with other boards and leadership roles and simply did not have the time to devote to this process. At first, every one of the SCWIG members contacted about becoming an advisor also said that they didn’t have time to take on any additional tasks or responsibilities. After some convincing by the Coordinator, though, the four individuals did agree to become advisors.

Several of the contacted landowners (as well as educational program attendees) expressed the sentiment that current cropland cash rental rates have outpaced land rental payment rates as authorized by FSA for conservation practices. As an example, FSA-authorized rental rates for the counties in the Shell Creek Watershed have generally not changed since 2000 (FSA, 1999; 2005).
FSA-authorized rental rates also make no distinction between non-irrigated and irrigated cropland, even though the cash rental rate (and sale price) is significantly greater for irrigated as compared with non-irrigated land. To help overcome this concern, for a recently implemented project (Shelton, 2004b), cropland within three targeted Shell Creek sub-watersheds on which certain conservation practices are installed will receive total annual payments (rental plus maintenance plus bonus, if applicable) of $150 per acre ($370/ha) for irrigated land, and at least $100 per acre ($247/ha) for non-irrigated land.

One of the most disappointing aspects of the FarmLink program to date has been the lack of rapid follow-up by NRCS field office staff with contacted landowners who had expressed an interest about conservation practice installation. Again, for the newly-implemented Shell Creek Watershed project, NRCS and the Nebraska Department of Environmental Quality (NDEQ) have jointly funded a Watershed Planner position to help address this issue. Some duties of this individual include working with landowners and operators, both individually and in groups, to develop conservation plans and assist with the application of resource management systems; and coordinating contacts with landowners and other stakeholders.

**SUMMARY AND CONCLUSIONS**

A peer-based, one-to-one outreach approach called “FarmLink” was used within a targeted watershed to promote the installation of conservation buffers. Four local farmers/landowners were hired part-time to contact their neighbors to explain the need for and benefits of buffers and other conservation practices. Forty-two landowners were contacted, leading to contracts for the establishment of 16 separate conservation buffer practices on 24.8 ha (61.3 acres) of farmland. In addition, one of the advisors also installed three different buffer practices totaling 4.2 ha (10.4 acres) on his own land. In aggregate, these practices converted 29 ha (72 acres) of cropland to grass, which will reduce soil erosion by an estimated 325 Mg (360 tons) per year, and create excellent wildlife habitat. Streamside buffers will physically protect 5.3 km (3.3 miles) of stream bank and filter the runoff from approximately 800 ha (2000 acres) of upslope cropland, while grassed waterways will help filter and control the runoff from in excess of 100 ha (250 acres). Direct payments to the landowners will provide an influx of nearly $100,000 within the local area over the life of these contracts. Thus, this program will have a significant impact both environmentally and economically within the watershed.

Landowners generally seemed to like the personal touch of someone coming out to talk directly to them, pointing out specific areas on their land where conservation practices could best be implemented, discussing compensation programs available, as well as management changes needed to help ensure practice success. Many of those contacted were not familiar with the multitude of USDA and other programs that are available to assist with the installation and maintenance of conservation practices.

Although one-to-one programming cannot be used in all cases, it has been an effective tool in the Shell Creek Watershed and will be used in two new projects. Further, this approach could be adapted to many other watersheds throughout Nebraska, the Midwest, and the US.
REFERENCES


FSA. 1999. 2000 Approved Soil Rental Rates. Farm Service Agency. Lincoln, NE.

FSA. 2005. Personal communication with county Farm Service Agency personnel.


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