

# Agroforestry Training for Professionals in Missouri and the Midwest

## Final Report for ENC04-084

Project Type: Professional Development Program

Funds awarded in 2004: \$47,890.00

Projected End Date: 12/31/2008

Matching Non-Federal Funds: \$11,973.00

Region: North Central

State: Missouri

Project Coordinator:

[Dusty Walter](#)

University of Missouri Center for Agroforestry

## Project Information

### Abstract:

A multi-agency training was organized in January 2006, attended by eighty-five resource professionals. An Agroforestry Training Manual was created, used and distributed at all trainings. Eight additional landowner workshops were held in 2006-2008, attended by 177 landowners and resource professionals in Missouri, Iowa and Illinois. Before/after surveys revealed significant gains in knowledge at all nine trainings. As a direct result of agroforestry trainings, the Missouri NRCS set aside \$1 million to fund a Windbreak sign up. 120 applications were funded totaling more than \$407,000. Twenty seven miles of windbreak/shelterbelts will be established in Missouri due to this effort.

### Project Objectives:

The overriding outcomes of the proposed stage 1-3 trainings delivered to diverse agencies and organizations will be evidenced in greater partnering across agencies, broadened agroforestry knowledge base among resource professionals, and increased benefits to farms through adoption of agroforestry and other integrated land management practices.

#### Short-Term Outcomes:

Knowledge about agroforestry and communication within and between core agencies and organizations will be strengthened. The number people key individuals within each of the core groups with a working knowledge of agroforestry practices will be increased. Further, as a result of the farm tour and case study activities, participants will be given the opportunity to interact across agency and organizational boundaries that may exist, and thereby create or enhance networks. While agencies cannot afford to send all pertinent personnel to a 1½ day training event, there is merit to having a broad spectrum of individuals within the core groups aware of, and educated about, the potential benefits to properly applied agroforestry practices. The primary outcome of Stage 2 activities will be based on

the number of people from within a core group that attend the specialized agroforestry training, and partnerships that are created and enhanced as a result. Paramount to the success of core group, or intra-agency, trainings will be the input and participation from group members that attended the Stage 1 activities. These individuals will prioritize the areas of importance with respect to their agency or organization, and assist in developing an effective curriculum to communicate the impact potential of agroforestry to the priority area.

A quantitative outcome of Stage 3 trainings will be the number of landowners attending regional agroforestry workshops. A secondary outcome will be the direct benefits to the existing UMCA Technology Transfer Model as measured by the increase in regional on-farm implementation of agroforestry practices. The existing UMCA Technology Transfer Model emphasizes the merit of field days/workshops that use University of Missouri Farms and Centers to highlight current scientific research in conjunction with visits to farms where landowners are practicing agroforestry. This delivers both science and experiential knowledge to landowners attending workshops and enhances the learning opportunity for educators. Outcomes from Stage 3 activities will strengthen our existing Technology Transfer Model.

Short-term outcomes achievable within the 3-year span of this Program are: 1) an increase in the knowledge of agroforestry practices and their benefits to sustainable farming by core participants and their perspective agencies or organizations; 2) enhanced networking and partnering between core participants working with farmers; 3) a greater utilization and adoption of agroforestry practices to enhance sustainable farming by using interactions between farm resources to the benefit of farm operations.

#### Intermediate Outcomes:

Policy changes within agencies and organizations will reflect knowledge gained and an appreciation for the benefits of agroforestry practices applied to the farm. This will result in greater cooperation and collaboration between agencies, organizations, and natural resource disciplines when recommending agroforestry and other sustainable forest and farm management practices. As agroforestry practices increase in number and mature there will be a diversification of products produced and marketed from farms.

#### Long-Term Outcomes:

Increased landowner adoption of agroforestry practices will result in a greater diversification on farm landscapes, enhanced farm sustainability through product diversification and enhanced stewardship of farm resources. In 2013, five years after the end of the agroforestry PDP trainings, the number of trained professionals and landowners practicing agroforestry will be reassessed. This will include a description of the types of agroforestry practices that are being adopted, where, and why. It will also revisit barriers and constraints to wider implementation by core groups and landowners. An updated Directory of Agroforestry Professionals and Landowners in Missouri will be compiled and published.

#### Introduction:

In Missouri and throughout the Midwest, family farms are at risk and must compete in an environment that does not afford the same opportunities as those currently available to corporate farms in conventional agricultural markets. Ninety two percent of all Missouri farms are operated by individuals/families (USDA ERS). Within this segment of the farm population, tens of thousands of forest and farm landowners and millions of acres of forest and farm land are represented. There are 98,435 family farms averaging 280 acres (USDA ERS). Additionally, 64,000 farm operators manage herds with less than 500 head of cattle (AgEBB). Finally, there

are 11.4 million forested acres owned by 307,000 non-industrial private forest landowners (USDA FS). If managed differently, through wider adoption of sustainable agriculture and agroforestry practices, the resulting changes will directly benefit the family farm, local communities and greater society.

Sustainable agriculture practices are defined as ecologically sound, economically viable and socially responsible (Ikerd 2004). Agroforestry is defined as intensive land-use management that optimizes the benefits (physical, biological, ecological, economic, social) from biophysical interactions created when trees and/or shrubs are deliberately combined with crops and/or livestock (Gold et al. 2000). The widespread adoption of agroforestry contributes to a sustainable agriculture by providing environmental and conservation benefits while yielding short-, intermediate and long-term financial gains.

To achieve on-the-ground adoption of agroforestry, it is essential to train a core group of individuals within State and Federal Government Agencies, University Extension, Non-Profit, and Professional Organizations who deal with land management issues and/or interact with farmers and landowners. Agencies and organizations including but not limited to MU Extension, MO Department of Natural Resources, MO Department of Agriculture, MO Department of Conservation, MO Natural Resources Conservation Service and MO RC&Ds offer considerable opportunities to communicate the benefits of agroforestry to the landowners of Missouri. Further, adoption of agroforestry is heavily influenced by the policies, priorities and actions taken by this core group. The proposed professional development training program will educate a diverse set of core partners resulting in more rapid adoption of agroforestry practices designed for integration into forests and farms to improve production and sustainability.

The University of Missouri Center for Agroforestry (UMCA), in cooperation with local, regional and national experts, held an agroforestry training for resource professionals in January of 2001 based on the best information available at that time. However, over the past 5 years a substantial amount of research progress in agroforestry has been brought to light and, in order to maximize the potential contributions to sustainable agriculture, it is essential that this information be passed on to resource professionals and, in partnership with this group, to the landowner. Further, there has been substantial turnover among resource professionals since early 2001 and it is imperative that the current staff in many diverse agencies and organizations be trained and/or updated with respect to agroforestry land use options.

A three stage agroforestry training approach was proposed using an updated, comprehensive training manual, case studies and DVD to train a core group of resource professionals, then build out to stage 2 intra-agency trainings relevant to the mission of each agency, and culminate with stage 3 landowner-focused region-specific trainings held in collaboration with teams of trained (stage 1 and 2) regional resource professionals in partnership with UMCA.

The agroforestry training manual, case studies and DVD were used as key learning tools and provided to all participants. Learning and team building across disciplines were enhanced through group interaction to practice on-farm application of agroforestry through a guided process of diagnosis and design.

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## Education & Outreach Initiatives

Objective:

Description:

### Methods

Methods - Background

The University of Missouri Center for Agroforestry (UMCA) has the largest, most comprehensive, agroforestry research and technology transfer program in the US. UMCA further strengthens its capabilities through active collaboration and partnership with other programs both regionally and nationally.

Project Director Gold and Senior Research Specialist Walter will work with the expertise of four additional UMCA technology transfer staff (Godsey, McCoy/Hall, Rhoads, Cernusca) tapped for all trainings. These individuals will play central roles in helping to plan, organize, publicize and participate in all trainings. Key expertise will be contributed from University of Missouri (MU) faculty representing a wide array of disciplines, plus experts from the NRCS, Missouri Dept. of Conservation, US Forest Service, faculty from Iowa State University, University of Nebraska-Lincoln, the National Agroforestry Center and practitioners. Graduate and undergraduate students will be involved with logistics, poster presentations of relevant agroforestry research (during stage 1 training) and will also participate in breakout sessions focused on planning, diagnosis and design.

In 2004, UMCA redesigned its technology transfer strategy to link its technology transfer activities with strengthened research and demonstration efforts at four key MU outlying farms and centers that represent 4 distinct regions (in terms of agroecology and dominant farming practices) of Missouri. To that end UMCA joined forces with the MO Dept. of Agriculture, Sustainable Agriculture Demonstration Award Grant program to sponsor six grants (three each in 2003 and 2004). Each award provided a landowner up to \$3,000 to demonstrate some aspect of agroforestry on their property. Each of the awards was in or immediately adjacent to the county containing one of the four focal MU outlying farms and centers. UMCA technology transfer has also deliberately linked its efforts and approach with its socio-econ-marketing research group. This group is concentrating its efforts around the same four key MU outlying properties and surrounding counties so that the social, institutional, and economic knowledge gained can be brought to bear directly upon UMCA outreach efforts to the benefit of the forest and farm landowners.

UMCA completed a major revision its 2001 Agroforestry Training Manual in December of 2005 to reflect the latest knowledge in support of agroforestry. Including updated sections on all five agroforestry practices (i.e., windbreaks, riparian forest buffers, alley cropping, forest farming, Silvopasture), the revised manual has been strengthened by including sections on planning and design, marketing, and wildlife. Additionally, UMCA has recently completed an agroforestry training DVD containing information on each of the five practices with real world landowner examples.

A stage 1 training session was held in auditorium and classroom facilities on the campus of the University of Missouri - Columbia (in-kind contributions of MU). This included the use of audio-visual equipment (computers, power point projectors, etc.). Stage 2 trainings were intended to be held at agency and organization training facilities. Stage 3 trainings took place at MU outlying farms and centers (Wurdack, Southwest Center, Horticulture and Agroforestry Research Center, Greenley Memorial Research Center) along with a host of other local venues to minimize training costs.

#### Methods - Activities

Activities were originally designed in a three stage approach to maximize the impacts and spin-off from of the educational trainings and workshops to the ultimate benefit of forest and farm landowners.

#### Stage 1:

Stage one placed an emphasis on the training of key individuals within perspective core group organizations. This consisted of a 1 ½ day training session that presents the most up-to-date knowledge on agroforestry practices and their on-farm application. As a part of the training session, participants participated in a farm tour that allows them to view and discuss agroforestry research and its applications. The final, hands-on, component of the campus based training session focused on a case study that provided participants the opportunity to apply newly acquired knowledge to a real-world farm scenario. These regional resource teams drew up an on-farm design incorporating agroforestry practices to address economic and environmental problems. The case study was worked on by regional resource teams drawn from training participants grouped by regions of the state that they represent. This served to further enhance the intra-agency networking that will be promoted throughout the training session.

Feedback from a majority of participants in Stage 2 dictated a shift in future training focus. Feedback strongly supported the idea of bypassing agency centered trainings and focusing on landowner/resource professional trainings coupled with design exercises. Therefore, no Stage 2 trainings as originally conceived, were conducted.

### Original Stage 2 Training Idea:

The second stage involves input from and collaboration with participants from the stage one training session to create targeted trainings relevant to and involving personnel within their respective organizations. The one-day intra-agency trainings will be designed to inform and promote agroforestry practices and relevant research that are closely associated with areas emphasized by each organization. For example, Missouri Department of Natural Resources (MDNR) deals with air and water quality issues that impact farming practices. In conjunction with UMCA and other experts, an MDNR intra-agency training will focus on the benefits to air and water quality derived from the proper application of specific agroforestry practices such as windbreaks and riparian forest buffers.

Stage 3 Trainings were the focus of all subsequent training efforts following the original kick-off event in January of 2006:

These were renamed as Stage 2 trainings beginning in mid-2006.

These trainings focused on one-day landowner focused workshops held at each of four MU outlying properties across the state of Missouri that were designed to address farm production and conservation issues of local and regional significance. Workshops combined morning classroom presentation/discussion with design exercises. These workshops were enhanced by having regional teams of participants, established during stage 1 trainings, provide active input into locally important issues, and by their involvement in presentations and discussion as resource experts at the workshops. Following lunch, these landowner focused workshops were further enhanced by field tours of outlying farms and centers with relevant research demonstrations and through participation of and site visits with local landowners (some of whom were funded through UMCA supported Missouri Sustainable Agriculture Demonstration Awards).

## Outreach and Publications

Summary of publications and education/outreach events 2006-2008

Publications:

Gold, M.A., W.D. Walter, L.D. Godsey, R.L. McCoy, H.E. Garrett, R.A. Pierce, B. White, J. Robinson, R.C. Schultz. 2006. Training Manual for Applied Agroforestry Practices. University of Missouri Center for Agroforestry. 425 pp.

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Hall, M.M. M.A. Gold, W.D. Walter, and H.E. Garrett. 2008. The Five Practices of Agroforestry: Enhancing Land Stewardship, Farm Profitability and Wildlife Habitat. Agroforestry in Action Guide # AF1001-2008. University of Missouri Center for Agroforestry. 20 pp.

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Reid, W., M. Coggeshall and H.E. Garrett. 2007. Growing Black Walnut for Nut Production. Agroforestry in Action Guide # AF1011-2007. University of Missouri Center for Agroforestry. 16 pp.

<http://www.centerforagroforestry.org/pubs/walnutNuts.pdf>

Bruhn, J. 2008. Growing Shiitake Mushrooms in an Agroforestry Practice. Agroforestry in Action Guide # AF1010-2008. University of Missouri Center for Agroforestry. 12 pp.

<http://www.centerforagroforestry.org/pubs/mushguide.pdf>

Walter, D. and R.A. Pierce. 2008. Integrating Agroforestry Practices for Wildlife Habitat. Action Guide # AF1012-2008. University of Missouri Center for Agroforestry. 16 pp.

<http://www.centerforagroforestry.org/pubs/wildlife.pdf>

#### Event Summary:

A total of 85 resource professionals participated in a single Stage 1 Training.

A total of 252 landowners and resource professionals participated in 10 additional trainings over 3 years.

The target audience consisted of State and Federal Government Agencies, University Extension, Non-Profit, and Professional Organizations. "Agroforestry Training for Professionals" was held on January 10-11, 2006, in Columbia, MO. Eighty-five resource professionals participated in this event using an updated and comprehensive agroforestry training manual. As a spin-off from this event, a "Windbreaks and Other Practices to Manage Livestock Odors" training was designed in conjunction with a resource professional who attended the January 2006 training, held in Paris, MO, July 25, 2006 with 38 attendees. Surveys before/after each event provided feedback as to participant demographics, knowledge gain, and workshop effectiveness.

Four agroforestry trainings were held in 2007. The "Windbreaks to Help Manage Livestock Odors", February 20, 2007 in Memphis, MO drew fifteen landowners and natural resource professionals. A "Forum on the Silvopasture Practice in Missouri", March 20, 2007, Cook Station, MO drew twenty-one landowners and natural resource professionals; the "Missouri Exchange Workshop" July 19, 2007, Columbia, MO. drew twenty-four specialty crop entrepreneurs; and a "Windbreak Workshop" July 25, 2007, New Franklin, MO. drew fourteen landowners and natural resource professionals. Surveys before/after events provided feedback as to knowledge gain and workshop effectiveness.

Three SARE supported agroforestry trainings were conducted in 2008. "Agroforestry Practices for Iowa: Enhancing resource professional's knowledge of agroforestry", held on June 26th, 2008, Fairfield, IA drew 29 landowners and natural resource professionals. The "Agroforestry Workshop", held on November 7th, 2008, Hardin, IL drew 29 landowners and natural resource professionals. An Agroforestry Workshop: "Reducing energy use and controlling odor", held on December 2nd, 2008, Neosho, MO drew 7 landowners and natural resource professionals. Surveys before/after events provided feedback as to knowledge gain and workshop effectiveness. The organization and content of all workshops were rated as either excellent or good.

Two SARE supported agroforestry trainings were conducted in LaCrosse, Wisconsin, March 27-28, 2009, in collaboration with the Southwest Badger RC&D. The first training on March 27, "Agroforestry Planning Workshop for Resource Professionals", drew 36 resource professionals. The second training, on March 28, "Opportunities in Agroforestry", drew 39 landowners.

#### Outcomes and impacts:

2006:

1) Agroforestry training manual available on the UMCA website, hard copies and CD version distributed to all County Extension Offices in Missouri (100+).

3) Eighty five natural resource professionals representing 7 different agencies and organizations attended the January 2006 training and an additional 38 individuals representing 9 different agencies and organizations attended the July 2006 Windbreak workshop.

3) Windbreak and Other Practices to Manage Livestock Odors workshop, July 2006, resulted in important changes to Missouri NRCS cost share programs. These changes include additional dollars for windbreaks through the EQIP program and an extended landowner sign-up period.

Center for Agroforestry personnel, working with Department of Agriculture Director,

Fred Ferrell and his staff, and NRCS State Conservationist, Roger Hanson and his staff, successfully created the opportunity for producers to qualify for EQIP windbreak dollars for odor abatement. The agreement calls for a significant cost share on large seedling planting stock and drip irrigation to assure fast growth of the trees. In addition to funding provided for the initial signup period which ended November 17, 2006, an additional \$1-million was set aside for a special signup during January, 2007 to create windbreaks around animal feeding operations, farmsteads and headquarters.

4) Three one-day agroforestry workshops were conducted across Kentucky in April, 2006 representing a collaborative with UK Extension.

5) Regional workshop spinoffs are underway including 2007 trainings in Illinois and Kansas.

2007:

A scheduled Forum on the Silvopasture Practice in Missouri, originally scheduled for Nov. 30, 2006 was rescheduled and held on March 20, 2007 due to bad weather. This workshop was held at the MU Wurdack Farm. In addition, a Windbreak Workshop was held at the MU HARC Farm on July 25, 2007. Two additional trainings were held, Windbreaks to Help Manage Livestock Odors was held on Tuesday, February 20, 2007 at the Scotland County Community Fitness Center, Memphis, Missouri and the Missouri Exchange Workshop, held on July 19, 2007 on the MU Campus, Columbia, MO.

1) The SARE PDP agroforestry trainings are having a direct impact on both research and future training activities at the Center for Agroforestry and in the State of Missouri. Building on training activities described in the 2006 Annual Report, mentioned last year:

(The Windbreak and Other Practices to Manage Livestock Odors workshop, July 2006, resulted in important changes to Missouri NRCS cost share programs. These changes included additional dollars for windbreaks through the EQIP program. In addition to funding provided for the initial signup period which ended November 17, 2006, an additional \$1-million was set aside for a special signup during January, 2007 to create windbreaks around animal feeding operations, farmsteads and headquarters).

In 2007, the Center for Agroforestry received a grant of \$111,000 from the Missouri Department of Agriculture to install a windbreak around a large confined animal feeding operation in northern Missouri. The role of the Center for Agroforestry is to test the science of windbreaks for odor control and to report whatever findings are revealed. Specific testing and quantification of air quality (downwind) changes due to the windbreak will be documented. In addition, proposals are planned (not yet funded) to study changes in water quality that may result from the knifing in of collected animal waste. All of this is taking place within 10 miles of the MU Greenley Research Center where the Center for Agroforestry has been conducting a long-term paired watershed study to determine the impacts of agroforestry and grass buffers on water quality. The windbreak for odor control location will serve as an excellent training and demonstration location once we have documented impacts over the next 3 years.

2) As a direct follow up to the above mentioned July 2006 workshop and in line with Stage 2 trainings, the Windbreaks to Help Manage Livestock Odor training (Memphis, MO. February 20, 2007) was another direct spinoff that was jointly organized, and co-hosted and co-taught by natural resource professionals who attended previously sponsored NCR-SARE agroforestry trainings. The training was jointly organized by Northeast Missouri RC&D, the Missouri NRCS and the Center for Agroforestry. Fifteen landowners and natural resource professionals attended. This is an issue of major

concern in Missouri and surrounding states and is drawing considerable interest at all levels, from landowners to natural resource professionals to state and federal agencies.

3) Because landowners practicing agroforestry must focus as much on the marketing of their specialty niche products as on the production, the Center for Agroforestry is working to support and help grow the market for locally produced niche products. Leveraging NCR-SARE agroforestry training support, the Center for Agroforestry hosted the Missouri Exchange Workshop (Columbia, MO., July 19, 2007) to bring together knowledgeable speakers who discussed opportunities for marketing niche and fresh agricultural products to restaurants, marketing of alternative products, native plants and the GrowNative! program and the rise of the local food movement in the United States. Participants and speakers also had the chance to exhibit their services and products. Participant Vera Gelder, of Walk-About Acres in Columbia, Mo., said she enjoyed the programs and the chance to chat with other producers. "As always, the presenters had some worthwhile information to share about marketing and where to find needed information," she said. "We learned about blogging and hoop-house tomatoes from a couple of the participants. The networking is invaluable!"

Statistics for the site have recorded between 300 and 600 unique visitors per month and between 6,000 and 22,000 hits per month. The site's exposure is broad, attracting visitors from all over the world. The web site was launched at the end of January 2007. Membership increased monthly. By the end of 2007, there were 303 members and 108 directory listings with membership increasing almost daily.

4) During 2007, regional agroforestry workshop spinoffs took place including trainings in Illinois and Kansas. Copies of the Agroforestry Training Manual CD were distributed to all participants at both trainings.

5) With the resources from an additional NCR-SARE RC&D Training Grant, and in joint collaboration with three regional RC&D's in Wisconsin, Iowa and SW Missouri, agroforestry workshops are in the planning stages for 2008.

6) Building on the momentum and knowledge gain from both agroforestry research and agroforestry training, the Center for Agroforestry will host the 11th North American Agroforestry Conference from May 30 - June 2, 2009. The theme of the conference is "Agroforestry Comes of Age: Putting Science into Practice". We hope to be able to collaborate with NCR-SARE and National SARE to secure funding to bring in landowners practicing agroforestry to serve as keynote speakers during the conference plenary sessions. Realizing that not that many landowners are comfortable speaking in front of groups, we will need to work together to locate those unusual individuals who are good speakers, active and respected in the field of agroforestry and who can represent different conference themes. However, if we can pull this off, it will strengthen the conference theme and set the right tone for the conference ("Putting Science into Practice") by putting landowners front and center in the 11th North American Agroforestry Conference.

2008:

The SARE PDP agroforestry trainings are having a direct impact on both research and future training activities at the Center for Agroforestry, in the State of Missouri and in bordering states. Building on training activities described in the 2007 Annual Report the following impacts and outcomes are noted:

1) Within the Missouri NRCS, momentum continues to build using EQIP cost share dollars to support windbreak establishment as a direct follow up to NCR-SARE funded July 2006 workshop. This is an issue of major concern in Missouri and surrounding states and is drawing considerable interest at all levels, from

landowners to natural resource professionals to state and federal agencies. At the April 10, 2008, NRCS Missouri State Technical Committee Meeting, Columbia, MO, Dwaine Gelnar, Assistant State Conservationist for Programs and Operations, indicated that 2007 EQIP had three special emphasis areas. Special attention was given to Windbreaks, Forestry and Comprehensive Nutrient Management Plans (CNMP's).

Mr. Gelnar also stated that \$1 million was set aside to fund Missouri's Windbreak sign up. All 120 applications were offered funding totaling more than \$407,000.00 and 27 miles of windbreak/shelterbelts will be established in Missouri due to this effort.

2) Leveraging the NCR-SARE agroforestry Missouri Exchange Workshop (Columbia, MO., July 19, 2007), which was created to support the local food movement and niche crop markets in Missouri, the Missouri Exchange website ([www.missouriexchange.com](http://www.missouriexchange.com)) continued to grow and develop. In 2008, statistics for the Missouri Exchange site have recorded between 700 and 2,000 unique visitors per month, continued increases over 2007. The site's exposure is broad, continuing to attract visitors from all over the world. The web site launched at the end of January 2007. By the end of 2008, there were 512 members (vs. 307 in 2007) and 154 directory listings (vs. 108 in 2007) with membership continuing to increase. New features were added to Missouri Exchange in 2008 including a member directory map, "Tip of the week" and "Did you know?" informational items

3) During 2008, additional regional agroforestry workshop spinoffs took place including one training in Illinois (February 7th, 2008 Putting Small Acreages to Work Quincy, IL) and two trainings in Minnesota (March 20th, 2008 Agroforestry Training-Workshop for Natural Resource Professionals Willmar, MN.; June 5th, 2008 Agroforestry Training/Workshop in Lanesboro, MN). Copies of the Agroforestry Training Manual CD were distributed to all participants at both trainings. Further, at the request of NCR-SARE, a presentation was given at the National Small Farm Trade Show, November 8, 2008, Boone County, MO.

4) With the resources from an additional NCR-SARE RC&D Training Grant, and in joint collaboration with the Southwest Badger Wisconsin RC&D, Wisconsin, an agroforestry workshop is in the planning stages for March, 2009.

5) Building on the momentum and knowledge gain from both agroforestry research and training, the Center for Agroforestry will host the 11th North American Agroforestry Conference (NAAC) from May 31 - June 3, 2009. The theme of the conference is "Agroforestry Comes of Age: Putting Science into Practice". We were able to secure a \$2,000 SARE Outreach Education grant and have recruited two landowners practicing agroforestry to serve as keynote speakers during the conference plenary sessions. In addition, the \$2,000 SARE Outreach Education grant is also supporting two additional landowners who will be the speakers during the conference "farmer show and tell" session. We have been fortunate enough to locate individuals who are good speakers, active and respected in the field of agroforestry, and who will represent different conference themes. In addition to conference presentations, SARE supported landowners will be featured in both the pre-, within-, and post-conference field tours which include Eridu Farms elderberry plantings, Shepherd Farms pecan/buffalo/eastern gama grass operation and the Ozark Forest Mushrooms operation. The \$2,000 SARE Outreach Education grant has served a key role in strengthening the conference theme and setting the right tone for the conference ("Putting Science into Practice") by putting landowners front and center in the 11th North American Agroforestry Conference.

## Project Outcomes

### Project outcomes:

11 agroforestry training workshops were conducted from Jan. 2006 - March 2009.

A total of 85 resource professionals participated in a single Stage 1 Training.

A total of 252 landowners and resource professionals participated in 10 additional trainings over 3 years.

A new agroforestry training manual was created and made available to all workshop participants.

As a direct follow up to NCR-SARE funded July 2006 workshop, \$1 million was set aside by the MO NRCS to fund Missouri's Windbreak sign up. All 120 applications to this program were offered funding totaling more than \$407,000. 27 miles of windbreak / shelterbelts will be established in Missouri due to this effort.

Between January 2006 and March 2009, agroforestry trainings, supported directly and indirectly by NCR-SARE took place throughout the Midwest including: Missouri, Kansas, Iowa, Minnesota, Wisconsin, Illinois and Kentucky.

### Recommendations:

#### Potential Contributions

The SARE PDP provided an opportunity to cross state boundaries and address resource constraints that can be positively impacted through the increased deployment of agroforestry practices.

These agroforestry practices offer opportunities to conserve natural resources and improve wildlife habitat while creating the potential for new economic enterprises suited to the family farm.

Further, it is anticipated that spin-off training programs that include agroforestry topics will be developed throughout the NCR-SARE region.

A comprehensive agroforestry training manual is now in the hands of a few hundred resource professionals and landowners. If widely used, increased adoption of agroforestry practices can be anticipated.

For example, the NCR-SARE Agroforestry Training PDP generated particularly strong interest in windbreaks in Missouri and resulted in a large increase in NRCS cost share support that directly resulted in increased landowner adoption of the windbreak practice.

#### Future Recommendations

According to workshop participants, demonstrating successful application of agroforestry practices, additional agroforestry training, sources of financial assistance, more information about market and economic benefits, and, critically, finding champions in agroforestry implementation are all necessary to increase landowners' awareness, acceptance and adoption of agroforestry.

Additional research, in collaboration with landowners, that details both specific market opportunities and short-, medium-, and long-term financial and environmental benefits from the adoption of agroforestry enterprises is essential.

Coupled with the detailed research information that will be developed (see above paragraph), is a need to establish an active program of direct farmer-to-farmer

(peer-to-peer outreach activities. Based on the small-scale success of the Farmlink program in Nebraska, a greatly expanded peer-to-peer agroforestry enterprise project is needed to overcome landowner resistance to agroforestry adoption.

Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture or SARE.



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