2009 Annual State Report to the Southern Region SARE Program

DATE:	January 27, 2010
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CURRENT REPORTING PERIOD:	January 2009 to December 2009
SSARE FUNDING AMOUNT:	$ 10,000

Tuskegee

Southern Region SARE Professional Development Program
2009 Photo Identification Form for SARE State Activities
(make as many copies of this blank form as needed before listing photos)

Photo #
Photographer's name:
Date:
Location:
Subject and activity:
Photo #
Photographer's name:
Date:
Location:
Subject and activity:

NONE SUBMITTED

Tuskegee

II. Abstract

Provide 100 words maximum.

The goal of this plan was to establish and support a diverse, active, and effective Advisory Committee for Sustainable Agriculture in the state of Alabama. The Advisory Committee (formation is in progress) will comprise members of the agricultural, extension, governmental, business, educational, financial, and environmental sectors. Also, an inventory of state sustainable agriculture resources and activities is being taken, and an online presence was established and is being constructed. S-SARE programs were promoted at the Professional Agriculture Workers Conference in December. Also, producers were sponsored for the Southern Sustainable Agriculture Working Group Conference in 2009 and 2010.

III. 3-Page Report (This entire report will be posted on our web site soon after you submit it)

Your report should include the following information regarding your state's implementation plan, based on activities that took place during the past year.

1. Briefly describe how your training efforts have addressed objectives in your SARE state plan for sustainable agriculture.
2. Provide bullet statements of training outcomes.
3. Briefly describe expectations for future sustainable agriculture training events.

1. Training Efforts in the State Plan

There were three objectives in our plan of work: (1) Establish an Advisory Committee; (2) Conduct a Sustainable Agriculture Inventory, and; (3) Create a website for the Advisory Committee. The Advisory Committee is in formation and will have its first meeting this spring 2010. The SSAWG Conference aided in the effort to identify producers for involvement in this process. Extension Agents have also been informed of the effort as well. The Inventory will be completed before June, using a basis of other similar agricultural inventories done in the state. There has been a discussion with our economics faculty on the best methods. The website has been established, www.alabamasare.com. SARE awardees in the state have been contacted for images and information on results. The gathering of this information is ongoing. The efforts that have taken place have been mainly promotion of the program and the current plan to professionals, producers and extension agents.

2. Training Outcomes

Thirty (30) producers and professionals were informed about SARE funding opportunities at the Professional Agricultural Workers Conference.

- Several attendees contacted this State Coordinator later about the presentation

Twenty (20) extension agents were informed about SARE funding opportunities at an extension conference.

- A number of agents were involved in planning for grant submissions

Producers were sponsored for the Southern Sustainable Agriculture Working Group Conference, eighteen (18) in 2009 and twenty (20) in 2010. The survey results are being tabulated for the outcomes. However, those producers who have attended the conference have been involved in county level efforts with sustainable agriculture (though this has not been rigorously documented).

3. Expectations

Tuskegee

With the finalization of the Advisory Committee, future sustainable agriculture training events will be set for 2010-2011. It is expected that at least three programs will be held for sustainable agriculture training across the state.

2009 Alabama A&M University Annual Report to the Southern Region SARE
Water Conservation, Rainwater Collection and Irrigation

DATE:	January 26, 2010
STATE SUBCONTRACT NUMBER:	RE675-155/4690358 STATE PLAN 09
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CURRENT REPORTING PERIOD:	January 2009 to December 2009
SSARE FUNDING AMOUNT:	$10,000

2009 Alabama A&M University Annual Report to the Southern Region SARE
Water Conservation, Rainwater Collection and Irrigation

Abstract: An Extension Team Project was developed and combined with other training efforts. Thirty trainers attended an online. Participants increased knowledge by 28%. Thus far, 519 clientele attended 19 workshops. Participants at seven of the workshops indicated an overall knowledge gain of 30%. One survey indicated that out of 42 participants 40% already installed rainwater catchment systems and the primary use will be for irrigation. One on-farm demonstration will allow trainers to receive hands-on installation instructions. Leveraged funds will be used to install on-farm rainwater collection demonstrations. Agents will be able to hold training workshops at these demonstration sites.

Alabama A&M

2009 Alabama A&M University Annual Report to the Southern Region SARE
Water Conservation, Rainwater Collection and Irrigation

1. **Training**. The training objective of the proposed project, *Water Conservation, Rainwater Collection and Irrigation,* is to increase knowledge of Regional Extension Agents, County Extension Agents, Urban Regional Extension Agents, and other Agricultural Trainers/Educators about the benefits and costs of water catchment.

In 2009, thirty agents and specialists attended an online workshop addressing rainwater collection, filtration, cistern maintenance, catchment construction and how to evaluate the impacts of rainwater collection on water conservation, runoff and pollution. This was a joint workshop with the University of Georgia and North Carolina State University. Dr. Cathy Sabota at Alabama A&M University (AAMU) joined with Ken Tilt, Eve Brantley and Kerry Smith at Auburn University and Mitch Woodward at North Carolina State University, to leverage the SSARE funds in combined training efforts to reach more agents and provide a broader scope of water conservation training. The agents associated with Auburn University, as well as the AAMU agents, were also taught raingarden construction, low water requirement plant use, watershed management and runoff issues related to pollution, chemicals and stormwater.

Participants were surveyed after the workshop, using Survey Monkey to determine knowledge gained (Table 1).

- Twenty-two participants responded to the survey. Overall, participants increased knowledge by 28%.
- In skill specific topics related to catchment systems, their knowledge improved by 33%.
- Future programs will provide more detailed knowledge of construction and maintenance of on-farm water collection systems for irrigation.

Table 1. Water Catchment Knowledge questions	**Average knowledge gain (%)**
• Impacts of runoff on streams	13%
• Natural versus impervious ground runoff	18%
• Water quality impacts of urbanization	17%
• How to size a rain barrel	36%
• Where to locate a rain barrel	28%
• Maintenance of a rain barrel	34%
• Determining the right pump for a rain barrel or water collection tank	30%
• Calculation of how much water can be collected from a catchment surface	35%
• The use and construction of a first flush diverter	36%
• Installation/Construction of a complete rainwater collection system.	32%
Overall Knowledge Gain	**28%**

After both phases of the training were completed, agents, specialists and other trainees were to conduct 20 workshops to increase clientele knowledge, awareness, promote adoption or establishment of catchment systems and increase income.

Trainers are to measure change in participant behavior as a result of the training—awareness, adoption, and impacts of adoption. However, even before the second phase of the training, agents began to establish training programs.

- During the first six months of the project, 519 clientele attended 19 workshops, field days and demonstrations conducted by agents and specialists.
- Two agents have trained 22 Master Gardeners, who have already conducted four additional workshops to train 71 clientele on water conservation and management.
- There were 239 pre and post training evaluation forms distributed to participants at seven of the workshops. The overall knowledge gain of 183 of the participants was 30%.

One follow-up one-page survey was placed on Survey Monkey and 100 participants were asked to complete the survey.

- There was a 42% response rate.
- Rainwater catchment systems have already been installed by 40% of the respondents
- A total of 96% still plan to install a system, if they have not already done so.
- Generally, respondents indicated they delayed installation due to heavy and continuous rainfall Alabama received in 2009.
- The primary use of the water collected will be for irrigation, according to 71% of the respondents.

2. Impact on Sustainable Agriculture

Increased efficiency of commercial crop irrigation has reduced farm water use, despite an increase in irrigated acreage. However, withdrawals for public supply and domestic use have increased steadily since estimates began. Enormous population increases are predicted for the future, creating an even greater strain on water resources and quality.

To maintain a sustainable crop production system in the United States, conservation must begin at home. Americans use 117 gallons a day more than they need. Convincing the average American to reduce water use by 90% seems impractical; however, a reduction of 10% to 25% is possible. Education, incentive and demonstration programs in Texas, California and other states have shown that a 7.5% to 20% reduction in water use is, in fact, realistic and necessary.

Rainwater harvesting is one small part of the solution for non-point source pollution in urban areas, but the potential impact is significant. The trend of rising water and sewer rates, has and will continue to cause interest in rainwater harvesting from an economic and environmental standpoint.

Farmers are not excluded from our conservation programs. More local production should occur in states, such as Alabama, where 50 inches per year of rainfall and a variety of soils and climate can produce most crops. Although Alabama's summers are generally drier than the rest of the year, sustainable cropping, conservation and storage of rainfall and runoff, use of water holding organic compost and other interventions will reduce the need for ground and surface water.

Sustainable agriculture outcomes:

- 3 on-farm rainwater collection demonstrations have been established.
- 1 on-farm demonstration is being installed for the on-site training workshop
- 30 trainers will receive instruction on how to install a rainwater collection system, make pump choices, construct first flush diverters, site the tank, size the tank, choose irrigation type, and connect it all together.
- 30 trainees will learn how to measure the impacts of the on-farm installation of rainwater collection systems.
- A training notebook with PowerPoint presentations, oral presentations, and detailed training information was developed for the February 2010 workshop.
- Dr. Sabota currently participates in an Extension Based Facebook group discussion for rainwater collection.

3. Future Expectations

A hands-on two day workshop is scheduled for February 1 and 2, 2010. Thirty agents, specialists and Master Gardeners will attend workshops and assist with the construction of an on-farm rainwater collection irrigation system for fruits and vegetables. Another farm system will be built for a high tunnel to reduce runoff and provide a source of irrigation water for the high tunnel plants. This farm system serves as a learning tool for participants to experience the installation of first flush diverters, water sensors, pumps, pipe sizing, overflow lines, filtration, tank sizing, tank siting, plumbing, guttering and tank selection. As well, the farm will become a demonstration site for growers in the region and especially producers that sell their produce at the Moulton Farmers' Market. Educational programs, conducted by county agents and specialists, will be held at Larry LouAllen's Farm after he is in production this summer or early fall.

Funds leveraged from the combined efforts of all participants will allow us to install other on-farm rainwater collection demonstrations in other areas of the state. Agents will be able to hold field days and training workshops at these demonstration sites.

The data to be collected from this project will include:

Farmers that install demonstrations will be surveyed to determine:

- Expansion of the demonstration
- Gallons of water saved (community or well water)
- Reduction in runoff
- Reduced pollution
- Number of tours and visitors coming to see the system
- Names and contact information of visitors, tour participants (a follow-up survey will be conducted to determine interest, need for information, and adoption)
- Utility bills from 2007-2010 will be compared to determine decrease in community water consumption.
- Producer input on usefulness, solution to water resource issues, training effectiveness, and likelihood of expansion in the future.
- How the catchment system changed their sustainability of production.

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A website will be developed dedicated to training agents and farmers about water conservation and rainwater collection.