

## FLORIDA 2009 Annual State Report to the Southern Region SARE Program

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## Final Report Florida Sustainable Agriculture Model State Program -- 2009

### **Abstract:**

Activities in 2009 focused on extending collaboration among UF/FAMU researchers and Extension personnel, and particularly on incorporating sustainable agriculture into on-going programs that have not traditionally interacted strongly with SARE. Key outcomes included significant impacts of training programs measured by pre- and post-tests of knowledge, identification of ways to improve programming by county faculty, and success stories of implementing sustainable practices. Research and outreach teams expanded to include faculty members from extension focus teams and disciplines not traditionally involved with sustainable agriculture. Faculty members initiated new programs at the local and state level and took leadership for developing a sustainable agriculture working group in the National Association of County Agricultural Agents.

**Objective 1 (from 2009/10 Plan of Work):** County Extension faculty and other local service providers will use the resources provided through the SARE program in their outreach programs and activities.

Approach & Activities: We expanded the list serve, which currently has 228 members. Initially treated as a bi-monthly newsletter, we have altered our approach because we wanted to deliver material and information in a more timely fashion. We therefore changed to an "on-demand" list-serve. We normally send two or three notices each week. We maintained the website. Collaborating county and state faculty indicated that they have problems assessing or evaluating the impact of their programmatic activities. We therefore conducted a statewide training session, in collaboration with the Extension Professional Association of Florida, about how to conduct efficient, effective evaluations, especially of training programs. One of the extension focus teams that we work with organized a statewide small farm conference. We developed a pre-conference training program for UF/FAMU faculty where faculty could participate in a roundtable discussion with Dr. John Ikerd. Prior to this program, all participants read Dr. Ikerd's book "Small Farms Are Real Farms" as a basis for this discussion, which explored how we can make small farms more central to our extension programming. SARE sponsored this program and was recognized as a gold sponsor.

### Outcomes:

- Evaluation of Roundtable Discussion with Dr. John Ikerd. (1) We conducted a Mann-Whitney U Test (non-parametric test for ordinal data) for two paired samples to evaluate the impact of the roundtable on participants' perceptions of the importance of small farmers as a clientele group for extension. The results indicate a significant change in pre- and post-test scores significant at a p-value of 0.05. (2) Post-test results of three questions focusing on participants' confidence that they can apply what they learned in the roundtable show an average score for all participants of 4.0 on a scale of 1 to 5. (3) Post-test results of two questions focusing on participants' understanding of the challenges and opportunities of working with small farmers show an average score for all participants of 4.0 on a scale of 1 to 5. (4) The post-roundtable evaluation also provided time for participants to think about how to apply what they learned from the discussion. Each participant provided a list of two or three programmatic applications they will make in their extension programs as a result of the training. Participant responses varied greatly. Examples of programmatic applications include how to increase urban food production, market development, and develop networking opportunities for small farmers.
- Evaluation of Evaluation Training. 18 participants completed a pre and post test of change in knowledge at the evaluation training. The mean score for the pre-test was 7.58 and for the post-test was 10.74. After testing for normality a t-test was conducted to see if there was a significant change in knowledge. The difference in knowledge between pre and post test was significant with  $p < 0.001$ .

- We monitored usage of the web site. The web site was consulted 1,157,996 times.
- We took a randomly selected sample of list serve members, to conduct phone interviews. All of the respondents indicated that they are aware of the emails sent through the list serve, and that they either usually or almost always read the emails. All of them said that they are very interested in receiving information about grant and scholarship opportunities. The respondents also indicated that they share the information that they receive with others through their own newsletters and through email.

**Objective 2:** Increased use of SARE resources, including application for SARE grants and other appropriate resources, by University of Florida and Florida A&M faculty members.

Approach & Activities: Our emphasis in 2009 was to work with researchers from a number of disciplines to develop research, teaching and outreach projects with a strong sustainable agriculture component. Our objective was to expand the disciplinary breadth of faculty members, collaborating institutions, and students who incorporate sustainable agriculture into their professional activities. We worked closely with four multi-disciplinary teams to develop grant proposals. At UF, we expanded our collaboration to include faculty members in the College of Liberal Arts and Sciences, with a focus on value systems associated with dietary preferences. At FAMU, we conducted a grant-writing workshop, with Drs. Hill and Meyer, for faculty and students.

Outcomes:

- Five research and/or outreach proposals were submitted, some with SARE and some with other federal programs. Two projects have been funded and three have been invited to submit full proposals. These projects cover diverse topics, including enhancing undergraduate education in sustainable agriculture, cover crop alternatives for organic vegetable production, comparison of the quality of organic and conventionally produced crops, and mineralization of organic soil amendments. Additional grant proposals are in the process of development.
- We have developed a major collaborative effort with a statewide training program using the “Annie’s Project” curriculum, supplemented by additional information emphasizing sustainable agriculture. This program will be initiated in three counties in January 2010.

**Objective 3:** Increased collaboration between research and Extension personnel at the University of Florida and Florida A&M University with individuals in other organizations and agencies involved with sustainable agriculture.

Approach & Activities: An obstacle to increased collaboration is the difficulties encountered in developing and maintaining multi-disciplinary teams. Teams are usually comprised of individuals with shared interests and a diversity of backgrounds and experience. However, team **management** is a problem. Collaborators identified the difficulties that working in multi-disciplinary teams poses as a major problem to more robust collaboration. We therefore developed and delivered a training program that provided faculty with contemporary approaches to team management, incorporating recent findings about “emotional team intelligence” and team management skills and styles. We also focused on enhancing collaboration between our two universities and the farm community, particularly those farmers who have adopted sustainable agricultural practices. We emphasized developing local food supply systems for university-wide food services. We made initial progress and will continue to emphasize this effort in 2010-11. We also initiated a strong collaboration with county planners and commissioners in Martin County, FL. This collaboration serves as a model for creating linkages with urban counties where agriculture has been a very low priority for the past 15 years, and development a high priority. New hoop houses were established at FAMU for research and demonstration

purposes, focusing on sustainable techniques and technologies to extend the growing season. This is a critical component to increasing farm profitability in North Central Florida.

#### Outcomes:

- We facilitated interactions between Aramark Corp. (UF food service contractor) and the Florida Farm Bureau to identify Florida farmers who can supply food products.
- Local foods are emphasized in UF dining halls, including, for example, electronic displays providing a succinct description of the product and the farmer who produces it.
- County Commissioners in Martin County adopted sustainable agriculture as a key objective for county development over the next decade. The Commissioners hosted, with extension, a conference to address opportunities for alternative farm enterprises, including urban farming. Nearly 200 residents of Martin and surrounding counties attended. SARE provided the keynote speaker for this conference. The SARE state coordinator provided a taped interview for the local TV station, which aired county-wide on multiple dates.
- We conducted demonstrations and field days at FAMU for external audiences, but also focusing on faculty at students at the university. These training programs focused on alternative high-value crops and enterprises for small and family farms.
- **Down to Earth Farm** -- Bryan Lapinski, owner of Down to Earth Farm and graduate of the Department of Family, Youth & Community Sciences at the University of Florida, with an emphasis on sustainable community development. Mr. Lapinski started a small farm near Jacksonville, FL. His farm is a CSA. The Lapinskis have developed strong ties to local community organizations, including the school district.. Their farm was featured in *Southern Living* as an example of the “new urban farm” that focuses on community service. Brian and his family use a wide variety of sustainable farming practices. This is an excerpt from their November 2009 newsletter giving one example of how they used material from an ATTRA publication. “I've mentioned the techniques that we have tried to combat cutworm, especially our placing hundreds and hundreds of cardboard collars around our little plants to create a physical barrier... Companion planting is the concept of planting two or more plant types in close proximity in order to gain a benefit from the plants' interaction such as reduced pest pressure and/or increased plant vigor. We have benefited greatly from interplanting herbs and onions throughout our veggie crop this fall.”

**Objective 4:** Inclusion of information and resources about sustainable agriculture in the training programs and outreach activities of the state's extension focus teams.

Approach & Activities: We continued to work closely with the extension focus teams in the areas of small farms and agriculture and natural resources. We have enhanced our collaboration, initiated through the 2008 enhancement grant, with the Expanded Food & Nutrition Education Program. In 2009, we developed working relationships with the Sustainable Community Development focus team and the Family & Consumer Science focus team.

#### Outcomes:

- The educational materials produced under the 2008 enhancement grant are widely distributed to county faculty and are now available to all county faculty as electronic publications. The publications form a special series of extension educational materials that tie together dietary recommendations and the social and economic benefits of purchasing locally grown products. We anticipate adding additional materials to this series next year.
- We have developed an extension working group that focuses on sustainable community development. One faculty position has been filled to backstop this effort and a second faculty position is currently being filled.
- We have developed a publication series electronically available to all Extension faculty.

- We have developed a training program in sustainable development that will be delivered in 2010.
- **Miami-Dade County Nurseries Implement Sustainable Production Practices.** Teresa Olczyk, Miami-Dade County Extension. Teresa has participated in many SARE-sponsored programs. She has helped develop training materials and worked closely with the State Coordinators for over five years. Her work with the nursery industry is a good example of how to apply the principles of sustainability to mainstream agricultural industry. “The Miami Dade County nursery industry is the largest in the State of Florida and the second largest in the nation with 1,500 certified nurseries growing on 13,000 acres. The industry faces many challenges due to the recent downturn in the economy, constant introduction of invasive pests, irrigation restrictions and increasing production costs. With the growing trend in our society emphasizing the development of sustainability in businesses and communities, many Miami-Dade County nursery growers agree that survival of the industry will depend on implementation of more sustainable production practices. This will allow an increase of the economic viability of the industry and at the same time will reduce the nurseries impact on the environment. The extension agent works daily with nursery owners and workers to introduce sustainable practices by providing educational workshops, seminars and technical assistance to improve nutrient and water management practices, implementation of Integrated Pest Management and other topics. From January 2008 thru August 2009 more than 600 clients participated in these programs and several nurseries implemented one or more sustainable practices presented by the extension agent. Some of the examples include the measurement of Electric Conductivity (EC) of a substrate leachate to adjust fertilizer and irrigation rates, eliminate nutrient leaching from containers and improve quality of plants by one of the largest nurseries in the county. By implementing the use of the EC meter, this nursery can save about 25-30% of fertilizer and water. Several other growers implemented a quicker way to reduce costs with the advantage of a “green” appeal and sustainability by recycling potting medium from the unsold plants and using it instead of peat after composting as a component of potting mix for new plants. Two nurseries implemented the use of soil moisture sensors (tensiometers) for scheduling irrigation. Many growers are reusing plastic nursery containers and recycling plastic from greenhouses and irrigation systems. Another example of a successful extension program helping to move the nursery industry towards sustainability are frequent trainings of “nursery scouts” and teaching them proper scouting and plant sampling techniques. Early detection and proper diagnosis of pests eliminates the unnecessary applications of pesticides, saves growers money and reduces the negative impact on the environment. Several field and container nurseries successfully established regular scouting programs and are reporting decreased need for pesticide applications. Miami-Dade County nursery growers are truly undertaking a major effort to incorporate environmentally sustainable growing practices into their businesses. The long-term goal for this industry is to enhance the environmental sustainability of nursery production while maintaining economic sustainability.”

**Objective 5:** Targeted professional development for County Extension faculty and other local service providers to enhance knowledge of SARE and sustainable agriculture.

Approach & Activities: We sought out new faculty to participate in in-service trainings, broadened the venue of topics covered in SARE-funded training, and we more systematically sought out a broader range of training opportunities. We revised our selection process for farmer scholarship recipients for the SSAWG meeting to be able to identify farmer leaders as well as minority and limited resource farmers (process approved by Advisory Council).

Outcome:

- Three state extension faculty associations have each taken responsibility for awarding one educational scholarship (funded in part by SARE), competitively awarded, to a member to attend a regional or national professional development program directly related to sustainable living.

- Two Florida SARE Advisory Council members, one extension faculty person and SARE Coordinator Cassell Gardner attended the National Small Farm Conference. Dr. Gardner gave two presentations at the conference and one of the SARE Advisory Council members gave a workshop on development of educational materials, using an example of materials developed under a SARE grant.
- **Teaching Best Management Practices to Farmers in Bradford County.** Jim Devalerio, Bradford County and Bob Hochmuth, NFREC/Suwannee Valley. Jim Devalerio received a scholarship from Florida SARE for professional development. Bob Hochmuth has worked with the SARE program in many capacities over the past five years. Their work is paying dividends in rural communities in North Central Florida “Bradford County Extension and NFREC/Suwannee Valley worked with a Bradford County farmer to improve his production. Extension worked with Mr. Franklin and his neighbors. They were shown the importance of using Best Management Practices (BMPs) and the advantages of using drip irrigation to manage water and fertilizer for crop production. Although he has farmed for more than 50 years, this was his first exposure to the Extension Service. After realizing a drastic yield reduction from his drought ridden strawberry crop, the Mr. Franklin agreed to trying drip irrigation. Agents assisted Mr. Franklin over the entire cropping cycle by showing him and his neighbors how to install drip irrigation and use a fertilizer injection system. After the crop was established, weekly visits were made to demonstrate fertilizer management based on soil, sap and tissue testing. These visits provided the opportunity to teach the importance of recording fertilizer and irrigation events. Additional opportunities to teach pest scouting techniques and the value of keeping cost, yield and pesticide application records were also realized. Towards the end of the crop cycle workshops targeting local and regional farmers were conducted. According to his own estimates, Mr. Franklin used half of the water and fertilizer that he would normally use to produce a crop. As a result of this effort, five other area farmers plan to work with extension and convert to using drip irrigation.”
- **Controlling Pest Mole Crickets in Pastures with Parasitic Wasps.** Ed Jennings, Regional Livestock Agent. Ed received a Florida SARE scholarship for professional development in sustainable agriculture in 2009. His work with livestock producers shows the impacts that a focus on sustainability has achieved in West Central Florida. “In the four county regions of Citrus, Hernando, Pasco, and Sumter there are approximately 65,000 beef brood cows located on over 600 ranches. Over 200,000 acres of pastureland is managed to support this portion of West Central Florida’s livestock industry. One of the biggest threats to forage and pasture productivity in this region of Florida is the damage caused by invasive pest mole crickets. Mole crickets are a non-native, ground dwelling insect that originated from South America. Bahiagrass, Central Florida’s primary pasture grass, also originated from South America and is relished as a food source by mole crickets. Unlike South America, Florida contains no natural enemies of the mole cricket to keep their population in check as would occur in their native environment. It has been estimated that mole cricket damage in pastures can reduce stocking rates of beef cattle by 50% or more. As one rancher put it, ‘I have to grow grass for two grazers, my cows and mole crickets.’ Extension faculty has helped residents establish populations of the parasitic wasp *Larra bicolor* to control these invasive pests. Field research on Florida Ranches indicate that planting nectar sources like the plant *Spermacose verticillata* attracts the wasps to areas and aids in predation on the pest. *S. verticillata* is a plant that is native to the West Indies and is now naturalized in Florida since the 1960’s. The plant is not toxic or invasive. *Larra* wasp females can sting but are not quick to do so. Even when stung, the effects are mild compared to other wasps and this wasp is harmless to all plants and animals except pest mole crickets. Through a cooperative arrangement with a Florida plant nursery, *Spermacose verticillata* plants are now being propagated and sold to residents to help provide a nectar source and to attract adult *Larra bicolor* to areas where mole crickets are causing damage. On ranch demonstrations are being established to teach Florida ranchers how to use this natural enemy of the mole cricket and reduce the pest load on their pastures and hayfields.”

- One Florida extension professional has initiated a sustainable agriculture working group in the National Association of County Agricultural Agents.
- 11 scholarship recipients were selected for the 2010 SSAWG conference (18 applications) (evaluation not yet available). All recipients were either mentor farmers, limited resource or minority farmers and most fell into more than one category. The scholarship application process required an essay response explaining how the SSAWG recipients reach out to other farmers and the community.

**Objective 6:** Maintain active input from Advisory Council to continue enhancing statewide SARE efforts.

Approach & Activities: The Advisory Council met regularly and reviewed all SARE activities.

Outcomes:

- Council members served as advisors for SARE-funded research and outreach projects.
- All members participated in development of instrument to select SSAWG scholarship recipients.
- Two council members participated in regional SARE activities.
- Council members reviewed county faculty scholarship recipients for sustainable agriculture awards given at the Florida Small Farm Conference.
- **Rabbits, Etc.**, Mike & Dee Blaha, owners. Mike and Dee are members of the Florida SARE Advisory Council. They have worked with SARE for several years, and in the process have become mentors to many farmers, especially new farmers, and strong leaders in Florida's agricultural community. "We have been assisted by some wonderful folks in our extension program. Bill Hill, as our county extension agent, first reached out to us and introduced us to the many facets of the extension programs. Currently, Stacey Strickland keeps us under his wing. Dr. Mickie Swisher at the University of Florida, gave me the courage (and LOTS of pointers) to write and apply for a USDA grant in 2000. I found the application and bookkeeping much simpler than expected. The grant enabled the development of a multi-herd tracking program. We manage our rabbits, sheep, cows and pigs with this program and can easily not only track but also determine if the animal is productive. The program can easily be applied for many different animals and will, ironically, 10 years later, assist us in complying with some of the newest regulations requiring tracking our stock. Nothing on our farm goes to waste! A NRCS grant and Dan Oliver's help enabled us to implement a compost system that includes not only a bin, but also a harvesting unit with a conveyer belt. There are 234 handfuls of composted manure in every wheel barrel! It used to take three people to process the worms and now the job can be accomplished by one person. This eco and time saver enabled us to work on other projects, like developing our web site and CSA program that we have long talked about, but did not have the time to get off the ground. Now, we are full cycle. Instead of burying the offal and dead animals, we are stewards of the ground and water tables and have an income producing result. We compost the carcasses to feed the worms that we introduced under the rabbit cages originally for fly control. We harvest the worm beds for castings to plant and fertilize organic vegetables in our efficient space and water saving vertical garden. We then sell our vegetables at our market stand and nurture our CSA members. We also ship worms globally to other composting customers creating a very positive ripple in our 'green world.'"

## Southern Region SARE Professional Development Program

### 2009 Photo Identification Form for SARE State Activities

<b>Photo # 1</b>
Photographer's name: Tyler Jones (UF/IFAS photographer)
Date: July 31, 2009
Location: Kissimmee, FL
State and county faculty members at UF and FAMU have a spirited roundtable discussion with Dr. John Ikerd focusing on key concepts in his book "Small Farms Are Real Farms." Over 30 faculty members participated in this SARE-funded roundtable.
<b>Photo # 2</b>
Photographer's name: Bob Hochmuth
Date: Sept. 9, 2009
Location: Bradford Co., FL
Subject and activity: Extension faculty worked closely with Bradford County farmer to implement sustainable practices. As a result, other farmers are now adopting the same practices on their farms.

**Photo # 3**

Photographer's name: Teresa Olczyk

Date: Sept. 29, 2009

Location: Miami-Dade County, FL

Subject and activity: Sustainability has become a watchword for nursery operators in South Florida. These operators practice identifying insects at an extension training program focusing on sustainable practices.





