

2009 SPECIALTY CROP BLOCK GRANT PROGRAM

FINAL REPORT

ALABAMA DEPARTMENT OF
AGRICULTURE & INDUSTRIES

December 20, 2012

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2009 SCBGP – ALABAMA PROJECTS:

Please allow this document to serve as the 2009 SCBGP Final Report. Below please find a listing of approved projects for the Alabama Department of Agriculture & Industries.

Chilton County Innovation Center
Carvers Market(School Fundraising Market)
Ready For College
Sylacauga Grows
Union Town Beginning Farmer Project
Brown's Farm Training and Outreach
Fairfield Five a Day
IPM-CORE Auburn University
Alabama Plant Evaluation Program Auburn Dept. Of Horticulture
Sankofa Youth Agricultural Project (Federation Of Southern Cooperatives)
Promotional Materials Direct Marketing (ASAN)
MSMA Auburn University
Women In Ag And Youth
Commercial Market Dev. Satsuma's (South Al. Fruit And Vegetable Growers Association)
Chattahoochee Trading Company Blueberry Production
Diversity Community Garden
Binon Farm
Taste of Citrus

Project #1

Chilton Food Innovation Center (CFIC)

Project Summary

The mission of the Chilton Food Innovation Center (CFIC) is to provide a Food and Drug Administration (FDA) and Alabama Department of Public Health approved facility and certified personnel for the development and production of value-added food products thus allowing specialty crop producers to be more competitive. The CFIC will have a positive economic impact for specialty crops producers in the area through preparing higher margin products and extending sales beyond the summer season. A preliminary survey was conducted and of 100 producers interviewed, 30% indicated interest in using this type of facility.

Few large producers and no small producers can afford their own FDA approved facility. Local producers have to either go to Florence, AL or out of state (e.g. GA or TN). Similarly, retailers in the area have to sell product grown and packaged in another state due to lack of local alternatives. As a result, producers and retailers of fruits and vegetables had no alternative but to discard a portion of their produce which could be converted to value-added food products with the availability of a suitable facility.

The objectives of this project were to:

- Provide large and small producers with a way to create value-added products.
- Serve to produce sufficient food product to test market ideas and product viability with the goal of eventually establishing their own facility and producing product on a larger scale.
- Assist entrepreneurs with the development of innovative processes, products and packaging.
- Improve farm income and financial stability by creating unique and valuable products.

This project built on the previous SCBGP. The previous grant project organized key people to form what would later be the CFIC Board of Directors. The background information was collected in the form of a survey among local producers and interviewing with a director of the only other facility of its kind in Alabama.

Project Approach

The Chilton County Board of Education granted CFIC the use of a former middle school cafeteria kitchen. Some modifications to the inside of the building were made to open up two rooms into one and in anticipation of electrical and plumbing needs. Some work was done on the

outside of the building to accommodate fruit washing equipment which was refurbished and installed by the Chilton Research and Extension Center. A gas meter was also installed. Landscaping was performed to correct a drain-off problem.

With help from Auburn University, ACES, Chilton County Board of Education and local specialty crop producers we secured some basic kitchen equipment. A director was hired to assist with all aspects of CFIC Start-up. With the development of the floor plan, the condensation hoods were able to be installed. Other activities included researching and obtaining insurance and the purchase of basic kitchen supplies. The purchase of additional kitchen supplies and the condensation hoods was made possible by a grant from the Cawaco RC&D Council.

The flooring has been repaired and although it has been approved, it will need to be replaced soon. The installation of half of the equipment has been accomplished, but there remains some repair work on the other half. This has been a problem during the past two years. The equipment that was given to us has been costly to repair causing delays in opening.

Last year it was anticipated we would have five clients within our first year. Because we were not open to operate yet, there was a delay in receiving clients. During 2011, we had two processing clients.

Goals and Outcomes Achieved

Our goal was to be self-sufficient after three years. The CFIC was opened in late summer of 2011. We anticipated five clients within the first operational year. We have had three processing clients and four consulting services clients. Self-sufficiency is heavily dependent on repeat business. The consulting services clients are not likely to be repeat customers. They request assistance with meeting federal documentation requirements and usually have their own facility already. One of our clients has been a repeat customer, processing two times in 2011 and again in 2012. It is expected that at least one more of the three clients to be a repeat customer.

Our long-term goal is to have 15 repeat clients with the assumption that they may not be the same 15 every year. It is the desire of CFIC to have our clients “graduate” from our facility, that is, to outgrow us and need to expand into their own processing plant.

There was no income generated from this project. The revenue gained from collecting usage fees of the facility from clients was used to continue use of the facility, such as payment of utilities, insurance and maintenance not covered by grants.

Beneficiaries

Our beneficiaries are our clients, their families and employees. The full-time equivalent (FTE) is estimated to be 1 FT for the owner and 1-2 FTE for their employees. Each owner spends a large amount of time on getting the business started and would be considered one full-time job at least

for the first two years. The extended beneficiaries are the suppliers who are selling ingredients and jars, any retailers that are carrying the products manufactured at CFIC and the municipalities receiving sales tax from their sale.

The Chilton County Health Department collects a fee for each client's food permit. The clients usually spend the entire day in Clanton while processing, and therefore must eat lunch in one of our restaurants. We must purchase disposable/consumable supplies for operation of the center as well as contract maintenance of equipment on occasion.

For our clients that supply at least a portion of their own produce, they are expanding their business, creating a demand for their own produce as well as increasing the overall competitiveness of Alabama specialty crops. One of our clients has already indicated the desire for a product line expansion. In addition to increasing the use of specialty crops by developing a high-end pickle brand, this client has made progress in becoming a new producer as well. He supplies his own fresh herbs and eventually will produce fresh vegetables for his products.

Lessons Learned

Not all gifts are free. The donated equipment needed refurbishing, repair and even "re-claimed;" they were taken apart and used to construct other items. In some cases, it was not cost-effective to repair at all. This was our most difficult challenge during start-up and the first year.

We already knew there was a need for a filler to make filling the jars faster. The clients and potential clients quickly recognized the need for automation as well. We have made plans for its acquisition. It's a decision that should be made for each similar project whether they would start small and slowly increase with the demand, or to wait until there are more start-up funds to provide a more automated processing line for acidified canners.

New food processors may or may not have any formal training in food science and safety. The regulations for food processors are numerous, not always clear and can change frequently. The regulation of a shared-use facility provides a challenge for the FDA and Alabama Department of Public Health because the forms they use do not currently accommodate such an unusual situation. CFIC puts in a lot of time with each client to walk them through the steps and paperwork required. Some clients need complete business incubator services for advice in financing and marketing. We have teamed up with Alabama Small Business Development Center to provide our clients these services.

One unexpected outcome is both a problem and an opportunity at the same time. CFIC has had several inquiries regarding co-packing. Some are people who have a product and just want someone else to make it for them. Others are producers who have the surplus of fruits or vegetables that they would like to make into value-added products, but during harvest, do not have the time or labor. We see this as an opportunity for a new business requiring less investment. They could provide the labor and use produce from the farmers to process into the

shelf-stable items and returned to the farmers to sell to their current customers. A separate co-packing operation using our facility could be beneficial to the smaller growers who could consolidate their culls to produce more value-added products under a common label, where they might not have enough of one fruit from just their farm.

Project #2

Project Title - Enhancing the Competitiveness of Specialty Crops within the \$30M Alabama School Fundraising Sales Market (Carvers Market – School Fundraising Market)

PROJECT SUMMARY

The Alabama school-based group product sales market presents a ready opportunity for the sale of specialty crops, estimated to be about thirty-million dollars. However, there is not a way for the market to be informed about specialty crop sales, or for specialty crop producers to be advised on these potential sales. Towards these needs, the initial purpose of this project was to analyze the market, generate promotional materials for schools, and create outreach resources for specialty crop producers. This project was not built on a previously funded project with the SCBGP or SCBGP- FB.

PROJECT APPROACH

A questionnaire was developed to analyze the school-based group product sales market. A survey of the market was attempted by online means with the questionnaire. This effort was supported through print, radio, and web advertising. Alternately, the survey was conducted at industry group conferences, and a database of industry professionals was obtained.

The survey is attached. The targets of the survey were PTA leaders and delegates who attended a state conference and workshop. It was suggested by the consultants that the strategy to use telephone surveys, conduct survey visits, or conduct focus group studies would either be ineffective or inefficient. Therefore the online survey was developed.

The promotional materials are attached. The promotional materials will be distributed at the next PTA state conference in April 2013.

GOALS AND OUTCOMES ACHIEVED

The online survey was not successful in collecting information from industry professionals. The surveys at industry professional conferences were successful at gathering information on the market. Over 100 industry professionals were contacted and completed either a questionnaire and/or an agricultural product test marketing survey. In addition, a database of industry professionals was obtained through the efforts in the project. This information is available to producers who wish to address this potential, niche specialty crop market

The results from the survey are attached. The outreach materials are attached. The outreach materials will be distributed through e-mails to the Alabama Fruits and Vegetables Growers Association and ALFA. The promotional materials will be distributed at the next PTA state conference in April 2013. There will be several hundred PTA leaders and delegates from across the state in attendance.

BENEFICIARIES

Decision makers within the school-based product sales market—state and local PTA leadership, other parents—as well as producers benefited from the completion of this project. In the project, almost 100 PTA leaders were contacted concerning procedures in the industry and almost half completed an agricultural product test marketing survey. The information gathered in the effort is available to producers.

The outreach materials will be distributed to the Alabama Fruits and Vegetable Growers Association by email.

The promotional materials will be distributed at the next PTA state conference in April 2013. The PTA leaders will benefit by having information to assist with their fundraising considerations at the time it is most important.

The results of the survey will be communicated through a press release to ALFA, and a report of the survey will be sent by e-mail to the Alabama Fruits and Vegetable Growers Association.

LESSONS LEARNED

A much fuller understanding of the school-based product sales market and its workings was gained as a result of this project. The initial project strategy was changed significantly as more was learned about the market. The information gained will assist in tailoring future market analyses and outreach efforts, and this information will be available to producers.

Our initial understanding was that the teachers in a school select and conduct the fundraisers. In many cases, they do neither. The PTAs in schools, along with other parent groups, mainly conduct fundraisers. Though teachers may support the effort by, say, collecting money, the parents groups run the fundraisers.

Once our survey was transferred to an online form, it was advertised through print, radio, and radio-related web media. This was very ineffective. The best strategy for online surveys would be when you have an e-mail list to send the survey out to and people can respond while they are still on the computer. An e-mail list of prospective respondents would have been a great asset to this project. Ultimately, it was necessary to attend a conference and meeting where many PTA leaders would be to collect data with paper forms.

CONTACT PERSON

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Alabama Fruits, Nuts, and Vegetables

Positioning Yours for School Fundraisers

Selling your fruits, nuts, and vegetables is an ideal activity for nearby schools to raise money. However, they may not know about this great opportunity to benefit them, you, and your community. There are many businesses who sell foods, such as oranges, grapefruits, and pecans, through schools. Here are a few tips on how you can join them.

In 2011, a survey of the fundraising practices of PTAs in Alabama was taken. The survey was funded by the Alabama Department of Agriculture and Industries, and it also asked which food products are being sold. Below are some results.

How do PTAs find out about fundraising companies?

1. Word of Mouth
2. Meetings and Expositions
3. Previous History

Gaining “word of mouth” may not be feasible to do, but it is entirely possible to build relationships with nearby PTAs through school visits. The dates and times of PTA meetings can be found on the marquee and by phone. Ask if you can do a presentation.

Who makes the final decision on fundraisers?

1. Executive Committee
2. Whole Group
3. Fundraising Committee

When you make contact with the PTA, these results show that you will need to be sure that you are “selling” the idea to the “right” persons. However, all of them may be the right person, so gain as much “buy-in” as possible with samples or other incentives.

What are the top foods sold as fundraisers?

1. Cookie dough and cookies
2. Popcorn, pretzels, and snack foods
3. Frozen entrees and desserts

Though these may be the top sellers, your Alabama-grown fruits, nuts, and vegetables are a healthier and fresher option. What you grow is also fresher than fruits from other states such as oranges and grapefruits. Let this be a selling point in your presentation

Overall, PTAs are looking for responsive companies to work with. As a member of their community, you can offer them local support in their effort and the best quality of foods.

Alabama Fruits, Nuts, and Vegetables

A Smart, Healthy, and Winning Fundraiser

In 2011, a survey of Alabama PTA leaders was taken to find out about fundraising practices. The survey asked about: finding out about fundraising companies; what is important, and; who makes the decisions on what is sold. Because the survey was funded by the Alabama Department of Agriculture and Industries, it also asked which food products are being sold. Here are some of the results of the survey.

Fundraising in AL brings in \$30M, but only 1 in 7 knew of sales with Alabama foods.

The school fundraising industry in Alabama is estimated at 30 million dollars. A good portion is the sale of foods such as cookie dough, popcorn, and snack foods. However, few PTA leaders knew of sales with Alabama-grown fruits, nuts, or vegetables, or Alabama-produced foods, such as pickles or jellies. Those who did, about 1 in 15, knew of sales with Alabama foods like pecans, peanuts, sweet potato filling and pickles.

Selling Alabama-grown and produced foods is smart and helps our economy!

Cookie dough and snacks sales are tops, but fruits sales few, and rarely from Alabama!

The top three categories of food sales were: 'cookie dough and cookies'; 'popcorn, pretzels, and snack foods', and; 'frozen entrees and desserts'. However, sales of fresh and dried fruits and nuts were low ranked. The fruits mentioned were citrus fruits that were likely from other states; pecans and peanuts were mentioned.

Selling Alabama fruits, nuts, and vegetables is a healthy fundraising option!

Company and representative responsiveness was most important!

Of the aspects that were rated most important when choosing a fundraising company, 7 of 8 of the PTA leaders noted the 'company and representative responsiveness'. The other top-rated aspects were: 'order turnaround time and handling'; having a 'program that is tailored to your needs'; and the 'damaged product and return policy'.

Selling local Alabama foods is a winning strategy to having a great sale!

How to find out who and what is growing nearby, contact:

Your County Extension Office

Alabama Fruits and Vegetable Growers Association

Alabama Department of Agriculture and Industries – Ag Promotion Division

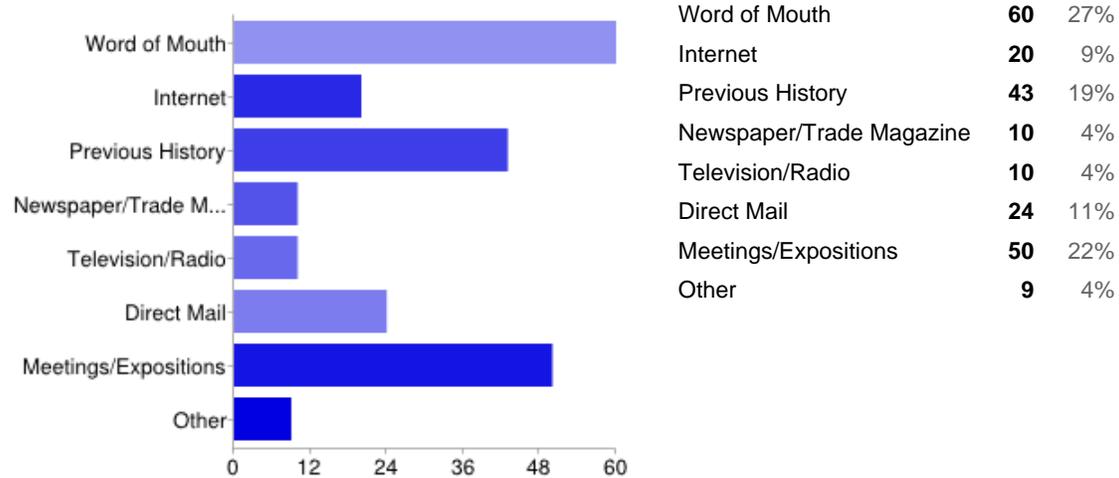
95 responses

Summary [See complete responses](#)

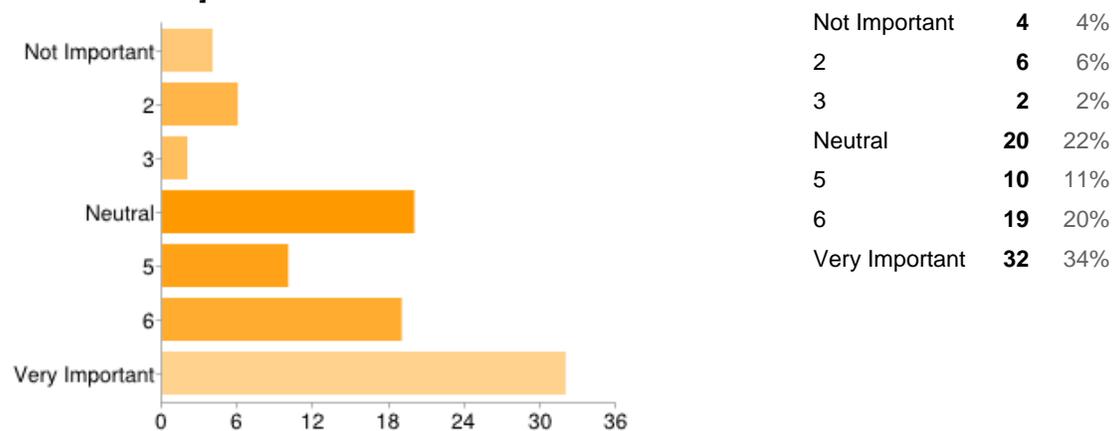
Survey Number

205 135 122 101 117 113 213 13 107 23 27 137 210 105 9 110 118 127 119

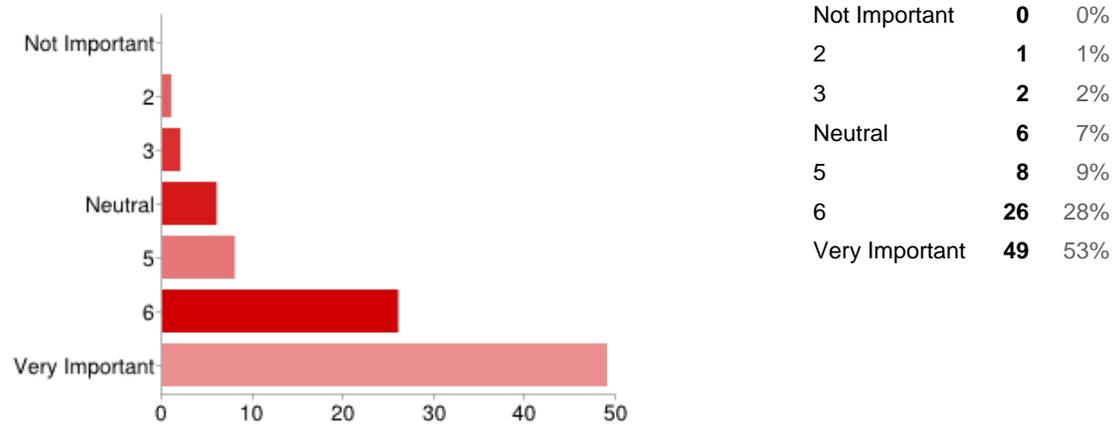
How does your organization usually learn about a fundraising company?



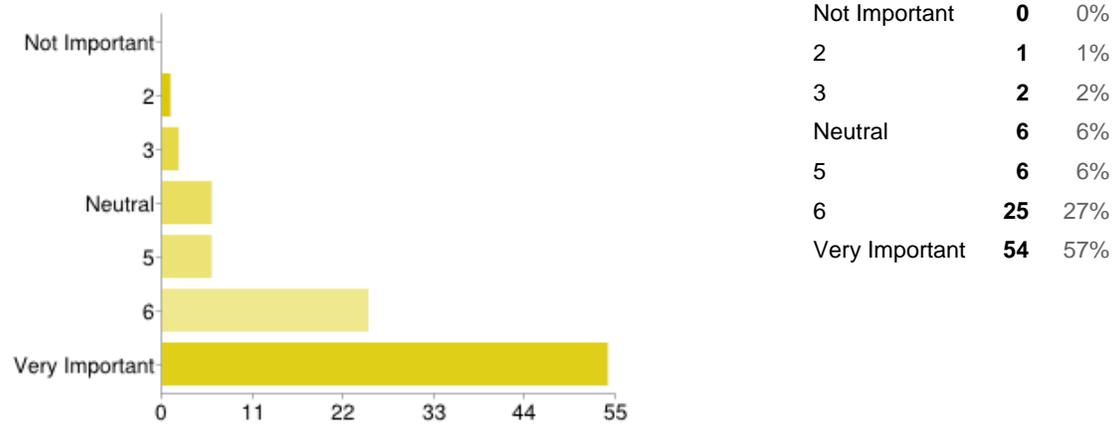
How important are the following when choosing a fundraising company? [Time that company has been in business]



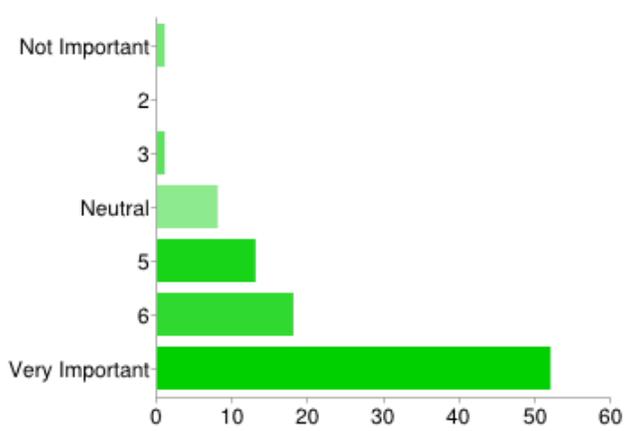
How important are the following when choosing a fundraising company? [Value-added services offered and costs]



How important are the following when choosing a fundraising company? [Program that is tailored to your needs]

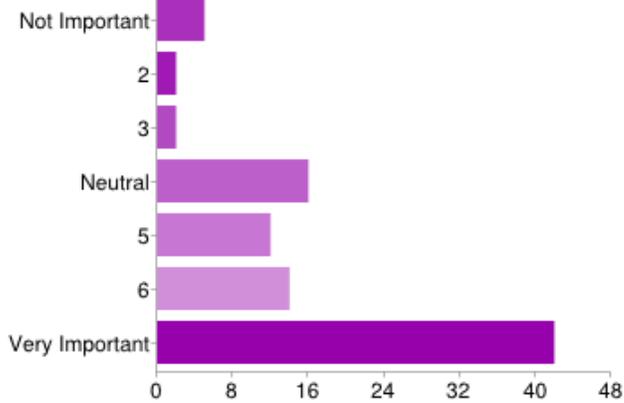


How important are the following when choosing a fundraising company? [Focus on seller safety and supervision]



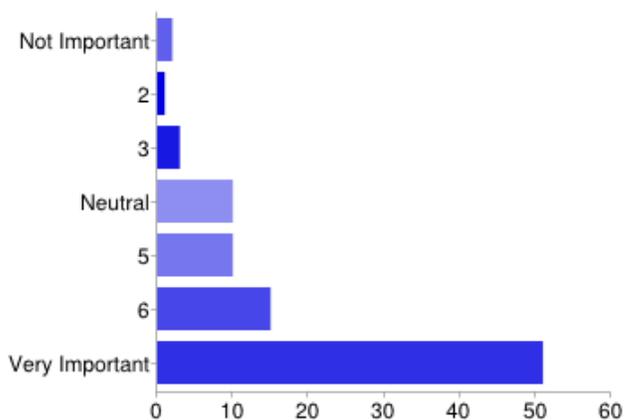
Not Important	1	1%
2	0	0%
3	1	1%
Neutral	8	9%
5	13	14%
6	18	19%
Very Important	52	56%

How important are the following when choosing a fundraising company? [Educational elements of the program]



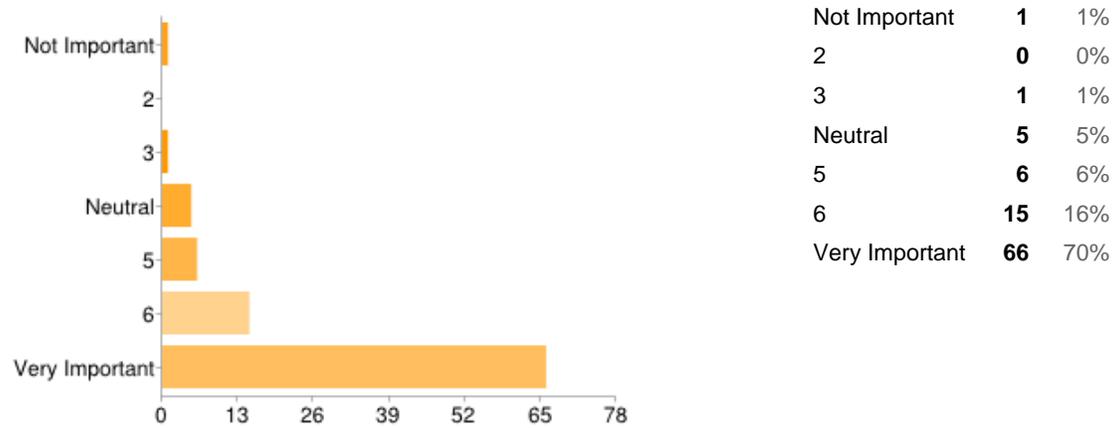
Not Important	5	5%
2	2	2%
3	2	2%
Neutral	16	17%
5	12	13%
6	14	15%
Very Important	42	45%

How important are the following when choosing a fundraising company? [Compliance with state sales tax laws]

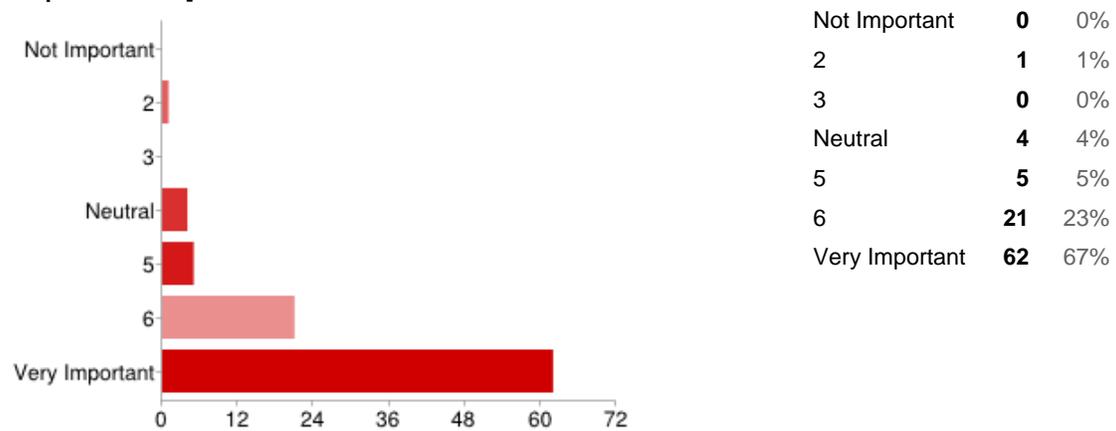


Not Important	2	2%
2	1	1%
3	3	3%
Neutral	10	11%
5	10	11%
6	15	16%
Very Important	51	55%

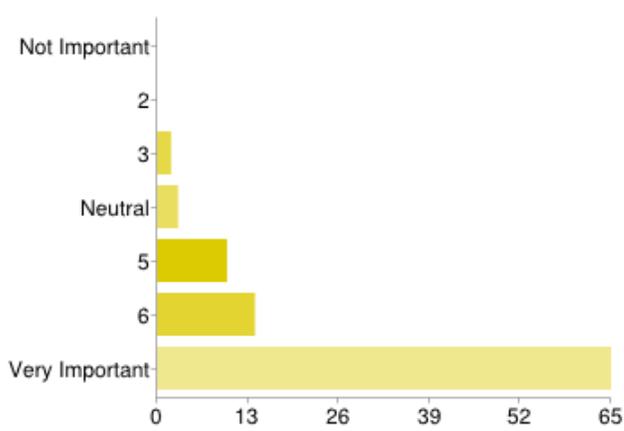
How important are the following when choosing a fundraising company? [Order turnaround time and handling]



How important are the following when choosing a fundraising company? [Company/representative responsiveness]

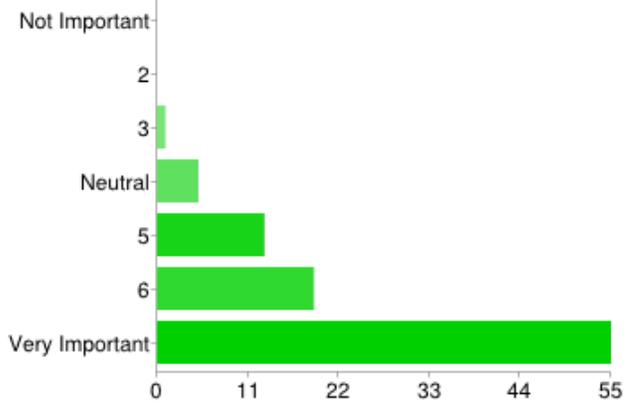


How important are the following when choosing a fundraising company? [Damaged product and return policy]



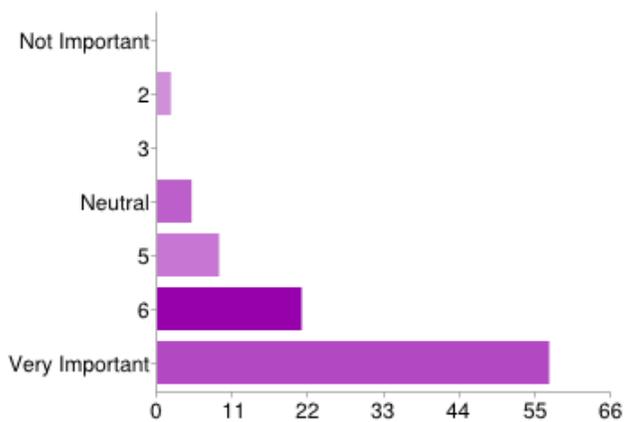
Not Important	0	0%
2	0	0%
3	2	2%
Neutral	3	3%
5	10	11%
6	14	15%
Very Important	65	69%

How important are the following when choosing a fundraising company? [Back order or substitution policy]



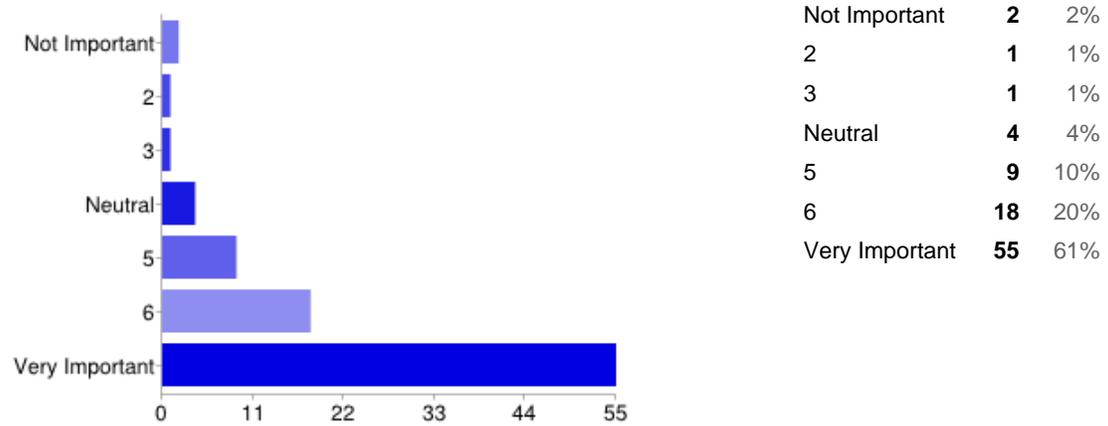
Not Important	0	0%
2	0	0%
3	1	1%
Neutral	5	5%
5	13	14%
6	19	20%
Very Important	55	59%

How important are the following when choosing a fundraising company? [Product novelty and marketability]

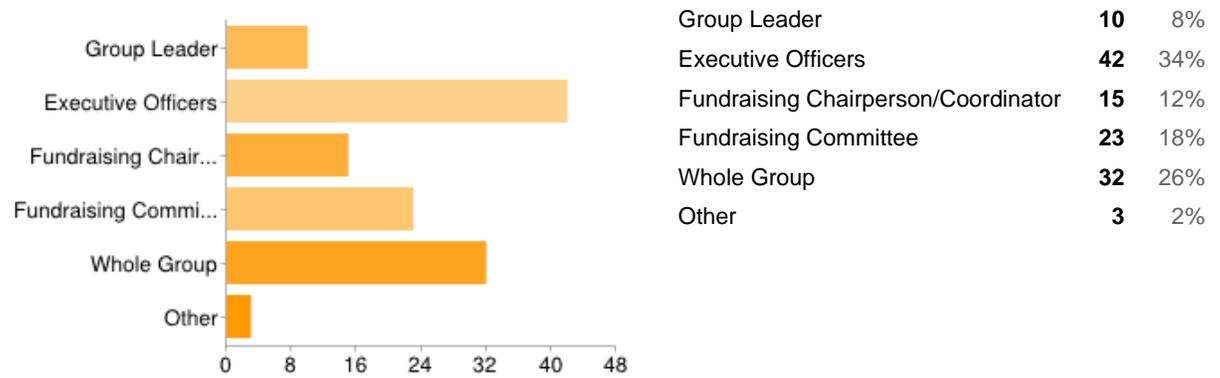


Not Important	0	0%
2	2	2%
3	0	0%
Neutral	5	5%
5	9	10%
6	21	22%
Very Important	57	61%

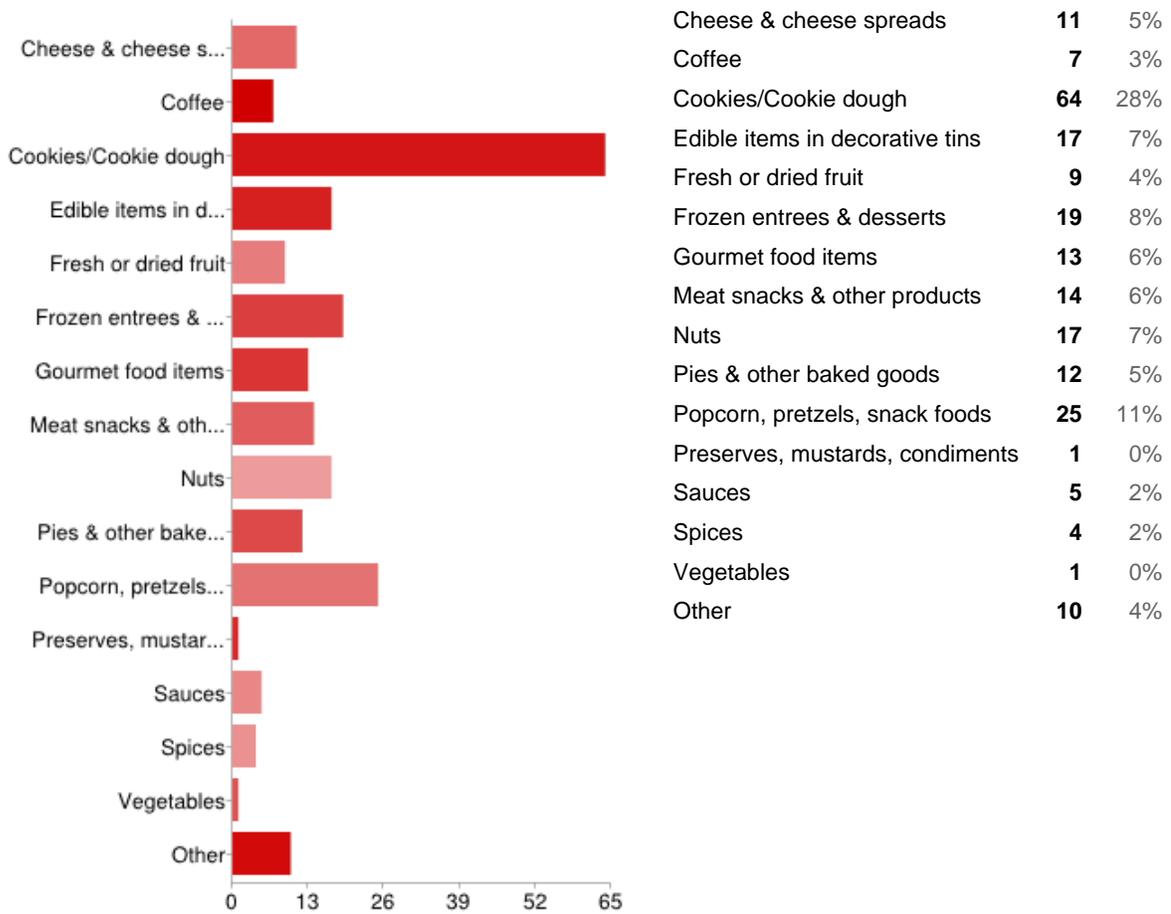
How important are the following when choosing a fundraising company? [Incentives offered and terms]



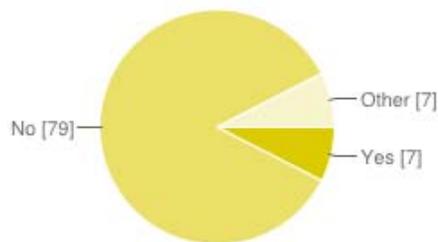
Who makes the final selection of which fundraisers to hold?



If your organization has held a food product sale, which have you sold?



Have you known of any group that has raised funds by selling Alabama-grown fruits, nuts, or vegetables, or Alabama-produced foods, such as pickles or jellies?



Yes	7	8%
No	79	85%
Other	7	8%

Number of daily responses

FUNDRAISING QUESTIONNAIRE

How does your organization usually learn about a fundraising company?

(Please select all that apply.)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Word of Mouth
<input type="checkbox"/> Internet
<input type="checkbox"/> Previous History
<input type="checkbox"/> Newspaper/Trade Magazine | <input type="checkbox"/> Television/Radio
<input type="checkbox"/> Direct Mail
<input type="checkbox"/> Meetings/Expositions
<input type="checkbox"/> Other _____ |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

How important are the following when choosing a fundraising company?

(Please select one for each line.)

	Not		Neutral			Very	
	Important					Important	
Time that company has been in business	<input type="radio"/>						
Value-added services offered and costs	<input type="radio"/>						
Program that is tailored to your needs	<input type="radio"/>						
Focus on seller safety and supervision	<input type="radio"/>						
Educational elements of the program	<input type="radio"/>						
Compliance with state sales tax laws	<input type="radio"/>						
Order turnaround time and handling	<input type="radio"/>						
Company/representative responsiveness	<input type="radio"/>						
Damaged product and return policy	<input type="radio"/>						
Back order or substitution policy	<input type="radio"/>						
Product novelty and marketability	<input type="radio"/>						
Incentives offered and terms	<input type="radio"/>						

Who makes the final selection of which fundraisers to hold?

(Please select all that apply.)

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Group Leader
<input type="checkbox"/> Executive Officers
<input type="checkbox"/> Fundraising Chairperson/Coordinator | <input type="checkbox"/> Fundraising Committee
<input type="checkbox"/> Whole Group
<input type="checkbox"/> Other _____ |
|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|

If your organization has held a food product sale, which have you sold?

(Please select all that apply.)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Cheese & cheese spreads
<input type="checkbox"/> Coffee
<input type="checkbox"/> Cookies/Cookie dough
<input type="checkbox"/> Edible items in decorative tins
<input type="checkbox"/> Fresh or dried fruit
<input type="checkbox"/> Frozen entrees & desserts
<input type="checkbox"/> Gourmet food items
<input type="checkbox"/> Meat snacks & other products | <input type="checkbox"/> Nuts
<input type="checkbox"/> Pies & other baked goods
<input type="checkbox"/> Popcorn, pretzels, snack foods
<input type="checkbox"/> Preserves, mustards, condiments
<input type="checkbox"/> Sauces
<input type="checkbox"/> Spices
<input type="checkbox"/> Vegetables
<input type="checkbox"/> Other _____ |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Have you known of any group that has raised funds by selling Alabama-grown fruits, nuts, or vegetables, or Alabama-produced foods, such as pickles or jellies?

(If 'Yes', please indicate the food.)

- Yes _____ No

Please return the questionnaire. Thank you for your help!

Project #3

Project Title - Ready for College

Project Summary

This project was designed to establish a community gardening project using plasticulture technology to improve nutrition and wellness with children in two after school programs and their parents along with senior citizens. Individuals were guided to learn how to plant and grow a garden, learn to prepare healthy meals and improve their physical and nutritional health.

There are several problems that we wanted to address. Throughout the project community there is a high rate of hypertension and diabetes. There is a need to help residents eliminate poor eating habits due to the lack of food availability and improve food preparation. Approximately 98% of the children receive free or reduced lunches. Many children do not interact with senior citizens, especially those with gardening backgrounds. This project helped to facilitate bringing the children with senior citizens. Another problem is that in the typical classroom, teachers rarely have an opportunity to incorporate hands-on activities with students. With this project, teachers incorporated gardening activities with math and science principles that were linked with educational standards.

Project Approach

Partner Organization: Ready for College was responsible for the project along with assistance from the Tallapoosa County Cooperative Extension Agency. The **purpose** of this community-wide nutrition and wellness gardening project, was to combine children and their parents with senior citizens to improve good nutrition and increase physical fitness. Organizations in the partnership includes two after school programs, Ready for College and the Wall St. Community Center, the Wall St. Senior Citizens Center and the Wall St. Improvement Committee, a community organization.

Funds from the proposed project were used to enhance an existing vegetable garden and plant a new garden along with assistance from the children's teachers. Community members and senior citizens helped to harvest the food.

Industry Impact - The proposed project has a direct and positive impact on the vegetable industry in our area. By combining the knowledge of senior citizens with the stamina and curiosity of young children, the entire community will benefit.

Activities Performed

Prior to starting outdoor classroom activities for the children, we had to complete quite a lot of preparation to the two-acre property. Listed below are some of those projects:

- Our garden coordinator completed a master gardening course
- We cleaned brushes and grass
- We cleaned and cleared an area for vehicle and bus parking
- We acquired a bull dozer to clear brushes, trees, and limbs and removed them from the garden
- We used a mechanical break and harrowed the garden
- We fertilized the garden and prepared it for the plastic culture
- We installed the plastic culture for planting
- We cleared trees and brush growth from the existing well
- We rebuild the existing well and poured cement for a platform
- A garden group donated funds to build the hut over the well
- We installed a well pump for irrigation purposes
- We connected water lines to the irrigation system

Once the above activities were completed, we were then able to engage the children in planting. However, there was still quite a bit of exterior garden work.

- We purchased assorted plants and seeds and engaged the children to sod plants.
- We dug holes to fence the entire garden and installed posts for fencing.
- The Tallapoosa County Cooperative Extension came out to fence the entire garden. (This was necessary because animals were frequently walking into the garden. We wanted to reduce contamination in the garden and with the children).
- The Tallapoosa County Cooperative Extension assisted in the preparation for raised beds for student projects.
- We created individual project plans for students.

Six objectives will guide this project:

1. Improve nutrition and healthy food preparation
2. Reduce obesity and lack of physical fitness
3. Enhance community relations
4. Reduce diabetes and hypertension rates
5. Incorporate math and science educational standards

Results, Accomplishments, Conclusions and Recommendations

Results – We have a very beautiful garden that is eye appealing and is a sense of pride for the community. We have a diverse population participating and utilizing the garden. This is excellent in an area where there is still quite a bit of racial differences. The differences primarily stem from a land field about 10 miles away which is located in a predominately African American community.

Accomplishments – We were able to meet our goal of bringing together children, families and senior citizens to the concept of growing your own food for nutritional purposes. Our outdoor classroom has transformed to include a garden with a walking trail to the pond and a butterfly garden. The children learned where food comes from and learned how to plant and grow a garden.

This one year grant has made a significant impact in our community. Approximately 500 people including 125 children in the after school program, 85 senior citizens and staff, 58 after school staff members and 232 people included parents and community residents.

Conclusions and Recommendations – We are thankful to USDA for the grant funds. The only problems were related to a significant delay for funding. Additionally, a person assigned to work on our project as fiscal agent suddenly became ill and disabled. As a result, other funds such as personal funds were used to make certain that the project stayed on schedule until funding arrived.

Our one-year project turned out so well that we do not have recommendations for the agency. We do hope that other projects are able to receive funding each year as did Ready for College.

Goals and Outcomes Achieved

Our one-year project goals and objectives achieved the following:

Measurable outcome #1 - ***Improve nutrition and healthy food preparation by 10% each year.*** -
Timeframe: 1 year period October 2010 – October 2011

The goal of this outcome is to ensure that all participants increase their knowledge of how garden vegetables are healthy and how to prepare their food using healthy cooking techniques.

Performance Measure – 10% increase of knowledge over the previous year

Evaluation measures

Pre-Gardening Activities Survey

Post-Gardening Activities Survey

(individuals who demonstrated adequate knowledge in nutritional food preparation techniques)

25 of 55

48 of 55

Measurable outcome #2 - ***Reduce obesity and lack of physical fitness with a 10% increase in physical activities.*** - Timeframe: 1 year period October '10 – October '11

The goal of this outcome is to demonstrate exciting family-oriented physical fitness activities and to reduce obesity overtime.

Performance Measure – 10% increase of knowledge over the previous year

Evaluation measures

Pre-Gardening Activities Survey

Post-Gardening Activities Survey

(individuals who engaged in family-oriented, physical fitness activities including gardening)

5 of 55

20 of 55

Measurable outcome #3 - Enhance community relations with a 10% increase in participation of project activities. - Timeframe: 1 year period October '10 – October '11

The goal of this outcome is to create project activities that show community-wide participation and coordination with the various organizations in an effort to enhance community relations.

Performance Measure – 10% increase of knowledge over the previous year

Evaluation measures

Pre-Gardening Activities Survey

Post-Gardening Activities Survey

(individuals who were aware of the importance of partnerships with various organizations)

5 of 55

25 of 55

Measurable outcome #4 - Reduce diabetes and hypertension rates by 5% over the previous year - Timeframe: 1 year period October 2010 – October 2011

The goal of this outcome is to structure program activities and provide information to participants that will lead to a reduction in diabetes and hypertension.

Performance Measure – self-reported 5% decrease over the previous year

Evaluation measures – annual survey, anecdotal data from conversations

Pre-Gardening Activities Survey

Post-Gardening Activities Survey

(individuals with diabetes and/or hypertension who reduced their levels)

8 of 55

18 of 55

Measurable outcome #5 - Incorporate math and science educational standards in 100% of activities for children in grades K – 8th - Timeframe: 1 year period Oct. '10 – Oct. '11

The goal of this outcome is to design program activities and develop lesson plans to correlate with state educational standards.

Performance Measure – self-reported 10% decrease over the previous year

Evaluation measures – annual survey, anecdotal data from conversations

Pre-Gardening Activities Survey

Post-Gardening Activities Survey

(teachers who incorporated gardening activities with math and science)

1 of 5

5 of 5

Beneficiaries

The main beneficiaries were the children, families and staff of two after school programs and participants in a senior citizens program. There were unexpected residents of the Tallassee Housing Authority who were frequent participants who helped to pull grass and picked their own vegetables.

Approximately 500 people including 125 children in the after school program, eighty-five senior citizens and their staff, 58 after school staff members and the remaining 232 people will include parents and community residents. We estimate that economically, this project saved each family an estimated \$350.00 on vegetable purchases.

Lessons Learned

A wealth of information has been learned from a very short timeframe.

- Do not schedule gardening activities prior to 11:00 a.m. due to the extreme heat.
- Additional funds are needed for day laborers as there is quite a bit of work.
- One gardening coordinator can't possibly do all work needed for a two-acre garden.
- Water is a huge cost and small, costly emergencies occur frequently.
- A two-acre garden with a pond is a large undertaking with many requirements.
- Because children participate, insurance is a requirement and is expensive.
- People want to participate but not with their personal funds. A community project of this size requires adequate funds. Otherwise, one or 2 people will use their own personal funds for unforeseen costs.

Contact Person: Dr. Shandra Williams, swilliams@ready4college.com or (334) 283-2115

Additional Information



Plasticulture beds as they were being set up.



Garden property being cleared



Property being cleared for the fence



being constructed

Raised beds



Mr. Futural of the Tallapoosa County Cooperative Extension

Discussing raised beds and planting with children in the

After school program



Staff and residents picking vegetables

PROJECT TITLE: Project 4 – Sylacauga GROWS/Community Garden

PROJECT SUMMARY:

In January 2009, based on the results of the community needs assessment, a group of community leaders and concerned citizens came together to address food access. Thus, Sylacauga GROWS was created in response to the identified need. The goal of the Sylacauga GROWS Community Garden project is to enhance the competitiveness of US specialty crops, by increasing child and adult nutrition knowledge and consumption of these crops through a community-based initiative. The objectives of this initiative are: to provide specialty crops to the families and community of Talladega County; to create comprehensive educational opportunities about sustainable agriculture and nutrition through outdoor experiential education; and to provide instructional opportunities for 100 students in the BRIDGES afterschool programs related to entrepreneurial ship, employability, healthy life choices, gardening, nutrition and healthy food preparation. Sylacauga GROWS is a community project that encourages community members and leaders to work together during economically challenging times toward a common mission to grow specialty crops and healthy communities through farming and education. Sylacauga GROWS serves as a model for Talladega County and other rural communities in sustainable agriculture and nutrition through outdoor experiential education. Sylacauga GROWS reaches out to the community through the creation of community gardens (raised beds for lease), where families farm their own plots on garden sites leased from Sylacauga GROWS. Educational opportunities have included workshops and in-school training on gardening skills, healthy diets, and entrepreneurship at the garden sites and in targeted school and afterschool sites across the county. Production garden sites have expanded to five school sites across the county to educate and promote healthy life choices and the prevention of obesity. Garden tours are available to promote the community garden model and to generate support for these efforts.

PROJECT APPROACH:

Activities Performed:

- Expanded the existing 3.5 acre production garden by 1.5 acres.
- Provided 26 families with the opportunity to farm their own plots on Sylacauga GROWS garden sites by creating 26 raised beds for lease at \$5.00/year.
- Built a greenhouse to further expand the capacity of Sylacauga GROWS to provide food and educational opportunities to the community.
- Expanded existing partnerships with community partners to provide hands-on activities, workshops, and educational tours of the community garden.
- Recruited 4 farm workers through the Alabama Workforce Investment Act Summer Youth Employment Program to work with Sylacauga GROWS.
- Provided volunteer opportunities for the community to serve in the garden and through court ordered community service.

- Increased production of the garden by planting a greater number of specialty crops.

Community Partners and Contributions:

City of Sylacauga	- Land for raised beds - Labor to construct raised beds - Water supply at raised beds
Sylacauga Housing Authority	- Land for community garden - Grass cutting and tree clearing at community garden - Water and utilities needed at community garden
Chamber of Commerce	- Press and media relations for Sylacauga GROWS Community Garden
Talladega County Extension Agency	- Support and educational materials
United Way of South Talladega	- Labor related to construction of the green house
Care House	- Distribution of vouchers and produce from the community garden

GOALS AND OUTCOMES ACHIEVED:

<p>Objective 1:</p> <p>To provide fresh vegetables to unemployed families and disabled families needing assistance with daily food needs.</p>	<p>Work plan Indicators:</p> <p>Expand existing 3.5 acre production garden by 1-1.5 acres.</p> <ul style="list-style-type: none"> • In the spring of 2010, the Sylacauga GROWS production garden was expanded by 1.5 acres. For the 2010 growing season, 5 acres were cultivated and produced fresh vegetables. 	<p>Outcome Indicator 1:</p> <p>Record number of pounds of vegetables disbursed through the clearing house (Care House) each week. Each month's records will be tabulated.</p> <ul style="list-style-type: none"> • For FY 2010 & 2011, 846 vouchers were disbursed through the clearing house (Care House). • For FY 2010 & 2011, 3354.24 lbs. of vegetables were disbursed to clearing house (Care House) participants. • For FY 2010 & 2011, 1322.13 lbs. of vegetables were sold to area residents.
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<p>Objective 2:</p> <p>To create a comprehensive initiative that provides experiences to educated the community about farming, gardening, food and nutrition.</p>	<p>Work plan Indicators:</p> <p>Provide 25 families with opportunities to farm their own plots on Sylacauga GROWS garden sites without assistance. Twenty-five community garden plots will be developed for this program.</p> <ul style="list-style-type: none"> • In July 2010, 26 garden plots were created at the Sylacauga GROWS Community Gardens Site. • All 26 garden plots are currently being rented. <p>Build a greenhouse to further expand the capacity of Sylacauga GROWS to provide food and educational opportunities to the community.</p> <ul style="list-style-type: none"> • In July 2010, a 8'6"x24'x6'10" greenhouse was purchased to be constructed on the Sylacauga GROWS Production Garden site. • In October 2010, the greenhouse was constructed. <p>Expand existing partnerships with Jones Valley Urban Farms,</p>	<p>Outcome Indicator 1:</p> <p>Twenty-five garden plots will be developed for families to experience the development of their own gardening skills. Records will be kept on the number of vegetables produced from each garden plot.</p> <ul style="list-style-type: none"> • For FY 2010 & 2011, 102.15 pounds of vegetables have been produced from the twenty-six plots. <p>Outcome Indicator 2:</p> <p>A greenhouse will be purchased and constructed. Plant production in the greenhouse will be recorded and a comparison will be made for cost.</p> <ul style="list-style-type: none"> • For FY 2010 & 2011, 219 plants have been germinated in the greenhouse. <p>Outcome Indicator 3:</p> <p>Gardening skills workshops, food and nutrition workshops will be held. Sign-in sheet will be recorded on the number of participants for these classes. Pre and post test will be given at the beginning and end of each workshop to evaluate knowledge gained, behavior, and attitudes changed.</p> <ul style="list-style-type: none"> • For FY 2010 & 2011, 1152 students have participated in gardening skills workshops, food, or nutrition workshops.
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	<p>Sylacauga City/Talladega County School districts and the Talladega County Extension System to develop a comprehensive continuum of educational learning opportunities for students and families across south Talladega County about farming, gardening, nutrition and entrepreneurial skills. This will be accomplished through “hands-on” activities, workshops, and educational tours.</p> <ul style="list-style-type: none"> • A partnership with Jones Valley Urban Farms has been fostered and developed. Plans are underway to coordinate training sessions. • Partnerships with Sylacauga City/Talladega County School Districts have resulted in the growth and development of educational opportunities for students and families across the county. In the spring of 2011, 5 school gardens will be piloted across the county. 	
<p>Objective 3: To teach entrepreneurial skills in order to better equip youth and adults</p>	<p>Work plan Indicators: Recruit farm workers through Alabama Workforce Investment Act</p>	<p>Outcome Indicator 1: Daily records will be kept on vegetables and fruit sales during production months.</p>

<p>with additional employment skills.</p>	<p>Summer Youth Employment Program to work with Sylacauga GROWS.</p> <ul style="list-style-type: none"> • For FY 2010, four farm workers were recruited through the Alabama Workforce Investment Act Summer Youth Employment Program. Each worker contributed 280 hours to the garden. • The Alabama Workforce Investment Act Summer Youth Employment Program ended in 2010. Therefore, no workers were available for recruitment in 2011. <p>Provide volunteer opportunities for the community.</p>	<ul style="list-style-type: none"> • For FY 2010 & 2011, 5178.68 lbs. of vegetables were produced from the production garden. <p>Outcome Indicator 2:</p> <p>Sign-in sheets will be recorded on the number of participants for entrepreneurial workshops. Records will be monitored to see if business skills taught in the entrepreneurial workshops are being used.</p> <p>Outcome Indicator 3:</p> <ul style="list-style-type: none"> • For FY 2010 & 2011, 3597.75 volunteer hours have been logged at the garden.
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BENEFICIARIES:

- Unemployed or disadvantaged citizens of Sylacauga that were in need of fresh fruit and vegetables.
 - **For FY 2010 & 2011, 5178.68 lbs. of vegetables were produced from the production garden.**
- Elementary school students who had access to the school gardens that were built, cultivated, and maintained at 5 elementary schools across Talladega County.
 - **Those schools were Graham Elementary, Salter Elementary, Indian Valley Elementary, Sycamore Elementary, and Fayetteville School.**
 - **Approximately 3,500 students were impacted by this project.**

- Citizens of Sylacauga, service clubs, and other organizations that were seeking a meaningful project and opportunities to volunteer in our community.
 - **For FY 2010 & 2011, 3597.75 volunteer hours have been logged at the garden.**

LESSONS LEARNED:

The Sylacauga GROWS Community Garden has been a successful project for the entire community of Sylacauga and surrounding areas. It has proven to be a sustainable project that provides food, service, and opportunities to serve. Youth groups from 5 different states have traveled hundreds of miles over the past two summers have provided service to the garden with the mission of assisting those in need in rural, poor communities such as Talladega County, Alabama.

One of the challenges we faced and have addressed relates to garden maintenance during seasons of high production. With limited paid staff and a dependence on individual volunteer assistance on a daily basis, maintaining for full production of five acres of a production garden along with 27 raised beds and five school gardens presented challenges. In the summer of 2010, the garden was at full capacity. Managing and maintaining the garden was difficult and production suffered as a result. To further add to that complication, a severe drought hit the area and production suffered. Those issues have been addressed through the development of a cultivation plan that assigns segments of the garden to groups of volunteers, primarily the faith-based community churches, who are responsible for their garden sections. They prepare the plots, select the specialty crops to be cultivated and manage and maintain their designated areas throughout the year. In addition, two acres of the community gardens has now been dedicated to a fruit orchard. Individuals may purchase fruit trees in honor or in memory of a loved one. To date, 40 fruit trees have been planted in the Sylacauga GROWS community gardens. The orchard is low maintenance and will yield a high production over time of healthy fruits for distribution in the community.

Another challenge concerns entrepreneurial classes we had hoped to implement. Our original thought was to engage the extension service in conducting the classes to participants at the family resource level and other interested individuals. However, the extension service was faced with making drastic cuts due to the economic climate. Therefore, the classes were not available to be taught. Garden staff and community volunteers have provided educational opportunities in the garden and across the community..

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ADDITIONAL INFORMATION:

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Project #5
Sundown Ranch Uniontown Youth In Ag. Training
&
Outreach Project
(Union Town Beginning Farmer Project)
Sundown Ranch Project

Project Summary

The purpose of this project was design to educate youth and community to help motivate the youths to become land owners and build a business through farming.

The project was very helpful in a way as to motivate the students and others in the community to plant in a timely manner.

Project Approach

The Sundown Ranch Project consisted of a variety of produce to include:

- Peas, butterbeans
- Turnips, mustard greens
- Summer Flavor Squash
- Georgia collards

The young farmers harvested the peas, butterbeans, turnips, mustard greens, collards and summer squash to the farmers market in Uniontown.

The youth enjoyed working with harvesting their yield and selling them to the farmer's market. The approach to this practice was to teach the young people how to begin to operate and own their own business. They also learned how to market their product.

Goals and Outcomes Achieved

During the course of working with area farmers, 12 farmers were introduce to the assistance provided by the Alabama Farmers Markets Authority in conjunction with Alabama locally grown fruits and vegetables. There were trained on the guidelines require when accepting coupons from consumers during the purchased of fruits and vegetables. The project will continue to work with the growers providing any update information relative to this program. I will make contact with those growers monthly.

Student farmers and their families were exposed to USDA programs especially cost share programs, USDA Service Centers and the programs that they administered. This exposure took place primary during the growing seasons 2011. There were 15 students and their families participating in the program. Their involvement included education on how cost share programs work, what the farmer responsibilities are, income requirements, and other eligibility requirements. The youth were exposed to entrepreneurial activities which included record keeping, sales, and marketing. We will maintain contact after the growing seasons on a monthly basis to keep them encouraged and informed on any program updates.

We trained 75 families on these programs including market opportunities statewide. From this training 15 actual families have continue with production of produce and selling to new markets that they otherwise would not be aware of.

Beneficiaries

The youth got excited about entrepreneurs opportunities and wanted to pursue in obtaining land to grow more produce and sell in the market. The youth were introduced to USDA/FSA youth loans for funds to get started. There were 15 youth participated in the program and will continue to plant and sell their produce in farmer markets and mentor to other youth to become farmers.

Lessons Learned

The lessons learned was to install plastic culture with irrigation to reduce the worry of little water so that the yields will be higher and reduce weed control.

We experienced a drought and this was one of the topics that we discussed during this project. We talked about the fact that the more rain received, the higher the yield, the less rain, the lower the yield. We further discussed the disadvantages of no rain water which could cause very low yields and pest which could become a great problem.

The main lesson learned is that you must have the proper equipment and funding to prepare the land for growing crops.

Project #6

Brown's Farm Training and Outreach Project

Project Summary

The purpose of this project was design to enhance the farm knowledge of the communities and involve students in and around Autauga County. The vision of this project was to help motivate the youths and area farmers in such a way that they will have a stronger desire for farming.

The project was very helpful in a way as to motivate the students and others in the community to plant in a timely manner.

Project Approach

The Brown Training and Outreach Project consisted of a variety of produce to include:

- Jubilee, watermelons
- Texas Pinkeye Peas
- Summer Flavor Squash
- Georgia Bell Peach Trees, Metaphor Plum Trees
- Turnip Greens, and Collard Greens

The young farmers harvested

* 20 bushels of Peas

* 250 watermelons

* 15 – 12 quart baskets of peaches, 40 quart baskets of plums

The youth enjoyed working with the pruning of fruit trees, learning how they are to be properly cut so that yields will be high. During some of this training, taste tests were offered on all items planted. The fall crop has been planted with collard and turnips being a high demand during the fall months. I instructed the youth on planting collard greens by manually setting them out by hand row by row, and spreading the turnips out by hand. We later went back to fertilize them by hand instead of using a tractor.

Goals and Outcomes Achieved

There were approximately 20 youth that were exposed to agricultural careers, USDA programs, and various entrepreneurial opportunities, and also were introduce to productions techniques in producing quality foods. They were also exposed to innovative ideas for entrepreneurial projects at the farmer's conferences. Additionally, adult beginning farmers also attended this conference along with parents of the youths. And as a result, the families of these youths were exposed to new business and market opportunities. This information that was obtained through the training

was provided to 110 farm families in the Autauga/Chilton counties area. PAWC conference at Tuskegee University

The core group of 20 young people has participated in an ongoing series of training meeting and workshops related to the project. In the workshops held, we worked on youth loans through FSA. Taught students career opportunities such as; agriculture, forestry and natural resources, harvesting, packaging, grading and marketing techniques.

The education and training component of this project has been successful based on the commitment of the beginning farmers and youth participating. As a result at least 25 of the farmers participating will be able to continue participate in farming without the support of this grant which represent about 30% of the beginning farmers that participated. The youth are encouraged to continue to participate, but will need further support and guidance to their commitment to agriculture. At least 50% of the youth

Those providing the training were Tuskegee University Farm Management Staff as well as other University faculty and staff. We provided demonstrations on how to:

- Prune fruit trees
- Train on how to look for gummy stems
- Youth attended workshop on spraying peaches and plums
- Training youth how to do seed bed preparation, soil testing and soil types
- To promote good healthy eating habits
- Increase more healthy produce for consumptions and expand the markets

Beneficiaries

The benefit of this project was very educational to the students and beginning farmers. The participants in this project were excited about getting involved. This project enhanced job opportunities and motivated the students to have this experience again. The youth were exposed to agricultural professional that will interest the youths in agricultural careers.

Lessons Learned

We experienced a drought and this was one of the topics that we discussed during this project. We talked about the fact that the more rain received, the higher the yield, the less rain, the lower the yield. If you get plenty of rain, chemicals will have to be used to keep the grass down

Despite receiving the grant funds late in the middle of the month of June, I was able to work with the project with youth in and around the area. The yields were low due to the drought and some of the plots were not able to produce the expected yield. I experienced a few break downs with my equipment and spent some time getting this repaired.

Project #7

Project Title – Fairfield 5-A-Day

Project Summary – the initial purpose of this project was to increase the knowledge and use of Specialty Crops in the Fairfield, Alabama community. The project was both timely and necessary as the use of fruits and vegetables, in general, in the community is poor. This is due, in part, to only having one grocery store in the city and the perceived high cost of most items there.

Project Approach – the AGITC and partners spent over 150 days in the community in the three-year period working with hundreds of adults and thousands of school children.

Over 2,000 5-A-Day Activity books were developed, printed and distributed to Fairfield students in three elementary schools.

Five gardens were installed and maintained with large amounts of produce eaten in afterschool and summer programs and sent home with the children. Produce was given to seniors, sold at several markets and prepared and eaten in three community meals.

Children helped prepare the gardens, plant, maintain, harvest and ate fresh or cooked and ate the garden's produce. Many hundreds of bags of potatoes, sweet and Irish, collards, cabbages, tomatoes, peppers, squash, etc. went home with the students.

Using funds from additional grants, fruit plants were planted at each school, including blackberries, blueberries, strawberries, figs, muscadines, apples, peaches, etc. Most of the fruit was picked, washed and eaten on the spot. Children learned how to use a variety of hand tools and all were given an opportunity to operate a small electric garden tiller.

Cut and annual bedding plantings were installed and students harvested and helped display zinnias, gladiolus, dahlia, begonia, lantana, verbena, etc. at each site.

Volunteers and community members, sometimes up to fifty per day, helped with garden preparation, tree plantings and general site cleanup. The five gardens and orchards have really increased the interest in community members growing their own or starting new community gardens in the area.

The AGITC Educational Director has helped Team Nehemiah install and maintain another community garden in the area that is now very successful. Additionally, that garden is providing small bags of produce for sale to the community for a nominal price.

The AGITC has also begun and helped manage a large farmers market and educational event at a local mall, known as the Alabama Marketplace. Produce and plants from the 5-A-Day gardens were used as displays and donated to participants.

During the three years of Hope Center Summer Camps, the grant helped two hundred and fifty children learned about Specialty Crops through educational lessons and tasting labs. Many children had never eaten cantaloupes or plums and had never harvested Irish potatoes, tomatoes and squash from a garden.

Project partners included:

- Alabama Cooperative Extension System, providing expertise and staff to support gardening and community outreach.
- Alabama Department of Agriculture and Industries, providing direction, grant support and funding.
- Alabama Urban Forestry Association, providing expertise and materials for projects.
- USDA Forest Service, providing donations of educational materials and seedlings.
- Staff and volunteers from Hands-On Birmingham, Team Nehemiah, Fairfield Fire Department, Fairfield City Schools, UAB's Into the Streets, Samford University, Birmingham Southern University, Region's Bank and many other church and community related groups .
- Better Basics, Inc., providing staff, volunteers and funding to support the various sites.
- John Deere Landscapes, Myer's Plants and Pottery, Barton's Greenhouse and Nursery, Belgard, Inc. and others for donations of materials to supplement the sites.
- Alabama Power and Alagasco for funding for tree planting projects.

Goal and Outcomes – the most significant and on-going outcome from the grant is the development of five productive and permanent gardens in the city. With that, a mechanism is in place for the next several years to continue to expand and maintain the sites using both volunteer labor and paid staff. Additional outcomes are as follows:

- Worked with an average of 100 children per week during the school year in small groups for three years on Specialty Crops, gardening, science, health and nutrition. These presentations were for children in both during and after school programs. These numbers greatly exceeded our original estimates.
- Worked with 150 Hope Summer Camp children each week of several four to eight week camps as above for three years.
- Provided five community meals or fruit giveaways and educational programs which were attended by over four hundred community members where school garden produce was featured.
- Provided over 5,000 salads, fruit tastings and other healthy snacks to the children, much of which was grown in the school gardens. AGITC staff also demonstrated healthy food preparation including washing and cooking in healthy ways. Foods harvested in the garden and cooked included sweet and Irish potatoes, squash, tomatoes, cabbage, broccoli, collards, etc.
- Provided many hundred bags of sweet and Irish potatoes, carrots, collards, cabbages, squash and much more for children to bring home to their families and to give to the elderly in the community. It has become commonplace for students to leave at the end of the Hope Center day with enough food for a meal. Many parents have commented that the sweet potatoes, collards, etc. would “be their meal” and they “were a great blessing.”

- Manned or set up a Farmers Market at the Hope Center Summer Camp, Fairfield Health and Safety Day, Pepper Place, Alabama Marketplace and WAY Day giving away fruits and vegetables to over 1,600 students and community members. During that time the attendees were given presentations on gardening, nutrition and were allowed to sample numerous fruits and vegetables. .
- Expanded gardens and plantings at all four schools and added additional space at the Fairfield Fire Department. We now have almost two and a half times the projected growing area and are adding more space each year. In the three years of growing we have relied primarily on less toxic pesticides, incorporation of limes and organic matter and intensive growing methods.
- Produce from the Fairfield Fire Department Community Garden is often delivered to senior citizens and needy families.
- Using a donation from Belgard, Inc. of \$5,000 worth of ornamental wall units, have built eight raised gardens for the use of elderly and handicapped participants at various gardens.
- Worked with over 500 volunteers from UAB Into the Streets, Birmingham Southern, Samford, Fairfield Fire Department, Team Nehemiah, etc. to help build, plant and harvest gardens in the city. Additional time has been spent to clean-up the campuses and make them safer for the children.
- Donated many hundreds of books and other prizes to participants in the program. With the help of our Alabama Cooperative Extension System partners, we provided numerous demonstrations on fruit and vegetable preparation for the community and students in the Fairfield community. Hundreds of volunteers and teachers know much more about selecting, planting, maintaining, harvesting and preparing Specialty Crops for use.
- We presented hands-on and in- class programming at the AGITC with the help of extension personnel to 150 people in the areas of vegetable and fruit gardening, rain barrel usage, nutrition and more.
- We presented hands-on gardening classes to many thousands of K-8 students, parents and teachers, city fireman and volunteers. Additionally, every meal and or cooking and food preparation class has built-in nutrition from a plant and human perspective.
- We were able to have several multiple site community meal events where parents, families and community members were able to participate. For several of these, students helped prepare salads and serve the meals. Fire station staff prepared grilled chicken and staff from Better Basics and volunteers helped prepare and serve several hundred people each meal.
- Additionally, thousands of students get to participate in the harvest, preparation and serving during afterschool and summer camp enrichment, of garden produce including squash dishes, green beans, Irish and sweet potatoes, etc.
- Several times we included a fresh fruit educational station at the conclusion on summer camps and have participated in several educational field days including a “WAY Day” in which 200 people participated and several Fairfield Safety Days.
- In one Safety Day, we had a booth with examples of live fruit and vegetable plants and explained how to install and grow. Next to that booth, we had samples of fresh fruits and

vegetables and let the adults and children here about the benefits while snacking on the produce. Each Safety Day has 600 - 900 attendees.

- The grant worked reached many thousands of participants each year, with several hundred after-school and summer camp children gaining 50 hours plus each in gardening and nutrition education. So much of the produce was picked, prepared and consumed in enrichment activities, and we can easily say that thousands of salads, fruit and cooked samples were consumed.
- Much of the produce goes home with the children or is given to community members, teachers and senior citizens. In many cases, every child in the afterschool program brought home bags of collards, lettuce, beans, potatoes etc.
- We have picked many bushels of potatoes and hundreds of 1 pound bags of collards. Many hundreds of yellow squash and tomatoes were picked to send home with students, custodians, teachers and area volunteers.
- The garden sites are growing and each school now has a small fruit growing area and a greatly enlarged vegetable garden footprint.
- We did not complete surveys in most of the adult classes, but do have an extensive photographic record of all the events and activities. Class participants asked for and are receiving hands-on classes on weekends as we continue the work of the grant.

Beneficiaries – The beneficiaries of the Fairfield 5-A-Day grants are many and include:

- Many hundreds of school children participating in the programming in and after school and during the summer camps. Staff worked with an average of 100 students per week for 42 - 46 weeks each year for three years.
- Hundreds of community members and families who were given fruits and vegetables for use at home. Elderly custodial and cafeteria staff members at each school were often given boxes of fruits and vegetables.
- Hundreds of community members and student's families making an effort to garden and/or purchase fresh fruits and vegetables.
- City staff at the fire station and local seniors who benefitted from the large amounts of produce from the community gardens.
- The community as a whole as the landscapes have been improved with the planting of fruit trees and flowers each site.
- The Birmingham area as five hundred trees grown by the students, and 500 packs of donated flower and vegetable seed, were given away at an MLK Day of Service and a Birmingham Reads and an Alabama Marketplace event.

Lessons learned – many lessons were learned including:

- Some communities have lost the ability to grow Specialty Crops due to lack of expertise and the desire or ability to do manual labor. Programs like this help raise awareness and create interest in gardening and healthier eating.
- Obtain tangible community buy-in before starting a project of this scale. Make friends through delivery of promised activities in a timely manner.
- Very few people are willing to weed and install a garden, especially as the heat of summer arrives.

- Take lots of pictures!

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fkapp@bellsouth.net

Project #8

Project title:

IPM-CORE Pilot Project: An Integrated Pest Management (IPM) Initiative for Increasing Competitiveness of Vegetable Production in Alabama

PI: Dr. Ayanava Majumdar, Extension Entomologist & Commercial Horticulture Team Leader, 111-A Duncan Hall, Auburn University, Auburn AL 36849. Tel: 251-331-8416. Email: bugdoctor@auburn.edu

General comments by PI: I am really thankful to the USDA and Alabama State Department of Agriculture and Industries for strong support of the IPM-CORE project through the years. As indicated in this final report, the SCBGP funds really helped revive the vegetable IPM campaign in Alabama that has resulted in supporting the industry and farmers in sustaining their livelihood.

Specific purpose of the project:

1. Insect pests are number of production issue for vegetable farmers in Alabama since crop loss can be 100% without the use of integrated pest management (IPM). There was no vegetable IPM program in Alabama before the initiation of this project.
2. Due to poor communication and lack of educational materials, vegetable producers could not get timely information and training in crop protection resulting in the overall slow growth of the vegetable industry.
3. The project was motivated by the producer organizations that had approached the Alabama Cooperative Extension System (ACES) Extension Specialist, Dr. Ayanava Majumdar, to assist small family farms and conventional large producers of high value crops such as vegetables. There was a disconnect between research being done at the institution and technology transfer to the field. Therefore this IPM education campaign was needed to provide a framework for rapid technology transfer and grower education aimed in changing the behavior and IPM adoption rates among farmers for sustained economic, environmental and social benefits.

Project inputs:

Besides financial assistance received from the SCBGP, the critical inputs are the Regional Extension Agents (REAs) from the Commercial Horticulture Team and Home Grounds Team that worked tirelessly to organize farmer training programs and large conferences that have been attended by thousands of producers since 2009.

Project approach (outputs):

Clearly, the IPM-CORE project has led to the establishment of a unique award-winning and highly recognized training program for the farmers in rural and urban Alabama. The project has made deep impact on vegetable industry which was nonexistent prior to 2009.

Activities: This Extension campaign consisted of training vegetable farmers in traditional and underserved areas through intensive hands-on experience, for example,

Level 1 training (regional meetings): Due to the internal structure of ACES, the REAs conduct regional training meetings at various counties throughout the state in order to reach a broad audience. Typically, the new farmers who come to the first IPM training event listened to short

45 min talks. As part of IPM-CORE, we have completed 62 Level 1 producer meetings from 2009 to 2012.

Level 2 training (workshops): About 50-60% producers who attend the first regional meeting are motivated to attend in-depth advanced level workshops on vegetable IPM where they are trained using real-life examples of crop damage, insect specimens, and pest management tactics. These workshops are typically about 1 to 2 h long with plenty of time for interaction. Farmers are also trained in the use of Extension resources such as websites and publications which is all part of the IPM-CORE project. As part of IPM-CORE, we have completed 17 Level 2 workshops from 2009 to 2012.

Level 3 training (field training): IPM-CORE project emphasizes on clear communication between university researchers and vegetable producers. The best interaction and impacts (behavior change) occur when farmers witness IPM in action during field days at demonstration and research plots. Hundreds of farmers learn useful information during field days each year and become dedicated users of Extension IPM information creating a large impact for the IPM-CORE project. As part of IPM-CORE, we have completed 19 Level 3 field days from 2009 to 2012.

Project monitoring and evaluation: Quality of Extension IPM program has always been tracked as part of the IPM-CORE so that we can monitor successes and make necessary adjustments. Numerous outcome and impact surveys have been conducted using measurable indicators as summarized in the Table 1 (page 8).

IPM-CORE Project Participants:

- IPM-CORE audience primarily includes conventional vegetable producers (30%), low resource farmers (51%), and gardeners (40%). We have seen rising participation of new beginning producers and urban farms/community gardens in IPM workshops. Other participants in IPM training events include industry representatives, USDA NRCS and FSA personnel, and crop consultants.

IPM-CORE Project Activities (photos are include at the back):

Attached is a full 'report card' for the IPM-CORE project that contains details of indicators on project success. Here are some highlights from OUTPUTS.

- The IPM-CORE project has directly benefited approximately 2,042 participants from 2009 to 2012. As part of IPM-CORE, we have completed 62 Level 1 regional Extension meetings, 17 Level 2 workshops, and 19 Level 3 field days.
- Participation by farmers in IPM events has increased 14 times during this time period. At every meeting, producers from at least six counties attend our regional events.
- Number of IPM-CORE training events for farmers has increased to nearly 24 in 2012. This is 8 times compared to 2009 when there were only 3 meetings for vegetable producers.
- Significant increase in producers participating from the Black Belt of Alabama. Partnerships with the Alabama Sustainable Agriculture Network, Federation of Southern Cooperatives, and Deep South Food Alliance have helped assist farmers in underserved communities.

- IPM-CORE communication strategy is unique to Alabama and currently uses traditional print media, websites, and social media as information transfer system. From 2009 to 2012, IPM-CORE has published 71 newsletters and Timely Information Bulletins; 54 issues of the IPM Communicator newsletter are archived in the ACES Store for free download. There are over 1,000 subscribers to the weekly electronic IPM newsletter. The Extension entomology website receives over 100 hits per day during peak season and Facebook IPM page has 208 subscribers with a potential to reach
- IPM-CORE project has also published 2 major handbooks, 7 Extension bulletins, 21 magazine articles and 8 newspaper articles. We have also designed 6 promotional items like bookmarks and magnets containing insect identification guide that have been distributed free of charge to producers who are using these items heavily for improving their pest control practices.
- IPM –CORE exhibition at over 13 several regional meetings, farm exhibitions and tradeshow has been viewed by nearly 8,610 fruit and vegetable producers, gardeners, industry representatives, and crop consultants in Alabama and neighboring states.

IPM-CORE Project Outcomes:

- Overall quality of IPM project as evaluated by participants is 89% approximately. There is strong support from farmers in rural and urban areas and from new producers to continue information delivery beyond the life of the IPM-CORE project that was funded.
- Participant's change in IPM knowledge ranges from 25 to 48% after attending a workshop. The change happens more rapidly at field events where participants can see a new technology or recommendation in action.
- Regional IPM handbooks and Extension bulletins are being used by over 75% producers and 50% or more gardeners around the state. The IPM publications and promotional items are also benefiting the small beginning farms to improve their IPM decision-making skills.
- Use of electronic resources and social media (esp. Facebook IPM page) is doubling every year. The IPM page on Facebook currently has 208 subscribers within 1 year of launch.
- Over 88% participants strongly favor the IPM training events and the hands-on approach. Nearly 55 to 70% producers actually use the new information on their farm each year to maximize crop yields and profits. Majority of the training participants utilize Extension websites and publications for making critical decisions on their farm.
- IPM education leads to 55% improvement in confidence in using IPM tactics for small and big producers. Crop consultants who work with large (wholesale) vegetable producers are also trained via IPM project and stay in touch with the project PI for up-to-date information.
- Nearly 62% small producers use alternative insect control measures like biological and botanical insecticides resulting in long-term environmental benefits on the farm (e.g., conservation of natural enemies, reduced use of harsh insecticides, insecticide rotation, etc.).
- Nearly 32% producers and gardeners have the intention to adopt mechanical insect control tactics like row covers and insect netting.

IPM-CORE Project Awards & Recognitions:

Name	Year
National Winner, NACAA Search for Excellence – Crops Award recognizing the impact of Vegetable IPM Program (2008-2012) http://www.nacaa.com/countyagent/2012-10.pdf	2012
Alabama State Finalist ACAAS Communication Award (Feature Story)	2012
Alabama State Finalist ACAAS Communication Award (Published Photo & Caption)	2012
Alabama State Finalist ACAAS Communication Award (Audio Recording)	2012
Achievement Award, National Association of County Agricultural Agents Recognizes excellence in Extension profession (early career)	2012
Future Leader Award, Southern IPM Center Nominated by Dr. Henry Fadamiro, Auburn Univ., AL Recognizes excellence in IPM programs http://www.sripmc.org/newsalerts/newsletter/winter2012.pdf	2012
Southeastern Region Finalist, Team Newsletter (IPM COMMUNICATOR) National Association of County Agricultural Agents Communication Awards Program sponsored by Bayer Advanced	2011
Southeastern Region Finalist, Published Photo & Caption (STINK BUG) National Association of County Agricultural Agents Communication Awards Program sponsored by Bayer Advance	2011
Finalist, Friends of IPM Award, Southern IPM Center Nominated by Dr. Henry Fadamiro, Auburn Univ., AL	2011

IPM-CORE Project Impacts:

- IPM-CORE is been highly peer-reviewed regionally and nationally as an exemplary program. IPM-CORE project has received many awards for its high quality and impactful programming. During several Extension events, the Alabama Agriculture Commissioner (Mr. John McMillan) has also praised our efforts to reach out to the small producers and underserved communities for supporting the statewide local foods campaign.
- As a result of a streamlined and highly synchronized information delivery system forming the main objective of IPM-CORE project, there have been major reductions in barriers that typically prevent behavior changes in farmers. For example, we have identified 8 barriers to IPM technology adoption and have made significant improvements within the project period to reduce those barriers. Due to a significant number of new and beginning farmers and nontraditional audience attending our Extension events (urban farms/community gardens) to receive IPM-CORE training, our onsite surveys are not sufficient to capture data about improvement. Future impact evaluations will be developed to collect such data.
- Alabama Smart Yards: This program encourages wise use of all natural resources to make every bit of every resource count. ASY programs and workshops have reached 24,800 participants. A survey of 487 individuals indicated that 92% learned to identify

common pests and/or beneficial garden insects and 88% learned new pest management strategies.

- Local Food Production Initiative survey in Baldwin County (AL) indicated 44% loss in yields can occur in the absence of IPM. Participants produced 645 lb of vegetables in gardens that was worth \$759.93 in retail. Producers will lose \$334 approximately without using IPM tactics.
- **Master Gardeners IPM Field training:** 18 hours in 2010, 34 hours in 2011. Change in safe insecticide purchase decision after IPM training = 55% (2010-2011). Total time volunteered by Master Gardeners in IPM projects statewide = 200 approximately.
- Impacts of the **IPM COMMUNICATOR newsletter**, AL (2009-2010):
 - Subscriptions have increased 17 times between 2009 and 2012. Currently there are 980 subscribers on the email list. This newsletter is the only Extension Team publication that caters to the needs of the fruit and vegetable producers in conventional or organic systems.
 - 34% survey respondents were farmers and 28% respondents were company representatives
 - 44% respondents read the newsletter to its entirety while 17% readers read about half of the publication
 - 53% respondents read the newsletter for 15 minutes and 22% read for 30+ minutes
 - 30% respondents visited the newsletter archive at least once a week during peak cropping season for IPM info
 - Readers ranked Entomology articles as most useful followed by articles on weed control, plant pathology, fruit production, and home garden IPM
 - 53% respondents indicated that they used an IPM recommendation after reading the articles
 - Six cases of economic benefit reported = \$591 gain per adoptive farmer
 - 94% respondents support continuation of the newsletter in 2011 as a weekly publication.
- Impact assessment surveys indicate adoption of university recommended IPM program in Alabama saves about \$246 per acre for producers (mainly by reduced insecticide usage, use of alternative IPM tactics, and yield improvement). The impact data collected via surveys is probably a conservative estimate since vegetable producers can lose nearly 50% or more of their crop in the absence of any insect pest control measure. The average size of vegetable farm is 28 acres (conventional) and 4-10 acres (organic/naturally grown).
- Cost: benefit ratio of IPM in vegetable production is 1:16 (\$16 return for every dollar invested). Loss in tomato yield in the absence of insecticides: 95% depending on area (Gianessi, 2009).
- The PI has been invited to the Board of the two major farm organizations in Alabama, namely, the Alabama Fruit & Vegetable Growers Association and the Alabama Sustainable Agriculture Network. Close coordination with two nonprofit marketing agencies in the Black Belt is also a result of IPM-CORE's far-reaching impacts.
- Client testimonials are provided to indicate program success and continued need for an IPM campaign in Alabama.

Lessons learned:

- IPM-CORE included multiple Land Grant Institutions together (Auburn University, Tuskegee University, and Alabama A&M University) for reaching to wide audience. This collaboration is critical to project success.
- The Alabama Vegetable IPM program initiated by the IPM-CORE funds is a regionally and nationally recognized farmer-centric program that uses multiple levels of communication and training to producers. We have to use various traditional and emerging communication channels in an integrated manner to reach to new younger farmers and support experience producers.
- Continuous monitoring of program quality is important to find out what is working and to know what is not working (barriers). Continuous evaluations in various forms must be tracked meticulously to determine who is being benefited and who is not. IPM-CORE has used program monitoring and evaluation tools to evolve into an effective educational campaign.
- Capacity building and in-service training of Regional Extension Agents in multiple teams was very effective in disseminating new knowledge to farmers. Local producers always communicate with the Extension Agent first for IPM information.
- We continue to develop new publications and promotional items that have always been distributed free of charge to small and big producers in order to increase visibility of the IPM campaign. Participating in major farm exhibitions and tradeshow has also been a unique to this IPM-CORE project.

Client Testimonials (Impacts) Regarding the Vegetable Extension IPM Program:

- Steve Carpenter, vegetable producer (Muscle Shoals, AL): *“We are extremely thankful to Alabama Cooperative Extension System Specialists and Extension Agents who provide valuable crop production advice to us. We have been able to learn about new pest management techniques from the demonstration plots put up by Dr. A.”* (Statement during IPM field day on June 20, 2012)
- Charles Brannon, vegetable producer (Addison, AL): *“This is the first year we used the IPM recommendation from handbook and received training from Dr. A. In the hoop house alone, we sold about \$5,500 worth of tomatoes which is double the output from last year. The tomato fruit worms and leaf footed bugs caused 50% yield loss in the past but not this year. With abundant production, we are taking our produce to large farmer markets in Birmingham and Decatur, not limiting ourselves just to the farm stand.”* (field survey on July 5, 2012)
- Frank Randle, transitioning vegetable farmer (Auburn, AL): *“We have terrible outbreaks of squash bugs every year and in 2011, the IPM program told us about mechanical barriers like net houses for slowing down the squash bugs. We now use low tunnels and row covers early in the season as a mechanical pest management method and improved our squash production tremendously by 80%. Our squash production has improved by about 3300 lb and profits have increased by \$4400 (2000 row feet of crop).”* (Statement during IPM field day on June 20, 2012)
- James Bedsole, large vegetable producer (Dothan, AL): *“We received the crop production handbook from Extension office and use it very much for our large-scale vegetable production. If we weren’t using insecticides as recommended by the handbook,*

we could potentially lose our entire crop to worms and the loss would be about \$25,000 per acre.” (field survey on June 14, 2012)

- Jonah Tobin, gardener (Birmingham, AL): *“Thank you so much for talking to me the other day and taking the time. I appreciate your sending me this article. I also was at the extension service yesterday and went over the garden stuff with Bethany. I appreciate all your help and will call again if I need to talk. Thanks for being there!”* (via email on June 6, 2012)
- Albert Riddle, medium sized vegetable producer (Titus, AL): *“We use the integrated pest management recommendations provided by Chip East – our Regional Extension Agent. I can lose over 50% of my tomato crop if I did not follow IPM for insect and disease management. That is about \$10,000 loss per acre.”* (field survey on May 23, 2012)
- Danny & Dale Dickie, large vegetable producers (Oneonta, AL): *“We use the insecticide recommendations from the SE Vegetable Handbook and consult Mel Wade before we treat the crops. Without insecticides, we can potentially lose over 80% of our crops to worms and stink bugs that may result in over \$20,000 loss per acre.”* (field survey on May 30, 2012)
- Dennis Gentry, Subscriber on Facebook (Vegetable IPM) via email: *“I really do like the tests on your Facebook page.”*
- Val Webb, Subscriber on Facebook (Vegetable IPM) via email: *“I enjoy the informative posts on your Facebook page. Keep up the good work!”*
- Lloyd Robbins, Wendy’s Produce: *“Thanks for the good work you are doing, and the website updates. It made it pretty easy to figure out what the little green bug with 12 spots was on my plums.”*
- John Palmisano, new vegetable producer in Cullman County, AL (received IPM newsletter & other information): *“This (IPM newsletter) is exactly the type of guidance I’m looking for; I’ve already read through almost all of the weekly IPM Communicators and am beginning to develop a feel for the pest management issues as I read the referenced materials. It definitely holds a wealth of information for the beginning farmer.”*
- Megan Busby, new vegetable farmer in Randolph County, AL: *“Thank you for your thoughtful response. I will join you on Facebook and subscribe as you suggested. I have found some beneficial insect and plant information by doing as you suggested - looking up the problem pests using Alabama extension service information and then finding the predators and then how to attract them. Good luck with all of your research and I am so glad you are helping improve our food supply!”*
- Jerry Noe, New Mexico State University: *“I talked to you several days ago about a white fly problem in our test greenhouse operation. Thanks for taking the time to share some of the information that has already helped us.”*

Public Reactions to Newspaper and Magazine Articles on IPM and Vegetable Production:

- Reaction to magazine article ‘Technology Pipeline’ (April 2012):
 - *I read with great interest your article entitled “Technology Pipeline” that appeared in the April 2012 issue of Georgia Gardening magazine. I live in Chamblee, Georgia, a northern suburb of Atlanta. I had been plagued for many years with birds, squirrels, and chip monks destroying my tomatoes, usually with the damage occurring just as the fruit were ripening. Several years ago I decided to take serious*

action and enclosed the tomato plants in bird netting like you describe in your article. I do square foot gardening, so only 4 plants were involved; the enclosure measures about 3 feet by 12 feet. The damage immediately came to a halt and I also noticed much less insect damage as well. I then realized that moths and butterflies could not get through the netting. The next year, I hung two yellow sticky traps in the enclosure and further damage (from aphids and whiteflies for example) decreased dramatically. I now apply Dipel two to three times per year and rarely use anything to control the other insects, and I get all the tomatoes that I want. When I first built the enclosure, I used 8 foot long poles on the corners and ran pieces of PVC pipe between them to support the netting. The PVC was so heavy, however, that it would sag of its own weight. I took up your idea of using rope between the poles this year and it is working wonderfully. It is not sagging at all. The only thing that I did a bit differently from what you describe in the article was to use duct tape to hold the rope to the poles in addition to tying it – I didn't trust my knot tying skills. Thank you so much for your article – I will certainly forward to others that you write in the future. (Dr. Daniel Schadler, Oglethorpe University, GA, email August 12, 2012)

- Reaction to newspaper article on insect netting (Mobile Press Register, December 29, 2011):
 - Contacts with audience: 3 (1 FL grower)
 - *I read with great interest your article in the Press Register on Dec. 28 about using netting. Thanks so much, I've always felt the Extension office was a very valuable service provided by Auburn. (Suzanne Laurier, Orange Beach, AL, email February 7, 2012)*

- Reactions to the newspaper article 'An Urban Cornucopia' (Birmingham News, March 15, 2012):
 - Contacts with audience for more information: 8
 - Comments:
 - *I enjoyed reading your article in The Birmingham News dated March 18, 2012 entitled "An Urban Cornucopia" (Dr. J.R. Patel, Birmingham, AL, email March 22, 2012).*
 - *I read the story in the Birmingham News that says that you are trying to reach urban producers with business and marketing training, and technical knowledge. I am the garden manager in Birmingham for a few urban gardens, one of which is a food production site (although, little food is currently planted). I am interested in more training in various topics. (Laura Rodgers, Urban Garden Manager, The Southern Environmental Center, Birmingham, AL, email March 19, 2012)*

Table 1. IPM-CORE Program Outputs, Outcomes, and Impacts, 2009 to 2012.

MAJOR PROJECT OUTPUTS (program-centered)				
AUDIENCE BREAKDOWN	2012	2011	2010	2009
Number of audience reached	945+	771	259	67
Survey returns (n)		439	119	28
Return rate (percent)	55%	57%	54%	39%
Number of major Extension IPM training events	34 (3 levels, 2 projects)	28	4	3
Average number of counties represented by audience	7	8	5	5
Average land holding of participants (acres)	10 (org.), 24 (conv.), 2 (gard.)	9.3	13.6	28.0
EXT. PUBLICATIONS	2012	2011	2010	2009
Ext. bulletins	4	1	1	1
IPM newsletter issues	18	17	18	18
IPM newsletter subscriptions	980+	570	280	57
Magazine publications	3+9	8	1	-
Promotional items	6+	-	-	-
News releases	8+	8	6	6
Success stories (for stakeholders)	4	2	1	-
NATURE OF AUDIENCE	2012	2011	2010	2009
Conventional producers	30%	26%	36%	73%
Small family farms (organic or transitioning farms, certified naturally grown)	51% (5% organic,	39%	42%	13%

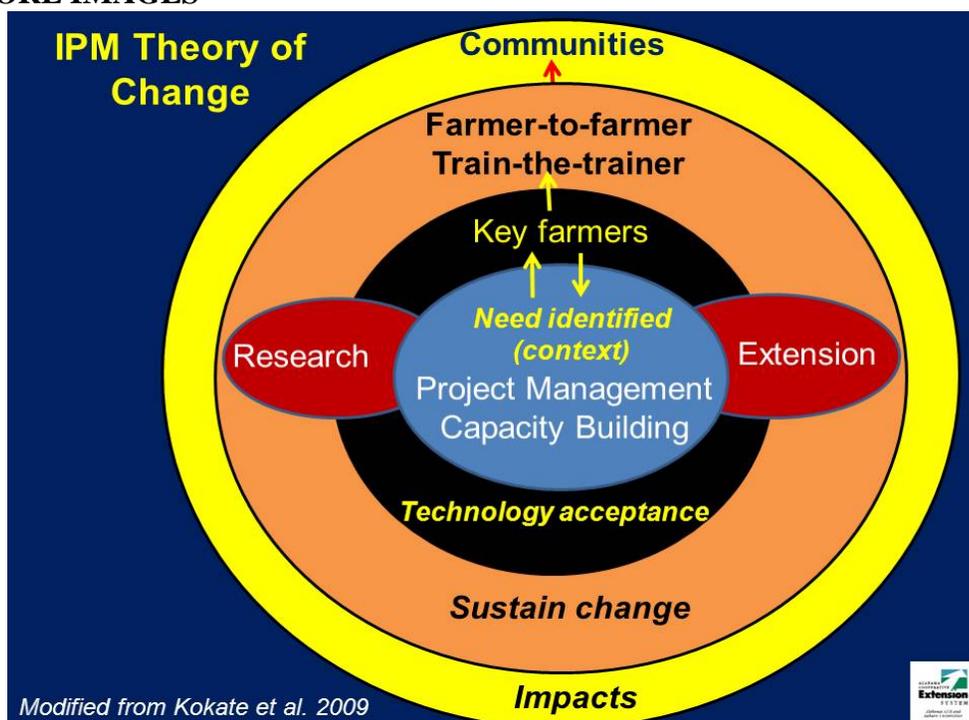
	36% naturally grown, 2% urban farms, 8% new farmers)			
Crop consultants	5%	3.1%	4%	0%
Industry representatives	2%	4.3%	2%	3%
Gardeners	20%	20.9 %	7%	11%
USDA/NRCS personnel	6%			
BASIC IPM TRAINING	2012	2011	2010	2009
Participants with prior IPM training	13%	34.3 %	-	52%
Confidence in IPM application	10%	15.8 %	-	10%
Never heard of IPM	5%	27.0 %	-	27.0 %
Information retention		45.2 %	-	12%
EVALUATION OF OUTPUTS	2012	2011	2010	2009
Awareness about or use of the IPM newsletter	55%	42%	24%	10%
Do not use university IPM publications	45% (many new farmers)	35%	28%	24%
Use of major Extension IPM publications (2 guide books)	70%	55%	45%	48%
Subscriptions to Facebook Page (Alabama Vegetable IPM)	208	100	30	-

Support for continuing a social media presence	-	50%	-	-
Usage of vegetable IPM website by participants	60%	55%	49%	41%
Peer recognition of program (number of awards)	2 national awards	6 communication awards	4	0
MAJOR PROJECT OUTCOMES (participant-centered)	2012	2011	2010	2009
Overall quality of IPM training	88.9%	86.9%	83.3%	71%
Average change in IPM knowledge	48%	49%	40%	53%
Average changes in confidence in IPM recommendations	55%	55%	49%	41%
Adoption of insect monitoring/scouting practices	76%	73.5%	-	41.0%
Adoption of cultural tactics for insect management (trap cropping, sanitation)	58%	58.9%	-	18.5%
Adoption of mechanical control practices (row covers, insect netting, reflective mulches)	32%	43.3%	-	-
Adoption of insecticide recommendations	80%	79.6%	-	46.5%
Use of biological insecticides	62%	42.3%	-	26.5%
BARRIERS TO IPM ADOPTION (FARMERS)	2012	2011	2010	2009
Lack of awareness of IPM program	65%	29%	-	45%
High cost	14%	23.2%	-	7.5%

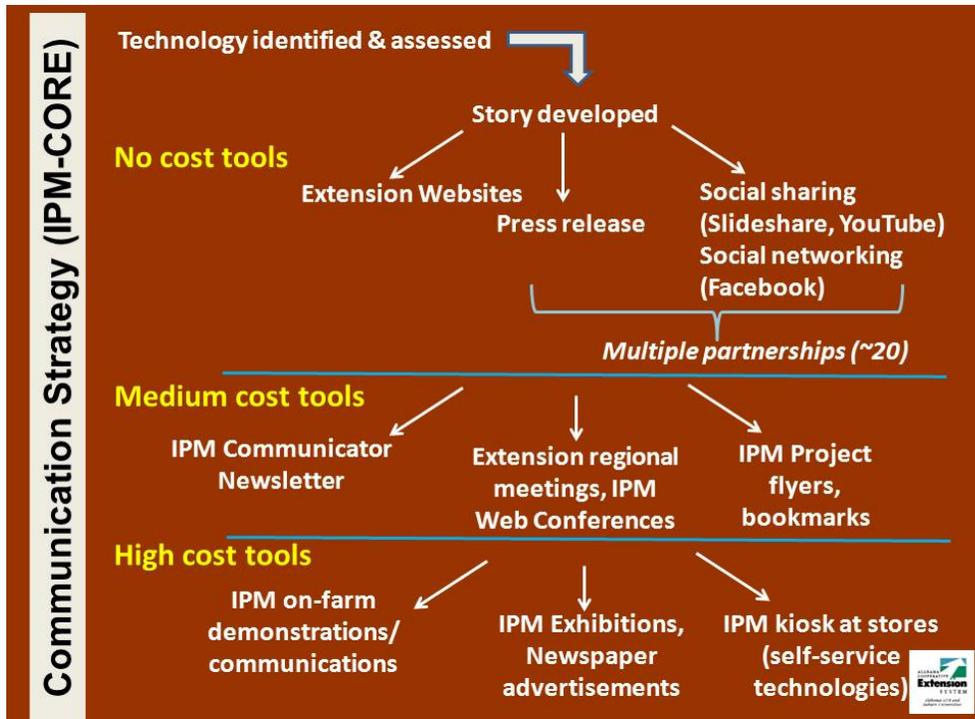
Low availability of reliable data	10%	14.8 %	-	10.5 %
Difficult to access information	6%	2.2%	-	15.0 %
Low availability of recommended insecticides	12%	11.4 %	-	10.0 %
Program information not helpful	0%	1.2%	-	0%
Difficulty in implementing practices	0%	11.6 %	-	10.0 %
Lack of time	2%	5.0%	-	2.5%
BARRIERS TO IPM ADOPTION (CERTIFIED CROP ADVISORS, n = 18)	2012	2011	2010	2008/2009
Lack of awareness of IPM program		5%	-	38%
High cost		32%	-	7%
Low availability of reliable data		5%	-	38%
Difficult to access information		0%	-	7%
Lack of confidence in IPM		10%	-	7%
Program information not helpful		0%	-	0%
High risk of crop losses		5%	-	0%
Lack of time		43%	-	0%
IPM-CORE IMPACTS	2012	2011	2010	2009
Overall adoption rate of IPM practices by farmers	55 to 70%	62.7 %	-	38.5 %
Cost saving by using IPM newsletter information (reader survey, 6 case studies)		\$591 gain per adopting		

		farmer		
Cost savings by using vegetable IPM recommendations (farmers)		\$246 per acre		
Cost savings by using IPM recommendations in general (CCA surveys)		\$186 per acre		
Cost savings by using IPM recommendations in general (Gardener surveys)		\$111 per acre		

IPM-CORE IMAGES



This is the Theory of Change (Extension Model) for the entire project showing various levels of impacts made by the project.



IPM Core Communication Strategy

ACES Commercial Horticulture Team – Vegetable IPM Team Members



Ayanava Majumdar,
Extension Entomologist
& Vegetable IPM
Project Coordinator



Chip East, Regional
Extension Agent



Gary Gray, Regional
Extension Agent



Tony Glover, (former)
Regional Extension
Agent, currently
County Ext.
Coordinator



Bethany O'Rear,
Regional Extension
Agent



Doug Chapman,
Regional
Extension Agent



James Miles, Regional
Extension Agent



Mike Reeves, Regional
Extension Agent



Neil Kelly, Regional
Extension Agent

ACES Home Grounds Team – Vegetable IPM Team Members



Chris Becker, REA



Willie Datcher, REA



Mike McQueen, REA



Alfred Jackson, Tuskegee Univ. Extension

ACES Extension IPM Team that implemented IPM-CORE Project from 2009 to 2012.



Regional IPM Training Meetings (Level 1 training)



Hands-on IPM Workshops (Level 2 training)



IPM Field Days (Level 3 training)



Farmer-to-Farmer training during IPM Field Days



Causes high information retention &
impact on communities



Know the IPM Campaign!

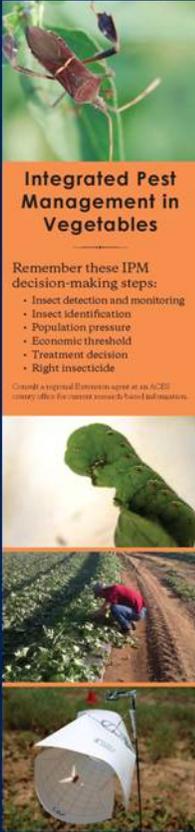


Alabama Vegetable IPM Project

Scout Without Doubt

Visit  Alabama Vegetable IPM website
www.aces.edu/go/87

Campaign items: Display magnets, bookmarks (4 designs), IPM exhibitions



Integrated Pest Management in Vegetables

Remember these IPM decision-making steps:

- Insect detection and monitoring
- Insect identification
- Population pressure
- Economic threshold
- Treatment decision
- Right insecticide

Consult a registered Entomologist agent at an ACEE county office for correct insect & brand recommendations.



Visit the Vegetable IPM website

Extension newsletter: <http://aces.edu/Lifeforms.asp?CategoryID=180>
 Alabama SARE website: www.sare.org/SARE-in-Four-States/Alabama
 Facebook page: Alabama Vegetable IPM
 Alabama Vegetable IPM website: www.aces.edu/go/87

Alabama Cooperative Extension System
 Alabama A&M and Auburn Universities

Support for Alabama Vegetable Extension Program
 The Alabama Cooperative Extension System (ACES) is a program of the Alabama A&M and Auburn Universities, providing extension and support to the people of Alabama. © 2012 New Leaf Publishing, LLC. All rights reserved.
www.aces.edu

Examples of bookmarks and the IPM logo that are part of the IPM-CORE educational campaign.

This report was submitted to ADAI on October 31, 2012 by Dr. Ayanava Majumdar.

Project #9

Development of an Alabama Plant Evaluation Program

Project Summary

Many states have established statewide plant selection/introduction programs for the purpose of promoting and marketing selected plants to consumers to increase sales for the Green Industry. Statewide growers and retailers have requested such a program for Alabama. In order to have a strong foundation, Auburn University has completed a research study to compare all existing national programs on structure, operation, and success in order to create a sustainable program. This research also surveyed Alabama growers and retailers to determine their opinion about a potential plant selection program. Over 90% of respondents wanted to have some involvement in the potential program including growing and selling the plants, committee participation, nominating plants, and marketing the selected plants. Most respondents thought a plant selection/introduction program could help their business. Based on these findings, this project was proposed to implement an evaluation program that would select the best landscape plants for Alabama. This has the potential to benefit all homeowners, landscape businesses, nursery and greenhouse operations, as well as retail garden centers across the state.

Project Approach

Part 1

The research conducted in the study was broken into three sections, an industry survey, consumer survey, and summer annual plant trial. Recruitment for the first study consisted of participants from the Alabama Nursery and Landscape Association (ALNLA) that were either landscape or production companies. The ALNLA was chosen because it is the largest green industry organization in the state of Alabama. A survey was developed and sent to all participants (N=193) seeking to gather information on perceptions of consumer demand, interest in a state plant promotion program, and opinions on specific annuals trialed.

The results of this study showed that the industry believes consumers are predominately focused on physical characteristics of plant materials. Foliage color (61%) and flower color (58.5%) were the most popular answers when asking the industry what they thought consumers look for in foliage and flowering annuals. The majority of participants (89.7%) expressed interest in the development of a statewide plant promotion, and the majority of participants (76.9%) wanted to receive plant promotion and trial information from a website. When asking about specific species for trials on *Solenostemnon scutellarioides* (Coleus) and *Angelonia angustifolia* (Angelonia), 80% currently grow or use coleus and 75.6% currently grow or use angelonia. Interest in learning about new cultivars and varieties of angelonia (87.2%) and coleus (77.5%) was also very positive. The results of this study showed that the industry is consistent in their theory stating consumers are mainly interested in aesthetic appeal, they are interested in the development of a plant promotion program, and are interested in learning about new cultivars and varieties that are being trialed and introduced through such a program.

Part 2

The second part of the research consisted of a consumer survey. Participants for this survey predominately came from master gardeners across the state. Master gardeners were encouraged to forward survey link along to non-master gardeners within the state of Alabama as well. This survey was developed in order to gain information on preferred consumer characteristics, interest in a plant promotion program, and opinions of specific annuals trialed. Data collected from this study will be compared to data from the industry study in hopes of finding correlating data, thus proving that the industry understands consumers and their demands.

The survey gathered 542 respondents, with the majority of the respondents being 65 or older (30.8%) and being master gardeners (61%). Participants looked mainly for color (88.6%) and plant use (63.1%) when purchasing plant materials, and almost all of the participants (95.2%) made the decision of purchasing plant materials themselves. If a plant promotion program was promoting plant materials, 88.4% of participants said they would buy the programs plant material with 69.1% saying they would be willing to pay more for these plants. This study showed consumers are looking for plant material that have brilliant color and will perform well in Alabama.

Part 3

The third part of the research consists of a plant trial on two summer annual species, *Angelonia angustifolia* (Angelonia) and *Solenostemnon scutellarioides* (coleus). Six cultivars of each species were trialed with three repetitions each. Study was installed at the Auburn University Teaching Gardens on Woodfield Drive in Auburn, Alabama. This study was done to evaluate the given species performance in full sun conditions in the harshest environmental conditions available in the Alabama summer. All six cultivars of both species were ranked in both studies above to determine most preferred cultivars trialed. A field day was also hosted for the industry to assess and see first hand the performance of the new cultivars of both species.

Both species were planted in full sun conditions to simulate the harshest conditions a landscape can offer. The coleus cultivars used were all classified as sun coleus varieties, yet after one week in the landscape, signs of sun scorch began to appear. Coleus cultivars diminished in size until irrigation rates were elevated from 15 minutes per day to 45 minutes per day. Evaluations were done every 14 days throughout the summer until termination. Angelonia did not suffer from the transition from greenhouse to landscape. Cultivars were budding or in flower at time of planting and bloomed constantly throughout the growing season al the way up to termination. There was a minor problem with stem breakage with AngelMist™ series, due to the growth habit of the AngelMist™ series. Serena series is much more compact in growth habit and did not have any problem with stem breakage.

Goals and Outcomes Achieved

The original proposal for this grant identified Lantana (*Lantana camara*) as the species to be trialed. A grower survey was to be created that would include a list of all produced Lantana cultivars and new releases. The growers would be asked for their familiarity with the cultivars,

which ones they grow, and their opinions on the best Lantana cultivars. Another survey would be created for landscapers to determine their familiarity with the different cultivars, which ones they use, and their opinions on the best Lantana cultivars. Comparisons were to be made between the landscapers and growers. Based on the results, the “best” lantana cultivars chosen and the new cultivars will be planted in a trial garden.

This first portion of the project did not happen at all. After taking copies of the project to an ALNLA board meeting, it was the overwhelming consensus of the members that Lantana was not an acceptable species to trial. They were not concerned with new cultivars or their ability to overwinter. There was no consensus, however, on what should be trialed. An advisory committee was formed and polled, but still no suggestions were received for annual or perennial plant material. After going back to the executive director with these issues, he suggested two plants - *Angelonia angustifolia* (angelonia) and *Solenostemnon scutellarioides* (coleus). Data were taken on the plants to include growth rate, heat and drought tolerance, and visual plant quality.

The results of the experiment were to be shared with the growers and landscapers by hosting a field day at the trial garden. This was held in August, 2011. Growers, landscapers, extension specialists, and other professionals were invited to attend the field day through the Auburn University Landscape School held each August. At this field day, the fifteen attendees were surveyed to determine which cultivars they felt were performing best and which were their favorites.

Written materials were also to be created to send directly to all growers and landscapers in ALNLA (193). This document was created and is attached to this report. Follow-up surveys were to be created to determine the acceptance of the evaluation. Industry professionals were also to be polled to determine their opinions of the trial process to determine if adjustments need to be made in the trial process, selection of the plant material, or dissemination of materials. The majority of respondents wanted to have the information from the trials given to them via the internet. There were no suggestions made on the trial process, but several growers did list plants to include in future trials.

The overall goal of this project was to create a plant evaluation and promotion program for the state of Alabama. While the promotion part of this goal did not happen, we did make progress towards determining best practices for the plant evaluation side of the project. The records that were kept over the past two years on implementation of the trial and evaluation of the plants, provide a strong foundation for future trials. I think the actual promotion part of the program is going to take more time and dedicated extension personnel to glean what we can from the industry. Very few industry professionals had any input in any part of the program; they just want the program. It is my opinion that they need to be an integral part of the whole process or it will not be successful. One person cannot sustain this type of program.

Beneficiaries

At this point, the beneficiaries for this research are the green industry. It will take time for the benefits to work themselves out to the consumers and the economy. We have completed the informational sheet from the actual trial and will be mailing it to the industry within a week. We also plan to put a copy of this document on the Alabama State Master Gardener website. At that point, those that participated in the study and those that did not will both have the information about the plants which could impact what is prepared for next year and what is requested.

Some plant promotion programs have become very successful and have reported increased sales. One program is the Mississippi Medallion program, which had an overwhelming response to a medallion winner, the panola (*Viola x wittrockiana* x *V. cornuta*). Prior to 2000, Mississippi did not sell panolas, but once this plant was selected as a Mississippi Medallion winner consumers' interest increased. Most growers in the state sold out of the panola that year. One grower reported selling 16,000 pots of panola the first year with promotion and 10,000 pots the following year without promotion. A successful program can provide great benefits, strength, and economic impact amongst the green industry in the state of Alabama.

Lessons Learned

The biggest lesson learned from this project was the fact that you cannot move quickly or even efficiently sometimes when dealing with large numbers of people. I honestly believed that this was a program that the industry wanted based on previous research, but so few had any insights or suggestions to give at any point in this study. What we have found based on survey results and actually dealing with the industry in trying to get surveys returned, was that they want the program, but do not necessarily want to have anything to do with it. It took repeatedly contacted them both by paper mail and electronic mail to get enough surveys returned to make this a valid study.

I do think it will take polling the industry again to determine who would be willing to be on a steering committee for this program and then using those members to determine all aspects of the program. I did not want to develop an official name or logo for the program without input from the industry, but getting feedback from most of them was near impossible.

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Project #10

NAME OF PROJECT: Sankofa Youth Agriculture Project

PROJECT SUMMARY

The Sankofa Youth Agricultural Project (SYAP) was started by the Federation of Southern Cooperatives/LAF in 2004 to meet the socio-economic needs of youths in underserved, limited resource communities. Since it started, the SYAP has enjoyed support from different organizations and government agencies for various programs. The project was carried out in Greene/Sumter counties in Alabama. The average high school graduation rate is about 65% and the median family income is \$24, 287. These counties have unemployment rate of 12.3 % with 33% of individuals living below the poverty line.

In 2009 the SYAP received an awarded of \$25,000 under the Alabama Specialty Crop Block Grant (SCBG) for a 2-year project. The SCBG was designed to enhance the competitiveness of specialty crops. For the realization of this project, the following objectives were planned to be carried out by the SYAP:

1. Increase child and adult nutrition knowledge and consumption of specialty crops,
2. Develop good agricultural practices, and
3. Promote sustainability.

The overall goal of the project was to encourage the production and consumption of specialty crops which we believe will help reduce some of the health issues associated with unhealthy food choices prevalent in the Black Belt area of Alabama. This project had a budget including monthly student stipend, travel reimbursement, supplies, minimal contracting work, and publications.

During the duration of the project, which usually occurred in the summer season, students were employed to participate in agricultural related project at the Federation's Rural Training and Research Center. Those participating in the project were recruited between March and April, and May and June, of 2010 and 2011, respectively. The period of the project's activities was appropriate for the high school students, because during this time they were out of the normal school activities. In addition, the most appropriate season of the year to grow crops is in the summer period. We continued to work with the youths after they went back to school. This gave the youths opportunities to participate in conferences, workshops and meetings that were not organized in the summer season. In the first year (2010), youths were introduced to: agriculture through growing vegetables on approximately one-acre land, in class teaching of good agricultural practices; farm visits and produce marketing. The youths were introduced to good nutrition and healthy living through in-class training on nutrition and food choices, exercises and outdoor activities. The second year (2011) of the Sankofa Youth Agriculture Project was planned to focus on developing instructional materials on specialty crop nutrition, recipes; outreach to schools and communities; presentations at conferences, schools, and communities. After a prior year's program review, it was decided that repeating the vegetable garden was a better way to help increase the youth's interest in specialty crop and reach more youths in the community.

Beneficiaries from this project included and not limited to the youths, peers, members of the communities, Greene/Sumter Farmers' Market and staff of the Federation.

Project Approach

The staff of the Federation of Southern Cooperative / Land Assistance Fund planned the project's activities. In order to recruit the targeted individuals, the Federation staff visited three high schools (Greene County High School, Sumter County High School, and Livingston High School) and gave presentations about the program to youths in grades 9 through 12. With prior consent given by the school principals, the Federation's staff gave presentations to students in the Biology and Agricultural science classes. At the end of each presentation, application forms were left with the teacher for interested students. In 2010, a total of 42 eligible applicants were interviewed in April, however, 20 were selected for the program. While in June 2011, 23 were interviewed, out of which, only 8 were recruited for the summer project because of the limited funds available for the program in 2011. In each of the years, the project was kicked off with a 3-day orientation. During the orientation, the youths and their parents/guardians were educated about the goals and objectives of the project to ensure support and commitment—both youths and parents/guardians at the end of the orientation signed a memorandum of understanding. To ensure safety on and off farm, safety and emergency response trainings were provided by Federation's partners, Alabama Cooperative Extension and the Livingston Fire Department.

In 2010, participants for the project were recruited between March and April. The youths were introduced to agriculture through growing vegetables on an approximately one acre of land, in class teaching of good agricultural practices, farm visits and produce marketing. The youths were also introduced to good nutrition and healthy living through in-class training on nutrition and food choices, food recipe demonstration with specialty crops, exercises and outdoor activities.

Prior to the recruitment of the youths in March and the subsequent interview in April, the site for the youth garden was selected in fall of 2009. The soil was tested and cover crops were planted to help build soil nutrients during the cold fall and winter months. The cover crops were tilled into the soil in late April and planting began in May. Hired labor was used to work the ground while the youths were being introduced to the Federation, the objectives of the specialty crop funded program, and farm safety. Transplants were used instead of seeds for all planting. Before each crop was planted, the youths were educated on the soil requirement for the crop, planting method, spacing, nutritional values and climate requirements by the AmeriCorps VISTA member assisting with the project. The crop planted included collard greens, strawberry, tomatoes, peppers, sweet potatoes, watermelon, squash, okra, cantaloupe, eggplant, etc.

Sustainable agricultural practices were taught to the youths as the sustainable way of farming. Chicken and cow manure were used to amend the soil for plants requiring more nitrogen than present in the soil. Companion planting was introduced as a way to control plant pests and diseases. Weeding was carried out using simple farm tools such as hand shovels, hoes, and weed eater where possible. Every opportunity was utilized as a teachable moment on the field to explain food production to the youths. The VISTA member assigned to the project assisted with organizing and coordinating workshops and in-class training and field visits. The youths hosted a field day in August of 2010 and talked to visiting adults about their project.

The second year (2011) of the Sankofa Youth Agriculture Project was planned to focus on developing instructional materials on specialty crop nutrition, recipes; outreach to schools and communities; presentations at conferences, schools, and communities. But, after a prior's year program review, it was decided that repeating the vegetable garden will be a better way to help

increase the youths' interest in specialty crop and reach more youths in the community. The youths attended conferences, town hall meetings, and school activities to share their experiences. The youths were available to assist any interested families with setting up raised beds at their homes. A total of six raised beds were set up in three locations—two at the Federation's Rural Training and Research Center in Epes, Alabama for teaching purposes and two each at a community member's house to promote specialty crop consumption.

During 2010, the project partnered with Tuskegee University's Nutrition Education Program that took the youth through a 8-week nutrition training, which introduced the students to nutrition training which focused on healthy food selection, shopping for grocery, making simple healthy snacks, simple recipes using specialty crops and some basic exercises. The Greene/Sumter County Farmers Market Cooperative formed a critical component of the SYAP activities. The produce harvested (specialty crops) from the youth garden was sold at this farmers market in Eutaw, Alabama. Project coordinators estimated approximately \$134 in farmer's market sales, which was used to continue SYAP outreach. The youths organized a field day and participated in the Federation's Annual Meeting in August of 2010. They talked to and interacted with visiting adults about their project. At the end of the summer and into the school year, SYAP students continue to participate in workshops, conferences and meetings where they share their experiences with their peers and the communities. Although some problems and delays were encountered during the course of this 2-year project, overall, it was successfully conducted. The principals of the high schools visited, indicated their interest in setting up a vegetable garden on their campuses for student education as well as to encourage the consumption of specialty crops by the community.

Students were trained on financial literacy part of which was to encourage the youths to open a bank account where their checks were deposited at each pay period. Another component of the financial literacy covered how to maximize their spending by teaching how to do grocery shopping, replacing the unhealthy food choices with vegetables to encourage consumption of specialty crops which we believe will help reduce some of the health issues associated with unhealthy food choices prevalent in the Black Belt area of Alabama

GOAL AND OUTCOMES ACHIEVED

The goals for this project included increase child and adult nutrition knowledge and consumption of specialty crops, develop good agricultural practices, and promote sustainability. To achieve these goals, the project had an acre youth garden where they planted, tended, and harvested specialty crops. The project partnered with Tuskegee University's Nutrition Education Program, which introduced the students to nutrition training. These training were focused on healthy food selection, shopping for grocery, making simple healthy snacks, simple recipes using specialty crops and some basic exercises. In 2010, twenty students were recruited, but 17 youth completed the program; in 2011, eight were recruited, two dropped out but were replace and all eight student completed the program. The students sold their produced at Greene/Sumter Farmers Market, where they encourage people to buy and consume locally grown produce. Sale produce from the youth garden was estimated to be \$134. The youths hosted a field day and participated in the Federation's Annual Meeting in August of 2010 and 2011. Over 50 participants were present at the field day each year. The student also received unscheduled visitors, who came to

see what students were growing, through out the duration of the program. The students reach out to over 300 people through their outreach effort in the communities and presentations at the Federation's annual meetings in 2010 and 2011. Although no formal survey was carried out to measure the knowledge level of the participants, responses and reactions of the participant show a significant increase in knowledge of the participants about specialty crop and nutrition. No curriculum was developed for the reason already stated above.

As a result the SYAP activities, two of the SYAP youths applied and received a \$5000.00 youth loan each from USDA-FSA to start a livestock production. The loan was provided by the USDA's Farm Service Agency and not the SCBGP. In addition, one of these students received an Entrepreneur award during the 2011 Youth Empowerment Summit at Tuskegee University. Other students share in this achievement by participating and receiving more exposure and networking with college students, professors, other high school students from other schools.

Produce from this project was extended to family and community members when the produce from the youth garden were not sold. Youths set up two raised beds for different families in the communities to start a home garden. Youths shared their successful stories at different conferences and meetings with different audiences.

BENEFICIARIES

The youths were the direct group of beneficiaries. Most of the students recruited indicated that this was their first job that generated for them financial benefit through the monthly stipends. Students profited from exposure to different agricultural related programs. Selling produce at the farmer's market exposed the youths to produce marketing, bookkeeping and interaction with community members. The youths gained an insight about produce handling and safety for market and how to preserve unsold produce. The youths were amazed with their networking capacity within a short time. The youths were surprised to learn some very interesting and delicious meals and snacks they could make with specialty crops. One of the students received an award during the 2011 Youth Empowerment Summit at Tuskegee University. In June, some of the youths that were eligible participated in a week-long Forestry Camp organized by the Alabama Forestry commission. This provided the participants the opportunity to learn more about other area of forestry, the environment and recreational activities under forestry.

The communities benefited from the youths' participation at the farmers markets as well as the donation of unsold produce. Two families in the communities benefited from raised beds gardens and the specialty crops provided by the project. The Greene/Sumter Farmers Market benefited from increase sale and variety of farmer produce at the market during those seasons. The students' consumption of special crops increased. The Farmers' Market enjoyed the active participation of the SYAP in their Saturday marketing. One of these instances was during a Water Melon Contest organized by the members of the Farmers market. The youths acted as judges during this event.

The youths held a field day in August of 2010 and talked to visiting adults about their project. Later in summer of 2010, the youth garden was visited by a student from Emory University who interviewed the youths about their project as part of her project for her PhD thesis.

LESSONS LEARNED

The problems we faced were similar in both years. Drought was one and the use of irrigation helped. The second challenge was transportation for the youths. This caused some students to terminate their participation in the project. The only solution for the transportation problem was to encourage car-pooling where possible. During 2011, due to the small number of the students recruited, it was difficult to keep up with the weeds in the youth garden due to the problem with knotgrass. If funded next year, we will relocate the garden to an area within the Federation's plot where there is no knotgrass problem.

To implement this project, modification were made which included using funds available to hire more youths instead of using the funds for producing flyers and other materials. Late planting of crops and the lack of rain affected the yield. Using seeds instead of transplants will reduce the money spent on transplanting. In spite of these challenges faced during the course of this project, we were able to sell some of our produce at the local farmers' market in Greene County as well as share harvested produced to community members. We planned on using our Facebook page to continue the education piece of our program.

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ADDITIONAL INFORMATION

The future plan for the project will depend on the availability of funds. We will seek funding to support this program for next year. The principals of the two schools, where the students were recruited (Sumter Central High School and Greene County High School) have indicated their interest in setting up a vegetable garden on their school campus to increase their students' knowledge of vegetable production and encourage the consumption of specialty crop. If successful, produce from their garden will be served in the school cafeteria. Some secondary outcomes from this project are increased youth interest in agriculture, development of leadership skills, community involvement and exposure. The youths have also indicated their interest in participating in agriculture related programs such as the USDA's AgDiscovery, and AgriTREK at Tuskegee University.

We continue to connect and share stories on our Facebook page. Please visit us at <http://www.facebook.com/pages/Sankofa-Youth-Agricultural-Project/114984831850030> for more pictures and information.

Selected Photographs for the SYAP Activities



Ground preparation and cover crops at the youth garden



Orientation day, youths with their parents



SYAP youths introduction to the garden



Farm Safety by Extension Agent Mr. Lampley



Youths planting transplants



Youth weeding and tending crops in the garden



Youths 'staking' tomatoes plants



On the field one-on-one training



Youths weeding the garden



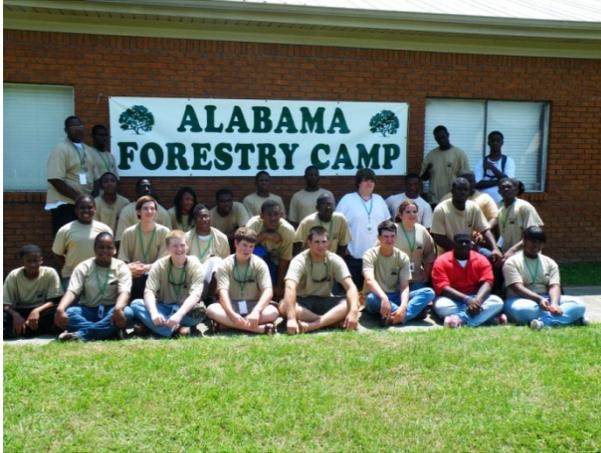
Youths taking questions from visitor on a garden tour



Tuskegee Extension staff, Ms. Davis teaching youths on simple stretch exercise and outdoor recreation



Youths preparing simple meals from vegetables taught by Ms. Davis, Tuskegee Extension



SYAP youth participating in the Alabama Forestry Camp in Epes, Alabama



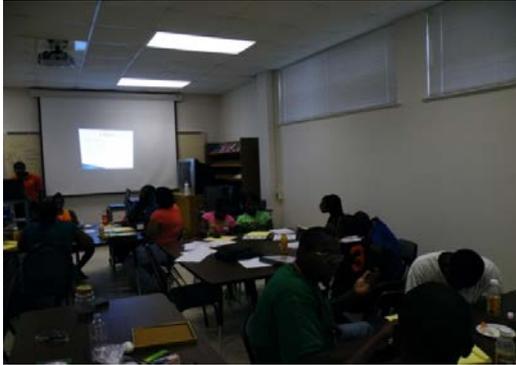
Youths on tour at Mr. Childs' farm interviewing SYAP youths



Ms. Sarah of Emory University with youths in the youth garden



Youths selling their produce at the Eutaw Farmers' Market in Eutaw, Alabama



Youths at Entrepreneurship training at University of West Alabama, Livingston, Alabama



Youths at Tuskegee University

Youths at Personal Financial Training by FDIC



Youths visiting a Soil and Environmental Chemistry Laboratory at Tuskegee University



SYAP youths invited to serve as judges at the farmers' market Watermelon Contest



Ms. Bell, a community member sharing and educating youths on wide range of issues through art and the youths performance during Federations's Annual Meeting.



One of SYAP youths honored by Tuskegee University for Entrepreneurship



SYAP youths setting up vegetable raised beds at the homes of Ms. Craig and Ms. Taylor

Project #11

Project Title

Developing Promotional Materials for Alabama's Direct-Marketing Specialty Crop Producers

Project Summary

The Alabama Sustainable Agriculture Network (ASAN) worked to develop promotional materials for Alabama's direct-marketing specialty crop producers. The project helped farmers around the state tap into the increasing interest in locally- and sustainably-grown products by creating professional promotional materials and improving customers' access to locally-grown foods around the state.

A key part of the project was the development of three metropolitan area Farm and Food Guides. The guides promote almost 200 farms that are marketing directly to customers as well as restaurants, groceries, and other outlets that support local farms. In addition, ASAN developed promotional materials that may be used by individual farmers to promote their own farms as part of a larger brand.

Project Approach

Branding and marketing has been identified as a key challenge by the farmers and educators that ASAN works with across the state. This project is just the beginning of an effort to help Alabama's specialty crop producers and other direct-marketing farmers with promotional materials for their farms.

The push for local foods and food security in the national media makes this project especially relevant. Individual consumers and institutions in Alabama may have expressed more interest in purchasing local foods, but they need support in finding local sources. This project has helped to link farmers and consumers and provide an ongoing opportunity to promote local products and farms.

While direct-marketing specialty crops producers have diverse outlets and products, ASAN is working to develop tools that can help individual farmers with their markets as well as promote local farms in general through food guides and general promotional efforts. We hired a graphic designer and photographer and worked with local community groups to help create professional materials to promote individual specialty crops producers and the market for locally-grown foods.

We were able to compile three professionally-designed local food guides for the Huntsville, Birmingham, and Gulf Coast regions of the state. The guides in total highlight 194 farms as well as restaurants, farmers markets, groceries, and other businesses providing local farm products.

We have printed 1800 copies of the guides and expect to print at least another 1000 by the end of September.

We worked with local groups to help collect data and review the materials. The Local Food Production Initiative on the Gulf Coast, Southwest Birmingham Community Farm, and Alabama A&M University all helped with the data collection for the local guides. They were reviewed by extension agents, local businesses and non-profits, and other farmers, including groups like Slow Food, Main Street Birmingham, the North Alabama Food Policy Council, the Alabama Farmers Market Authority, the Huntsville Botanical Gardens, the Birmingham Originals, and many others.

Our graphic designer also developed a marketing template that can be used by individual farmers to market their farms. The template (attached) has a standardized format, with “Your Food Was Grown By” across the top plus space for photographs and a description of the farm. The template can be easily individualized by inserting photographs, a description, and the farm name and location. While we were not able to get the templates set up for the twenty farms we planned on due to difficulties in getting the right materials from the farmer, we are still planning to complete this part of the project. We had four in the final stages of completion. Our photographer visited 13 additional specialty crops growers around the state this year that represent a variety of products and farmers. The photographs will be used for the template as well as for additional promotional materials, and the rights for use are shared between ASAN, the farm, and the photographer.

The promotion and distribution of the food guides has lead to many new connections. The first draft of a Huntsville Local Food Guide was originally distributed at the Green U Festival at the Huntsville Botanical Gardens in 2009, and in the process of festival planning ASAN staff connected with a number of environmental advocates that were not necessarily focused on sustainable food production. ASAN members Karen Wynne, Lee McBride, and Kathryn Strickland spoke on local and sustainable food production at the Green U Festival in 2011. This year ASAN staff met with the Huntsville/ Madison County Convention and Visitors Bureau prior to the release of the final version of the food guide; they are distributing the guide in the visitors center, have linked to the guide on the website, and hosted Karen Wynne on their radio show to promote the guide. Tuskegee University distributed the guides in Huntsville and Mobile as part of their educational series on organics. We expect to recruit businesses like Whole Foods to sponsor printings of additional copies of the guides. And as more guides are distributed, more connections will be made and we will find even more allies helping to promote local farms and local foods.

Goals and Outcomes Achieved

1. Promote the products of at least 300 Alabama specialty crop producers through press releases and other low-cost educational efforts to thousands of Alabama consumers. (Goal 1)

We were able to promote fewer farms than expected. The number of direct-marketing specialty crops producers is probably lower than we originally thought. A well-researched state-wide guide would likely have about 300 farms listed; we have collected information on about that many farms. The numbers of individual farms promoted are listed below:

Huntsville Food Guide	49 farms
Birmingham Food Guide	96 farms
Gulf Coast Food Guide	49 farms
Farms photographed	13 farms
Templates developed	4 farms

In total, approximately individual 200 farms were promoted using the tools we created. While we did some general local promotion along with our food guides, it would not have significantly increased those numbers.

2. Create individualized promotional materials for at least 20 Alabama specialty crop producers using a professionally-designed farm profile template. (Goal 2)

Jessica Peterson, a graphic designer based in Tuscaloosa, developed a promotional template highlighting specialty crop producers (attached). We hoped that the templates would represent the diversity of Alabama's farmers by age, race, gender, crop, and geography.

Unfortunately this part of the project did not go so well. In the beginning, we had a number of farms volunteer for the project. We found that it was more difficult than we expected to get a few good photographs and a small description of the farm. The farms that volunteered were only really available for a few months in the winter, and then as the growing season started they did not have time to finish the project.

Our original planned photographer moved to New York, and so we did not get our professional photographer out until this May, and delays in getting the photographs edited resulted in our not receiving copies until very recently.

Part of the plan was to print and distribute the first templates in order to drum up interest and get more farmers to sign on. With delays in receiving funds and cash flow problems, we were unable to print the first two templates for many months, at which point the information was out of date. Since then one of the farms has gone out of business.

We do still expect to get these templates finished. Ms. Peterson has committed to completing the templates for at least 20 farms, and we now have appropriate photographs to use for thirteen farms. Any design cost for templates beyond the first twenty will be minimal, maybe \$25-50, and we hope that farmers will take advantage of this opportunity especially over the next winter. We expect that in time the templates will still help develop an identifiable brand when displayed at farmers markets and in restaurants, farm stands, and grocery stores.

3. Distribute at least 1000 local foods guides to consumers in three Alabama metropolitan areas. (Goal 3)

We did meet and exceed the numbers for this goal. We have printed and distributed 800 guides for the Huntsville area and have printed another 1000 for the Gulf Coast that are now being distributed. We plan to print at least 1000 guides for the Birmingham area before the end of September.

In addition to print guides, the Huntsville Guide is available on our new and improved website and linked from local websites including the Huntsville Visitors Center and the North Alabama Food Policy Council. The Gulf Coast Guide is for now available on our website and through the Local Foods Production Initiative based in Baldwin County. We hope to have the information available through visitors centers on the coast and in Birmingham as well, and the Birmingham guide available on our website in the next month. While we do not know how many of the guides have been downloaded from our website, since it was placed online earlier this year we have gotten about 4700 hits on the ASAN website.

Ms. Peterson has developed a recognizable food guide design that has been used for all three guides. This design can be used in other parts of the state or for an eventual state-wide guide and is another step in the process of developing a brand. Initially we had planned to develop unique guides for each region, but have realized the need for a more standardized design to help consumers recognize the final products.

Beneficiaries

The development of the three food guides has given us the opportunity to promote 194 farms in all parts of the state, ranging from very small farms selling at one or two farmers markets to larger vegetable producers that sell through wholesale and retail markets. We expect that most if not all of them will benefit from the increased consumer education on sources of local produce as well as by providing specific information about products available on their farms.

We also were able to have a professional photographer shoot 13 specialty crops farms and markets across the state, listed below. Farms that are starred (*) are one of ten ASAN demonstration farm sites, a program that helps support small farms with educational programs to host workshops for local farmers and gardeners.

J. Darby Farm, Montevallo, AL, raises certified organic cut flowers, satsumas, vegetables, herbs, bees, and small livestock on 20 acres in central Alabama.

At Mahalah Farm* in Cuba, Yawah Awolowo raises organic vegetables and herbs and goats on her family farm in far west Alabama.

Fairhope Farm* in Baldwin County is a teaching farm with a mix of vegetables, herbs, flowers, and livestock as well as a bakery.

J. Sparks Farm to the north in Huntsville has 1.5 acres of intensive hydroponic vegetable production.

Highway 45 Market and Food Hub in Mobile is working with produce farmers across southern Alabama and Mississippi to improve access to direct and wholesale markets.

James Hill Farm* in Camden raises a mix of vegetables, fruits, goats and chickens and hosts workshops and youth camps for farmers and gardeners in central Alabama.

The Farm Program at Camp McDowell*, to the northwest in Nauvoo, is teaching visitors about food production on a diversified farm with vegetable, fruit, and livestock production. Camp McDowell hosts thousands of students and campers throughout the year, and has programs for adults as well.

Alabama Rural Heritage Center* in central Thomaston, has taken the former high school's football field and converted it to vegetable production, raising a variety of organic vegetables and fruits. They host workshops at the site and also have a commercial kitchen, gift shop, and meeting space at the center. They serve as a hub for local farmers looking for an outlet for their produce.

Scott's Orchard, Hazel Green, is a 950-acre row crop farm with an apple and peach orchard. They raise 12 varieties of apples, their specialty, on property uniquely suited and selected for apple production due to its climate.

RRBG Farm* in southwestern Ariton raises certified organic traditional southern crops such as peas, okra, and greens as well as medicinal and culinary herbs, fruits, bees, and small livestock. Their farm is also used for teaching and conducting research.

Southwest Birmingham Community Farm* is located on a formerly vacant lot in a low-income neighborhood in Birmingham. They raise a variety of vegetables and herbs using a permaculture approach.

E&J Farm* is located in the far southeast corner of the state in Gordon. The Meltons' extended family raises row crops and cattle, and they have been raising and selling vegetables at local farmers markets for the past few years.

Pecan Point* in Hurtsboro raises pecans, honey bees, and livestock as well as providing bass and bream fishing. They have a small commercial kitchen they produce value-added pecan products.

To evaluate our success, we sent copies of the guides to about 80 producers with a return postcard. Everyone that has responded to date agreed that the guide would teach consumers about the availability of local farm products, and almost all said that it either already had helped increase farm sales or would in the future. Some comments (just coming in):

“Thank you for this helpful healthful guide, which is the best of its kind for our area. Many people are seeking these natural products for their families and are desperate for a composite like this.”

“The Tennessee local food guide has definitely been a positive in the life of [our farm]... We expect the Alabama edition to do the same!”

“Thank you for putting this together.”

The guide listed some local producers that were not specialty crop producers, including local dairies and producers of direct-marketed meats. We felt that it was essential to include all local producers to ensure that customers understand the diversity of local foods available to them. We were able to leverage funding from our Beginning Farmer and Rancher outreach program as well as some general funds and volunteer time to include these producers in the final guides.

Lessons Learned

While we were able to accomplish much that we set out to do, we did have many delays and roadblocks.

We probably should have simply set out to create a state-wide local foods guide. Rather than simplifying data collection, having three metro areas with producers from all over the state made it more complicated. Also, working with local community groups to collect data was easier in some areas than others.

We also had internal and external cash flow issues that caused delays in printing and accomplishing some of the contract work.

Working with individual farmers to develop promotional materials requires more hand-holding than we expected. We expected that direct-marketing producers would have a simple farm blurb available for use, but few did. Few had photographs that were suitable for the template, and the

delay in getting the professional photographs completed set back the process. Writing a blurb for a farmer is far easier than getting good photographs of the farm.

We have found that our projects rarely end as we expect them to. Despite the delays and roadblocks, the food guides have been well-received by producers and consumers alike. We will continue to print and distribute copies of the guide over the course of the year and expect that the increasing visibility will result in increased support for local growers and local food outlets.

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Project #12

Project Title: Identification of Alternative Herbicides to MSMA for Sod Production

Project Summary:

Background.

MSMA (monosodium methane arsonate) is a herbicide that is extensively used in the Alabama turfgrass and sod production industries. MSMA offers effective control of the three worst grass weeds- crabgrass (*Digitaria* spp.), goosegrass (*Elusine indica*), and dallisgrass (*Paspalum dilatatum*). MSMA is the primary herbicide used in sod production for weed control. MSMA is currently being phased out for sod production use by the EPA.

Research is needed to determine possible MSMA replacements for grass weed control in bermudagrass and zoysiagrass turf. Research will focus on grass weed control, as opposed to control of sedge or broadleaf weeds. While they are more expensive than MSMA, options currently exist for sedge and broadleaf weed control in sod production. No viable options are currently available for broad-spectrum grass weed control. Without adequate replacements, quality of Alabama sod will be greatly reduced and the sod industry will be damaged as a result.

Motivation and timeliness:

Without adequate herbicides to replace MSMA for weed control in sod production, sod producers will suffer economically and the value of their product will decrease.

Project Approach:

Summary of Activities and Tasks Performed

There were two main objectives for this project: (1) Evaluate herbicides registered in the U.S. but unregistered for sod production use for potential use as an MSMA replacement for control of crabgrass, goosegrass, and dallisgrass (2) Develop an MSMA weed control alternatives options for sod producers and present these options to stakeholders.

Crabgrass Control: MSMA controls crabgrass best at the early post emergence phase (before the plant becomes fully mature). Therefore, applications were made at this time. Two sequential applications of MSMA, 2 to 4 weeks apart, provide the best crabgrass control, although a single application can sometimes suffice. Herbicides tested are listed in Table I. These herbicides were applied once to better separate the crabgrass control between herbicides.

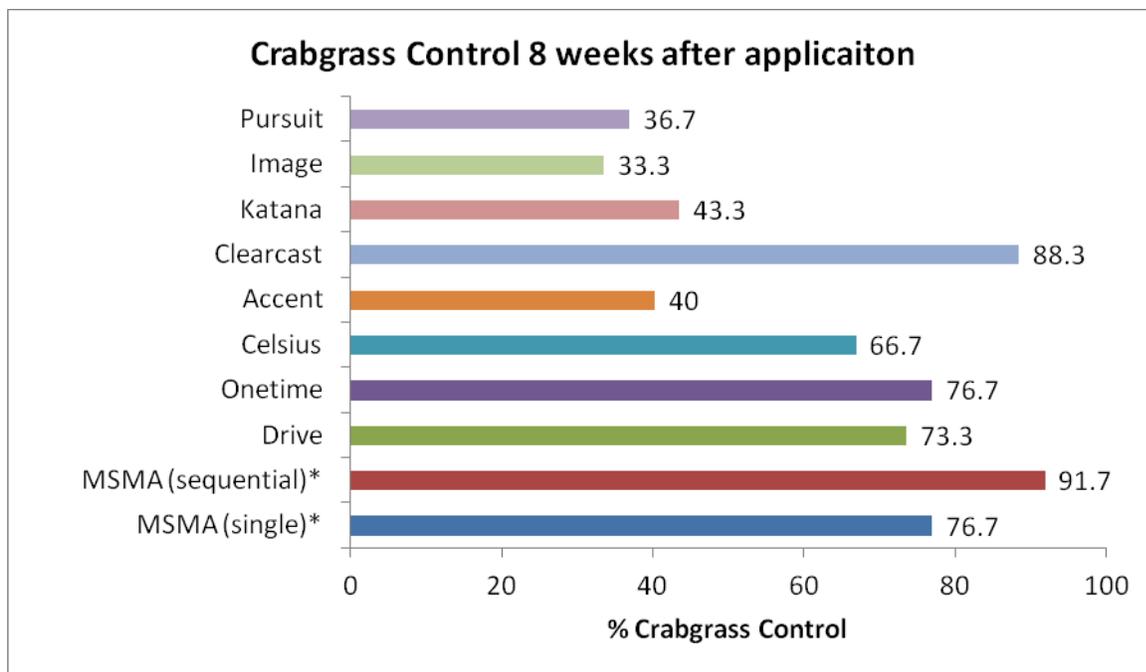
Table I. Herbicides tested for MSMA replacement- crabgrass (*Digitaria* spp.).

Herbicide Trade Name*	Active Ingredient(s)	Currently Registered for use in	Rate of Product Utilized
Drive	quinclorac	Turfgrass, Rice	64 fl oz/a
Celsius	thiencarbazone, iodosulfuron, and dicamba	Turfgrass	4.9 oz/a
Laudis	tembotrione	Corn	3 fl oz/a
Impact	topramazone	Corn	0.75 fl oz/a
Accent	nicosulfuron	Corn	2 oz/a
Assure II	quizalofop	Soybeans aquatic vegetation control	10 oz/a
Clearcast	imazamox		1 pt/a
Onetime	quinclorac, mecoprop, dicamba	Turfgrass	64 fl oz/a
Katana	flazasulfuron	Turfgrass	3 oz/a
---	metamifop	---	5.7 oz/a
Image	imazaquin	Turfgrass and ornamentals	11.2 oz/a
Pursuit	imazethapyr	Soybeans, peanuts, alfalfa	4 oz/a

*Herbicides applied one time and compared to both MSMA applied once and a sequential application of MSMA.

Crabgrass control was evaluated from the time of application (early March) until the end of season (September). Crabgrass control was promising with many herbicides. Some herbicides exceeded the control provided by MSMA. Unacceptable turfgrass injury was noted from Laudis, Impact, Assure II, and metamifop. Therefore crabgrass control results are not presented from these herbicides. Turfgrass injury was minimal or nonexistent from other herbicides tested. Crabgrass control at 8 weeks after application is presented in Figure 1 for a general comparison of herbicides.

Figure 1. Crabgrass control 8 weeks after application.



*MSMA applied at 1 lb/a both singly and sequentially (3 weeks between applications). All other herbicides applied once.

From Figure 1, it is clear that Clearcast is the best alternative herbicide to MSMA for crabgrass control. Results from other rating dates also support this conclusion (data not presented). Clearcast provided better long-term crabgrass control compared to MSMA. Currently, Clearcast is registered for vegetation control in and around aquatic and non-cropland sites. Generally, it is difficult for a herbicide to be registered for use in aquatic areas, due to strict restrictions by regulatory agencies. The fact that Clearcast is registered for use in aquatic areas bodes well for the possible use of Clearcast in turfgrass areas. Interestingly, the current labeling of Clearcast states that the product controls purple and yellow nutsedge, however, no control of cock's comb kyllinga, a similar species, was observed in this study. MSMA is widely used for sedge control in turf. If Clearcast does provide effective sedge control, this would add value to Clearcast as an MSMA alternative. Further evaluation of Clearcast will likely provide valuable information possibly leading to the registration of Clearcast in turfgrass.

Drive and Onetime also provided good crabgrass control. Both products include the active ingredient quinclorac. Drive is known to have effective crabgrass control and is registered for use in turfgrass including sod farms. Drive is the current industry standard for post emergent crabgrass control. Onetime is also known to have effective crabgrass control, but its turfgrass use is limited. The labeling of Onetime does not allow for use on turfgrass grown for sod. It is important to note that the patent on quinclorac has recently expired. This expiration has led to the inclusion of quinclorac in many combination herbicide products (products with multiple active ingredients). Furthermore, quinclorac is likely to come down in cost due to generic competition. Further evaluation of Clearcast, Drive, and Onetime will be conducted in Phase II of Objective I.

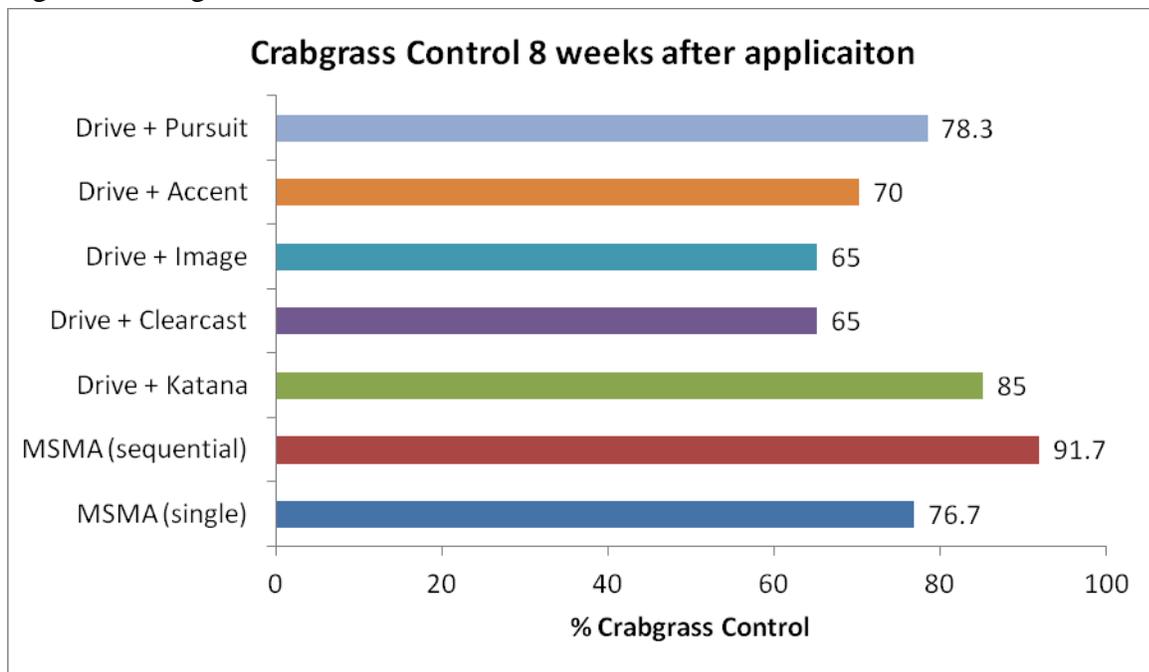
Combination treatments were also evaluated and compared to MSMA. These treatments are listed in Table 2. Again, results are presented from 8 weeks after treatment as a general comparison of treatments.

Table 2. Herbicide combinations tested for MSMA replacement- crabgrass (*Digitaria spp.*).

Herbicide Trade Name*	Active Ingredient(s)	Rate of Product Utilized
Drive + Katana	quinclorac + flazasulfuron	64 fl oz/a + 3 oz/a
Drive + Clearcast	quinclorac + imazamox	64 fl oz/a + 16 fl oz/a
Drive + Image	quinclorac + imazaquin	64 fl oz/a + 11.2 oz/a
Drive + Accent	quinclorac + nicosulfuron	64 fl oz/a + 2 oz/a
Drive + Pursuit	quinclorac + imazethapyr	64 fl oz/a + 8 oz/a

*Herbicides applied one time and compared to both MSMA applied once and a sequential application of MSMA.

Figure 2. Crabgrass control from combination treatments 8 weeks after treatment.*



*MSMA applied at 1 lb/a both singly and sequentially (3 weeks between applications). All other herbicides applied once.

Combination treatments provided good crabgrass control, but did not provide (statistically) any additional crabgrass control compared to Drive alone, which resulted in 73% control. Therefore, combination treatments may not be an economically savvy alternative to MSMA. However, combination treatments likely provide a broader spectrum of weed control

compared to Drive alone. This aspect of combination treatments was not evaluated in this research but deserves attention.

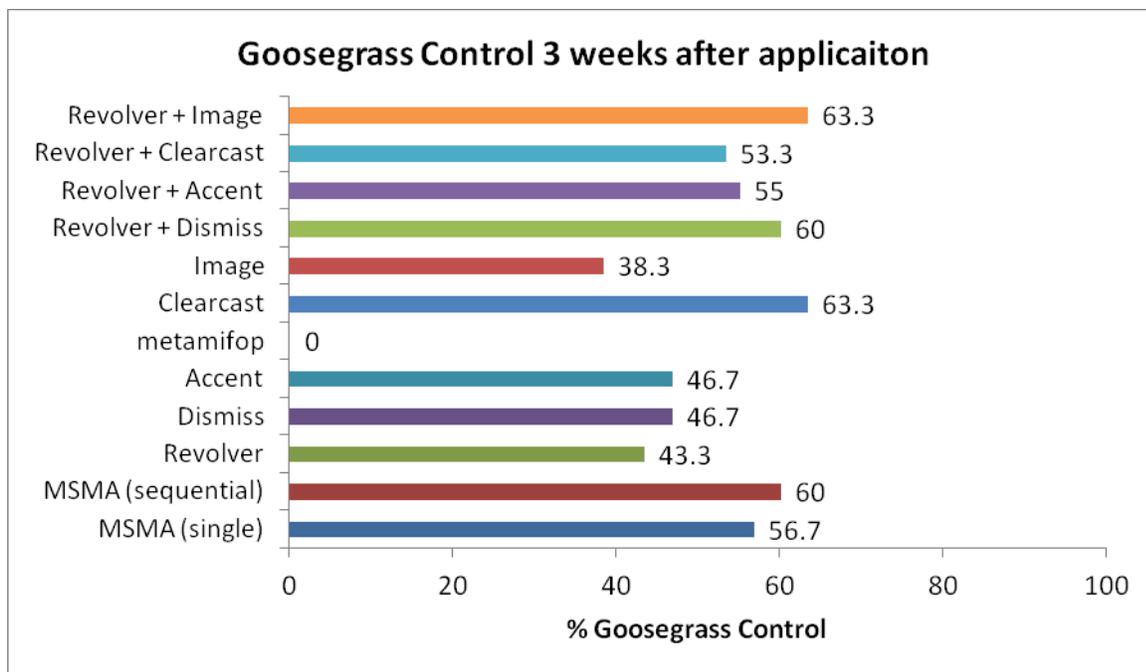
Goosegrass control: Goosegrass is a very difficult to control weed once established. Many times when crabgrass is controlled, a flush of goosegrass germination occurs and goosegrass becomes the dominate weed in place of crabgrass. Goosegrass is well controlled by sequential applications of MSMA spaced about 2 weeks apart. Herbicides and combination treatments tested as possible alternatives to MSMA are listed in Table 3. Goosegrass control at 3 weeks after treatment is presented in Figure 3 as a general comparison between treatments.

Table 3. Herbicides tested for MSMA replacement- goosegrass (*Elusine indica*).

Herbicide Trade Name*	Active Ingredient(s)	Currently Registered for use in	Rate of Product Utilized
Revolver	foramsulfuron	Turfgrass	28 fl oz/a
Dismiss	sulfentrazone	Turfgrass	12 fl oz/a
Accent	nicosulfuron	Corn	2 oz/a
---	metamifop	---	5.7 oz/a
Clearcast	imazamox	aquatic vegetation	1 pt/a
Image	imazaquin	Turfgrass and ornamentals	11.2 oz/a
Revolver + Dismiss	foramsulfuron + sulfentrazone	---	28 fl oz/a + 12 oz/a
Revolver + Accent	foramsulfuron + nicosulfuron	---	28 fl oz/a + 2 oz/a
Revolver + Clearcast	foramsulfuron + imazamox	---	28 fl oz/a + 16 fl oz/a
Revolver + Image	foramsulfuron + imazaquin	---	28 fl oz/a + 11.2 oz/a

*Herbicides applied one time and compared to both MSMA applied once and a sequential application of MSMA.

Figure 3. Goosegrass control from combination and alone herbicides treatments compared to MSMA evaluated 3 weeks after application.*



*MSMA applied at 1 lb/a both singly and sequentially (2 weeks between applications). All other herbicides applied once.

Figure 3 indicates that many herbicides and combinations thereof provide similar goosegrass control compared to MSMA. These results are not typical compared to previous research. This abnormality is mainly due to drought conditions beyond the control of the researcher. Goosegrass under drought stress is less sensitive to herbicides. Previous experience indicates that goosegrass is well controlled by Revolver alone, unless the goosegrass is under drought stress. Revolver is also currently registered for use in turfgrass, making it a viable alternative to MSMA. Future research will focus Revolver.

Other outstanding treatments included Clearcast, which also provided excellent crabgrass control. Combination treatments were generally more successful than single herbicide treatments in this study. Finally, turfgrass injury was only observed from metamifop in this study.

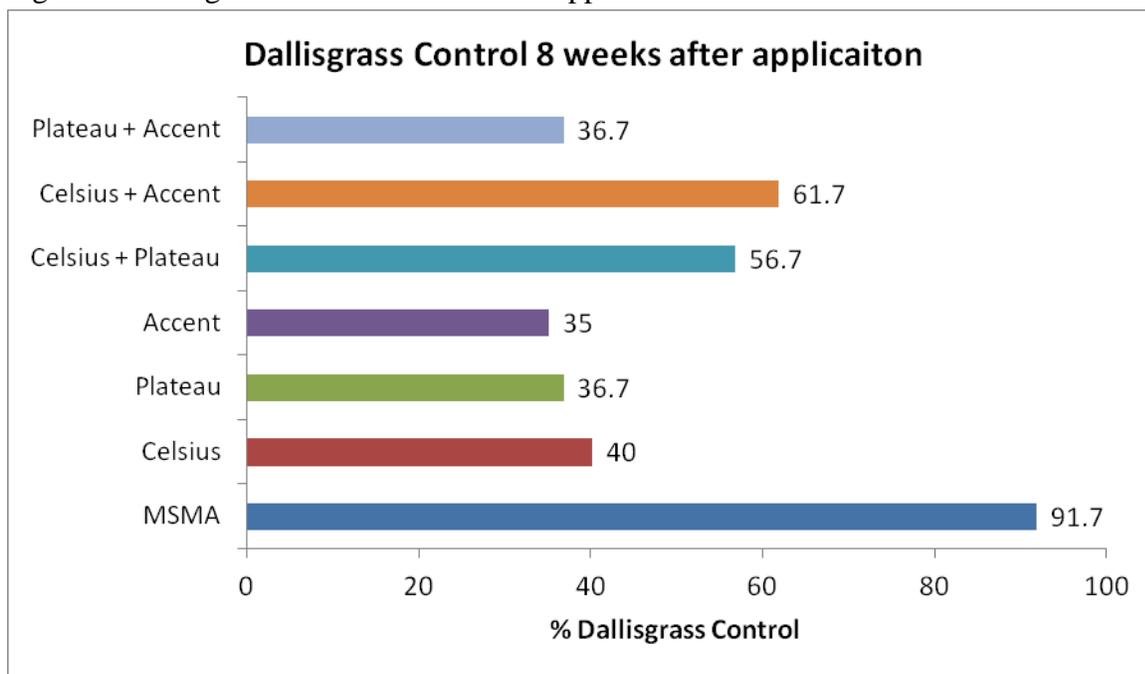
Dallisgrass control: Of the three weed species controlled by MSMA, dallisgrass provides the greatest challenge to control. Dallisgrass is a perennial species, unlike crabgrass and goosegrass which are annuals. MSMA can control dallisgrass at high rates and with sequential applications, but due to the perennial nature of dallisgrass, regrowth from underground rhizomes can occur. Therefore suppression of dallisgrass is sometimes the goal, compared to control. Single application treatments did not provide adequate control of dallisgrass and therefore are not presented. Potential alternatives to MSMA are listed in Table 4. Dallisgrass control was evaluated until the end of the season. Results from the 8 weeks after initial application date are presented in Figure 4 as a general means of comparison between treatments.

Table 4. Herbicides tested for MSMA replacement- dallisgrass (*Paspalum dilatatum*).

Herbicide Trade Name*	Active Ingredient(s)	Currently Registered for use in	Rate of Product Utilized
Celsius	thiencarbazone, iodosulfuron, and dicamba	Turfgrass	4.9 oz/a
Plateau	imazapic	Pastures and non-crop	2 fl oz/a
Accent	nicosulfuron	Corn	2 oz/a
Celsius + Plateau	thiencarbazone, iodosulfuron, and dicamba + imazapic	---	4.9 oz/a + 2 fl oz/a
Celsius + Accent	thiencarbazone, iodosulfuron, and dicamba + nicosulfuron	---	4.9 oz/a + 2 fl oz/a
Plateau + Accent	imazapic + nicosulfuron	---	2 fl oz/a + 2 fl oz/a

*Herbicides applied twice 3 weeks apart and compared to both MSMA applied sequentially 2 weeks apart.

Figure 4. Dallisgrass control 8 weeks after application.*



*MSMA applied at 1 lb/a; all herbicides applied twice.

As figure 4 indicates, MSMA did an excellent job at controlling dallisgrass. No other herbicides or combinations provided similar dallisgrass control. Adequate dallisgrass suppression was achieved with the Celsius + Accent combination. Future research will included this treatment and will also explore other herbicides with potential as alternatives to MSMA.

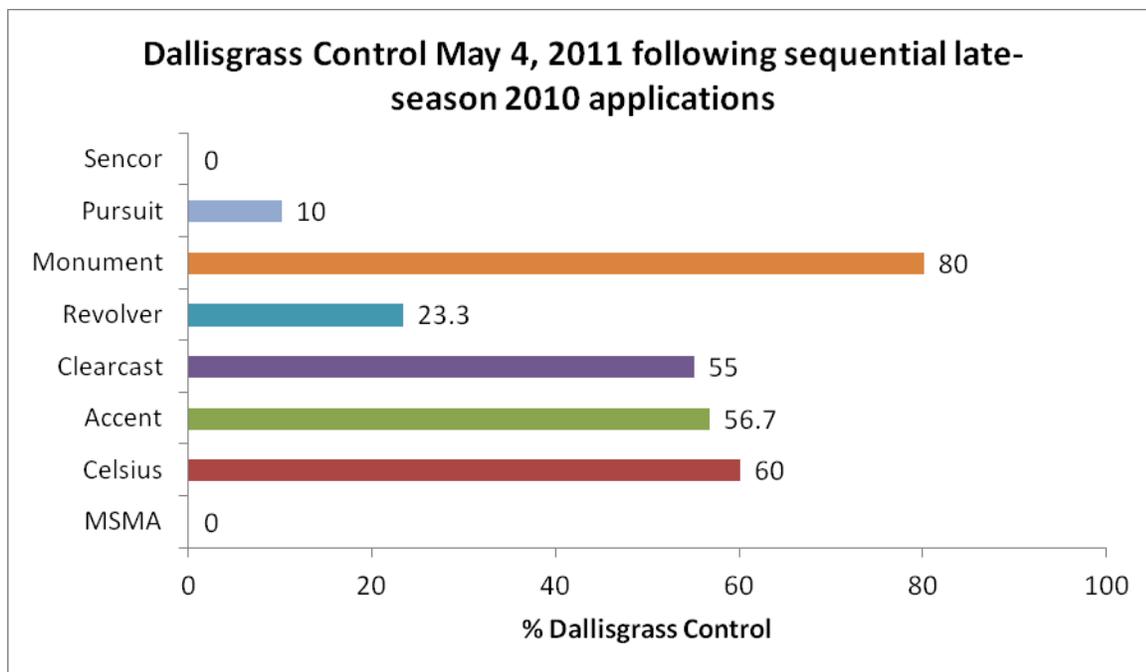
Dallisgrass is the only perennial weed being evaluated (goosegrass and crabgrass are both annuals). Previous research and experience indicates that increased control can be achieved with late season applications, just before the dallisgrass goes into dormancy for the winter. Therefore, research was conducted with the most promising herbicides, applied twice at this late-season timing. Treatments are below in Table 5. These herbicides were applied twice- on October 18 and November 11, 2010 and dallisgrass control and bermudagrass injury were rated through the end of the season and again after spring green-up.

Table 5. Herbicides tested for MSMA replacement- dallisgrass (*Paspalum dilatatum*) late-season application timing.

Herbicide Trade Name*	Active Ingredient(s)	Currently Registered for use in	Rate of Product Utilized
Celsius	thiencarbazone, iodosulfuron, and dicamba	Turfgrass	4.9 oz/a
Accent	nicosulfuron	Corn	2 oz/a
Clearcast	imazamox	Aquatics	1 pt/a
Revolver	foramsulfuron	Turfgrass	28 fl oz/a
Monument	trifloxysulfuron	Turfgrass	0.53 oz/a
Pursuit	imazethapyr	Legumes and Corn	6 fl oz/a
Sencor	Metribuzin	Turfgrass	12 oz/a

*Herbicides applied twice 3 weeks apart and compared to both MSMA applied sequentially 2 weeks apart.

Figure 5. Dallisgrass Control May 4, 2011 following sequential late-season 2010 applications.



*MSMA applied at 1 lb/a; all herbicides applied twice on October 18 and November 11, 2010.

All the herbicides resulted in significant injury to the dallisgrass after application. However, some treatments did not result in control the following spring, after green-up. These treatments include MSMA, Sencor, Pursuit, and Revolver. More importantly as Figure 5 indicates, Monument, Celsius, Accent, and Clearcast all significantly out-performed MSMA. Furthermore, Monument and Celsius are already registered for use in Turfgrass. No treatments in this study resulted in any injury to bermudagrass that was also in the research test plots.

Significant Contributions and Role of Partners.

Alabama sod producers themselves had input into this project from its establishment. Specifically, Beck's Sod Farm in Tuskegee, Alabama allowed us to conduct demonstration and research sites which allowed us to complete this project. Without the input from this production company this project could not have been completed.

GOALS AND OUTCOMES ACHIEVED

Activities completed.

All necessary activities have been completed. It was my goal to develop an official publication from the Alabama Extension Service outlining the findings of this research. However, current budget constraints precluded the development of such an "official" publication. In fulfillment of my grant obligation, printed copies of data and recommendations were distributed to four sod farms in Alabama. The findings were discussed directly with these four sod farms regarding utilizing MSMA substitute herbicides. Other sod producers were

contacted but did not return my communication therefore information was not distributed to directly to them. Data from this research has been posted at <http://www.auburnweedscience.com> for public viewing. At all presentations to end-users (listed below) my contact information was given to participants to allow them to contact me regarding the findings of this research. On average, I receive and answer three phone calls per week from end-users regarding herbicide usage in turfgrass. Approximately half of these phone calls are MSMA related.

Long-term outcome measures.

This project has defined the imidazoline herbicides imazaquin, imazamox, and imazethapyr as the most viable options for MSMA replacement. Imazaquin is the only one currently labeled for use in turfgrass, however it has the least potential of this group of herbicides. These herbicides have the potential when applied in combination with other herbicides such as,

Further, quinclorac (Drive), quinclorac+ dicamba + MCPP (Onetime), and imazamox (Clearcast) all provided excellent crabgrass control that was equal to or better than MSMA. Foramsulfuron (Revolver) and imazamox provided good goosegrass control compared to MSMA. Dallisgrass control was best achieved through sequential, late-season applications (applied as the dallisgrass is transitioning into dormancy) with trifloxysulfuron (Monument) and iodosulfuron+thiencarbazone+dicamba (Celsius).

As a result of our project, the following presentations and scientific abstracts have been written and/or presented to stakeholders and other scientists thus increasing potential involvement of others to solve MSMA replacement issues.

McElroy, J.S. and M.L. Flessner. 2011. Alternatives to MSMA in turf: Part deux. Proc., South. Weed Sci. Soc. 64:170. (24 attendees in research industry)

McElroy, J.S., J.J. Rose, and P.E. McCullough. 2010. Utilizing nicosulfuron-herbicide mixtures for MSMA replacement weed control in turfgrass. Proc., South. Weed Sci. Soc. 63:220. (33 attendees in research industry)

MSMA Replacements for Turfgrass. April 21, 2011. Everglades Golf Course Superintendents Association Spring Symposium. Naples, Florida. (1 hour presentation; ~55 Attendees in Golf Course Industry)

MSMA Replacement Herbicides. Alabama Turfgrass Association Annual Meeting. October 21, 2010 (1 hour; 110 Attendees. Both sod farmers and miscellaneous turfgrass industry)

New Herbicides for Turfgrass Management. Gulf Coast GCSA Monthly Meeting. July 15, 2010. Pensacola, FL (1.5 hours; 25 attendees)

New turfgrass herbicides to make your life easier. Gulf States Horticultural Expo. January 21, 2010. (45 minutes; ~40 attendees in Lawn and Landscape Industry).

New herbicides for weed control in turfgrass. 2012 Auburn Landscape School. Auburn, AL. August 7, 2012. (45 minutes; ~48 Attendees in Lawn and Landscape Industry).

Update on New Herbicides for Turfgrass Management. November 15, 2011. Mississippi Turfgrass Association Annual Conference. Philadelphia, MS (1.5 hours, Invited; ~130 attendees from MS turfgrass industry).

Control of the South's Toughest Weeds. October 11, 2011. Alabama Turfgrass Association Annual Conference. Auburn, AL (1.0 hours, Invited; ~90 attendees from Alabama Turfgrass industry)

Total Impact of Presentations: Approximately 555 individuals from Alabama, Mississippi, and Florida Turfgrass industries; and greater southeastern US agronomic research area.

Comparison of Accomplishments and Goals.

We have accomplished our goals of this project. We have identified potential herbicides for MSMA replacement for sod production.

Completion of Achieving Outcomes

Herbicides that can be utilized for crabgrass, goosegrass, and dallisgrass control in warm-season turfgrasses, zoysiagrass and bermudagrass, have been identified. This information has been delivered to the stakeholders and scientific community via presentations and abstracts at numerous stakeholder meetings.

BENEFICIARIES

Description of Groups that Benefit.

Sod producers in Alabama are directly impacted by this project. Sod producers can use this information to develop new weed management strategies and increase or continue sod production. Sod producers can also use this information to seek 22(c) labeling for sod production for herbicides tested that are currently not listed for turfgrass management use.

Chemical companies who produce herbicides are also directly impacted by this project. They can use this information to further develop products that will benefit the Alabama sod production industry.

Potential Economic Impact of the Project

In a 2002 survey of the national sod production industry, there are 96 sod farms in Alabama with a total impact of \$108 million (US) per year (Haydu et al. 2006). Alabama has the third largest sod industry in the US and employs approximately 1100 people annually (Haydu et al. 2006). Sod production directly impacts the lawn care industry through the sod supply chain.

The lawn care industry employs >4000 people and produces an annual value added impact of >\$140 million dollars in Alabama. Both of these combined industries make a significant impact on the Alabama economy. Without herbicides to produce salable sod, both industries could be negatively impacted. Alabama sod production could be at a competitive advantage if MSMA alternatives are discovered and registered in Alabama first and if sod producers are better educated than their neighboring state competition. Economic impact information can be found in Haydu et al. (2006) [<http://edis.ifas.ufl.edu/FE632>]. Numerous measurements of economic impacts of agricultural and horticultural industries exist. This economic impact assessment was selected for the sake of simplicity.

LESSONS LEARNED

Lessons Learned by Project Staff by Completing the Project

The most viable MSMA alternatives for sod production are imidazolinone herbicides – imazamox, imazaquin, and imazethapyr—as well as foramsulfuron, quinclorac, and trifloxysulfuron. Combination products of quinclorac+MCP+dicamba and iodosulfuron+thiencarbazone+dicamba can also aid in grass weed control in sod production. Some are currently registered for sod production use. If not, these herbicides should be registered for sod production in Alabama.

Unexpected Outcomes

None to report.

Insights for Others if Outcomes Not Achieved.

None to report.

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Additional Information

Abstracts and presentations are listed in the text as demonstrations of outcomes of this project.

Project #13

Project Title: Women in Ag and Youth

Project Summary

This purpose of this project was to involve more of the community and students from the Elementary School in Camden, Alabama. The community as well as the youth needed more hands-on projects to open up the minds of young people to why we farm and raise our own produce.

The project motivated the community and students what it means to be timely with planting and the outcome. Like the projects we did last summer through the Specialty grant to prepare and obtain more farm tools and equipment to work with to assure a successful project.

Project Approach

Results Of Activities using fish protein on $\frac{3}{4}$ of an acres with plastic culture with irrigation drip system produced a higher yield which amounted to 3000 bunches or 12,000 lbs, compared to $\frac{1}{4}$ of an acre without plastic culture and fish protein only with standard drip system produced 1000 bunches or 500 lbs which was 50% less yield on average.

Goals and out Achieved

In conjunction with the youth fruit trees (pears) yield 20 bushels. Cabbage yields 48 heads. Pecans 2500lbs, peppers 3 bushels, Even though the volumes were relatively small the participating youth gain invaluable experience and education on fruits and vegetables production.

Pesticides decrease because of fish protein and drip system utilized. The nutrients from the use of fish protein impacted in a positive way soil health. The water quality excellent because of the use of city water (Wilcox Water Authority). The 40% increase of farm income was derived by the overall farm operation (sub grantee's income). It is considered program income. This income was used to support training and education of youth, promotion of fresh fruits and vegetables grown on the farm which focus on healthy eating and healthy lifestyles.

An increase of 15 New and Beginning farmers will now focus on specialty crops participating in the program. Also as a result of the training received those new and beginning farmers will be able to utilize best practices and lessons learned on their respective farms. Women & Youth Project Introduced personal plots that will hold more rows of produce. The high value specialty crops were the pecans.

The project exposure resulted in area farmers, consumers, awareness of health benefits involving high quality locally grown fruits and vegetables. Local groceries and food markets did indicate a significant increase in sell of locally grown fruits and vegetables. Also school administrators,

nursing homes and hospitals did acknowledge the effectiveness of our project and agreed to purchase our produce.

Beneficiaries

The benefit from this project impacts the community to want to purchase organic foods. This project improves the quality of food grown organically to help control diabetes in consumers and especially Youth. Organic farming will:

- Enhance the small –scale farmer to produce more healthy food
- Recruit new producers

Through this project we targeted 180 consumers. The community purchase the organic foods spread the word that eating healthy will begin the process of good health.

Lessons Learned

Educating community and youth on how important it is to begin to raise your own food and start good healthy eating habits promote good health

Contact Person

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Additional Information

Below please find photographs and wyia.org website in under construction.





Project #15

Project Title: Commercial Market Development Satsuma's

PROJECT SUMMARY

The initial purpose of this project was to allow the Alabama Satsuma Growers to increase operational efficiency and profitability by reducing post-harvest loss of fresh Satsumas in storage and handling and maintaining quality for more efficient distribution to large institutional and retail customers. This goal was achieved through the purchase of automated bagger scales, a de-sanitizer vat, a forty foot cooler and a tow motor.

PROJECT APPROACH

The satsuma industry has established fresh markets with the Alabama Farm to School Program and with CH Robinson, a produce broker. With these new markets, the demand for satsumas is increasing. Additional equipment and supplies were needed to help meet these increased production requirements and expanded market opportunities. The necessary equipment was purchased with the funds from the grant program. Our primary goals are to become more efficient in meeting the increased demands of the buyers and to improve the quality of the fruit. The equipment and supplies purchased helped to achieve these goals. Storage and handling is crucial when dealing with fresh produce. We utilized the de-sanitizer vat by soaking and pre-washing the fruit to remove bacteria. Once the fruit was sorted and sized and boxed, the tow motor made it easier to transfer the palletized fruit from the packing house to the refrigerated trailer, which then kept the satsumas at a constant temperature. The automated scales were used to accurately weigh the three pound bags required of the CH Robinson contract. Overall, the quality of the fruit was maintained and distributed more effectively.

The Farmers Market Authority has been exceedingly supportive of the satsuma producers. They are continuously seeking additional markets and contracts. The Experiment Station in Baldwin County is researching new varieties of trees and new techniques to aid in a longer storage life for satsumas. On behalf of the Satsuma Growers Association, George Warden and Art Sessions implemented the purchase and installation of the equipment. They contact the growers to coordinate and schedule product delivery.

GOALS AND OUTCOMES ACHIEVED

In 2009, approximately 450,000 pounds of satsumas were sold to the Alabama Farm to School Program and to the Wal-Mart Distribution Centers, via CH Robinson, after an estimated 11% post-harvest waste. For the 2010 harvest season, approximately 94,000 pounds of satsumas were sold, but with only a 2% post-harvest loss. The crop production for the 2010 season was lower due to extremely cold weather the previous winter. In 2011, the Alabama Farm to School Program and the Wal-Mart Distribution centers purchased 373,300 pounds of satsumas.

Unfortunately, several growers faced a setback. Approximately 80,000 pounds of satsumas were processed, bagged and ready for shipment, but CH Robinson could not make any more sales for the satsumas due to outside competition from Louisiana satsumas and California clementines or “Cuties”.

According to a recent survey of the producers participating in these marketing programs, the quality of the satsumas has improved with each year. The de-sanitizer vat is beneficial to the quality of the fruit by killing bacteria. With the use of the forklift, the satsumas are bagged and/or boxed and transported more quickly to the cooler where the fruit is then stored at 40 degrees. During harvest time, outside temperatures can be in the 70’s to 80’s. The quality and storage life are adversely affected if the satsumas are picked from the trees and then kept in these temperatures for a long period of time. Even the automated bagging scales allows for quicker processing time. These pieces of equipment have all attributed to the improved quality of the satsumas by providing faster processing time and temperature control. In turn, better quality and longer storage life allows for the potential for sales to increase each year.

Because of increased capacity and quality, it has become essential to venture into new areas to market the satsumas. Each year brings greater production, so it is necessary to find new markets. The local producers are looking into Central and North Alabama as new markets. These new areas include the Birmingham Farmer’s Market and the Piggly Wiggly chain stores.

BENEFICIARIES

The primary benefits of this grant were in the form of economic returns shared by the producers, distributors and retailers; thus, the Satsuma industry as a whole benefited and more importantly local communities. Specifically, the following growers have benefited from the use of this grant: Warden Farms, Sessions Farm, Ladnier Farms, Ken Buck, Clent Mayo, Oasis Farms, Pat Laconsay, and the Gulf Coast Experiment Station. All producers, distributors and retailers have received monetary profits from the satsumas. With increased profits, some growers have reinvested in planting more trees. Because of local awareness of the satsumas and the potential of economic profits, many new individuals and/or farms have also begun planting satsuma orchards.

LESSONS LEARNED

With the acquisition of better equipment, the satsumas are processed quicker and without loss to their quality. In the future, it is important for the satsuma producers to continue working with the Farmers Market Authority and the Gulf Coast Experiment Station. With more research, we hope to prolong the storage life of the satsuma, while preserving the quality of the fruit to competitively seek additional markets

CONTACT PERSON

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Project Title: Increasing the Competiveness of Alabama-grown Blueberries

Project Summary

Since at least the mid-nineties commercial blueberry production in the US has increased dramatically. The primary reason for this growth has been the widespread acceptance of a series of medical studies showing the extraordinary health benefits derived from the regular consumption of blueberries. While a commercial blueberry industry in Alabama exists and is growing it hardly registers when compared with the quantities of blueberries grown in the southern parts of neighboring Georgia and Mississippi. The purpose of this project is to make Alabama-grown blueberries more competitive by creating a local market for “process berries”; that is berries that are perfectly suitable for making value added products but which fall short of the USDA standards for # One grade of fresh blueberries. The reasons for rejection from # one fresh grade are many. Some examples are bird peck caused blemishes, splits, fruit inadvertently mashed in the harvesting process, minor insect damage to the skin, size and berries that are less than completely blue in color. While there is a tiny local market for these rejected berries for private use in making jelly or wine, in fact most of these berries are fed to stock or simply discarded. So the premise of this project is to make our berries (and hence our blueberry growers) more competitive by establishing a market or an outlet for reject berries. In practice, these berries can be frozen and made available (sold) at any time during the year giving growers revenue that they currently do not have. The key has been to develop value added products made primarily from blueberries, to impart market appeal to these products, create market appeal and to find economically viable ways to produce to meet this demand. Unique and new products have been created and exposed to the market place as have been standard blueberry products. A brand and logo have been created and are being put into public view via direct marketing and e-commerce. All products are positioned as top end items and presented to appeal to health conscious customers who have more than average disposable income. In our opinion we have met the project goal of proving there is a demand for value added products and that suitable, high quality products can be made from berries of less than the USDA # 1 quality fresh market standard. Our intention is to continue making and selling current products and develop new products as well.

Project Approach

Our overarching task was to build a food processing business in which we developed, produced and sold products. The first step was product development. It seemed natural to us to build upon the number one attribute of blueberries and that is its widely known range of health benefits. We wanted to develop food products that carried forward the images of being wholesome, nutritious yet still delicious. Supermarket shelves are flooded with products with pictures of blueberries on the label and that claim to have blueberries as an ingredient but which,

upon close inspection, do not have any blueberries at all and, at most, often have only blue food coloring. In fact some food manufacturers use hydrogenated oils, liquid sugars and blue food coloring to make something called “blueberry crunchlets” and depict whole blueberries on their labels. This blatant deception, and worst, is permitted under current USDA and FDA food labeling laws. Why do many of the major food manufacturers market and sell products that imply they contain the healthy natural goodness of blueberries when, in fact, they contain nothing of a real blueberry at all? There are three answers and they are simple; (1) pictures of blueberries on a label projects an image of good, healthy food and does increase sales, (2) actually putting berries in their product would be expensive and (3) since the US government gives tacit consent to this practice companies do not have to put berries in, so they leave them out. For more on this see “Blueberries faked in cereals, muffins, bagels and other food products” by investigative reporter Mike Adams, 1/18/11 at www.Foodinvestigations.com for one of numerous similar media stories on this subject matter. I explain this to point out that our approach in product development is exactly the opposite of what these corporations are doing. We have positioned our products as reputable, top of the line items that, as much as possible, retain the health benefits of fresh blueberries in prepared food products. Each of our products has blueberries listed as the primary ingredient which, by federal law, means the product must consist of at least 51% blueberries. Further we use only natural ingredients and they are items that most consumers will recognize and be familiar with. To avoid high sugar levels, we use small amounts of agave nectar as our primary sweetener in all but one product which uses honey. This keeps the glycemic index of our products low and increases their appeal to diabetics. Because our products contain expensive ingredients the final price to the customer must be expensive when compared with similar products on the shelves. (Note: To our knowledge we do not have a direct competitor that always uses blueberries as the first ingredient and then uses only natural ingredients.) Our theory is that, since we are blueberry growers, we will use this vertical integration to keep the berry costs low enough to make the project viable.

We have started with four products; three sauces – Blueberry B-B-Q, Blueberry Chipotle and Blueberry Dessert Topping and a drink, Blueberry Juice. Early decisions were container type and size, label design, nutritional analyses, and cooking methods. Each sauce recipe was created specifically for this project and resulted from an iterative process of cooking, tasting and down selecting from several different versions. The juice is extracted from the berries with a steam process that best captures the flavor, color and nutritional benefits. This process results in a pasteurized blueberry juice concentrate to which is added water to regain the original amount of water present in each berry and to achieve the optimal consistency for consumption plus a small amount of agave nectar as a natural sweetener. Without the sweetener the juice has a mild, yet slightly tart taste and most people prefer the juice with the added sweetener. This juice is suitable to use as a base for making blueberry jelly, wine or other products and many of our customers buy with this in mind though most seem to want to drink the juice for its antioxidant properties and other health benefits.

We consider our first product line to be the sauces. Other types of sauces may be added in the future. The juice is the first in a product line of drinks. Adding Blueberry Juice Concentrate is an easy addition and will be our next product. To the line of drinks we also plan to add health drinks which will be our slightly sweetened juice mixed with water and vitamin and mineral supplements, packaged in individual serving sizes and sold as a substitute to cokes and other carbonated drinks. It appears there is a real possibility this item can be sold to Alabama school systems as part of a healthy school lunch program. A natural and logical additional product line will be Jams, jellies and syrups. Getting the labels and nutritional analyses for these items will be relatively easy compared with the learning curves experienced in getting the sauces onto the market in full compliance with all laws and regulations. We also plan to offer dehydrated (sun dried) berries in both bulk and individual packages. Future plans include investigating sale of commercial raw food products such as purees to food manufacturers.

Originally we thought we could set up a small commercial kitchen in which to experiment and make our first batches of product. In practice we learned that this approach would be far too expensive due to the need for specialized equipment, inspections and certifications. This caused us to look for an alternative source for product development. Fortunately we found a small, local company, Kyliegh Farms of Chancellor, Alabama. We engaged this firm to help develop our products and to produce them. Based upon their capabilities and experience it appeared to be a good fit. However, as the product development phase ended the owner, Jill White, told us she would not be able to continue. Her advice was to find a larger co-packer who would be able to charge less so that our product would be competitively priced. This meant we would have to seek out other sources for production and lead to the realization that several of the new food product development tasks such as nutritional analysis and label development that were supposed to be done by Kyliegh Farms were still not complete. Still the biggest problem was the immediate need to find another production source. The larger co-packers that Ms White referred us to were not accepting new clients. Interestingly enough we ended up making our first production run at a facility being funded in part by the Alabama Specialty Crop Block Grant Program and that was the Chilton County Food Innovation Center (CFIC) at Clanton, Alabama. While this worked well, it has the disadvantage of being located 120 miles away and was not air conditioned. We have now found a local, privately owned certified kitchen that may be adequate to our needs and is, at a minimum, a backup production site to CFIC.

The life blood of any business is sales. Original thoughts were to begin locally, talk with grocery store chains, and use a website to try to sell over the internet. We also had a goal to place our products in some local stores. The business arrangement for some is that they buy at our wholesale price and re-sell; for others we place the products on their shelves on a consignment basis. Our most direct sales efforts so far have been directed to Farmer's Markets, seasonal festivals and specialty shops plus we have set up a website. The first big question of course was how would prospective customers like our products? We use a tasting bar approach with the theory that when people can actually taste our product they will buy it. In general this has proved

to be successful. We typically set up a 12' x 12' booth with an 8' table on which we have a juice dispenser with 1 oz. tasting cups. The juice is chilled. We offer the Chipotle sauce on crackers with cream cheese, the BBQ sauce on a small bit of chicken and the dessert sauce on a tasting spoon. Our retail prices are \$8 per bottle for the sauces and \$10 for a ½ gallon bottle of the juice.

In summary, our project purpose has been to add value to Alabama's commercially grown blueberries. Further, we want to create an ongoing demand for "process" berries; fruit that currently is being discarded as it has no real economic value. Our approach has been to establish a food processing business beginning with product invention, choosing product image, position in the market place, finding viable production sources, creating market appeal with attractive product labeling and packaging, setting up a website to promulgate our message and draw customers from wide areas, and making direct customer contact in our local area by offering product tasting at different venues.

Goals and Outcomes Achieved

One of our original thoughts was to focus on equipment that could be used to make intermediate blueberry products such as juice concentrates, purees, and dehydrated berries that could be sold to major food manufacturers. We realized this plan was too expensive to implement in our first phase so we delayed its implementation and focused instead on developing new products and brand awareness with individual consumer products. In this, we feel we have been very successful. All three of the sauces we created for this project and our blueberry juice have been very popular each time we have offered them for sale. We have seen a surprisingly large number of repeat customers, especially for our juice, that are becoming real proponents and say they have made consumption of the juice a regular part of their diet. At the tastings parents have literally had to drag their children away from the juice dispenser. This sort of information is very encouraging to us.

Our first measureable outcome regards the process berries purchased from area blueberry growers. We purchased 3,525 pounds of berries from five different growers for a total of \$ 2,494.71.

The second measureable outcome was sales from blueberry products manufactured and sold. Total sales have reached \$ 6,451.50 with most of this coming from our booth placed at Farmer's Markets and Festivals of various types. The product breakdown is shown below:

Product	Sales (\$)	Remarks
Bar-B-Q Sauce	877.20	16 Oz. bottles
Chipotle Sauce	1,507.40	16 oz. bottles
Dessert Topping	1,602.90	16 oz. bottles
Juice	2,464.00	All sales in ½ gallon jugs
Total	6,451.50	

These funds (gross revenue) have been used to further the goals of the program.

Beneficiaries

CTC, Strategy 6, Kyliegh Farms, BB growers, Southern Label Company, CFIC, Wiregrass Advertising Inc.(label development)

Lessons Learned

Lessons learned have been significant.

Product Acceptance. In general we have learned that people like our products. They like the fact that all of our products are designed to taste good but also to be nutritious. Our use of all natural ingredients and the use of agave nectar or honey as sweeteners is a plus. Most consumers seem to be very much aware of the fact that consumption of blueberries is healthy. In local farmer's markets we have witnessed "repeat" customers and consider that to be a very positive sign.

Cold Storage Capacity. Before starting the project we thought we would be able to use the services of a large, industrial freezer (cold storage) facility in nearby Dothan, Alabama. We learned that using them to store berries was not really an option because they do not have sufficient space to take on new customers. Currently they serve mainly the chicken industry and they need additional space to accommodate just that demand. The next closest facility is in Troy but there the story was the same. Both firms told us they do have expansion plans and will add to their capacity in the future. This forced us to find an alternative solution. We did so by buying, with non-project funds, a used freezer (actually a truck body formerly used to deliver frozen foods) and setting it up with electrical power near our pack house. This box will hold up to 5,000 pounds of berries and that has been sufficient so far. Assuming future growth we will need more freezer space.

Distinction Between the Two Classes of Process Berries; Establishment of Market Price.

We started the project without a figure in mind for what we should pay for the process berries. We checked with blueberry growers in Georgia and Mississippi and determined that process berries there sell for in the \$0.50 to \$1.00 per pound range. We also learned that a certain amount of education of the growers is necessary because it makes sense to have at least two different categories which involves just how clean the berries are. Juicing the berries can be done with berries in almost any condition. That is, they can be of various stages of maturity (green, red or blue), they can be mashed or split, and leaves and bits of stems can be present. These berries are OK to use for making juice and juice derived products such as jelly and syrups. We call these "juice" berries. The second category is berries that are cleaner and which are needed to make sauces. They must be at least 95% blue and all leaves and stems must be removed. This can be done but it takes a bit more effort at the pack house level and, consequently, more cost. We call these "sauce" berries. We have established prices of \$0.50 a

pound for jelly berries and \$1.00 a pound for sauce berries. In the future, after we have established an annual demand for these process berries, we anticipate a market price will emerge based on supply and demand and will no doubt fluctuate from year to year.

Cost Competitiveness. We are not aware of a direct competitor in the marketplace, even on a national level. Of course there are numerous blueberry based products on the market but most use only a bare minimum amount of actual blueberries or none at all. The fact that each of our products contains at least 51% blueberries makes us very unique. The other side of this is our prices must be higher, relative to other blueberry-like products because blueberries are expensive.

E-commerce. Our website is on the net at www.bluemoonblueberry.com . It is still a work in progress but is fully functional. We think e-commerce has significant potential to help sales but it will take steady work over a lengthy period to come to fruition. We think the biggest obstacle to overcome is the high costs of shipping. We are now working on alternative solutions to this problem.

Final Financial Report:

The breakdown of our spending of the grant money is as follows:

Item	Cost (\$)	Notes
Co-packer/consultant	3,800.00	1
Building Rent	4,500.00	
Commercial Kitchen Rental	680.00	2
Website Design/establishment	3,468.02	
Nutrition Testing	115.00	
Blueberries	2,494.71	
Other Ingredients	3,129.58	
Jars and Lids	2,717.95	
Labels	2,539.00	
Bar Codes	760.00	
Total	25,000.00	3

Notes:

(1) - We quickly learned we needed someone to do our co-packing for commercial success. We located Kyleigh Farms, Inc. less than an hour from us who offered a package deal to convert our recipes to commercial production amounts, design our label, have the nutrition testing done on the first three sauces, do a test production for run of the sauces , be our co-packer and, in general, guide us down the business path. In terms of industry knowledge and physical production assets it appeared this would be an ideal match. Unfortunately this relationship did not last and we were back on our own. Fortunately, CFIC opened and we were able to obtain guidance and production support from Christy Mendoza, CFIC Director.

(2) – We have used two commercial kitchens: CFIC in Clanton and a local kitchen at Shelley Farms. Both are approved by the pertinent health departments.

(3) - In addition we have expended \$7,118 of private funds to cover purchase of small equipment, insurance, postage, and other necessary costs to produce and market the sauces and juice. This does not include a significant amount of mileage for business related travel.

Additional Information

Pertinent websites:

www.bluemoonblueberry.com – This is the website for Blue Moon Blueberry products. It tells our story which stresses that we use only all natural ingredients and have the mission to deliver products that are both nutritious and delicious. This is a commercial site that enables customers to place orders on line.

www.Foodinvestigations.com – This link provides more data about the widespread food industry practice of deceptive advertising in which pictures of whole blueberries are shown on the label implying health and goodness yet the product does not contain any blueberries at all.

www.blueberries.org – This extremely informative website is hosted by the U.S. Highbush Blueberry Council, a research and marketing organization that supports the blueberry industry. It contains a wealth of information about the health benefits of blueberries, types of commercial blueberry products, chemistry of blueberries, etc.

Project #17

DIVERSITY CHRISTIAN CENTER COMMUNITY GARDEN PROJECT:

PROJECT SUMMARY:

A vision of helping to change a whole community. In a small community in the city of Talladega, Alabama, caring for the concerns and aspects of the citizen of this community. Many generations have grown up, (some moved away others have remained in the community), and have lost the knowledge where food comes from. Our families have learned hands on life sustaining skills through this program. Communities were able to eat fresh Vegetables year round. Most of all take home the knowledge that can be use to live.

PROJECT APPROACH:

The concern with the health, education, and all-round well-being of the community. This program was use to educate the public. The education of this program included learning about growing nutritious food to encourage good eating habits, strategies for marketing excess produce, and educating youth and adults on the value of the land and the green house.

The Talladega County Exchange Extension Coordinator Mrs. Wanda Jurrians helped Diversity Christian Center to receive a grant through the COOSA VALLEY RC&D Coordinator Mr. Eddie May. This was the beginning of this program a new way of growing under Plasticulture System. The special block program help us to make this program more educational. The Specialty Crop Block Grant Program gave Diversity supplies for a green house which allowed us to grow year round. We were able to dry out and grow our own seeds and seedlings. Ready to plant in the plasticulture garden.

GOALS & OUTCOMES ACHIEVED:

During the grant period we train teens & adults and younger children how to farm plant and harvest their products. One of the greatest tasks we preformed teaching of canning and persevering food. We increase the number of wanting to be framers and gardeners about 60% and the quality of food by 40%. The results are great and in conclusions has been a success and is recommended for every community, where is space for it.

The significant contribution and roll of project partings had a great impact on the community and the county. The roll of the U.S.D.A. N.R.C.S. R.C.D. and the County Extension Department was well over due and was good for the community, city and state, working together in teaching and support of our youth and adults. The project partners were very supportive and subordinate.

The program helped to teach the youth/adults in the community the power of the seed when planted in the right temperature, which a green house can change during hot and cold sessions. Your better results when planting under plastic and a green house over it makes a great different.

We were able to complete the training and teaching of using a green house and a plasticulture garden together made a strong impact on the community among our youth and elders. The renting of a tractor allowed some our teens to work equipment that some will never experience in a life time. The program also helped to supply the garden with supplies need to complete the task.

In 2013 we are moving and enlarging the green house and the community garden for the next seasons.

The community is getting a hands on learning experience of a life time that can be use for a life time. Especially in an economy like now. Youth learning the educational power of the seed after planting it in the ground. The experience of using of the tractor among some of the young males.

In completion of this project data was taken in the beginning of the project and has been tracked and kept all season long. The end results were amazing. The project has increase in production over 60% and the qualities of the produce and quantities were amazingly better than the beginning. Data kept in form of news articles, pictures, movies, record keeping and more. Please visit our website for more. www.info@ourcdc.org.

BENEFICIARIES:

The Specialty Crop Block Grant program helped along with the Plasticulture for Diversity Christian Center Agriculture outreach of over sixty or more youth club members to induct Talladega Eastside Head start of over one hundred and twenty students, Talladega High School Agriculture classes of over one hundred students and staffs, community churches and citizens of all surrounding counties that participated to learn more about farming and even about who are the U.S.D.A-N.R.C.S. / COOSA VALLEY RESOURCE CONSERVATION/ RC&D and all the different programs that is offers through these programs together. More people now know more about farming.

LESSONS LEARNED:

This project starts out with Diversity outreach students and about ten new students and four adults. The ending results of the project end up with as many as fifteen new farmers and one young poultry farmer of chicken and fresh brown eggs. Many more have signed up for next season.

In doing this project while being involved in it, the relationship with the USDA and other government programs was an experience of a life time. Unexpected and over whelming amount of participates in this program.

Funds should have been distributed on time and fairly. This makes it difficult on disadvantage farmers.

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Project #18

Binon Farms

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Robert Binon, Project Director

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Peach Industry

Project Summary

The objective of this project was to develop a process to continue the training efforts for small farmers in Chilton, Autauga and the entire Black belt and to develop a demonstration project of fruit trees and vegetable crops to educate small farmers on how to sustain small farmers through diversification.

This project motivated and demonstrated to new and beginning farmers especially youth to open up the peach industry and promote health through fruit. Young farmers can use small acreage to produce a peach crop as an alternate enterprise. This project will also encourage youth to become peach and plum growers.

Project Approach

This project performed the following activities:

- Hands-on planting of 100 plum trees, 125 peach trees
- Train youth how to set out the plum trees
- Conducted two tours , demonstrate preparation of bedding

Farmer participated in vegetable production including:

- Laying plastic with irrigation
- Planted tomatoes, and squash
- Sold vegetables at Farmer Markets
- Farmers learn direct market strategies such as retail, roadside selling

Goals and Outcomes Achieved

The goal of developing 10 farmers and their planting fruits and vegetables was accomplished.

These farmers were trained and educated on best practices production techniques, seed bed preparation, irrigation and plastic culture.

Binon Farm conducted 2 tours, James Brown Farm, Autauga County, Raymond Coody Farm, and Chilton County. Twenty farmers participated during these tours. Observation was made on pruning techniques, seed bed preparation, pest management, spraying techniques. Of the 20 farmers 10 farmers decided to continue and pursue production of peaches, plums and vegetables. These 10 farmers are now actively participating in our local Autauga/Chilton County Farmers Cooperative. These same participating farmers were introduced to USDA Programs particularly cost share programs and operating loans programs to sustain their future farming operation.

Beneficiaries

This project has benefited youth such as:

- 4-H club students
- Agribusiness education students
- Small and beginning farmers and community

This project benefited those clubs and the community to continue to produce new farmers and enhance the food industry of healthy foods.

Lessons Learned

We face problems on the vegetable planting without plastic culture because of the weeds getting out of control, not enough rain. We learned that you must have proper equipment in order to plant on time.

Continue project with an upgrade of laying plastic culture and demonstrate how plastic culture with irrigation will produce a healthier crop and yields plentiful. Conduct workshops encourage exiting farmers, New and Beginning farmers, growing produce and enter the peach industry along with introducing plums. Provide more outreach and technical support for farmers entering into fruit production. The main goal of this project is to recruit more farmers into the fruit production and raise healthy fruits as well as vegetables. Provide more hands on workshops to continue to show how fruits are good marketing commodities.

Project #19

Project Title

A Taste of Citrus Field Day, Gala and Promotion

Promoting expanded small-scale production, consumer awareness and regional consumption of Gulf Coast citrus specialty crops

Project Summary

The Gulf Coast occupies a distinctive worldwide niche in the citrus market, producing exceptionally nutritious, flavorful and high-return products such as Satsumas, clementines and other warm-temperate citrus crops ideally suited to family-scale production. In spite of this, production remains surprisingly low, and too many consumers – even on the Gulf Coast – remain unaware of the quality and benefits of these productions. In a recent Auburn University survey, only 32 percent of respondents had actually tasted a Satsuma.

There are many reasons for this, but the difficulties of establishing a national marketing niche is a significant one. To compete in national markets, there is increasing pressure to harvest earlier than peak maturity, which can lower the quality of the citrus, and which many growers say has discouraged them from expanding or continuing their operations. While some attempt has been made to develop relationships between local growers and national retailers, less effort has been devoted to diversifying more local and regional markets, where it's easier to build name recognition and to market at peak season, and where returns for growers and local communities are ultimately higher and arguably more stable.

Our goal has been, and continues to be, introducing a broader segment of the regional population to the benefits of growing and consuming Gulf Coast citrus. We've promoted more backyard citrus groves for home use and for small-scale local marketing; and we've worked to develop heightened local market interest in citrus by promoting, in a variety of local media, the nutritional benefits and the exceptional flavors of Gulf Coast citrus. We've also worked to increase regional demand for Gulf Coast citrus products by working with local restaurants, food critics and chefs to feature Gulf Coast citrus products in seasonal menus and on various media.

Project Approach

We developed a “branding” approach to locally grown citrus. The theme of our program has been “Mobile and the Gulf Coast: The sweet spot for Satsumas and other fall citrus.” We developed this brand in numerous ways, in multiple media, over several months and in multiple venues. Numerous concepts have also been developed to promote specific underused local citrus, e.g., Hamlin oranges, the ambrosia orange of the Gulf Coast; Satsumas, the champagne of citrus. Project media partners WKRG television, FM Talk 106.5 radio, the Mobile Press-Register, Al.com, and Lagniappe have all contributed significantly to communicating this project to a large audience. Auburn University's Ornamental Horticulture Substation and the Fairhope Experiment Station have both contributed expertise, experts, fruits and other considerations to the programs' success. Volunteers have contributed more than 140 hours of service to this project.

This evolved to include five specific programs:

—A Citrus Field Day, which included more than 60 members of the public who were introduced to a local grower, and given a tour through an entire citrus production operation, from

propagation to production to harvest. Samples of more than 18 citrus cultivars suitable for Gulf Coast growing conditions were assembled by Auburn University personnel and offered for sampling and comparison. Participants were presented information on why Satsumas and other fall-ripening citrus tend to develop excellent flavor on the northern Gulf Coast. Auburn University researchers presented information on growing citrus. Those who responded to our surveys — orally and in written form — expressed satisfaction with the program, and indicated they would be interested in knowing more and becoming more involved. As a follow-up to our program, we will contact all participants in the field day and gauge their interest in more citrus related activities this spring, as well as provide them with information on where to purchase citrus trees.

Grant monies were expended in the form of publicity, transportation, equipment and facility rentals, sampling fruit, transit costs, honorariums and program materials. A Citrus Sampler Gala marketed as “A Citrus Christmas,” was free and open to the public.

Numerous varieties of citrus were available for sampling, educators were on hand to promote locally grown citrus, and there were samples of Satsuma ice cream, Satsuma vinegars, Satsuma cookies, citrus Christmas decorations, all made from locally grown citrus. Specially commissioned Satsuma and Gulf Coast citrus artwork was developed to promote the benefits and use of local citrus. Children’s activities included making decorations out of locally grown citrus. Locally grown fresh citrus in bags and cases was also available, branded with “The Sweet Spot for Citrus” logos. More than 500 adults and children attended the event.

Grant monies were expended in the form of program materials, publicity, informational materials, sampling fruit, purchase of food and culinary materials.

—The 10 Days of Citrus, a marketing program which aims to connect local restaurants and food and beverage retailers with local citrus growers, and those citrus retailers, in turn, with consumers. The program has been an amazing success, with more participation than we had predicted. More than 20 locally owner retailers participated and each produced a menu featuring at least one citrus product. This has received tremendous publicity in the local media, saturating television, radio, print and digital, and we have partnered with a number of media outlets. One of the participants was included in a cooking show on local television, which garnered a lot of attention. Table toppers remained in the restaurants through the citrus season to promote the benefits and uses of locally grown citrus. Restaurants who have responded to our phone surveys and post-event visits all said that they were pleased at the results, and expressed a strong desire to continue the program — at a larger scale — next year. Many said they would like to meet and work with the Mobile Botanical Gardens this spring to begin development of a larger program. As an example of the impact of the project, the “hot” new ice cream flavor in Mobile is Satsuma ice cream, which was developed by one local ice cream maker for the program, and has sold out repeatedly at events and at multiple local ice cream parlors.

Grant monies were expended in the form of restaurant development and promotions, publicity, and program materials.

—A Citrus Christmas recipe contest encouraged the public to use locally grown citrus to develop their own recipes. The “buzz” surrounding the event was significant, and many people wrote to suggest citrus recipes, but didn’t officially enter the contest. In the end, we received only 12 official submissions for recipes. In spite of the low participation rate this year, we feel that there is potential to develop this contest more in coming years, as people become more comfortable, and more adventuresome, in developing recipes with locally grown citrus.

Grant monies were expended on program materials and publicity.

—General public awareness of citrus: In addition to promoting specific programs and venues, we have also succeeded in providing much information to the public about using citrus through multi-media presentations that have reached a broad spectrum of the community, and as a result of our project, we have begun a separate project with the City of Mobile and the Mobile Housing Board to plant citrus and promote its use in various underserved communities around the city.

Goals and Outcomes Achieved

We are pleased to report that we have met or significantly exceeded all of the goals and outcomes that we have so far been able to measure.

- The Citrus Field Day attracted more than 60 participants, as expected. Written survey participation was low, but enthusiasm for the event was high, and we have continued to receive thanks and acknowledgements from those who attended. Many asked us to keep them posted on additional citrus events this spring, and we will have another chance to gauge their enthusiasm and their knowledge growth when they respond to our calls and mailings this spring.
- The Taste of Citrus Sampler Gala (marketed as “A Citrus Christmas” event) attracted more than 500 people. Our original expectation was a minimum of 75 and a maximum of 250. Formal survey responses were enthusiastic and are included here, but as with all formal surveys conducted with this project, participation in the written survey is too low to be statistically significant. For future reference, the response rate could possibly be improved by recruiting volunteers to conduct brief oral surveys.
- More than 22 restaurants participated in promoting and serving winning citrus recipes. We had expected a minimum participation rate of 3 and a maximum of 10, so these goals have been exceeded beyond our best hopes.
- We can report more than eight major features on citrus production, consumption and benefits in regional print and digital print media. Most of those stories went statewide, via the al.com media site. We had expected to report two major features. One local print media outlet not only participated by doing articles, but also by contributing full-page ad space.
- We can report multiple citrus programs on both radio (five segments) and local television (three segments). We had anticipated two radio show appearances, with a stretch goal of some television coverage.
- We had anticipated a regional magazine feature on citrus. This was our one goal that did not materialize as we had planned.
- We encourage you to browse our extensive program materials, developed specifically for this project, at <https://www.dropbox.com/sh/fm3ptaa3q0cp2gl/DjNgcwrvFt>. In this folder, you will find collections of photographs, brochures, table toppers for restaurants, surveys, newsprint articles and even audio files.

Beneficiaries

We have clearly developed a working relationship between local food and beverage retailers and local citrus producers, and greatly enhanced the local retailers' appreciation of the many uses of local citrus.

We also have excellent evidence that the public has responded widely and well to our messaging and educational programming, and are now seeking out locally grown citrus, including Satsumas, Hamlin oranges and others. While response rate to written surveys was low, people commented in an even more significant way, by attending our events in numbers far in excess of what we had predicted, by responding with major media coverage, and by featuring citrus meals at most of the region's prominent locally owned restaurants.

Lessons Learned

There is clearly a big marketing gap that is preventing local producers from getting their product to consumers, as anticipated. This gap is widening, and without more intervention, it appears possible — likely, even — that we'll continue to lose local citrus growers and production. We discovered that there is not even a reliable database of citrus producers, something we have tried to rectify at least in a small way with this project.

But we've also learned that local retailers and many members of the public are anxious to make that connection with locally grown produce, and are willing to learn more about local citrus, what makes it special and how to use it.

The participation in the written survey did not create a large enough sample size to be statistically significant. For future reference, the response rate could have been improved by recruiting volunteers to conduct brief oral surveys.

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