

FLORIDA DEPARTMENT OF AGRICULTURE
& CONSUMER SERVICES (FDACS)



Final Performance Report
Specialty Crop Block Grant Program
Florida Department of Agriculture & Consumer Services
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PROGRAM CONTACT

Carole Strange
Program Administrator
Florida Department of Agriculture
& Consumer Services
Mayo Building – Room 411
407 South Calhoun Street
Tallahassee, Florida 32399-0800
(850) 487-2058

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Total Grant Funds awarded - \$253,750.10
2006 Specialty Crop Block Grant Funding

University of Florida – Institute of Food and Agricultural Sciences (IFAS)
Florida Department of Agriculture and Consumer Services (FDACS)
Food Safety Partnership - \$221,314.36 expended

PROJECT SUMMARY

Florida's 42,500 commercial farms supply over 280 essential commodities to households throughout North America and to 100 international trading partners. Florida's farms are some of the most productive in the world and the value they provide to our state is second only to tourism. According to a recent study published by the University of Florida, the state of Florida agriculture industry creates over 756,993 jobs and has an overall economic impact of \$97 billion annually.

Florida is the number two producer of fruits and vegetables in the nation. Cash receipts for Agriculture production in Florida for 2005 were \$7.759 Billion. According to USDA data, more than forty-five percent of this amount was derived from specialty crop production of fresh fruits and vegetables. The Federal Food and Drug Administration (FDA) reports that over 12% of foodborne illnesses associated with outbreaks are caused by produce consumption. This higher risk level is associated with four specific types of fruits and vegetables commercially produced in Florida; specifically tomatoes, leafy greens, melons and berries.

Effective food safety standards, practices and education are critical to sustain and safeguard Florida's high level of specialty crop production. It is essential to establish, utilize and maintain food safety guidelines to enhance food safety at every phase of agriculture production. A high priority placed on food safety education results in the safest product possible and enhanced consumer protection.

The following program of work was preformed to enhance the safety and competitiveness of Florida specialty crops:

- FDACS worked direct with the University of Florida, Institute of Food and Agricultural Science (IFAS) to develop and deliver food safety educational materials and training.
- Food safety training and materials were provided statewide by Florida extension professionals to producers, field workers, packers and repackers of fresh fruits and vegetables.

- The development of this food safety program focused on those fruits and vegetables associated with the highest risk of foodborne illness and at the greatest level of production in Florida: tomatoes, leafy greens, melons and berries.
- The development and implementation of this food safety program addressed safe handling, production and packing practices. This is critically important for quality and competitive agriculture production and the safety of the consuming public.

In order for Florida specialty crops to remain competitive and to ensure safe consumption, many practices must be followed to prevent and reduce microbial or chemical contamination. These practices must be followed in every phase from farm to consumer. Specifically, this includes the production, handling, packing, transporting and serving. Tomato Good Agricultural Practices (T-GAPs) for tomato farms and greenhouses and Tomato Best Management Practices (T-BMPs) for packinghouses and post harvest handling were developed from 2004-6; however, the basic food safety education and training to implement these requirements at all levels of tomato production from the farm to the consumer was not available or broadly offered before this program. Specialty Crop Block Grant funds provided for the development and implementation of specific training materials targeted to a broad and diverse audience from highly skilled and educated packinghouse managers and grower/owners to a less skilled and changing workforce.

PROJECT APPROACH

The goals of this program were as follows:

- Develop and implement a food safety program to mitigate the risk of foodborne illness, microbial and chemical contamination of specialty crops.
- Develop educational programs and materials that addressed safe practices and guidelines for production, packing and repacking.
- The Florida Tomato Growers Exchange worked to develop Tomato - BMP's and Tomato - GAP's for tomato production in Florida. The existing tomato T-BMP's and T-GAP's, along with commodity specific guidelines for leafy greens, and National GAP's documents served as the basis for the development of food safety guidelines specific to leafy greens, melons and berries. The existing tomato guidelines served as a working document.
- Develop educational programs and materials that addressed safe practices and guidelines for production, packing and repacking. The existing tomato guidelines were used to develop much needed training and educational materials for the tomato industry.
- The tomato educational and training materials, as well as, the commodity specific guidelines for leafy greens were used as a basis for the development of additional training and educational materials specific to leafy greens, melons and berries.

- Provide education programs to prevent or minimize contamination of fruits and vegetables either in the natural environment in which they are grown by utilizing Good Agricultural Practices (GAP'S) and in the handling, packing and repacking of fruits and vegetables once harvested.
- University of Florida (IFAS) Extension Agents worked with FDACS to provide this training on food safety practices to producers and farm workers at all production levels.

Several partners contributed to the success of this project. The grant partners played an important role to the success of this grant. Our two main partners, Cornell University (Dr. Robert Gravani and his assistant Ms. Elisabeth Bihn) and Pennsylvania State University (PSU) (Dr. Luke LaBorde) were instrumental in the creation and preparation of training materials. Additionally, the assistance of county Extension personnel cannot be emphasized strongly enough. Agents such as Gene McAvoy, Alicia Whidden, Crystal Snodgrass, Bob Hochmuth, Linda Landrum, Mark Ritenour, David Sui, Edward Skvarch and Aparna Gazula, just to name a few, were instrumental with assisting in the scheduling and preparation of regional training events. The state Extension specialists comprising the instructor team included Keith R. Schneider, Renée Goodrich-Schneider, Steve A. Sargent and Michelle Danyluk.

One example of the partnerships we created was with our first project proposed, the tailgate training flipchart. Our partnership Penn State University yielded to versions of the flip chart. This flipchart, in English, Spanish and now in Creole, is now part of our training material that was available for free from our website to any Florida farmer or packer currently dealing in tomatoes, melons, berries and/or leafy greens. The Creole flipchart was a joint effort with Penn. State University and Dr. Luke Laborde. We have distributed over 600 of the English/Spanish flipcharts to date at training events. The Creole flipcharts were available at this year's Florida Tomato Committees Food safety Update meeting held on Sept. 7, 2010 in Naples, FL. This flipchart gives the farmer a self-guided instrument for training their workers in food safety practices.

GOALS AND OUTCOMES ACHIEVED

Goals of this grant can be broken down into three main objectives: 1) develop and deliver food safety educational materials and training; 2) focused on providing training and materials statewide to producers, field workers, packers and repackers of fresh fruits and vegetables; and 3) develop a food safety program focusing on those fruits and vegetables associated with the highest risk of foodborne illness and at the greatest level of production in Florida: tomatoes, leafy greens, melons and berries.

Objective 1 was to develop and deliver food safety educational materials and training. To accomplish this task several projects were undertaken. We immediately began development of the UF/IFAS Produce Safety Center website to act as clearinghouse for produce safety information. This website, resulting from feedback received from stakeholders, is now functional and is located at <http://fshn.ifas.ufl.edu/foodsafety/>. This website contains a wealth of information, from factsheets, regulation documents to a list of upcoming training events. The site contains online workshops/training such as the Tomato Safety Update held in Naples, FL in September 2008. This training is presented on narrated PowerPoint presentation and is available to anyone with Internet access. The site also functions as a portal to a project we have entitled "Extension University." This site allows 24-hour, 7 day-a-week access to educational training and certification. This system is designed to provide an educational platform for online training for all T-GAPs and T-BMPs related topics.

Several other projects were key to the successful completion of this grant. The first of which was the standardization of the teaching curriculum as determined by the training team of Schneider, Sargent, Goodrich-Schneider, and Danyluk, and based on the draft and final rules from Florida Tomato Committee documents.

One of the first projects proposed was the tailgate training flipchart. This flipchart, in English, Spanish and now in Creole, is now part of our training material that is available for free from our website to any Florida farmer or packer currently dealing in tomatoes, melons, berries and/or leafy greens (while supplies last). We have distributed over 600 of the English/ Spanish flipcharts to date at training events. This flipchart gives the farmer a self-guided instrument for training their workers in food safety practices.

A companion piece to the Creole language flipcharts is a Creole language version of Cornell University's DVD "Food Safety Begins on the Farm." The English/Spanish version of "Food Safety Begins on the Farm" was extremely popular with producers around the state. During this grant, we distributed approximately 2,000 copies.

Objective 2 was focused on providing training and materials statewide to producers, field workers, packers and repackers of fresh fruits and vegetables. We first discussed the GAPs training grant and tomato food safety program at the 2007 Florida Tomato Committee meeting held in Naples, FL. Since then an additional 24 workshops were held. The venues and dates for each of these meetings are listed below:

<u>Venue</u>	<u>Date</u>	<u>Notes</u>
Naples, FL	September 5, 2007	Tomatoes Specific
Balm, FL	November 28, 2007	FDA "Kick-off" Tomato Initiative
Balm, FL	December 7, 2007	Tomatoes Specific
Naples, FL	September 2, 2008	Tomatoes Specific
Jackson County, FL	February 3, 2009	Melon Specific
Gainesville, FL	February 12, 2009	Combined Training
Live Oak, FL	March 31, 2009	Combined Training
Balm, FL	May 1, 2009	Combined Training
Gainesville, FL	May 11, 2009	Combined Training
Orlando, FL	August 31, 2009	Extension Agent Training
Naples, FL	September 8, 2009	Tomato Specific
Immokalee, FL	September 14, 2009	Blueberry/Agent Training
Immokalee, FL	September 24, 2009	Combined Training
West Palm Beach, FL	October 27, 2009	Combined Training
Immokalee, FL	November 4, 2009	Tomato Specific
Milton, FL	November 18, 2009	Tomato Specific
Gadsden, FL	December 2, 2009	Combined Training
Palatka, FL	December 7, 2009	Tomato Specific
Tavares, FL	February 9, 2010	Tomato Specific
Gainesville, FL	March 23, 2010	Combined Training
Balm, FL	April 21, 2010	Tomato Specific
Live Oak, FL	April 20, 2010	GAPs Manual Develop Program
Live Oak, FL	April 27, 2010	GAPs Manual Develop Program
Live Oak, FL	May 4, 2010	GAPs Manual Develop Program
Immokalee, FL	May 14, 2010	Combined Training
Gainesville, FL	May 25, 2010	Agent Training

With the workshop events we have trained 1027 attendees (approx. 700 persons; with some individuals attending two or more workshops). Of the 700 unique individuals, approximately 40 were Florida Extension agents. The majority of the non-extension attendees were management personnel, who in turn trained their upper management employees and who will in turn train the packinghouse and farm workers. If you estimate the number of employees who will be trained by those person we've trained, or through the use of our free educational materials and/or the Produce Safety Center website, you could multiply the attendee number by 10, possible 100 (or more) to estimate the overall impact this grant has had on Florida agriculture. These workshops possess a significant multiplicative effect.

One of the most impressive metrics of the success of this grant is that with approximately 1,000 persons trained, this program delivered training at a cost of only \$200-210 per person. Even more impressive is that approximately 60-70% of the training costs were materials given directly back to the farmers and processors.

All programs were evaluated for speaker effectiveness, clarity and significance, as well as overall workshop utility. These evaluations were reviewed after each workshop in order to assess the overall effectiveness of the program. All workshops conducted received positive ratings and the vast majority of attendees showed an increase in both knowledge and awareness, and stated that they would implement GAPs at their respective operations. Further, all attendees completed pre and post workshop exams that served as an additional quality assessment tool, as well as verification for their attendance for the entire program. Certificates of training were awarded to all documented attendees.

Objective 3 was designed to develop a food safety program focusing on those fruits and vegetables associated with the highest risk of foodborne illness and at the greatest level of production in Florida: tomatoes, leafy greens, melons and berries. To this end, the training and materials gathered reflect our efforts towards this goal. One of the main hurdles faced during early years of this project was the lack of attendance from those farmers and packers who worked with leafy greens, melons and berries. While we had several meeting with a specific focus other than tomatoes (i.e., Jackson County, FL meeting for melon growers; Umatilla/Immokalee meeting for blueberry Extension agents). During the course of this grant we found that the growers/packers for these commodities (leafy greens, berries and melons) were more reluctant to participate in GAPs training for several reasons. Private conversations with farmers revealed that since the program was not mandatory for their crop as is were for tomato farmers and packers, participation was viewed as a low priority. This low priority was also described as costly, time consuming,

and an unnecessary burden for producers. We noted that these commodities represented a smaller percentage of farmers and thus are not as well coordinated as the tomato industry is in Florida.

Early on, it was determined that the best way to ensure the best attendance to the broadest audience was to deliver a generic GAPs training which could be used by all farmers and packers. This approach was also taken with the training materials. Rather than specific guidance documents and materials, the training group focused on a “one-size-fits-all” approach. The exception to this practice was when we had a “tomato specific” audience. In these instances, we focused training directly towards the tomato industry with the appropriate emphasis on tomato related issues (e.g., T-GAPs and T-BMP audit document review). Originally, the grant called for commodities specific guidelines. These commodity specific documents are currently being developed (and under review) by the FDA and have been for over two years. The docket was to close July 23rd. The draft commodity specific documents can be found at the Produce Safety Center website (<http://fshn.ifas.ufl.edu/foodsafety/>)

BENEFICIARIES

The training group of Schneider, Sargent, Goodrich-Schneider and Danyluk provided valuable training to the bulk (representing ~95% of total states total production) of the Florida tomato industry. The team has a proven curriculum (an average 6% gain in knowledge from approximately 500 responses), GAPs certification program, a solid core of training material and a website for continued training of Florida farmers and packers, long after grant funding has ended, thus ensuring a better return on investment for the future of the State.

LESSONS LEARNED

One of the main lessons learned during the course of the training workshop was to keep the trainings short and to the point. Our farmers and packers fared better with real world examples and hands-on training. To that end, the team developed the “create-your-own” GAPs manual programs that were run in the final year of the grant.

An unexpected outcome of conducting numerous smaller workshops, rather than large multi-county events, was how effective it was to rotate speakers and bring in outside speakers. University extension faculty were typically well received, in part because of the outstanding reputation of our county extension faculty. Even so, our guest speakers (e.g., other farmers, buyers, auditors) were particularly effective. They spoke to the farmers and packers on their level and had a “trust factor” which is hard to cultivate as without extended contact time. Their participation in our workshops was very more appreciated by our university speakers and event attendees.

Contact Person

Keith R. Schneider, Ph.D.
Associate Professor
Food Science & Human Nutrition
University of Florida
(352) 392-1991 ext 309
keiths29@ufl.edu

Florida Department of Agriculture & Consumer Services Division of Marketing

Note - funds unexpended by the University of Florida in the amount of \$32,435.74 were reallocated to the Florida Department of Agriculture and Consumer Services – Division of Marketing for promotion and education activities. The 4 projects funded are listed below. The Department received approval and reallocated funds in August 10, 2010. All activities were initiated and concluded by the end date of the cooperative agreement on November 28, 2010.

- (1) FNGLA Horticulture Trade Show
- (2) Speaking of Women's Health
- (3) The Balancing Act Educational Series
- (4) New Product Promotion

Florida Nursery Growers & Landscape Association Trade Show – Project (1)

Project Summary

The Florida Nursery, Growers and Landscape Association (FNGLA) hosts a major horticulture industry show yearly in Orlando. The Landscape Show allows the state's leading industry an opportunity to showcase a variety of plants.

The Landscape Show is an event at which the Division of Marketing and Development has exhibited in the past to promote and support Florida's horticulture industry. Specialty Crop funds allowed the Division to not only exhibit, but allowed for the inclusion of two members of the Florida Agricultural Promotional Campaign (FAPC) to participate in the show.

Project Approach

Division staff recruited companies to share exhibit space at “The Landscape Show”. Originally three companies accepted the invitation, however only two participated. The funds secured four booth spaces in a row. We removed the pipe and drape between the individual booths to open it up and present our displays under the umbrella of FAPC or Fresh from Florida.

Goals and Outcomes Achieved

The main goal of allowing Florida agribusinesses to participate and gain industry exposure was met.

Beneficiaries

Promotion of the FAPC was important, and we encouraged visitors to learn more about the services of the program. We also encouraged buyers to meet with the exhibitors; early feedback from the exhibitors suggests that the show was worth the time, effort and money expended by them. Both companies reported sales at the event (selling their exhibit stock) as well as reporting potential future sales opportunities.

One of the FAPC members, NGM Productions, is actively involved in the FNGLA, the event organizer, so that company was able to bring increased awareness to the Department and programs in place to assist agribusinesses. The other participant was a new FAPC member called Brite Leaf Citrus Nursery. It was the first time they had been to any trade show, so it provided extremely valuable exposure to the company (both educational for them and in introducing their products to attendees).

Lessons Learned

Several days before the event one company had to cancel. There was an attempt to recruit one more company to fill the space, but with only a few days notice it was not possible. This was easily handled by increasing the amount of booth space the two participating growers received.

While many FAPC members were thankful for being asked to participate, business has been very slow and they could not afford the travel costs associated with the event. Even though the exhibit cost was waived, many out of the area were not able to justify the cost to travel and spend several days away from their farms. We were not able to offer lodging assistance.

This was a one-time event, but within the next three months, Division staff will follow up with the two participating businesses to ascertain sales outcomes.

Speaking of Women's Health – Project (2)

Project Summary

Speaking of Women's Health is a one day annual event designed to educate women of all ages on health, nutrition and achieving an overall healthy lifestyle.

During the Speaking of Women's Health event more than 1200 women attend the one day seminar that included exhibitors, guest speakers and educational breakout sessions. Specialty Crop funds allowed the Division of Marketing and Development to perform a dual role at this event; one as an exhibitor and as the host of an educational breakout session.

Project Approach

As an exhibitor the staff displayed an array of fresh fruits and vegetables promoting our Paint Your Plate series. Fruits and vegetables were displayed featuring the 5 major color groups (Red, Green, Orange/Yellow, White and Purple/Blue). The display also highlighted the health benefits of each color group and the specialty crops from Florida associated with them. Attendees also received a bag of assorted fruits and vegetables to encourage healthy eating habits.

As the host of an educational breakout session, staff used this opportunity to promote specialty crops through our Fresh from Florida Kids program which teaches parents how to begin introducing produce to their infants and toddlers. During this session our chef performed a cooking demonstration preparing baby food, food for a toddler and a meal for the entire family utilizing the same fruit and vegetable ingredients. This illustrated how simple it can be to prepare different meals for children and the entire family by using the same ingredients. This demonstration followed the outline from the Fresh from Florida Kids program. At the end of the hour session participants were given the recipe with the fresh produce items to make the meal as well as an informational booklet on the program and tools to assist them with cooking at home.

Goals and Outcomes Achieved

The overall goal for this event was to target women (primarily Africa American) and parents by providing them key information for maintaining a healthy lifestyle through the consumption of fruits and vegetables in order to combat childhood obesity and obesity related illnesses. This goal was achieved.

Beneficiaries

More than 1200 women attended the one day seminar where the Paint Your Plate exhibit was featured. Mothers, grandmothers and other caregivers were able to attend the breakout session promoting the Fresh from Florida Kids program.

Lessons Learned

There were no major problems or delays. However, if we had to identify a problem it would be that the Division was not able to perform two educational breakout sessions. Our initial commitment was to exhibit and have one session; however there was a demand for a second session

The Balancing Act Educational Series – Project (3)

Project Summary

The Balancing Act is a nationally syndicated morning talk show program that airs on The Lifetime Channel.

Project Approach

The Department's Certified Executive Chef and manager traveled to the Lifetime studios to film a program segment for The Balancing Act to promote Florida specialty crops and the Division of Marketing and Development's kids nutritional programs; Xtreme Cuisine and Fresh From Florida Kids.

Our Chef and The Balancing Act host used a kitchen setting to display a variety of fruits and vegetables and recipes created specifically for children. The two programs featured (Xtreme Cuisine and Fresh from Florida Kids) were chosen because they both allow parents and kids the opportunity to eat more fresh fruits and vegetables as well as learn about the nutritional value of those products.

Goals and Outcomes Achieved

Our goal was to reach a broad range of consumers, primarily women to educate and create awareness of the variety of specialty crops grown in Florida. This was accomplished through this project.

Beneficiaries

Teaching parents how to prepare meals using fruits and vegetables is important, but encouraging them to involve their children in the preparation process and help them understand the value of eating fresh produce is equally important. Due to the fact that this show is nationally syndicated it was important to acknowledge that Florida provides nearly half of the fruits and vegetables throughout the U.S.

Lessons Learned

We did not experience any problems or delays with this project. We would like to continue our partnership with The Lifetime Channel and use different resources and unique marketing tools to expand our reach in promoting healthy lifestyles through fresh fruits and vegetables.

New Product Promotion – Project (4)

Although approved for expenditure, Specialty Crop Grant Funds could not be used for the New Product Promotion because the activity could not be implemented and concluded prior to the contract end date. The Department provided funds for this project and completed the associated scope of activities independent of the grant.

Contact Person

Yolanda Roundtree
Development Representative Supervisor
Florida Department of Agriculture and Consumer Services
Division of Marketing
(850) 413 -7961
Yolanda.Roundtree@freshfromflorida.com