

**DEPARTMENT OF AGRICULTURE OF PR**

**FINAL PERFORMANCE REPORT**

**SCBGP FY 2014**

**USDA AMS AGREEMENT NUMBER 14-SBGP-PR-0043**

Projects to Enhance the Competitiveness of Puerto Rico Specialty Crops:  
Participation in Local & International Events to Provide Market Access for  
Local Specialty Crop Products;

*Delpaís* Brand Advertising Program to Increase Sales of PR Specialty  
Crops Products Identified by the Seal; *Placita en Plaza*: Farmers Markets  
at *Plaza Las Américas* and *Plaza del Caribe* Shopping Malls,  
Proposal for the Increase in the Production of Honey in Puerto Rico, and  
Various Recommended Sub-Grantee Projects

***Submission Date: 1/31/18***

*Project Coordinator: Ruth L. Pagán Alvarado*  
*FIDA Executive Director*  
*Department of Agriculture of PR*

## Description of Approved Grant

This is the Final Performance Report for the Specialty Crops Block Grant under Agreement #14-SCBGP-PR-0043. The amount requested in State Plan was **\$522,655.00**, however, there was an additional funding for the total amount **\$524,511.15**, with an unassigned amount **\$1,856.15**.

The grant period begun on October 1, 2014 and ended on September 29, 2017. *This report covers activities and expenses during the year from October 2014 through January 2018 (As requested in amendment).* As a part of the present agreement, the Puerto Rico State Plan includes a Sub Grantee project component.

The main projects and the allotted budgets for each are included in the following table:

### **BUDGET FOR MAIN PROJECTS & SOURCES OF FUNDS**

	<b>Grant Portion</b>	<b>State Match Portion</b>	<b>Sub Grantee Portion</b>
State Managed Projects (4)	\$458,830.99	\$458,830.99	
Sub Grantee Projects *	\$63,824.01*	\$63,972.40	\$72,972.58
<b>Totals</b>	<b>\$522,655.00</b>	<b>\$502,803.39</b>	<b>\$72,972.58</b>

The Sub Grantee Projects (as prior approved in State Plan), as per item 2 of Table 1, are listed in the following table 2:

**TABLE 2: BUDGETS FOR SUB GRANTEE PROJECTS APPROVED, SOURCES OF FUNDS**

<b>Sub grantee projects</b>	<b>Grant Portion</b>	<b>State Match Portion</b>	<b>Sub Grantee portion</b>
<b><i>Agreempresas Ke'verde*</i></b>	\$19,426.76	\$19,575.16	\$19,747.58
CAP Inc.	\$20,000	\$20,000	\$20,000
FSCC Inc. Organia Farms	\$6,000	\$6,000	\$6,000
<b><i>Finca El Sol de Joaquín*</i></b>	\$7,945	\$7,945	\$7,945
<b><i>Alicia Justiniano**</i></b>	\$10,452.24	\$10,452.25	\$10,280
<b><i>High Tunnel and Hydroponic Vegetable Production Assistance for Developing Farmers</i></b>	\$36,400.00	\$0.00	Re-Allocation \$36,400.00
<b><i>Unallocated Funds</i></b>	\$1,424.00	0.00	\$1,424.00

*\*Withdrew the projects, amendments were submitted and approved. High Tunnel and Hydroponic Vegetable Production Assistance for Developing Farmers was the project submitted in substitution for the sub grantee projects not performed. \**

*\*\*Never submitted documents to sign contract with FID/not executed*

The following are the reports of each project. Regarding the Sub Grantee Projects, same will also be address on the details on a project by project basis.

## **STATE MANAGED PROJECT (1): Participation in Local & International Events to Provide Market Access for Local Specialty Crop Products**

### **A. Project Summary**

This project pursues to promote specialty crop producers increased competitiveness through exposure and increased access to local and international markets. The work plan is focused on a series of marketing efforts primarily focused in the participation in local and international tradeshows to achieve an increase in market presence and sales of specialty crop and derived products. In the case of local events, the participation contributes to increase market access by enabling that the producers engage in commercial activity through different types of points of sales (direct sales, wholesalers, and retailers). For international events, these participations enable producers to engage in export activity through networking with potential buyers, brokers and distributors as well as identifying important market opportunities and behaviors. Throughout the execution of the project, we encountered challenges that required the cancellation of some of the local and international events proposed. Events were eliminated due to changes dates programmed, travel restrictions due to government fiscal measures implemented during the timespan of this project and other unforeseen events that could impact product availability and other coordination factors. Through this project, local producers aimed to place their products in a diversity of market segments which will result in increased awareness and consumption of locally grown products as well as export sales to higher paying markets. This would increase the competitiveness of specialty crops producers.

This project was built on similar events previously participated, however, our funding attends many farmers from all areas of the island, thus attending marketing issues from different specialty crop industries at different locations and events, thus having a different scope from previous efforts.

### **B. Project Approach**

Participation in these events take place through the coordination of exhibition space where participating companies can showcase their products and network with potential buyers of the target markets identified. Task and activities associated to the coordination are similar with the exception of the design and size of the exhibit space which varies depending on the location of the event, and the need for travel. To coordinate these participation, the following tasks and activities were executed:

- Coordination and contraction of exhibit space with organizers
- Coordinate preparation of exhibition booth space and rental of furnishings and equipment
- Assess and select eligible potential participants
- Assign available exhibitor spaces
- Coordinate additional delegation participants (non-exhibiting) for booth attendance support and seminar participation.
- Make travel arrangements for staff and persons who attended
- Ship samples, materials, and equipment in advance
- Travel to the activity and remain at site to coordinate and provide daily assistance to participants, host booth visitors and trade leads

- Coordinate and supervise installation and final details of booth design and furnishings; exhibitor move-in before show and dismantle at show end
- Coordinate one on one meeting with potential buyers and trade leads introductions
- Hold daily meeting with participants to coordinate materials replenishment and assessment of daily activities

The following Local & International events were attended:

EVENT	DESCRIPTION	TYPE OF ATTENDANCE
Puerto Rico Chocolate Festival May 2015	<p>Festival open to the public that promotes chocolate and other derived products. The event includes an educational agenda in which provided a seminar regarding cacao planting, production, processing and opportunities to establish this crop. Farmers attended this event seeking for workshops and capacity building for the cacao industry.</p> <ul style="list-style-type: none"> <li>• Coffee Producers establish kiosks to increase access points through direct client engagement with information.</li> <li>• Informed attending visitors of new technologies, quality and innovations in the coffee industry.</li> <li>• Farmer recruitment for Cacao production was accomplished by other producers and farmers.</li> </ul>	2
ASORE October 2015	<p>A local event from the <i>Asociación de Restaurantes de PR</i> (Restaurants Association of PR). Local agricultural firms participated in this event to offer specialty crops products to the Restaurant and Food Service Industries.</p> <ul style="list-style-type: none"> <li>• Farmers exhibit their local fresh produce to chef, restaurants and other culinary industry leaders to establish greater sales.</li> </ul>	7
De Norte a Sur October 2015	<p>Culinary event that gathered local and international place at Plaza del Caribe. This participation is focused on promoting the producers that participate in Placita at Plaza del Caribe for additional sales and promotion.</p> <ul style="list-style-type: none"> <li>• Farmers exhibit their local fresh produce to chef, restaurants and other culinary industry leaders to establish greater sales.</li> </ul>	9
National Barista Championship October 2015	<p>Coffee preparation competition in which locally grown, high quality specialty coffees were showcased and promoted to potential buyers (coffee related businesses) and consumers in general. The event had an educational component of the importance of specialty coffee production for farmers, producers, as to the public as well. The selected barista and coffee was exposed on international events as a promotional tool for local coffee and to producers.</p>	<p>Awareness Event <small>(Farmers Exhibit their Coffee)</small></p>
Frutos de Mi Tierra Fair November 2015	<p>Agricultural fair which offered an educational and agricultural platform, so the public could experience the importance of our specialty crops, learn about different related subjects, and purchase products.</p> <ul style="list-style-type: none"> <li>• Opportunity for farmers to exhibit their local fresh produce directly to the public to increase sales.</li> </ul>	14
Agrofresco Gastronomico March 2016	<p>Event hosted and organized by FIDA and the PRDA to bring together producers and a variety of commercial buyers, specifically from the gastronomic industry, to encourage far to table approach</p>	50

	<p>and increase presence of locally grown specialty crop products within chefs and restaurants to promote awareness.</p> <ul style="list-style-type: none"> <li>• Opportunity for farmers to exhibit their local fresh produce directly to the public and specifically to the culinary industry to increase sales.</li> <li>• Business to business engagement.</li> </ul>	
Agrofresco Ornamental May 2016	<p>Event hosted and organized by FIDA and the PRDA to bring together ornamental producers and a variety of commercial buyers focused in the landscaping industries to promote local sales and support of locally grown plants.</p> <ul style="list-style-type: none"> <li>• Opportunity for ornamental producers to exhibit their goods.</li> <li>• Business to business engagement.</li> <li>• Ornamental workshops for the general public to establish home gardens.</li> </ul>	30
Agropolis 2016	<p>Agricultural fair which offered an educational and agricultural platform, so the public could experience the importance of our local agriculture as well as the specialty crop industry, learn about differences in farm related subjects, and purchase products.</p> <ul style="list-style-type: none"> <li>• Farmers exhibit their local fresh produce to inform the public and to increase sales.</li> </ul>	6
MIDA June 2016	<p>The biggest local event directed specifically to the food, supermarket and distribution industry. In this event specialty crop farmers began negotiations that lead to business deals during the year with the main buyers of the local food retail industry. The event counts with exhibition and business match making meetings, participation of chief executives, administrative personnel from the leading buyers of the Puerto Rico Chamber of Commerce Industry.</p> <ul style="list-style-type: none"> <li>• Opportunity for farmers to exhibit their local fresh produce directly to the public and specifically to supermarket, distribution and retail industry to increase sales.</li> <li>• Business to business engagement.</li> <li>• Farmers increase their offer to local and international markets, increasing Specialty Crop production and overall sales.</li> </ul>	6
PR Hotel & Tourism Association Convention September 2016	<p>Participation at the convention for the local tourism and hotel industry in which specialty crops producers establish sit-downs with potential buyers.</p>	4
Frutos de Mi Tierra Fair November 2016	<p>Agricultural fair which offered an educational and agricultural platform, so the public could experience the importance of our local agriculture and the industry, learn about different related subjects, and purchase specialty crop products.</p> <ul style="list-style-type: none"> <li>• Opportunity for farmers to exhibit their local fresh produce directly to the public to increase sales.</li> </ul>	9
Coffee & Chocolate Expo October 2016	<p>Event that showcased and promoted chocolate, coffee, and derived products and provides direct sales opportunities through exhibits open to the public.</p> <ul style="list-style-type: none"> <li>• Coffee Producers establish kiosks to increase access points through direct client engagement with information kiosks.</li> </ul>	18

	<ul style="list-style-type: none"> <li>Informed attending visitors of new technologies, quality and innovations in the coffee industry.</li> </ul>	
National Barista Championship October 2016	Coffee preparation competition in which locally grown, high quality specialty coffees are showcased and promoted to potential buyers (coffee related businesses) and consumers in general. The event had an educational component of the importance of specialty coffee production. The selected barista and coffee was exposed on international events as a promotional tool for local coffee to foreign buyers.	Awareness Event (Farmers Exhibit their Coffee)
De Norte a Sur October 2016	Culinary event that gathered local and international place at Plaza del Caribe. This participation focused on promoting the specialty crop producers that participate from Placita at Plaza del Caribe for additional sales and promotion. <ul style="list-style-type: none"> <li>Farmers exhibit their local fresh produce to chef, restaurants and other culinary industry leaders to establish greater sales.</li> </ul>	11
Feria Artesanal y Agrícola de la Montaña March 2017	Agricultural fair which offered an educational and agricultural platform, so the public could experience the importance of our local agriculture and the industry, learn about different related subjects, and purchase products. <ul style="list-style-type: none"> <li>Opportunity for farmers to exhibit their local fresh produce directly to the regional public and specifically to central mountainous area to increase sales.</li> <li>Business to business engagement.</li> </ul>	Farmers Market Event (Farmers Exhibit Space)
Festival del Apio March 2017	Agricultural fair which offered an educational and agricultural platform, so the public could experience the importance of our local agriculture and the industry, learn about different related subjects, and purchase specialty crop products. <ul style="list-style-type: none"> <li>Opportunity for farmers to exhibit their local fresh produce directly to the regional public and specifically to central mountainous area to increase sales.</li> </ul>	Farmers Market Event (Farmers Exhibit Space)
Semana de la Tierra March 2017	Agricultural fair which offered an educational and agricultural platform, so the public could experience the importance of our local agriculture and the industry, learn about different related subjects, and purchase specialty crop products.	Farmers Market Event (Farmers Exhibit Space)
Frutos de Puerto Rico April 2017	Agricultural fair which offered an educational and agricultural platform, so the public could experience the importance of our local agriculture and the industry, learn about different related subjects, and purchase specialty crop products. <ul style="list-style-type: none"> <li>Opportunity for farmers to exhibit their local fresh produce directly to the public to increase sales.</li> </ul>	9
Academia de Nutricion y Dietetica April 2017	Participation in the convention held by the Nutritionists and Dieticians Academy to showcase locally grown specialty crop products for institutional sales and increase local product share in the School Nutrition Program as well as to partner with the entity for health endorsements of locally grown specialty crops products.	Awareness Event & Workshops
Porta del Sol Gastronomic Festival April 2017	Culinary event that targeted the southwestern part of PR which promotes and showcased through chefs' participations locally grown specialty crop products and direct sales through product exhibits.	7
Agrohack 2017 May 2017	Agricultural and innovation conference that provided outreach platform to promote programs and reach beginning specialty crop producers and available resources to assist them increase and	Farmers Market Event (Farmers Space & Orientation)

	<p>improve operations. The event also included a farmer's market open to the public where locally grown specialty crop products were promoted and sold.</p> <ul style="list-style-type: none"> <li>• Opportunity for farmers to exhibit innovation in the farming industry as well to learn what other farmers are doing locally to increase their sales.</li> <li>• Business to business networking and engagement.</li> <li>• Farmers increase their offer to local markets, increasing Specialty Crop production and overall sales.</li> </ul>	
Saborea May 2017	<p>Culinary festival, promoted locally grown specialty crops to consumers, chefs, and other potential buyers of the restaurant and gastronomic industry. Participation was focused in showcasing the variety of vegetables, fruits and other exotic fruits to chefs and other related buyers to increase local product share in these markets and food service sales.</p> <ul style="list-style-type: none"> <li>• Farmers exhibit their local fresh produce to chef, restaurants and other culinary industry leaders to establish greater sales.</li> </ul>	4
Puerto Rico Chocolate Festival May 2017	<p>Festival open to the public that promoted chocolate and other derived products. The event included an educational agenda that provided a seminar regarding cacao planting, production, processing and opportunities to establish this crop.</p> <ul style="list-style-type: none"> <li>• Coffee Producers establish kiosks to increase access points through direct client engagement with information.</li> <li>• Informed attending visitors of new technologies, quality and innovations in the coffee industry.</li> <li>• Farmer recruitment for Cacao production was accomplished by producers and farmers.</li> </ul>	Awareness Event <small>(Farmers Exhibit Space)</small>
MIDA June 2017	<p>The biggest local event directed specifically to the food, supermarket and distribution industry. In this event specialty crop farmers began negotiations which lead to businesses during the year with the main buyers of the local food retail industry. The event counts with exhibition and business match making meetings, participation of chief executives, administrative personnel from the leading buyers of the Puerto Rico Chamber of Commerce Industry.</p> <ul style="list-style-type: none"> <li>• Opportunity for farmers to exhibit their local fresh produce directly to the public and specifically to supermarket, distribution and retail industry to increase sales.</li> <li>• Business to business networking and engagement.</li> <li>• Farmers increase their offer to local and international markets, increasing Specialty Crop production and overall sales.</li> </ul>	7
Centro Unido de Detallistas Convention August 2017	<p>Convention that gathered multi industry retail sectors of products and services for seminar and trade event. Products are showcased in the food and beverage pavilion, promoting locally grown and value added products to potential commercial buyers to gain access to additional points of sales and to promote the products to public.</p> <ul style="list-style-type: none"> <li>• Opportunity for farmers to exhibit their local fresh produce specifically to retail sales industry to increase sales.</li> <li>• Business to business networking and engagement.</li> <li>• Farmers increase their offer to local and international markets, increasing Specialty Crop production and overall sales.</li> </ul>	11
Asociación de Industriales Convención	<p>Convention that gathered multi industry sectors of products and services for seminar and trade event. Products were showcased to</p>	6

June 2017	<p>promote locally grown specialty crops and value added products to potential commercial buyers to gain access to additional points of sales and to promote locally grown products as a raw material source for product manufacturing.</p> <ul style="list-style-type: none"> <li>• Opportunity for farmers to exhibit their local fresh produce specifically to farming industry to increase sales.</li> <li>• The farming industry was categorized as one of the leading manufacturing promoting industry in the island.</li> <li>• Business to business networking and engagement.</li> <li>• Farmers had the opportunity to see the latest advantages in the manufacturing industry to acquire equipment, packaging and other materials for the safe management as well as marketing aspect.</li> </ul>	
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EVENT	DESCRIPTION	PARTICIPANTS
PMA October 2014	<p>International trade event organized by the Produce Marketing Association. Participation promoted for educational purpose to learn about new technologies and trends for the produce industry to enhance competitiveness of specialty crop producers and networking with potential buyers.</p> <ul style="list-style-type: none"> <li>• Business to business networking and engagement for fresh produce producers focused on Tropical Fruit's such as Mango, Pineapple, Papaya among others.</li> <li>• More than 10 Business contacts.</li> </ul>	2
Americas Food & Beverage October 2015	<p>Trade event that provides access to retailers and food service buyers from the US, Latin America and the Caribbean. Participation coordinated in collaboration with the Puerto Rico Trade Company.</p> <ul style="list-style-type: none"> <li>• Business to business networking and engagement for fresh produce producers and value added for Specialty Crops (Food Service and Retail).</li> <li>• Around 15 Business contacts.</li> </ul>	3
Expo Puerto Rico November 2015	<p>Multi Industry event of international scope that took place in PR focused on showcasing products and services to potential buyers. Our specialty crop farmers exhibited their products and pre-arranged one on one meetings to promote sales to potential buyers.</p> <ul style="list-style-type: none"> <li>• Business to business networking and engagement for fresh produce producers and value added for Specialty Crops (Food Service and Retail).</li> <li>• Around 27 Business contacts and 1 on 1 meetings.</li> </ul>	9
Fruit Logistica February 2016	<p>Main fresh produce industry event worldwide. One of the most relevant venues for industry trends as well as to showcase products to potential buyers from all over the world. Participation mainly focused on promotion of fresh mango and papaya for the European market. Participation in collaboration with the Southern US Trade Association.</p> <ul style="list-style-type: none"> <li>• Business to business networking and engagement for fresh produce producers and value added for Specialty Crops (Food Service and Retail).</li> <li>• Around 4 New Business contacts.</li> </ul>	1

	<ul style="list-style-type: none"> <li>Follow up to three existing clients to negotiate potential orders for the new harvest.</li> </ul>	
SCAA April 2016	<p>International event directed to coffee producers and related products, to promote and incentivize coffee sales from local PR producers in the international specialty coffee markets. Trade event and educational convention that allowed for product showcase for potential buyers as well as a comprehensive educational forum about diverse subject related to crop improvement, market trends, and other.</p> <ul style="list-style-type: none"> <li>Business to business networking and engagement for green coffee producers for Specialty Coffee Industry.</li> <li>Around 9 Business contacts.</li> </ul>	3
SCAE June 2016	<p>International event directed to coffee producers and related products, to promote and incentivize coffee sales from local PR producers in the specialty coffee European markets. Trade event and educational convention that allowed for product showcase for potential buyers as well as a comprehensive educational forum about diverse subject related to crop improvement, market trends, and other.</p> <ul style="list-style-type: none"> <li>Business to business networking and engagement for green coffee producers for Specialty Coffee Industry.</li> <li>Around 3 Business contacts.</li> </ul>	1
FCCA Convention & Tradeshow September 2016	<p>International event hosted in PR for the Cruise Industry focused on the cruise lines and other minor operators for the Caribbean and European markets. Mayor cruise lines participated in search of suppliers of products based on port locations to source their ships throughout their routes. One on one meetings, seminars on how to do business with this industry, and product showcase to potential buyers formed part of the event.</p> <ul style="list-style-type: none"> <li>Business to business networking and engagement for fresh produce producers and value added for Specialty Coffee Industry.</li> <li>Around 20 Business Contacts and 1 on 1 meetings.</li> </ul>	5
SCAA April 2017	<p>International event directed to coffee producers and derived products, to promote and incentivize coffee sales from local PR producers in the international specialty coffee markets. Trade event and educational convention that allows for product showcase for potential buyers as well as a comprehensive educational forum about diverse subject related to crop improvement, market trends, and other. This participation focused in education for product and production practices improvements and networking with potential buyers one on one without the use of exhibit.</p> <ul style="list-style-type: none"> <li>Business to business networking and engagement for green coffee producers for Specialty Coffee Industry.</li> <li>Around 9 Business contacts.</li> </ul>	3

### C. Goals and Outcomes Achieved

The expected measurable outcomes achieved by this project were:

- Create awareness of specialty crops and the importance of this industry, in both local and international events, promoted specialty crop production with a total of at least 50 participating companies; 80 specialty crops producers/ firms participated in total throughout the duration of this project.
- Achieved an increase of specialty crops production after participating in the events of at least 10%. Particularly those with value added products elaborated from specialty crops, retail product placements achieved by contracts with buyers promote and increase in crop production to feed their production lines and fulfill buyers' orders.
- Achieved collective export sales of at least \$50,000 after participating in the events. Collective export sales of approximately \$290,000 were achieved among the international participations.
- Substituted imports in an increase in export sales of at least 5%.

To measure this increase, FIDA obtained current export sales from participants (which refer to the production of the previous crop year) and compare them to export sales after their participation in the tradeshow.

Besides the measurable outcomes previously mentioned, these participations contribute to establishing new business opportunities and commercial relation, both locally and internationally. Participating companies reported a combined total of over 70 quality trade leads obtained throughout the project.

#### **D. Beneficiaries**

A total of 80 specialty crops producers/firms participated and benefitted from this project; all 80 participated of the local events while 15 from the international events. Participation in these events had a total economic impact of approximately \$1,500,000 in sales both locally and internationally.

#### **E. Lessons Learned**

According to the Work Plan, and considering the events that were eliminated due to cancellation by organizers and fiscal measures that restricted travel, the activities and tasks to perform were the same as the events are similar in structure and nature. Same tasks as the previously stated were required to complete the participation of all events included in this project.

Part of the challenges encountered during this period were droughts, pest infestations and hurricanes. These weather events that took place throughout the project duration and had an impact on different crops affecting product availability during several crop years. In the case of coffee, for example, yields were decreased because of the Roya pest outbreak which started in the latter half of year 2014 and escalated in 2015 due to the drought that affected Puerto Rico Island wide. The 2015 drought was identified by the National Weather Service as the worst underwent in Puerto Rico's recent history,

being the outcome of a rain deficit that started in 2013. In the case of overall specialty crops, product availability decreased dramatically during the 2017 last trimester due to Hurricanes Irma and Maria.

In the case of international events it's important to consider that its necessary to build a presence as a company or country of origin for a specific product, in the case of coffee and fresh produce, to be able to establish a commercial relation with a new buyer and wholesaler as well identifying a suitable broker for more specialized products or markets. Therefore, achieving higher export sales depends greatly on a continuity of presence in international events to provide the necessary feedback to potential buyers on the virtues and opportunities of the product offered and the potential business relation that is pursued. Also, this help to maintain buyers for future crop years despite events that may affect yields and decrease product availability.

In the case of local events, they continue to be an important resource to strengthen the local supply chains. This is especially relevant to increase the market access and competitiveness of specialty crops producers to maintain and increase awareness and consumption of locally grown products but also awareness among commercial buyers of the variety of locally grown products that they can source instead of relying on imported products. This has a multiplying effect in the economy which is especially critical to keep market share during events in which local availability is compromised by mayor force events.

#### **F. Additional Information:**



**Expo Puerto Rico 2015**

Exhibitors showcasing their product during the event.

## Fruit Logistica 2016



SUSTA-Southern United States Trade Association, had a chef present to highlight all of the products coming out of the region. From left to right, Michelle Wang from the N.Carolina Ag Dept., Debra Cox May from the Florida Ag Dept., Karin Defossez from Phaff export marketing, Chef Kurt Fleischfresser and Vanessa Febres from FIDA.

Yoav Cohen from MS Mango Farm, LLC and his daughter, featuring Puerto Rican mangoes in the SUSTA group stand.

<http://www.freshplaza.com/photoalbum/PAViewAlbum.asp?ID=410>

<http://www.freshplaza.com/photos>



## Agrohack 2016



Left: Former Secretary of Agriculture, Dr. Myrna Comas, providing guidance to a beginning farmer.



Right: Conferences and lectures during the event.

Former Secretary of Agriculture, Dr. Myrna Comas, presenting an Agricultural State of the Industry Overview.

**MIDA 2016**



Product showcase of fresh and value added specialty crops products during networking event at convention.

**SCAA 2016**



Partial view of the Café de Puerto Rico exhibition booth. Coffee producers Alfredo Rodriguez from Offecay and Abimael Ruiz from Café Don Ruiz hosting potential buyers and other trade visitors.



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Please contact us for any additional information related to this project.

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**STATE MANAGED PROJECT (2): *Delpaís Brand Advertising Program to Increase Sales of PR Specialty Crops Products Identified by the Seal***

**A. Project Summary:**

The Puerto Rico Department of Agriculture and the Innovation Fund for Agricultural Development identified the need to improve and channel the additional demand in the market for our local specialty crop products. The *Delpaís* Brand was created, to place local products on the market exposing and positioning our agricultural production, gradually displacing imported products. After creating the brand, an advertising campaign was created to effectively convey the consumer's arguments and encourage the consumption of local products. This product promotion helped increase the value of Puerto Rico's local agricultural production impacting the local market and opening new doors to the market for these products.

Within the time that was stipulated for this project, more than 50 farmers made the brand part of their agroindustry. This helped sales increase a 10% with the help of supermarket chains in their weekly shoppers by identifying products with *Delpaís* brand logo to emphasize and guarantee freshness and quality.

After these great efforts and achievements with the participants of the Brand, Puerto Rico was devastated by two powerful hurricanes: Irma and Maria. These two atmospheric phenomena destroyed the island, leaving the agriculture of Puerto Rico completely weakened. After these two events, the Department of Agriculture and FIDA saw the need to start promoting the few products that are available to farmers and by other means began to help affected farmers to continue raising local agriculture.

*Delpaís Brand Advertising Program* was built with a similar scope of previous projects but attending the needs of many specialty crop producers through out the island. Establishing a second phase for brand awareness campaign requires more time and effort than other projects that may be implemented in a single phase. In this phase *Delpaís* Brand was able to promote awareness of eating fresh specialty crops through graphics, media, billboards and illustrations for consumers to eat fresh, healthy and eat specialty crops.

**Project Approach:**

The process to obtain and adhere candidates for this project was firstly to identify potential farmers that satisfy membership requirements of the brand to visit those farms, agricultural firms and food retailers. The next step was to orientate in a formal presentation, *Delpaís* branding to supermarket chains and restaurants giving them an insight on the brand benefits. After this, we started a promotion in activities and formal meetings to give the opportunity to the new participants of the brand to exhibit their products. See the following table with the activities realized:

Date	Visit
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February 2017	Presentation of the <i>Delpaís</i> Brand to farmers of the San Germán Region, Lares Region and Arecibo Region of the Department of Agriculture
March 2017	Exhibition and Orientation of <i>Delpaís</i> brand to farmers at the Congress of the nutrition and diet academy event in the Four Point Hotel in Caguas.
	Exhibition and Orientation of <i>Delpaís</i> brand to farmers at the Agro fair event in Santa Isabel.
April 2017	Orientation to the farmers in the activity of the Lares Super Region from the Department of Agriculture.
	Presentation and orientation to farmers at the Celery Festival (Festival del Apio) event in Barranquitas.
	Exhibition and Orientation of <i>Delpaís</i> brand to farmers at the Agricultural Fair (Feria Agrícola) event in Orocovich.
	Orientation to the farmers at the Gastronomic Festival Porta Del Sol in Mayaguez.
May 2017	Orientation of <i>Delpaís</i> Brand to farmers at the Chocolate Festival event in the Mayaguez Palace of Recreation and Sport.
	Presentation and orientation of <i>Delpaís</i> brand at the Agrohack event in the PR Convention Center.
June 2017	Presentation, exhibition and orientation to farmers at the Camara de Mercadeo, Industria y Distribucion de Alimentos (MIDA) event in the Conquistador Hotel.
	Presentation, exhibition and orientation to farmers at the Industrial Convention event in the Conquistador Hotel.
July 2017	Exhibition and Orientation of <i>Delpaís</i> brand to farmers at the Agricultural Fair of the Valley (Feria Agrícola del Valle) event in Lajas.
August 2017	Exhibition and presentation of <i>Delpaís</i> Brand Project at the Retails United Center event in the Conquistador Hotel.
	Orientation to the farmers in the activity of the Naranjito Super Region from the Department of Agriculture.

Presentation of *Delpaís* Brand project in the beekeeping training offered at Finca Monterrey in Dorado Puerto Rico.



Secretary of Agriculture, FIDA's Executive Director along with the farmer of the year in the Agricultural Fair of Santa Isabel.

Specialty crops sale at *Festival del Apio* in Barranquitas.



Specialty crops sale on the Agricultural Fair in Orocovis.



Feria Agrícola del Valle de Lajas.



The Executive Director of FIDA participating at the Agrohack event.

The Financial Analyst of FIDA presenting Delpais brand to the public of the Agrohack event.





Participants of the *Delpaís* brand at the MIDA event with the Secretary of Agriculture and the Executive Director of FIDA.

Demo Kitchen of the *Delpaís* brand at the United Retailers Center event with the Executive Director of FIDA and Chef Campis.

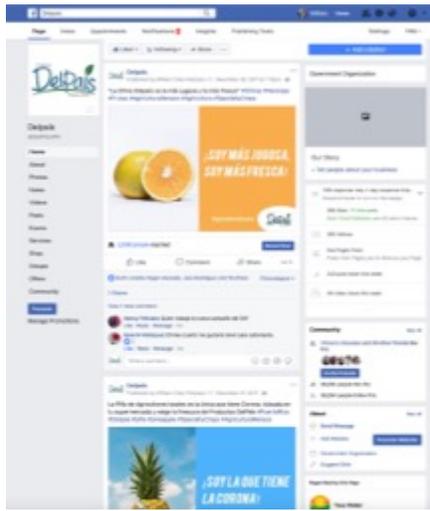


Billboard Campaign – Outreach to consumers to eat fresh fruits and vegetables.





Social Media Campaign





B

- More than 70 farmers and agricultural enterprises
- Supermarkets, Distributors and other food retailers
- Consumers/ Customers

A total of fifty-one (51) specialty crop farmers qualify to *Delpaís* brand. During the 3-year period required by the Department of Agriculture, farmers received collaboration from FIDA coordinators to help them participate in the branding. From the farm to the consumer, the farmer distributed the product with its food safety recommendation to guarantee its freshness.

#### Goals and Outcomes Achieved:

The expected measurable outcomes for this project were achieved: More than 50 firms were established under *Delpaís* brand campaign accomplishing our goals within advertising, promotion and increasing sales of at least 10% of farmers that comply with this project.

During the *Delpaís* brand campaign, public relations companies were used to get farmers and companies to obtain a 10% increase in specialized crop sales. The companies used to promote the brand were: Badillo Nazca S & S, Key Integrated Solutions Inc. and B-Billboards. These companies focused on working on the promotion of the Brand as follows:

- Advertisements in radio, billboards, newspaper, magazine, TV, Facebook, social media and Instagram.
- The brand supplies gifts for promotion in activities where farmers participate.
- Social Media ads, consume fruits and vegetables *Delpaís*.

The membership collaborative agreements of supermarkets under *Delpaís* brand project are: Supermax Supermarkets, Econo Supermarkets, Plaza Loiza Supermarkets, Selecto's Supermarkets,

Hatillo Kash and Karry Supermarkets and Pueblo Supermarkets. This supermarket use the logo in shoppers and others retailer promotional efforts and in store signature.

The following agricultural firms/ products under the brand were able to do business successfully and enter multiple food distribution outlets and points of sales such as the mentioned below:

Beneficiary and Agroindustry	Sale Points
Cindy Cruz Torres/ Agro Pek	Agricultural fairs, restaurants, individuals
Orlando González González	Sams, Amigo, Walmart, Supermax,, Econo, Plaza Loiza, Selecto's
Lourdes Pérez Ruiz/ Ruiz Inc	Econo, Independent Distributors, Mercado Familiar
Jeniffer Pagan Rodríguez	Family market, Supermercados comercio, Progreso cash & carry, Hermanos Santiago
Gabriel Figueroa Cintrón/ GFC Farms	Restaurants
Pedro A Vázquez Torres/ Hacienda Tio Cano	Family Market, Supermarket, Dealers
Oswaldo Rivera Santiago/ Agricultura Hojas Verdes	Sams, Costco, Pueblo
Roberto C. Atienza Ramos/ Café La Finca	Supermax, Econo, Pueblo and Selecto's Supermarkets
Rafael López Rodríguez/ RLR 4U	Supermarkets, Farmers, Suppliers (Distributor)
Manuel Velázquez González/ Plantaciones Velazquez Irizarry	Supermercados Napo Velez, Selectos, Econo
Daniel M. Estrada Pagan/ Pura Parcha	Exportacion, Econo, Sam's
Patricia M. Ortega Rivera/ Sweetwater Vertical Farm	Freshmart, Econo Supermarkets, Dorado Beach Ritz Carlton Reserve, Restaurants
Café Mi AEELA	Supermarkets, AEELA branch offices
William López Méndez/ Agroproductos del Turabo	Selecto's Supermarket Inc., Econo Inc., Super Max, Agro Products, Antundez
Asociacion de Productores de Farináceos Del Este	Restaurants, Filler, Inc., Caribbean Products, school canteens, Ballester Hermanos, Inc.
Milton R. Toro/ Toro Farm	Supermarkets, restaurants, hotels

Agroponicos Cosecha de P.R., Inc.	Food Service - Directly to restaurants & hotels
Erasmus Ramos, Inc.	Placita en Plaza, Family market
Luis Carrasquillo Lopez	Family Market, Selecto's Supermarket
Edwin A. Rosado Torres/ Finca Rosado	Family Market, school canteens
Luis I. Melendez Melendez/ Finca Luis Melendez	Cocaba Farmers, Family Market
JEC Carrasquillo, Inc./ Jose Carrasquillo	Farmers
Finca Verdor de la Montaña/ Hector X. Torres	Family Market, WIC Plan
Centro Adiestramiento para Personas con Impedimento (Capi, Inc.)	Supermarkets, Menonita Hospital, school canteens
Hacienda Los Amigos	School canteens, grocerie stores
Servicios Agrícolas del Centro, Inc.	Family Market
Marvill Guzmán	No contract at all, selling to diferent buyers
Bravo Farms	Restaurants, grocerie stores, agricultural markets
Café Oro de PR, Inc.	Supermarkets, bakeries, grocerie stores
Omar I. De Hoyos Ramos/ De Hoyo Farm	Supermarkets
Productos Tu Maiii	Placita en Plaza
Hidrocaribe Del Sur	Plaza Mercado, Supermarkets, Itermediaries, Family Market
Cooperativa Agro-Comercial de PR	Supermarkets and coffe shops



## Lessons Learned:

Through branding development and advertisement tool, it was possible for farmers to accomplish great marketing strategies, which they had no access to prior to entering the brand. Identifying necessities such as how many crops were needed to harvest for a specific client or as easy as getting government permits needed to comply in order to sell their product. The brand also helped farmers gain easy access to sale points with success. Our farmers had poor knowledge in the chain of Distribution and Retail Industry, and *Delpaís* have managed to help them place their local fresh products in supermarkets and school canteens guaranteeing the sale of their harvested products with assurance in premium quality. This gives specialty crop farmers knowledge in their business distribution and negotiation with bigger chain stakeholders to continue improving the agricultural sector economically. With this data, we could say that *Delpaís* branding made a tremendous impact in farmers where their major problem was in branding label not too attractive to buyers with the help in supply chain logistic.

Pursuant to last year (2013) grant closing, *Delpaís* brand had difficulties on acquiring farms for farmers due to visiting directly at their agroindustry or simply to follow up with any missing documents so the farmer could complete the process of adhering to the brand. This year (2017), with the help of the coordinators specialized only in *Delpaís* process and qualifications, easily coordinated visit to farmers were realized for orientation, follow up and check-up. Thanks to this, a total of one hundred and thirty (130) farmers were visited; 58% were interested. Of those interested in the labeling and promotion of their products, fiftyone (51) farmers qualify to the brand because of their excellent quality conditions in their farm, sanitary permit and other qualifications that make them a grade-A candidate. Coordinators made sure that they kept permits to date, in the meantime, they kept making random visits. Given the circumstances due to funds that weren't expended due to Hurricane Maria and Irma, we requested a grant extension until January 30, 2018. This request helped us advertise the brand in digital billboards around different strategic points where consumers could see that fresh products were near and still available for their consumption.

**STATE MANAGED PROJECT (3): Placita en Plaza: Farmers Markets at Plaza Las Américas and Plaza del Caribe Shopping Malls**

**PROJECT SUMMARY**

Under this project, FIDA pursues the use of grant funds to assist in the access and local consumption of specialty crops and derived value-added products as well as in the development of marketing opportunities that reinforce the consumer awareness and consumption of these locally grown products in a direct producer/ consumer setting. This setting will also provide market access to specialty crop producers through this farmer's market type initiatives aimed at increasing direct sales from farmers to consumers and promoting greater consumption of locally produced agricultural products. This provided a greater margin for producers, provided a healthy interaction between producers and consumers, making more obvious the need to maintain quality, so that the consumers stay satisfied, and provides access for small firms that were incapable of satisfying retailer requirements or who do not have sufficient volume to participate in regular market channels. This project will continue serving farmers rural areas of Puerto Rico; these areas are considered as socially and economically disadvantaged for which providing with this effort allows them market access by reducing the costs associated with this type of activity and fosters new and expanded markets for producers.

This project was built on a previously funded project with the Specialty Crops, however, this project previously attended only issues regarding the point of sale. With this project farmers were able to attend many marketing issues, branding placement and promotional activities, as well as mall activities that allow for more spotlight on those stakeholders.

**PROJECT PURPOSE**

State Agency pursued the use of grant funds to promote farmers markets that could benefit specialty crop producers, by providing necessary market access and increased marginal income to be obtained through a direct sales situation. The specific use was to create promotional activities that could draw public to the markets and increase public knowledge of calendar, schedule and availability. The specific issue or need addressed through the project was the need that a specific group of farmers had for access to direct sales to the consumers to enhance their competitiveness. The need for access was felt by many producers, who were excluded from traditional retail outlets because of their small size and lack of capacity to deliver large quantities of merchandise consistently; and became disappointed at the prices that market intermediaries offer for their products when they visited the farms to purchase from the farmers. Consumers, on their part, were anxious to be able to buy fresh excellent quality produce directly from the farmers and made a connection with the production aspect of food supply chain for cultural and humanistic reasons.

**PROJECT APPROACH**

Farmers market located at *Plaza Las Américas*, is the main market of our project. The shopping mall is the biggest one in PR, in addition, is located in San Juan which is the capital main city in PR. The market has been celebrated since various years ago, and every year we tried to considerate new vendors to participate in the market. Most of them are farmers that are referred by the Regional Agricultural Offices from the Department of Agriculture. In addition, farmers who participated in other

projects within the Department and that are eligible are also considered. When renegotiating the contract each year with the mall administration, farmers/vendors are actually evaluated. Then they continue to be evaluated in almost a monthly basis, since we need to know which of them are complying with the rules established and in addition, are been successful within the market and increasing their sales. Therefore, the vendors list was updated constantly. Since we have staff permanently in the market, the communication with the vendors and the attention given to them is constant. New vendors are oriented regarding the market's regulations once they are selected to be placed in the market.

**PROJECT ACTIVITIES:**

- **Placita en Plaza Las Américas:** A local farmers market located at the major shopping mall in PR “Plaza Las Américas”: For the past five consecutive years, this farmers’ market has been developed and many farmers and/or agricultural firms have participated. It took place every weekend from Thursday to Sunday. Since it is located in the biggest shopping mall in the metropolitan area, farmers and their products had a lot of exposure. This event has benefitted them in developing their businesses, increasing their sales and achieving new markets. Estimated collective sales of \$2,500,000.00 throughout the project duration were reported. This evidences that this location constitutes a prime point of sales to enable market access for producers. Specialty crops farmers and/or agricultural firms that participated in this farmer’s market during the last grant year were:

COMPANY NAME	PRODUCT
<i>Hacienda Román</i>	Fresh Produce
<i>El Colmenar</i>	Honey
<i>Artsy Pops</i>	Fruit Popsicles
<i>El Trapiche</i>	Sugar Cane Beverage
<i>Productos Frescos Alicea</i>	Fresh Produce
<i>Sin Remordimiento</i>	Roots Soups
<i>Mr. Piña</i>	Fresh Pineapple & Pineapple based beverage
<i>Frappe Artesanal</i>	Fruit Frozen beverage
<i>Sofrito Verde Bonito</i>	Sofrito condiment
<i>Estancia Rosannie</i>	Fresh oranges and orange juice
<i>Finca Don Pupa</i>	Fresh Pineapple, Pineapple based hot sauce & marmalade
<i>Doña Tere</i>	Sofrito Traditional Condiment
<i>La Mofonquería</i>	
<i>Dulce Tentacion</i>	Roots & Vegetable Cookies
<i>La Frutera del País</i>	Fruit Traditional Snow Cones & Fresh Cut Fruit
<i>Lavender Innovations</i>	Lavender Plants & Lavender based products
<i>Jardinato</i>	Ornamental Plants
<i>Santa Bárbara</i>	Ornamental Plants
<i>Kiero Coco</i>	Fresh Coconut & Coconut Water
<i>D'Manolo</i>	Pumpkin Muffins and Bread
<i>Genabi</i>	Fresh Produce based pastas & sauces
<i>Hidronagel</i>	Hydroponic Lettuces and fresh produce
<i>Café Del Alba</i>	Coffee
<i>Café La Torre</i>	Coffee
<i>Café Don Lorenzo</i>	Coffee
<i>Aromas Del Campo</i>	Coffee
<i>Antojitos de Mango</i>	Mango Marmalades
<i>Granja Mi Santo</i>	Roots Turnover
<i>Delicias de la Montana</i>	Platain & Roots Pasteles (local tamal)

<i>Loiza Dark Chocolate</i>	Chocolates
<i>Hyro Max</i>	Lettuces
<i>Productos Tu Mai</i>	Platain & Roots Pasteles (local tamal)
<i>Productos Frescos Nao</i>	Fresh Produce
<i>Finca Carrasquillo</i>	Fresh Produce

- **Placita @ Plaza Del Caribe Mall in Ponce:** Farmers market located at *Plaza del Caribe* shopping mall, is actually the second biggest mall in PR, and also located in the second main city in PR (Ponce). The selection of farmers/vendors was similar to the *Plaza Las Américas* vendors. Processes established and regarding evaluation, selection and negotiation of contract were also similar, in addition that we also had staff there constantly to assist and orient them. Estimated collective sales for the duration of the project amount to \$600,000.00. There were 9 eligible participants:

COMPANY NAME	PRODUCT
<i>Café Teto</i>	Coffee
<i>Café Portillo</i>	Coffee
<i>Delicias de la Montana</i>	
<i>Sopas Michelle</i>	Roots Soups
<i>Finca Don Pupa</i>	Fresh Pineapple, Pineapple based hot sauce & marmalade
<i>Finca Micheal Lopez</i>	Fresh Produce
<i>Plantas Crimilda Vargas</i>	Ornamental Plants
<i>Chinas Jose Lopez</i>	Fresh Oranges and Orange Juice

As part of the activities within both Placitas, we developed the concept of offering workshops related to the showcased products to drive consumption, raise awareness of locally produced products and their benefits, as well as general information of consumer interest about that crop. The first subject or product of focus was coffee to highlight the beginning and end of the coffee harvest season in Puerto Rico. The event was called “*De la Finca a la Taza*” and included seven (7) short open seminars or workshops that included coffee production, how to get the best out of your coffee brewing, general agricultural practices, and differences in taste and quality between locally grown and foreign coffees. The sessions took place November to December 2016 in Plaza del Caribe and January to February 2017 in Plaza Las Americas.

## **GOALS AND OUTCOMES ACHIEVED**

Without any doubt, the success that the *Plaza Las Américas* market at the northern part of PR had in the past years, led to expand the market to the *Plaza del Caribe* mall in the southern part of the island. This definitively provided farmers and producers a great opportunity for the direct sales of their agricultural products. Firms that participated in Plaza Las Américas farmer’s market during the duration of this project reported estimated collective sales in \$2,500,000.00 while *Plaza del Caribe* reported estimated sales of approximately \$600,000.00. Both reported increase in sales amounting for a 10% increase approximately which fulfills expectations regarding our goals and outcomes, but mitigating circumstances always affected the project in some instances, particularly within an environment of a tighter economy. Achieving the participation of 100 companies at once can be

challenging because of space and other limitations. Also, companies rotate to allow more producers to participate despite the space limitation. Nevertheless, we felt satisfied with the outcomes achieved, since the vendors resulted definitively benefited from the project, when increased their sales as per their participation in the project.

New agricultural firms participated and entered in this new market opportunity. As a result, collective sales reached more than \$2,500,000. Consumers could receive a better price having a direct access to agriculture products as having more information about local produce freshness. Some of the additional advantages of being in a mall such as *Plaza del Caribe*, is it's unique strategy that enhances the 4P s of marketing (Place, Promotion, Price & Products). It's one of the largest, strategic, market spot's of the island and what a better place to promote awareness of specialty crops.

The placita project has three main phases, first phase attends the branding aspect of placita, the second phase an educational, and the third phase talking about market positioning.

### ***BENEFICIARIES***

*Plaza Las Américas* market had 36 participating specialty crop companies while *Plaza del Caribe* market had 9 participating specialty crop companies. The list of beneficiaries in both markets at *Plaza Las Américas* Mall in San Juan and *Plaza del Caribe* Mall in Ponce, and a description of their agricultural specialty crop products was provided in prior section of the report.

### ***LESSONS LEARNED***

Main lesson learned from establishing this farmer market was that the local farmers and producers gain space for the direct sale of their agricultural products. Most important, this opportunity came free of charge and in addition to that they were located in the two major shopping malls of Puerto Rico. Nevertheless, *Plaza del Caribe* mall continues to be more challenging as it has a considerably lower traffic than the San Juan located mall. Therefore, farmers continue to have a preference for participating in *Plaza Las Americas* and participation in *Plaza del Caribe* is drastically lower. On the other hand, we also learned that adding educational and entertaining activities regarding subjects that relate to specialty crops at these locations enhances consumer traffic which can translate in increased sales; not only immediately but also on a long term basis as the consumer learns about the benefits and properties of locally grown specialty crops and achieves and educated purchase choice. This process also contributes to a willingness to pay a differentiated price which increases our producers' competitiveness. For the future we have to reevaluate this locations to find ways to strengthen traffic if to continue with this location. Also, the *Plaza Las Americas* location has been instrumental to promote the recuperation of these farmers after the hit of Hurricanes Irma and Maria providing them of the opportunity to generate much needed income that is required to keep and recondition crops and operations damaged by the hurricanes.

### ***ADDITIONAL INFORMATION***

Coffee related Workshops were offered in both locations from November 2016 to February 2017 as a parallel activity created to increase consumer interest and consumption. The event was called *De la Finca a la Taza* (From Seed to Cup) and included seven (7) workshops that took place for seven (7) consecutive Saturdays on each Placita.



**La Placita en Plaza del Caribe**  
2050 Ponce Bypass, Ponce, 00717

**La Placita en Plaza las Américas**  
525 Ave Franklin Delano Roosevelt,  
San Juan, 00918

**Fechas: Año 2016**

**SÁBADOS** 5 de noviembre  
12 de noviembre  
19 de noviembre  
26 de noviembre  
3 de diciembre  
10 de diciembre  
17 de diciembre

**Fechas: Año 2017**

**SÁBADOS** 14 de enero  
21 de enero  
28 de enero  
4 de febrero  
11 de febrero  
18 de febrero  
25 de febrero

**Horario: 1:30 pm a 2:30 pm**

**Horario: 1:30 pm a 2:30 pm**

**Talleres a Presentarse:**

1. Historia del Café en Puerto Rico
2. Desde la Siembra hasta el Recogido
3. Métodos de Preparación  
(Demostrativo variedad de métodos existentes)
4. Barista @Home  
(Como preparar adecuadamente tu café en casa - Varios Métodos)
5. Tueste para cada gusto  
(Tipos de Tueste y Métodos de Preparación Recomendados)
6. Presente y Futuro del Café en PR (Tema presentado tipo panel)
7. Barista Latte Art Kickoff



**Se presentará un taller cada sábado,  
en el orden ilustrado previamente.**



Consumers and stands at Placita in Plaza del Caribe in Ponce.



Presentation setting for “De la mesa a la taza” Workshop at Placita in Plaza del Caribe in Ponce.



Presentation setting for “De la mesa a la taza” Workshop at Placita in Plaza Las Americas in San Juan.

**STATE MANAGED PROJECT (4): Proposal for the Increase in the Production of Honey in Puerto Rico**

**Project Summary**

The main purpose of the project was achieved. During the last 3 years, the project has increased bee production in Puerto Rico by increasing the number of hives and offering technical assistance to beekeepers and the general public. During this period with the collaboration of Emergency Management Office and the Department of Agriculture, beekeepers managed to rescue 1,000 beehives from urban areas and they were placed in commercial apiaries. What was once a public health problem became a working tool for the beekeeper directly impacting the production of honey and by products on the island.

As part of a collaborative agreement between the Department of Agriculture and the Department of Correction and Rehabilitation, the 1,000 beehives were built and placed by inmates of the Correctional Center of Guayama as part of their rehabilitation process.

On the other hand, this project presents a complete curriculum of technical training on best beekeeping practices, offered by a beekeeper of vast experience. It is prepared for beginner or experienced beekeepers and includes the following topics: History and Bee Biology, Planning, Establishment and Creation of Apiary, Management and Behavior, Commercial Production of Queens, Diseases, and Beehive Products. During these courses, it was possible to surpass the goal established in the project where it proposed to impact a number of beekeepers, agronomists and inmates.

**Project Approach**

During this grant period, the following activities were performed: the ideal model for the construction of the beehives was identified, the beekeepers and inmates who would participate in the courses were identified, the agronomists that would be training to work with the beekeepers in the Agricultural Regions were identified and finally the person who would be offering the training for beekeepers, agronomists and inmates was identified. See the following table with the activities realized during the project:

Date	Visit
October 2016	Meeting with personal of the Department of Correction and Rehabilitation and personal of the Department of Agriculture to present the project.
	Meeting in the Guayama Correctional Center with personal of the Department of Correction and Rehabilitation and personal of the Department of Agriculture for the design of construction of hives boxes.

	Meeting in the Department of Agriculture with Gabriel Diaz and personal of the Department of Agriculture for the proposal for the training sessions.
	Delivery of materials for the construction of beehives in the Guayama Correctional Center.
February 2017	Meeting in the University of Puerto Rico with professor Tugrul Giray and personal of the Department of Agriculture for the proposal for the training sessions.
May 2017	Interview in local television channel in the East Beekeeping School for explain the proposal and the goals of this project.
June 2017	Meeting in the Guayama Correctional Center with personal of the Department of Correction and Rehabilitation and personal of the Department of Agriculture for the continuity of the project of the beehives.
July 2017	Meeting in the Department of Agriculture with Ricardo Caraballo and personal of the Department of Agriculture for the proposal for the training sessions.
August 2017	Interview of the WIPR-Maxima 940 Radio Station for explain the proposal and the goals of this project.
	Training course for beekeepers, agronomists and confined people in Dorado and Juana Diaz.
November 2017	Practice with beehives and end of beekeeping training in the town of Guanica.

Construction of hive boxes:



The inmates of the Correctional Center in Guayama building the hives boxes.

Presentation of boxes built by the inmates to the last Secretary of Agriculture of Puerto Rico.



Presentation of boxes built by the inmates to the new Secretary of Agriculture of Puerto Rico.



A total of 1,000 beehives boxes made by the inmates in the Correctional Center of Guayama.

Training courses for beekeepers:



**CURSO PARA APICULTORES  
TEÓRICO Y PRÁCTICO**

CURSO INTENSIVO QUE CONSTA DE 4 SECCIONES

— Cubrirá los siguientes temas:

- Historia y biología de la abeja
- Planificación, establecimiento y creación de apiario
- Manejo y comportamiento
- Producción Comercial de Reinas
- Enfermedades
- Productos de la colmena

**Nota:** Para las secciones de práctica el participante debe llevar equipo de seguridad.

**FECHA:** 15, 21, 27 de Agosto y 3 de Septiembre de 2017

**LUGAR:** Innes Montañez, Dorado

**LUGAR:** Caserío Experimental Agrícola, Juana Díaz

**FECHA:** 17, 24 y 31 de Agosto y 7 de Septiembre de 2017

**DIRECCIÓN GENERAL MANEJO COMUNITARIO**  
787-721-0110 ext. 2120  
Comunicación: @agricultura.pr.gov

**FIDA**  
Fondo de Innovación para el Desarrollo Agrícola



## **Goals and Outcomes Achieved**

Based on the Expected Measurable outcome established for this project, all outcomes were achieved through a collaborative agreement with the Department of Correction and Rehabilitation. Inmates of the Correctional Center of Guayama carried out the construction of 1,000 beehives in the workshops of joinery this institution.

Through the Protocol for the Management of Swarming, agreement that is worked between the Department of Agriculture and the Office for Emergency Management, 1,000 swarms were rescued in urban areas and placed in commercial apiaries, turning a Public Health problem into a working tool for the beekeeper. For each swarm removed from Urban areas, a beehive was given to the beekeeper to be handled in the apiary, according to the Protocol. During this activity 37 beekeepers were impacted.

Beekeeper Ricardo Caraballo offered 2 courses for new and experienced beekeepers and in addition, Dr. Tugrul Giray, Professor of the University of Puerto Rico, specialist in bee behavior, collaborated. During these courses were covered topics of History and Bee Biology, Planning, Establishment and Creation of Apiary, Management and Behavior, Commercial Production of Queens, Diseases and Products of the hive. The courses were offered on two dates of 4 sections on Tuesdays; August 15, 22 and 29, 2017 at the Monterrey Dorado farm and on Wednesdays; August, 17, 24 and 31, 2017 at the Experimental Station of Juana Diaz. Due to the passage of Hurricane Irma and Hurricane Maria, the practical sections were offered on November 28 and 29. During these courses, a total of 88 beekeepers, 12 agronomists from the Department of Agriculture and 9 inmates were impacted.

A total of 9 inmates participated in the workshops, 5 from the Correctional Education Institute (Cárcel de Bayamón) and 4 from the Mountain Agricultural Program in Jayuya (Carcel La Pica).

<p><b>Goal 1:</b> Construction of hives boxes</p> <ul style="list-style-type: none"> <li>• Performance Measure: Number/amount of hives boxes to be constructed</li> <li>• Benchmark: at least 500 hives boxes needs to be constructed</li> <li>• Target: Complete and achieve the construction of boxes</li> </ul>	<p><b>Goal 1:</b> Construction of hives boxes</p> <ul style="list-style-type: none"> <li>• As part of the objectives of this project, it was established that the inmates of the Correctional Center of Guayama would build a total of 500 boxes of bees. The interest shown by the beekeepers in the project led us to double the construction of the boxes, so a total of 1000 boxes of bees were built in the carpentry workshops of the institution.</li> </ul>
<p><b>Goal 2:</b> Increase number of bee hives in production</p> <ul style="list-style-type: none"> <li>• Performance measure: Number/amount of rescued bee hives in production</li> <li>• Benchmark: at least 500 bee hives in production will be rescued</li> <li>• Target: Achieve rescue of beehives in production</li> </ul>	<p>Goal 2: Increase number of bee hives in production</p> <ul style="list-style-type: none"> <li>• The goal for this project was to reach 500 swarms and through the Swarm Management Protocol, an agreement worked between the Department of Agriculture and the Office of Emergency Management, 1,000 swarms were rescued in urban areas and placed in commercial hives, turning a Public Health problem into a working tool for the beekeeper.</li> <li>• According to the Agriculture Statistics Office of the Puerto Rico Department of Agriculture there are 3,266 beehives in Production. In 2011-2012 were 1,647 Beehives in Production; representing an increase of more than 1500 hives.</li> </ul>
<p><b>Goal 3:</b> Train apiarists and agronomists to work jointly with governmental agencies in best management and apicultural practices</p>	<p><b>Goal 3:</b> Train apiarists and agronomists to work jointly with governmental agencies in best management and apicultural practice</p>

<ul style="list-style-type: none"> <li>• Performance measure: Number/amount of apiarists to be trained</li> <li>• Benchmark: is expected that at least 72 apiarists from all the island will be trained</li> <li>• Target: Achieve and complete training to expected amount of apiarists in apicultural practices</li> </ul>	<ul style="list-style-type: none"> <li>• Through this project, although the established goal was to impact a total of 72 beekeepers, the project was completed with a total of 88 experienced beekeepers and beginners. The experience acquired in the courses helped them improve their beekeeping practices in their projects and also increase the production of honey in their hives.</li> <li>• Also as part of the project, a total of 12 agronomists from the Department of Agriculture were trained. The trained agronomists will work directly with the apicultural sector of the eight Agricultural Regional Offices of the Department of Agriculture.</li> </ul>
<p><b>Goal 4:</b> Train inmates from additional correctional facilities in best management and apicultural practices</p> <ul style="list-style-type: none"> <li>• Performance measure: Number/amount of inmates to be trained</li> <li>• Benchmark: at least between 10 and 15 inmates from additional correctional facility will be trained</li> <li>• Target: Achieve and complete training to expected amount of inmates in apicultural practices</li> </ul>	<p><b>Goal 4:</b> Train inmates from additional correctional facilities in best management and apicultural practices</p> <ul style="list-style-type: none"> <li>• In the goals established for this project, a total of 10 to 15 inmates would be trained. During the trainings a total of 9 inmates completed the participation in the workshops, 5 of the Correctional Education Institute (Cárcel de Bayamón) and 4 of the Mountain Agriculture Program in Jayuya (Carcel La Pica).</li> </ul>

Table: Bee Industry Situation<sup>1</sup>

Year	Honey Production (In gallons)	Number of Hives	Bee Farmers
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<sup>1</sup>Agricultural Statistics Office, Puerto Rico Department of Agriculture.

1985/ 1986	25,143	12,371	146
1994/ 1995	9,626	4,830	359
2011- 2012	3,472	1,647	72

This Project was not built on a previously funded project of the specialty crops block grant program.

### **Beneficiaries**

- 88 beginner and experienced beekeepers
- 9 inmates of the Department of Correction and Rehabilitation
- 12 agronomists of the Department of Agriculture

Through this project it was possible to impact a total of 88 experienced and beginner beekeepers. The experience gained in the courses helped them improve their beekeeping practices in their projects and also increase the production of honey in their hives. On the other hand, the 9 impacted inmates began to work their hives from jail in order to contribute to the agricultural development of the country. Also as part of the project, a total of 12 agronomists from the Department of Agriculture were impacted. The trained agronomists will be working directly with the apiculture sector from the eight Agricultural Regional Offices of the Department of Agriculture.

### **Lessons Learned**

The development of a highly competent beekeeping industry with economic impact is possible as long as all the components of it are attended in a holistic manner. Beekeepers need specialized courses, good quality equipment and suppliers of commercial queens duly selected to increase yields and lower docility.

During the course, we learned that generational change is very important to maintain this industry and we observe that there is much interest from the population to do it. 70% of the course participants were new and / or inexperienced beekeepers. During the calls, we realized that many of these experienced beekeepers understand that reeducation is not necessary, so it was difficult to convince them and their participation was low. Only 26 beekeepers with experience attended. For the future, new tools must be implemented to achieve the interest of these beekeepers and provide them with these much needed tools.

To obtain better results with the wild hives rescued and placed in the boxes made by the inmates, it is necessary to replace the queen with a commercial one. These queens have the quality to come select lines to guarantee greater production, docility and fewer tendencies to swarm. It is for this reason that we understand that offering courses of production of Commercial Queens and encouraging the development of these queen producers is necessary for the resurgence of the Apiculture Industry in Puerto Rico. The first beehives constructed had design flaws. For this reason,

it was agreed to construct new ones in replacement, this in order to achieve grant deliverables and outcomes.

**Contact Person**

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### **SUB GRANTEES PROJECTS**

State Agency FIDA included, as part of proposed work plan, the approval and subsequent administration of sub grants developed by partner entities solely to enhance the competitiveness of specialty crops produced in PR.

The required sections are presented for each of the Sub Grantees projects (that are currently operating) in the next pages of this report.

**SUBGRANTEE PROJECT (1): Demonstrative and Educative Project of Sun-Dried Coffee (Renewable Energy)**

***Proponent: Finca El Sol de Joaquín/Café Nativo***

No activities were performed. Sub Grantee submitted a letter to FIDA Executive Director to withdraw the project due to personal and economic reasons.

No funds were expended.

Funds (\$7,945) requested reallocated to an amendment project. High Tunnel and Hydroponic Vegetable Production Assistance for Developing Farmers

## **SUBGRANTEE PROJECT (2): Artisan Lettuce and Strawberries**

**Proponent: CAPI, INC.**

### **Project Summary:**

The project will seek to develop new farmers through simple hydroponics techniques to support the production and marketing of lettuce and strawberries. It would enable the development of new jobs and micro businesses. The project aimed to expand and strengthen the existing business and develop strawberry in hydroponics as part of community self-management economy. This was achieved through a work plan that provided business training with specialized knowledge in hydroponics, individual counseling and support existing promo guaranteeing hydroponics business as a profitable business.

The business was related to the production and marketing of lettuce and strawberries. Lettuce is one of the most used products in the daily diet of Puerto Ricans. In the last decade, strawberry had become one of the most consumed fruits in the Puerto Rican diet. In the past years, the demand to consume healthy products increased as well as the involvement of hygiene and the use of organic products. CAPI Inc. education services in agriculture were offered through the hydroponics technique and the conventional technique of vegetable crops. Their mission was to promote and provide employment opportunities for people with disabilities through self-management and creation of micro businesses in the agricultural area.

### **Project Approach:**

Hydroponics is a way to grow plants without soil using a solution of mineral salts that plants require for its development. Hydroponics is a very profitable business because it offered the advantage of being a system of growing vegetables and fruits with lower costs. However, expertise was required. Through the project, knowledge was obtained through short training courses. During CAPI Inc. 18 years of experience, it had been successful in the hydroponic lettuce project. They pursued the expansion of the existing project and in addition, the development of strawberry in hydroponics techniques. They should increase the production and marketing of this vegetable and fruit, as well as the competitiveness in the community to facilitate the creation of new micro business and create new community employment opportunities through business trainings. In order for the cultivation of strawberries to be successful, it was essential to build a hydroponic system following the measurements and regulations needed for this fruit.

The project promoted the cultivation of lettuce and strawberries as part of rural economic development and awaken more farmers develop in the cultivation using hydroponic systems, and experienced the variety of vegetables and fruits that could be developed in PR. Trained persons and farmers in how to achieved hydroponic lettuce and strawberries, through basic hydroponic principles for those and other different crops. The educational process should impacted housewives when purchasing nutritious food for their households; restaurants; hotels; market stalls, supermarkets, among others. Main goal was to offer training to 5 new farmers in hydroponic lettuce and strawberries, in order for them to develop their familiar microbusinesses.

## **Goals and Outcomes Achieved:**

Last October 2014 CAPI Inc. received the funds for impact agricultural development through specialty crops that impact the competitiveness of the market in the mountain area of PR. Selected specialty products were lettuce and strawberries. The need to establish this project was in order to develop new farmers using the agricultural technique of hydroponics and food sustainability. The SCBGP funds supported training for five (5) people with disabilities and limited financial resources, to develop their own business expanding the possibilities of job creation, improving the quality of life and their coexistence in the community in which they live. In addition, funding provided through Department of Agriculture/FIDA gave support to new farmers, in a way that the hydroponics technique ensures safe, healthy and organic products for the food area.

Whereas the consumption of lettuce and strawberries in the last decade in Puerto Rico, we expanded the knowledge so that these new entrepreneurs came together and ensured greater market through the cultivation of the same. The impact of the creation of new firms allowed for greater economic autonomy for communities, new employment opportunities and self-reliance conducive to improving the quality of life for our families. The project complied with provisions of the contract, developing new entrepreneurs in the area of agriculture. The Lettuce and Strawberries Artisan project developed training to five (5) people, with the purpose of developing five (5) new entrepreneurs in the agricultural area. The activities were aimed in the area of simple hydroponics in growing lettuce and strawberries.

During January 2015, CAPI Inc started with the training in hydroponics. Recruitment of participants was conducted successfully complying with 100% of the people that will make trained. We started with lectures in the course of hydroponics. During the months of February and March 2015, we continued with the teaching-learning process. In addition to strengthening the area of socio-emotional educational workshops offered by the psychologist Dr. Ricardo Colón. It was identified in the hydro-farmers' community that allowed visits to your place of work, in which participated 100% of participants. It should be added that he has been made arrangements with INSEC and negotiated business development and training agencies, to financially support the development of micro-enterprises of our participants in the area of hydroponics lettuces and strawberries craft.

During the educational process, we visited four (4) hydroponists in different cities of the island, with the purpose of expanding knowledge and empower our participants in the selection of the product to be growth. The focus was directed to develop market strawberries and lettuce, since in the last decade Puerto Rico has a majority this fruit and vegetable consumption. Strawberries are mainly imported from other States, especially the State of California, and this project intended to introduce the idea that Puerto Rico has the ideal climate in the mountain for the cultivation of this fruit. This meaning that any production of this fruit will automatically begin the reduction of the importation of small shelf life fruit.

This was demonstrated in the teaching-learning process, when the participants had the opportunity to receive training in the area of strawberries by the unique hydroponist cultivating strawberries in the mountain of PR, Mr. Benjamín Pagán. Mr. Pagán during the training indicated that this year had been one atypical in the climate of Aibonito and mountain (understand high temperatures), what affected that the fruit of strawberries was one of a commercial nature, since the heat accelerates the maturity

of the fruit and reduces growth. Even so, Mr. Pagán understands that it is a Virgin market with great economic potential. Mr. Pagán farm is located in Barrio La Sierra, Aibonito.

This project impacted five (5) persons between the ages of 25 to 55 years with disabilities. The geographic area served was the center of the mountain, which included the cities of *u*, among others. The participants of this project are Barranquitas, Aibonito and Naranjito, municipalities where agriculture is their main economic resource. Training in the development of their own business promotes self-sufficiency and employment independence of the communities in which they live. The development of these five (5) business will have a direct impact on five (5) direct and about 15 indirect jobs. In addition, the economic impact in the five (5) Puerto Rican families and the development of agriculture in the country, impacting the food area with healthy and fresh products for the Puerto Rican household consumption.

From (5) small developing microbusinesses participating in this initiative, four (4) of them began working with Hydroponic Lettuce and one (1) into the strawberry production. From those four small lettuce producers two of them are currently in commercial production. Some of the outcomes of the strawberry production were reduced due to the varieties used in the workshop, this having an effect on the size and quality of the fruit. The strawberry production in the workshop allowed for more participation in identifying different varieties in order to supply the correct size and requirement for the specific market.

Some of the market effect was not able to be measure to the extent of comparing expansion or market growth in the strawberry business due to the dry and specific climate situations previously from our workshop. However, in the Lettuce production two of the main participant where able to establish medium size business in this type of production applying skills learned in our workshops. Establishing business deals with some of the markets mentioned bellow.

During the last quarter we conducted **workshops** and **educational guidance** in the agricultural area, with the aim that the participants have knowledge of the services offered by the Department of Agriculture through its different programs for new farmers.

The business training that included:

- Financial advisor permission to develop a business in Puerto Rico.
- Guidance for agricultural economic incentives.
- Support to the incorporation of the Department of State registry.
- Development of the proposal and its plan of work.
- Support in the development of the first hydroponic greenhouse.
- Support in the selection of the product to grow.
- Coaching in the market of the product and visits with participants to the agricultural market potential.
  - HAR Products
  - Supermarket *Econo* of *Caguas*, *Agua Buenas*, *Cayey* and *Aibonito*.
  - *Selectos* of *Aibonito y Salinas*.
  - Restaurant *Wendy's* of *Puerto Rico* through *Sunny Valley* of *Juncos Puerto Rico*.

We celebrated the graduation of the five (5) participants, with an activity of achievements in the *Tio Pepe* restaurant in *Aibonito* and in which we surrendered them certificates of fulfillment of the course of simple hydroponics. Five (5) micro-enterprise development. We started the first micro enterprise with the young *José Malavé* from the city of *Aibonito*, who selected the lettuce crop and who is marketing their product with HAR Products through CAPI, Inc.

The second micro-enterprise is from the young *Jorge Morales* from the city of *Aibonito*, it is placed in its phase 1 of construction. This young man decided to grow strawberries. They will have their market with HAR Products. The third microenterprise is from *Ms. Yolanda Colón* from the city of *Barranquitas*. We are negotiating the roof shades with the *Universidad Interamericana de Barranquitas*. We understood that it should be ready by the end of November 2015. *Ms. Colón* selected the cultivation of lettuce.

In conclusion, the project met the goals established under contract:

- Demonstrate that the hydroponics is the agriculture of the future; where the harvest per unit is higher than in land cultivation.
- Where there is no preparation of soil or use of pesticides.
- There is a full and stable control of nutrients and fruit quality.
- Develop through training/training (5) five greenhouses to hydroponic products expand.

**Beneficiaries:**

The following collaborated with the Project:

Colaborators	Contributions to the project
Hydroponic Technicians from CAPI, Inc.	Process teaching and learning in the field of hydroponics.
Norma Arzola - Trainer	Strengthening and motivation through courage management workshops and learning to manage stress.
Benjamín Pagán - Trainer	Teaching-learning process for the participants in the area of cultivation of strawberries.
Ginger Santiago - Trainer	Guidance and support in the area of enterprise development.
Dr. Ricardo Colón - Psychologist	Strengthening in the emotional area of the participants.
Sonji Ortiz –Lawyer Departament of Agriculture	Orientation on the agricultural area and on services offered by the Department of agriculture through its various programs for new farmers.
José Rivera Vizcarrondo – Officer from Banco Popular of PR	Financial advice
Elvin Sánchez - Contratista de Invernaderos	Orientation in the construction of greenhouses for the participants of the project including prices, earth moving (if applicable), companion of the construction equipment.

The project had five (5) participants between the ages of 25 to 55 years with various disabilities. The geographic area served is the center of the mountain which includes the towns of *Aibonito*, *Barranquitas*, *Naranjito*, *Corozal*, *Comerio*, *Orocovis*, among others. The participants of this project are *Barranquitas*, *Aibonito* and *Naranjito*, cities where agriculture is their main economic means.

Training in the development of their own business promotes self-sufficiency and employment independence of the communities in which they live. The development of these five (5) business impact five (5) direct and about 15 indirect jobs. In addition, the economic impact in the five (5) Puerto Rican families and the development of agriculture in the country, impacting the food area with healthy and fresh products for the Puerto Rican household consumption.

### **Lessons learned**

The cultivation of the strawberry is a good source of income in the agricultural market, especially in this mountain region, since the climate is low temperature. Unfortunately, this year high temperatures, heat and drought were not good choices for its cultivation. One of the lessons learned with the cultivation of the strawberry is chosen the variety that is characterized for the transport by its resistance and adaptation in hot and/or cold areas. In addition, know how to select the saran of the greenhouse for keep it at low temperature. Strong temperatures that suffered Puerto Rico this year caused a rapid maturation of the fruit preventing fruit to acquire the size of marketing. Even so, we could complete the training process, achieving two of the participants selected the strawberry as the crop for your Company.

### **Contact Person**

Ana M. Colón  
CAPI, Inc. Director  
787-735-6305  
No email address

**SUBGRANTEE PROJECT (3): A New Method for the Production of the European Bee**

***Proponent: Alicia Justiniano***

No activities were performed. Efforts were made to achieve the sub grantee submitted documentation in order to complete and sign the contract. Nevertheless, the sub grantee never submitted the requested and needed documents.

No funds were expended.

Funds (\$13,333.34) requested reallocated to an amendment project. High Tunnel and Hydroponic Vegetable Production Assistance for Developing Farmers

**SUBGRANTEE PROJECT (4): Formal Research on Development of Tomato Seeds, Nutrients and Pesticides for the Organic Approach Cultivation under the Environmental Conditions of Puerto Rico**

**Proponent: Agroempresas K'verde**

**Funding Expended to Date -**

1<sup>st</sup> Annual Performance Report SCBGP 2014 *(As informed by sub grantee in last report submitted (July-September 2015), the funds used to the present were \$2,150.00 which corresponds to the preparation of the land, for the laboratory construction, estimated in \$5,520.00 as part of the Ke'Verde in kind contribution).*

FIDA's Program Coordinator María Aponte learned that this proponent, due to personal and/or economic reasons, recently closed its operations and will not complete the project.

No funds were expended.

Funds (\$19,426.76) requested reallocated to an amendment project. High Tunnel and Hydroponic Vegetable Production Assistance for Developing Farmers

**SUBGRANTEE PROJECT (5): Project Title: “Community Fertilizer” Vermicomposting Contribution to Specialty Crops**

**Proponent:** *FSCC, Inc. (Organia Farms)*

**Project Summary:**

In recent years there has been a genuine interest of citizens in consuming specialty crops that are produced locally and with sustainable production practices. This project aims to introduce and promote the use of vermicomposting in the production of specialty crops to farmers. So the farmers could use this technique / tool to sustain and / or increase the production of their products. The vermicomposting is the conversion of organic waste into organic fertilizer or soil amendment. It's made by specialized worms that are responsible for processing and digesting the organic matter to convert it into vermicompost a type of high-quality organic fertilizer. This project has not been previously funded by the Specialty Crops Block Grant Program.

This project arises from the need that we have identified to disseminate and share with other farmers of specialty crops in Puerto Rico, the knowledge and experience we have gained in the vermicomposting production. The establishment of vermicomposting projects among farmers will benefit the specialty crop for the capacity for fertilization and pest control in crops that have this material (vermicompost). At present there is no local production of fertilizers and are confident that the competitiveness of farmers may increase if this technology is deployed in their farming operations. Furthermore consumers of specialty crops receive benefits because a healthier and better quality product.

**Project Approach:**

We establish a demonstration project and activities to promote the use of vermicomposting to enhance the production of specialty crops. We develop a worm farm nursery and several outreach activities to disseminate information and education to farmers / producers about the benefits of vermicomposting to enhance the production of specialty crops.

The demonstration project was located at “Organia Farms” alongside the Carite Lake. This is the oldest man made water reservoir in Puerto Rico. The surrounding land use around the lake is mostly family farms with agroforestry as the main type of operation. The forest is intercrop with coffee, bananas, yams, sweet potato, passion fruit and other specialty crops. The farm is a portrayal of the typical farms in the tropical humid up-land where specialty crops are grown.

We also tested the vermicompost produced at the worm farm for available macro and micro nutrients, conductivity and other parameters. According to the results, the vermicompost is suitable to use as an organic fertilizer for crops and soil amendment to improve fertility. The nutrients in vermicompost are made available slowly over a period of time and its mostly a neutral to alkaline pH due to earthworms capacity to neutralise even the most acidic of materials. Vermicompost is a humus like material that is rich in enzymes and microbial populations.

**Goals and Outcomes Achieved:**

- 1) We develop a worm farm nursery to facilitate the distribution of specialized worms between interested farmers / producers of specialty crop. We offered 3 workshops and field demonstration.
- 2) We Partnerships with four (4) organisations to establish projects of vermicompost in their facilities and provide workshops.
  - a University of Puerto Rico Cayey
  - b Municipality of Cayey
  - c Student Farmer Association (UPR Mayaguez)
  - d Agricultural Experimental Station
- 3) We visit thirty (30) farmers directly and donate worms to start their own worm composting farm projects.
- 4) We use our internet portal as an educational tool for disseminating the project and reach more people.
- 5) We reduce the cost of production, by producing our own fertilizer when growing specialty crops.

**Beneficiaries:**

-Over 250 farmers /producers and general public interested in specialty crops were directly benefitted from the project during or workshops.

-We provide 5 workshops in our collaborator sites, and attended 121 people:

- 1.June 23, 2015
- 2.August 29, 2016
- 3.October 8, 2016
- 4.January 26, 2017
- 5.May 30, 2017

- Farmers were able to produce more fresh produce that was available to consumers.
- The education provided by this project helps to increase the consumption of specialty crops in the Island.
- Farmers were provided with new tools, techniques and knowledge in the production of fresh and healthy products.
- The uncertainty of farmers impacted by this project was reduced, given the new alternatives as fertilising options.
- Farmers were empower with the vermicomposting technique and able to produce their own organic fertilizer for the production of specialty crops

-We visit 30 specialty crop farmers to provide technical training and donate worms to start their vermicompost farm projects. Over 349 pounds of worms were distributed between specialty crops farmers around the island.

# Farmers	Town	Pounds of worms donated to farmers
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1	Gurabo	10
2	Patillas	20
3	Guaynabo	5
4	Rio Grande	10
5	Patillas	20
6	Cayey	20
7	Rio Grande	20
8	San Juan	10
9	Caguas	20
10	Hatillo	20
11	Cayey	10
12	Corozal	10
13	Cayey	5
14	Ponce	10
15	Añasco	10
16	Arecibo	10
17	Lajas	10
18	San Lorenzo	20
19	Mayaguez	10
20	Isabela	10
21	Utado	10
22	Luquillo	10
23	Lajas	10
24	Camuy	12
25	Hatillo	12

26	Caguas	10
27	Cabo Rojo	5
28	Mayaguez	10
29	Cidra	5
30	Comerio	5
<b>TOTAL</b>		<b>349</b>

#### Lessons Learned:

- We found this technology should be studied further by analyzing the long term benefits of vermicomposting for specialty crops production. ○ We recommend using this technology on any type of specialty crop operation and business size.
- Prior to vermicompost, the raw materials should be pre-composted and monitored. Applying water regularly to maintain the desired moisture levels and temperature. ○ The vermicomposting beds has to be feed regularly to maintain worms eating fresh food (organic materials) and watered to maintain the desired moisture levels at the beds.
- Vermicompost analysis of the castings produced by our worm farm:

• Analysis Date	6/20/2016 A&L Labs	9/19/2016 A&L Labs	9/29/2015 A&L Labs
Total Nitrogen	0.76	0.76	1.00
Conductivity	2.29	2.38	6.02
% Moisture	56.6	56.0	43.1
pH	7.18	7.09	7.34
Aluminum mg/Kg	8070	8240	9380
Boron mg/Kg	<25.0	<25.0	<25.0
Calcium mg/Kg	24600	43300	56700
Copper mg/Kg	96.7	155	177
Iron mg/Kg	16500	10200	13000
Potassium mg/Kg	1390	902	1040
Magnesium mg/Kg	1750	1370	1800

Manganese mg/Kg	347	145	188
Sodium mg/Kg	425	<250	365
Phosphorus mg/Kg	2710	4680	5290
Sulfur mg/Kg	2080	3230	5210
Zinc mg/Kg	306	640	1970

**Contact Person:**

Project Director: Rodolfo H. Salgado	
Contact Information: Sierra Morena street, # 267, PMB 579 San Juan, PR 00926-5583	Phone Number: 787-300-9935 E-mail: <a href="mailto:organiarc@gmail.com">organiarc@gmail.com</a> <a href="http://www.organiarc.com">www.organiarc.com</a>

**Additional Information:**

**Worm Farm at our facilities**







Workshop and Establishing of vermicomposting beds



Workshop and field Demonstration at Organia Farms





### Final Financial Report

#### **Cash Receipts:**

1. SCBG-FIDA= **5,648.00** Chipper / Shredder
2. SCBG-AMS= **4,418.71** Compost Tea Brewer
3. SCBG-AMS & FIDA = **1,853.80** Worms *Eisenia Fetida* y *Eisenia Hortensis*

#### **Proponent Share:**

1. **1,600.00** Worm farm development

#### **Reimbursement:**

1. None

#### **Surplus of Funds:**

1. \$79.49

**STATE MANAGED PROJECT (SUBGRANTEE AMENDMENT PROJECT) (6): High Tunnel and Hydroponic Vegetable Production Assistance for Developing Farmers**

**Project Summary**

This project was focused in the assistance and encouragement of specialized farmers/producers the area of high tunnel for hydroponic vegetable production. Attending issues for climate control, economical and agricultural limitations for producing vegetables locally, as well as the orientation and capacity building allowing for incentive acquisition. In previous efforts, the project was focused mostly on the marketing aspect and not specifically on the investment and access to incentives to promote production aspect.

For the past, few years the vegetable industry in Puerto Rico has suffered from climate inconsistencies and economical variations that have a direct effect on the local production of these goods. Many farmers have been forced to attend to these issues investing establishing greenhouses and other high costing equipment. This investment currently is subsidized by the local government up to a 50% of its total cost. However, farmers are faced to do additional investment hiring greenhouse specialists, investing in marketing strategies for higher added value in order to compensate the cost of producing in these structures. Efforts of planning, assisting and establishing new market alternatives for farmers was implemented trough the assistance of coordinators.

**Project Approach:**

Workshops

The Innovation Fund for Agricultural Development established workshops for stakeholders through the regional offices of the Puerto Rico's Department of Agriculture (PRDA). Workshops were directed to the improvement of the proposal writing skills of the farmers to apply for local incentives, federal grant incentives or to apply for loans to expand or keep optimizing their projects. These workshops were located strategically, one in the south part of the Island and one on the north side.



Summary for sales of the last semester from January 2017 to May 2017 we have:

Description of the units:

- Tropicana Lettuce (16 Units of 12 Oz Each per Box)
- Romaine Lettuce (16 Units of 11 Oz Each per Box)

- Mezclum Leaf Mix (6 Units of 16 Oz Each per Box)

Units sold to the School Authority:

- Tropicana Lettuce: 8,230.73 boxes of 16 units each (131,691.68 individual units)
- Romaine Lettuce: 4,359.62 boxes of 16 units each (69,753.92 individual units)
- Mezclum leaf mix: 5,081.83 boxes of 6 units each (30,490.98 individual units)

This resulted in this semester in a \$459,009.28 economic impact divided in all farmers that participated in the program. Making the coordination efforts successful and boosting the economy for those farmers to promote the growth of the sector of vegetable producers.

Later, we started the coordination of the following semester August 2017 to December 2017 with 37 participants. August turned to be a successful month, but in September, having the two-atmospheric phenomenon, Hurricane Irma and Maria, the projects suffered a lot of damage what made this coordination impossible to continue.



### Farm Visits

In the effort of assuring better quality and good agriculture practices, we have followed through with visits to many of the farms that are currently participating in the school market program. Many of the farmers are applying techniques learned in the good agriculture practices workshop and some need assistance in establishing most of these practices, therefore we personally assist farmers in doing so. In addition, we have assisted in informing of local incentives from the local farm investment program and other federal assistance as well.



## Goal and Achievements

FIDA planned and executed all activities reported in this project with the completion of 100% of its objectives. All participants attended training sessions to a 100%.

	Participants	Farmer	Specialty Crops	New or Established
1	Cultivos Campo Verde	Rubén Rodríguez	Leaf greens, Cilantro & Lettuce	Established
2	Finca 2 Ríos	Marileen García	Hydroponic Lettuce	Established
3	Pura Parcha		Passion Fruit	Established
4		Aixa García Ruiz	Cilantro	Established
5		Daisy Mateo	Lettuce & Cilantro	Established
6	Hacienda Los Amigos		Hydroponic Lettuce	Established
7	Agrican Corp	Miguel A. David Burgos	Ornamental, Fruits, Vegetables & Medicinal Leaf Greens	New Farmer
8	InterAgrícola		Lettuce & Cilantro	New Farmer
9		Juan Hernández Barrios	Cilantro & Vegetables	New Farmer
10	Julia Industries Group Inc	Waldo Julia	Cilantro & Leaf Greens	New Farmer
11	Hojas Verdes Inc.	Osvaldo Rivera	Cilantro, Lettuce & Vegetables	New Farmer

Sadly, after the path of hurricane Maria & Irma, all projects suffered catastrophic damages, losing the ability to produce under climate controlled environment. We are currently working over the clock to ensure the restoration of our farm industry as well as previous investments. By November 2017 the Department of Agriculture of Puerto Rico have received approximately 30 proposals for hydroponics and high tunnels projects and their reconstruction.

Beneficiaries:

Eleven (11) farmers established new technologies through governmental incentives that increased yields, efficiency and increased conservation of resources.

Farmers with deliveries: 37+

Workshops: 50 participants all farmers directly working with vegetables produce

This project allowed for the establishment of 5 new farmers in the Hydroponic and High Tunnel Industry. Thus, allowing for immediate increase in yield and lower contamination of produced goods. These factors will assist



## **Lessons Learned**

Vegetable production capacity and marketing skills are a key part for any healthy agricultural project. With this project, we could create a successful market opportunity, investments for farmers all around the island and establish a high tunnel greenhouses with higher yields. This also created an awareness in terms of the importance of the marketing skills, proposal writing, product quality and an efficient level of production as well.

Many farmers do not access local incentives for Specialty Crop production due to high cost for establishing new technologies, however, they are willing to accept the risks of an investment if technical workshops, agronomist and other specialists will assist them in the acquisition of such equipment.

***Gerardo Vazquez Torres***

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*Fondo de Innovación para el Desarrollo Agrícola (FIDA)*

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