# ANNUAL REPORT 2009

IICA's Contribution to the Development of Agriculture and Rural Communities

# Bahamas





#### Inter-American Institute for Cooperation on Agriculture

#### IICA's Contribution to the Development of Agriculture and Rural Communities in the Bahamas



### **Annual Report 2009**

Nassau, The Bahamas

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#### FOREWORD by the Representative



Dr. M. N. Alvarez, Representative

I am pleased to present our 2009 Annual report on behalf of the team at the Inter-American Institute for Cooperation on Agriculture (IICA)-Bahamas office. The report entitled "The IICA's Contribution to the Development of Agriculture and Rural Communities Bahamas" presents the outcome of close cooperation with the Ministry of Agriculture and Marine Resources (MAMR), producer groups and many other partners in The Bahamas.

During 2009, the global economic crisis impacted on the agriculture sector in our region. The concern for food security, as the price of food increased, along with the reaction of both the public and private sector to stimulate local production have resulted in more interest in agriculture. The government interventions and incentives to alleviate the critical food security situation resulted in more local participants in agribusiness.

To respond to the growing demand, the government, in collaboration with partners, has undertaken a rapid assessment of the sector. This assessment has identified priority areas that will be targeted for revitalizing and to improve support to the sector. Similarly, IICA continued to provide technical support to producer groups and cooperatives in order to facilitate access to readily available agricultural technologies and innovations.

The support of, and collaboration with the Minister of Agriculture and Marine Resources; the Ministry of Foreign Affairs; Ministry of the Environment; Ministry of Education, Youth, Sports and Culture were vital in the process. Other partners were the Diplomatic and Councilor Corp Community; the private sector groups through the Bahamas Agricultural Producers Association (BAPA) and the Sustainable Tourism Entrepreneurial Management and Marketing Project of the Bahamas Hotel Association (BHA/STEMM) also played significant roles in the implementation of the technical cooperation agenda.

The Institute also acknowledges the efforts and contribution of all producers, the bodies of the MAMR such as the Bahamas Agricultural Industrial Corporation (BAIC), the Cooperative Societies and other stakeholders, public and private, as well as national and international organizations to the achievements. We do look forward to continued collaboration with members of the community of agriculture and rural life, as we seek to implement the plans for 2010.

#### INTRODUCTION

The economic growth for The Bahamas slowed considerably during 2009 and continues to face growth challenges. The international trade deficit expanded as import spending exceeded the export sales of merchandise. Despite the revenue from the service sector, tourism and finance, the economy still spent more on imports. The Export Bulletin data indicated that between 2001 and 2008, The Bahamas export of rock lobster and sea crawfish, frozen in shell declined by 0.7%, which stood at \$64.957M in 2008 while rock lobster and other sea crawfish not frozen in shell was at \$13.3M, an increase of 77.3%. The bulletin emphasized the huge potential to diversify the export base.

The contraction of the economy in 2009 resulted from the decline in tourism, foreign direct investment and offshore financial services activity. Despite the surge in cruise arrivals, provisional data suggests a weak tourism sector performance during the third quarter of 2009, due to sustained downturn in stopover visitors. Similarly, the slowdown in foreign investmentled and domestic private sector projects constrained output in the construction sector. These declines resulted in significant job losses in the hotel sector and the wider economy. Since more than 80% of visitors are Americans, it is expected that the growing negative impact of the U.S. recession will continue to be felt in the coming year.

The sudden and rapid rise in food prices in 2008 triggered public efforts to mitigate this negative impact. During 2009 this momentum continued with the spread of the agricultural expo and the back yard garden concept to the Family Islands. The aim of encouraging greater participation by individuals in the production of food is being gradually realized. The provision of tractor services to farmers in Andros and Exuma along with assistance to groups to form their associations or clusters started to have impact on production. The progress on the introduction of greenhouse technology continued.

MAMR intensified its activities at the Gladstone Road Agricultural Centre (GRAC) in order to generate/validate technologies for producers. During the year the embryo transfer techniques were used to rapidly upgrade the breeds of small ruminants for quick access to farmers. At the same time initiatives in on-farm demonstration of improved pasture management started. The provision of tractor service to producers in Andros continued and plans were under way to extend to other Family Islands.

Through this linkage with many stakeholders, IICA was able to implement the technical cooperation agenda. The institute continued its efforts to strengthen agribusiness, agro-tourism and the sustainable use of natural resource initiatives in The Bahamas. This report describes the results of the main technical cooperation activities for the past year.



#### **EXECUTIVE SUMMARY**

#### Repositioning of agriculture and rural life

- The Minister of Agriculture and Marine Resources and his delegation participated in the Week of Agriculture and Rural Life of the Americas, in Montego Bay, Jamaica.
- In support of the BAPA Agro-tourism project initiative the importance of linking tourism with agriculture was discussed within the framework of an Agro-tourism roundtable.
- The institute participated in the Ministry's agricultural sector rapid assessment exercise coordinated by FAO.

#### Promoting trade and the competitiveness of agribusiness

- The theme of the 2009Agricultural Expo was "strengthening food security" where IICA helped through committees and exhibits. Farmers from the Family Islands, as well as major producers and exporters, training institutions and backyard gardeners participated.
- A number of workshops and seminars were presented on the Value-Chain principles, and projects developed and funded to provide technical support for the strengthening of cooperatives for competitiveness and increase market penetration.
- MAMR also signed agreement to participate in the Market Information Organization of the Americas (MIOA).

#### Promoting agricultural health and food safety

- In support of the initiative to consolidate the SPS national committee, the institute hosted a series of meetings with the "SPS Ad-hoc Committee", which has started the protocol to formalize its function.
- A follow-up to the good agricultural practices (GAP's) training and agreed to priority actions from recommendations of the policy, visioning and strategy exercise were also revisited.

#### Promoting the sustainable management of natural resources and the environment

• IICA facilitated the access to technical support for the rapid assessment of potential interventions to Forestry initiative of the Ministry of the Environment. The Ministry agreed to implement follow-up recommendations.



#### Promoting the development of rural communities based on a territorial approach

IICA facilitated the clustering of youth around agriculture through a number of activities to stimulate interest in the sector. The Bahamas Agricultural Forum for Youth (BAFY), in linkage with the Caribbean Forum for Youth (CAFY) organized a number of activities including career talks/presentations, Agricultural Think Tank forum and a poster competition.

#### Promoting the introduction of technology and innovation for the modernization of agriculture and rural life

- IICA facilitated Biotechnology-Biosafety consultation events in The Bahamas, as well as capacity building in a specialized area at the Centre for Tropical Agricultural Research and Education (CATIE) for private sector Biotechnology initiative.
- In collaboration with The Food and Agricultural Organization (FAO) and the Caribbean Agricultural Research and Development Institute (CARDI), a clean seed rapid multiplication and distribution system for root crops was introduced to Family Islands in The Bahamas.



#### THE STATE OF AGRICULTURE AND RURAL LIFE IN THE BAHAMAS IN 2009

#### a. The Context for Agriculture and Rural Life

The Commonwealth of The Bahamas is an archipelagic state comprising of over 700 islands. Parts of these islands are arid with little potential for agriculture. Thirty of the islands are inhabited, the most important being New Providence and Grand Bahama, in terms of population and level of infrastructure. However, for the purpose of agriculture, the major Family Islands with fertile land and adequate fresh water supply are Andros, Abaco and Grand Bahama, which are also known as, pine islands. Other Family Islands such as Eleuthera, Long Island, Cat Island and an additional four islands - Acklins, Mayaguana, Inagua and San Salvador (coppice islands) are smaller contributors to the sector. Almost all of the major agricultural production takes place on the Family Islands. The major producer of greenhouse tomatoes, peppers, cucumbers and lettuce as well as initiating tissue culture propagation operates on New Providence.

The government incentives and efforts to revitalize the sector have resulted in increasing interest among new farmers. Land allocation to interested individuals in Andros and Abaco increased in 2009 and formation of farmers associations on the different Family Islands also increased. IICA's contribution to this process was to continue to provide technical support to the producer groups and cooperatives.



Launch of the 2009 Agribusiness Expo, L-R: Lavarity Deveaux (Farmer), Creswell Sturrup (P.S. MAMR), Hon. Lawrence Cartwright (Minister MAMR), Hon. Hubert A. Ingraham (Prime Minister & Minister of Finance), Edison Key (BAIC Executive Chairman).

#### b. Changes in Policies that Affect Agriculture and Rural Life

The formation of the producers association will enable them to more optimally capitalize on the Family Island Development Encouragement Act, which is an incentive policy, favorable to the agriculture sector. This act enables the associations to benefit from duty free and excise free tax on their imports of machinery for land clearing and to reduce the cost of other input supplies by bulk purchases.

The consolidated Ministry has made progress in the intensification of activities in support of national agriculture and Family Island life. These policy incentives introduced last year have resulted in a spur in production. This is further highlighted by the Ministry's decision to support the Family Islands' Agribusiness Expo. The Family Island expo will show case local production and position the lead producers for the national expo in the following year. One of the immediate impacts of this policy shift is an increase in the number of farmers and entrepreneurs in the Family Islands to participate in revitalizing the sector and further strengthen food security.





Participants in technical workshop session, Exuma Horticultural Fair 2009.





Minister Cartwright addressed the participants and presented awards to winners, Exuma Horticultural Fair 2009.



Since the reintroduction of the Agribusiness Expo as one of the activities to sensitize the public about the scope and role of agriculture in The Bahamas, the momentum has grown as demonstrated in the turn out in 2009. The Expo was predominantly national products but international specialists were also present to make presentations during the different lecture series period. The continued support to upgrade the traditional processing of local products was also another factor of encouragement for the processing groups in the Family Island.









Photo highlights from the Agribusiness Expo 2009: preserves from Eleuthera, bananas and vegetables from New Providence and ducklings.

#### c. Changes in the Institutional Framework for Agriculture and Rural Life

In 2008, MAMR restructured with the aim of invigorating the technology generating section and improving its services to agribusiness initiatives in the Family Islands. Some of the key activities undertaken to accelerate the delivery of improved technologies were the embryo transfer of small ruminants to upgrade local herds and the rapid multiplication of selected root crops.





Visit with Dr. Dunstan Campbell, FAO Representative and Greg Bethel (Department of Marine Resources) to small ruminant farmers' fields and participants in the embryo transfer program.

MAMR also implemented a rapid assessment exercise of the sector to identify major binding constraints and prioritized challenges to be addressed. This exercise has stream lined major areas with high potential for action in the short, medium and long-term. This was a useful exercise to identify specific priorities for technology generation/validation for the agri-food system and agro-ecologies of The Bahamas.



Briefing by FAO Representative for rapid assessment exercise.



# d. Major Events in the Thematic Areas (of IICA) that Affected the Performance of Agriculture and the Rural Milieu

The effort to assist the producers to merge into clusters of vegetable, livestock, or fish producers is being supplemented by IICA by introducing value chain principles or code of conduct for competitiveness. A more comprehensive and integrated approach is still needed in order to increase cooperation among the cluster and various partners in the value-chain. Group strengthening remains an important factor for the operation of the association or organizations.

With support from regional specialists, both public and private sector partners were made aware of the legal and regulatory issues affecting agriculture. These included the trend in the application of health and phyto-sanitary measures (SPS). During the year, a performance, visioning and strategy (PVS) exercise was undertaken. The purpose was to catalyze the participation of The Bahamas in the Committee on Sanitary and Phyto-sanitary Measures (SPS Committee) and promote implementation of the Agreement on the Application of Sanitary and Phyto-sanitary Measures of the World Trade Organization (WTO-SPS Agreement). The Bahamas has sent at least one capital-based representative to approximately ten (10) of the 18 meetings held in Geneva.

Similarly, with the aid of regional specialists and within the framework of group strengthening of the cooperatives, IICA assisted the North Abaco Fisheries Cooperative Society (NAFCO) to access grant fund from the Inter-American Development Bank (IDB) for the cooperative to increase competitiveness. The three major challenges that IICA and its partners will be involved with are: the enabling environment, strengthening the value chain and improving business management skills. These interventions will continue to be extended to all cooperatives and producer associations of interest.

In collaboration with the MAMR, IICA continued to participate in the introduction of improved technologies. For the introduction of protected agriculture, an orientation visit to Jamaica was made, followed by the selection of the types of equipment most suitable for The Bahamas. This technology will be demonstrated to interested investors and will also serve as a training facility in 2010. Similarly, in collaboration with the Ministry of the Environment, a preliminary assessment of the forest potential was undertaken.

#### RESULTS **IMPLEMENTATION** OF THE OF THE NATIONAL **TECHNICAL COOPERATION AGENDA IN THE BAHAMAS DURING 2009**

The technical cooperation agenda for 2009 was implemented with many partners and an increased level of participation among stakeholders. The producer groups showed increased activity over the previous year despite the financial challenges. All strategic priority actions were addressed and results of training/workshops and roundtable discussions with various producer groups and especially the initiative of linking agriculture and tourism with in partnership with BAPA and BHA/STEMM are having an impact. The results of the cooperation are shown below:

#### a. IICA's Contribution to the Repositioning of Agriculture and Rural life

A major accomplishment during the year 2009 was the participation of the Minister of Agriculture and Marine Resources and his delegation in the IABA October meeting of all ministers of agriculture in the Hemisphere in Jamaica. This meeting marked the transition of one administration of the Institute to another. The outgoing administration of Dr. Chelston Brathwaite was replaced by the new administration of Dr. Victor Villalobus. The ministers elected the new Director General for a four-year term.

IICA's contribution to the repositioning of agriculture and rural life was highlighted by the 2008 situation of high food prices and a global food and financial crisis. These activities continued in 2009 intending to help policy makers gain a greater awareness of the expanded role that agriculture can play in the economy. During the year many interventions introduced in the previous year picked up momentum in 2009. In The Bahamas, another successful Agribusiness Expo was undertaken in which many farmers from the Family Islands participated. The popularity of the Expo and the Ministry's policy to reposition the sector has resulted in shifting the Expo to the Family Island for one year and then back to New Providence the following year (2010-2011). The greater participation of the Family Islands will help to establish the importance of an integrated approach to production, marketing and distribution chain that will build on the respective strengths of the different Family Islands and strengthen the overall food security, and also help mitigate food production-related risks in event of natural disaster.



Within the framework of repositioning the sector, some priority areas were further highlighted by the rapid assessment experts in 2009. These included integrated livestock production with major focus on small ruminants, vegetables and root crops and fruits trees. The priority areas that were identified for greater collaboration with IICA were address at different stages during 2009, namely:

- Promote the use of greenhouse technology
- Increase production of staple foods (root crops, small ruminants)
- Strengthen national capacity in agricultural health and food safety
- Assist in the creation of Market Information System
- Review of sector policy with view to mitigate risks due to shocks

In collaboration with MAMR and BAIC, IICA through the IICA-CARDI collaborative projects and through direct funding from FAO was able to provide immediate assistance to make some technologies available to producers.

Another important activity that occurred within this framework was the roundtable discussion involving stakeholders from the tourism and agriculture, to review the strategies to cultivate the linkage between the two sectors. This roundtable identified key constraints that will need serious attention and it also revealed the willingness among the stakeholders to strengthen agro-tourism linkages.





Initiating Agro-Tourism linkages discussion in Exuma: Danielle Knowles (BHA/STEMM Consultant) and farmer, Hoteliers and Farmers' group meeting with Ena Harvey.

#### b. Promotion of Trade and Competitiveness of Agribusiness

Strengthening agribusiness activities for competitiveness continued to be a major area for IICA's technical cooperation agenda. During 2009 some of the major activities undertaken to promoting trade and competitiveness of agribusiness dealt with capacity building of producer associations, cooperatives (producers and fisheries) and providing technical support within areas where the Institute has technical expertise. The capacity building training workshops aimed at assisting the various groups to better manage their businesses, group strengthening and orientation to good practices. The groups that have benefitted from this training and acted on it were NAFCO and BAPA.

NAFCO is a small-scale fishery, which currently receives all its fish related technical support from the Department of Fisheries. The areas that IICA has been specifically requested for support are to enhance the enabling environment, introduction of management tools and to build and strengthen their value-chain approach. The activities undertaken during the year for this project were funded by the Inter-American Development Bank (IDB) through its Multilateral Investment Fund (MIF). This project was launched in 2009 and is expected to continue through 2010.

BAPA, which operates the Agro-Tourism linkage project, in collaboration with MAMR and other partners, played a lead role in promoting the market opportunity of local market and the high potential niche areas for its producers. This project is equally funded by IDB through its MIF grant and with technical backstopping by IICA.







Presentations by Leslie Minns, MAMR and Ena Harvey (Hemispheric Director) at the Agro-tourism Roundtable.



During the year, there was a major push to strength clustering of producer groups on the various Family Islands. The leaders of the different associations then become directors on the BAPA directorship board. This strategy was strongly promoted by BAIC and has had major impact in stimulating increased membership of BAPA and strengthened its board. This interinstitutional effort and cooperation between public and private agencies has strengthened the network among farming groups from the different Family Islands. The consolidation of the different clusters along with the effort to promote and revitalize the sector through the various Agribusiness Expos, has served as a formal institutional framework.





Delegation supporting producer association and BAPA President (I. G. Stubbs) addressing producers in Exuma.

The different organizing committees for the Agribusiness Expo serve as a good forum to involve the various stakeholders along the value-chain. These committees play an active role in promoting and organizing producers and receiving inputs of the various players in the Family Islands. The list of capacity building activities to the various groups is included in the Main Activities Organized by IICA in 2009 (See *Table 1 in page 34*).

#### c. Strengthening Agricultural Health and Food Safety Systems

During the year, the Bahamas implemented the Performance, Vision and Strategy (PVS) for sanitary and phyto-sanitary measures (SPS) with focus on plant health issues. This was undertaken within the framework of the Standard and Trade Facility (IICA-STDF), which is the project being implemented by IICA on behalf of the 28 member countries of the Americas. The Common Vision Session was attended by all relevant stakeholders from both the public and private sectors. It was supported by the regional specialist, who moderated the two days of deliberation as well as visited relevant sites with interest in plant health issues. This exercise was very productive and the exercise identified major challenges and priorities. Once the strategic vision was completed and the priorities identified, it was presented to policy makers for the follow up steps.







Carol Thomas, Regional Specialist conducting interviews and site visits during PVS exercise.

The conclusion and recommendations highlighted several areas that need attention for improvement. Among these were matters dealing with SPS enquiry points, clear mechanism for effective public-private sector communication and information dissemination, as well as the coordination mechanism of SPS issues involving both sectors. The exercise emphasized the need for technical staff training and updating of the legal framework to harmonize with new international standards.



IICA continued with capacity building and to play a role as the focal point in bringing the public and private stakeholders together to dialogue and promote a holistic approach. The institute in collaboration with BAPA also provided technical support for the promotion of GAP's to producers.



Carol Thomas visits Abaco Neem along with BAPA members (Marsh Harbour, Abaco).

#### d. Promoting the Sustainable Management of Natural Resources and the Environment

The series of training workshops that were held with NAFCO and backed by technical support resulted in the approval of their project proposal for group strengthening. The project was launched with a signing ceremony in the same community where the cooperative members are located. Among the expected outputs of the project are to create a positive impact in the community and to especially stimulate interest among the youth in the community and to promote sustainable management of the marine resources.





Leon Pinder, NAFCO President and Oscar Spencer, IDB Representative signing project & processing plant site visit (Abaco).

The other intervention in which IICA collaborated with the Ministry of the Environment was to participate in a rapid assessment of the potential output of the pine forest at the different Family Islands. The Ministry along with the Bahamas National Trust (BNT) identified key areas of high potential under-utilized resource for development and to establish a program for the sustainable development of a Bahamian Forestry Program. Some of the suggested areas for action were:

- Use of forest stand strips in housing development
- Thinning to improve quality stands
- Select seeds from plus trees to establish nurseries
- Implement a forest management plan



The assessment of the sustainability of a pilot plan indicated that it would be a profitable exercise at the cost assumptions at the time of the assessment. This was based on the use of only the culled trees from the thinning.







Debriefing by Mr. Pina (forester) to Hon. Earl D. Deveaux (Minister of the Environment) and Eric Carey (Director of BNT). Photos of the visit to the Abaco forest.

#### e. Strengthening Rural Communities based on the Territorial Approach

IICA facilitated the clustering of youth around agriculture through a number of activities to stimulate interest in the sector. In 2008, after a visit from Mrs. Una May Gordon a small BAFY core group was started. BAFY partnered this year with the Bahamas National Youth Council (BNYC – umbrella youth organization/President – Tyson McKenzie and "We are the future" a small youth advocate group - helping to start the Agriculture Think Tank (started September 2009) with the following topics: Diversifying the Bahamian economy with Agriculture, Creating new Cottage Industry with Value-added products, Buy Bahamian - LaMonica Glinton (BAIC), What is SPS? - Dr. Maurice Isaacs and Working in Groups - the Co-operative Model - Francis Davis (BCLL).





Agriculture Think Tank #1 Photo by Dahalia Smith. Students at H. O. Nash work at the school plot.

Other activities included: participating in the Forum for Young Leaders in Agriculture (Costa Rica, September 7 -11, 2009), Career day presentations at various schools and youth organizations to promote agriculture as a career option (Aquinas College Business Week -November 5), blog, poster competition (September 1 - December 15, 2009) and extending the databank of young Bahamian agriculture professionals (resumes/CV's).

H. O. Nash Junior High School (off Dolphin Drive) was included on the FAO Seeds project growing sweet potato cuttings. Donations were also secured for the orchard from Atlantis Landscaping and Claridge Back-yard Farms.

Since the remodeling of the Library several youth event have taken place in the library: Agriculture Think Tank, career planning visits from Program SURE and career counseling/ work study with students from C. C. Sweeting Senior High School. Also there have been several schools sending their students to use the Libraries services: College of The Bahamas, University of the West Indies, Centreville Primary School and others (also, see to Table 1).



#### Library usage:

The Finn Damtoft Agricultural Library (8th Terrace off Collins Avenue), which established in **2001 was fully renovated in 2008 and also joined The Bahamas Library system** (www.bahlibs.org). The Library, which is a collaborative activity with MAMR, has been moving ahead with the mandate to assist with disseminating agriculture information. The Library has been used by more students (seen more agriculture projects/economy) and interested public because of the growing interest in agriculture for food security. The future plans for the Library are to keep organizing events and encouraging research use (please see Table 1 which includes the list of events held in the Library).

The Library visiting numbers went down for the months of June and July because the air-conditioning system's break down. The Information Technicians participated in the National Library System Training in August. In November there was a break down for the air-conditioning system again and water damage from a leak on the third floor - the floors were cleaned, ceiling tiles and the carpet changed.

The numbers for January to March for the graph purposes have been estimated at 25 persons for each month (sign-in sheets were not recovered). The office for the administrative manager for BAPA has been stationed at the Library from March – December 2009. They have hosted closed meetings using the Library space (these numbers have not been included in the totals for the Library, *Figure 1* below).





The National Accountability Seminar held in the Library.

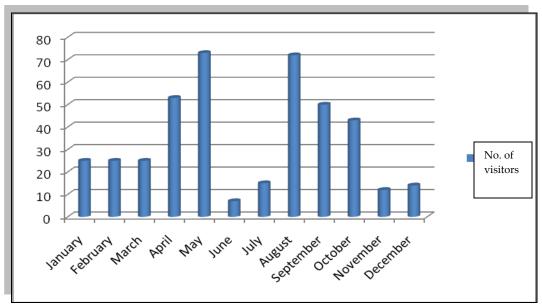


Figure 1. Number of library visitors/month 2009

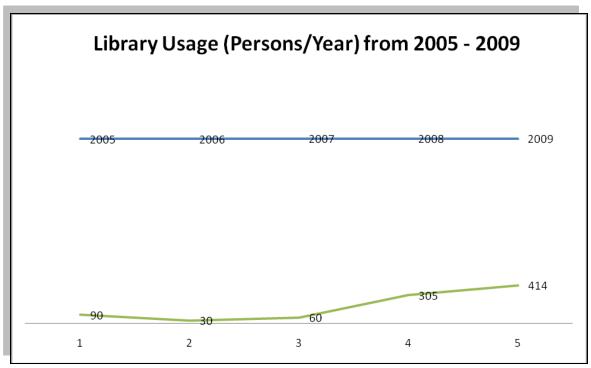


Figure 2. Library usage persons/year 2005 – 2009

#### **IICA Bahamas Poster Competition 2009**



Poster 1 – Tina Adderley (Honourable Mention)

L. W. Young Junior High School – Grade 8
"The Influence of Global Warming on the
Caribbean Agricultural Sector"
Soil Erosion



Poster 2 – **Tranna McPhee**L. W. Young Junior High School – Grade 8
"The Influence of Global Warming on the Caribbean Agricultural Sector
Drought Effects



Poster 3 - Game Atilus
L. W. Young Junior High School – Grade 8
"The Influence of Global Warming on the
Caribbean Agricultural Sector"
Hurricane/Storm Effects



Poster 4 - **Erin Stubbs (Second Place)** T. A. Thompson Junior High School - Grade

"Agriculture in Action around the Islands in the Bahamas"



Poster 5 - Elvardo Meadows (Third Place) Anatol Rodgers Senior High School - Grade

"Agriculture in Action around the Islands in the Bahamas"



Poster 6 - Clementia Ellis (First Place) T. A. Thompson Junior High School – Grade

"The Influence of Global Warming on the Caribbean Agricultural Sector" Hurricane Effects

#### Objective:

Choose three wining posters that will be used to create a display area at the Finn Damtoft Agricultural Library.

#### Participants:

All Government High School students (Jr. and Sr.) where there are agriculture courses offered.

#### Evaluation criteria:

- 1. Interpretation of the Theme of the contest
- 2. Colour use
- 3. Creativity
- 4. The posters should not have been submitted in previous contests. The decision of the jury was non-contestable.

The judging process was a two-fold one: a. The posters were judged by a professional artist and b. The posters were voted on by a cadre of agricultural /business professionals.

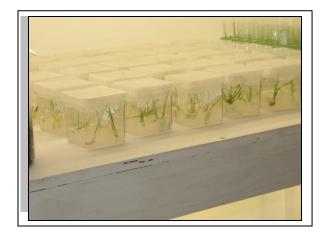
All Awards were donated. Many thanks to our sponsors: Bahamas Food Services Ltd., Green Systems Ltd. and Bahamas Co-operative League Ltd. The school with the most entries was L. W. Young Junior High School (won a pallet of mulch from Green Systems Ltd.).



# f. Introducing Technology and Innovation for the Modernization of Agriculture and Rural Development

#### **Bahamian Botanicals**

Dr. Selima Hauber, spurred by a vision of a Bahamas that is capable of feeding itself, has initiated a rapid multiplication enterprise with the aid of tissue culture. This initiative has started to address urgent needs for large quantity of health planting material of vegetatively propagated crops such as banana, pine apple, plantains. Dr. Hauber founded Bahamian Botanicals, (established Summer 2008), which is a micro-propagation laboratory offering liners to nurserymen and farmers on a wholesale basis. Micro-propagation, also referred to as plant tissue culture, is the rapid vegetative multiplication of plants in sterile containers on nutrient media, under controlled temperature and light. It is hoped that the lab will play an extensive role in advancing the horticultural and agricultural industries in The Bahamas.





*Micro propagation of plants at the Bahamian & Botanical laboratory.* 

Bahamian Botanicals is currently focused on the production of native species for coastal and inland habitats with measurable success already achieved in the micro-propagation of sea oats (*Uniola paniculata*) and two species of native orchids. In the immediate future, Bahamian Botanicals will expand its focus to include tropical fruit crops like bananas, plantains and pineapple. The lab has one full-time lab technician and has started to propagate 7 banana cultivars and 2 plantain cultivars.

April 20-24, 2009 - in collaboration with CATIE and the IICA Bahamas office, Dr. Hauber visited with the Biotechnology Laboratory in Turrialba, Costa Rica for training in the micropropagation of bananas and plantains. The training was in fulfillment of IICA Bahamas' priority for the 2009 work plan: Promote the adoption of appropriate technologies and agricultural practices to ensure sustainable food production systems in urban and rural areas. The training took place in the biotechnology laboratory at CATIE Costa Rica under the direction of Dr. Maria Elena Vega. The program was well-designed by Dr. Vega and was executed by researcher Juan Luis Ortiz. Dr. Hauber expressed great satisfaction with the training as she also received instruction in the use of temporary immersion technique, which was previously unknown to her.

In collaboration with the CARICOM initiative, consultations were held in The Bahamas to discuss the regional harmonization of the Biotechnology Policy and Strategy document. The consultation involved a cross section of stakeholders, who discussed the importance of improved technologies for the sector. The participants represented public and private sector, academia and NGO's. Among the major issues highlighted by the participants were the need for human resource development, infrastructure and clear policy framework. The range of Biotechnology applications in agriculture and other areas and its contribution to the better understanding of genomic functions was also mentioned. The consultation was moderated by MAMR staff and presentations done by representatives and chairman of the CARICOM Biotechnology Working Group.



Participants to the regional harmonization consultation on the Biotechnology Policy and Strategy document.

#### **RESULTS OF INTER-AGENCY COOPERATION**

The poster competition has fostered linkages with sponsoring agencies: Green Systems Ltd., BCLL and BFS, advocating linkages with the youth to encourage agriculture education. There were also other private individuals, who continued to mentor young professional to focus on agribusiness opportunities. IICA's cooperation with the various agencies resulted in the effective implementation of a number of activities of the national technical agenda. This collaboration with agencies of common interest facilitated capacity building, and extended technologies to schools, producer groups and technicians.

In cooperation with FAO, NGOs, MAMR, IICA-CARDI a major seed production and distribution project was implemented. IICA, in collaboration with FAO, undertook a rapid multiplication, distribution and capacity building program to accelerate the access of healthy planting material of sweetpotato and cassava to the Family Islands. FAO funded this root crop clean seed production and capacity building for the nursery managers in The Bahamas. This activity was within the framework of the Initiative for Soaring Food Prices and based on the request made by MAMR to provide clean root crops (cassava, sweetpotato) planting material to producers in the different Family Islands. The sweetpotato varieties multiplied in the system were tested and recommended from the GRAC. These have been through several cycles of testing and were selected based on yield performance and stability.



Sweetpotato & cassava multiplication at GRAC and sweetpotato at BASH & training at Abaco.

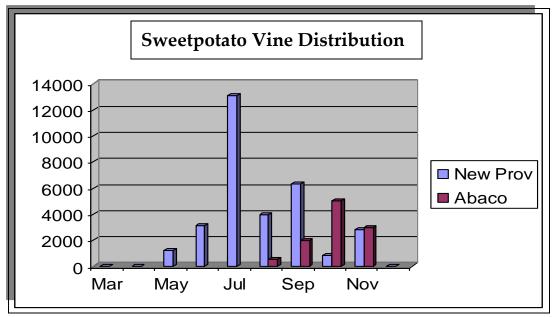


Figure 3. Sweetpotato cutting distributed from nurseries in New Providence & Abaco to producers and different Family Islands.





Seedbed preparation at BASH for Sweetpotato and cassava rapid multiplication.

On the Island of Great Exuma, the hotels, Exuma Chamber of Commerce and farmers have united under an umbrella "The Taste of Exuma Food Festival" to promote agro-tourism linkages. The IICA Bahamas office has encouraged this cluster along with assistance from Ena Harvey (IICA Hemispheric Specialist in Agro-tourism, Barbados) and Rosemary Parkinson (Culinary Expert). On Thursday December 3, 2009 the Hotels' retreat was hosted by BHA at the Wyndham Nassau Resort and awards have been given to the Exuma Hotels in the STEMM network for their actions in agro-tourism. The task force that has been formed from this cluster has had various meeting and has formed their strategic plan – we look forward to continue collaboration to see the realization of these efforts.



Listed from left to right: Dr. Marikis Alvarez (IICA Bahamas Representative), R. Danielle Knowles (Consultant BHA/STEMM), Robert "Sandy" Sands (BHA President), Kizzy Curtis (Grand Isle), Kinglsey Holbert (Palm Bay), Anthony Collie (February Point), Nesbitt Ferguson (The Palms at Three Sisters), Monique Morley (Club Peace and Plenty), Rufus Gray (Mt. Pleasant Resort), Keva Campbell (Marshall's Guest House), Charity Armbrister (Ministry of Tourism-Exuma), Ian Ferguson(BHA/STEMM - Moderator) and Peter Oxley (Coral Gardens) - not present in photo. Photo courtesy of BHA/STEMM.

#### RESULTS OF HORIZONTAL TECHNICAL COOPERATION

Horizontal technical cooperation had a role in facilitating progress in key areas, namely the transfer of lessons learned from adapting greenhouse structural technologies adapted to the tropical heat. The cooperation has facilitated the access of this technology to the Bahamas. The other critical area in which this cooperation has assisted was for capacity building in market information technology. The Bahamas has joined the Market Information Network of the Americas, from which it will benefit from the experience of other Caribbean countries that have joined and adapted.

#### NEW OPPORTUNITIES FOR TECHNICAL COOPERATION

As the efforts to recover from the current crisis go forward, The Bahamas has launched new policies to adapt to global trends. It will take a number of years to fully implement and for the agriculture sector to capitalize on these measures. The initiative to do a rapid assessment of the sector and streamline priorities will help to build the foundation for a sustainable sector over the long run. This was an important first step for revitalizing agriculture and to strengthen food security.

In view of the phasing in of the European Partnership Agreement (EPA) and other regional programs, new opportunities have opened for the sector. These opportunities provide an incentive to review competitiveness strategy for agriculture and to realize its potential to increase its contribution to the economy. The Bahamas can accelerate its access to technical support for applied research results in its new priorities related to specific technologies. Among these, are value-adding in a range of products, market information systems, value chain consolidation and matters related to enabling environment. These will be reviewed during 2010, as new areas and further refined for future networking and technical cooperation.



#### ISLAND PROFILE - ANDROS

Andros, affectionately called the "Big Yard" and the "Game-fishing Capital of the World", is the largest island in The Bahamas' chain of islands. Most Androsians view the island as three separate islands because of the creek system that runs through the island. The island is actually the fifth largest island in the Caribbean and Andros is home to the second-largest reef in the Western Hemisphere.

Andros has been targeted as the "Breadbasket of The Bahamas". Quite a lot of attention has been placed on the island for vegetable production and even talks of housing the "Agriculture College" there. Whichever way it is looked at, there is great potential for Agriculture production on the island.



#### STATISTICAL FACTS ON ANDROS

STATISTICAL FACTS ON ANDROS				
Population	7,686			
(2000)				
Location	Approximately 25 miles			
	(40.3km) from New			
	Providence			
Size	2,300 square miles			
	(5,957 square kms)			
Climate	Sub-tropical			
Soil	Oolitic Limestone, pH			
	range 7.5			

Source: Department of Agriculture, Basic Agricultural Facts (1990)

#### **Agriculture History Notes of Andros:**

Late 19th Century	Loyalists and their slaves also settled in Andros. Cotton and sisal were grown and later sponging became a flourishing industry.
1928	Mr. I. Deveaux, a part of the "West Indian Seven" was assigned to Andros as a technical agriculture officer from Jamaica.
1950/53	Colonial Development Corporation (British Government Agency)
1958	Franklin Farms Ltd., Mastic Point, Andros (growing strawberries, tomatoes, and papaya for export).
1958	The Andros Island Growers, Mastic Point, Andros (growing cucumbers, tomatoes, cantaloupe, and sweet peppers for export)

Source: Agriculture in The Bahamas, Historical Development 1492-1992 by Wm J. Godfrey Eneas (1998)

Currently, the island produces a wide variety of crops: onions, tomatoes, herbs, hot peppers, sweet peppers, cucumbers and livestock: cows, pigs, goats and sheep. Many farmers have mixed farms and much of the produce is sold directly and some to the packing house.

Andros is also famous for its handicraft industry and boasts of the following handicraft associations: North Andros Handicraft and Manufacturers Association (NAHAMA), Red Bays Handicraft Association, Central Andros Handicraft Association, South Andros Handicraft Manufacturers Association (SAHMA) and SAHMA – Mangrove Cay Branch. The island is famous for the Red Bays straw weave, straw, coconut and shell craft and the Androsia fabric.



#### MAIN ACTIVITIES ORGANIZED BY IICA

Table 1 - Main Activities: Workshops and Events 2009:

Workshop/Event:	Facilitator:	Date:	# of	Location:
			Participants:	
Agro-Tourism Presentation	Mrs. Ena Harvey	January 29, 2009	46 persons	IDB Training Room
National	MAMR, BAIC, IICA,	February 26-	10, 000+	GRAC fair site
Agricultural Expo	BAPA	28, 2009	persons	
Biotechnology	Dr. Wendy	April 7-9, 2009	15 persons	Finn Damtoft
Consultation	Hollingsworth			Agricultural
				Library
Value-Chain	Mr. Robert Reid	May 14, 2009	37 persons	IDB Training Room
Presentation				
National	Dr. Marikis Alvarez	May 22, 2009	21 persons	Finn Damtoft
Accountability				Agricultural
Seminar				Library
Abaco Neem GAP's	Carol Thomas	August 7, 2009	7 persons	Marsh Harbour,
Assessment				Abaco
PVS/CVS	Carol Thomas	August 10-14,	14 persons	Finn Damtoft
		2009		Agricultural
				Library
Agriculture Think	BAFY/BNYC/"We	August 27,	13 persons	Finn Damtoft
Tank #1	are the Future"	2009		Agricultural
				Library
Agriculture Think	BAFY/BNYC	September 24,	12 persons	Finn Damtoft
Tank #2		2009		Agricultural
				Library
Agriculture	BAFY/BNYC	October	11	Finn Damtoft
Think Tank		22, 2009	persons	Agricultural
#3				Library
Agriculture Think	BAFY/BNYC/BCLL	December 9,	4 persons	BCLL Training
Tank #4		2009		Room
Agro-tourism	BAPA – Ena Harvey,	September 10,	70 persons	Choices
Roundtable	Robert Sands, Don	2009		Restaurant, CHMI
(sponsored by	Major, Chef Keshlah			(COB)
BAPA)	Smith, Rosemary			
N. C. G.	Parkinson	0.11.20	F 000 :	II 't D I
National Craft	BAIC, BNCA, IICA	October 28 –	5,000 +	Heritage Park,
Week		November 1,	persons	Arawak Cay
Riotochnology:	R Inefield A	2009	20 Persons	IDR Training Page
Biotechnology Consultation	B. Joefield, A.	December 16, 2009	20 Persons	IDB Training Room
	Thomas, Dr. C. Roberts, Dr. M.	2009		
(CARICOM/IICA)	•			
	Alvarez			1

#### LIST PUBLICATIONS

The IICA Bahamas Newsletters are available on the website:

http://www.iica.int/Eng/regiones/caribe/bahamas/Pages/default.aspx.

#### **TEAM HIGHLIGHTS 2009**



Ena Harvey speaking on Agro-tourism in January 2009.



Abaco Neem at the Agriculture Expo 2009, February 25 – 27.



Listening in to Dr. Isaacs at the Agriculture Think Tank.



Participants at the Agro-tourism Roundtable (sponsored by BAPA) – September 10, 2009.

#### LIST OF ABBREVIATIONS

**BAFY** Bahamas Agricultural Forum for Youth

**BAIC Bahamas Agricultural and Industrial Corporation** 

**BAPA** Bahamas Agriculture and Producers Association

BASH **Bahamas Association for Social Health** 

BCLL **Bahamas Cooperative League Limited** 

BFS **Bahamas Food Services** 

BHA **Bahamas Hotel Association** 

**Bahamas National Craft Association BNCA** 

**BNT Bahamas National Trust** 

**Bahamas National Youth Council BNYC** 

**CAFY** Caribbean Agriculture Forum for Youth

**CANROP** Caribbean Network of Rural and Women Producers

**CARDI** Caribbean Agricultural Research and Development Institute

**CARICOM** Caribbean Community

CATIE Centre for Tropical Agricultural Research

**CHMI Culinary and Hospitality Management Institute** 

COB College of the Bahamas

**CWA** Caribbean Week of Agriculture

**EPA Economic Partnership Agreement** 

**FAO** Food and Agricultural Organization

**GAP Good Agricultural Practices**  GRAC Gladstone Road Agricultural Research Station

IICA Inter-American Institute for Cooperation on Agriculture

IDB Inter American Development Bank

M Million

MAMR Ministry Of Agriculture and Marine Resources

MIF Multilateral Investment Fund

MIOA Market Information Organization of the America's

M.P. Minister of Parliament

NAFCO North Abaco Fisheries Cooperative Society

NAHAMA North Andros Handicraft and Manufacturers Association

NGO Non-Government Organization

OAS Organization of American States

PAHO/WHO Pan American Health Organization/World Health Organization

PVS Performance, Vision and Strategy

SAHMA South Andros Handicraft Manufacturers Association

SPS Sanitary and Phyto-sanitary

STDF Standard and Trade Facility

STEMM Sustainable Tourism Entrepreneurial Management & Marketing

**Project** 

USA United States of America

WTO World Trade Organization

## Inter-American Institute for Cooperation on Agriculture

#### Vision

To be the leading agricultural institution in the Americas and the partner of choice by virtue of the quality of the technical cooperation it provides in response to the needs of Member States, and its contributions to sustainable agricultural development, food security and prosperity.

#### Mission

IICA is the specialized agency for agriculture and the rural milieu of the Inter-American System, whose purpose is to provide innovative technical cooperation to the Member States, with a view to achieving their sustainable development in aid of the peoples of the Americas.

#### **IICA Bahamas Team**



Astrid Cleare (Local Professional), Danette Malcolm (Secretary), Anthony Plakaris (Driver/Office Assistant) & Dr. Marikis Alvarez (Representative).

Thank you from our team to yours.



Photos: IICA Bahamas Team, Dahalia Smith, BHA/STEMM