

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

Inter-American Institute for Cooperation on Agriculture

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



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FOREWORD by the Representative



Dr. M. N. Alvarez, Representative

It is with great pleasure that I present our 2008 Annual report on behalf of the team at the Inter-American Institute for Cooperation on Agriculture (IICA)-Bahamas office. The report entitled " IICA's Contribution to the Development of Agriculture and Rural Communities in the Bahamas" presents the outcome of close cooperation with the Ministry of Agriculture and Marine Resources (MAMR) and many other partners in the Bahamas.

IICA continues to serve as a development agency to its thirty-four member states in the northern hemisphere. During 2008, there were dramatic global events that had major impact on the agriculture sector in our region. The jump in energy cost and increase in food prices along with the global financial crisis had significant impact on many communities, agri-businesses and the economy in general.

To respond to these shifts, the government announced several interventions to alleviate the critical food security situation and to improve support to the sector. Similarly, IICA convened several high level meetings and study tours to technology generating centres in order to provide an orientation to readily available agricultural technologies and innovations. Policy makers from MAMR and the private sector through the Bahamas Agricultural & Industrial Corporation (BAIC) participated. The visits and meetings resulted in the identification of key priority areas for technical cooperation. In addition, IICA will continue to assist in the design of appropriate policies and strategies, offer training of youth and promoting the modernization and expansion of agricultural services for competitiveness and strengthening food security.

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; partners in the Diplomatic and Councilor Corp Community and the private sector groups through Bahamas Agricultural Producers Association (BAPA) played a significant role in the implementation of the technical cooperation agenda.

The Institute also acknowledges the efforts and contribution of all producers, especially BAIC, the Cooperative Societies and other stakeholders in the tourism sector such as STEMM/BHA, 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 2009.

INTRODUCTION

The economic growth for the Bahamas slowed during 2008. The projected GDP growth for 2008 and 2009 was initially set for three and four percent respectively, but has since been revised to 1.1 and 1%. Tourism, which accounts for more than 60 percent of GDP and employs over 50 percent of the labor force, was impacted by the decline in visitor arrivals. This 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 (short term and others long-term). Some of these interventions will impact positively on the small farmers in the country. Among the major policy adjustments within MAMR was the consolidation of the major stakeholders in the sector under this Ministry – BIAC, and the Department of Cooperative Societies (DCS). Another significant intervention, led by MAMR was the launch of the "backyard gardening program" as one of the steps towards greater food security. The aim is to foster greater participation by individuals in the production of food.

MAMR has intensified its activities at the Gladstone Road Agricultural Centre (GRAC) in order to generate/validate technologies for producers. At the same time, the Ministry, through BAIC has been active in effective consultation to foster stakeholder involvement and commitment to the sector. It informs producers and potential farmers of incentive schemes for land and technological access for farming. In addition there has been a launch of agricultural field services in Andros. This program makes tractors available to be used for land preparation for farmers. Promotion of the greenhouse technology to the Family Islands has also been generating much interest.

Through this linkage with many stakeholders, IICA was able to implement the technical cooperation agenda. The institute continues its efforts to strengthen agri-business, agrotourism 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

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

 High level authorities from the MAMR and from the BAIC visited IICA's Head Quarters in Costa Rica, where they exchanged their experiences and visited technology generating sites of interest.

Promotion of Trade and Competitiveness of Agribusiness

• Agro-Tourism Linkage Project being implemented by BAPA with technical support from IICA, completed an assessment of the state-of-the-art of farming practices in the country, provided Good Agricultural Practices' Training for New Providence and Family Island Farmers, as well as project planning workshops with producers and hoteliers.

Promoting Agricultural Health and Food Safety Systems

 SPS meetings/ Codex/ Common Vision and Mission/ OIE were attended by public and private sector technicians that allowed them to identify and agree on priority actions.

Promoting the Sustainable Management of Natural Resources and the Environment

By providing technical support from IICA, a bankable proposal for fish processing plant developed by North Abaco Fishing Cooperative for funding consideration by IDB. To encourage more youth participation in the agriculture sector, IICA participated in: SURE Program Career Planning, Work Study High School program, Career Days for Schools, COB Career Day.

Introducing Technology and Innovation for the Modernization of Agriculture and Rural Life

- Trainings done on screen house technology and hydroponics (for farmers and teachers).
- Rapid Multiplication training done on Family Island and New Providence.
- A Tissue Culture facility has been established by the private sector at Lucayan Tropical.

Strengthening Rural Communities based on the Territorial Approach

- BNCA joined CANROP (participated in CWA 2008).
- BAFY small group started to join CAFY.
- Two, One-day Workshops in Backyard farming, in conjunction with Bahamas Cooperative league and facilitated by (MAMR).

THE STATE OF AGRICULTURE AND RURAL LIFE IN THE BAHAMAS IN 2008

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 (pine islands). Other Family Islands such as Eleuthera, Long Island, Cat Island and an additional four islands - Acklins, Mayaguana, Inagua and San Salvador are smaller contributors to the sector (coppice islands). Almost all of the major agricultural production takes place on the Family Islands. The major producer of greenhouse tomatoes, peppers and lettuce operates on New Providence.

In successive agricultural census for the past 30 years, they have shown a continuous decline in the number of farms and farmers. For this reason, agriculture continues to be a small part of the economy, representing less than 3%. The records show that there has been a decline in the number of farmers in the Bahamas from 36,246 ha in 1978 to 20,336 in 1994 and in 2000 it was estimated that those in production are just at 10% capacity. Those producing have less than 10 acres of farmland and the average age was approximately 59 years old.

The government has decided to revitalize the sector and has put a number of incentives and programs in place to generate interest among farmers and other potential investors in the sector. The high potential in the Family Islands for agri-business, such as Andros and Abaco, is getting special attention from BAIC for land allocation to interested farmers. A part of IICA's contribution to this process was to host the visit of the decision makers to Costa Rica to participate in the Leadership Training Forum and to get an orientation to available, appropriate technologies for the Bahamas.



BAIC's vist to Costa Rica, September 2008

b. Changes in Agrifood Production

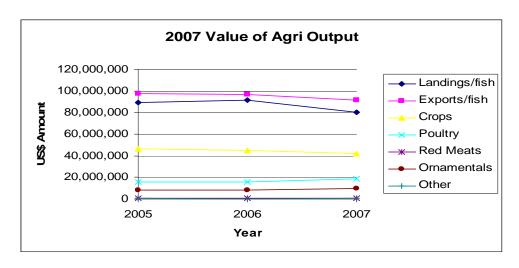
The performance of the sector over the last three years (2005-2007) showed a slight decline in output for the major sub sectors of fish and crops, while the other sub sectors of poultry, red meats and ornamentals showed a slight upward trend (Table 1). This figure showed that while the value of exports for marine products and crops (mainly citrus) declined, the value of products for internal consumption increased.

The major portion of the sector's domestic export is marine products. The overall marine products export value in 2007 was \$91.9M, a drop of \$5.3M from 2006. The value of crop exports also declined to \$42M, down from almost \$45m in the previous year (Figure 1).

Table 1. Value of Agricultural Output 2005-2007 (\$Bs)

| Agricultural | | | |
|---------------|-------------|-------------|-------------|
| <u>Output</u> | <u>2005</u> | <u>2006</u> | <u>2007</u> |
| Landings/fish | 89,436,055 | 91,134,563 | 80,167,483 |
| Exports/fish | 97,620,202 | 96,477,301 | 91,174,892 |
| Crops | 46,215,600 | 44,960,930 | 42,006,420 |
| Poultry | 16,031,280 | 16,002,830 | 18,765,780 |
| Red Meats | 928,450 | 918,620 | 1,008,710 |
| Ornamentals | 8,000,000 | 8,000,000 | 9,711,460 |
| Other | 432,160 | 356,430 | 520,870 |

Figure 1. Trend of value of agricultural and marine products output 2005-07



c. Changes in Policies that Affect Agriculture and Rural Life

One of the major policies in place that is moving to develop the Family Islands, is known as the Family Island Development Encouragement Act. Within this framework, there is a duty-free and excise-free tax on the import of any machinery that clears land for farming or construction.

The consolidated Ministry also has responsibilities for agricultural marketing, horticulture, quality control of food and beverages, Potters Cay Dock (an outlet for vending agricultural products and fish), public markets, Down Home Fish Fry (a group of restaurants selling traditional foods), the slaughter house, agricultural lands, craft markets, cooperatives, credit unions, development of handicraft, agro-industry, manufacturing, and small business development. Commensurate with this consolidation is the intensification of activities in support of national agriculture and rural life.

The implementation of bold policy incentives has positioned the Bahamas for a spur in production in the coming years. One of the immediate impacts of this policy shift is an increase in the number of farmers and entrepreneurs on the Family Islands to participate in revitalizing the sector.

d. Changes in the Institutional Framework for Agriculture and Rural Life

MAMR restructured with the aim of invigorating the technology generating section and improving its services to agri-business initiatives in the Family Islands. DCS has joined BAIC to be under the same Ministry (moved from the Ministry of Lands & Local Government) and Forestry has shifted to the Ministry of the Environment. The consolidation of these departments/services to the same Ministry has shifted emphasis from purely production to its strategic role in the social context and management of technology generation/validation and outreach.

The Ministry also changed both the position of the Permanent Secretary and the Under Secretary. While these changes are an important step towards improving governance, there is still a need to identify specific priorities for technology generation/validation for the agrifood system and agro-ecologies of the Bahamas.

e. Major Development in the Thematic Areas that Affected the Performance of Agriculture and the Rural Life

There is now a greater assortment of crops in production for the local market. The main crops are tomatoes and green peppers, which have increased in production on Andros. This is due to a significant change in production and market arrangements, catalyzed by MAMR through BAIC. One of the successful greenhouse producers, Lucayan Tropical, has developed a market channel for fresh vegetables in the Bahamas. For this reason, the company has established a collaborative relationship with the producers and provides seedlings of tomatoes and green peppers to the farmers. The harvest is then bought back and enters the marketing channel.

This arrangement is assisting to merge the various stakeholders into a cluster of vegetable producers. A more comprehensive and integrated approach is still needed in order to increase cooperation between the cluster and its various partners. These arrangements are also instrumental in building trust and to facilitate the co-existence/partnership of a high technology greenhouse producer with a group of open field producers. The producers have formalized their cluster by registering as an association (North Andros Farmers Association), and are beginning to adapt or operate in accordance with established regulatory principles and hedging risks. In an effort to encourage and to minimize risk to the producers, BAIC provided refrigerated 40-foot containers to help them meet the shipping requirements for the fresh fruit and vegetable market.

RESULTS OF THE IMPLEMENTATION OF THE NATIONAL TECHNICAL COOPERATION AGENDA IN THE BAHAMAS DURING 2008

The technical cooperation agenda for 2008 was implemented with many partners and an increased level of participation among stakeholders. All strategic priority actions were addressed and results of training/workshops with various producer groups are having an impact. The results of the cooperation are shown below:

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

During the year, IICA's contribution to the repositioning of agriculture and rural life was highlighted by the existing situation of high food prices, a global food crisis. The activities carried out in this area were intended to help policy makers gain a greater awareness of the expanded role that agriculture can play in the economy. It was to help establish the importance of an integrated technical basis for production, marketing and distribution chain that will strengthen food security, and to help mitigate food production-related risks.

Within the framework of repositioning the sector, two high level delegations visited the Center for Leadership in Agriculture to attend the Leadership Forum at IICA head quarters. The leadership forum was attended by the Ministers of Agriculture from Antigua and Barbuda, Bahamas and Dominica and their delegations. Other attendees were the Deputy Director General, Directors of Operations for the Caribbean Region, Operations and Regional Integration, Office of the Ministerial Process, IICA Representative to ECS countries and other directors of the Institute. The Director General highlighted key challenges and new responsibilities for the Institute and Governments. These included: -Food Security, Agro-energy, Employment and Social equity.

The priority areas that were identified for greater collaboration with IICA were:

- 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 a Market Information System, and
- Review of sector policy with a view to mitigate risks (due to shocks).

The Hon. Minister and his delegation also participated as observers in the two-day Executive Committee meeting. They were able to see first-hand how the management of institutional affairs was conducted. After the meeting days, the minister and his delegation visited model facilities implementing the improved technologies of interest.

The second delegation consisted of the Executive Chairman of BAIC, the General Manager and the Assistant General Manager & Manager for Agriculture, along with representatives of the private sector. The Executive Chairman – Mr. Edison Key, M.P. and his delegation of both the public and private sector were able to visit centres of excellence for training in agriculture, had one-on-one discussion with the Director General and team members of the Centre for Leadership in Agriculture. In addition, the BAIC team was able to interact directly with the Costa Rica Chamber of Exporters and medium size enterprises in pineapple production for export and cassava production and processing for export.

The Executive Chairman also indicated that the partnership the corporation has with IICA has been beneficial and expects it to continue. He expressed great thanks to the Director General for the Institute's technical support to member states in view of the current world food situation. The main priority areas for collaboration that were identified during the trip were:

- Sourcing germplasm material for following crops: banana, plantain, cassava and pineapple,
- Assistance in capacity building in greenhouse technology,
- Feasibility study on the viability for a Bahamian timber industry,
- Training in rapid multiplication of root and tuber crops,
- Capacity building in improved pasture management for small ruminants,
- Strengthen national capacity in Agricultural health and food safety,
- Assistance in capacity building in handicraft industry,
- To initiate discussion with the Central American Livestock School (ECAG) for short-term training in light industry, and
- Support in the area of market information systems.

These priorities have been factored in for the 2009 priority actions.





Policy makers (Minister, PS & Director, Executive Chairman BAIC) visit to Costa Rica

This visit provided an opportunity for the decision makers to have a first hand experience of the support-technologies available that can be adapted in the Bahamas in response to strong growth in demand. Within the framework of these policy interventions, MAMR through BAIC was prepared to provide immediate assistance to make these technologies available in order to minimize financial stress to producers. IICA collaborates with these initiatives directly and through IICA-CARDI collaborative projects. Through this instrument, projects developed help to address identified priority areas such as clean seed production, and demonstration of improved pastures for small ruminant production.

The other important, far reaching effect of this orientation is an awareness of the greater role that agriculture can play in the economy and especially its potential if linked with the demand created by tourism. In an effort to cultivate this linkage, several activities were held in the form of round table discussions and group presentations to diverse stakeholders from agriculture and hotel industries.





Round table discussion with stakeholders, public & private sector represented in collaboration with Bahamas Chamber of Commerce

The Government of the Bahamas announced several interventions to revitalize the sector and also to respond to rise in food prices and strengthen food security. These new provisions (which were a sign of support for food) included the elimination of import duty on citrus fruits, frozen vegetables and cereals. The 2% stamp tax on 160 food items was also removed. These provisions in addition to the Family Island Development Encouragement Act are new and untested programs for producers. At this time it is not clear if this will be adequate incentive for producers. What the implications will have on strengthening the food safety net, or on the competitiveness of farmers in the long run will depend on the degree to which it stimulates investment in the agriculture sector and its linkages with the tourism sector.

Similarly, MAMR has put in place a number of interventions and enhanced existing programs to ensure a greater degree of food security and safety. The efforts have resulted in increased interest in the general public to produce more food. Among the popular programs launched was: the Backyard Farming. This program entailed workshops and a home garden kit that included seeds, planting medium, trays and other facilities to assist with home gardening. Other programs include Green-house technology promotion, plants supplied to encourage citrus production, and small ruminant embryo transfer to improve breeding herds. The other incentive program that reflects a strong policy objective includes assistance to farmers with the traditional support of land preparation. This assistance has now extended to cool storage transportation of fresh produce, which has helped to reduce input and marketing cost. This has been of great help to farmers, realizing that production inputs are rising rapidly. Another special program in which the Department of Agriculture participated was: the Caribbean Regional Special Program for Food Security, managed by FAO.





Plant distribution for the launch of MAMR's Backyard Farming Program





Class instruction and demonstration at the Backyard Farming Program

B. Promotion of Trade and Competitiveness of Agribusiness

Agro-business support activities have been an integral part of IICA's technical cooperation agenda. The major activities undertaken during this year in support of promoting trade and competitiveness of agribusiness can be grouped as those of capacity building of producer associations and cooperatives in partnering projects. The capacity building training workshops were aimed at assisting the various groups to better manage their businesses, group strengthening and orientation to good practices. The list of capacity building activities is included in the Main Activities Organized by IICA.

The project design and preparation workshop was a team effort with BAPA, Bahamas Cooperative League Limited (BCLL), STEMM/BHA, BAIC and COB. They all selected participants and also contributed resource persons to make presentations and shared experiences, which enriched the workshop training. The training was conducted and lead by the regional specialist, Mr. Kervin Stephenson. This training was well received and participants from organizations and cooperatives from the Family Islands said that the training will help to strengthen their organizations. The training helped them to understand the procedures and process to identify potential high risk areas for better management and to adopt good practices.





Project development training with Kervin Stephenson

Another activity undertaken for the strengthening of agri-business was the establishment of linkages between distributors and field producers. The North Andros Farmers Association was the first group of producers to deliver produce to a greenhouse tomato distributor, and the photo below shows the exchange of ideas and strategies in a field recently planted with seedlings from the buyer. The Minister of Agriculture and Marine Resources and the Executive Chairman for BAIC and the media were also present. This collaboration contributed greatly to secure the functioning of the internal produce market and it's provided lessons can help to safeguard the internal market.





Field visit of stakeholders to producer field and launch of tractor services in Andros

C. Strengthening Agricultural Health and Food Safety Systems

The Bahamas was the first to implement the Performance, Vision and Strategy (PVS) for sanitary and phyto-sanitary measures (SPS) in the region. The Common Vision Session was attended by all relevant stakeholders. It was supported by a full contingent of technical specialists from IICA, USDA, regional specialists and the AHFS Director. The two days of deliberation was very productive and the stakeholders arrived at a consensus on major challenges and priorities. Once the strategic vision was completed and the priorities identified, it was presented to policy makers, who were willing to provide support to the follow up steps.

The recent food safety events have highlighted the deficit in dealing with reliable scientific information upon which decisions can be made for public safety. This complex issue calls for an interdisciplinary approach, requiring greater cooperation among various agencies and departments. In addressing this IICA has been a major focal point in bringing the public and private stakeholders together to dialogue and promote a holistic approach.

The promotion of agricultural health and food safety resulted in several key national and regional training workshops with support from regional specialists and international partner FAO. The CODEX training in collaboration with FAO and PAHO was well attended. Similarly, more than a dozen producers from the different Family Islands participated in the Good Agricultural Practices (GAP's) training. Some of these participants will be leaders in the promotion of the greenhouse technology on the different Family Islands.



Participants to Common Vision Session



Participants receive certificate at end of to Codex training (FAO/IICA collaboration)

D. Promoting the Sustainable Management of Natural Resources and the Environment

Training workshops were held for the executive managers and the members of the North Abaco Fish Cooperative. The training workshop on project development design and management was attended by the president and the financial advisor of the cooperative. A follow up meeting and workshop was held in Abaco with the full membership and executive committee of the North Abaco Fish Cooperative. The meeting/workshop was moderated by the regional specialists for project development and for agri-business strengthening. The Representative for the Inter-American Development Bank and the project officer were also present. During this workshop, agreement was reached on the scope, objective and strategy for the expansion and strengthening of the cooperative.

The project proposal developed and presented for grant funding to IDB (submitted for consideration) is entitled, "Enhancing Sustainability of North Abaco Fisheries Cooperative".





Fish Cooperative meeting in Abaco



Fish Cooperative executive committee meeting in Abaco

Within the framework of sustainable management of natural resources, BAIC and the Ministry of the Environment solicited support from IICA to address the issue of the improved management of the pine forests in the Bahamas. In order to adequately deal with this request, the Director of Natural Resources and Environment, visited the Bahamas for a rapid assessment of the requirements for a feasibility study.

The natural forest of the Bahamas consists of *Pinus Caribea-bahemensis*, which performs a strategic service in the eco-system. It provides a watershed for the fresh available water, carbon sequestration and maintains soil biodiversity. It was suggested that the productivity of the forests can be enhanced if management practices were introduced. Project profiles have been developed for consideration by the Ministries and models of bye-laws/legislation for forest governance provided.





Review of forest state of the art in Andros and Abaco

E. Strengthening Rural Communities based on the Territorial Approach

IICA/BAIC/BNCA/CANROP

The IICA Bahamas Team has been networking with BAIC and The Bahamas National Craft Association (BNCA) within the last year to encourage agriculture and the handicraft industry in the Bahamas. The Handicraft Development/Marketing Department of BAIC was started in 1999 and is responsible to develop the handicraft industry in the Bahamas. They assist artisans and artists with producing and marketing of their handicrafts, gifts and souvenirs locally and internationally.

Aims and objectives:

- To foster the relationship between artisans and the environment, strengthen the network of artisans by encouraging the development of Handicraft Associations,
- Meet the needs of handicraft entrepreneurs who rely on art, crafts and souvenirs and gifts production as a primary source of income, and
- Encourage unemployed persons to become future entrepreneurs.

They have the following training programs (yearly and throughout the Bahama Islands): Straw, Shell, Coconut, Sisal, and Batik & Tie-dye.

BNCA was founded in 2006 as an umbrella association for the various handicraft associations throughout 15 Family Islands and New Providence. Some of the aims and objectives include: coordinating association activities, training, source funding and encourage marketing and sales of products.

During the 2007 National Craft Week, BahamArts was a visited by Ms. Christine Wilson (President of CANROP) who did a presentation on CANROP, paper making and was a booth judge at the Festival. By the end of the year, BNCA joined CANROP officially.





Photos from BahamArts October 25, 2007

In 2008, Mr. Albert Whyley (director in BNCA) was a participant at the CWA in St. Vincent & the Grenadines (October 6-11). He was able to share with the participants

there the organizational structure of BNCA in the Bahamas. As part of National Craft Week 2008, Mrs. A. Cleare shared information on IICA's role, IICA Miami office, CANROP and Agro-tourism at the 3rd Annual BNCA AGM (October 29-30). After the presentation the floor was opened for questions, ideas and comments:

- There was a request made for the planting guide for fruits and vegetables for the Bahamas,
- Develop the South Andros "Coppit" tour where tourists will have a chance to travel to where the palm is harvested and have a chance to purchase products made from the straw,
- Develop more Bahamian tea and various products like a tea bath, and several other products were discussed as possible additions for the Spa experience,
- In Inagua there is an old Sisal Plantation that should be developed into a historic site where the oral history of the area can be related and a book written,
- The public needs to be educated to the importance of the silver-top palm (preserve sites and propagate more tissue culture), and
- In Bimini there is a sulphur pool that can be developed into a community tourism site where even the rocks from the area could be sold as a product.

At the end of the day, the group was taken on a field trip to visit to the Clifton site. On 208 acres of land, the Clifton Heritage National Park preserves what is left of several Loyalist plantations from the 18th and 19th centuries. They are marrying the Lucayan, African and Loyalist cultures and are interested in souvenir and handicraft products that will reflect these and the present Bahamian culture.

Looking toward working together for 2009, BAIC Handicraft Department and BNCA are very interested in: packaging and marketing to get their products into the U.S. Market, funding to attend tradeshows, looking at ways to preserve the palm and its local habitat, adding a Woodturning class to their list of training programs, and participation in CWA and BahamArts.





Photos from BahamArts October 31, 2008

F. Introducing Technology and Innovation for the Modernization of Agriculture and Rural Life

The importance of innovation and its acceptance by producers and actors along the value chain is critical for competitiveness. To foster the selection, introduction and adaptation of new technologies to the agriculture sector in the Bahamas, policy makers visited technology generating facilities to seek out existing technologies that can be transferred. Transferring proven technologies can generate rapid results. Some of the technologies that were selected as priority for transfer were: -Greenhouse technology, Backyard gardening, improved crop and pasture varieties, and improved breeds of small ruminants (goat and sheep).





Viewing technologies for backyard gardening and intermediate level greenhouse tech

This is a case where national policy makers partnering with IICA for the identification of appropriate technologies are having positive results. In a recent budget remark, there was indication that a higher level of public allocation for technology transfer will be made. IICA's regional specialist along with a greenhouse professional from Jamaica also visited the Bahamas and delivered a series of training workshops on greenhouse technologies in New Providence and 3 Family Islands (Andros, Abaco and Grand Bahama). Subsequently, private investors have followed up and made their own visit to Jamaica to learn more about the technology.



Support team of regional specialists dealing with greenhouse

And project development issues in the Bahamas





Field tour to farmer's field and high-tech greenhouse of participants to Gap's training

The restructuring of the department is also reflecting a change in favor of agricultural technologies. During the orientation visit of the policy makers, they were pleased with the openness and willingness of the technology generating institutes to share. There is no doubt that as the momentum of interest to enter the sector increases, so also will be the need for rapid access to technologies to face the existing challenges.

The Bahamas' first plant tissue culture/micro propagation lab was established in the summer of 2008 by Dr. Selima Hauber. Dr. Hauber used the technology to conduct her Master and Doctoral research projects and recognized the need for a commercial lab in the Bahamas.

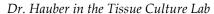
The laboratory's focus is three-fold:

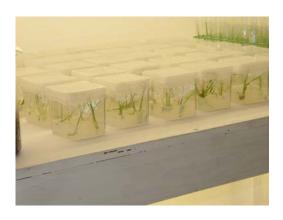
- 1) To provide tropical ornamental plants for interior and landscape projects,
- 2) To provide native species of coastal and inland habitats for landscaping projects, and

3) To provide tropical fruit and vegetable crops for establishment of large-scale farms and orchards.

The establishment of the lab will bode well for the advancement of the horticultural industry in the Bahamas.







Sea Oats in the Lab

Results of Inter-Agency Cooperation

Inter-agency cooperation has resulted in accelerating the process of strengthening the capacity of the national system to satisfy or address their needs. Strong cooperation exists between IICA and the various agencies with which we collaborate. This has allowed IICA to engage and implement the national technical agenda through a wide range of collaborative activities. This collaboration has also facilitated the building of capacity, and extending technologies to schools, producer groups and national technicians.





Past president of CABA handing over to new president and the new executive committee

The BAPA was represented at the last CABA meeting at the time of the passing over of

the past administration to the new. The lessons learned were the importance of support through internal-external coalitions among various producer groups and the need to continue to promote public-private partnerships.

Through cooperation between IICA-CARDI, the Bahamas office was able to address to strategic priorities identified by MAMR. The two priorities were the accelerated multiplication of root crops (sweetpotato and cassava) and the demonstration of improved pastures for small ruminants. The multiplication of healthy planting material had an impact on local capacity. Nursery producers were trained on Cat Island, Abaco and New Providence (where representatives from Exuma participated). With support from FAO and in-kind contribution from the Ministry, an expansion program has started.

Through cooperation with IDB, a project was funded for BAPA, which has enabled the access of technical experts for a number of capacity building training workshops as well as to bring in specialist from university outreach/extension division. One such specialist for turf-grass production was brought in for diagnostic work in Abaco. A training workshop was also held with interested members of the Abaco Agricultural Cooperative Society.



Birthplace of inter-agency collaboration

Results of Horizontal Technical Cooperation

Through horizontal technical cooperation, there has been a significant expansion of the visible scope of IICA's comparative advantages. The national partners have a clearer concept about the wide range of collaborative activities that IICA can engage in. Through its horizontal network, the institute can facilitate access to specific technologies that satisfy a local need and providing training workshops for capacity building have been facilitated through horizontal cooperation.

Some of the areas that were strengthened in the Bahamas through horizontal cooperation are as follows:

- o Support to the agro-tourism project initiative from the regional office has provided impetus to the Bahamas initiative through BAPA,
- o Through this cooperation there will be support to the Bahamas Home Garden Initiative with technical support from Haiti's experience, and
- Strengthen the market information capacity. The process of getting an official decision to join the Market Information Organization of the America's network (MIOA) has been lengthy but it is now recognized as a felt need. Technical support from MIOA unit was provided during the year.

New Opportunities for Technical Cooperation

Agricultural Library attracts more patrons:

The Finn H. Damtoft Agricultural Library was established in 2001 and named in honour of Mr. Finn Hjortmar Damtoft, the Representative who opened the IICA Bahamas office in 1998. He is from Canada and has a Ph.D. in Agronomy. The library is managed in conjunction with MAMR and also links with regional and international data banks (e.g. SIDLAC, Agricola). Mrs. Deborah Abang-Ntuen (biography below) manages the Library on Wednesdays and Fridays to assist with information dissemination, since 2002. The Library is also under the ICP of the team's local professional.

Mrs. Deborah Abang-Ntuen – Senior Agriculture Superintendent

Mrs. Deborah Abang-Ntuen (nee Darling) is a graduate of the College of the Bahamas, where she completed her BA degree in Business Administration with specialty in Computer Information Systems and her AA degree in Agriculture with Biology. She is a graduate of Bahamas Academy Secondary School. Mrs. Abang-Ntuen is employed at MAMR and has worked at GRAC (as a Food Inspector, Microbiology Lab Technician and in Food Processing), Produce Exchange, and the main office at Levy Building, East Bay Street (Agriculture Extension/Information).

Renovation Project

The Library renovation project started with the idea to reach more people and become a more functional, user-friendly area. The following improvements were made (by request) to the Library using the Special Budget for Office Improvement in Technological Infrastructure and Internal Remodeling:

- Rearrange the space allocated to the Library to shift the bookshelves and create space for seminars, workshops and meetings. The Library measures 36'X19' and was 80% occupied by 6 huge shelves that were less than 60% filled with books and publications,
- The improvement will involve re-arranging the shelves along the walls and recovering the open floor space with carpet. The spots on the wall were repainted with the same white wall colour,
- This rearrangement opened a space of 30'X13' that is being used as a multipurpose conference area for lectures, seminars, and workshops. It was outfitted with a seating capacity for 20 persons, and

 The Library facility also needed to be equipped with a computer, DVD, podium, projector screen, camcorder and digital camera.

The Library will be the focal point for the database that will contain information for market intelligence, list of producers from the Family Islands and backstopping support to the cluster groups in the Family Islands. The upgrade at the Library has facilitated a larger number of training activities, reducing room rental costs. Rental costs are up to \$300.00 per event without equipment costs. Internalizing the capacity to host activities increases the awareness of the offices activities. The Library is now meeting more of the demand for information and technology training since the IDB funded Agro-tourism project began.

The Library before:









The Library After:







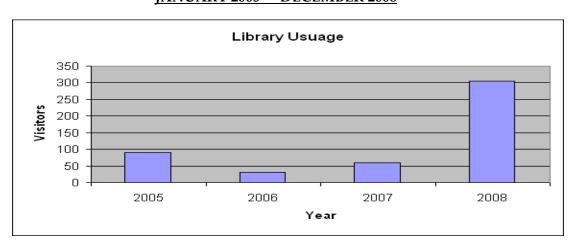


Library usage:

In 2005 there were ninety visitors with the figure dropping dramatically in 2006 and increasing slightly in 2007. The drop was due to the renovation of the library. However, in 2008 the figure increased dramatically to 305 for the year. This great increase of visitors was due to school visits, seminars and workshop held at the Library.

Table 1:

JANUARY 2005 - DECEMBER 2008



2008:

- On-line course in Information Management systems, first course completed,
- Various trainings and meetings with stakeholders: Codex, OIE, GAP's,
- An increased use of materials from the general public for research projects (schools) and farmer research in new technology information,
- The Finn Damtoft Agricultural Library has been accepted into the Ministry of Education's library system. The area has been visited by Ms. Dorcas Bowler, Head Librarian, National Library and Information Services (www.bahlibs.org). In this system the library will have access to training programs and the library Cadet Program (where a student librarian will be sent to assist with the library),
- The library services were advertised using a "grass-roots" approach at trainings, on talk shows and at various presentations, and
- One school tour was conducted for the SURE program where Careers in Agriculture was addressed.

Future outlook:

- Workshops and trainings
- School tours
- Library system organization, training and library cadet
- "Grass-roots" PR program

Main Activities Organized by IICA: Workshops and Events 2008

| Workshop/Event | Facilitator | Date | # of Participants | Location |
|---|--|------------------|----------------------|---|
| IDB/BAPA Project Launch | IDB/IICA/BAPA | February 11 | 15, estimated | Nassau, Bahamas |
| Rapid assessment | BAPA/LaMonica Glinton | February/June | - | Bahamas |
| Turfgrass Management | Dr. David Han | June 16-18, 2008 | 15, estimated | Marsh Harbour, Abaco |
| Codex training workshop | | June 18-19 | 15 | Nassau, Bahamas |
| "Gone to da Market" day, | IICA/Island Flare | June 27 | 6 | NPCC Farmer's Market, Nassau, Bahamas |
| GAP's Training | Carol Thomas/Everton Ambrose | July 2-4 | 16 | Nassau, Bahamas |
| Goodfellow Farms Tour | Mr. Ian Goodfellow | July 5 | 20, estimated | Nassau, Bahamas |
| Roundtable on Agriculture & Food Security | The Bahamas Chamber of Commerce / IICA | July 9 | 13 | Nassau, Bahamas |
| Common Vision Session | Dr. Ricardo Molins, Carol Thomas, Ana Marisa Cordero, Evelyn Alexander (USDA) | August 6 | 31 | Nassau, Bahamas |
| Planning | Kervin | 26-28August, | 31 | Nassau, |
| Workshop | Stephenson | 2008 | 16 | Bahamas |
| The OIE Normative | On-line Course with | September 30 | 16 | Nassau, Bahamas |

| Process and | Dr. Ricardo | | | |
|----------------|------------------|-----------------|-----------|--------------|
| You Session | Molins' | | | |
| | Team | | | |
| Greenhouse | Derrick Smith, | December | 34 | Nassau, |
| Workshop | Robert Reid, | | | Bahamas |
| | Kervin | | | |
| | Stephenson | | | |
| | | | 48 | Grand Bahama |
| | | | 25, | Andros |
| | | | estimated | |
| Forestry | Gustavo Bejarano | Thursday, | 7 | Nassau, |
| Presentation | | December 11, | | Bahamas with |
| | | 2008 | | visits to |
| | | | | Andros and |
| | | | | Grand Bahama |
| MIOA | Frank Lam | December 3, | 6 | Nassau, |
| Presentation | | 2008 | | Bahamas |
| Rapid | Dr. Alvarez | December 15-16, | 17 | Nassau, |
| Multiplication | | 2008 | | Bahamas |
| Workshop | | | | |

- o Program SURE visit to Library (career planning) April 11
- o Micro-finance workshop roundtable May 15
- CARDI Regional workshop for sweetpotato production "Formulation of Regional Sweetpotato Work Program" that was held in St. Vincent and the Grenadines, March 21-28, 2008
- The Bahamas Chamber of Commerce, U.S. Embassy and The Bahamas Development Bank Business Education and Development Seminar (May 27, 2008)
- Young Leaders in the 21st Century is an IICA initiative to further develop young leaders of sustainable agricultural development in the Americas.
 Regional youth leaders participated in a one-week international seminar at the IICA Headquarters in Costa Rica from March 23 to 30th, 2008
- o BCLL 2008 Cooperative Forum and AGM (May 30-June 1)
- o OAS & Ministry of Foreign Affairs Workshop on: "The Logical Framework Approach for Project Design" (June 3-5, 2008)

- The BCLL Backyard Gardening workshop was held on June 28, 2008 & September 27
- Delegations from Antigua and Barbuda, Bahamas and Dominica took part in the Forum for Leaders held 21 July at the Headquarters of IICA, located in Costa Rica.
- Bio-Energy Workshop July 23(office visited by Una May Gordon and Carlos Echeverria)
- o Agriculture Teacher's Workshop August 20
- o The BAIC Group visit Costa Rica September 2008
- o Office anniversary October
- o CWA St. Vincent & the Grenadines
- October 15-16, 2008 at the Wyndham Cable Beach, the National Co-operative Congress took place under the theme: "Fostering Partnership for Economic Development"
- o STEMM Trade Show October 3
- o IICA Representative's Week October 23
- o BNCA AGM & BahamArts October 31 November 2, National Craft Week 2008
- o C.O.B. Career Fair November 6

List Publications

The IICA Bahamas Newsletters are available on the website: http://www.iica.int/Eng/regiones/caribe/bahamas/Pages/default.aspx.

Team Highlights 2008: *In Memory of Ms. M. Johnson, GHS – R.I.P. February* 2009



Team visit to Government High School



Visit from Una May Gordon



Team visit to H.O. Nash Junior High School



Visit from Mr. Carlos Echeverria



Mr. Derrick Smith visiting Mr. Budhu at NAHS



Greenhouse/Screen house Workshop Session

LIST OF ABBREVIATIONS

BAFY Bahamas Agricultural Forum for Youth

BAIC Bahamas Agricultural and Industrial Corporation

BAPA Bahamas Agriculture and Producers Association

BCLL Bahamas Cooperative League Limited

BNCA Bahamas National Craft Association

CABA Caribbean Agricultural Business Association

CAFY Caribbean Agriculture Forum for Youth

CANROP Caribbean Network of Rural and Women Producers

CARDI Caribbean Agricultural Research and Development Institute

CDB Caribbean Development Bank

CFNI Caribbean Food and Nutrition Institute

CHA Caribbean Hotel Association

COB College of the Bahamas

CPC Cooperative Producer Council

CSME Caribbean Single Market Economy

CWA Caribbean Week of Agriculture

DCS Department of Cooperative Societies

ECS Eastern Caribbean States

FAO Food and Agricultural Organization

GCC Global Climate Change

GDP Gross Domestic Product

GHS Government High School

GRAC Gladstone Road Agricultural Research Station

IICA Inter-American Institute for Cooperation on Agriculture

IDB Inter American Development Bank

JCN Jones Communication Network

M Million

MAMR Ministry Of Agriculture and Marine Resources

MIOA Market Information Organization of the America's

MFSI Ministry of Financial Services and Investments

M.P. Minister of Parliament

NAFC North Abaco Fishing Cooperative

NAHS North Andros High School

OAS Organization of American States

OIE World Organization for Animal Health

PAHO/WHO Pan American Health Organization/World Health Organization

SPS Sanitary and Phytosanitary

STEMM/BHA Sustainable Tourism Entrepreneurial Management & Marketing

Project/Bahamas Hotel Association

USA United States of America

USDA United States Department of Agriculture

WTO World Trade Organization

Island Profile: Abaco

"Abaco and its Cays 650 sq. miles Great & Little Abaco 373sq. miles

Affectionately dubbed as the "sailing capital of the world", Abaco comprises Great Abaco, Little Abaco and many surrounding cays, often uninhabited, spread out over 120 miles. Located in the northern-most part of the Bahamas, it is the country's second-largest and third-most frequently visited island. The five inhabited cays of major importance are Walker's Cay, Green Turtle Cay, Great Guana Cay, Man-O-War Cay, and Elbow Cay. Marsh Harbour, Abaco's "city", offers all modern amenities – even a famous traffic light, the only one in Abaco."

Source: The Bahamas Telephone Directory 2008 White Pages. The History of the Bahamas. www.btcbahamas.com



Source: http://www.the-bahama-islands.com/islandmaps/abacomap.html

Abaco is located approximately 53 miles to the North of New Providence (Nassau). It has a sub-tropical climate with a mean annual rainfall of 61 inches. The wet months are June – September and the drier months from December to March. Abaco has limestone soils and water aguifers.

Abaco has two main co-operatives:

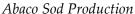
- o Abaco Agricultural Cooperative Society
- o North Abaco Fishing Cooperative

Source: Agricultural Facts on Abaco, Department of Agriculture, 1990

Abaco has had a very rich history of agricultural production. The Loyalists started it all off in 1775, when they moved to the Bahamas to continue to live under British rule. Abaco grew pineapples (since 1830's), Sisal (1840's -1895 & 1899 - 1930's), Citrus (since 1854), Tomatoes (since 1920's) and Sugarcane (1960's -1970). Many of the crops grown in Abaco were chosen as the back-up plan for Florida (because of the proximity to the Florida market and against any freeze events there).

Source: Abaconian, 2007 / http://www.abaconian.com/agriculturalevolution.html







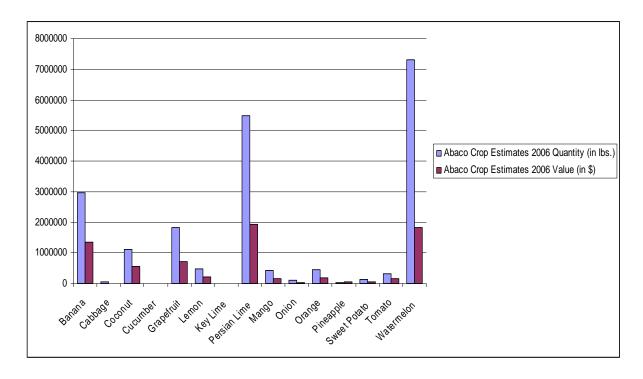
Abaco Neem (certified Organic)

More recently, Abaco has seen severe losses in citrus production due to Citrus Canker. New technology is slowly replacing traditional forms of cultivation (screen house production/hydroponics) where more crops can be grown intensively. Abaco produces sod, watermelons, onions, hot peppers, tomatoes, sweet peppers, cucumbers, ornamental plants, neem and other fresh fruits and vegetables.

According to the 1994 Census of Agriculture there were 51 crop farms, 2 livestock and poultry farms and 16 mixed farms, covering an area of 15,892.37 acres (Livestock including cattle, pork and poultry). In 2006 (Department of Agriculture, Farmers by Island statistics) there were 87 farmers in Abaco (943 in total for the Bahamas) using 1,441.21 areas under production (6,025.67 in total for the Bahamas).

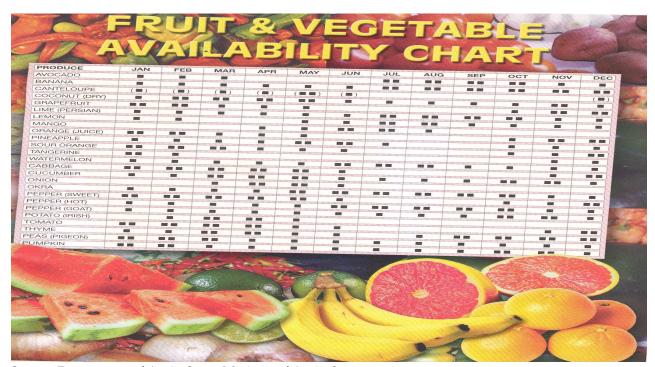
Source: Department of Agriculture & Department of Statistics (published February 1996)

Some Key Agricultural crops grown in Abaco:



Source: Department of Agriculture, Crop Estimates by Island 2006

Abaco Availability Chart:



Source: Department of Agriculture, Ministry of Agriculture

IICA Bahamas Team



Dr. Marikis Alvarez, Representative



Anthony Plakaris, Driver/Office Assistant



Danette Malcolm, Secretary



Astrid Cleare, Local Professional

Thank you from our team to yours.





Contributors:
Dr. Marikis Alvarez
IICA Team
Dr. Selima Hauber, Lucayan Tropical
Deborah Abang-Ntuen, MAMR

IICA's 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 rural prosperity.

IICA's 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.