



**REPORT**  
**May 2018**

**RAPID RESPONSE ACTION**

**Rehabilitation of the Agricultural Rural Communities in Antigua  
and Barbuda in the Aftermath of the Hurricane Irma**

**Submitted by: IICA Delegation in Antigua and Barbuda**

## 1.0 Background/ Introduction:

The Rapid Response Action (RRA) was proposed by the IICA Office in Antigua and Barbuda in response to the damages caused by Hurricane Irma in the agricultural sector. The agricultural sector was heavily affected with significant damage to farms, on-farm infrastructure and farm access roads. Preliminary estimates provided by the Ministry of Agriculture and Fisheries indicated that the total loss to the agriculture sector was approximately US\$ 1.7 million. Livestock damage (comprised by goats, sheep, pigs and poultry) are estimated at US\$95,222.22 and damage to infrastructure is estimated at US\$52,925.92 (including fencing, henhouses, garden beds, irrigation, etc.). Losses are largely attributed to a temporary loss of home production and the additional costs associated with purchasing agricultural products. Together with the livestock replacement costs, the total agriculture recovery needs amount to about US\$ 259,259.25.

Damage and losses in the fisheries sector include loss of damaged vessels (55 estimated), lost traps (2,177) and lost revenue from the fisheries sector as recovery progresses. Environmental damage, particularly in Barbuda, may impact lobster production over the near (6 months) future. Additionally, lack of basic infrastructure (water and electric power) and housing damage to local fisher folk will impede the sectors recovery. The recovery needs are mainly focusing on the reestablishment of the fisheries value chain, especially lobster. In addition to revitalizing the fisheries value chain, some additional improvements could also be considered, not least related to improved storage options for fisheries equipment during storms and hurricanes. Total recovery needs amount to close to EC\$1M.

The recovery needs assessment average the total damage (e.g., destroyed physical assets) of the Irma/Maria events for Antigua and Barbuda comes to EC\$ 367.5 million (US\$ 136.1 million), while losses amount to approximately EC\$ 51.2 million (US\$ 18.9 million). Recovery needs amount to EC\$600.1 million (US\$222.2 million).



Images showing the path and results of Hurricane Irma (<http://fox6now.com>)

## **Actions Undertaken**

IICA, through a RRA, provided support to the rehabilitation of the agricultural sub-sectors and in particular, assisted the producer groups and farm families to quickly recover livelihoods and build resilience to reduce the impact of climate-related events. The overall objective was to support in rebuilding the capacity of four producer groups to reestablish their income flows through climate smart agriculture practices. The Programming Committee approved US 23,000 on 10<sup>th</sup> October 2017 in support of the execution of the RRA. The major outputs for implementation included:

- Capacity building among producers and technicians in the area of sustainable land management and Climate change (CC) Adaptation, including establishing a demonstration site
- Development of adaption strategies/ plans/projectsenable agriculture to adapt to climate change
- Introduce technologies to reduce the vulnerabilities to CC impact.
- Documentary evidence of best practices and actions of the RRA.

In preparation for the implementation of the RRA entitled “Rehabilitation of the Agricultural Rural Communities of Antigua and Barbuda in the Aftermath of the Hurricane Irma.” \ meetings were held with the Division of Agriculture management team and Extension Officers and farmer groups. Emphasis was placed on augmenting the RRA with other ongoing programmes to yield optimum results, which included the IICA’s Flagship Project on Resilience and taking advantage of The Caribbean Agriculture Research Development Institute (CARDI) that had complementary programmes to assist in the recovery and rehabilitation process.

IICA partnered with CARDI and Technicians from the MALFBA to submit a joint proposal entitled “Hurricane Rehabilitation of the Agricultural Sector in Antigua and Barbuda, St. Kitts and Nevis and Dominica following the passage of the number of natural disasters that affected the named islands. These projects in Antigua and Barbuda” commenced in October 2017 and is expected to be completed and review in March 2018.

Additionally, assessments were done throughout the agricultural regions of Antigua and Barbuda with the Extension staff and the Barbuda Council to determine the key subsectors areas of interest, the target beneficiaries, and areas of synergies among the projects. Whilst the RRA was clear on its objectives, a joint collaboration between IICA and CARDI was made to address the needs of the beneficiaries. As such, counterpart funding was committed under the Resilience Flagship Project core budget and under the IICA/CARDI project. The initiatives complemented the objectives and activities of the RRAs interventions. *See annex.*

The RRA was successfully accomplished with all results delivered and attained. Below are the highlights of the interventions and results achieved.

## 2.0 Achievements:

### DESCRIPTION OF RESULT 1: TECHNICAL CAPACITY BUILDING ON SUSTAINABLE CLIMATE RESILIENCE MANAGEMENT AND CLIMATE CHANGE MITIGATION/ADAPTATION FOR SELECTIVE SECTORS

A series of workshops were conducted in three areas:(i) ***Small Ruminant Management Production***, (ii) ***Climate Smart Agriculture Greenhouse Management***(iii) ***Climate Smart Resilient Methods*** aimed at strengthening the capacities of farmers on climate resilience management and climate change adaptation. The workshops emphasized climate change adaptation strategies to assist farmers as it relates to each sector mentioned above; characterization of vulnerability on smallholder farms; assessment of farmers' knowledge and attitudes about climate change and how farmers currently cope with risks The workshops methodologies were divided into two sessions which included series of practical demonstrations of adaptation strategies to reduce vulnerabilities such as drought.

**Climate Smart Resilient Agriculture:** A training was conducted to build capacity in developing Climate Smart Resilient Farm with a focus on soil (Integrated Soil Fertility Management), plant fertility (plant nutrient requirement and deficiency symptoms, fertiliser calculations, application techniques and timing, pH management and organic matter quality) and water management (optimising plant water use efficiency) and the socio-psychological dimension (changing perception of risk and building risk planning and management in farm plans to address adaptation limits) needed to develop sustainable systems. Dr. Chaney St. Martin –IICA International Water and Soil Management Specialist facilitated the session. Nineteen technicians were beneficiaries from the training.

**Small Ruminant Management:** A Theory and Practical workshop was hosted at the Sir Mc Chesney George Secondary School- Barbuda, to promote Resilience Management Practices for Small Ruminants and adaptation options such as breeds, alternative feed, pasture monitoring and development and management for small ruminants regarding climate change. The session was facilitated by Dr. Chere Kellman, Ministry of Agriculture Veterinary and Livestock Unit and Mr. Perry Phillip- Consultant/Forage Specialist. Participants were given ear tags during the practical session in an effort to encourage the farmers to keep proper records. Fifteen farmers participated in the training session.

**Clime Smart Greenhouses:** A training session on climate smart agriculture was conducted which was facilitated by Mr. Dennis Mc Clung-President/CEO of Garden Pool Institute. During this workshop participants were introduced to the new innovation climate smart agriculture systems using latest 3D technology, virtual reality and next generations tools a demo system presently been installed at the Sir Mc Chesney George Secondary School. Seventeen persons participated in the workshop. Garden Pool is an international non-profit organization which focuses on sustainable food production.

**Apiculture:**A training session with members of the Antigua Beekeepers Co-operative along with new beekeepers was conducted to address the lesson learnt after the passing of Hurricane Irma and to strategize and implement future management measures for the Bee keepers in the event of another natural disaster. The location, orientation and securing the hives were the center of discussion during the session by the members. It was evident that it's very difficult to prevent damages to hives however preventative measures should be implemented to minimize extensive damages. It was recommended that hives are placed on flat broad areas with straps and stakesto secure hives during a storm. The placement of hives in the location surrounding by trees which can act as wind breakwas another recommendation. Through observation the hives that survived Hurricane Irma in Barbuda were saved due to the Wild Tamarind - *Leucaenaleucocephala* which acted as wind breaks where the colonies were located.



**Farmers participating in Small Ruminant Management Training session**



**Training session Bee Co-operative**



**Practical training session ear tagging with Dr. Kellman**

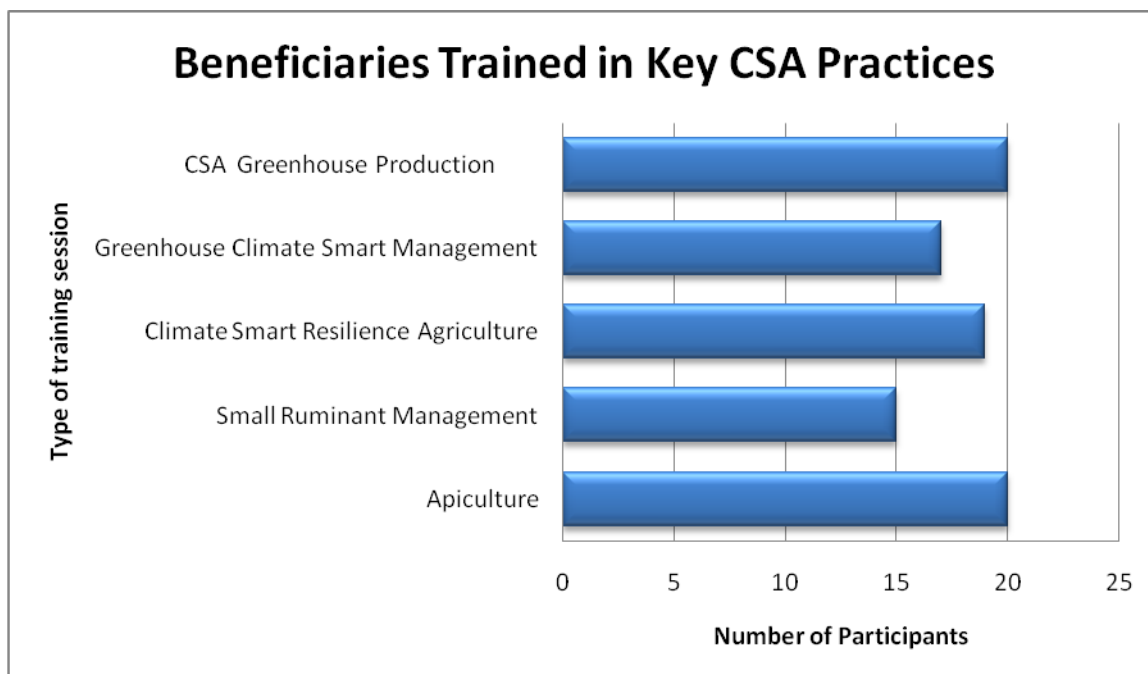


Table showing beneficiaries trained in key Climate Smart Agriculture (CSA) Practices

**DESCRIPTION OF RESULT 2: GREENHOUSE AT THE SIR MC CHESNEY GEORGE SECONDARY SCHOOL (SMGSS) REHABILITATED TO A CLIMATE SMART DESIGN TO PROVIDE STUDENTS AND FARMERS WITH SEEDLINGS AND VEGETABLES.**

IICA in collaboration with Garden Pool organization engaged the Secondary School in Barbuda which participated and were awarded regional winners in the Climate Smart Agriculture Competition (CSAC) a component of the Resilience Flagship Project in 2016 with a strong agriculture presence throughout the Antigua and Barbuda. Garden Pool is an international public charity dedicated to research and education of sustainable ways to grow food. SMGSS is the only secondary school in Barbuda with an enrollment of over 150 students. Its Agricultural Science programme is focused on sustainable organic development by engaging youth in the Production, Processing and Marketing of Agricultural Produce. Prior to the hurricane SMGSS agriculture programme provided the community with eggs and vegetables produced by the school managed by the students. IICA supported SMGSS to rehabilitate a greenhouse for the propagation of selected vegetables as part of soil and water conservation practices. Garden Pool provided the technical lead in systems design and technology supported by technical specialists from IICA (local and international), the Ministry of Agriculture Fisheries and Barbuda Affairs, CARDI, SMGSS and residents from Barbuda. The systems designed by Garden Pool uses 98% less water, greatly reduces the quantity of external inputs needed (e.g. synthetic fertilisers and pesticides) resulting in a more eco-friendly production system. The emphasis of this project was on propagation of vegetables, a cloning station and the growth of tilapia. Support was also provided in procurement of basic nursery needs including planting materials, soil medium, solar panels, irrigation supplies and plant nutrients.

A training session which included only students from the Sir Mc Chesney George Secondary School was geared to the operation and benefits of the system. The session was facilitated by Dennis Mc Clung-Founder and CEO Garden Pool. Twenty students participated in the training.



Greenhouse condition after the effect of Hurricane Irma



Students learning how to clone plants using cuttings



Installation of pond liner in tilapia pond



Installation of Solar Panels for greenhouse system

### [DESCRIPTION OF RESULT 3: IMPROVED LIVESTOCK UNITS \(INCLUDING BEES\) ESTABLISHED TO DEMONSTRATE CC BEST PRACTICES](#)

In supporting the Division of Agriculture, Livestock Unit, support was provided in quickly rehabilitating one poultry unit, one goat unit and four paddocks. The rehabilitation included the improvement in management of through more secure pens, perimeter boundary fencing (poultry) and paddocks for grazing, reduction in stress levels among the animals through improved nutrition post Hurricane Irma.



Prior to the storm livestock (sheep and goat) were left to roam and graze within the village of Codrington on the palatable grasses and legumes within their surroundings. Predial larceny and dogs have been the highest cause of loss to the Producers. Through our intervention the implementation of paddock grazing was introduced whereby farmers now practice a semi-extensive system and at the same time have introduced a cut and carry feeding system.

Seven farmers in Barbuda were supported in rehabilitation the farmers were responsible for the labour involved in the repairing the pens and paddocks. A total of four new paddocks were newly installed while an additional three were repaired. As a result of the hurricane the scarcity of forages was limited, twenty farmers were beneficiaries of diary feed supplements procured under the projectsto assist in improving their stocks nutrition and health.



Paddock upgrade for livestock



Upgraded livestock housing unit

#### DESCRIPTION OF RESULT 4: APICULTURE SECTORHAVE BENEFITTED FROM THE CC ADAPTATION/ MITIGATION BEST PRACTICES

Barbuda is well known to produce a unique quality honey which derived from Wild Flower and Logwood plant species which are predominantly found on the island. Wild Flower honey is created from the nectar of variety of flowers producing a honey which has a deep brown colour, which means it is high in minerals and antioxidant. On the other hand, the Logwood honey is made from nectar of the Logwood Tree. The high demand of this honey is the fact that it will not crystallize easily allowing the honey to remain on the shelf for a longer period of time without fermenting.

Prior to Hurricane Irma there were thirty –five managed hives in Barbuda which supplied honey to the community. After the storm through our assessment of the sector the findings showed there was a high percentage of **Swarming**and an infestation of the **Wax Moth**causing only ten hives to survive, however through assistance from the Antigua Bee KeepersCooperative with the assistance from IICA and CARDI a number of materials were

procured such as hives, gloves, veils, swarm traps were distributed to Bee Keepers. These hives were constructed with durable materials and replaced in a manner to demonstrate simple systems to secure hives in the event of a storm.

In Antigua, the RRA supported the Bee Keepers Cooperative members who were also affected; in addition, the project supported four persons (women and youth) in re-starting their apiculture enterprise. Twenty-five Bee Keepers from Antigua and Barbuda were beneficiaries of tools and equipment materials to assist with revitalizing their colonies.



Inspection of destroyed hives after Hurricane Irma Replacement of new durable hive bodies.



Beekeepers removing swarms & monitoring colonies with new equipment under the projects

#### DESCRIPTION OF RESULT5: SMALL RUMINANT SECTOR IMPROVED THROUGH THE INTRODUCTION OF NEW BREEDS OF SMALL RUMINANTS

Through a collaborative effort between IICA, CARDI, MoAFBA and the Private Sector the cooperative members in Barbuda were beneficiaries of ten high bred sheep. The Hall Farm in Antigua donated four female Black Bellywhile Byron Lee Farm donated six male Black Head. Both breeds are able to tolerate heat and exhibit more stamina than most breeds of sheep, thus selecting these breeds for Barbuda were ideal for the climatic conditions in Barbuda .These animals will be in the custodian of the cooperative members who will undertake the responsibility of the breeding and management in an effort to improve and increase the sheep population as well as the marketing of mutton in Barbuda.



Farmer receiving livestock and input supplies



Image of the Black Belly breed sheep

#### DESCRIPTION OF RESULT 6: SMALL RUMINANT SECTOR IMPROVED THROUGH THE INTRODUCTION OF CLIMATE RESILIENT GRASSES AND LEGUMES

One of the weakestlinks in the chain of production for livestock in Barbuda is their pasture management skills. Nonexistent to the poor established pastures force farmers to rely heavily on imported commercial dairy feed which is very costly and heavy grazing on poor pasture. The introduction of a selection of grasses and legumes from Antigua such as the Elephant Grass, Siratro, Glycine, Chrysopogen and Mulberry were transferred to Barbuda and are been managed by the Agricultural Science Department. Once established the planting materials will be transferred to the demo plot. The plot was established with the view to introduce resilient nutritious drought tolerant species of grasses and legumes that will improve other pastures for the farmers.

The demo plot will be used to provide feeding materials for livestock in addition to provide and support farmers with planting materials allowing them to establish other feed banks for their livestock. Cut and carry feeding system was also recommended during the capacity building session especially during the dry period. Fifteen Farmers participatedin a pasture management capacity building activity; this session was facilitated by Perry Phillip-Consultant.



Land preparation on pasture demo plot



Farmers implementing the cut and carry feeding system



Established Chrysopogon grass species material bank Installation of irrigation sub-main pipes for demo-pasture

**DESCRIPTION OF RESULT 7: INSTITUTIONAL FRAMEWORKS AND STRATEGIES/PLANS IMPROVED OR FORMULATED TO ENABLE AGRICULTURE TO ADAPT TO CLIMATE CHANGE**

IICA's International Water and Soil Management Specialist was engaged to evaluate a number of productive sites affected by Hurricane Irma and to propose a strategic plan to build resilience and to promote adaptation strategies for Antigua and Barbuda. The Specialist gathered data and hosted consultations with critical stakeholders including farmers and technicians to determine suitable plans to address some of the vulnerabilities identified. A Strategic proposal entitled: Developing climate resilient farming communities in Antigua and Barbuda: A food and Nutrition Security Strategy was drafted. The strategic options recommended addressed issues of land management and extreme drought. The overall objective of this proposal is to implement cost effective measures in the community via interventions at the institutional, farming and environment level to simultaneously build natural, institutional and social adaptive capacity.

**DESCRIPTION OF RESULTS 8: DOCUMENTS AND NEW PACKAGING LABELS**

Beneficiaries received a number of training documents and improved packaging and labels materials that would assist them with the improvement of the agri-business component

within their respective target areas. The project also provided beneficiaries with copies of the following documents which will guide them in different facets of their production:

- Antigua and Barbuda National Standard –ABBS CRS 18:2010 Specification for Honey
- Antigua and Barbuda National Standard ABBS CRS 5: 2010 Labelling of Pre-Packaged Foods

<http://abbs.gov.ag/standards/standards-for-sale/specifications/standard-details/abbs-crs-5-2010/>

<http://abbs.gov.ag/standards/standards-for-sale/specifications/standard-details/abbs-crs-18-2010/>

- Introductory Beekeeping 19-31 October, 2009 as adopted by Antigua and Barbuda Beekeeping Co-operative.
- A series of Fact Sheets- Pasture Management Production produced by CARDI  
<http://www.cardi.org/cardipublications/factsheets/livestock/>
- Labels and Packaging Materials in accordance to the National Standards requirements. (*See images below*).

***Before***



**Improved labels according to standards**

***After***



**Antigua & Barbuda Honey marketed to Japan**

**DESCRIPTION OF RESULT9: DOCUMENTARY EVIDENCE, PROVIDED BY THE COUNTERPART, REGARDING THE FULFILLMENT OF EXPECTATIONS REGARDING THIS RRA**

A video was produced to document the outputs of the RRA and IICA/CARDI rehabilitation project and to document some of the Best Practices relevant to climate risk land management and other mitigation and adaptation methods. Interviews were conducted with beneficiaries, technicians from the MoAFBA, IICA Technical Specialists and CARDI Representative. Footage of the demonstration sites were also captured as well as training sessions.

This video will be shared with stakeholders in an effort to not only highlight the technical support by IICA but also to bring more awareness of the effects of climate change and

measures that should be taken to minimize the damages. The video also shows the benefits of collaboration between institutions and private sector.

### **3.0 Level of Satisfaction of the Counterpart**

The Ministry of Agriculture, Fisheries and Barbuda Affairs (MoAFBA) and the Barbuda Council were fully involved in the execution of the RRA. The Extension Unit identified and presented proposals regarding the interventions and training needs to be addressed. The actions of the RRA formed part of the Division of Agriculture technical programme and as such they took ownership in ensuring the effective execution of the activities.

The Permanent Secretary and Director indicated to officially communicate to IICA the MoAFBA evaluation of the contribution of the Rapid Response Action in the rehabilitation of the agricultural sector. They however have expressed informally their satisfaction with the interventions and looking forward to IICA's continued guidance in the area of climate change. (See Annex A)

### **4.0 Technical Cooperation Opportunities generated by the RRA**

The results attained under the RRA supported the strategic objectives set forth in the 2018-2022 IICA Medium Term plan particularly regarding the contribution areas as follows:

- Strengthening the capabilities of the member states at the National Level to establish public policies and institutional frameworks in order to make agriculture more productive and competitive, improve management of rural territories, adapt to and mitigate the impact of climate change, and promote food and nutrition security
- Increasing the capacity of public and private institutions to promote and implement measures for adapting agriculture to climate change and mitigating its effects, as well as promoting integrated risk management in agriculture
- Enhancing the capabilities of different stakeholders of the agricultural production chains and rural territories in the integrated management of water and sustainable use of soil for agriculture

They further strengthened a number of actions outlined in the IICA Country Strategy for Antigua and Barbuda 2014-2018 as well as Component 1 of the Resilience Flagship project.

Whilst the RRA was in response to the emergency that is, to support the rehabilitation and revitalization of the agriculture Sector post Hurricane Irma, the interventions provided the opportunity for Division of Agriculture to rethink its National programme and to build into its programme the issues relating to climate change. This was evident by follow up actions

supported by IICA to host a training workshop in strengthening the capacity of the technician and senior staff of the Ministry towards climate proofing the Agricultural Policy and Action Plan. Nineteen Technicians from the Ministry of Agriculture were in attendance.

The RRA has prompted interest to advance support from IICA towards increasing knowledge, information and methodologies on how to anticipate, prepare, respond and recover to environmental risks (extreme events). The technical areas identified included agricultural risk management tool kit with risk management protocols, methodologies to undertake damage assessment and rehabilitation/recovery plans.



Climate Change Workshop for Technicians



Dr. Chaney St. Martin and ECS Rep John King participating in RRA

## 5.0 General Comments

Prior to Hurricane Irma, climate change mitigation and adaptation strategies were discussed and included within the technical programmes of the Ministry. However, limited resources prevented the government from addressing some of the key areas related to climate change thus having a greater effect on the sector. The issue of resource management (soil and water management), livestock and apiculture management programmes were not adequately addressed. Hurricane Irma exposed, in a sense, the level at which we ignored certain good management practices that warranted immediate action. The Rapid Response Action has started the process in the area of land and water management in addition highlighting that the small ruminants and apiculture are heavily affected by climate change. In conclusion the project through our assessments are of the opinion that although the fishing industry is the main source of income for the Barbudans, there are avenues for diversification in areas such as small ruminants, apiculture and hydroponics.

## 6.0 Financial Report(s)

|  |                      |  |
|--|----------------------|--|
| <b>FINANCIAL STATEMENT</b>   |                      |  |
| <b>RAPID RESPONSE ACTION</b>   |                      |  |
| <b>" Rehabilitation of the Agricultural Rural Communities in Antigua and Barbuda in the Aftermath of the Hurricane Irma</b>                            |                      |  |
|  |                      | Note: <b>US \$6000</b> was allocated for travel of IICA Professional Staff to facilitate training Workshops, however resource persons were recruited locally to facilitate the training workshops. |
| <b>TOTAL ALLOCATIONS 2017/2018</b>   | <b>US\$23,000.00</b> |  |
| <b>EXPENDITURES:</b>   |                      |  |
| MOE-505 Materials and Inputs<br><i>Materials for demonstration and training for crops, livestock, irrigation, protected agriculture and apiculture</i> | \$5,000.00           |  |



|  |                    |  |
|--|--------------------|--|
| OE-309 Teaching materials<br><i>Three training workshops (1) Climate smart resilience;<br/>(2) Management of Livestock (3) Apiculture Management</i> | \$7,000.00         |  |
| MOE-307 Organization of events   | \$3,500.00         |  |
| MOE- 312 National Travel   | \$1,500.00         |  |
| <b>TOTAL EXPENDITURES 2017/2018</b>  | <b>\$23,000.00</b> |  |
|  |                    |  |
| <b>BALANCE</b>   | <b>US\$00.78</b>   |  |

| <b>FINANCIAL STATEMENT</b>   |                      |  |
|--|----------------------|--|
| <b>Flagship Project: Resilience</b>  |                      |  |
| <b>CAPACITY BUILDING IN PASTURE MANAGEMENT TO FOSTER THE INCREASED SMALL RUMINANTS<br/>PRODUCTION FOR PRODUCER GROUP</b> |                      |  |
|  |                      | <b>Note:</b> US \$29,609.00 was allocated from the resilience FP targeting two (2) areas of interest<br>1. Pasture Management<br>2. Greenhouse |
| <b>TOTAL ALLOCATIONS 2017</b>  | <b>US\$29,609.00</b> |  |
| <b>EXPENDITURES: Rehabilitation of Green House</b>   | <b>\$16,398.00</b>   |  |
| MOE 401 International Per diem   | \$1,283.00           |  |

|   |                    |  |
|---|--------------------|--|
| MOE 403 International Transport<br>Support from IICA's International Specialist Soil and Water Management and the ECS Representative.                                 | \$900.00           |  |
| MOE 505 Materials<br>Materials and inputs such as pipes, netting and screws were procured to rehabilitate the greenhouse.   | \$14,498.00        |  |
|   |                    |  |
| <b>EXPENDITURES: Establishment of Pasture</b>   | <b>\$13,211.00</b> |  |
| MOE 307 Organization  | \$1,283.00         |  |
| MOE 313 International Travel  | \$2,701.00         |  |
| MOE 315 International Travel Consultant<br>Airline tickets procured for Garden Pool Consultant.   | \$1,800.00         |  |
| MOE 407 National Per diem   | \$1,106.00         |  |
| MOE 409 National Transportation<br>Airline tickets to travel to Barbuda for Technicians and freight expenditures.   | \$2,509.00         |  |
| MOE 509 Materials<br>Materials procured included post, paddock wire and planting materials to set-up a demo paddock and feed bank with selective grasses and legumes. | \$3,066.00         |  |
| MOE 701 Correspondence  | \$665.00           |  |
|   |                    |  |
| <b>TOTAL EXPENDITURES 2017</b>  | <b>\$29,609.00</b> |  |
|   |                    |  |
| <b>BALANCE</b>  | <b>\$US 0.00</b>   |  |

|   |
|---|
| <b>FINANCIAL STATEMENT</b>  |
| <b>IICA/CARDI Project</b>   |
| <b>"The IICA-CARDI Post Hurricane Rehabilitation of the agricultural sector in Antigua and Barbuda"</b> |

|   |                      |  |
|---|----------------------|--|
|   |                      | <b>Note:</b> US \$25,000 was allocated for a regional capacity building activity in <b>Damage/Loss Assessment using Satellite Imaginary and other advanced tools</b> for Technicians to facilitate training workshops; however resource persons will be selected by the MOA from selected countries. This activity will be coordinated by CARDI Trinidad and Tobago in collaboration with local offices. |
| <b>TOTAL ALLOCATIONS 2017/2018</b>  | <b>US\$24,333.00</b> |  |
| <b>EXPENDITURES:</b>  |                      |  |
| 1. Restoring Productive Capacity through Provision of Seed, Germplasm and Nursery infrastructure <ul style="list-style-type: none"> <li>• Planting materials, promix and seedling trays</li> </ul>  | \$9,325.00           |  |
| 2. Rebuilding and Rehabilitating Productive Capacity of Targeted Communities and Producer Groups <ul style="list-style-type: none"> <li>• Irrigation Supplies</li> <li>• Livestock fencing materials</li> <li>• Feed for poultry and small ruminant</li> <li>• Apiculture equipment supplies</li> <li>• Freight charges to transport materials</li> </ul> | \$15,000.00          |  |
| <b>TOTAL EXPENDITURES 2017/2018</b>   | <b>\$24,333.00</b>   |  |
| <b>BALANCE</b>  | <b>\$US 0.00</b>     |  |

*Thanks to the Rehabilitation Team*



**L-R:** John Mussington-Principal SMGSS, Brent Georges-MoALFBA/Bee Cooperative, Bradbury Brown -CARDI, Craig Thomas-IICA, Thadeus Spencer-MoALFBA/Bee Cooperative, Victor Harris-Barbuda Council/MoALFBA, Dennis McClung-Garden Pool, Dr. Chere Kellman-MoALFBA, Perry Phillip- Grass Specialist and **kneeling** Tsekani Mussington-Teacher SMGSS

**Missing:** Paul Lucas-CARDI Rep and Dr. Chaney St. Martin-IICA International Specialist in Water and Soil Management

Heartfelt thanks is extended to the Producer Groups ,MoALFBA , Ministry of Education and Board of Education, Byron Lee Farm, Hall's Farm, Abbotts Feed and Supplies,

*See Gallery of Memories below*

*Gallery of Memories*

