



**Caribbean Agricultural Research and Development Institute (CARDI) and Inter-American  
Institute for Cooperation on Agriculture (IICA) –**

**Joint Initiatives 2018-2019**

**Prepared by CARDI  
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**1. Introduction**

The Inter-American Institute for Cooperation on Agriculture (IICA) and the Caribbean Agricultural Research and Development Institute (CARDI), share a long-standing institutional relationship, working toward the development of the regional agriculture sector. Much of the work of the organisations is facilitated through formal agreements under the General Technical Cooperation Agreement (GTCA). However, the institutions do collaborate outside of the formal agreements. Both institutions are committed to the promotion and development of agriculture research in the region and it was envisioned that through collective efforts the institutions could provide a more effective contribution to agricultural research and development. Outlined below are the collaborative project activities undertaken for the period 2018-2019.

**2. Argentina/Brazil IICA Technical Cooperation Mission**

March 12<sup>th</sup> -15<sup>th</sup>, 2018, Mr. Barton Clarke, Executive Director, CARDI along with High Level Officials from Caribbean Agricultural Ministries, CARICOM Secretariat led by IICA visited Brasilia, Brazil and Buenos Aires. The aim of the Mission was to strengthen ties and promote agricultural technology transfers between the Caribbean, Argentina and Brazil. This Mission included a working session in Brasilia, Brazil prior to an Argentine Senate visit with the President of the Agricultural Commission, Mr. Alfredo De Angeli, as well as various technical site visits to institutions to gain first-hand knowledge of innovative technologies and research in the agricultural sector that promote food security and build resilience. Representatives also visited the National Agricultural Technology Institute (INTA) to examine research facilities that specialize in natural resources, climate, water and domestic agriculture and to experience the latest technologies being applied to enhance food security.

CARDI identified several areas for further collaboration including research and technology development and transfer, capacity building in research, business development, public policy and collaboration with other developmental agencies including EMBRAPA and INTA. Mr. Barton Clarke underscored the importance that public policy in Argentina and Brazil in developing an agricultural industry that is closely linked to world trade. Mr. Clarke reiterated that:

*“This is an important lesson for us. We must invest in research and innovation. The countries of the Caribbean are small, and we face problems such as unemployment, poverty and high energy costs. Agriculture plays a critical role in helping to overcome social and economic ills. We must engender capacity building for research in the Caribbean and strategic research that can foster innovation and intellectual property. I thank IICA for facilitating this visit and cooperation among countries; through this we can strengthen ties and foster alliances”.*

CARDI look forward to further collaborative work among IICA and both governmental and technical institutions in Brazil and Argentina toward the development of regional agriculture.

### **3. Interaction with the NORGEN group (PROCINORTE) to explore technical assistance to CARDI for germplasm management.**

The CARDI has been interested in pursuing the establishment of a regional network of facilities to conserve and promote the utilization of nutrient-rich traditional crop diversity (especially roots and tubers), as well as “climate-ready” diversity that will support farmers in adapting to climate variability and change. It is regarded as a necessary step towards mitigating the significant threats to food and nutrition security, health and wellness and the overall economic development of the region. Further to this pursuit, a mandate was given by the Heads of Government through the CARICOM Secretariat, for CARDI to take the lead in:

- Building out the Roots and Tuber Value Chain as part of a resilience strategy for Food and Agriculture within the Region,
- Genetic Resource Management for Crop and Livestock within the Region

To this end, engagement with the Program for Research and Agricultural Technology of Canada, the United States and Mexico (PROCINORTE) and the North American Network for the Management of Genetic Resources (NORGEN) was made possible through the Inter-American Institute for Cooperation on Agriculture (IICA). Through this facilitation by IICA, CARDI was able to have initial dialogue with Dr. Audia Barnett with whom a concept note titled “Enhanced Germplasm Management for Caribbean Food and Nutrition Security” was shared. This concept note referred to the management of crop germplasm, capacity building and infrastructural development by way of a regional germplasm facility and reflected CARDI’s intent of delivering on Regional Public Goods (RPGs) for the Caribbean. Dr. Barnett,

has committed, in principle, assistance from PROCINORTE and by extension NORGEN, in reviewing the concept note and identifying follow-up actions as to how best they can assist. This relationship undertook a more established setting with a first meeting of CARDI, PROCINORTE, NORGEN and IICA, taking place in December 2018. The meeting proved rather informative and laid the foundation for further collaboration in the area of crop germplasm management, with a focus on sweet potato, one of the priority commodities identified by the Council for Trade and Economic Development (COTED), for industry development within the Region. It is expected that work in the area of germplasm management will continue as a priority and an area of interest for CARDI for at the very least, the next strategic period ending 2022, and PROCINORTE, NORGEN and IICA will continue to engage in that regard.

#### 4. CARDI / IICA visit to CIP

A visit by a CARDI (Omaira Avila Rostant / Biotechnologist; Gregory Linton / Plant Breeder; Ariel Coolman / Research Assistant), IICA (Kurt Manrique / International Specialist in Agriculture Innovation) Team in December 2017, led to these follow-up actions:

- Establish a CARDI Sweet Potato Working Group (Completed),
- A review of CARDI's Research and Development activities on sweet potato in the region (Completed),
- Identify the key characters in local and introduced accession (varieties), that can be used in breeding programmes (On-going)
- Molecular characterize of the five (5) most popular (commonly used) accessions (varieties) of sweet potato in each CARICOM Member State [On-going; in collaboration with UWI Cavehill Campus, funded by the IDB Pilot Programme for Climate Resilience (PPCR)]. The project implementation phases are:

**Phase I** - (sample collection and posting to UWI Barbados). **Completed.**

- a. Leaf samples from Dominica, Grenada, Jamaica, St. Lucia, and St. Vincent, (PPCR CARICOM countries) will be provided each PPCR country through the CARDI network- CARDI Jamaica
- b. Haitian leaf samples will be provided by Faculty of Agriculture (FAMV) of de University of State of Haiti
- c. Leaf Samples from Barbados will be sourced from the Ministry of Agriculture.

**Phase II** – DNA extraction and RE digest (UWI - Barbados). **Completed**

**Phase III**-library preparation and RAD sequencing- outsourced

**Phase IV**- Bioinformatics analysis viz Phylogenetics and statistical analysis to be conducted/ Haplotag.

**Phase V** – report writing and dissemination

- Clean-up the five (5) selected cultivars in the Region (Collaboration with CIP)

- A Concept Note entitled - Developing the Sweet Potato Industry: A Value Chain approach; was developed by CARDI and the area of breeding was identified as a priority area for CIP's collaboration.

## **5. Technical Cooperation with INTA (Argentine Agricultural Research Institute) – Pelletized Forage**

In January 2019 exploratory discussions were held among INTA, CARDI and IICA on provision technical assistance and training on pelletized forages by INTA to CARDI Scientists. This initial discussion was facilitated by IICA and is the platform from which further discussion will take place.

## **6. Regional Coconut Commodity Innovation Platform**

CARDI has taken lead responsibility for the development of the Regional Coconut Industry within the Caribbean. It has done so by dint of a European Union (EU) Funded Project, through the African, Caribbean and Pacific (ACP) Group of States, co-implemented by the International Trade Centre (ITC) and CARDI across eleven CARIFORUM countries. Through this project, CARDI was able to arouse the interest of policy makers and Heads of Government to the extent where coconuts was recognized by COTED as a priority commodity, where focus is to be given towards industry development. Recognition as a priority commodity also entailed that its development be coordinated at the Regional level through an established CARICOM Coordinating Mechanism, that of the Commodity Groups. These Commodity Groups represent each of the priority commodities with responsibility lying with an identified Regional/International Agricultural Agency. Due to CARDI's work in developing the Regional Coconut Industry, supported by EU funds and in collaboration with the ITC, CARDI was identified as the lead for the Coconut Commodity Group. This group was launched in the last quarter of 2018 and affectionately titled the "Regional Coconut Commodity Innovation Platform (RCCIP)", a name which was taken precedence over "Coconut Commodity Group". This platform has the express aim of harmonising key actors and stakeholders work programmes, making better use of scarce resources and serving as a coordinating mechanism of the advancement of regional policy as well an oversight for the implementation of the Regional Coconut Initiatives through national mechanisms like the National Stakeholder Platforms (NSP's).

Several Regional and International partners have been identified to serve on the RCCIP, with IICA being one of the foremost agencies. Discussions in early 2019, served to recognize IICA as a key stakeholder within the Regional Coconut Industry, given their actions under a project intervention, which sought and will continue to seek, treating with one of the foremost challenges affecting the global Coconut Industry, that of the supply of

coconut planting material to increase production. Coordination among IICA, individual member states and CARDI will be key, in procuring coconut planting material that is safe and of a high quality, taking into consideration limited sources of procurement, duplication of efforts, harmonised protocols for the safe movement of germplasm, weaning and hardening of plants amongst a host of other considerations. Both IICA and CARDI have recognized the need to work more closely in this regard, through the RCCIP, as leaders in the development of the Coconut Industry, to effectively guide member states.

## **7. Other Collaborative Initiatives**

CARDI recognized in the Revised Treaty of Chaguaramas as the Regional Agricultural Research Institute in CARICOM, with the mandate for Regional Agricultural Research and Development, leads the CARICOM mechanism known as the Agriculture, Food and Nutrition Cluster (AFNC). The AFNC has the responsibility to collectively support and promote the policies, strategies and programmes as approved by COTED and the Heads of Government. In addition, the AFNC is also called upon to do the following:

- Review work programmes of the various institutions as they relate to agriculture, food and nutrition so as to facilitate synergy and reduce overlap.
- Agree on and support the implementation of areas of focus and emphasis within the commodities and themes identified and agreed to by COTED.
- Make recommendations to COTED, through the Secretary General, for changes as necessary in strategy, policies or programmes.
- To optimize the use of scarce available resources through the sharing of knowledge
- To collaborate in the search for resources and the conduct of joint programmes and actions.

Consisting primarily of CARICOM/Regional Institutions, from the onset, CARDI recognized that there are non-CARICOM institutions which had as their major focus, the development of the agricultural and rural sectors in the Region and they should be included in the AFNC. A request for inclusion of those non-CARICOM entities was made and permission obtained which led to key stakeholders such as IICA, comprising the membership of the AFNC. IICA's contribution at the AFNC has been invaluable which has led them to take charge of the Business Development Thematic Group, another of the CARICOM coordinating mechanisms, one which reports to the AFNC. The Business Development Thematic Group, they have made representation at various COTED meetings and CARICOM Agriculture Planners Forum, on behalf of the AFNC as chaired by CARDI. Further to IICA's involvement on the AFNC, they have been responsible for the development of the Activity Integration Matrix (AIM), which has been handed over as a tool of the AFNC, to assist in the coordination and harmonisation of work programmes and actions across the Region.

Similarly, IICA, serves on the Research and Human Resource Development Thematic Group, another CARICOM coordinating mechanism which reports to the AFNC. With a focus on research, IICA has ably contributed by way of sharing presentations on actions pertaining to germplasm management and the distribution and use of bio-fortified crops for improved nutrition in CARICOM. In this regard, IICA has continued to advocate for further research and developmental actions in the areas of germplasm management and bio-fortification, areas which are compatible with the Regional focus.

In Belize, Bahamas and St. Lucia, Technical Officers attend meeting hosted by the counterpart agency and are on advisory committees together. Throughout the region IICA and CARDI work together to deliver technical products and services to the agriculture sector.