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REPORT AND CARDI PLAN OF ACTION

Montego Bay, Jamaica

CARIBBEAN AGRICULTURAL RESEARCH AND DEVELOPMENT INSTITUTE

Update on CARDI's Performance

January 2008 to May 2009

Presented by

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at

IICA's Executive Committee Meeting

San José, Costa Rica

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1. Introduction

Approximately one and a half years ago, a new Management (Chairman, Board of Governors, Chairman, Board of Directors and Executive Director) assumed responsibility for the development and implementation of CARDI's programmes. This period has been dedicated to:

- i. Improving staff morale.
- ii. Enhancing and promoting the image of the Institute.
- iii. Developing and/or improving operational and financial systems.
- iv. Seeking external resources to ensure the successful medium to long term development of the Institute.
- v. Development and approval of the Medium Term Plan (MTP) 2008-2010.

The 2008-2010 MTP is organised around three Strategic Axes;

- **Strategic Axis 1 – Development of Sustainable Industries**
 - o Science, Technology and Innovation
 - Technology Generation and Transfer
 - o Natural Resource Management
 - Invasive Species
 - Climate Change
 - Biotechnology
- **Strategic Axis 2 – Development of Strategic Linkages**
 - o Partnership and Collaborative Initiatives
 - Build and Maintain Relationships
 - Establish “Friends” of CARDI
 - o Advocacy
 - Re-branding and promotion of CARDI
 - Website Development
- **Strategic Axis 3 – Institutional Strengthening**
 - o Income Generation
 - Resource Mobilisation
 - Revenue Generation and Technical Assistance
 - o Capacity Building
 - Human Resource Development
 - Staff Motivation
 - Cultural Change
 - Organisation Development

The hierarchical representation of the MTP is presented in **Annex 1**.

Following the practice and guidelines of institutions, such as, the Inter-American Institute for Cooperation on Agriculture (IICA) and more recently, the Food and Agriculture Organisation of the United Nations, CARDI's MTP, 2008-2010 is built on the following three pillars:

Bottom up/client led

Transparency and accountability

Working together

The Interrelationship between the Strategic Axes and the three pillars are shown in **Figure 1** and the description of the three pillars in Figures 2 (a), 2 (b) and 2 (c).

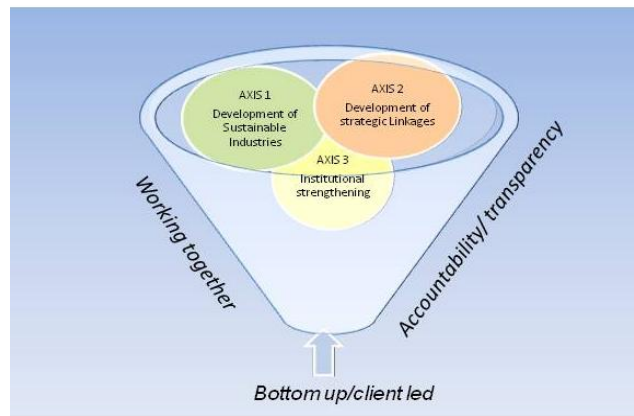


Figure 1: Interrelationship between Strategic Axes and 3 Pillars



Figure 2A: Bottom Up/Client Led Process

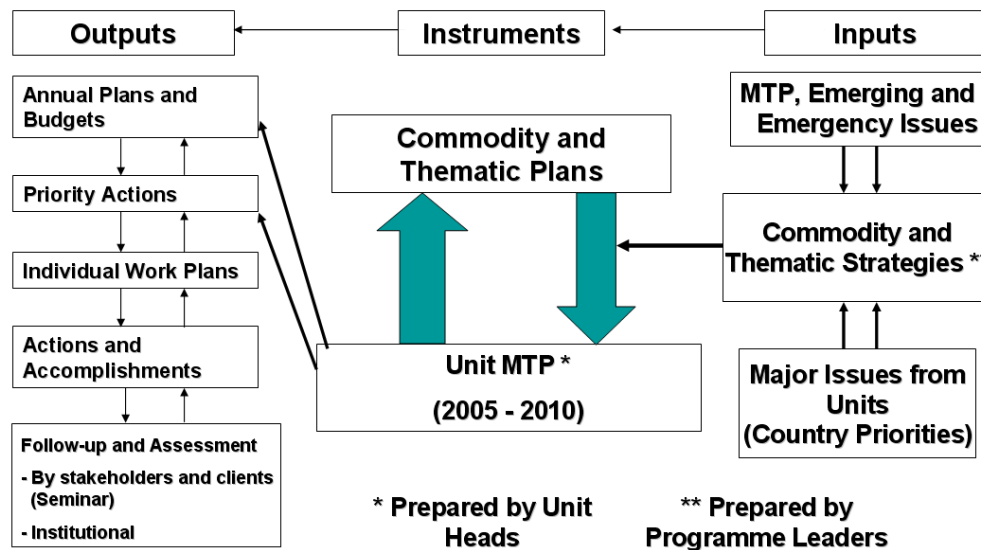


Figure 2B: Transparency and Accountability

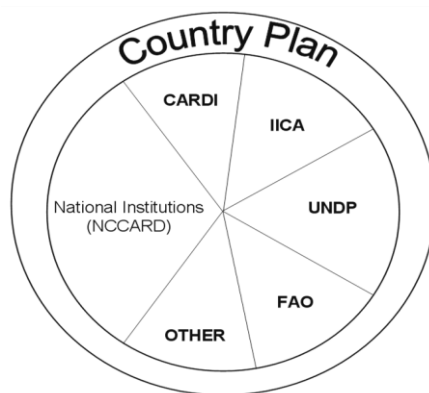


Figure 2C: Working Together (National Level)

The strategy followed involves:

- a. Continuous consultations with stakeholders, clients and strategic partners to develop programmes and report on progress of implementation as illustrated in (Figure 2C).
- b. The development of strategic synergies and partnerships especially in the conduct of its work programme as demonstrated in the Research and Development Chart (Figure 3).
- c. The use of, knowledge and appreciation of all components of the Value Chain with respect to the selected commodities. The Value Chain is shown in Figure 4, with the components in which CARDI is directly involved highlighted. This ensures relevance of CARDI's programmes and enhances the possibility of achieving meaningful, tangible and utilisable results.

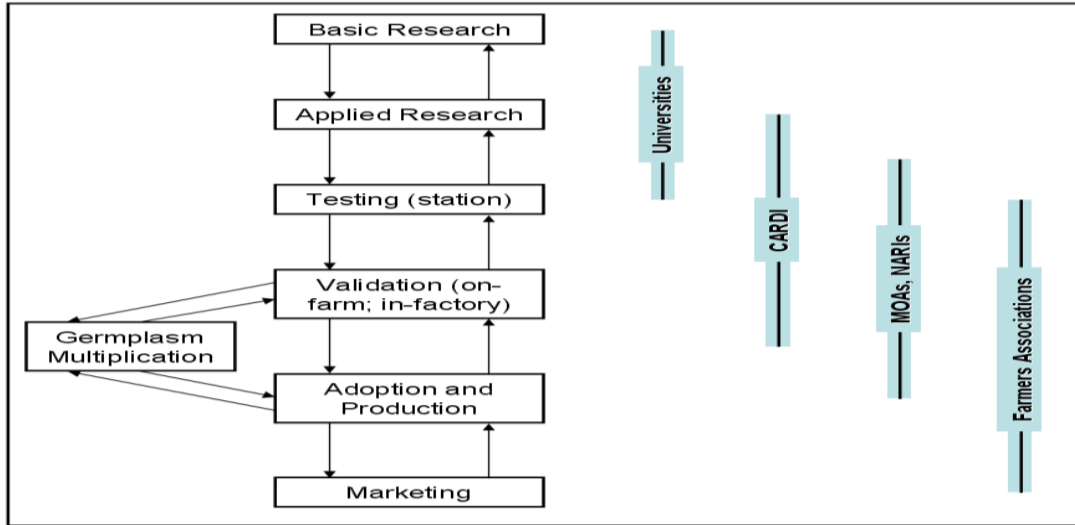


Figure 3: Research Development and Application Chain

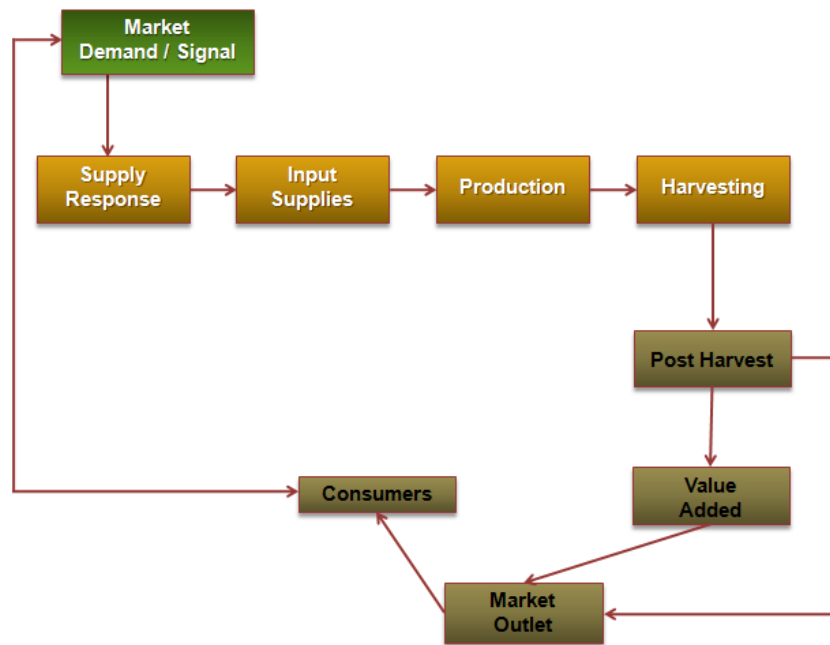


Figure 4: Commodity Development Chain

In addition, because of the lack of recognition of the importance of agriculture, in general and research and development in particular, there is

- a. Focus on a few commodities that are important to the CARICOM Region and will make an impact on its development. These are roots and tubers, cereals and grain legumes, hot peppers and small

ruminants and the relevant cross cutting Thematic Areas. At the individual national level, other commodities include dairy cattle and fruits e.g., pineapples and citrus and vegetables, e.g., tomatoes

- b. Emphasis on seeking and picking the “low hanging fruits”

This progress report is presented in the format of the MTP, that is, by Strategic Axes.

2. IMPLEMENTATION OF THE MTP

2.1 Strategic Axis 1: Development of Sustainable Industries

Strategic Axis 1 comprises two Focal Areas – (1) Science, Technology and Innovation and (2) Natural Resource Management. It allows CARDI to contribute to: (1) increased regional food security, food supply/food sovereignty and agro-industrialisation; (2) sustaining the environment under which food production occurs; and (3) sustaining post-disaster food supply.

2.1.1 Science, Technology and Innovation: Results contributing to increased regional food security, food supply/food sovereignty and agro-industrialisation

As stated earlier, our research activities take into consideration and are guided by the components of the Value Chain.

2.1.1.1 Commodity Development – Crops

Develop/improve, characterise and evaluate varieties and landraces of sweet potato, cassava, cereals (corn), beans and peas, and hot pepper for field productivity and value added products

Hot Pepper

- Currently, varietal improvement of hot peppers is in **Barbados** with three variants (two red and one yellow). In **Trinidad and Tobago**, stabilization of eight elite purelines is taking place.
- In **Dominica**, evaluation of yield and pungency of the 20 landraces of the local Bonda Ma Jacque hot pepper has begun.

Corn

- One hundred plus germplasm entries of corn from CIMMYT and a local seed house in **Belize** are undergoing evaluation.

Sweet Potato

- Sweet potato germplasm is being obtained from INIVIT of Cuba, the University of Puerto Rico and CIP to expand the production base. Forty-six accessions within the IPGRI/CARDI programme are being maintained in the Ministry of Agriculture, **Trinidad and Tobago**. The tissue culture laboratories in **St Vincent and the Grenadines** and the Scientific Research Council, **Jamaica**, are collaborating in the maintenance of in vitro plantlets.
- In **Antigua and Barbuda**, accessions are undergoing characterisation and evaluation for subsequent multiplication as planting material for farmers.
- Several varieties of **sweet potato** from **Barbados, Jamaica, St Kitts/Nevis, St Vincent and the Grenadines and Trinidad and Tobago** have been categorised as suitable for flour, fries and juices.

Produce breeder, nucleus and commercial seeds of the improved varieties and landraces

- CARDI **Belize** produced 8,100 kg commercial seed of soybean (*CARDI S-15 and CARDI S-89*) equivalent to 66 ha commercial soybean.
- Hot pepper seeds produced for commercial use.
- In order to ensure adequate supply of hot pepper seeds for farmers in the Region, a seed development and production strategy involving CARDI and its collaborators both for production and seed marketing has been prepared.

Multiply and distribute planting material for roots and tubers, for vegetables and tree crops

- Capacities to maintain and multiply planting material for fruit and food crops, including sweet potato, cassava, yam, several vegetables, pineapple and passion fruit have been established in **Grenada and St Lucia**.
- Approximately 1,450 lethal yellowing tolerant dwarf coconut seedlings distributed to farmers in **St Lucia**.

Develop and transfer production technology packages and financial profiles for the commercial production of the starches, grain legumes and vegetables

- A poster and brochure on sweet potato production (**Jamaica**) was produced for farmers.
- Investment profiles and postharvest protocols for hot peppers, dasheen, breadfruit, pumpkin, tannia, eddoes and ginger developed for **Dominica and St Lucia**. Farmers trained in the use of these tools.
- Eight pack house operators of the St. Lucia Marketing Board, **St Lucia** trained in postharvest handling of breadfruit, dasheen and hot pepper.

- Database of hot pepper farmers in **Trinidad and Tobago** is continually being populated. Over 500 copies of the document: “*Hot pepper production manual for Trinidad and Tobago*” are being used nationally and regionally.
- Extension and Quarantine Officers in **Dominica** and **St Lucia** trained in the detection of the Moko Disease of banana using the ELISA technique.
- The Asian Soybean Rust, *Phakospora pachyrhizi*, identified in **Belize** in 2006 as a serious disease of soybean was successfully controlled with fungicides, (Silvacur-Combi, Duett, Tilt and Amistar).

2.1.1.2 Commodity Development – Livestock

Develop/multiply and distribute improved breeds of sheep and goats

- In **Jamaica**, 80% of the goat herd at the Sam Motta station (SMDTC) has attained the target 87.5% breed purity of the base breeds (Alpine, Nubian and Boer). Fifteen improved breeding stock distributed to farmers.
- The stud buck service at the station was used by seven farmers to improve the offspring breed from 33 does.

Evaluate forage legumes and grasses for forage-based feeding systems development for livestock

- The response of ‘Mulato’ *Brachiaria* grass to different cutting intervals and fertiliser applications is being studied in **Trinidad and Tobago**. Recommendations will be available this year.

Collect baseline data to characterise the small ruminant industry and develop and transfer production technologies and financial profiles to industry stakeholders

- A Regional small ruminant survey of eight countries completed and analysed.

Evaluate cassava and soybean varieties and by-products for poultry and small ruminants feed

- Information provided to the Caribbean Poultry Association (CPA) in **Jamaica** and **Trinidad and Tobago** on improved varieties of cassava, available at CARDI **St Vincent and the Grenadines**. These have potential for use in poultry feed.
- In **Jamaica**, the pilot commercial CARDI feed produced average daily gains of 121.7 g in weaner goats compared with 135.0 g for a commercial feed. However, costs per kg weight gain were EC\$8.65 and EC\$17.42, respectively, indicating that the CARDI feed can contribute to reduced costs of production. The tests are continuing to obtain results on acceptable marketable weights at slaughter.

2.1.1.3 *Emerging Issues*

Protected/Undercover Agriculture

- Demonstration/validation of commercial production of vegetable callaloo *Amaranthus* using exclusion strategies for pest management is ongoing in **Jamaica** as a joint CARDI/MOA effort. Full cost-benefit analysis to guide the popularisation of the exclusion system is almost completed.
- Five priority areas were identified for action at a meeting in **Barbados** during 14-16 May 2008 on Regional Protected Agriculture Industry attended by CDB, IICA, FAO, CARDI, UWI, MOA-**Jamaica** and MARD-**Barbados**. These are research and development, cost-benefit analysis, training and capacity building, networking and coordination and standards and regulation. CARDI was assigned the lead role for research and development and networking and coordination. A subsequent meeting was held with IICA and IRTA (Catalan, Spain) to develop a joint project.

Organic Agriculture

- A review of CARDI's organic agriculture programme in **Tobago** was completed. Programme revamped to focus on a comprehensive sensitisation programme about organic farming and the development of community-based organic input supply systems.

Herbals

- Evaluation of commercial production of Cerasee (*Momordica charantia* L), Red sorrel (*Hibiscus sabdariffa*), Blackmint (*Mentha spicata*, syn *M. viridis*), Peppermint (*Mentha x piperita*) and Lemongrass (*Cymbopogon* spp.) in **Jamaica** ongoing.
- A survey of shado-beni cultivation in **Trinidad and Tobago** completed. Agronomic trials initiated.

2.1.2 **Natural Resource Management: Results contributing to sustaining the environment under which food production occurs and sustaining food supply, including post-disaster recovery**

2.1.2.1 *Support initiatives to manage invasive species that could pose threat to regional agri-food supply*

- CARDI Chaired the 2008 Annual Meeting of the Caribbean Invasive Species Working group (CISWG) held in Miami, Florida in July.
- As an output of the Caribbean Plant Health Directors meeting and with the support of USDA, CARDI is monitoring the status of invasive species in the Region through Dgroup list serves for Red Palm Mite, Palm Pest, Giant African Snail and Emergency Response.
- In August 2008, the presence of the Red Palm Mite established in **St Kitts**. CARDI, in collaboration with the Department of Agriculture and the media, started public education. The pest

is also found in other Caribbean countries, e.g., **Grenada, St. Vincent and the Grenadines and Trinidad and Tobago.**

- Efforts continued to coordinate the regional response to the Coconut Red Palm Mite. Developed a project proposal with CABI for funding. Advanced negotiations with the Commonwealth Secretariat and the Governments of India and **Trinidad and Tobago** for technical assistance from India.
- The Pink Hibiscus Mealy Bug (PHMB) was recently re-established in **Jamaica**. CARDI assisted in the determination that the parasitoid, *Gyranusoidea indica* Shafee, could be imported to enhance the diversity of the natural enemy complex.
- Survey in **Barbados** confirmed that CTV is not present on citrus in Barbados.
- Collaborated with Strategic Partners to agree on SPS measures for selected commodities identified for intra-regional trade. Elected to lead pest risk analysis for sweet potato.

2.1.2.2 Collaboration with climate change and disaster management agencies to develop and apply models for adaptability of varieties / breed types of selected commodities

In collaboration with the Caribbean Community Climate Change Centre (CCCCC) and the Caribbean Institute of Meteorology and Hydrology (CIMH).

- Regional professionals, including two CARDI staff members, gained knowledge and experience in assessment tools (including crop growth simulation models) and methodologies for studying climate change impact on the agricultural sector during a workshop in **Guyana**. Further training will be done in the third quarter of year.
- The development of a Regional Strategy for Climate Change and climate variability with specific relationship to agriculture is ongoing. Workshop to review draft scheduled for late 2009.

Resistance to drought and flood introduced as a characteristic for assessing the suitability of crop varieties.

2.1.2.3 Biotechnology Development for Priority Commodities

- Laboratory studies by CARDI, UWI and MARD on the DNA fingerprinting of the Barbados Blackbelly sheep is complete. The MARD could use the technology developed to select the purebred animals from its flock and start a true purebred foundation and breeding/multiplication flock.

2.1.2.4 Technical Systems & Services (Information, Marketing, Biometrics and other R&D services)

- A pragmatic balance has been developed between supporting CARDI's work programme and the work of the CTA Regional Branch Office for the Caribbean (RBOC). Thus:

- Technical information, industry reviews, and statistical data on the key commodities and themes identified, acquired and delivered to the CARDI research teams.
 - A Selective Dissemination of Information Bulletin (*SDI Bulletin*), an electronic publication that proactively provides staff with current information on topics of relevance to the Institute’s work programme, developed. This Bulletin (now tested) will soon be disseminated to stakeholders and clients.
 - Mounted booths at UWI AgriTECH Expo in **Trinidad and Tobago**, the **Jamaica** Denbigh Agricultural Show, the CWA in **St Vincent and the Grenadines** and the Agricultural Fair in **Cayman Islands** in April 2008, August 2008, October 2008 and February 2009, respectively.
 - CARDI played an active part in the development of the CTA/KIT/IICD ‘Smart Toolkit for Evaluating Information Products and Services’, the second edition of which was launched in **St. Lucia**.
- CIRAD, the OECS Secretariat, IICA, UNDP and UWI to develop a Forum that could, inter alia, bid for EU funds for development of activities within the agricultural and rural sectors of the ECS.
 - A “Coconut Production Guide” prepared to assist farmers in the establishment and production of the crop.
 - One hundred and twenty-five copies of a “Plantain Manual” were handed over to the Extension Unit of the Ministry of Agriculture, **Dominica**. The manuals will be used in the Plantain Expansion Programme.
 - Experimental/survey designs completed and data sets analysed by the Biometrics unit for the CARDI work programme, as well as for collaborators and students from UWI, UTT, NAMDEVCO, CRFM, Ministries of Agriculture, **St Lucia** and **Trinidad and Tobago**.
 - In response to request by Government of **Jamaica**, a visit by a team from NAMDEVCO of **Trinidad and Tobago** to **Jamaica** facilitated. The purpose was to enable discussion on the possibility of transferring the market information service from **Trinidad and Tobago** to **Jamaica**.

2.2 Strategic Axis 2: Development of Strategic Linkages

Strategic Axis 2 includes two Focal Areas, (1) Partnerships and Collaborative Initiatives and (2) Advocacy.

2.2.1 Results relating to Partnerships and Collaborative Initiatives

2.2.1.1 Support to Development of Regional Research and Development (R&D) Strategies

- Draft of Regional Agricultural (R&D) Strategy completed and circulated to key individuals and institutions for comments.

- Support to the CAPGERNET (as part of the PROCICARIBE Network) was provided through the securing of funding:
 - To prepare reports on the status of plant genetic resources for food and agriculture in **Dominica** and **St Vincent and the Grenadines**.
 - From the Global Crop Diversity Thrust Initiative for the regeneration of germplasm as follows: Cuba – Lima Bean, Guadeloupe - Yam; **Guyana** - Cassava; and **Trinidad and Tobago** – Sweet Potato.

2.2.1.2 Develop/Operationalise MOU's with key Institutions and Partners

Within the last year:

- MOUs and/or partnership agreements signed with:
 - The Caribbean Network of Farmers Organisations to enable CARDI's research to be farmer oriented.
 - Scientific Research Council of **Jamaica** to provide linkages to value added products.
 - CLAYUCA to support cassava research and development activities.
 - The Florida Association for Volunteer Action in the Caribbean and the Americas to obtain skilled and experienced professionals.
 - The International Fertilizer Development Centre to obtain access to new developments in the fertilizer process and use.
 - The Natural Resources Institute (NRI) to provide skilled expertise and to work together to secure funding from the European Union for a number of difference initiatives.
- MOUs are being negotiated with UWI (not only the Faculty of Science and Agriculture), CARICOM Community Climate Change Centre (CCCCC) and the Tobago House of Assembly.
- In 2007, CARICOM Secretary General initiated meetings with Heads of Community Organisations (SG/CHO). CARDI was appointed to Chair the Agricultural Cluster which had its first meeting on 2 July 2008. As a consequence, the subsequent SG/CHO meeting mandated the Agricultural Cluster to prepare a comprehensive project proposal relative to Food Security.
- In addition, CARDI has also arrived at an agreement with CATIE that a joint programme will be initiated in **Belize**. It is also actively developing programmes with the Chinese Academy of Agricultural Sciences (CAAS) and IRTA, the Catalonia Spain Research and Development Institute.
- Relationships with CCS, CDB, University of Florida, CTA and IICA considerably strengthened. With respect to the latter two, joint work programmes are being implemented. The joint initiatives with IICA are provided in **Table 1** with details of the project financing in Annex 2.

Table 1: Joint Initiatives with IICA

Projects	Other Joint Activities
Enterprise/Industry Development Undercover Systems Root Crops Livestock New Products	<ul style="list-style-type: none"> • Both CARDI and IICA sit on a number of regional committees such as, the Committee of Lead Agencies, the Secretariat for the Alliance for Sustainable Development of Agriculture and the Rural Milieu and two of its components, CABA and CACHE, Steering Committee for CARDI/IICA Programme, the Regional Institutional meeting to discuss the Food Crisis, Steering Committee of the Caribbean Week of Agriculture • CARDI, as Coordinator of the agricultural cluster of CARICOM Institutions, invited IICA to participate. • CARDI and IICA sit on national committee of National Co-ordinating Committee for Agricultural Research and Development (NCCARD) where they exist.

- In 2007, CARICOM Secretary General initiated meetings with Heads of Community Organisations (SG/CHO). CARDI was appointed to Chair the Agricultural Cluster which had its first meeting on 2 July 2008. As a consequence, the subsequent SG/CHO meeting mandated the Agricultural Cluster to prepare a comprehensive project proposal relative to Food Security.
- In addition, CARDI has also arrived at an agreement with CATIE that a joint programme will be initiated in **Belize**. It is also actively developing programmes with the Chinese Academy of Agricultural Sciences (CAAS) and IRTA, the Catalonia Spain Research and Development Institute.

CARDI is a member of the Global Water Partnership-Caribbean (GWP-C) and attended the Annual Meeting of that body in **Guyana**. A CARDI proposal to do an inventory of water resources in the Caribbean is being considered by the Steering Committee of GWP-C.

2.2.1.3 Consolidate and Expand Membership Base of CARDI

- **Cayman Islands** officially opened in the second half of 2009.

2.2.2 Results Relating to Advocacy

2.2.2.1 Develop/Operationalise Strategies (Media, etc)

- CARDI was the Caribbean Liaison for the Caribbean Regional Kick Off Workshop held in April 2008, in Montego Bay, **Jamaica**, as part of the EU-ACP All Agricultural Commodities Programme.

- CARDI's position as the Caribbean Coordinating Agency for the EU-ACP All Agricultural Commodities Programme was confirmed at the Medium Term Review Workshop of that programme at a two day workshop in Brussels in May.
- In association with the Caribbean Examination Council (CXC), the first Annual CARDI Award was given to the most outstanding student at the Agricultural Science Examination.

2.2.3 *Promotion of Research and Development for the "New Agriculture"*

- Three very well received public lectures were held in **Trinidad and Tobago** on the Effects of the EPA on Agriculture, Climate Change and Agriculture, and the Financial Meltdown, the Food Crisis and the Way Forward for Agricultural Research in May and August 2008, and March 2009, respectively.
- CARDI initiated and co-hosted (with CDB) a meeting of institutions involved in Agriculture in the Region on their response to the Food Crisis at CDB in **Barbados** on 2 May 2008. The results of this meeting led to strategies, including a priority list of commodities that were presented to the CDB / IDB Workshop in **Barbados** on 16 June 2008.
- CARDI made presentations in July on its 2008-2010 MTP and the Institute's expanded role in the development of the agriculture sector in the Caribbean to key institutions in July 2008 in:
 - Holland and Belgium, viz, CFC, CTA, EU-Divisions of Development and Science and Technology, ACP Secretariat, University of Wageningen, and Caribbean Ambassadors to the EU.
 - Uruguay to the FORAGRO meeting that included R&D institutions in the Americas to the CGIAR system.

2.2.4 *Publications*

- The CARDI Annual Reports 2007/2008 and Highlights for each Country Unit completed for publication.
- One issue of CARDI Update was published.
- One edition of CARDI Review was published.
- Three Factsheets, on Hair Sheep Management, Introducing Mulato and Dwarfing Tall Golden Apple in **Grenada** were completed.
- The Publication and Seminars Committee has approved 11 publications for 2009; seven of these have been published and include CARDI documents as well as articles in Journals and other international media.
- Sixteen Press Releases issued for the period.

- Eight scientific presentations were made by the Institute’s professionals, two to the CFCS meeting in July and two to the TTABA Workshop on Sweet Potato also in July and four to UWI’s 60 years Workshop in early December.

2.2.5 Participation in Exhibitions

- The Institute participated in an Institutional Exhibition, such as, UWI Agri Tech National Agricultural Expo and National Exhibitions, e.g., **Dominica, Jamaica and St. Kitts.**
- The Institute, as an active member of the Alliance Secretariat, took part in the 2007 Caribbean Week of Agriculture in **St. Vincent and the Grenadines.**

2.2.6 Development and Management of Website

- A new, cleaner, richer and more dynamic CARDI website (www.cardi.org) was launched and is being continuously updated.

2.3 Strategic Axis 3: Institutional Strengthening

In Strategic Axis 3, the Institute is pursuing (1) Income Generation and (2) Capacity Building as its focus.

2.3.1 Results Relating to Income Generation

2.3.1.1 Identification and Prioritisation of Potential Financial and Human Resource Donors

- Discussions initiated and/or ongoing with a plethora of potential donors. However, these efforts are hindered particularly in Europe because of a lack of a definitive statement from Governments on the importance of agriculture to sustainable development in the Region.
- The efforts to obtain resources for CARDI’s technical programme are presented in **Annex 3.** The total is EC\$56.2M of which approximately EC\$20.1M has been approved and EC\$35.1M is under negotiation.

2.3.1.2 Consultancy Services and Technical Assistance

- The Institute has provided/is providing technical assistance/consultancies to four initiatives as shown in Table 3. The total revenue obtained is approximately EC\$389,000.

2.3.1.3 Project Development

During the period the efforts of the Institute principally targeted the preparation/development of projects for the mobilisation of resources. Some of which were done in collaboration with international agencies such as

NRI (United Kingdom) and IRTA (an international research institute based in Catalina, Spain) for joint applications of Funds.

2.3.1.4 *Project Monitoring and Evaluation*

- Systems for the monitoring and evaluation of projects and individual performances are being completed. Activities involve training in project management software and the formulation of reporting formats

2.3.1.5 *CARDI Commercial Production*

- The guidelines for commercial production activities by the Institute have been completed and are being introduced in 2009. These guidelines separate research activities that provide income as a by product and activities that are strictly 'commercial' in nature.

2.3.2 Results Relating to Capacity Building

2.3.2.1 *Pool of Experts/Centres of Excellence*

- Commodity and Thematic teams developed and a Leader identified for each team. Strategies for each area being developed. The next step is to link with the respective teams of our Strategic Partners so as to develop critical scientific masses to be of benefit to the Region.

2.3.2.2 *Training*

- Six members of staff supported to undertake training at University or in service or vocational institutions.

2.3.2.3 *Performance Management*

- The process and documentation for individual performance management, that is linked to the CARDI Work Programme is being finalised. It will be implemented in 2009.

2.3.2.4 *Reward and Recognition*

- The Chairman's Award for Excellence has been established with the development of the Guidelines. For 2008, there was one Award in the Technical staff category.

2.3.2.5 *Definition of Core Values*

- The documentation defining institutional core values will be prepared but in the interim standardised uniforms, identification cards, business cards, logo and corporate stationery have been institutionalised.
- A CARDI Flag developed and sent to each Office.

2.3.2.6 Finance

- The Audited Accounts for CARDI for 2006, 2007 and 2008 were completed during the period.
- Negotiations are continuing to allow CARDI to have one major Banker to service all CARDI countries and optimise the interest earned from our scarce cash resources.
- Government contributions over the period 2006 to 2008 averaged 109% and reflected the drive to recover arrears of contributions. CARDI's experience in previous years was the receipt of 90% of budgeted contributions.
- Our net annual deficit on CORE operations fell from US\$0.83M in 2006 to US\$0.55M in 2008 (US\$0.78 in 2007), reflecting cost-saving measures.

2.3.2.7 Administration

- Draft policies developed / revised for casual labour, transfers and disciplinary action as part of the process of the revision of the HR Manual.

Annex 1: Hierarchical Representation of the MTP

Strategic Axis (3)	Focal Area (6)	Priority Area (14)	Programme (33)	
1. Development of Sustainable Industries	1.1 Science, Technology and Innovation	1.1.1 Technology Generation and Transfer	1.1.1.1 Commodity development – Crops	
			1.1.1.2 Commodity development – Livestock	
			1.1.1.3 Emerging issues	
			1.1.1.4 Soil and water management	
			1.1.1.5 Development of seed and seedling banks	
			1.1.1.6 Technical systems and services (information, marketing, biometrics and other R&D)	
	1.2 Natural Resource Management	1.2.1 Invasive Species	1.2.1.1 Support to invasive species initiatives	
			1.2.2 Climate Change	1.2.2.1 Coordinated programmes with climate change and disaster management agencies
				1.2.3 Biotechnology
			1.2.3.1 Development of biotechnology for priority commodities	
2. Development of Strategic Linkages	2.1 Partnership and Collaborative Initiatives	2.1.1 Build and Maintain Relationships	2.1.1.1 Support to development of Regional R&D strategies	
			2.1.1.2 Develop/Operationalise MOUs with key institutions and partners	
			2.1.1.3 Consolidate and expand membership base of CARDI	
			2.1.2 Establish “Friends” of CARDI	
	2.2 Advocacy	2.2.1 Re-branding and promotion of CARDI	2.2.1.1 Development of strategies (media, etc)	
			2.2.1.2 Promotion of R&D for the “New” agriculture	
			2.2.1.3 Publications	
			2.2.1.4 Participation in exhibitions	
			2.2.2 Website Development	
			2.2.2.1 Development and management of website	
3. Institutional Strengthening	3.1 Income Generation	3.1.1 Resource Mobilisation	3.1.1.1 Identification and prioritisation of potential financial and human resource donors	
			3.1.1.2 Project development	
			3.1.1.3 Project monitoring and evaluation	
			3.1.2 Revenue Generation and Technical Assistance	3.1.2.1 Consultancy services/technical assistance
				3.1.2.2 CARDI commercial production
			3.2 Capacity building	3.2.1 Human Resource Development
	3.2.1.2 Leadership/Succession planning			
	3.2.1.3 Training			
	3.2.2 Staff Motivation			
	3.2.2.1 Performance management			
	3.2.2.2 Reward and recognition			
	3.2.3 Cultural Change			
	3.2.3.1 Definition of core values			
	3.2.4 Organisation Development	3.2.4.1 Finance		
3.2.4.2 Administration				
3.2.4.3 Internal networking				
3.2.4.4 Knowledge management				

Annex 2: Joint Project Activities CARDI/IICA 2008/2009

Number/Location	Title	Amount Allocated Within This Project Portfolio (US\$)
Group A: Enterprise/Industry Development		61,427
A1. Trinidad and Tobago	Improving farmer livelihoods from the exploitation of commercially viable herbs (Shado beni and lemon grass)	19,000
A2. St Lucia	Revitalisation of fresh coconut water industry	7,500
A3. Trinidad and Tobago	Enhancing information and communication for food security	20,000
A4. Jamaica	Support to the development of a herb, spice and medicinal plant industry in Jamaica	14,927
Group B: Undercover Systems		118,500
B1. Dominica	Increasing the use of greenhouse technologies	40,000
B2. St Vincent and the Grenadines	Development of seedling production	7,500
B3. St Kitts/Nevis	Development of commercial greenhouse production systems	20,000
B4. Jamaica	Development of suitable ventilation systems for greenhouses in 2 agro-ecological zones	40,000
B5. St Lucia	Year-round open air and undercover vegetable production	11,000
Group C: Root Crops		42,925
C1. Jamaica	Determination of the most appropriate method for mass producing planting material for sweet potato production	3,000
C2. St. Lucia	Production of root crop planting material	20,000
C3. Jamaica	Sweet potato improvement	19,925
Group D: Livestock		65,000
D1. Bahamas	Improvement of pasture and herd management of sustainable quality meat production of sheep and goat for the tourism market	25,000
D2. Grenada	Improve goat rearing capacities	40,000
Group E: New Products		130,000
E.1 Regional	Strengthening market access/opportunities for SMEs in the Caribbean Agri-Food industry	50,000
E.2 Regional	R&D Coordination CARDI Strategy	24,000
E.3 Regional	CHBA	56,000

Annex 3: Identification and Prioritisation of Potential Financial and Human Resource Donors/Collaborators

Source of Funds	Amount (ECS'000)		
	Approved/ In Progress	Awaiting Approval	Total
Donors / Collaborators			
CARICOM/Japan			2,476
Commodity Development (Livestock)	154		
Development of Seed & Seedling Banks	270		
Emerging Issues		2,052	
Common Fund for Commodities & EU			15,318
Commodity Development (Crops)	5,329	2,848	
Undercover Production Systems	5,427	1,714	
IICA/CARDI			1,059
Commodity Development (Livestock)	176		
Commodity Development (Crops)	664		
Undercover Production Systems	65		
Strategic Linkages/R&D Co-ordination	154		
Petroleum Fund			33,800
Retooling	4,100		
Emerging Issues	2,700		
Endowment Fund	1,300	25,700	
CAPERGENET:			108
Development of Seed & Seedling Banks	108		
CTA:			190
Technical Systems & Services	190		
UNDP - CARDI/IRTA/IICA:			1,015
CARINETQ		1,015	
Government of Taiwan:			1,024
Protected Agriculture		1,024	
Pan American Development Fund:			325
Planting Material for Disaster Mitigation		325	
CDB:			405
Production and dissemination of root crop planting material		405	
Belize (Toledo District):			100
Red SICTA	100		
Consultancy Services & Technical Assistance			389
Chaguaramas Development Agency	78		
C-TEP (North South Institute)	50		
Belize Rural Development Project	261		
TOTAL	21,126	35,083	56,209