IICA COUNTRY STRATEGY
JAMAICA

2014-2108 Medium Term Plan

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CONTENTS

Glossary of Partner Organization

ACP	Agricultural Competitiveness Program
BB	Banana Board
Bodles	Bodles Research Station, MOAF
BSJ	Bureau of Standards Jamaica
BWA	Bureau of Women's Affairs
CABI	Centre for Agricultural Biosciences International
CARDI	Caribbean Agricultural Research and Development Institute
CASE	College of Agriculture Science and Education
CONACYT	Consejo Nacional de Ciencia y Tecnología
CIB	Coffee Industry Board
CIBJ	Coconut Industry Board Jamaica
CICY	Centro de Investigación Científica de Yucatán
FAO	Food and Agriculture Organization
IAS	Invasive Alien Species
IRAP	International Research Applications Project
J4-H	Jamaica 4-H Clubs
JAS	Jamaica Agriculture Society
JBDC	Jamaica Business Development Corporation
JDDB	Jamaica Dairy Development Board
JEA	Jamaica Exporters Association
JNRWP	Jamaica Network of Rural Women Producers
JPFA	Jamaica Pig Farmers Association
JSIF	Jamaica Social Investment Fund
JYBT	Jamaica Youth Business Trust
LIFE	Local Initiative for the Environment
MIIC	Ministry of Industry, Investment and Commerce
MOAF	Ministry of Agriculture and Fisheries
MOH	Ministry of Health
NSFC	National Food Safety Committee
NCSU	North Carolina State University
PCA	Pesticide Control Authority
RADA	Rural Agricultural Development Authority
SDC	Social Development Commission
SIDS	Small Island developing State/s
TPDCo	Tourism Product Development Company
USDA	United States Department of Agriculture

Introduction - What is the IICA Country Strategy (ICS)

The IICA Jamaica strategy (IJS) comprises all technical cooperation activities delivered and organized under the four instruments of action (Flagship Projects, Externally Funded Projects, Rapid Response Actions, FonCT) for technical cooperation considered in the 2014-2018 Medium Term Plan.

The ICS will respond to requests from the Member States, recognizing the heterogeneity of the hemisphere and the specificities of each region or country, and attempting to reflect the articulation and coordination of IICA's work at the hemispheric, regional, multinational, and national levels, thereby strengthening the concept of "a Single IICA."

The ICS will adopt a renewed vision of a regional dimension that, although rooted in current structures, should evolve towards multinational cooperation models and will promote greater articulation among actors in the agricultural chains and the rural areas.

The ICS will define the areas in which IICA should concentrate its efforts and capabilities by means of technical cooperation processes framed by the four proposed instruments of action. The topics will be selected jointly with the relevant actors in country who are involved in the agricultural sector, including the private sector, academia and the public sector over a period of 4 years.

The ICS is the maximum expression of results-based management; these results are expressed in "deliverable products" that IICA must show at the end of the period. All technical cooperation projects or activities that are carried out annually in the member countries, regardless of the origin of the resource and should lead to the achievement of the objectives defined in the Strategy responding to the 11 Contributions outlined in the MTP. Once a year, a progress report on the ICS should be given to the national authorities and other counterparts.

Methodology

Stakeholder needs were identified through stakeholder consultations, bilateral consultations with the Permanent Secretary of the Ministry of Agriculture and Fisheries (MOAF), written requests sent to the office for technical cooperation from private and public sector entities, IICA headquarters and requests made directly to Dr. Victor Villalobos and in consultation with partners from ongoing or longstanding projects.

The majority of the current suite of projects was developed in response to direct requests from stakeholders for said technical cooperation (see annexes). Projects are also identified through leveraging international partner funding to address needs expressed by the MOAF while at the same time facilitating the partnering institution's achievement of their goals. The partnership with the International Research Applied Project (IRAP) to develop an Early Warning System for Coffee Leaf Rust is a good example. Another is presented in Annex 11 where the GIZ CATS (Caribbean Aqua Terrestrial Solutions) Program is requesting facilitation of their new cashew Initiative.

A comprehensive review was undertaken of the Government of Jamaica Agriculture Sector Plan in their Vision 2030 document and the MOAF 2013 – 2016 Strategic Business Plan. Both documents are used to guide the selection of activities to be undertaken under the ICS to align our IJS with the country's long term national development plan.

IICA Country Strategy

I. Analysis of the Context: General State of the Agricultural Sector in Country

Jamaica's agricultural sector, which covers agriculture, forestry and fisheries, remains an important contributor to GDP, employment, foreign exchange earnings and rural life in Jamaica. It is comprised mainly of small and medium sized farmers with 5 hectares or less, who account for 85.6% of total agricultural holdings. The sector employs approximately 20% of the total labour force (1.1 million) which averages 202,000 persons per annum (STATIN).

The average age of a farmer according to the latest survey conducted by the MOAF is 55 years. The data also shows that the age group of farmers in the sector can be disaggregated as follows; 18-25 (21%), 35-54 (43%) and 55-75 (26%)[1]. Women involved in agriculture accounts for approximately 30% of the overall agricultural labour force.

Agriculture's contribution to Gross Domestic Product (GDP) over the four-year period 2010-14 averages 6.7%. This figure captures output from primary production only and excludes outputs from the foods manufacturing sector such as agro-processing. Since the introduction of trade liberalization measures in the late nineties, Jamaica's agricultural sector has suffered great setbacks with some key subsectors underperforming.

The sector comprises crops and livestock subsectors. Crops are categorized as traditional and nontraditional. Traditional crops include sugar cane, cocoa, coffee, citrus, banana and pimento. These are crops that were previously cultivated during the colonial era. Over the years there has been a downward trend in the production of these crops. This is due mainly to the erosion of preferential treatment from the Europe Union. Bananas for example have shown an 18% decline over the period 2009-2013 down from 45,334 tonnes to 37,211 tonnes.

The sector has been slow in diversifying its outputs into value added products and relies heavily on primary output. In recent years a few companies have made attempts at developing value added products, such as banana chips, coffee and liquors from sugar cane. Some of the plantations have also transitioned into agro-tourism where they provide farm tours for local and foreign visitors.

[1] Census of Agriculture 2007-Prliminary Report, STATIN

The nontraditional agricultural sub-sector includes the domestic crop production which comprises the legumes, vegetables, condiments, fruits, cereals, roots and tubers. The MOAF has placed a lot of emphasis on this sub-sector, as it provides food for local consumption and quantities that are exported to Diaspora markets in Canada, United States of America and Europe. Figures from STATIN have shown that there is a steady increase in domestic production over the years. For the period 2009-2013 there has been a 25% increase in overall domestic production up from 489,672 tonnes to 614,912 tonnes. The farm gate price index also showed an increase of 17% for the same period up from J$141.1 to J$165.3.

The livestock and dairy subsector has also shown decline in production over the years resulting in less animals being slaughtered. For the five-year period 2009-2013, the data shows a 3.4% decline in the number of cattle slaughtered from 21,009 heads down to 20,700. The decline in animal production is due to shocks from past trade liberalization polices and the extent to which the domestic market had opened up to imports. The incidence of a number of diseases such as the bovine spongiform encephalopathy (BSE) in the international market impacted negatively on local demand, resulting in contraction of the sector. There is consolation however, as there has been a 10.6% growth in the number of goats slaughtered, up from 805 heads in 2009 to 1,144 heads in 2013.

Jamaica continues to experience a negative trade balance contributed partly by a high food import bill of US$669.7 million as reported by STATIN for 2013. Total food exports from Jamaica for the year in question was $174,809 up from $164,409 in 2012, reflecting a 6% increase in exports from both traditional and nontraditional sectors[2]. In recent years the import policy has changed towards one of import substitution. Imports are only allowed into the island if there is consensus among the Ministry and other industry players that there is scarcity of a particular commodity.

Additionally, other challenges low productivity, use of inappropriate technologies, praedial larceny, high cost of capital, inadequate research and development have also contributed to the overall decline in output adversely impacting the sector's contribution to GDP over the past years.

The sector continues to experience fluctuations in growth owing to adverse climatic conditions including longer periods of drought and heavy rainfall. In 2013 the island experienced severe drought for the first six months resulting in recorded declines in the first two quarters of 11.3% and 6.3% respectively. The domestic food crop sector also showed similar patterns of decline, 12.1% and 5.5% respectively[2].

The Agricultural Development Bank of Jamaica (ADBJ) has recorded fluctuations in the total value of loan allocations to agricultural industry over the period 2009/2013. In 2010 the lowest allocation of J$29 million was reported, whilst the highest disbursement of J$2.1 billion was recorded in 2013. The poultry and sugar sub-sectors had the highest allocations in 2013; J$1.1 billion and J$344 million respectively.

As a small island developing state (SIDS) Jamaica is impacted by natural disasters such as hurricanes, floods, landslides, extended droughts, heavy rainfall. Agricultural production is dependent to a great extent on rainfall, domestic production is conducted on

[2] Economic and Social Survey Jamaica (2013) - STATIN

slopes greater than or equal to 20 degrees. According to a 2013 report by the IDB and the Food and Agriculture Organization (FAO) on the impact of climate change in Jamaica, between 1994 and 2010 the loss to agriculture as a result of climate change can be estimated at J$14.4 billion[3]. The MOAF reported that during the prolonged drought in quarters two and three of 2014, approximately 2,190 hectares of crops valued at J$954 million was lost or damaged due to drought and fires. This impacted some 18,309 farmers across the drought stricken areas[4].

The IDB/FAO Report further stated that, on average the impact of major climate extremes on agriculture accounted for 20 percent of the total impact on the country. There have been increases in temperature of 0.6˚C or an average rate of 0.14˚C. Since 1995 there has been an increase in Tropical cyclones, especially categories 4 and 5 hurricanes. Additionally, according to the Report, the projections of mean annual rainfall from various models show a decline in rainfall for Jamaica.

II. International Vision and Hemispheric Trends in Agriculture and Rural Life

As the region endeavors to become food secure and take advantage of opportunities presented by an ever growing global demand for nutritious food, one of the greatest challenges to the Agricultural sector for SIDs is competition from imports resulting from trade liberalization and removal/expiration of special trade agreements. SIDs struggle to achieve economies of scale to adequately mechanize operations for improved cost efficiency for all foods produced in the Caribbean. Further, mechanization requires costly capital inputs and with high risks which makes the sector in the Caribbean not particularly attractive to Foreign Direct Investment and access to finance still out of reach for the majority of farmers in the region. This coupled with need to improve productivity of agricultural systems in the Caribbean limits severely growth and investment in the sector.

In the Caribbean, the high cost of energy and inputs such as land and agricultural equipment, Climate Change resulting in more severe weather events (hurricanes, fronts leading to flooding and drought leading to fires) and higher losses to production systems against a backdrop of an aging farmer population with traditional practices of food production which results in low earning potential makes the Agricultural sector unattractive to Youth as a career option. There is an urgent need for the modernization and diversification of food production systems to boost productivity and profitability, attract Youth for succession planning, achieve food and nutrition security and improve rural life in the Caribbean. Efficient use and management of the soil and water resources in the region are intrinsically linked to accomplishing the afore mentioned goals.

At the production level use of inappropriate or old crop varieties and animal genetic stock that easily succumb to pests and diseases, arrival of new pests and diseases as Invasive Alien Species (IAS) and Praedial Larceny continue to cripple the Agricultural sector in the Caribbean. Further a lack of a value chain and value added approach severely impedes

[3] Climate and Jamaica – FAO/IDB Report (2013)
[4] JIS/MOAF Ministerial Statement on the Effect of the Drought on Schools and Agriculture - 2014

growth of the Agricultural sector and minimizes opportunities for employment in Rural Communities in the Caribbean.

On the national front, a vision for the Jamaican agricultural sector in response to hemispheric trends has been articulated in the Agriculture Sector Plan, which was created as part of the country's long term national development plan – Vision 2030. The vision for the sector is "to ensure the dynamic transformation of the Jamaican agricultural sector through a sustained, research-oriented technological, market-driven and private sector-led revolution, which revitalizes rural communities, creates strong linkages with other sectors and emphatically repositions the sector in the national economy to focus on production of high- value commodities and contribute to national food security."

The Ministry of Agriculture and Fisheries' 2013 – 2016 Strategic Business Plan outlines programmes that seek to modernise the agricultural sub-sector, expand the extension services, introduce and expand the application of technology, strengthen farmer education, improve production and productivity through targeted and focused intervention in specific crops production, infrastructural development, value chain development, greater use of market intelligence, as well as renewed emphasis on research and development with a strong focus on value-added.

Against the background of the country's National Development Plan Vision 2030 and various plans to rationalise and modernise the public sector, the Ministry has identified the development of the following eight policies as priorities over the medium term.

1) Animal Health Policy: seeks to develop a coordinated, sustainable and internationally compliant animal health and welfare system;
2) Food Safety Policy: seeks to implement programmes that promote high standards of food hygiene and maintain systems of surveillance and control to ensure compliance with those standards;
3) Banana Policy: provide a platform for the restructuring and re-orientation of Jamaica's banana industry in light of the decline of the export banana sector;
4) National Organic Policy: will encompass food and farming systems, accreditation of certification bodies, and development of national organic standards and legislation which govern the production and trade of organic food;
5) Food and Nutrition Policy: will define the country's food and nutritional goals and guide the country's agricultural and food systems to meet those goals;
6) Agricultural Land Utilisation Policy: seeks to ensure environmentally sustainable use of agricultural land resources; and conserve, protect and manage forest lands so as to lead to sustainable economic and social benefit;
7) Policy Framework and Strategic Plan for Sustainable Fisheries Development in Jamaica: seeks to improve the institutional capacity and current management practices in the fisheries industry and mitigate further deterioration in the resource base of capture fisheries;
8) Plant Health Policy: seeks to establish a coordinated, sustainable and internationally compliant plant health system that enhances Jamaica's plant health status and promote consumer, plant and environmental health and food security.

III. Challenges and Opportunities for Agriculture

The Jamaican agricultural sector has experienced periods of growth and decline over the past decade and continues to face several challenges that hinder sustained development of the sector. The main challenges, as outlined in the Agriculture Progress Report 2009 – 2012 for Vision 2030, are listed below:

1) Declining competitiveness of agricultural production, as manifested in declines in some export sub-sectors and rising imports, due to: the small size of landholdings, high cost of inputs, praedial larceny, and limited application of modern technology
2) Limited staffing and resources for extension services
3) Gaps in key infrastructure, including: inadequate maintenance of feeder roads, inadequate irrigation works, and lack of sorting, grading, packaging and storage facilities
4) Weaknesses in marketing, including: high levels of informality in marketing and distribution channels, limited information services, and relatively weak linkages to other economic sectors, industries and non-traditional export markets
5) Aging farmer population
6) Loss of agricultural lands to urban settlement and housing development
7) Limited capacity for research and development
8) Environmental issues including: soil erosion from over-cultivation and inadequate soil conservation techniques in hillside farming, use of chemical fertilizers, impact of natural hazards, and deforestation resulting from clearing of hillsides, illegal settlements, monoculture farming and uncontrolled harvesting of trees.

Despite these challenges, the agriculture sector has shown considerable resilience as evidenced by the sector's ability to bounce back from periods of difficulty. In fact, the agriculture sector is being promoted as a key growth sector in the economy and is seeking to continue to attract private sector investment. In recent years, the government has divested several sugar estates to local and overseas private companies. Additionally, the Agro Parks are included in the country's International Monetary Fund agreement as one of the country's flagship projects to grow the economy. The sector can contribute significantly to increased employment and earnings in rural communities that are not likely to be touched by other sectors of the economy. A major opportunity for the sector will be the ability to produce for new export markets and to replace current imports where possible.

The Ministry has commenced work on several projects and programmes that are considered priority actions or opportunities in the 2013-2016 medium term, as outlined in the Ministry's Strategic Business Plan for the period. The major actions are listed below.

1) Development of Agro Parks: Agro parks are production zones for targeted crops with supporting infrastructure (irrigation, post-harvest etc) and technical services. The Agro Parks are being implemented under project funded by the Inter-American Development Bank (IDB) and European Union, and executed by the Agricultural Competitiveness Programme and Agro-Invest Corporation respectively.
2) Competitiveness Coffee Enterprises Programme: This programme seeks to expand acreages under production and increase the competitiveness of coffee enterprises.

3) European Union Banana Support Programme (EUBSP): The programme seeks to expand the acreage of banana under cultivation and increase banana production, as well as reducing the importation of banana products.
4) Diversification of Caribbean Livestock through Small Ruminants Production: Seeks to increase and diversify small ruminant production.
5) Redevelopment of the Dairy Sector: Seeks to encourage increased financing of investments in the dairy industry, expand the production of dairy/ livestock, increase annual production of milk, and increase research and development in the sector.
6) Redevelopment of Fisheries Sector: This programme comprises the modernisation of the fisheries division (inclusive of the above-mentioned policy framework), development of the aquaculture sub-sector, and development of value-added fisheries products and the business models to support exportation of fisheries products.
7) Tumeric Industry Resuscitation Project: Expanding the production of turmeric for the export market
8) Ginger Resuscitation project: Expanding the production of ginger to commercially viable levels for export markets
9) Rationalisation of Commodity Boards: The aim is to establish a regulatory agency for all commodities and formulate a Commodities Development Plan
10) Strengthen the Marketing of Agricultural Products: The overall marketing thrust involves greater penetration of export markets (CARICOM and new markets), increased consumption of local production, integrating the market chain, strengthening linkages with other sectors, and strengthening marketing information systems
11) Expansion of irrigation infrastructure utilising modern approaches to improve efficient use of irrigation services: seeks to increase the acreage of irrigable land to 1,700 hectares of land under irrigation.
12) Development and design of programmes guided by GAPs, GMPs: Involves the adaptation and application of sector and trade related standards.

IV. Needs and requests for technical cooperation and capacity building

Project No.	Project Short Title	Demand /Need from Consultations	Request from	Contribution	2014-2018 Instrument for Technical Cooperation	Component: Activities: Expected Results/Products	Summary of objectives	Partners	Months
	Project Lead: Elizabeth Johnson								
1	Developing Plant protection Curriculum in agricultural schools	Need	Articulated by PS of MOAF	3	CSAC	C2:A.2.1.3.1:ER2.1-P2.1.3	To strengthen extension services provided to growers in Agro parks for export markets	CONACYT, CABI, CASE, RADA,	12
2	Support for Local Livestock Sectors	Demand	Minister of MOAF to DG	2	ExtFin CSAC	C2:A.2.1.3.1:ER2.1-P2.1.3	To establish Hybrid Corn and Sorghum Trials	JDDB, Bodles, Pioneer	24
3	Development of the Jamaica Orange Flesh Sweet Potato Industry - Execution of IICA/ACP General Agreement 30 Sep 2013 - Agribusiness and commercialization	Demand	ACP	2 & 8	CSAC	C2:A.2.1.3.1:ER2.1-P2.1.3	To establish Sweet potato clean seed programme	ACP, Bodles, NCSU Hort Science	24

Project No.	Project Short Title	Demand /Need from Consultations	Request from	Contribution	2014-2018 Instrument for Technical Cooperation	Component: Activities: Expected Results/Products	Summary of objectives	Partners	Months
3	Development of the Jamaica Orange Flesh Sweet Potato Industry - Execution of IICA/ACP General Agreement 30 Sep 2013 - Agribusiness and commercialization	Demand	ACP	2 & 8	CSAC	C2:A.2.1.3.1:ER2.1-P2.1.3	To improve and promote Sweet potato good agronomic practices	ACP, RADA, NCSU and LSU Extension Programs	48
		Demand	ACP	10	CSAC	C2:A.2.1.3.1:ER2.1-P2.1.3	To establish Sweet potato Post harvest systems	ACP, Spanish Grains Storage, NCSU	24
		Demand	ACP	4 & 5	CSAC	C2:A.2.1.4.1. ER2.1-P2.1.4	To establish Jamaica Sweet Potato Commission	ACP, RADA, Agro park growers, Spanish Grains Storage	36
4	Building capacity for the commercial production of orange flesh sweet potato varieties in the Agro park system for export - Execution of IICA/ACP General Agreement 30 Sep 2013 - Agribusiness and commercialization	Demand	ACP	4 & 11	RRA CSAC	C2:A.2.1.3.1:ER2.1-P2.1.3	1) Familiarize decision makers in MOAF and ACP on Sweet Potato Trade	ACP, MOAF	9

Project No.	Project Short Title	Demand /Need from Consult ations	Request from	Contribution	2014-2018 Instrument for Technical Cooperatio n	Component: Activities: Expected Results/Products	Summary of objectives	Partners	Months
4	Building capacity for the commercial production of orange flesh sweet potato varieties in the Agro park system for export - Execution of IICA/ACP General Agreement 30 Sep 2013 - Agribusiness and commercialization	Demand	ACP	2	RRA CSAC	C2:A.2.1.3.1:ER2.1 -P2.1.3	2) Building capacity and Networks between R&D of MOAF and Research in Sweet Potato Industry	ACP, RADA, BODLES	9
		Demand	ACP	10	RRA CSAC	C2:A.2.1.3.1:ER2.1 -P2.1.3	3) Feasibility study for adapting post harvest handling and storage facility for orange flesh sweet potato for export	ACP, Spanish Grains Storage, NCSU	1
5	Establishment of Coconut Agro Park and visit to Queretaro Agropark - Execution of IICA/ACP General Agreement 30 Sep 2013	Demand	Minister of MOAF to DG	2; 3 & 4	CSAC	C2:A.2.1.3.1:ER2.1 -P2.1.3	1) To establish lethal yellowing resistant coconut varieties in Tree-crop Agro park by Mar 2015 2) To build capacity in CIB technical staff in coconut pollination and micropropagation 3) To observe large scale Agropark operations in Queretaro Mexico	ACP, Coconut IB, CICY, RADA, Bodles	48

Project No.	Project Short Title	Demand /Need from Consult ations	Request from	Contribution	2014-2018 Instrument for Technical Cooperatio n	Component: Activities: Expected Results/Products	Summary of objectives	Partners	Months
6	Rare and Release of Army Worm Predators	Demand	RADA	3	RCRM	C3:ER3.1:P 3.1.2:A 3.1.2.1	1) Identify most efficient predators for army worms in Jamaica 2) Develop rare and release protocols and build capacity in RADA to do same 3) Determine efficacy of control	RADA, CABI, BODLES, FAO, CARDI	48
7	Early Warning System for Coffee Leaf Rust	Demand	Coffee Industry Board	3; 7 & 10	RCRM	C3:ER3.1:P 3.1.2:A 3.1.2.1	1) To identify climate indicators of CLR 2) to determine accuracy of forecasting tool 3) To assess grower acceptance and factors influencing climate info to take action to control CLR. 4) To assess potential of fungi associated with and pathogenic on CLR in Jamaica for use as biocontrol agent 5) To determine the race composition of CLR in Jamaica for use of host resistance	Coffee IB, IRAP, Coffee Growers Association s, Coffee Buyers, UWI Mona, Purdue University, CABI	48

Project No.	Project Short Title	Demand /Need from Consult ations	Request from	Contribution	2014-2018 Instrument for Technical Cooperatio n	Component: Activities: Expected Results/Products	Summary of objectives	Partners	Months
	Project Lead: Shauna Brandon								
8	Support to the Caribbean Forum of ACP States in the Implementation of Commitments Undertaken Under the Economic Paratnership Agreement (EPA): Sanitary and Phytosanitary Measures (SPS) - Execution of EU 10th EDF SPS Project in Jamaica	Demand	HQ	3	ExtFin - RCRM- **SPS**	C3:ER3.1: ER3.2: ER3.3	Strengthening food quality and food safety systems in Jamaica through 1) Harmonization of AHFS legislation, regulation, protocols and guidelines 2) Supporting national and regional coordination mechanisms in SPS 3) National and/or Regional regulatory and industry Capacity and Capability Building to meet SPS requirements for international trade	MOAF Veterinary and Quarantine Divisions, BB, USDA, BSJ, MIIC, PCA	36

Project No.	Project Short Title	Demand /Need from Consult ations	Request from	Contribution	2014-2018 Instrument for Technical Cooperatio n	Component: Activities: Expected Results/Products	Summary of objectives	Partners	Months
9	Transitioning Small and Medium Sized Enterprises into Mainstream Markets - Capacity building of women operated enterprises	Need	Follow on from Rural Women Working Capital Project	4	Family Farming	C4:ER4.1: P 4.1.1	1) Conduct an assessment of selected women enterprise groups to determine gaps and needs for capacity building, 2) Facilitate pilot capacity building programme for beneficiaries in the Rural Women Revolving Loan Scheme to improve their abilities to operate successful businesses and meet regulatory standards	RADA, BWA, LIFE, JNRWP, JYBT, JBDC	48
10	Transitioning Small and Medium Sized Enterprises into mainstream markets - Guidelines documented for agro-processing	Need	Follow on from Rural Women Working Capital Project	10	Family Farming	C4:ER4.3: P 4.3.1	1) Requirements, recommended steps and available resources for the development of agro-processing enterprises documented. 2) At least one sensitization session held to disseminate the guidelines.	BSJ, RADA, LIFE, NFSC, JBDC	24

Project No.	Project Short Title	Demand /Need from Consult ations	Request from	Contribution	2014-2018 Instrument for Technical Cooperatio n	Component: Activities: Expected Results/Products	Summary of objectives	Partners	Months
11	Guideline documented for rural tourism	Need	Follow on from Buff Bay Valley Agrotour ism program	4 & 5	Family Farming	C2: ER2.1: P2.1.1: A2.1.1.2; A2.1.1.3	1) Compilation of existing rural tourism enterprises to identify scope and opportunities. 2) Document requirement, recommended steps and available resources for the development of rural tourism ventures. 3) At least one sensitization session held to disseminate the guidelines.	TPDCo, SDC, RADA, JISF	24
12	Capacity building of rural tourism enterprises	Need	Follow on from Buff Bay Valley Agrotour ism program	4	Family Farming	C2:ER2.1: P2.1.1: A2.1.1.3	Facilitate capacity building programme for selected rural tourism enterprises to meet market requirements.	TPDCo, SDC, RADA, JISF	48

Project No.	Project Short Title	Demand /Need from Consultations	Request from	Contribution	2014-2018 Instrument for Technical Cooperation	Component: Activities: Expected Results/Products	Summary of objectives	Partners	Months
13	Capacity building of youth in agriculture	Need	Identified by Youth in Agribusiness Awards Selection Committee	2; 4 & 5	Family Farming	C4:ER4.1: P 4.1.1 C2: ER2.1: P2.1.1: A2.1.1.3	1) Conduct an assessment of selected young persons in agribusiness to determine gaps and needs for capacity building. 2) Develop capacity building programme based on assessment. 3) Youth in Agribusiness Awards programme continued to recognize and promote excellence among youth in the sector. 4) Initiate discussion to facilitate incubator programme for graduates of agricultural schools.	4H Club, MOAF, JAS, RADA,	48

Project No.	Project Short Title	Demand /Need from Consult ations	Request from	Contribution	2014-2018 Instrument for Technical Cooperatio n	Component: Activities: Expected Results/Products	Summary of objectives	Partners	Months
	Project Lead: Ainsworth Riley								
14	Development of export platform and commodity chainsACP/MOAF - Execution of IICA/ACP General Agreement 30 Sep 2013 -	Demand	ACP	4	ExtFin - CSAC	C2:A.2.1.1.1. ER21- P2.1.1	1) Export platform development, Farm enterprise management capacity building	ACP, Farmers in Agro parks, JEA, US Fresh Produce Buyers	12
		Demand	ACP	4	CSAC	C2:A.2.1.1.1. ER21- P2.1.1	Completion of ongoing contract with consultant Nancy Cely and Frank Lam in development of export platform to get produce from Agro parks to US markets	ACP, Farmers in Agro parks, JEA, US Fresh Produce Buyers	12

Project No.	Project Short Title	Demand /Need from Consult ations	Request from	Contribution	2014-2018 Instrument for Technical Cooperatio n	Component: Activities: Expected Results/Products	Summary of objectives	Partners	Months
15	Support for Development of Local Livestock Sectors	Demand	JDDB	2; 4 & 9	CSAC	C2:A.2.1.3.1:ER2.1 -P2.1.3	1) Build capacity in appropriate use of forage and fodder species for establishing nurseries to produce fodder for dairy and small ruminants. Visit of IICA Specialists for selection and establishment of nurseries	JDDB, Bodles	48
		Need	PS of MOAF	2	CSAC	C2:A.2.1.3.1:ER2.1 -P2.1.3	2) Developing dairy curriculum in agricultural schools	CONACYT , CASE, Ebony Academy, JDDB, Bodles	18
		Demand	JPFA	5	CSAC	C2:A.2.1.4.1. ER2.1-P2.1.4	4) Development of Pork Council	JPFA	48

Project No.	Project Short Title	Demand /Need from Consult ations	Request from	Contribution	2014-2018 Instrument for Technical Cooperatio n	Component: Activities: Expected Results/Products	Summary of objectives	Partners	Months
16	ADRM Planning and Policy	Need	From Consult ations with Farmers and RADA	1 & 7	RCRM	C2:ER2.2-P 2.2.1: A 2.2.1.2	1) To assess country's status with respect to ADRM plans 2) provide necessary technical assistance to policy makers and other stakeholders regarding the preparation of executable agriculture disaster risk management plans that will address agricultural disaster, risk management and insurance	MOAF, RADA, ODPEM, MLG	12
17	ADRM Farmer Field School Methodology	Need	From Worksh ops with Small Rumina nt Farmers for improve d Feed systems	4, 5 & 7	RCRM	C2:ER2.2-P 2.2.4: A 2.2.4.1:	To train local extension technicians how to use Farmer Field School Methodology towards developing the knowledge and skills of farmers and other agricultural sector players in Agriculture Disaster Risk Management	MOAF, RADA, JAS	0.5

Project No.	Project Short Title	Demand /Need from Consult ations	Request from	Contribution	2014-2018 Instrument for Technical Cooperatio n	Component: Activities: Expected Results/Products	Summary of objectives	Partners	Months
18	Soil conservation and water use efficiency	Need	From Consult ations with Farmers	6	RCRM	C4:ER4.1-O4.1.1:A 4.1.1.1 C4:ER4.2-P 4.2.1: A.4.2.1.1	To sensitize and encourage farmers of soil conservation and water use efficiency practices so that they are better able to mitigate and later adapt to growing agricultural production challenges due to climate change.	MOAF,RA DA, NIC, JAS	0.5
19	ADRM Community/Institut ional Strengthening	Need	From Assess ment of Relevan t Committ ees	7	RCRM	C2:ER2.2-P 2.2.3: A 2.2.3.1	To ensure that the local ADRM Committee and subcommittees have the technical capacity, remain in a constant of state of readiness and are prepared/mobilized to manage agriculture disaster related events as they occur.	MOAF, RADA, ODPEM, MLG, SDC	12

Project No.	Project Short Title	Demand /Need from Consult ations	Request from	Contribution	2014-2018 Instrument for Technical Cooperatio n	Component: Activities: Expected Results/Products	Summary of objectives	Partners	Months
20	Silvo Pastoral Systems	Demand	JDDB	9	RCRM	C1:ER1.1:O1.1.1:A 1.1.1.1	To develop the knowledge and skills of the local livestock farmers to implement silvo pastoral systems that utilizes the synergies from the coexistence of diversified plants and animals.	JDDB, MOAF, RADA, JAS,	0.5
21	Agriculture Policy Programme - Execution of EU 10th EDF in Jamaica	Demand	HQ	1, 4 & 7	ExtFin CSAC-**APP**		Development of Domestic and Regional Marketing and Information Intelligence Systems, improved SME entrepreneurial, marketing and organizational capacities and finance mechanisms to support small ruminant and yellow and white sweet potato Value chains	MOAF JNRWP 4-H Club RADA FAO CARDI Small Ruminants Assoc ACP	24

Key to Colour Coding	Flagship Project
	Competitiveness and Sustainability of Agricultural Chains for food security and economic development
	Productivity and sustainability of family agriculture for food security and the rural economy
	Resilience and comprehensive risk management in agriculture

V. ICS Instruments of action

In 2015, the technical cooperation model of the IICA office in Jamaica is made up of six programs, composed of 21 projects, under three of the four Flagship projects, two regional projects (APP and SPS) funded under the 10th EDF and an RRA project which will come to an end in Sep 2015. The activities in the IICA Jamaica Technical Cooperation model fall under the Flagship Projects in order of priority (based on number of stakeholder requests)

1. Competitiveness and sustainability of agricultural chains for food security and economic development abbreviated as (CSAC) in this document
2. Resilience and comprehensive risk management in agriculture abbreviated as (RCRM) in this document
3. Productivity and sustainability of family agriculture for food security and the rural economy abbreviated (FF) in this document.

The projects can be classified under six programs by Flagships with deliverables in all eleven (11) Contributions;

- CSAC – (1) Support for the Local Livestock Sector (**4 projects**)
  (2)Execution of IIICA/ACP Agreement of 30 Sep 2013: Operationalization of Agro parks (**5 projects**)
- FF - (1) Transitioning Small and Medium Enterprises in Main Stream Markets (**5 Projects**)
  (2) Capacity Building Program for Youth in Agriculture (**1 project**)
- RCRM – (1) Agricultural Disaster Risk Management (**4 projects**)
  (2) Agricultural Health and Food Safety (AHFS) (**2 projects**)

Under the Externally Funded, 10th EDF (European Development Fund) there are two regional projects

1. Agriculture Policy Program (APP) geared towards strengthening the small ruminant and yellow and white sweet potato value chains
2. Sanitary and Phytosanitary (SPS) project which will support countries in the region implement SPS commitments undertaken under the Economic Partnership Agreement (EPA). This will be done via harmonization of Animal Health and Food Safety (AHFS) legislation, regulations and guidelines, supporting coordination mechanisms of national and regional institutions and building capacity in national or regional regulatory and industry stakeholders to meet SPS standards for international trade.

The third instrument being employed in the country strategy is the Rapid Response Action (RRA) to a request from the MOAF to support taking advantage of export opportunities for the highly nutritious orange flesh sweet potato varieties. Over the next 3 years, it is expected that stakeholders in the sector will demand projects in the Inclusion Flagship Project and as we work towards addressing cross cutting issues in the region FonTC and External Funding Sources will be employed in project development.

ANNEXES

Annex 1: Matrix of Projects and partners in IICA Jamaica 2014-2018 Country Strategy- **ANNEX-B_JAMAICA_CSAC**

IICA Strategy in: JAMAICA_CSAC

Name of project 1	Support for local livestock sector to include dairy and beef cattle, small ruminants and pigs in Jamaica			
Instrument of Action that finances it	**Flagship Project**	**Externally funded project**	**Rapid Response Action**	**Technical Cooperation Fund**
	CSAC- Competitiveness and Sustainability of Agricultural Chains for Food Security and Economic Development	In-kind contributions from partners		IICA's Small Ruminant and Commercialization Project completed 12/13
Background	The livestock subsector has shown decline in production over the years resulting in less animals being slaughtered. For the five-year period 2009-2013, the data shows a 3.4% decline in the number of cattle slaughtered from 21,009 heads down to 20, 700. The decline in animal production is due to shocks from past trade liberalization polices and the extent to which the domestic market had opened up to imports. The incidence of a number of diseases such as the bovine spongiform encephalopathy (BSE) in the international market impacted negatively on local demand, resulting in contraction of the sector. There is consolation however, as there has been a 10.6% growth in the number of goats slaughtered, up from 805 heads in 2009 to 1,144 heads in 2013. Consultation with representatives of the small ruminant sector and the completion of IICA's Small Ruminant and Commercialization			

	Project have identified the development of forages to substitute for the use of commercial feeds as a major priority. Additionally, the Dairy Board has requested IICA's assistance to develop alternative feed options and improve the efficiency of dairy operations. The Jamaica Goat Farmers Association has requested assistance to establish a forage nursery. The request for the establishment of the nursery emerged from the high levels of interest generated from the second FonTC small ruminant project. Farmers have been experimenting with the recommended forages as a substitute for the expensive commercial feeds. The Jamaica Pig Farmers Association believes that that there is needs to have a structured, recognizable and independent body to regulate the activities of the pig/pork industry. They have approached the Institute for guidance and to investigate the requirements for establishing a Pork Council in Jamaica similar to that which obtains in countries such as Canada and the USA.
Issues in the country	The dairy industry in Jamaica has experienced peaks and troughs in its development. In the 1960's, there were over 5,000 dairy farmers in Jamaica. This growth continued until milk production peaked in 1992 at 38.8 million litres. The peak was challenged by the pervading trade policies of the era i.e. Trade Liberalization and Structural Adjustment Programmes. This resulted in the demise of the dairy industry because of: - The dumping of milk by local producers unable to compete. - The sale for slaughter of more than 1500 milking cows. - The sale and slaughter of replacement heifers. - The departure of more than 550 small and medium size producers between 1990 and 2004. - Decline of national sufficiency levels from 30% in 1992 to 9.5% in 2009. - Reduction in per capita consumption of milk from 64 kg in 2001 to the current 34 kg.
General objective	To improve the competitive performance of agricultural chains as a whole and of all the links in those chains through policy management, strengthening of institutions and of public-private capacities and support for technological, entrepreneurial, institutional and commercial innovation processes
Baseline	

Issues (indicator)	Current level	Proposed goal	Component/Result
1. Forage and fodder availability and nutritional value are major problems in the livestock sector. **A2.1.3.1** Establishment of forage and fodder banks	Some existing infrastructure, fodder and forage plots at MOAF research stations and an underutilized dairy ear marked forage and fodder production.	To provide training and technical assistance to the JDDB towards the establishment of forage and fodder banks	**Component 2; Management of agricultural chains and agro-entrepreneurial capacities -** R.2.1 - Strengthened capacities of public and private actors for chain management, focusing on competitiveness, inclusion and sustainability
2. Request made by MOAF to DG at CWA MAOF requested technical cooperation to identify CONACYT specialist/s for placement in Jamaica to improve the curriculum on dairy management in selected tertiary level agriculture training institutions **A2.1.3.2** Developing dairy curriculum in agricultural schools	Dairy programs taught in schools do not produce graduates capable of operating a dairy farm**.**	Development of and institutional implementation of upgraded Dairy production and management curriculum to graduate young dairy operators	C2:R2.1
3. Request made by MOAF to DG at CWA for technical	Caribbean Broilers are	Crop trials for hybrid corn and sorghum established	C2:R2.1

cooperation to trial hybrid corn and sorghum as Commercial animal feed is cost prohibitive to livestock owners **A2.1.3.3** Hybrid Corn and Sorghum Trials	currently conducting Sorghum trials in Agro parks with mixed results.	and data being collected for scale up of production as feed	
4. Pig Farmers Association of Jamaica needs a structured governance organization **A2.1.4.1** Development of Pork Council	Pig/pork industry committee already exists	Links established with pork council (USA/Canada) and knowledge sharing is provided	C2:R2.1

Structure of the project

Component 2	**Management of agricultural chains and agro-entrepreneurial capacities**			
Specific objective 1	To strengthen public and private capacities for competitive, inclusive and sustainable management of agricultural chains, as well as the entrepreneurial and associative management capacities of the actors involved.			
Results	**Contribution to which the result relates**	**Products and services (indicator)**	**Partners and counterparts**	**Date of achievement**
R2.1.3.1	4	**P2.1.3.1** At least 50 acres of Forage and	JDDB CIAT	31/12/2018

Forage and Fodder Nursery established and forage, fodder and planting materials made available to farmers		fodder established at JDDB selected location. Number of workshops hosted and technical information disseminated to strengthen capacities of chain actors in maintain forage & fodder;	Bodles	
R2.1.3.2 . Request made by MOAF to DG at CWA Dairy curriculum developed and implemented in selected institutions to upgrade Dairy production and management curriculum to graduate young dairy operators	4	**P2.1.3.2** Number of courses improved or added to existing curriculum Number of teachers and technicians trained at tertiary level institutions in Jamaica to deliver new curriculum Percentage increase in number of students showing interest to take new dairy curriculum	CONACYT CASE Ebony Academy JDDB Bodles	30/06/2016
R2.1.3.3 Request made by MOAF to DG at	4	**P2.1.3.3** No. of Experimental	JDDB, Bodles, Pioneer	31/12/2016

CWA for Hybrid corn and sorghum trials established and data being collected for scale up of production		plots established at MOAF selected locations		
R2.1.4.1 Technical assistance to the pig/pork industry provided towards the development of a pork council	4	**P2.1.4.1** Links established with pork council (USA/Canada) and knowledge sharing is provided	JPFA MOAF	31/12/2015

Name of project 2	Execution of IICA/ACP General Agreement of 30 Sep 2013: operationalization of Agro parks			
Instrument of Action that finances it	**Flagship Project**	**Externally funded project**	**Rapid Response Action**	**Technical Cooperation Fund**
	CSAC-Competitiveness and Sustainability of Agricultural Chains for Food Security and Economic Development	Both In-cash (from IDB Loan 2444/OC-JA i.e. no INR as per Jamaica GAP 001-2014) and In-kind contributions from partners Agricultural Policy Program under 10th EU EDF	*Building capacity for the commercial production of orange flesh sweet potato varieties in the Agro park system for export*	
Background	The Government of Jamaica (GOJ) in partial fulfillment of an			

	agreement with the International Monetary Fund (IMF) to secure funding for its economic recovery programme, is committed to the development of nine (9) Agro-Parks as a key pillar in that restructuring programme, four (4) of which fall under the ACP in the MOAF. In summary the Agro Parks are geared towards achieving Import substitution /replacement of specific commodities, provide structured marketing arrangements for producers within the Agro Parks, provide produce for Agro Processors & Fresh Produce Exporters, supply products for School Feeding Programme, supply supermarkets, restaurants and the hotel trade with fresh produce, supply Government Institutions with fresh produce, through public private partnerships (PPP) establish abattoirs to supply meats to the hotel trade, supermarkets & restaurants, provide prospective investors with access to lands and establish post-harvest facilities through PPP. The Agro Park initiative seeks to reduce the annual food import bill which currently exceeds US$1billion thereby saving scarce foreign exchange as well as to earn scarce foreign exchange. On August 2, 2013 the Minister of Agriculture and Fisheries (MOAF) in Jamaica requested technical assistance from the Director General for supporting the Agricultural Competitiveness Programme (ACP) of the Agro-Investment Cooperation (AIC) funded by IDB Loan 2444/OC-JA. On September 30, 2013, the IICA/AIC General Agreement was signed for areas of cooperation that contribute to Agribusiness and commercialization, Innovation and productivity for competitiveness, Agricultural Health and Food Safety, Territorial development and rural wellbeing and Food Security with respect to the ACP. This is a 3 year agreement. Demand for orange flesh sweet potato has risen by 18.5% annually over the past 4 years and is growing. Over the last 12 years processing of sweet potatoes into fries for local and export markets have increased by 538% in North Carolina alone. Further, shipments for bulk fresh and canned sweet potatoes increased by 112% from 2012 to 2013 as nutritionists have stipulated that ¾ cup of red/orange sweet potato must be served to students in grade 8 and 1.25 cups to students in grades 9-12 in an attempt to improve nutrition in school feeding programs. Demand continues to increase for both fresh and processed sweet potato products as Canada and other countries in Europe such as the Netherlands are becoming major importers. However, sweet potato is a tropical crop with the major producing states of North Carolina, Mississippi,

	Louisiana and California able to produce one crop per year which is highly dependent on weather. There was an 11% decrease in acreage planted in the US between 2012 and 2013 resulting in a reduction of 220 million pounds of sweet potato for export due to the long winter. It is this fluctuation in supply from year to year from the US, entirely dependent on weather, which is driving the UK consortium to look for supplies from more tropical regions. The Agriculture Policy Programme (APP) funded under the 10th European Development Fund (EDF) to the tune of 8.6 million Euros is being executed through an agreement with IICA with CARDI and CARICOM Secretariat/CARIFORUM (CCS) as implementing partners. The APP aims to support the efforts of partners in enhancing rural incomes and livelihoods, food security and the development of rural communities through 3 components managed by each of the above mentioned organizations. Component 1 - Policy and Strategy at €2.69 Million will be implemented by CCS and will focus on actions that support an enabling, efficient national and coordinated regional policy environment. CARDI - Component 2 - Applied Research at €2.89 Million will be implemented by CARDI and will focus on building human capacity to adopt ag R&D and technology, improving stock of genetic material and transforming to 'climate smart' agricultural systems. Last but not least Component 3 - Enterprise Development will be implemented by IICA at €2.12 Million in member states in Caribbean. There is a 4th Component dealing with Program Coordination and visibility at €0.89 Million/
Issues in the country	Agro-Parks are being strategically implemented across Jamaica to facilitate promotion of Public Private Partnership investments in agriculture, promote efficiency in resource allocation and utilization resulting reducing cost of production making produce more competitive, improve economies of scale – e.g. in the procurement of goods and services, improved market access, promote and encourage sustainability, create long term and seasonal employment in the sector and create focal points for agricultural development

	The Permanent Secretary of the MOAF requested technical cooperation, by way of letter dated 5 Sep 2014, to assist the MOAF/ACP take advantage of the opportunity they identified to export orange flesh sweet potato varieties to meet growing demand in Europe and thereby improve the livelihoods of farmers in the Agro parks, while contributing to GDP thru foreign Exchange earnings. Jamaica currently exports 28 MT of yellow and white varieties of sweet potatoes to the diaspora markets in the UK. Earlier this year their buyers in the UK Fresh Produce Consortium proposed to buy any amount of the orange flesh varieties, Beauregard and Covington that Jamaica could produce as they are unable to fulfill demand in this main stream market. However, orange flesh varieties have never been produced commercially in Jamaica previously and the production system, post-harvest handling and markets are completely different from those for yellow and white varieties of sweet potato. As such an RRA entitled '*Building capacity for the commercial production of orange flesh sweet potato varieties in the Agro park system for export'* was developed and approved, thru Feb 2015, to help Jamaica take advantage of a new opportunity presented by health benefits of orange flesh sweet potatoes. In Jamaica, the APP will focus on fostering an enabling environment for SME small Producer Entrepreneurs in the Small Ruminants and white and yellow sweet potato chains through building capacity, instigating networking and enabling effective engagement with markets.
General objective	To Build on IICA's programs and respond to demand from member state by strengthening the institutional and managerial capacities of the small ruminants and pig production systems and to develop profitable, sustainable and eco-friendly dairy farms for Jamaica

Baseline

Issues (indicator)	**Current level**	**Proposed goal**	**Component/Result**
A2.1.1.1. Development of export platform and commodity chains for Agro parks with	ACP funded marketing consultant, Ms. Nancy Cely is currently working on	Actors MOAF/ACP/Farmers etc.) in selected commodity chains are knowledgeable of local and international market requirements and have established market	**Component 2; Management of agricultural chains and agro-entrepreneurial capacities -** R.2.1 -

ACP/MOAF	identifying products and forming have been established with UK Fresh Produce Consortium, Preliminary report on local crops with export potential completed	linkages with local and international buyers	Strengthened capacities of public and private actors for chain management, focusing on competitiveness, inclusion and sustainability
A2.1.1.2 – Ext-Fin (IDB loan) – Export Platform Development **A.2.1.3.4/.6; A2.1.4.2; A2.1.3.7 - RRA**	ACP funded marketing consultant, Ms. Nancy Cely is currently working on identifying products and forming have been established with UK Fresh Produce Consortium, Preliminary report on local crops with export potential completed	Completion of ongoing contract with consultant Nancy Cely and Frank Lam in development of export platform to get produce from Agro parks to US markets	C2:R2.1

Development of the Jamaica Orange Flesh Sweet Potato Industry	28 Metric tonnes of Yellow and White type Sweet Potato are exported to UK diaspora market. Orange flesh sweet potato is not currently commercially grown.	Decision makers have a thorough understanding of the technical and marketing aspects of the Beauregard and Covington orange flesh sweet potato industry so that it can be established in Jamaica thru 4 Activities: (1) Sweet potato clean seed programme established (2) Stakeholders (growers and curing/storage managers) are trained in Sweet potato good agronomic practices (3) Sweet potato Post harvest systems developed (4) Jamaica Sweet Potato Commission established **For RRA**- In completion of RRA; decision makers in MOAF and self-supported stakeholders are knowledgeable about Orange flesh (Beauregard and Covington varieties) Sweet Potato Trade	C2:R2.1
A.2.1.3.8 **Request made by MOAF to DG at CWA** for technical cooperation to establish Coconut Agro Park, provide training of Coconut Board Technical staff in coconut propagation techniques and visit Queretaro Agropark	Agro park identified by MOAF for establishment of tree crops by Mar 2015 to meet IDB deliverable	Lethal yellowing resistant coconut varieties from CICY established in Tree-crop Agro park in addition to building capacity in CIBJ technical staff in coconut pollination and micropropagation. Fulfill request from Minister Kellier to observe and network with large scale Agropark operations in Queretaro, Mexico	C2:R2.1

A.2.1.3.9 Developing Plant protection Curriculum in agricultural schools thru CONACYT program	Advisory and Extension services in Jamaica is currently extremely under staffed and in need of training in crop production practices and pest and disease management for export markets in the crops being targeted for Agro parks	Upgrading and adapting existing curriculum in CABI and local agri institutions to design and implement the Plant Health Professional Course	C2:R2.1
A.2.1.3.10 – APP-Ext Fin via 10th EDF – Supporting and building the Small Ruminants and Yellow and White Sweet Potato Value Chains in Jamaica	Established linkages between some sweet potato farmers and the Christiana Potato Growers Cooperative. Local exporters with international marketing experience. Sweet potato is has been established as one of the leading export crops from Jamaica. Small	(1) Improved entrepreneurial, marketing and organizational capacities of stakeholders in 2 value chains (2) Improving MSME access to market intelligence for Small ruminants and Yellow & White Sweet potato value chains (3) Improving Financing Schemes to support commodity value chain development	C2:R2.1

	ruminant is one of two priority commodities for Jamaica.		

Structure of the project

Component 2	**Management of agricultural chains and agro-entrepreneurial capacities**			
Specific objective 1	To strengthen public and private capacities for competitive, inclusive and sustainable management of agricultural chains, as well as the entrepreneurial and associative management capacities of the actors involved.			
Results	**Contribution to which the result relates**	**Products and services (indicator)**	**Partners and counterparts**	**Date of achievement**
R2.1.1.1.1 Facilitating Export platform developmen t with farm enterprise manageme nt capacity built	4	**P2.1.1.1** Number of workshops for stakeholders organized and M&E visits to Agro parks in support of **A2.1.1.2 -** Ext-Funded Export Platform	ACP Farmers in Agro parks, JEA US Fresh Produce Buyers	31/04/2015
R2.1.1.1.2 Export platform developed with farm enterprise manageme	4	**P2.1.1.2** Number of stakeholders trained, Reports produced by Consultant Nancy Cely, and	Same as above	31/04/2015

nt capacity built		buyers' mission completed to Jamaica		
R2.1.3.4 Sweet potato clean seed programme established	4	**P2.1.3.4** At least two persons trained in biological (by grafting) and molecular virus indexing and maintenance of virus free mother plants and technology transferred from NCSU. **Funded by ACP via IDB loan with IICA facilitating**.	ACP, Bodles, NCSU Hort Science	31/12/2015
R2.1.3.5 Stakeholders (growers and curing/storage managers) are trained in Sweet potato good agronomic practices	4	**P2.1.3.5** Number of workshops organized and farmers trained to achieve scale up to 50 acres planted in Beauregard. Trial plots of Covington established and repeated for Beauregard to obtain 20% improvement on trial yields from 2014 of marketable yields of Beauregard sweet potato. **Funded by ACP via IDB loan with IICA**	ACP, RADA, NCSU Extension, Farmers in Agro parks selected to grow sweet potato	31/08/2016

		facilitating		
R2.1.3.6 Sweet potato Post harvest systems developed	4	**P2.1.3.6** Developed PPPs (initiattly with Spanish Grain Storage) to support curing and storage facility management for orange flesh sweet potatoes. Technology identified at NC State for transfer to Jamaica. Facilitate exploratory investments in the processing of Orange Flesh Sweet Potatoes thru PPP **Funded by ACP via IDB loan with IICA facilitating**	ACP, Spanish Grains Storage, NCSU	31/08/2016
R2.1.4.2 Jamaica Sweet Potato Commission established	4	**P2.1.4.2** Growers and Processors organized with understanding of proper governance of their organization to build the Sweet Potato industry in Jamaica and actively collaborating with NC Sweet Potato	ACP, RADA, Agro park growers Spanish Grains Storage, NC Sweet Potato Commission	31/08/2016

		Commission as part of membership requirement to obtain license to grow Covington **Funded by ACP via IDB loan with IICA facilitating**		
R2.1.3.7 – RRA *Building capacity for the commercial production of orange flesh sweet potato varieties in the Agro park system for export*	4	**P2.1.3.7** Report on decision makers of the ACP and MOAF and stakeholders Trade mission to the 53rd Annual Convention of the U.S. Sweet Potato Council in Nashville, TN 2. Feasibility study and action plan developed to cure and store up to 2,000 acres of orange flesh sweet potato in production in the Agro parks system. Conducted by a Consultant **funded in part by ACP via IDB loan with**	ACP, MOAF, Spanish Grains Storage, NCSU, RADA, Bodles, Private growers	28/02/2015

R2.1.3.8 Request made by MOAF to DG at CWA for technical cooperation for Establishment of Lethal Yellowing Resistant Coconuts in Agro Park, training in coconut propagation and networking with Queretaro Agropark	4	**IICA facilitating** **P2.1.3.8** Number of lethal yellowing resistant coconut plants, transferred to Jamaica for establishment in Agro. (2) At least 2 technicians from Coconut Industry Board Jamaica trained in coconut pollination and micropropagation techniques (3) Networking visit to CICY and Queretaro Agropark	ACP, Coconut IB, CICY, RADA, Bodles ACP, Coconut IB, CICY, RADA, Bodles ACP, Coconut IB, CICY, RADA, Bodles	30/03/2015 31/12/2015 31/12/2015
R2.1.3.9 Developing Plant protection Curriculum in agricultural schools thru CONACYT program	4	**P2.1.3.9** Number of courses improved or added to existing curriculum Number of teachers and technicians trained at tertiary level institutions in	CONACYT, CABI, CASE, RADA, HEART	31/12/2016

R2.1.3.10 - APP Supporting and building the Small Ruminants and Yellow and White Sweet Potato Value Chains in Jamaica	4	Jamaica to deliver new curriculum Percentage increase in number of students showing interest to enroll in new Plant Health Professional Curriculum **P2.1.3.10** %reduction in dumping of produce during periods of high production. % reduction in postharvest losses. % reduction in price margins along the value chain due to more equitable pricing mechanisms. Number of baseline survey reports completed. Number of actors trained in the production and marketing of the two	MOAF JNRWP 4-H Club RADA FAO - CARDI Small Ruminants Stakeholder Associations ACP Yellow and White Sweet Potato Growers	31/01/2016

				commodities.					
Resources					**MOE**				
Component	**Person responsible**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**Total US$**
Component 2	Elizabeth Johnson	**5,900**	**24,618**	**3,400**		**4,700**	**4,000**		**42,618**
Total Project		**5,900**	**24,618**	**3,400**		**4,700**	**4,000**		**42,618**

Annex 1-Cont'd: Matrix of Projects and partners in IICA Jamaica 2014-2018 Country Strategy- **ANNEX-B_JAMAICA_FF**

Name of Project #1	**Transitioning Small and Medium Sized Enterprises in Mainstream Markets**			
Instrument of Action that finances it	**Flagship Project**	**Externally funded project**	**Rapid Response Action**	**Technical cooperation Fund**
	Productivity and Sustainability of Family Farming for Food Security and the Rural Economy			Working Capital Programme for Rural Women Entrepreneurs in the Caribbean being implemented in St. Lucia, Dominica, Guyana, and Jamaica
Background	Since 1999, the IICA Jamaica Office has provided technical assistance to the Jamaica Network of Rural Women Producers (JNRWP), which is the local arm of the Caribbean Network of Rural Women Producers (CANROP). IICA was instrumental in the formation of both organisations. These female entrepreneurs (individuals and groups) generally fall in the micro and small enterprises category, several of which are engaged in agro-processing activities. During 2013 – 2014, IICA implemented the Working Capital Programme for Rural Women Entrepreneurs in the Caribbean to respond to the needs of these women, who face various challenges in their operations, such as access to credit, packaging and other raw materials, entrepreneurial know-how and access to market. The project sought to provide entrepreneurial capacity building and initiate a revolving loan scheme to provide working capital support to selected women's enterprises. Since 2009, the IICA Jamaica Office has supported the development of an agro-tourism project in the Buff Bay Valley, following on a regional agro-tourism project implemented in Jamaica and seven other Caribbean countries during 2005 - 2008. Several other communities across the island have shown interest or at various stages of development of rural tourism activities. However, most have not yet met the required criteria to entering mainstream tourism markets.			

Issues in the country	Micro, small and medium sized enterprises in the agro-processing, value-added, or rural tourism sectors face several challenges trying to access mainstream markets, which include: insufficient capital, know-how and confidence to penetrate these markets. As such, their enterprises remain at the nascent stage for a long time and often-times these agro/rural-businesses fail as a result. In an effort to drive these sub-sectors, the government has commenced the development of a Community Tourism policy and a Micro, Small and Medium sized enterprises (MSMEs) and Entrepreneurship policy. The Community Tourism policy seeks to strengthen community involvement in tourism, given a preponderance of all-inclusive tourism packages in the country, which are said to exclude the average Jamaican and surrounding communities. The MSMEs and Entrepreneurship Policy aims to support MSMEs, which are seen to play an important role in economic development, as they represent the main source of new business start-ups.		
General objective	To strengthen the capacity of small and medium sized agro/ rural enterprises to access and sustain a presence in mainstream markets		
Baseline			
Issues (Indicator)	**Current level**	**Proposed goal**	**Component/Result**
A2.1.1.2 Guideline documented for rural tourism To review the sector, document and disseminate guidelines for the development of rural tourism enterprises	Documentation of types of Rural Tourism enterprises required to provide structured support for development of the sector	To Facilitate capacity building programme for selected rural tourism enterprises to meet market requirements.	**Component 2:** *Knowledge Management and Exchange of experiences for strengthening of FF* **R2.1: P2.1.1.2**
A2.1.1.3.1 Capacity building of rural tourism enterprises To facilitate capacity building programme for selected rural tourism enterprises to meet market requirements	Capacity of rural tourism enterprises need strengthening to be more competitive in the market	At least two enterprises have benefited from the capacity building in managing their business	**Component 2:** *Knowledge Management and Exchange of experiences for strenghening of FF* **R2.1: P2.1.1.3.1**

A4.1.1 Capacity building of women operated enterprises To conduct an assessment of selected women enterprise groups to determine gaps and needs for capacity building	Capacity of women's organisations to operate their businesses and transition their products into mainstream markets need strengthening	1,1) Conduct an assessment of selected women enterprise groups to determine gaps and needs for capacity building, 1.2) Facilitate pilot capacity building programme for beneficiaries in the Rural Women Revolving Loan Scheme to improve their abilities to operate successful businesses and meet regulatory standards	**Component 4:** *Strengthening of Associative/organizational processes of FF for Food Security and Commercial Insertion* **R4.1: P4.1.1**
A4.3.1 Guideline documented for agro-processing. To facilitate pilot capacity building programme for beneficiaries in the Rural Women Revolving Loan Scheme to improve their abilities to operate successful businesses and meet regulatory standards	Capacity of women's organisations in Revolving Loan Scheme needs to be strengthened to operate their businesses to meet regulatory standards	1) Requirements, recommended steps and available resources for the development of agro-processing enterprises documented. 2) At least one sensitization session held to disseminate the guidelines.	**Component 4:** *Strengthening of Associative/organizational processes of FF for Food Security and Commercial Insertion* **R4.3: P4.3.1**
Structure of the Project			

Component 2	Knowledge Management and Exchange of experiences for strenghening of FF			
Specific objective 1	Promote strategies to develop technical capacities that foster technological innovation and extension processes with the participation of family farmers, to contribute to increasing productivity, resilience and food security of FF.			
Results	**Contribution to which the result relates**	**Products and services (indicator)**	**Partners and counterparts**	**Date of achieve-ment**
R2.1.1.2 Guideline documented for rural tourism	1	Reports from at least 4 training events and at least 15 persons have been sensitized to the steps required for development of rural tourism enterprises	TPDCo, SDC, RADA, JISF	31/12/2015
R2.1.1.3.1 Capacity building of rural tourism enterprises	1	Reports on training sessions where at least 15 persons having been sensitized to the steps required for development of rural tourism enterprises. Report on training sessions where at least three rural tourism enterprises have benefited from capacity building interventions	TPDCo, SDC, RADA, JISF	31/12/2015
Component 4	Knowledge Management and Exchange of experiences for strengthening of FF			
Specific objective	Increase technical, institutional and managerial capacity of public institutions and associative organizations of countries for the insertion of FF the dynamics of rural economies in a sustainable manner			
Results n	**Contribution to which the result relates**	**Products and services (indicator)**	**Partners and counterparts**	**Date of achieve-ment**
R4.1.1 Capacity building of women operated enterprises	4	Report on at least three women's groups having benefited from capacity building interventions	RADA, BWA, LIFE, JNRWP,	31/12/2015

			JYBT, JBDC	
R4.3.1 Guideline documented for agro-processing.	10	Reports from at least 4 training events and at least 15 persons have been sensitized to the steps required for development of agro-processing enterprises	BSJ, RADA, LIFE, NFSC, JBDC	31/12/2015

Name of Project #2	**Capacity Building Programme for Youth in Agriculture**			
Instrument of Action that finances it	**Flagship Project**	**Externally funded project**	**Rapid Response Action**	**Technical cooperation Fund**
	Productivity and Sustainability of Family Farming for Food Security and the Rural Economy			
Background	Since the past decade IICA Jamaica has been recognizing a number of youth across the island for their contribution to the sector during the office's annual Youth in Agribusiness Awards. A database was developed for this cohort of agriculturalists and there is the need to develop a more robust programme to develop their capabilities and hone their technical skills. The Agribusiness Awards selection committee, which comprises representatives from the MOAF, rural Agricultural Development Authority, Jamaica 4-H clubs and Jamaica Agricultural Society, have recommended that such a programme be developed for the young persons who are nominated for these awards. In 2013, the office provided training in onion production and business plan preparation to a group of young farmers, who were selected to operate farms in one of the Agro Parks, in an effort to promote youth in agriculture.			
Issues in the country	There is a major concern regarding the aging farming population locally. Latest Agricultural census from the MOA&F has revealed that the age group 55 and over makes up 33% of practicing farmers. Persons involved in agriculture age 34 and under make up 34%. There is therefore the need to ensure that the existing youth participating in agriculture remain and that there should be a			

	mechanism(s) to encourage more youth to become involved in the sector.		
General objective	To encourage the involvement of youth in agriculture and improve the capacities of youth already involved in agriculture		
Baseline			
Issues (Indicator)	**Current level**	**Proposed goal**	**Component/Result**
A2.1.1.3.2 Capacity building of youth in agriculture To build capacity of selected young persons in the agribusiness sector and promote Youth in Agriculture through recognition of achievement and develop/or build on incubator programmes with schools	Documentation of needs/ gaps for selected young agr-entrepreneurs and develop of capacity building program based on needs identified. Recognition of the achievement of young agri-entrepreneurs. Assess the need for school based agri business incubators with selected tertiary level agricultural institutions	1) Conduct an assessment of selected young persons in agribusiness to determine gaps and needs for capacity building. 2) Develop capacity building programme based on assessment. 3) Youth in Agribusiness Awards programme continued to recognize and promote excellence among youth in the sector. 4) Initiate discussion to facilitate incubator programme for graduates of agricultural schools.	**Component 4:** *Knowledge Management and Exchange of experiences for strenghening of FF* **R2.1: P2.1.1.3.2**
Structure of the Project			

Component 2	Knowledge Management and Exchange of experiences for strenghening of			
Specific objective 1	Promote strategies to develop technical capacities that foster technological innovation and extension processes with the participation of family farmers, to contribute to increasing productivity, resilience and food security of FF.			
Results	**Contribution to which the result relates**	**Products and services (indicator)**	**Partners and counterparts**	**Date of achieve-ment**
A2.1.1.3.2 Capacity building of youth in agriculture	1	Report at least four young persons in agribusiness having benefited from capacity building interventions Report on at least two young persons in agribusiness were recognised for excellence in agri-business enterprises	4H Club, MOAF, JAS, RADA,	31/12/2015

Implementing Strategy		**Jamaica – Family Farming**							
Resources		**MOE**							
Components	**Person responsible**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**Total US$**
Component 2	Elizabeth Johnson	**2,750**	**2,600**	**800**		**1,850**	**5,100**	**2,000**	**15,100**
Component 4	Elizabeth Johnson	**1,850**	**200**	**250**		**650**	**4,700**		**7,650**
Total Project									**22,750**

Annex 1-Cont'd: Matrix of Projects and partners in IICA Jamaica 2014-2018 Country Strategy- **ANNEX-B_JAMAICA_RCRM**

Name of Project	**Agricultural Disaster Risk Management** (ADRM)			
Instrument of Action that finances it	**Flagship Project**	**Externally funded project**	**Rapid Response Action**	**Technical cooperation Fund**
	Resilience and comprehensive management of environmental risk for agricultural production			
Background	As a small island developing state (SIDS) Jamaica is impacted by natural disasters such as hurricanes, floods, landslides, extended droughts, heavy rainfall. Agricultural production is dependent to a great extent on rainfall, domestic production is conducted on slopes greater than or equal to 20 degrees. According to a 2013 report by the IDB and the Food and Agriculture Organization (FAO) on the impact of climate change in Jamaica, between 1994 and 2010 the loss to agriculture as a result of climatic events can be estimated at J$14.4 billion. The MOAF has reported that during the prolonged drought in the quarters two and three of 2014, approximately 2,190 hectares of crops valued at J$954 million was lost or damaged due to drought and fires. This impacted some 18, 309 farmers across the drought stricken areas. The IDB/FAO Report further stated that, on average the impact of major climate extremes on agriculture accounted for 20 percent of the total impact on the country. There have been increases in temperature of 0.6˚C or an average rate of 0.14˚C. Since 1995 there has been an increase in Tropical cyclones, especially categories 4 and 5 hurricanes. Additionally, according to the Report, the projections of mean annual rainfall from various models show a decline in rainfall for Jamaica.			
Issues in the country	The three and six month dry season forecast (Dec 2014 – Feb 2015 and Mar 2015 to May 2015) are predicting a 40% chance of below normal to just about normal rainfall, respectively. While a 65% and 45% probability of higher than normal temperatures have been predicted for the same period (CARICOF 2014-2015 Dry Season Forecast). This translates to a hot and dry period following the severe droughts earlier in 2014. As such water reserves will not be fully recharged before entering the dry season translating to promotion and adoption of efficient use of water strategies to maintain production in the agricultural sector.			

	All this in a country where over 6% of the GDP comes from the agricultural sector.		
General objective	To increase the resilience of the agricultural systems in the member countries in order to address climate change and other environmental shocks by strengthening the institutional framework for innovation and risk management based on the principles of sustainable adaptation.		
Baseline			
Issues (Indicator)	**Current level**	**Proposed goal**	**Component/Result**
A1.1.1.1 Silvo Pastoral systems To strengthen the knowledge and skills of the JDDB and livestock farmers towards establishing silvo pastoral systems	Farmers have earmarked land spaces and have commenced the process of establishing silvo pastoral systems	To develop the knowledge and skills of the local livestock farmers to implement silvo pastoral systems that utilizes the synergies from the coexistence of diversified plants and animals.	**Component 1:** *Natural resources management and adaptation to climate change for agriculture* **R1.1: O1.1.1**
A2.2.1.2. ADRM Planning and Policy. To build the competencies of agricultural technicians/policy makers in disaster planning, risk management and insurance.	ADRM plans reviewed and where necessary updated to include work plans for agri-insurance, risk management and, disaster planning	1) To assess country's status with respect to ADRM plans 2) provide necessary technical assistance to policy makers and other stakeholders regarding the preparation of executable agriculture disaster risk management plans that will address agricultural disaster, risk	**Component 2:** *Comprehensive management of environmental risks (extreme events) for production* **R2.2: O2.2.1**

		management and insurance	
A2.2.3.1 ADRM Community/Institutional Strengthening To strengthen local community structures to implement ADRM measures	To strengthen and implement awareness programmes in Local ADRM Committees	To ensure that the local ADRM Committee and subcommittees have the technical capacity, remain in a constant of state of readiness and are prepared/mobilized to manage agriculture disaster related events as they occur.	**Component 2:** *Comprehensive management of environmental risks (extreme events) for production* **R2.2: O2.2.3**
A2.2.4.1 ADRM Farmer Field School Methodology To train MAOF, RADA, JAS, Jamaica 4H-Clubs personnel to apply the Farmer Field School Methodology in ADRM	To develop ARDM knowledge and skills in Technical personnel within MOAF, RADA, Jamaica 4H currently using the Farmer Field School Methodology	To train local extension technicians how to use Farmer Field School Methodology towards developing the knowledge and skills of farmers and other agricultural sector players in Agriculture Disaster Risk Management	**Component 2:** *Comprehensive management of environmental risks (extreme events) for production* **R2.2: O2.2.4**
A4.1.1.2 Soil conservation and water use efficiency **To build the** competencies of technical personnel within MOAF, RADA, JAS,	Technical personnel within MOAF, RADA, Jamaica 4H are training farmers in on farm water use efficiency and soil conservation	To sensitize and encourage farmers of soil conservation and water use efficiency practices so that	**Component 4:** *Efficient water use and sustainable soil management for agriculture resilient to climate change* **R4.1: O4.1.1**

Jamaica 4HClubs in soil conservation and water use efficiency practices	practices	they are better able to mitigate and later adapt to growing agricultural production challenges due to climate change.		
Structure of the Project				
Component 2	Comprehensive management of environmental risks (extreme events) for production			
Specific objective 1	To strengthen the institutional framework and the capabilities of the Member States to enable them to anticipate, prepare, respond to and recover from environmental risks (extreme events) that could affect agricultural production and the well-being of producers**.**			
Results	**Contribution to which the result relates**	**Products and services (indicator)**	**Partners and counterparts**	**Date of achieve-ment**
R1.1.1.1 Number of famers establishing silvo pastoral systems as more sustainable approach towards becoming more resilient to climate change by taking advantage of plant biodiversity.	6	Reports from number of workshops hosted and technical information disseminated to strengthen capacities of chain actors in maintaining forage & fodder pastures	JDDB, MOAF, RADA, JAS,	30/06/2015
R2.2.1.2 Number of ARDM plans completed/enhanced	1, 4 & 7	Reports from at least 4 training events Number of policy makers trained to develop ADRM plans	MOAF, RADA, ODPEM, MLG	31/12/2015
R2.2.3.1 Number of stakeholder sensitization sessions conducted	1, 4 & 7	Reports from at least 4 training events to keep local committees and sub committees in a state of disaster management	MOAF, RADA, ODPEM, MLG, SDC	31/12/2015

		preparedness		
R2.2.4.1 Number of technical personnel trained and are using the Farmer Field School Methodology to develop the farmers' knowledge and skills in ARDM	1, 4 & 7	Reports from at least 4 ADRM Farmer Field School Methodology training events	MOAF, RADA, J-4H	31/12/2015
R4.1.1.2 Number of farmers implementing on-farm soil conservation and water use efficiency practices	7	Report on the identification of areas and number of farmers using ecosystems interventions	MOAF, RADA, NIC, JAS	31/12/2015

Name of Project	**Plant and Animal Health and Food Safety** (PAHFS)			
Instrument of Action that finances it	**Flagship Project**	**Externally funded project**	**Rapid Response Action**	**Technical cooperation Fund**
	Resilience and comprehensive management of environmental risk for agricultural production	*Sanitary and Phytosanitary Measures (SPS) funded by 10th EDF* *&* *International Research and Applications Project (IRAP) National Oceanic and Atmospheric Administration (NOAA) funded under Climate and Societal Interactions (CSI) Program*		

Background	Many pests and pathogens exhibit considerable capacity for generating, recombining, and selecting fit combinations of variants in key pathogenicity, fitness, and aggressiveness traits that there is little doubt that any new opportunities, such as increasing temperature, resulting from climate change will be exploited by them. Further, the FAO reports that there is clear evidence that climate change is altering the distribution, incidence and intensity of animal and plant pests and diseases with trans boundary pests and diseases posing a major threat to both food security and foreign exchange earnings through export of agricultural produce in the region. In Jamaica, the IDB/FAO reports, there have been increases in temperature of 0.6˚C or an average rate of 0.14˚C over the past 10 years. Since 1995 there has been an increase in Tropical cyclones, especially categories 4 and 5 hurricanes. Many plant pests and invasive animal species can be transported by strong winds and storm surges or flooding from driving rains.
Issues in the country	The adverse impacts of climate change on Jamaica are numerous and diverse, as it affects the economy, food security and the quality of lives of Jamaicans, particularly farmers, who face losing their livelihoods (FAO report). It is projected that changes in wind patterns and increased storm activity will have further damaging effects on agriculture as topsoil is washed away, and farmland is degraded. The reality being faced by farmers in Jamaica, particularly onion and escallion farmers, is that the increase in pests linked to climate change is no longer a futuristic projection, but a current problem. The Beet Armyworm pest has been linked to the impact of climate change and the resulting higher temperatures and reduced precipitation, which favours the pest's life cycle. In November, thousands of acres of crops and forage were devoured by a spike in beet army populations following the preceding drought conditions which caused crop losses due to fires. According to USAID, the previous beet army outbreak in May 2012, resulted in the destruction of some 45 hectares of crops valued at approximately $31 million Jamaican dollars Fungal disease incidence has also been related to climate change and of particular interest in Jamaica is coffee leaf rust (*Hemileia vastatrix*). In 2013, the average infection across parishes was 24.29% with Manchester recording the highest incidence with 40.67% while St. Elizabeth has shown the lowest incidence at 3.50%. In 2014, with pattern was reversed with St. Elizabeth recording a higher incidence than Manchester due to rainfall distribution across the island indicating a strong climatic influence on disease incidence. Coffee is the second major export commodity for Jamaica after sugar cane employing over 120,000 people along the chain with over 20,000 farm families making a living from this crop. In the 2012/2013 crop, Coffee Leaf Rust contributed to losses of J$114.9 million by JBM farmers. In the 2013/2014 crop Coffee Leaf Rust contributed to

	losses of J$132.9 million or 16% over the previous year.		
General objective	Comprehensive management of sanitary and phytosanitary risks for resilient agriculture		
Baseline			
Issues (Indicator)	**Current level**	**Proposed goal**	**Component/Result**
A3.1.2.1.1 Rare and Release of Army Worm Predators To strengthen the local technical capacities in crop protection systems	Rare and release of natural enemies programme required for the control of army worms and sweet potato weevils.	1) Most efficient predators in Jamaica for army worms identified 2) Rare and release protocols developed and capacity built in RADA to do same 3) Efficacy of natural enemies determined.	**Component 3:** *Comprehensive management of sanitary and phytosanitary risks for resilient agriculture* **R3.1: O3.1.2**
A3.2.1.1.2 Early Warning System for Coffee Leaf Rust (CLR). Identification of climatic indicators that trigger CLR for implementation of mitigation actions by coffee growers and determination of their predisposition to taking action based on climatic indicators	Strong indications that climatic conditions conducive to CLR in Jamaica can be identified. Grower confidence in using an Early Warning System as a decision making tool to initiate control actions to be assessed. Identified as possible IRAP Flagship project in the Caribbean	1) To identify climate indicators of CLR 2) to determine accuracy of forecasting tool 3) To assess grower acceptance and factors influencing use of the Early Warning System to take action to control CLR.	**Component 3:** *Comprehensive management of sanitary and phytosanitary risks for resilient agriculture* **R3.1: O3.1.2**
A3.2.1.1.3 – Ext Fin 10 EDF SPS Project	Support required by the Caribbean Forum of ACP States in the Implementation of	AHFS Harmonization via three components:	**Component 3:** *Comprehensive management of sanitary and phytosanitary risks for*

	Commitments Undertaken Under the Economic Partnership Agreement (EPA): Sanitary and Phytosanitary Measures (SPS)	(1) Legislation, Regulation and Protocols and Guidelines (2) National and regional agency coordination mechanisms in support of SPS (3) National and/or regional regulatory and industry capacity and capability building to meet SPS requirements for international trade.	*resilient agriculture* **R3.3: O3.3.1**	
Structure of the Project				
Component 3	Comprehensive management of sanitary and phytosanitary risks for resilient agriculture			
Specific objective 3	To strengthen the institutional framework and capabilities of the countries for the integrated management of sanitary and phytosanitary risks, in order to increase the resilience of agriculture.			
Results n	**Contribution to which the result relates**	**Products and services (indicator)**	**Partners and counterparts**	**Date of achieve-ment**
R3.1.2.1.1 Number of release events timed to reduce army worm populations	3	Report on number of effective native natural enemies identified	RADA, CABI, BODLES, FAO,	31/12/2017

especially after periods of prolonged drought and associated % reduction in army worm populations		Number of technicians trained in rearing and releasing natural enemies	CARDI	
R3.1.2.1.2 Climatic conditions conducive to CLR in Jamaica identified, early warning system tested over at least 2 years and grower confidence in and use of Early Warning System in decision making assessed	3	Report/or peer reviewed journal article on Early Warning system development from historical climate and CLR outbreak data Report on results from testing the Early Warning System. Assessment report on number of coffee farmers and other stakeholders along value chain using the Early Warning system for decision making	Coffee IB, IRAP, Coffee Growers, CIMH, UWI, FAO	31/12/2017
R3.1.2.1.3 Deliverables for 10th EDF SPS projects achieved to time and budget	3	Reports on food quality and food safety systems in Jamaica strengthened through 1) Harmonized AHFS legislation, regulation, protocols and guidelines 2) Supported national and regional coordination mechanisms in SPS 3) National and/or Regional regulatory and industry capacity and capability built to meet SPS requirements for international trade	MOAF Veterinary and Quarantine Divisions, BB, USDA, BSJ, MIIC, PCA	31/12/2017

Implementing Strategy									
Resources		**MOE**							
Components	**Person responsible**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**Total US$**
Component 2	Elizabeth Johnson	**2,700**	**7,500**	**1,100**		**1,750**			**13,050**
Component 3	Elizabeth Johnson	**2,400**	**10,350**	**7,500**		**600**	**500**		**21,350**
Component 4	Elizabeth Johnson	**800**	**2,200**	**300**		**400**			**3,700**
Total Project									**38,100**

Annex 2. Areas of commonality between the national actions of externally funded projects and the 11 contributions set out in the 2014-2018 MTP

IICA Office in: JAMAICA.

Contribution/National Actions of Externally Funded Projects	National Actions of Externally Funded Projects 1 (title) SPS Project	National Actions of Externally Funded Projects 2 (title) APP	National Actions of Externally Funded Projects 3 (title)
Contribution 1		**X**	
Contribution 4		**X**	
Contribution 3	**X**		
Contribution 4		**X**	

Annex 3. Analysis of Technical Leadership and Cooperation Management Capabilities

IICA Office in: JAMAICA – Revised to add Contribution 6

Contributions/ Key Functions	Institution Building	Project Management	Creation of methodologies and Instruments	Consensus-building and coordination of stakeholders	Corporate Management	Knowledge management and use	Skills development	Horizontal Cooperation
Contribution 1	***Ainsworth Riley*** (Agribusiness Specialist)			***Shauna Brandon*** (Rural Development Specialist), ***Ainsworth Riley*** (Agribusiness Specialist)				
Contribution 2		***Elizabeth Johnson*** (Rep), ***Shauna Brandon*** (Rural Development Specialist), ***Ainsworth Riley*** (Agribusiness Specialist)		***Shauna Brandon*** (Rural Development Specialist), ***Ainsworth Riley*** (Agribusiness Specialist)		***Elizabeth Johnson*** (Rep), ***Shauna Brandon*** (Rural Development Specialist), ***Ainsworth Riley*** (Agribusiness Specialist)	***Elizabeth Johnson*** (Rep), ***Shauna Brandon*** (Rural Development Specialist), ***Ainsworth Riley*** (Agribusiness Specialist)	***Elizabeth Johnson*** (Rep), ***Shauna Brandon*** (Rural Development Specialist), ***Ainsworth Riley*** (Agribusiness Specialist)
Contribution 3			***Shauna Brandon*** (Rural Development Specialist), ***Ainsworth Riley*** (Agribusiness Specialist)			***Elizabeth Johnson*** (Rep), ***Ainsworth Riley*** (Agribusiness Specialist)	***Elizabeth Johnson*** (Rep), ***Ainsworth Riley*** (Agribusiness Specialist)	
Contribution 4	***Shauna Brandon*** (Rural Development Specialist), ***Ainswort***	***Shauna Brandon*** (Rural Development Specialist), ***Ainswort***				***Shauna Brandon*** (Rural Development Specialist), ***Ainsworth Riley***	***Shauna Brandon*** (Rural Development Specialist), ***Ainsworth Riley***	

Contributions/ Key Functions	Institution Building	Project Management	Creation of methodologies and Instruments	Consensus-building and coordination of stakeholders	Corporate Management	Knowledge management and use	Skills development	Horizontal Cooperation
	h Riley (Agribusiness Specialist)	***h Riley*** (Agribusiness Specialist)				(Agribusiness Specialist)	(Agribusiness Specialist)	
Contribution 5	***Shauna Brandon*** (Rural Development Specialist),	***Shauna Brandon*** (Rural Development Specialist),				***Shauna Brandon*** (Rural Development Specialist),	***Shauna Brandon*** (Rural Development Specialist),	
Contribution 6		***Ainsworth Riley*** (Agribusiness Specialist		***Ainsworth Riley*** (Agribusiness Specialist				***Ainsworth Riley*** (Agribusiness Specialist
Contribution 7		***Elizabeth Johnson*** (Rep)	***Elizabeth Johnson*** (Rep)			***Elizabeth Johnson*** (Rep)	***Elizabeth Johnson*** (Rep)	
Contribution 9		***Elizabeth Johnson*** (Rep)	***Elizabeth Johnson*** (Rep)			***Elizabeth Johnson*** (Rep)	***Elizabeth Johnson*** (Rep)	
Contribution 10		***Elizabeth Johnson*** (Rep), ***Ainsworth Riley*** (Agribusiness Specialist)	***Elizabeth Johnson*** (Rep), ***Ainsworth Riley*** (Agribusiness Specialist)			***Elizabeth Johnson*** (Rep), ***Ainsworth Riley*** (Agribusiness Specialist)	***Elizabeth Johnson*** (Rep), ***Ainsworth Riley*** (Agribusiness Specialist)	
Contribution 11								***Elizabeth Johnson*** (Rep), ***Shauna Brandon*** (Rural Development Specialist), ***Ainsworth Riley*** (Agribusiness Specialist)

Annex 4. Exercise to pinpoint technical cooperation needs and their relationship with the 11 contributions and 4 Flagship Projects. Modified to add Contributions 1,3 & 10

IICA Office in: JAMAICA

Contributions/Flagship Projects	Agricultural Chains Flagship Project (Strategic Objective 1)	Inclusion in Agriculture and Rural Territories Flagship Project (Strategic Objective 2)	Family Agriculture Flagship Project (Strategic Objective 3)	Building Resilience in Agriculture Flagship Project (Strategic Objective 4)
Contribution 1			Guideline for Rural Tourism in Jamaica and Capacity Building of rural tourism enterprises	Agricultural Disaster Risk Management capacity building and strategies towards making sector more resilient
Contribution 2	P2. Execution of activities under the IICA/ACP/AIC General Agreement towards the establishment of agro-parks.	P2. Capacity building in youth runners up programme.		
Contribution 3				P1. Early Warning System for Coffee Leaf Rust to help stakeholders in making decisions on appropriate timing of control interventions P2. Rear and Release of Army Worm Predators to ensure adequate

				population levels after periods of drought for effective control of army worms.
Contribution 4	P.1. Establishment of a fodder bank/nursery as an alternative source of animal feed. P2. Execution of activities under the IICA/ACP/AIC General Agreement towards the establishment of agro-parks.	P1. Transitioning small to medium size enterprises into mainstream markets. P2. Capacity building in youth runners up programme.		
Contribution 6				P2. Implementation of integrated water management systems for targeted crop zones (FONTC).
Contribution 7				P1. Establishment of energy efficient production systems in the dairy sector.
Contribution 10			Providing Guidelines for Agro-processing to small and medium sized enterprises (SMEs) especially operated by Rural Women and Youth	

Annex 5: Signed IICA/ACP General Agreement of 30 Sep 2013.

GENERAL AGREEMENT FOR TECHNICAL COOPERATION BETWEEN AGRO-INVESTMENT CORPORATION AND THE INTER-AMERICAN INSTITUTE FOR COOPERATION ON AGRICULTURE (IICA)

Agro-Investment Corporation, hereinafter referred to as **Agro-Invest**, represented by its **Chief Executive Officer, Mr. Everton Spencer**, and **the Inter-American Institute for Cooperation on Agriculture,** hereinafter referred to as **IICA**, represented by **Mr. Ignatius Jean, IICA Representative in Jamaica**, have agreed to sign a **General Technical Cooperation Agreement**, subject to the following recitals and clauses:

WHEREAS:

IICA has been the specialized agency for agriculture of the Inter-American System for more than 70 years, and its mission is "To be the institution of the Inter-American System that provides technical cooperation, innovation and specialized knowledge to contribute to the competitive and sustainable development of agriculture in the Americas and to improve the lives of rural dwellers in the member countries;"

IICA signed a Basic Agreement on Privileges and Immunities with the Government of Jamaica which empowers it, in its capacity as an international juridical person, to sign agreements and contracts in the territory of Jamaica.

IICA provides direct technical cooperation through actions focused on four strategic objectives: To improve the productivity and competitiveness of the agricultural sector; To strengthen agriculture's contribution to the development of territories and to rural well-being; To improve agriculture's capacity to mitigate the effects of, and adapt to, climate change, and make better use of natural resources; and To improve agriculture's contribution to food security;

Agro-Investment Corporation (Agro-Invest) is an agricultural investment facilitation, advisory and management company established by an Act of Parliament, the Agro-Investment Corporation Act of June 1, 2009. It functions as the business facilitation department within the Ministry of Agriculture and Fisheries, with a focus on agricultural investment promotion and facilitation, project development and market development. Agro-Invest covers the investment chain from the identification of opportunities through feasibility studies, due diligence and business planning to fundraising, project management, long term business performance monitoring and technical support. Agro-Invest seeks to activate, stimulate, facilitate and undertake agricultural development for economic advancement and well-being of the people of Jamaica.

1

IT IS AGREED:

CLAUSE ONE. **Objective**

The present Agreement establishes the general bases for pursuing the following objectives:

a. To contribute as effectively as possible to support the development of a modern, efficient, internationally competitive and sustainable agricultural sector in Jamaica; and, particularly for the implementation of Agricultural Competitiveness Programme (ACP) of the Agro-Invest.

b. To establish a framework and a legal basis for Specific Cooperation Agreements or Letters of Understanding which may arise in the future from shared concerns, or which respond to proposals for collaboration by one or more of the Parties.

CLAUSE TWO. **Areas of Cooperation**

The areas of cooperation covered by this Agreement shall be those that contribute to the achievement of the objectives set forth in Clause One, especially those related to:

a. Agribusiness and commercialisation,

b. Innovation for productivity and competitiveness,

c. Agricultural health and food safety,

d. Territorial development and rural well-being,

e. Food security.

CLAUSE THREE. **Types of Cooperation**

The different types of cooperation that can be implemented in executing the Agreements or Letters of Understanding foreseen under the present Agreement shall be those that the Parties deem most suitable to the purposes being pursued, paying due attention to the following activities:

a. Studies on matters related to the areas of cooperation covered by the present Agreement,

b. Direct advisory services, provided by technical missions or individual experts,

c. Technical cooperation for the preparation and execution of projects related to the strategic objective mentioned above,

d. Training through courses, seminars, in-service training, and study trips, and

e. Exchanges of information via books, journals, bulletins, access to data bases and other means of communication.

CLAUSE FOUR: **Operating Procedures**

The Parties shall observe the following guidelines in implementing the present Agreement:

a. Each Party shall assign a staff member responsibility for maintaining official contact and coordinating all those activities that will conclude with the signing of Agreements or Letters of Understanding. Agro-Invest and IICA assign responsibility for executing the present Agreement to the **Chief Executive Officer** from **Agro-Invest** and **Representative in Jamaica** from **IICA**.

b. Pursuant to section b) of Clause One, the performance of specific actions shall be governed by Agreements or Letters of Understanding which shall set forth, in each case, the objectives; means of action; modes of participation; the obligations of each Party; contributions of technical, financial and human resources and provisions for the administration of those resources; budgets, including pertinent technical supervision and institutional support costs; indirect costs or Institutional Net Rate (INR); and other factors necessary to guarantee satisfactory fulfillment of the Agreement.

c. When deemed necessary, the Parties may create groups or technical missions to study the nature and relevance of projects and activities that are being carried out, or could potentially be carried out, under the present Agreement; and propose such recommendations and projects as may be appropriate and which shall become the subject of Agreements or Letters of Understanding.

d. The Agreements or Letters of Understanding referred to in the present Agreement may include the participation of other multilateral or bilateral technical cooperation and financial assistance agencies; or governments of countries concerned with improving agriculture and rural development in Latin America and the Caribbean; or private organizations whose aims are compatible with those of the Parties, if the signatories of the present Agreement find it advisable and necessary.

CLAUSE FIVE: **Responsibilities of the Parties**

a. The responsibilities of **IICA**:

i. To support the implementation of the activities programmed, via the participation of the technical personnel of the Office and the international specialists.
ii. To encourage coordination among the institutions participating in the process.
iii. To provide technical support for all the activities to be carried out, through its technical personnel at Headquarters and in its 34 member countries.

b. The responsibilities of **Agro-Invest**

i. To define the priorities for action in pursuing the proposed objectives.

ii. To provide the technical and financial support required to carry out the activities related to the present Agreement.

c. Joint responsibilities

i. To follow up on and evaluate the actions undertaken jointly under the present Agreement.
ii. To participate in meetings convened to coordinate the preparation of Plans of Action and the approval of Letters of Understanding and Specific Agreements.
iii. To draw up proposals on how to secure and manage resources.

CLAUSE SIX. **Resolution of Disputes**

Any disagreement that may arise as to the interpretation of the present Agreement shall be resolved by mutual agreement between the Parties.

CLAUSE SEVEN. **Reciprocity**

Each Party to the Agreement agrees to acknowledge the contributions of the others to the implementation of the activities agreed upon, in publications, reports, informational material, messages and other means used for disseminating information on these activities.

Any document bearing the name or logotype of IICA which is to be published as part of a special project, joint project, research project or any other activity, must comply with IICA's rules and regulations governing publications.

CLAUSE EIGHT. **Entry into Force, Effective Life, Amendment and Renewal**

The present Agreement shall go into effect on the date it is signed and shall remain in effect for a period of **three (3) years**. Should either Party wish to conclude the Agreement prior to its scheduled expiration date, it shall do so by means of official notification three months in advance. Early termination of the present Agreement shall not affect the implementation and conclusion of any Agreements or Letters of Understanding under way.

The terms of the present Agreement may be amended by express agreement between the Parties, via addenda, which shall become an integral part of the present Agreement. The present Agreement may be amended only during its effective life.

The present Agreement may be extended, following prior analysis by the Parties of the results in the period coming to a close, three months in advance of its expiration date. The result of that analysis shall be the basis for granting such extension. All extensions must be formalized via an addendum, which shall become an integral part of the main Agreement. In addition, the results of the analysis conducted for the purpose of extending the Agreement should be stated in the recitals of the amended version.

CLAUSE NINE. **Privileges and Immunities**

Nothing conferred in the present Agreement, or related to same, is to be considered an express or tacit renunciation of the immunities and privileges, exonerations and benefits enjoyed by IICA and its personnel in accordance with international law, treaties or international agreements or the national legislation of its Member States.

IN WITNESS WHEREOF, the Parties sign two original copies of the present Agreement, each being equally authentic, in Kingston, Jamaica on the day of the month of **September,** 30 **2013.**

Ignatius Jean

Representative in Jamaica

Inter-American Institute for Cooperation on Agriculture (IICA)

Everton Spencer

Chief Executive Officer

Agro-Investment Corporation

5

Annex 6: JDDB Request for General Agreement for Technical Cooperation to Transform the Jamaica Dairy Industry

Jamaica Dairy Development Board

Government of Jamaica

Ministry of Agriculture and Fisheries, Hope Gardens, Kingston 6, Tel# 618-7107, Fax# 977-9230

August 14, 2014

Dr. Elizabeth Johnson
Representative
Inter-American Institute for Cooperation on Agriculture (IICA) Jamaica
Hope Gardens
Kingston 6

Dear Dr. Johnson,

Re: Request for Tripartite General Agreement - Inter-American Institute for Cooperation on Agriculture (IICA); Earth University; and The Jamaica Dairy Development Board (JDDB)

Further to the findings of our July 2014 technical mission to Costa Rica (and to Earth University in that country), and further to the need to adopt a holistic strategy to the dairy industry transformation, and further to the expressed needs of stakeholders confirmed by several industry assessments, we hereby request the following:

1. As per subject, a formal tri-agency working relationship with a Broad General Agreement that allows for implementation of Actions to transform Jamaica's dairy industry
2. Incorporation of the following indicative Action Arenas in (1) above:
   i. Establishment of forage nurseries and forage production/conservation areas for dairy and other ruminants
   ii. Farmer and enterprise capacity building, and managerial skills improvement
   iii. Development of business models for profitable and sustainable dairy farming
   iv. Administration/Coordination i.e. project coordination, stakeholder mobilisation, logistical support, reporting, etc.

We look forward to continued cooperation with IICA.

Sincerely,

Hugh Graham
Chief Executive Officer

Copy:
Mrs. Zuleikha Budhan, Principal Director, Planning, Policy and Development, Ministry of Agriculture and Fisheries, Jamaica

Annex 7: Letter of 5 Sep 2014 from MOAF for Technical Cooperation for Orange Flesh Sweet Potato

MINISTRY OF AGRICULTURE AND FISHERIES
HOPE GARDENS
KINGSTON 6
JAMAICA

Telephone: (876) 927-1731
Facsimile: (876) 927-1904
ANY REPLY OR SUBSEQUENT
REFERENCE TO THIS COMMUNICATION SHOULD BE ADDRESSED ONLY TO THE PERMANENT SECRETARY AND THE FOLLOWING REFERENCE QUOTED

September 5, 2014

Dr. Elizabeth Johnson
IICA Representative in Jamaica
Inter-American Institute for Cooperation on Agriculture
Hope Gardens
Kingston 6

Dear Dr. Johnson

The Ministry of Agriculture and Fisheries wishes to express our deep gratitude in respect of the work the Inter-American Institute for Cooperation on Agriculture (IICA) has done, particularly the local office, in spearheading the introduction and trial of new sweet potato varieties targeting initially the European market.

Sweet potato is a strategic crop for Jamaica, and the Ministry of Agriculture and Fisheries perceives that we can be highly competitive in this market. We have been in constant dialogue with potential buyers in the targeted markets and believe that with the help of your organization we can significantly increase both production and export through our Agro Park system. Our medium term goal (3-5 years) is to target 1,500 to 2,000 acres of production of these varieties for the European, Canadian and Japanese markets.

Our recent collaboration in respect of the current trials fully demonstrates the tremendous amount of work that is left to be done. Clearly, Jamaica must acquire the rights with respect to the varieties we are working with if is to compete effectively, given the logistical difficulties of importing large quantities of sweet potato slips. Our knowledge of seed production methodologies, crop care and post-harvest handling of these varieties, will require long-term commitment of both IICA and the Ministry and its Agencies if we are to fully realize the opportunity presented by this crop.

We thank you for your support and look forward to our continued close working relationship.

Yours sincerely

Donovan Stanberry
Permanent Secretary

RECEIVED
05 SEP 2014

Annex 8: Plant Health Professional Curriculum submitted to CONACYT program.

Development of the Plant Health Professional for Agro Parks Production Systems in Jamaica

Link to 2014-2018 MTP - CSAC – Value Added Chains FP- Component 3- Contribution 10 – Res 3.2

1. Objective of the program

To develop a standardized curricula for the training and licensing of Plant Health Professionals to support the Extension services of the MOAF by developing local institutional capacity to train young agriculturists in the disciplines of Field Diagnostics, Crop Protection, Integrated Pest and Crop Management, Crop Production, SPS measures for Trade in agricultural commodities, basic business management/record keeping and Participatory Approaches in Adult Education thereby providing advisory services and support to farmers and facilitating export of produce from Agro parks and the wider agricultural sector in Jamaica.

2. Background

The Ministry of Agriculture & Fisheries (MOAF), in support of the Government of Jamaica's efforts at debt management, has embarked on several initiatives, one of which is the development of nine Agro Parks. Agro Parks are expected to reduce the need for agricultural imports as well as provide a supply of raw material for agro-processing and non-traditional exports. The MOAF defines an Agro Park as area of intensive agricultural production which seeks to integrate all facets of the agricultural value chain from pre-production to production, post harvesting and marketing. This initiative seeks to reduce Jamaica's annual food import bill, which currently exceeds US$1billion.

Agro-Parks are being strategically implemented to facilitate the following:

- Promote Public Private Partnership investments in agriculture
- Promote efficiency in resource allocation and utilization
- Improve economies of scale
- Improve market access for small farmers
- Promote and encourage sustainability
- Create long term and seasonal employment
- Create focal points for agricultural development

The aim of the Agro parks is to bring some 6,600 acres of under-utilized lands into agricultural production when fully implemented by 2017. To date seven of the Agro parks (Plantain Garden River, Yallahs, Amity Hall, Hill Run, Ebony Park, Spring Plain and New Forrest/Duff House) are in operation with all except Hill Run producing crops. The government of Jamaica is developing the Agro parks with both EU and IDB funded programs and the IICA office in Jamaica is currently providing Technical Cooperation to the IDB funded Agro Parks through a three year General Agreement with the Agricultural Competitiveness Program (ACP) of the MOAF.

The expected exponential growth in production that will be provided by Agro Parks will inevitably lead to a substantial increase in crop pests and diseases. If not properly managed by good agricultural practices, Agro Parks will create an enormous demand for diagnostic and extension services on the already constrained public Extension and Advisory service providers. The MOAF's agricultural research and extension services can be greatly strengthened if capacity is built in young agriculturists in the disciplines of Field Diagnostics, integrated pest and crop management (IPM) and good agricultural practices.

The Plantwise program of the Center for Agricultural Biosciences International (CABI) currently provides training for extension officers of the ministries of Agriculture in participating countries in field diagnostics, IPM, and basic extension services via plant clinics. A plant clinic, as the name suggests, is a place where farmers/growers can take plants showing symptoms of pests or diseases and, using country-specific data and information, CABI trained plant doctors make recommendations on how to manage the problem. As the training is currently geared to practicing extension officers, the training is condensed into a 2 week program. This course structure is not suitable for building capacity in students with little to no prior experience in crop production, crop protection and plant pathology or field diagnostics. However, this practical approach to teaching can be a model for the structure, development and implementation of a curriculum that may lead to some type of certificate or Plant Health Professional License.

In addition to Crop Production and Protection, Field Diagnostics and IPM, a Plant Health Professional License in the Caribbean should also include training in basic business/finance management, adult education through participatory approaches and SPS measures and standards that are critically important for trade of agricultural commodities in the Caribbean, Latin America, US and EU. In this way the Plant Health Professional can effectively work with farmers in Agro Parks and the Agricultural sector as a whole to help growers produce crops and other agricultural products that are suitable for domestic consumption, agro-processing, regional and international markets.

Therefore, in conjunction with the MOAF and relevant regulatory body, a nationally recognized licensing system will be developed for the Plant Health Professional. Ideally the Plant Health Professional License will be recognized within the Region as the basis for facilitating trade of agricultural produce within the region and accessing other international markets. In the future, the Plant Health Professional curricula can be adapted to meet the crop/pest production needs in other Caribbean islands and acceptance by relevant regulatory authorities thereby developing a regional standard for the license.

3. The Role of CONACYT

It is envisaged that CONACYT professionals will be on

- Secondment to Jamaica as required to work with selected stakeholders (Agricultural Schools, MOAF technical staff, RADA, CABI, Agro parks managers) to develop the curricula for the Plant Health Professional comprised of courses in Field Diagnostics, Integrated Crop and pest management, Crop Production, SPS measures and standards for export intra and extra regionally, adult education methods, basic farm and finance management. The MOAF is willing to provide accommodation as in-kind contribution.

- Train teachers in selected agricultural schools to teach the Plant Health Professional curricula
- Execute the curricula and mentoring teachers to graduate the first cohort of Plant Health Professionals for Agro parks in Jamaica.

Annex 9: Dairy Curriculum proposal submitted to CONACTY program

Developing Dairy Entrepreneurs for the Enhancement of Jamaica's Dairy Sector

4. Background

Jamaica's dairy sector declined significantly during the implementation of the trade liberation programme in the late 1980s leading up to the 1990s. This resulted in significant reduction in the demand for local milk due to the influx of lower priced imported powdered milk. In response to this market shock, many dairy farmers closed their operations and thus creating significant decline in the supply locally produced cows' milk. This scenario was also exacerbated by the cessation of a scheme that provides incentives for graduates of agricultural institutions to start their own dairy enterprises.

The agricultural curriculum and the general dairy program at a number of local agricultural institutions have been deemphasized with the infrastructure for proper training having passed their useful life and appropriateness for this current era. There is now a gap to be filled as the local demand for local fresh milk has increased owing to initiatives such as the government's school feeding programme, high price of imported powdered milk, and educational campaigns from various circles advocating the benefits of proper nutrition and buying locally produced commodities.

To attend to the critical concerns highlighted, there is the need for sustained efforts to continue the redevelopment of the local dairy sector. Current initiatives by the Jamaica Dairy Development Board (JDDB) and the Ministry of Agriculture and Fisheries (MOAF) to enhance the sector include:

- Pasture rehabilitation
- Investment schemes
- Importation of new genetics for herd development
- Farmer training
- Institutional support to producer organisations

To bolster these ongoing initiatives the MOAF and JDDB is developing a programme to produce dairy entrepreneurs. These activities are expected to revamp the sector by starting with a cadre of students attending at least two agricultural institutions namely the College of Agriculture Science (CASE) and Education and Ebony Park Heart Academy (EPHA).

Articulated below is a proposal to implement a dairy youth entrepreneurial programme.

5. Objective of the programme

To support the development of a modern, efficient and viable dairy sector by developing local institutional capacity to train young men and women to operate viable commercial dairy enterprises.

6. Components

a. Dairy Curriculum

i. **Objective**: Develop a modern and applicable curriculum in dairy science and business management for agricultural institutions.

ii. **Expected Results**:

1. Revised dairy curriculum incorporating components of good business practices is being implemented in two targeted agricultural intuitions.
2. Competent teachers/lecturers equipped with the requisite skills and knowledge to deliver course content to students.
3. Improved dairy infrastructure at the targeted training institutions to countenance the methodologies and content of the revised curriculum.
4. Agricultural graduates trained and equipped to manage a commercial dairy operation.

iii. Activities for ER.A.1:

1. Dairy specialist recruited. IICA will assist the MOAF to identify and recruit a dairy specialist for a minimum period of one year.
2. Curriculum audit. Current and past curriculum will be reviewed by the dairy specialist and a selected team comprising personnel from the targeted institutions, MOE and MOAF. Relevant content will be retained and new methodologies and content will replace sections deemed to be irrelevant.
3. Revision of curriculum. The dairy specialist will work with local agricultural institutions and the Ministry of Education (MOE) to review the existing dairy science curriculum towards identifying areas for adjustment and approval of revised document.
4. Implementation of revised curriculum. Institutions through assistance from the MOAF retrofitted with the infrastructure and trained personnel required to disseminate course content to students.

iv. Activities for ER.A.2:

1. Human resource audit. The dairy specialist will conduct an audit of the staff of targeted institutions to ascertain the competence level of staff.
2. Where necessary staff will be trained on the various components of the revised curriculum.

v. Activities for ER.A.3:

1. Infrastructure audit. An audit of the dairy infrastructure at the targeted institutions will be conducted to determine the scope of work required to upgrade the facilities.
2. Retrofitting of infrastructure. Completion of all administrative and physical activities resulting in the selection of a contractor and modern dairy facilities ready to be commissioned.

vi. Activities for ER.A.3:

1. Incentive system developed. Provide a resource based mechanism for graduates from the dairy programme to 'kick start' a commercial dairy enterprise. Provision of venture capital to establish small dairy units to include the purchase of dairy stock, pasture land, equipment and supplies, and working capital.

2. Recruitment of students. Selection criteria for a dairy entrepreneur developed in curriculum.
3. Institutions to conduct interviews with interested students and select a cohort based on the developed criteria.
4. Execute training prgramme. Training programme implemented in accordance with the methodologies and content articulated in the revised curriculum.

Annex 10: IDRC Concept Note for developing biological control agent for Anthracnose in White and Yellow Yams

Concept Note IDRC/CRDI Second Small Grants Call 2014-2015

Isolation, characterization, efficacy and cost of production of a biological control agent for Anthracnose (*Colletotrichum gloeosporioides*) of white and yellow yams (*Dioscorea rotundata and D. cayenensis*) in Jamaica.

Partners: IICA Jamaica & Canada, AIC MOAF Jamaica, SRC Jamaica, UWI Mona, 2 Canadian Institutions

In Jamaica, 24 varieties belonging to 5 species of *Dioscorea* (*D. alata, D. cayenensis, D. eculenta, D. rotunda and D. trifida*) (Asemota el at. 1996) are grown as edible yams. However, *D.cayenensis* (yellow yam) and *D. alata* (called white yam in Jamaica) are the most important domestic staple with some 217,000 tonnes consumed annually. These yams are also grown for export to diaspora markets in the Canada, US and UK earning USD 21 million (Jamaica Export Association Database) annually in foreign exchange significantly contributing to Jamaica's economy. Between 2006 and 2008, yam production decreased by 17% (Statistical Institute of Jamaica) and has been in steady decline since. However *D. alata* production, consumption and exports have been most affected mainly due to near complete crop failure due to Anthracnose disease caused by the fungus *Colletotrichum gloeosporioides*. There are reports that the disease is also now affecting yellow yams which is of major concern as this yam is the major source of carbohydrate in the Jamaican diet.

D. cayenensis known as Guinea yams are native to Africa and *D. alata* known as water or greater yams probably originated from the southeast Asian-Oceanian region (Malapa et al. 2005). In Jamaica, seven varieties of water yam namely, Tau, Sweet yam, St. Vincent yam, Chinese yam (*D. divaricata syn. D. batatas* Decne), Hard yam, Moonshine and Bajan or Renta yam (Asemota pers comm.) are cultivated. As such at least two species *D. alata* and *D. divaricata* are cultivated in Jamaica and called 'white yams'

Yam production and marketing are plagued by a wide range of pests and diseases most of which are kept under control by good agricultural and warehouse practices (FAO, 2002). However, foliar anthracnose is the most important field pathogen in yam production. The disease causes leaf necrosis and shoot dieback of yams reducing photosynthetic efficiency thereby reducing yields by as much as 90% in susceptible genotypes (Egesi et al 2007). Delay of the onset of anthracnose epidemics in the field requires weekly applications of fungicides which is both economically and environmentally undesirable. In the rainy season fungicides are ineffective and disease development is exacerbated by the wide host range of the pest with weeds providing refuge and inoculum for reinfection of yams by rain splash or irrigation systems once the effects of applied fungicides diminishes.

Over use of chemicals also leads to development of fungicide-resistant strains, higher cost of production and higher pesticide residues which could lead to refusal at port of entry when yams are exported. Although host plant resistance to anthracnose in the water yam varieties Belep, Kinabayo, Oriental and Plimbite is known in the Caribbean, expression of resistance is highly variable and tend to be incomplete with some form of symptom developing at some stage of plant growth (PAO/IPPGR, 1989).

Biological control using microbial antagonists offers an eco-friendly, cost efficient and effective alternative to the use of chemical control of yam anthracnose. In particular, soil actinomycetes such as Streptomyces are known to produce several secondary metabolites which have been shown to suppress a variety of pathogens (Prapagdee et al. 2008). Crude culture filtrate extract of Streptomyces strain MJM5763 was reported to effectively suppress anthracnose severity and incidence under field conditions by 86% and 75%, respectively (Palaniyandi et al 2011).

The three objectives of this study are the isolation of Streptomyces strains from the soil of anthracnose infested yam fields in Jamaica using protocols previously described by Hayakawa and Nonomura (1989). Strains of Streptomyces isolated from Jamaican soil will be screened for biocontrol and plant growth promoting traits by assessing protease and siderophore producing capacity (Palaniyandi et al 2011) and characterized by 16S rRNA sequencing, searching for similarities to known sequences in the Genbank database to identify candidate biocontrol agents. The final objective is to assess the ability of the candidate Streptomyces strains to suppress anthracnose disease in white yams under greenhouse and field conditions and determine the impact of this control strategy on cost of production compared to chemical suppression at a comparable level.

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PERCISION FARM MANAGEMENT PRACTICES FOR JAMAICA'S SMALL RUMINANT PRODUCERS

Problem and Justification (450 word maximum)

***What is the problem for which you seek support, and how and why is it important*?**

Jamaica has over 60 thousand farmers in the production of small ruminants (sheep and goat).[5] They produce only 15% of the total mutton and chevron consumed locally, with 85% being imported primarily from New Zealand, Australia and the United States[6]. This supply imbalance has persisted even though there continue to be significant increases in the sheep and goat populations[7].

The dichotomy which exists was explored during a 2012 Market Survey conducted by the Inter-American Institute for Cooperation (IICA) which revealed challenges experienced by the sector[8]. These challenges include, *inter alia*: improper record keeping, limited capacity of farmers to track development of breeds overtime, a very high level of Praedial Larceny and dog predation, high cost of feed leading to inadequate nutrition, the high cost of medicine and drugs for the animals and the absence of an efficient abattoir. Due to the popularity of the meat both in the local traditional cuisine and in the tourist sector, producers persevere in the sector.

What has already been done on this issue, by you or others?

Fences have served to reduce theft of animals, however, not fail safe and few farmers are able to afford this. Recognizing that Praedial larceny is a bane to Jamaican agriculture, the Minister of Agriculture and Fisheries in his 2014 Budget speech, highlighted plans for a national animal identification and traceability system, starting with cattle. With over half a million[9] small ruminants in Jamaica, the need for a producer driven farm management system which allows for traceability has been acknowledged.[10]

How do you situate this activity within the larger context in which you work?

Canada has a long standing tradition of livestock improvement that is recognized as providing tangible results domestically and internationally. Mandatory national livestock identification is a key component for Canadian program development and industry growth. Traceability for livestock producers can solve several challenges for producers, while addressing national issues such as health, food security and risk management. Working collaboratively with the small ruminant industry in Jamaica on this project would give us all the opportunity to find solutions for tagging, recording and adding value to the overall program. Canadian livestock associations are continuing work on ear tag trials and data generated from a project in Jamaica would be of interest, as we search for reliable

[5] Agricultural Census, 2007
[6] Ministry of Agriculture and Fisheries Policy Paper – 2014
[7] Agricultural Census, 2007
[8] IICA Market Survey Report, 2012
[9] FAOSTATS, September 2014
[10] Ministry Paper on Praedial Larceny, 2014

identification solutions. Technologies developed in Canada to maximize value from aggregate livestock data are designed to be customized for the wide variety of production systems in use. Export of livestock genetics, related technologies and resources are significant to our agricultural industry. This proposed project offers strengthening of the livestock value chain and the opportunity for several value added products for Canada and highly applicable in Jamaica. Because of the Canadian experiences in value chain management in milk, meat and related small ruminant products the application of these values in Jamaica's production sector can be efficient and effective. Enhanced and sustainable trade for Canadian elite sheep and goat genetics would be supported by tangible evidence in Jamaica of the value of ever-improved genetics and farm management technologies.

Objectives (350 word maximum)

What are your objectives?

General Objective : To demonstrate the impact of precision farm management practices on productivity and traceability for small ruminant producers in Jamaica.

Specific Objectives :

1. To introduce an identification system for 500 animals selected from the sheep and goat population in Jamaica.
2. To train trainers and producers in electronic identification system for animals.
3. To collect information relating to basic productivity and ownership of animals. This would include breed, age and sex of animals correlated to farm locations
4. To analyse and interpret information for decision making. Benchmark data will be generated and then related to optimum production, market timing and risk management.
5. To package and share lessons learned with regional organizations that impact livestock production.

What is unique about these?

Managing the project data through bioTrack, a web-based program, offers real time and cost effective solutions. Data entry and editing using technology already in use by Jamaican producers and/or their organizations reduces start up and maintenance costs. Having data entered into a dynamic database will build in robust accountability, benchmarking and analysis opportunities. Shared data bases allow researchers to identify parent stock whose genomic array indicates genetic ability to perform as expected in both the temperate and the tropical environment. Further researchers can identify feed and environmental conditions that the most appropriate parent stock can be selected from using the Canadian performance evaluation data bases. Industry focused research would have access to a complete historical record to identify effective strategies (i.e. health records, economics etc.). As the small ruminant industry in Jamaica grows and changes to meet market opportunities, management tools and analysis are able to be added to the existing platform. Direct connection to Canadian genetic evaluation programs will bring proven animal improvement tools directly to farmers in Jamaica. Canada and Jamaica share similar challenges of both praedial larceny and predation. The shared challenges of developing proactive protection against these situations serves to enhance the ability, (using unique, electronic, centrally managed animal identification), of producers and governments to mitigate the disastrous effects at the farm level.

Results (500 word maximum)

What do you reasonably plan and expect, in terms of outputs (material products); outcomes (changes in awareness, will and behaviour of groups and organizations to benefit from your project); and potential longer term impact or usefulness?

In terms of outputs (material products);

Identifying each of the 500 animals uniquely with RFID devices will provide proof of ownership for farmers involved. Performance analysis of the breeding stock and progeny, combined with an effective selection strategy, will yield more saleable livestock products with improved feed efficiency. There will be a model built for a livestock database that provides practical producer management tools and real time aggregate livestock reporting.

Outcomes (changes in awareness)

Enhanced appreciation by farmers and food policy makers on the effectiveness of investments in improved genetics, improved forage and more robust anti-praedial larceny legislation. The development of performance based benchmarks will allow for improved partial budgeting by farmers for genetics and performance inputs. Public managers will have more accurate information to make decisions on support of domestic production of meat and milk replacements. Web based and managed individual animal identification offer broad based confidence in more aggressive efforts in small ruminant production in Jamaica.

Desire and behavior of groups and organizations to benefit from your project?

Local Small ruminant producer organizations such as the Jamaica Goat Farmers Association have in various forums, highlighted the need for the development of local breeds assisted by a proper herd recording keeping system. Considerable efforts have been made by the Ministry of Agriculture and Fisheries and Individual farmers to purchase live animals and semen in order to upgrade the local breed stock. With this thrust to develop local herds the producer organizations are concerned that genetic information will be lost and have been encouraging members to maintain a proper system of keeping records.

Training initiatives by RADA and IICA to build the capacity of small ruminant farmers to develop herd records and systems of simple animal identification has proven successful. Farmers have a high anticipation for these training sessions and field activities. Farm visits by the RADA livestock officers have also revealed that the farmers participating in the workshops have been putting into practice the skills and knowledge learned at the sessions. The Associations have recognized the importance farmer training and are anxious for these to be expanded to ensure that all farmers have a proper system of keeping records and identification of animals.

Potential longer term impact or usefulness?

This project will contribute to policy development regarding the two countries' small ruminant industry. This would include improved information reliability for farmers to prepare and access operational loans for farm productivity and improvement. The web-protected animal identification and ownership information will assist in the enforcement of praedial larceny regulations[11] assisting the strengthening of food and financial security issues. A strengthened genetics improvement program for Jamaican conditions while allowing Jamaica to safely access a wider global genetic base is also envisaged.

[11] Ministry Paper 56

For Canada:

- Obtaining useful information for bench marking in different tropical regions.
- Increase confidence in Canadian agricultural products and services.
- Increased opportunity for value added genetics trade.

For Jamaica:

- Strengthen the ability to trade.
- Improved ability of farmers to expand the sale of their breeding stock.
- Increase confidence of consumers-general, specialized, buy local.
- Contribute to database for entire small ruminant value chain.
- Increase productivity and competitiveness.
- Contribute to import substitution.

Monitoring, evaluations, and learning (500 word maximum)

1. In relation to your reasonably expected outcomes (changes in awareness, will and behaviour of groups and organizations to benefit from your project) and outputs (material products): (a) how will you self-monitor progress and challenges toward reaching such expected outcomes and outputs throughout the project?(b) how will you evaluate the significance of project outcomes and outputs achieved, once the project is completed? 2. In relation to your organization's own learning: how will you reflect, document and share any lessons which your own organization may draw from its experience with carrying out the project?

(a) How will you self-monitor progress and challenges toward reaching such expected outcomes and outputs throughout the project?

The project methodology is designed with indicators and deliverables built in for the purposes of monitoring progress against planned deliverables. Please see Table…. (Attached).

(b) How will you evaluate the significance of project outcomes and outputs achieved, once the project is completed?

Monitoring and evaluation will be conducted by RADA livestock officers in the targeted areas. These officers are assigned geographic locations and will make scheduled visits to individual farms to collect and verify data thereby ensure that farmers are adapting to the technology and implementing the correct management practices. Producer associations through scheduled meetings will provide feedback from members regarding the impact project deliverables on the sector. The Data Bank and Evaluation Unit in the Ministry of Agriculture and Fisheries will provide overall statistics on the growth of the various components of the small ruminant sector.

Evaluation of RFID device retention rate will be generated from the livestock database, with significant events recorded by date. Benchmark reports will provide accurate animal valuation through genetic profiling. Various management styles will be compared to highlight effective management strategies, using real time data. The Jamaican small ruminant industry will be provided with an effective working model for a traceability program, that also gives value to producers.

2. In relation to your organization's own learning: how will you reflect, document and share any lessons which your own organization may draw from its experience with carrying out the project?

BIO is well integrated into the Canadian agricultural research and development process, with direct working relationships linking species organizations and educational institutions. There are opportunities to present and reflect our experience in this project. This will be done through annual general meetings, working groups and direct relationships with industry leaders in Canada. BIO also continues to build and support a resource network of Canadian companies interested in working internationally.

Qualifications, experience, roles, and responsibilities (500 word maximum, not including attachments)

What do you and your partners bring to this exercise? What are the respective roles and responsibilities of all organizations involved? Please include relevant references to past work (these can be web links), and attach the one page biography/ies of the lead organizer(s).

BIO
www.bridgingintelligence.com/home.aspx
BIO has played a key role in bridging intelligence in the livestock industry for over 20 years. Unique animal identification is linked to significant events throughout the livestock value chain. The web-based bioTrack system allows information to be captured, securely stored and analyzed in real time.
Role & Responsibility : To lead the project and provide training & liaison with other Canadian team members. BIO will provide livestock expertise to this project, combined with I.T. resources, to ensure that technology delivers effective results.

Canadian Centre for Swine Improvement (CCSI)
www.goatgenetics.ca/index.cfm
CCSI developed GoatGenetics.Ca as an information resource dedicated to the improvement and promotion of goat genetics. It aims at fostering the enhancement and expanded use of improvement programs for producers, as well as international promotion of our improvement systems and genetic products.
Role: To provide the programs for analyzing the genetic potential of the animals in the project, thereby providing relative valuation and identifying areas to improve.

Eastgen
www.semex.com/di/eastgen2/i2
EastGen is a producer owned and directed artificial insemination company. EastGen's small ruminant program includes a Canadian Food Inspection Agency (CFIA) accredited goat and sheep collection facility and laboratory. EastGen's genetics provide elite opportunities and diversity of bloodlines for the benefit of small ruminant breeders around the world.**IO**

The Canadian Livestock Genetics Association (CLGA)

www.clivegen.org

CLGA works with Agriculture and Agri-Food Canada (AAFC) to develop and support international markets for Canadian produced dairy cattle, sheep and goat genetics.

The mandate for CLGA is to deliver programs that provide support for sustainable livestock genetic trade. CLGA members have been active in Jamaica for several decades, in the development of artificial insemination (AI) and embryo transfer (ET) technical transfer for cattle, sheep and goats.

Role : To provide targeted coordination with Canadian industry/research collaborators on the initial identification of genetic profile of animals.

Inter-American Institute for Cooperation on Agriculture (IICA)

www.iica.int

IICA provides technical cooperation solutions for enhancing sustainable and productive agriculture in the Americas. It recently completed projects in small ruminant production in Jamaica, Trinidad & Tobago and Barbados. A

Role : Project Collaborator. To coordinate training, research and reporting activities in Jamaica and in Canada.

Ministry of Agriculture and Fisheries (MoAF)

MoAF is responsible for developing the country's Agricultural Policy and implementation of programs for food production & food security. It's extension arm-Rural Agricultural Development Authority (RADA) conducts training and consultations with farmers islandwide, has had recent joint initiatives with IICA in SR identification protocols.

Role: Trainers to be trained. Data collection.

Sheep & Goat Producers' Association

Merged in 2013, the joint association promotes productivity, profitability and competitiveness of the SR sector.

Role: To identify and mobilize animals for the project.

Caribbean Agricultural Research Development Institute (CARDI) generates, transfers and applies appropriate technologies through agricultural research for development in the Caribbean. It undertakes on-going initiatives in the SR sector.

Role : To disseminate research results in 3 Caribbean countries.

Timetable

When will you do what? Are there assumptions or constraints with respect to the start? NB: Grant duration must ensure sufficient time for all proposed activities, spending, and reporting to be completed by the proposed end date. Setting the duration of a project has grave consequences in terms of fixing the times for different deliverables and the final report. Planning must be carried out following the most rigorous project management standards (see for example the Project Management Institute's website. In your timetable, indicate the time needed to carry out each phase of the project. Remember to take into account the time required for staff recruitment and equipment purchases. Indicate possible constraints in adhering to the timetable.

See Excel file

Abstract (300 words maximum)

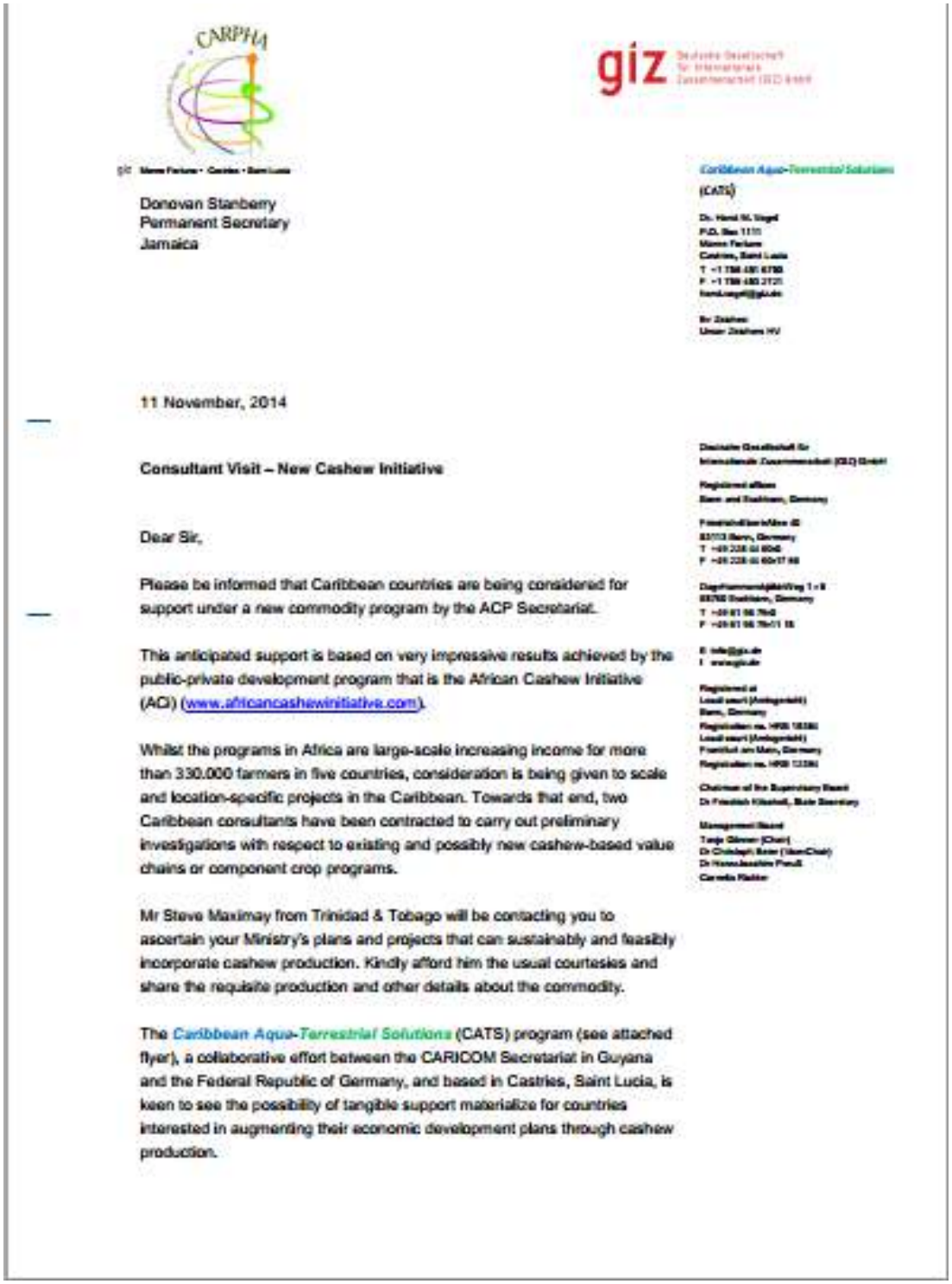
The abstract should include: a brief summary of the issue or topic (one brief paragraph); how the project will address this (principal objectives, method or approach, key activities in one or two brief paragraphs); and expected results (outputs and outcomes in one brief paragraph). Make sure to include institution names, important dates, and key locations as appropriate. Please write for a lay audience who will not have read your concept note. (Please note that if your application is successful, you agree that the project title and abstract may be edited and published by IDRC on our website.)

"Precision Farm Management Practices for Jamaica`s Small Ruminant Producers" is a practical, results-oriented project utilizing modern identification and data collection technologies for aiding informed decision-making by producers. Lead by not-for-profit organization, BIO, the 2year project plans to start in April 2015 and will collaborate with the Inter-American Institute for Cooperation on Agriculture, building on previous related initiatives. Recognizing that persistent challenges impacting the productivity and competiveness of the small ruminant sector in Jamaica largely relate to praedial larceny, dog predation and feed optimization, the advances made in Canada for improving farm management systems will be shared in training and demonstration activities planned. Benefits accruing to the local sector from the improved capabilities for traceability will assist in assuring food safety, import substitution and exploiting mutually advantageous trade opportunities.

The project aims to provide data for benchmarking and analysis of sheep and goat genetics in Jamaica. Shared data bases will facilitate the identification of parent stock with appropriate genetic profiles for temperate and the tropical environments. This is likely to improve Canada's ability to expand its marketing of genetics worldwide. Industry focused initiatives would have access to a complete historical record to identify effective strategies (i.e. health records, productivity, profitability etc.). As the small ruminant industry in Jamaica grows and changes to meet market opportunities, direct connection to Canadian genetic evaluation programs will bring proven animal improvement tools directly to farmers in Jamaica.

The project is timely complementing the Government`s new national animal identification system, starting with cattle. Providing training to the Ministry of Agriculture`s extension staff as well as to producers, a multiplier effect is anticipated. Sustainability and diversification in value added products is also envisaged. This project could become a template for small ruminant identification for the Caribbean Region and extend the benefits far beyond Jamaica.

Annex 12: On the Horizon- New GIZ CATS Cashew Initiative



Donovan Stanberry
Permanent Secretary
Jamaica

11 November, 2014

Consultant Visit – New Cashew Initiative

Dear Sir,

Please be informed that Caribbean countries are being considered for support under a new commodity program by the ACP Secretariat.

This anticipated support is based on very impressive results achieved by the public-private development program that is the African Cashew Initiative (ACI) (www.africancashewinitiative.com).

Whilst the programs in Africa are large-scale increasing income for more than 330.000 farmers in five countries, consideration is being given to scale and location-specific projects in the Caribbean. Towards that end, two Caribbean consultants have been contracted to carry out preliminary investigations with respect to existing and possibly new cashew-based value chains or component crop programs.

Mr Steve Maximay from Trinidad & Tobago will be contacting you to ascertain your Ministry's plans and projects that can sustainably and feasibly incorporate cashew production. Kindly afford him the usual courtesies and share the requisite production and other details about the commodity.

The Caribbean Aqua-Terrestrial Solutions (CATS) program (see attached flyer), a collaborative effort between the CARICOM Secretariat in Guyana and the Federal Republic of Germany, and based in Castries, Saint Lucia, is keen to see the possibility of tangible support materialize for countries interested in augmenting their economic development plans through cashew production.

This would be in keeping with the objective of the second CATS component that is "Adaptation of Rural Economies and Natural Resources to Climate Change", the objective of which is to enhance the adaptive capacity of rural economies, in particular with regards to agriculture and forestry.

Thank you for your understanding and cooperation in anticipation.

Yours truly,

Dr Christopher Cox
Head of Department
Environmental Health & Sustainable Development Department
Caribbean Public Health Agency (CARPHA)

Dr Horst Vogel
Head of Programme (PGL)
Caribbean Aqua-Terrestrial Solutions
Deutsche Gesellschaft für
Internationale Zussammenarbeit (GIZ) GmbH

cc. Dr. James Hospedales