Multilateral Investment Fund
Member of the IDB Group

I. GENERAL PROJECT INFORMATION

PROJECT NUMBER	JA-M1035		
PROJECT TITLE	Project Grow: Accelerating the Inclusion of Small Scale Farmers and Youth into the Commercial Cassava Value Chain		
PROJECT OBJECTIVE STATEMENT	The project objective at the **impact** level is to increase the incomes of small scale cassava farmers, as well as generate sustainable employment opportunities for vulnerable youth in Jamaica. The project objective at the **results** level is to enhance the capacity of small scale producers to supply cassava to commercial buyers and to build youth skills to foster their insertion into the cassava value chain as farm workers, processors, and service providers.		
EXECUTING AGENCY (EA)	Desnoes & Geddes Foundation		
DESIGN TEAM LEADER(S)	Yolanda Strachan and Norah Sullivan (MIF/AMC), Co-Team Leaders		
SUPERVISION TEAM LEADER	Wayne Beecher (MIF/CJA)		
OTHER TEAM MEMBERS	Erica Haughton (MIF/CJA), Winsome Leslie (MIF/MIF), Jovan Johnson (MIF/CJA), Elena Heredero (MIF/AMC), Clarissa Rossi (MIF/AMC), and Alejandro Escobar (MIF/AMC)		
BENEFICIARY COUNTRY	Jamaica	**BUDGET**	
UNIT WITH DISBURSEMENT RESPONSIBILITY (UDR)	CJA	MIF GRANT	$750,000
MIF ACCESS AREA	Access to Markets and Skills	MIF LOAN	$700,000
MIF AGENDA	Linking Small-Scale Producers to High Value Agricultural Markets and Youth Employment and Entrepreneurship	MIF EQUITY	$000,000
NUMBER AND TYPE OF BENEFICIARIES	• 1,200 direct beneficiaries (200 farmers and 1,000 youth trained to provide services in the value chain). • 3,170 indirect beneficiaries (families of direct beneficiaries, given that the average household size in Jamaica is 3.64)	TOTAL MIF CONTRIBUTION	$1,450,000
PREVIOUS OPERATIONS WITH EA	N/A	COUNTERPART (GRANT) LOCAL EA OTHERS	$1,500,000
COMPLEMENTARY IDB OPERATIONS	RG-M1210 (NEO); JA-M1036 (NEO Jamaica)	CO-FINANCING (LOANS) IDB GROUP OTHERS	$000,000
OII'S 5 QUESTIONS/AFIDAVIT	Yes - OAP	CO-INVESTMENT (EQUITY)	$000,000
WORLD CHECK	TBC	TOTAL PROJECT BUDGET	$2,950,000

II. PROBLEM DIAGNOSIS

Cassava, a crop native to Latin America and the Caribbean, is highly versatile and with adequate processing, can be transformed for use as flour, bread, confectionary, starch, and animal feed. Once seen as the "food of the poor", cassava has emerged as a multipurpose crop for the 21st century – one that responds to the priorities of developing countries,

to trends in the global economy, as well as to the challenges of climate change, as it is one of the most climate resilient staple crops in Africa[1].

In Jamaica, a new commercial supply chain for cassava production is emerging with the backing of Red Stripe, one of the country's leading beverage manufacturers. As part of its sustainable agriculture strategy, Red Stripe aims to increase usage of local raw materials in its beverage products and is using Jamaican cassava as a key ingredient for brewing beer.[2] It has successfully experimented with the use of cassava starch as a substitute for imported high maltose corn syrup (HMCS) in the brewing process. To this end, the company aims to substitute 40% of the HMCS that is now currently imported, with locally produced cassava starch by 2018 and 70% by 2020. A 40% level substitution would require some 48,600 metric tons of cassava tubers (roots) annually, a three to fourfold increase over current national production levels[3].To ensure a consistent supply of tubers for its newly built cassava starch factory, Red Stripe operates the only commercial cassava farm in the country, a 36-acre pilot farm at Bernard Lodge. However, additional clusters of private farms are needed across the island to address demand and achieve a sustainable supply. Eventually, the company intends to source 80% of its cassava from contract farms in the expected four clusters to be created and 20% from its own nucleus farms.

Today, cassava is grown mainly as a peripheral crop by smallholder farmers who cultivate on family-owned lands of five acres or less. Uneven domestic demand has caused fluctuations in production over the past 25 years (from as low as 15,000 to as high as 30,000 metric tons/year at its peak) making it very difficult for farmers to earn a reliable income from the crop. The uncertain market demand is also driving waning interest among farmers, and discourages young people (ages 18-35) in rural communities from entering into farming and cassava cultivation in the first place.

However, Red Stripe's commitment to local sourcing is creating a reliable and secure market for cassava and its by-products. In order to develop a local industry with the capacity to sustainably supply cassava on a commercial scale, the company launched Project Grow[4] in 2014, in collaboration with the Ministry of Agriculture and Fisheries (MoAF) and the Caribbean Agricultural Research and Development Institute (CARDI), aiming to both build the capacity of small scale producers and create a pool of skilled and semi-skilled workers to fill the approximately 2,000 jobs Red Stripe estimates will be created around cassava production and processing in the next five years. This will lead to greater productivity, quality, market access, and incomes for small scale producers. It will also generate the human capital needed to drive the value chain by giving young people (18-35) access to the job opportunities within it, as well as equipping them with cross-cutting skills for the growing agro-processing sector, identified by the New Economic Opportunities for Youth Alliance (NEO Jamaica) as one of the country's most dynamic economic sectors. Red Stripe is a member of the NEO Jamaica Alliance.

To this end, Red Stripe is building on its existing experience with youth skills training through the Diageo Learning for Life (DL4L) Program, run by the Desnoes & Geddes Foundation.[5] Within Project Grow, the focus of the DL4L training will be directly aligned with the company's core business through job opportunities being created within Red Stripe's value

[1] FAO, Save and Grow Cassava. A Guide to Sustainable Production Intensification, 2013. http://www.fao.org/docrep/018/i3278e/i3278e.pdf

[2] FAO, Regional Conference on Cassava Report, 2014. http://www.fao.org/3/a-i4548e.pdf

[3] Red Stripe is seeking to quadruple cassava yields from the current 10 to 15 tons per hectare to 40 to 60 tons per hectare.

[4] To date, the company has invested roughly US$2.5 million in creating a sustainable cassava supply chain, which includes the establishment of the 36-acre pilot farm at Bernard Lodge, a 180-acre farm at Wallen, and the construction of a 20-root ton cassava starch factory at the Kingston brewery, in addition to initiating the DL4L youth skills training pilot.

[5] DL4L has trained over 21,000 youth in Jamaica for jobs in hospitality, entertainment, and merchandizing since 2008, in partnership with the public national training agency HEART Trust/NTA.

chain. The Foundation has initiated a DL4L pilot phase for youth training in cassava cultivation and related technical areas in the value chain, with 67 youth trained to date through a nine-week program.

The project's direct beneficiaries will include 200 smallholder farmers and 1,000 vulnerable[6] youth. The project will be implemented in 3-4 rural communities with a track record for cultivating cassava. The **main problem** to be addressed by this project is twofold, centering on the production and workforce development aspects of strengthening the commercial cassava value chain. First, the cassava production of smallholder farmers in Jamaica does not meet the supply needs of commercial buyers in terms of volumes, quality (starch content), and consistency of supply. Second, the local workforce (specifically youth ages 18-35) is not trained to fill the skilled and semi-skilled farm worker positions (such as irrigation technicians, farm managers, tractor specialists, etc.) being created in the cassava supply chain. The primary causes of these problems include:

1) **Uncertain market demand for cassava and its by-products**. Many discouraged farmers often leave the cassava fields fallow because they have no consistent market. Without consistent demand and stable farm gate prices, farmers transition away from cassava to other crops. According to the FAO[7], national production in 2013 was approximately 17,300 tons, well below the 48,600 tons required annually by Red Stripe.

2) **A supply chain focused on subsistence rather than commercial production.** Farmers produce according to subsistence practices using basic inputs, methods, and without the need to meet specific buyer requirements (e.g. starch content). Current yields in Jamaica average 15 tons per hectare, far below potential yields of 40 tons per hectare. Commercial cassava farming requires the use of improved inputs (such as fertilizers, varieties suited to industrial uses, and water management systems,) which are able to double yields and improve farm profitability. Moreover, most farmers have limited experience in implementing farm protocols, traceability, record keeping, and other quality requirements that can constitute high barriers to entry for small farms.

3) **Low access to formal sources of finance for capital investment in cassava farms.** Farmers require both investment and working capital to upgrade their farms for commercial production. This includes long-term investments in irrigation systems, as well as seasonable outlays such as land preparation, inputs, and harvesting costs. Despite the wide array of traditional financial institutions and the proliferation of specialized micro lending institutions, access to credit remains a key issue for small farms in rural parts of the country. The microenterprise sector in Jamaica is served by four distinct financial service providers: credit unions, government-sponsored programs, consumer loan companies, and microfinance institutions. However, the percentage of actual small-scale agricultural and rural enterprises served by this sector is low, and most financial services are limited to security-backed loans (often tied to housing or appliances), auto loans, and some consumer lending. Furthermore, the degree of access to farm credit is directly related to farm size, with larger farmers having greater access to credit than small farmers.

4) **Mismatch between the skills required for employment in the cassava value chain and the current skills of vulnerable youth**. For vulnerable youth, limited access to quality technical training and life skills are a major obstacle to finding employment in the agro-processing sector. The cassava value chain is expected to create employment opportunities for both skilled and semi-skilled workers. For example, knowledge and skills in tractor operations, planting, crop fertilization, composting, harvesting, integrated pest and disease control, waste management, and basic knowledge of agro ecosystems are important for environmentally sustainable

[6] As defined by NEO Jamaica, "vulnerable" refers to youth who are over the poverty line, but are at risk of falling back into poverty.
[7] Food and Agriculture Organization of the United Nations, Statistics Division. www.faostat.fao.org

farm production. Similarly, farm management and administration, extension work, irrigation and water management, equipment maintenance, and factory operations are additional areas in which there is a skill deficit among youth. These types of jobs are becoming increasingly important in the transition to a green economy which promotes environmental sustainability while improving human welfare[8]. In a 2012 study from the Ministry of Labour and Social Security (MLSS), which surveyed 606 firms from different sectors, over 50% of employers with vacancies cited the inability to find the skills needed for the position. Moreover, employers consider the lack of soft skills among youth to be an important gap in the workforce.

III. INTERVENTION MODEL

In order to develop a new supply chain of cassava tubers for processing into starch and other by-products, the project will focus both on the production and workforce development "links" in this chain, in partnership with the lead company, Red Stripe. The intervention model is based on a contract farming model in which Red Stripe operates its own nucleus farms and contracts with small and medium-sized farms grouped into clusters to supply its cassava starch needs.

Red Stripe will provide a guaranteed market in the form of three-year purchasing contracts with small scale producers. As part of the contract farming arrangement, the company will facilitate affordable access to a starter package of inputs which includes irrigation technology, plant material, fertilizer, and crop protocols that have been tested and validated on the company's own farms. This secure market access through buyer commitment and price stability, combined with improved access to credit, training, and inputs will provide the right incentives for farmers to intensify production, improve quality, and fulfill their contracts. This expansion of production will not only increase income-generating opportunities for farmers, but will also open up employment opportunities in processing and support services throughout the value chain, such as extension agents, machinery technicians, irrigation specialists, and factory workers, etc. It is also expected that the development of the value chain will give rise to value added activities such as the production of cassava flour for bakeries and the use of the cassava leaves and fibers as animal feed[9].

The project objective at the **impact** level is to increase the incomes of small scale cassava farmers, as well as generate sustainable employment opportunities for vulnerable youth in Jamaica. The project objective at the **results** level is to enhance the capacity of small scale producers to supply quality cassava to commercial buyers and to build youth skills to foster their insertion into the cassava value chain as farm workers, processors, and service providers.

To achieve this, a significant component of Project Grow will focus on the development of "best in the world" technical knowledge in cassava production and the transfer of best practices to farmers. It will also focus on providing training to youth between the ages of 18-35 who will be able to take up employment opportunities within the supply chain.

Specifically, the intervention model is based on the following key elements:

1. **Access to agronomic and business training for small scale farms to transition to commercial cassava cultivation:** The project will equip farmers with the business planning, financial literacy, and management skills needed for commercial farm operations and value chain insertion. Agronomic support will include training in commercial cassava farming, particularly sustainable land preparation and water management, execution of a crop nutrition program, irrigation management, farm diversification, and pest and disease management, among other areas. Trainings will be done in cassava clusters and Red Stripe will establish pilot farms in strategic locations to serve as demonstration plots and host farmer field schools.

[8] FAO, Youth and Agriculture: Key Challenges and Concrete Solutions, 2014. http://www.fao.org/3/a-i3947e.pdf
[9] In Jamaica, other large buyers of cassava include cassava flat bread (bammy) processors such as Jamaica Producers Group Ltd.

2. **Access to improved technologies and inputs to boost farm productivity:** The project will support the transition of subsistence farms to small commercial farming enterprises by developing a package of inputs designed to maximize the productivity and income of small scale farms. Once farmers have successfully completed the agronomic and business skills training, they will be assessed for eligibility to take up contracts with Red Stripe which would include a "starter package" of inputs, containing the planting material, irrigation equipment, agro-chemicals, training and support services needed to produce at the quality and yield required. Farmers will be given technical guidance where necessary by Red Stripe personnel and will be clustered to enable them to take advantage of the collective use of equipment and other resources that Red Stripe will make available. In order to facilitate an efficient and transparent route to the market, Red Stripe will implement a robust quality program, including on-farm food safety quality standards, pest and disease control, and a process for establishing starch content in tubers through a mobile laboratory and starch testing facility.
3. **Access to finance to facilitate the adoption of improved technologies:** The project will address the critical need for investment capital by partnering with financial institutions to provide long-term loans to small scale farms. Potential partners in this space include First Heritage Bank and Access Financial Services Ltd. MIF funds will help to design a value chain finance program to ensure that farmers have access to credit to purchase inputs included in the "starter package" and to finance other start up costs such as land preparation, planting, and harvesting in the first crop cycle. Potential direct loan financing from the Social Entrepreneurship Program (SEP) or from other parts of the IDB Group, such as the IIC, will be explored.
4. **Development of qualified pool of young skilled agricultural workers to support value chain consolidation:** To support growth of the value chain, the project will create a pool of skilled and semi-skilled young workers (ages 18-35) to fill the jobs to be generated in cassava tuber production, processing, production facilities, and technical and logistic support services. The project will build on Red Stripe's existing youth training program, Diageo Learning for Life (DL4L), by providing training for youth specific to the agro-processing sector, including crop production, post-harvesting processing, starch production, as well as related areas such as farm management, agro-entrepreneurship, irrigation systems management, and farm equipment maintenance, among other areas. Youth capacity building will also incorporate life skills training and job insertion activities, which will be coordinated with the NEO Jamaica program.

IV. INNOVATION AND SCALE

One of the ways that the MIF seeks to promote social innovation with scale is through strategic engagement with companies that are integrating social and/or environmental concerns into their core business strategy, increasingly referred to as **corporate venturing for social innovation**. Corporate venturing is the act of leveraging people, ideas, technology, and business assets to drive new forms of value creation.[10] This is precisely what Red Stripe is doing through Project Grow, by translating a product innovation (e.g. substituting imported HMCS for locally sourced cassava in its beer brewing) into an opportunity for both social and commercial value creation and growth throughout the local supply chain. The aim is to build a value chain that is not only sustainable, but also equitable and that will provide social and economic benefits to farmers within the value chain through the provision of a guaranteed market.

In particular, the proposed project is innovative in that the concept of a market-driven production model with guaranteed purchasing is a new approach for Jamaica. Additionally, the project's dual focus on building the capacity of small scale farmers at the production level and on youth workforce development to address the skills mismatch facing the sector is an innovative way to pursue comprehensive value chain development. Likewise, the Access to Markets and

[10] Corporate Venturing for Social Innovation. MIF-Bridges Impact+ Concept Note, November 2015.

Skills Unit is seeking to support projects that integrate different topic areas more thoroughly, in this case joining the MIF's experience and expertise in agricultural value chains and youth employability.

As far as scale, there is potential for Red Stripe to transfer the value chain approach developed in Jamaica to other countries where its parent company, Heineken[11], is implementing local sourcing commitments under similar challenges. The knowledge generated will also be valuable for other agro-processors in Jamaica (e.g. Jamaica Broilers) and producer groups who wish to enter into similar contract arrangements.

V. KNOWLEDGE VALUE

In general, the MIF has learned that access to markets and value chain projects are more effective when they identify markets suitable for small businesses and when there is a clear understanding of how the particular market functions. Therefore, the proposed project is working closely with Red Stripe to understand demand, market forces, and quality requirements needed to create a new value chain. More specifically, the following lessons learned from both the MIF's and Red Stripe's experience are being incorporated into the project's design:

- **Transitioning to commercial farming requires intensive support.** An early lesson learned in the implementation of the "Scaling Up the Smallholder Alliance for Sorghum in Haiti (SMASH)" (HA-M1050) project, in which the beer company Brasserie National d'Haiti will source locally from sorghum producers, is that working with subsistence farmers with limited exposure to commercial agriculture requires a high degree of attention to bring about cultural change. The project will work closely with producers to foster changes in outlook and behavior in order to facilitate their successful participation in a more organized and commercially-oriented value chain.
- **Farm diversification is key.** Lessons from SEP and MIF cassava value chain projects (PR-S1006 and NI-M1031) and the FAO report on Sustainable Cassava Intensification[12] point to the importance of farm diversification for small scale farms. Strategies must be in place to achieve a healthy combination of short, mid, and long-term income streams from other crops; and (ii) use of a more resource efficient and environmental friendly water-based technology for cassava production (less water), currently available on the market. This project will promote crop diversification by identifying complementary crops based on their marketability and compatibility with cassava.
- **Youth training must be linked to jobs.** This is particularly important in the case of technical education, which involves preparing students for a trade so that, once they graduate, they can enter the job market. To ensure an effective transition, courses must be relevant to demand, and ongoing feedback must be provided. In addition, research has shown that employers value life skills (motivation, work attitude, responsibility, and commitment) even more than technical skills. Several studies have demonstrated the impact of life skills on the success of interpersonal relationships, in the school environment, and in the job market.

Key evaluation questions. What pre-existing conditions are necessary to successfully implement local sourcing in value chains? How can the business case be made for local sourcing programs? How can the effectiveness and sustainability of the Red Stripe local sourcing business model be enhanced? How successful was the project in helping farmers to integrate into the value chain and to improve their incomes? Can the model be replicated in other clusters? How

[11] In October 2015, Heineken bought Red Stripe from Diageo, acquiring a majority stake in Desnoes & Geddes Ltd., the operating company for Red Stripe. The MIF has a letter of commitment from Red Stripe confirming their ongoing commitment to the project under the new ownership structure.

[12] FAO, Save and Grow Cassava. A Guide to Sustainable Production Intensification, 2013.

successful was the project in training and employing youth within the value chain? How satisfied are the farmers and youth with the intervention?

Contribution to the MIF thematic area/topic strategy and knowledge gaps. The project is aligned with the MIF's Agendas on "Linking Small-Scale Producers to High Value Agricultural Markets" and "Youth Employment and Entrepreneurship". This project will contribute to reducing the Agenda/Topic knowledge gaps by generating knowledge and lessons learned on: (i) how large food and beverage companies can catalyze the development of new value chains by sourcing locally from smallholder farmers; and (ii) what are the most effective models for integrating vulnerable youth into agricultural value chains. The project will also provide valuable knowledge for the Access to Markets and Skills unit more broadly in terms of engaging with companies around corporate venturing activities.

Link to the knowledge needs/interests of other stakeholders. This project's knowledge contribution will provide guidance and good practice for companies and development institutions on how to develop partnerships among lead firms, farmers, and other stakeholders, as well as on how to increase the capabilities of farmers and other actors in the value chain, and effective mechanisms for providing financing for farmers.

VI. EXECUTING AGENCY AND STRATEGIC PARTNERS

The Desnoes & Geddes Foundation, incorporated in 2006, is Red Stripe's corporate foundation, which carries out projects aimed at relieving poverty and improving lives for Jamaicans. The Foundation, which is managed by a six-member board of trustees, is currently implementing and managing the Diageo Learning for Life Program (DL4L), which provides education and skills to give disadvantaged people a chance to find employment, and become valued and respected contributors to their communities. DL4L programs, which are implemented in partnership with established educational and training organizations, focus on four broad areas of competency, providing education and skills for graduates to find work in tourism, retailing, the arts and/or hospitality. These four initial areas align with the company's existing capabilities, and where opportunities exist to work with its on- and off-trade customers, leverage its marketing sponsorships and supplier base, and as a result bring scale to project execution. The execution of Project Grow represents the first opportunity for the Foundation to implement a youth training project that is fully aligned with the company's core business. Although the Foundation's expertise is on the youth training side, it will consolidate its capacity in agricultural and value chain development through alliances with key strategic partners.

Other Strategic Partners

EUCORD (European Cooperative for Rural Development) will be a key technical partner in the execution of the agronomic and agribusiness components of the project. EUCORD is primarily active in three program areas: (i) implementation of agricultural value chain development projects; (ii) building technical and business capacity of NGOs and small enterprises through training and partnerships; and (iii) improving the livelihoods of women and their families through technical, health (HIV/AIDS), management, and leadership training. EUCORD has implemented several value chain projects to connect small scale sorghum and cassava farmers to markets[13], specifically to beverage companies and other industrial buyers implementing sustainable sourcing programs.

[13] EUCORD has implemented sorghum value chain projects in Sierra Leone (SAB Miller) and Ghana (Guinness Ghana Breweries Ltd), and in Ethiopia, DRC, and Burundi (Heineken).

The project will engage other technical partners such as Jamaican's Rural Agricultural Development Authority (RADA), University of the West Indies, and the International Centre for Tropical Agriculture (CIAT) among others, to provide critical technical knowledge, training, and know-how.

VII. COUNTRY OFFICE COMMENTS

COF specialist should provide comments on the following issues: (i) alignment with country priorities, (ii) assessment of the project's viability within the country's context, and if other donors have similar or complementary projects; (iii) assessment of the potential for scale; (iv) assessment of executing agency's capacity; or (v) any other relevant issues that should be taken into account during the design and execution process.

If the project is regional with specified country participation, Specialists from those countries should provide comments on all of the issues mentioned above, including executing agency experience in those countries.