

AGRICULTURAL SUPPORT SERVICES

(JA-0111)

EXECUTIVE SUMMARY

Borrower: Government of Jamaica (GOJ)

Executing agency: Ministry of Agriculture

Amount and source:	IDB: (OC)	US\$22.0 million
	Local:	<u>US\$ 9.5 million</u>
	Total:	US\$31.5 million

Financial terms and conditions:	Amortization Period:	25 years
	Grace Period:	5 years
	Disbursement Period:	4 -years
	Interest Rate:	variable
	Supervision and Inspection:	1.0%
	Credit Fee:	0.75%
	Currency:	Single Currency Facility of Ordinary Capital (OC)

Objectives: The purpose of the program is to enhance the competitiveness of Jamaican agriculture in domestic and global markets, making a substantial contribution to the goal of increasing the incomes of agricultural producers. The program will lead to increased enterprise profitability on a sustainable basis; increased labor and capital entering the sector; and increased value of exports for agricultural commodities.

Description: Specific project activities are structured in three components:

1. Strengthening the delivery of agricultural support services (US\$6.4 million):

Component 1 develops a critical capacity for delivery of effective agricultural support services, including agricultural extension, research, marketing and strategic information, to producers and exporters. These services should increase, productivity by 30% over the four year program period. The current system will improve by introducing five Agribusiness Development Units (ADUs) to link agricultural services providers with producers, establish a fund to partially finance services supplied by selected providers, organize and train farmers, and improve facilities and train technical personnel. At the end of the third year of the program the Project Implementation Unit will start negotiating

with the service providers the transfer of the ADUs to the private sector, where feasible.

2. Strengthening and consolidating agricultural and food safety services (US\$10.2 million)

Component 2 will improve the effectiveness of the animal health, plant health, and food safety systems to protect domestic consumers from illness, and domestic production from disease and contamination, and ensure that Jamaica's exports meet international standards. Concomitantly the GOJ must develop adequate policies, update legislation and install the required coordination mechanisms. In addition, Component 2 will allocate resources to hire, and train additional personnel, acquire field and laboratory equipment, upgrade the infrastructure of laboratories and control posts, implement surveillance programs and update methodologies and information systems.

3. Financing Selected activities in high payoff productive projects (US\$6.0 million)

Component 3 increases competitiveness and profitability of Jamaican agricultural producers and exporters. Specific productive projects in different rural areas that address new development opportunities in non-traditional agricultural sectors will be developed. This component will complement the strengthening of agricultural support services delivery by allocating resources to the "Agricultural Support Services and Productive Projects Fund", that will have two lines of financing: (i) resources to contract extension, sanitary services, land regularization services, credit access advice, marketing, adaptive research services, from private providers; and (ii) grants to finance eligible activities in a productive project up to an amount of US\$300,000. The beneficiaries, eligible activities, grant size, cost sharing, the processing of projects and the monitoring and evaluation systems are included in the Operating Regulations.

**Bank's country
and sector
strategy:**

The Country Paper for Jamaica (GN-2025), approved by the Board in 1998, defines two overriding objectives. The first is to support establishment of a satisfactory macroeconomic environment; the second is to support a process of structural reforms, promoting an improved environment for long-term, private sector-led growth and development. The Bank seeks to attain these objectives by concentrating its activities in five priority areas: promotion of macroeconomic stability, private sector development, public sector modernization, social development, and environmental management. In the agricultural sector the Bank supports programs that will contribute to solving the main constraints that the country faces in its pursuit of increased competitiveness and

reduced poverty in rural areas, namely lack of irrigation, secure land tenure and effective agricultural support services. The objectives of the proposed project are fully consistent with the priorities set out in the Bank's Country paper. The program will contribute directly to public sector modernization, development of the private sector in agriculture, social development, and improved environmental management in rural areas.

**Environmental/
social review:**

By focusing on improved use of agricultural inputs, better farming practices and increased surveillance of agricultural and food safety, the proposed program will generate significant positive environmental and social impacts. Improvements to research, extension and marketing will encourage better agricultural practices such as soil conservation, safe handling and use of agro-chemicals, (pesticides) and increased water use efficiency. Strengthening agricultural health and food safety services will promote the use of biological controls such as integrated pest management, reduce the occurrence of pest infestation and animal diseases, and amount of pesticide use. In the case of productive projects, rigorous screening process using eligibility criteria will guide the selection process and eliminates projects with potentially negative impacts. An Environmental Officer at the Project Implementation Unit (PIU), in addition to other activities, will ensure that the environmental review process as well as monitoring and evaluation of the productive projects are carried out effectively. Project screening will ensure equality in selecting recipients for funding. Finally, special attention is given to gender issues in the design of outreach services and training programs.

Benefits:

Strengthening delivery of agricultural support services will have significant impact in Jamaica's agricultural sector. The potential increases in production, productivity and exports could be substantial and might even start during Project execution. Incomes of small and medium farmers that are mostly poor will increase. Benefits in agricultural health and food safety will come mainly from reduced losses that are avoided preventing new pests and diseases entering the country. The benefits of the productive project component come mainly from identifying competitive productive opportunities and increases in income that the process will generate for small and medium farmers.

Risks:

(i) Sustainability of project activities is always a concern, hence the project design devoted significant attention to it. Organization of farmers, development of private-public partnerships, design and implementation of a cost recovery system; and the allocation of recurrent costs to the appropriate budget item are activities that address this issue; (ii) The land tenure situation and limited access to credit restricts agricultural development. The program includes

land tenure regularization and advises in credit access in the eligible activities in the productive project component; (iii) Coordination of the different agencies that work in food safety will be a major challenge. The program will help design and implement coordination mechanisms, work plans and regulations that are needed; (iv) The program will request that additional staff be hired to strengthen service delivery. Given the fiscal restrictions faced by the GOJ the new personnel will have to be phased in gradually. (v) Changes in macroeconomic conditions also present some risks to the accomplishment of the program's objectives.

**Special
contractual
clauses:**

The first disbursement of the financing shall be subject to the fulfillment, to the satisfaction of the Bank, of the following requirements:

- a) The establishment by the Executing Agency of the Project Steering Committee (PSC) with representatives of agencies and organizations previously agreed with the Bank; (paragraph 3.2)
- b) The establishment by the Executing Agency of the Project Implementation Unit (PIU) and the appointment of its Director, the financial/administrative officer, and the technical officers for each of the components, pursuant to the terms of reference previously agreed with the Bank; (paragraph 3.9)
- c) The establishment of the "Fund for Agricultural Support Services and Productive Projects" and the approval of its operational regulations, pursuant to the terms of reference previously agreed with the Bank; (paragraph 3.14)
- d) The opening by the Executing Agency of the account (s) required to deposit the disbursements of the financing. (paragraph 3.21)

During the execution of the project the Borrower should fulfill the following conditions:

- a) Prior to the initiation of the execution of Component 1 of the Project, to submit to the Bank evidence of the signing of the Memoranda of Understanding (MOU) between the Executing Agency and selected public sector and non-public sector agricultural support services providers, the purpose of which is the proper coordination and provision of agricultural support services to producers and exporters; (paragraph 3.12)
- b) Prior to the initiation of the execution of Component 2 of the Project, to submit to the Bank evidence of the establishment and proper operation of the Food Safety Coordination Committee; (paragraph 3.13)

- c) Within (6) months after the first disbursement of the Financing, to submit evidence of the agreement regarding objectives, activities, and roles and responsibilities of the different agencies involved in food safety, to be included in the Memoranda of Understanding (MOU) to be signed between those agencies; (paragraph 3.13)
- d) Within twelve (12) months after the first disbursement of the Financing, to submit evidence of the submission to Cabinet of a cost recovery system, which includes a mechanism for revenue retention by the agricultural service providers; (paragraph 5.8)
- e) Within twenty four (24) months after the first disbursement of the Financing, to submit evidence of the implementation of the cost recovery system referred to in (d) above; (paragraph 5.8)
- f) Within the fourth quarter of each year, to prepare and submit for Bank's approval the Work Plan for the following year. (paragraph 3.12)

**Poverty-targeting
and social sector
classification:**

This operation does not qualify as a social equity enhancing project, as described in the indicative targets mandated by the Bank's Eighth Replenishment (Document AB-1704).

**Exceptions to
Bank policy:**

There will not be exceptions to Bank's policy in this project.

Procurement:

Bank procedures will be followed in the procurement of works, goods and consulting services. Internationally competitive bidding will be followed for purchases of more than US\$250,000 for procurement of goods and related services and US\$1.5 million for construction works. Bids below these ceilings will take place in accordance with local legislation. Consultant' services will be hired in accordance with Bank procedures.

I. FRAME OF REFERENCE

A. Evolution and main tendencies of the Jamaican agricultural sector.

- 1.1 The agricultural sector is central to Jamaica's economy and the lives of its people. Although accounting for only 8.0 percent of GDP, this per cent rises to 16 percent when food processing, beverages, and tobacco output are added. Currently, the sector accounts for almost one-fifth of all merchandise exports. In addition, it has been estimated that the domestic foods crop sub-sector produced approximately US\$400 million at farm gate prices. Almost a third of the Jamaican population lives in rural areas and agriculture employs a quarter of the total labor force (270,000 people). The incidence of poverty is high and sixty per cent of the poor reside in rural areas.
- 1.2 Agricultural exports have been dominated by a small number of crops: sugar, bananas, coffee, cocoa and citrus, which accounted for almost 16% of exports in 1996, while processed foods, beverages, and tobacco comprised an additional 14%. Sugar has been the main agricultural export, with an annual value of US\$100.0 million in the late 1990s and banana has been the second largest one with an annual value of US\$45 million. A large part of the sugar exports are sold under the preferential arrangements of the Lome Convention. Meanwhile, banana exports go almost exclusively to the United Kingdom under a quota tied to historical sales that also receive a preferential price.
- 1.3 The challenges faced by Jamaican agriculture are highly influenced by the effects on food markets of the globalization process that has taken place since the late 1980's. The Jamaican agricultural sector was highly protected until the early 1980's through import licenses, reference prices, stamp duties, and quantitative restrictions. Trade liberalization led to the fall of import duties from rates as high as 200% to a maximum of 40% for agricultural goods. In 1991 Jamaica adopted the Caribbean Common Market (CARICOM)'s Common External Tariff for all goods, with the exception of a few agricultural products. In 1995 Jamaica became a member of the World Trade Organization (WTO), which made it subject to the agreements and provisions established by the organization.
- 1.4 While creating significant price competition, the globalization of Jamaican agricultural sector has also opened new opportunities for the increase in exports of Jamaican agricultural products, especially legumes, condiments, root crops, fruits and vegetables, whose exports have increased sharply during the 1990's, primarily to the United Kingdom, United States and Canada. In addition Jamaica has an important tourism industry that demands growing amounts of those products. In contrast to the traditional crops, which are concentrated among large farmers, small farmers already grow many of the non-traditional export crops.
- 1.5 The potential of the Jamaican agricultural sector has not been fully realized because of the many constraints faced by the sector. The productivity of sector's assets is very low. Almost half of all agricultural producers is dedicated to yams

production, intermixed with some cocoa, coffee, peppers, pumpkins and red peas. These small farm units are largely found in upland areas, with half of Jamaica's land area on slopes of 20 degrees or more that could result in significant land erosion. Another additional problem is related to the land tenure situation. Almost half of the urban and rural parcels of land are unprotected by the lack of registered titles and in the case of public lands, an unidentified number of holders have no formal lease or contract from the appropriate public agency. Furthermore the high transaction costs from stamp duties and transfer tax results in a disincentive to transfer or register the land.

- 1.6 Only 10 percent of the farmland under cultivation is irrigated and it includes mainly sugarcane, pastures, vegetables, tobacco, orchards and aquaculture in five southern parishes. About 50% of the irrigated lands include public irrigation systems managed by the National Irrigation Commission (NIC). Much of this public irrigation infrastructure needs rehabilitation, and the irrigation technology is outdated, with about 76% of total area using surface irrigation, 18% sprinkler and only 6% drip irrigation. As a consequence of this lack of irrigation, the recent drought has devastated agriculture during the past two years and set agricultural GDP in 1999 back to the level that prevailed in 1993.
- 1.7 The lack of competitive enterprises found in Jamaica also reflects several agricultural constraints as the increased incidence of pests and diseases (Citrus Tristeza Virus, Coffee Berry Borer, Black Sigatoka in bananas, and white flies in vegetables and other crops). In contrast the country has a high level of animal health that should be maintained and improved. Jamaica is free of such diseases as Foot and Mouth Disease, African Swine Fever and Hog Cholera. This situation gives Jamaica an advantage in opening markets, compared to other countries in the area.
- 1.8 However, Food Safety is a rising concern among Jamaican authorities. The Ministry of Health (MOH) reports that gastroenteritis is the second most frequent cause of illness and mortality among children five years old or younger. Similarly there are around 1,000 cases of food poisoning annually. The indiscriminate use of a variety of agro-chemicals, veterinary pharmaceuticals and other products increases the risk of unsafe food.
- 1.9 The lack of competitiveness of Jamaican agriculture is also partially related to the influence of economic policy. A tight monetary policy in the first half of the 1990s succeeded in reducing inflation, but also raised interest rates to as high as 49% in 1994. After some reduction in recent years, the average real lending rate still exceeds 20%. The nominal exchange rate depreciated from J\$7/US\$1 in 1990 to J\$42/US\$1 in 1999, but for the most part, the real effective rate appreciated during the 1990s. This undermined the competitiveness of the economy, encouraging import growth and sluggish performance of exports (among them agricultural exports).

- 1.10 Given that competitiveness has been a goal of agricultural policy in the last years, it is useful to review the most recent studies in this area. A study commissioned by the Minister of Agriculture (MOA) examined estimates of the profitability, protection (nominal and effective) and competitiveness of 16 commodities. From those, six could operate in an open market without protection and evidenced high competitiveness, based on the Domestic Resource Cost Coefficient (DRC). It should be noted that two are traditional exports (bananas and citrus), three are non-traditional exports (yams, papayas and hot peppers) and only one is a domestic food crop (carrots). These data are from 1995 and the situation could have been changed. However, the country needs the analytical capability to keep the data current and to undertake its investments accordingly.

B. The Institutional Framework

- 1.11 In general, there is an institutional framework in Jamaica to support the development of the agricultural sector. The Ministry of Agriculture (MOA), through the Agricultural Research and Development Division (ARDD), the Marketing Division, the Policy, Planning and Development Division, the Veterinary Services Division (VSD) and the Rural Agricultural Development Authority (RADA), has maintained a minimum capacity to provide agricultural support services to farmers. This capacity is complemented, in the case of food safety, by the Jamaica Bureau of Standards (JBS) and the Food Storage and Prevention of Infestation Division (FSPID) in the Ministry of Industry, Commerce and Technology (MICT) and by the Health Promotion and Protection Division and the Pesticide Control Authority (PCA) in the Ministry of Health (MOH). Although they need significant strengthening, many of the agencies have a basic foundation of experience, facilities, equipment, and technical capability. However, there has been a significant deterioration over recent years in the quality, effectiveness, and competitiveness of public institutions supplying agricultural support services. In short, the main strengths and constraints of the provision of agricultural services are:
- a. Budget resources and incentives—There are significant resources allocated to agricultural services and regulations and significant experience and good technical capability in those fields in the personnel of the Ministry of Agriculture and other ministries. However, severe budget reductions in cases such as agricultural research and extension have led to the deterioration of the links between ARDD, RADA and the farming community. There are few incentives in the system for the organizations to be innovative or to generate revenue. As a result of falling salaries relative to other alternatives, well-trained professionals have abandoned public sector agricultural support services agencies.
 - b. Infrastructure and equipment – Even though there is a good base of laboratory facilities and an island wide network of offices, basic infrastructure, laboratories and vehicles for transportation have fallen into disrepair and do not function well.

- c. Paradigms and approaches--Models, paradigms, and approaches in use for the delivery of support services are old fashioned and out of date, not reflecting current needs, constraints and opportunities. The extension model is still top-down, based on visits to individual farmers by extension agents.
- d. Overlapping functions and lack of coordination--Some support services, but especially those dealing with food safety, show duplication and overlapping functions and activities.
- e. Legislation and regulations—There is a very large body of regulations and a proven track record of developing and applying new legislation (meat and aquaculture acts). However, there are about 20 Legislative Acts, amendments and regulations, most of which need to be reviewed and updated in order to comply with present demands. The regulations and standards applied need to be reviewed for compliance with World Trade Organization (WTO).

C. Bank Strategy

- 1.12 The Country Paper for Jamaica (GN-2025), approved by the Board in 1998, defines two overriding objectives. The first is to support establishment of a satisfactory macroeconomic environment; the second is to support a process of structural reforms, promoting an improved environment for long-term, private sector-led growth and development. The Bank seeks to attain these objectives by concentrating its activities in five priority areas: promotion of macroeconomic stability, and private sector development, public sector modernization, social development, and environmental management. In the case of the agricultural sector the Bank supports programs that will contribute to solving the main constraints that the country faces in its pursuit of increased competitiveness and reduced poverty in rural areas, namely the lack of irrigation, secure land tenure and effective agricultural support services.
- 1.13 The objectives of the Agricultural Support Services Project are fully consistent with the priorities set out in the Bank's Country Paper. The project will contribute directly to public sector modernization, the development of the private sector in agriculture, social development, and improved environmental management in rural areas.

D. Bank and other donors experience

- 1.14 The Bank has a history of involvement in the agricultural sector in Jamaica. It has participated in: Irrigation and Drainage (538/SF) in 1982, Global Agricultural Credit (516/SF & 212/IC) in 1982 and 1993, Agricultural Research and Development (580/SF) in 1984, Small Farmer Credit (714/SF) in 1989, and Land Titling (519/SF & 812/SF) in 1987, as well as an Agricultural Sector Loan (611/OC) in 1992. In 1999 the Land Administration Program (1219/OC-JA) was approved. The GOJ and the Bank have also been working in the preparation of a project to finance partially the "National Irrigation Development Plan"(JA 0106).

- 1.15 The operation most relevant to the proposed project is Agricultural Research and Development that served to reorganize research services, including the upgrading of research facilities and staff training. It also led to the organization of the Agricultural Research and Development Division (ARDD) in the MOA, charged with increasing small farmer productivity. However, subsequent budget cuts, the lack of effective and sustainable farmers organizations, and poor communications and linkages between ARDD, farmers, and other public and private organizations engaged in agricultural research and extension, resulted in only partial achievement of the long run project goals.
- 1.16 It is also useful to examine the Agricultural Sector Loan (611/OC) approved in 1992 and its impact on agricultural sector development. The positive incentives produced by trade reform have been eroded in recent times by the overvaluation of the currency. Liberalization of prices, import and export controls were judged to be successful (at least in the short run) and produced increases in the exports of coffee, citrus and cocoa (traditional exports), commodities in which Jamaica has had comparative advantage. Non traditional exports after a period of growth had run into difficulties because of the restrictions related to lack of appropriate research and extension, lack of irrigation, sanitary and quality problems, all related to the fall in public and private investment in agriculture. In short, with the benefit of hindsight, the fiscal problems that the GOJ has experienced in recent years, and its effects on the exchange rate, the interest rate and public investment on irrigation, rural roads and essential agricultural services as research, extension and sanitary services had been a crucial restriction to obtain the benefits of the policies promoted by the sector loan. .
- 1.17 Based on the success in the Morant-Yallahs Project, the European Commission (EC) recently approved Euro\$6.0 million grant to finance agricultural support services in eastern Jamaica, focused on the parishes of St. Thomas, St. Andrew, Portland and St. Ann. The project will provide grant funds for micro-projects enhancing productivity and marketing channels, including small irrigation and light infrastructure. The Caribbean Development Bank (CDB) is considering a US\$ 10 million financing for the renovation of the citrus plantation affected by the Tristeza Virus. The Bank is also preparing a MIF project to support JBS with training and certification for Hazard Analysis for Critical Control Points (HACCP) and ISO 14000.
- 1.18 The Bank has financed approximately 40 rural development projects during the last 30 years. In spite of the substantial amount of resources invested the levels of rural poverty remains unchanged. The rural developments projects in the past usually were centralized, promoted by government agencies, without farmer participation, and lacked coordination with macroeconomic and sector policies. They were centered on the agricultural sector and there was not enough consideration of opportunities outside the farm or to promote linkages between farmers and buyers (exporters and processing firms). Agricultural services like extension, marketing and information were provided mainly by government agencies, without consideration of their quality.

- 1.19 The "new approach projects" should be organized to respond to calls for assistance, with demands originating from households, producer organizations and municipalities. They should be participatory, with farmers intervening in the identification, and selection of projects. But the formulation cannot originate from a multitude of rural households. They need to be coordinated and conveyed by organizations. Farmer organizations promote economies of scale, facilitate linkages between farmers and buyers and promote the hiring of services like extension, information and marketing.

E. Project Rationale

- 1.20 To meet market requirements farmers and exporters need extension services of good quality and intensive training. Selling to foreign markets require marketing skills and connections that a high proportion of Jamaican farmers, especially small and medium farmers do not possess. Links with exporters and processing firms with connections in foreign markets is essential for small farmers to gain access to those markets. However, these links are weak in Jamaica. Contracts are rare mainly because export and processing firms find costly to negotiate and monitor contracts for large number of individual producers and the organization of farmers at the local level in Jamaica is also weak.
- 1.21 The above-mentioned requirements have several implications for the design of the project. The upgrading of the quality of agricultural production requires appropriate technologies and good quality extension services. Given the deficiencies in the public agencies supplying those services the project should provide funds to pay for extension services and establish mechanisms to demand good performance from them, such as the active participation of beneficiaries in the selection, monitoring and evaluation of services and the possibility of contracting public or private providers according to the expertise required.
- 1.22 The application of new farm and post-harvest technology and the marketing of production will require intensive training of farmers. Thus, the project will support training that emphasizes not only technology, but also organizational and managerial skills to improve farm management and strengthen farmer associations. Given the importance of farmer linkages to exporters and processing firms, the project will promote the development of contracts between farmers and buyers, by providing goods and services that decrease the transaction costs of establishing such agreements. Given the limitations of the local capital market and the difficulties of farmers in accessing credit resources (lack of land title in certain cases, and lack of equity and organizations track record in others) the project should support the regularization of land tenure in some specific cases or should support grants for some shared investments in other cases, in order to increase farmers equity and facilitate their access to the credit from the private financial institutions. The grants dispensed by the Program will partially finance some selected activities (extension, training, information, farmer organization) that have characteristics of public or semi-public goods or generate substantial externalities.

II. THE PROJECT OBJECTIVES AND DESCRIPTION

A. Objectives and Goals

- 2.1 The project's purpose is to enhance the competitiveness of Jamaican agriculture in domestic and global markets, making a substantial contribution to the goal of increasing the incomes of agricultural producers. This is to be accomplished by developing critical capacities for the delivery of effective agricultural support services; by improving the quality and standards of agricultural commodities produced in Jamaica, as well as those traded internationally; and through the development and implementation of high payoff productive projects in selected rural areas. The implementation of the Program will lead to increased enterprise profitability on a sustainable basis; increased labor and capital entering to the sector; and increased value of exports of a group of agricultural commodities.
- 2.2 The accomplishment of these results and the project's purpose will rest on five "principles": (i) project investments will be sharply targeted and guided by appraisals of the competitiveness of the enterprises and commodities addressed; (ii) all activities will be highly participatory and project beneficiaries, organized in groups or associations, will be involved in all phases and functions of the project; (iii) the project will promote competition among different service providers, including public agencies, NGOs, private firms, and individual technicians; (iv) the users of some services will have to pay a proportion of their costs, thereby giving farmers a sense of ownership and encouraging them to demand good performance from providers and contributing to the sustainability of the project; and (v) the project will promote linkages and contracts, between farmer groups and buyers (exporters, processing firms, trading houses), to decrease transaction costs and to improve the access of farmers to financial resources and market information.

B. Project Components

Specific project activities will be structured in three components:

1. **Strengthening the delivery of agricultural support services to producers (US\$6.4 million).**
- 2.3 The purpose of this component is to develop critical capacity to deliver agricultural services to producers, chiefly research, extension, and strategic marketing information in an efficient and cost-effective way, that avoid the limitations identified in paragraph 1.11 for the public agencies.
- 2.4 The new approach to service delivery will have the following characteristics: (i) it will change from a supply-oriented, top-down approach to a demand-driven one; (ii) taking account of government budget constraints, the component will help public agencies focus on a selected set of priority actions, rely in cost-sharing efforts with producer organizations and develop a sound system of fees for cost recovery and project sustainability; (iii) public agencies will not have the monopoly of service delivery. They will have to compete with private providers

(domestic and from overseas) to supply the services demanded by producers and exporters; (iv) the new system will introduce the Agribusiness Development Units (ADUs) to serve as a bridge between the agricultural support services providers and the producers and exporters in the field. Through this component the Program will implement the following specific outputs:

- a. Establishment of an improved system to deliver agricultural support services to producers and exporters.
- 2.5 The current delivery system will be improved chiefly by introducing the “Agribusiness Development Units (ADUs)” to serve as bridges between support services providers (public and non-public, domestic and foreign) and producers and exporters. Each ADU is to be led by an Agribusiness Development Officer (ADO) whose main function will be to act as a broker to help to identify local problems and opportunities and then link those with service providers. ADUs will be located in RADA and ARDD field offices, which will be upgraded for this purpose with Program resources. At the end of the third year of the Program the PIU will start negotiating with the service providers the transfer of ADUs to the private sector, where feasible. Given that the services providers are obtaining business opportunities and will get revenues as a result of the ADUs, they likely will take over the ADUs.
- b. Development and execution of Memoranda of Understanding (MOU) with agricultural support services providers.
- 2.6 Parallel to the improvement of the delivery system described above, agreements for cooperation or Memoranda of Understanding (MOU), will be developed and executed between the Program and a full range of agricultural support service providers. MOUs, as a minimum, will describe the services an agency is prepared to provide, in which priority regions it is willing to work, and at what unit cost each service can be provided, as well as whether or not the agency is prepared to share costs. When the ADOs, producers and exporters agree on the need for a particular kind of service, the ADO can select two or three potential service providers from the available MOUs, and request expressions of interest so that producers and exporters can then make a choice and be assured of securing the very best service provider their money can buy.
- c. Establishment of a Fund to finance the provision of agricultural support services
- 2.7 To facilitate the transition to this new approach to the delivery of agricultural support services, the Program will establish a US\$1 million grant facility to assist producers and exporters (individual or associated) in procuring the services of public and non-public service providers. This facility will provide financing of up to US\$30,000 per service intervention for services such as extension, marketing, land regularization, adoptive research and related strategic information. The producer or exporter could request support services through the ADUs or alternatively the ADU will work jointly with them to identify or articulate the

service needed. The ADUs will assist potential beneficiaries (especially small farmers) in developing terms of reference and selecting appropriate service providers (public or non-public, local or international) in accordance with operating regulations established by PIU¹. Any producer or exporter could request support services through the ADUs, and the PIU will select those proposals that have the strongest technical and economic foundation.

d. Implementation of a mechanism for the identification and prioritization of strategic commodities and regions.

- 2.8 Given that the Program budget is fixed and that the budgets of Jamaican government agencies are constrained, priorities will be established for Program actions. Those priorities will be a product of studies to be conducted by the MOA's Planning Division. At a minimum, the studies will quantify--for a given commodity, region, and producer type--private profitability, social profitability, domestic resource costs, and nominal and effective rates of protection in order to assess competitive positions. Some studies will also analyze Jamaica's market penetration overseas, looking, for example, at the increased value of exports of a target group of commodities, and Jamaica's share of exports of the same commodities in particular export markets.

e. Acquisition and dissemination of agricultural technology, information and strategic market intelligence

- 2.9 This output seeks significant strengthening for ARDD in the area of technology acquisition and dissemination. Agricultural researchers, who are to be hired and trained with Program resources, will be encouraged to turn more attention to the acquisition of promising basic technologies from overseas. They will apply those technologies to Jamaica through adaptive research with producer participation. This will be facilitated through Jamaica membership of the Cooperative Program for Agricultural Research in the Caribbean (PROCICARIBE), the work with the Caribbean Agricultural Research Institute (CARDI) and the collaboration with other regional and international organizations. Adaptive research in plant and livestock production is carried out on the three principal research extensions of Bodles, Orange River and Montpelier. The project will finance some infrastructural improvements that are considered necessary to support the delivery of support services. The research on such stations should be centered on the priority crops identified by the studies done in the Planning Division and in the problems identified by the ADUs. A portion of these resources will be allocated to maintain a central germplasm bank at Hope Gardens.

¹ The PIU will establish a US\$7.0 million "Agricultural Support Services and Productive Projects Fund". A US\$1.0 million facility of the Fund will finance agricultural support services under component one and a US\$6.0 million facility of the Fund will finance activities in productive projects under component three. The PIU will establish operating regulations for the Fund to address both facilities.

- 2.10 The Program will be working with RADA and the Marketing Division, in the following activities in response to the marketing problems faced by producers and exporters: (i) general market surveys will be conducted by project-financed consultants in the Ministry's Division of Marketing and Credit, the main purpose of which will be to detect market windows or supply shortages that can be filled by Jamaica; (ii) consultants will be contracted to assist the GOJ to develop opportunities in some critical overseas markets; and (iii) a communication network will be set up that connects local officers and producer organizations with Kingston, and other major domestic markets, providing them with current price, commodity grade, and supply and demand information.

f. Acquisition of equipment and upgrading of facilities

- 2.11 This output will support the purchase and deployment of vehicles, computers, related hardware/software, audiovisual equipment and accessories, extension field kits, field equipment and office equipment for units of the MOA in charge of providing agricultural support services to producers and exporters. The program will also support the refurbishing of five RADA and ARDD field offices.

g. Training of technical personnel and producers

- 2.12 This output will support training of RADA and the MOA's technical personnel in 29 short courses, plus 17 officers, chiefly from ARDD, though the M.Sc. degree. Among the M.Sc. degrees, the largest share will support better pest and disease management. The program will also support the training of at least 1,250 producers in management, agribusiness development, social organization, and new agricultural practices in short courses, workshops, and during the course of field days held in priority regions. An effort will be made to train female producers, especially in aspects of agribusiness based rural enterprises.

2. Strengthening and consolidating agricultural health and food safety services (US\$ 10.2 million).

- 2.13 The purpose of this second component is to improve the effectiveness of the animal health, plant health and food safety systems to protect domestic consumers from illness, and domestic production from disease, and contamination while ensuring that Jamaica's exports meet international standards. The component is designed to strengthen services assuring the coordination and optimal use of expertise and resources of all institutions concerned. In close coordination with the investments, the GOJ will need to work in the development of an adequate policy, the updating of the legislation and the coordination mechanisms. The component will address these needs through the following outputs:

a. Development of an appropriate policy, updating and enacting the legislation and strengthening of the coordination mechanisms

- 2.14 The development of a comprehensive policy will clarify the mission, vision, and goals of the different services; define areas of collaboration among agencies and

stakeholders, lend focus to the strategic objectives for animal health, plant health and food safety, within Jamaica and will increase the effectiveness of the investments. To provide guidance in this subject the GOJ will create and make operational the "Agricultural Health and Food Safety Coordination Committee". The Minister of Agriculture and the Cabinet will have to approve the policy and make it operational. The MOA will also execute Memoranda of Understanding to formalize and strengthen the working relationships that already exist with institutions such as the Ministry of Health, the Ministry of Industry and Commerce, Customs, and others. The component will support the review of the roles, responsibilities and operating procedures for the respective institutions. The coordination will be reinforced by the development of joint work plans as the guides for implementing specific programs. The project will also support the review of Jamaica's current legislation, regulations and standards and will propose changes to update or create new legislation.

b. Hiring and training of personnel

- 2.15 New staff will be hired for animal health, plant health, and food safety. The hiring of staff will be phased and will be consistent with efforts to rationalize and improve the efficiency of these services. In the case of animal health, about 121 people will be trained to improve critical areas of activity, including laboratory services, slaughterhouse inspections, implementing effective surveillance and monitoring, making appropriate import/export decisions and maximizing benefits of computerization. In the case of plant health, a total of 230 persons will be trained in pest and pesticide management, Integrated Pest Management, inspection/certification and quarantine measures, risk analysis and surveillance. Training in Good Laboratory Practices (GLP) will be organized for all labs. Farmers will be trained at the rate of 5000/year in pest management and trace-back.
- 2.16 In the Food Safety sub-component the training will include critical areas like current methods in food technology; upgrading inspections of food processing firms to include HACCP; training in risk analysis techniques, inspection of pesticide registration and licensing procedures and techniques; training in sampling and survey procedures; investigation of food-borne illness outbreaks and trace-back procedures.

c. Acquisition of equipment and supplies

- 2.17 Key equipment will be acquired to support the critical functions of laboratories, offices, and field activities relating to Animal Health, Plant Health and Food Safety. Equipment includes an incinerator for safe disposal of contaminated animal and plant material; vehicles for field activities like the national animal identification system work and the collection of laboratory samples; computer equipment to maximize information availability; and laboratory equipment to bring laboratories up to level of good laboratory practices (GLP) and begin the process of preparing them for laboratory accreditation. The project will also have resources for the acquisition of books, journals, and databases to access up-to-date

information about pest and disease risks around the world, current laboratory diagnostic techniques and methods, new risk assessment and food inspection methodologies, and minutes from international meetings and other forum.

- 2.18 The equipment needed to support food safety activities and prepare laboratories for international accreditation includes, but is not limited to, inspection tools, microbiology testing equipment, chemistry equipment, computers and software, video camera, digital camera, projectors, screens, Global Positioning System (GPS) sampling and laboratory supply, small scale processing equipment, vehicles, radios, and cell phones.

d. Strengthening and upgrading infrastructure

- 2.19 The Central Animal Health Diagnostic Laboratory will be upgraded and expanded in order to bring it up to GLP and international standards for providing a basic level of diagnostic service to Jamaica producers. The goal of the VSD laboratory services is to be accredited for disease testing, food microbiology analysis, and residue testing. The component also provides for the refurbishing of a regional laboratory in Montego Bay and two parish offices. The final critical area is the refurbishing of the large and small animal quarantine areas in Kingston.
- 2.20 Facilities are needed for Plant Quarantine and Inspection (PQ/PI) at the seaports (Kingston, Montego Bay, Port Antonio and Ocho Rios (cruise ship port). Joint occupation of offices at the ports by plant health, animal health and food safety would be implemented. A total of 2 laboratories and 4 greenhouses in ARDD will be refurbished in this component. Laboratories will be ranked and needs identified to upgrade the four most advanced to GLP. At least one of the laboratories will be strengthened to achieve international accreditation.
- 2.21 In the case of food safety, this component will support the upgrading of a microbiology laboratory for the MOH in Cornwall to strengthen the surveillance program, and a PCA office in the Montego Bay area to effectively expand their import inspection and registration activities. The PCA office will be located in an existing facility of a relevant agency.

e. Implementation of a public awareness campaign

- 2.22 A public awareness campaign targeted at crop and livestock producers will be carried out. Producer awareness of pests and foreign animal diseases is critical to their early detection and producer support is necessary for an effective monitoring and surveillance program as well as specific programs of control if necessary. In addition, the campaign will be used to establish support for the national animal identification and the national pest list programs and to educate producers regarding their responsibilities under the program.
- 2.23 This component will support the implementation of a food safety education program that will target everyone in the farm to table food chain. At the farm level, growers, packers, and transporters will need to be educated in the basics of

Good Agricultural Practices (GAP) for minimizing food safety problems. GAP guidance will be made available to everyone in the agricultural sector.

f. Data bases developed/record system strengthened

- 2.24 An accurate, up-to-date record keeping system comprised of various databases regarding animal disease surveillance and monitoring, livestock owners and animal identification, animal and animal product imports and exports, and laboratory animal disease and meat residues results is the cornerstone for opening and maintaining domestic and international marketing opportunities for Jamaican livestock producers. A similar output will be developed regarding food-borne disease surveillance and monitoring, food safety research results, inspection results and monitoring, facilitation of trade for importing countries, pesticide registration, residues and exposure assessment, farm and farmer registration, and food handlers information. In the case of plant health the information system will provide reliable data as well as access to information on internationally accepted standards, guidelines, WTO-SPS notifications, and pest status in country and overseas especially from countries from which produce is imported.

g. Updating of Methodologies

- 2.25 Currently, some methods being used are outdated and not in accordance with internationally accepted scientific standards. Examples include those related to inspection, extraction and detection of residues, surveys and pest risk analysis, analytical and sampling procedures and trace-back systems. Current methodologies for inspection, surveillance, risk analysis, and laboratory and research systems such as GLP, HACCP, and laboratory safety will be assessed and updated to bring them up to international standards. Manuals will be developed to standardize activities. Using updated methodologies will not only improve the efficiency of the services, but will also give credibility to the Jamaican agricultural health and food safety infrastructure in the international arena.

h. Implementation of surveillance programs

- 2.26 The VSD needs accurate records of livestock owners and their animals. A national livestock identification program is necessary for an effective monitoring and surveillance program, for meeting third countries' import requirements, and for eradication of diseases including foreign animal disease outbreaks.
- 2.27 In the case of plant health a comprehensive, national surveillance program will be designed enlisting the cooperation of key persons and institutions. A mechanism will be developed whereby the information collected can be reviewed, validated and incorporated into the databases being developed as well as incorporated into pest management programs.

3. Financing selected activities in high payoff productive projects for agricultural producers and exporters (US\$6.0 million).²

- 2.28 The purpose of the component is to increase the competitiveness and profitability of Jamaican agricultural producers and exporters through specific productive projects in different rural areas that address new development opportunities in non-traditional agricultural sectors. The PIU will establish a US\$6.0 million facility of the "Agricultural Support Services and Productive Projects Fund" for this component.
- 2.29 Project Characteristics. To be eligible for financing a potential project must be focused on a non traditional market opportunity (e.g. vegetables, fruits, spices, horticulture, food processing, flavor extractions for export markets or for commercial domestic markets- hotels, supermarkets). A project focusing on traditional commodities (coffee, cocoa, bananas) will be eligible for financing only if the project focus on new value added products (e. g. flavored coffee, banana chips) for established markets. The project should expand an existing market opportunity or exploit clearly defined new market opportunities.
- 2.30 Beneficiaries. Beneficiaries of this component will be formal associations (companies, cooperatives, partnerships) of agricultural producers and buyers of their products (exporters, processing firms, supermarket chains). No grant money will be provided to individuals under this line. To be eligible, buyers must be able to demonstrate that they have a binding contract with an agricultural producers association, and that they are willing to assist the associations in accessing agricultural services, financial resources, and secure markets. As in the case of component one ADUs will make an especial effort to train and support small farmers to facilitate their access to the grants.
- 2.31 Eligible Activities Grants will be available for the following activities:
- a. Cost of organizing the association (legal fees, accounting fees, etc).
 - b. Costs of preparing project proposals, that will facilitate the access to credit and other type of financing(equity)
 - c. Costs of services including extension, training, technical assistance, market analysis, market visits, information collection and other relevant services.
 - d. Off farm or shared capital investments. Shared capital investments include "communal goods", where the benefits accrue to the association and not to the individual. These include small irrigation infrastructure and equipment (tank irrigation), shared facilities such as packinghouses and chilling rooms, and shared equipment such as sprayers, packaging and labeling equipment.

² As noted in paragraph 2.7, the PIU will established a US\$7.0 million "Agricultural Support Services and Productive Projects Fund". A US\$1.0 million facility of the Fund will finance agricultural support services productive projects under component one and US\$6.0 million facility of the Fund will finance productive projects under component 3. The PIU will establish regulations for the Fund that address both facilities.

The financing of these investments with grant funds is done on cost share basis. In order to obtain grant financing for a capital investment of any kind, the association must provide cash or in kind contribution or show that it has found financing such as credit, crop lien schemes, contract farming or supplier financing, for the part of the investment not covered by the grant.

- 2.32 Grant size and Cost Sharing. The maximum grant amount for any project will be US\$ 300,000. Associations are required to share the costs of the projects (provide matching funds) as follows:

- a. 10% minimum of the grant amount for services
- b. 20% minimum of the grant amount for shared investments.

The specific level of cost share will be determined on a case by case base depending on the nature of the project and the beneficiaries. Cost sharing can be either in cash, in kind, or a combination of both. Associations can also meet their cost share with credit obtained elsewhere. The specific level of cost share is determined on a case-by- case base depending of the nature of the project and the beneficiaries.

- 2.33 Cost recovery for capital investments. Associations are required to establish a cost recovery system to recover 100% of the operation and maintenance costs of any capital investments.

C. Cost and Financing

- 2.34 The total cost of the proposed program is US\$31.5 million, of which the Bank will finance US\$22 million (70%) with recourses from the Single Currency Facility of Ordinary Capital and the local resources will amount to US\$9.5 million, with US\$8,608.000 coming from government funds and US\$893,000 coming from private sector contributions. The following table shows expenditure items by investment categories and sources of financing. The cost and financing table is a description of the principal items of expenditure.

1. Administration and Supervision (US\$2.9 million)

- 2.35 This category (9.3% of the total cost) will finance the expenditures needed for the Project Implementation Unit (PIU) in terms of personnel, field and office equipment and supplies and consultants. These expenditures will finance the Technical Officers that will help in the monitoring and evaluation of the different components and will assist in the technical, economic and environmental evaluation of the productive projects. A PPF will finance the expenses of the implantation of PIU and other expenses that will be incurred between November and the first disbursement of the program.

2. Direct Costs (US\$15.2 million)

- a. Strengthening the delivery of Agricultural Support Services

- 2.36 This category (15.2% of total costs) will finance the contracting of specialized

consultants for the preparation of MOUs with the service providers, to participate in the competitiveness studies, as service providers for the Fund, and to assist the Trade Commissioners in foreign markets studies. It will also finance office equipment and computers for the MOA divisions involved in the program, training for MOA personnel and farmers and civil works for the RADA offices and experimental stations (Bodles, Montpelier and Orange River).

**COST AND FINANCING
(US\$ THOUSANDS)**

CATEGORY	IDB	LOCAL ³	TOTAL	%
I. ADMINISTRATION AND SUPERVISION	2,680	252	2,932	9.3
1.1 Administration and Supervision	2,430	252	2,682	
1.2 Project Preparation Facility (PPF)	250		250	
II. DIRECT COSTS	14,445	810	15,255	48.4
2.1 Component 1: Support Services	4,780		4,780	15.2
a. Consultants	1,618		1,618	
b. Training	993		993	
c. Civil Works	1,425		1,425	
d. Equipment, Vehicles & Supplies	744		744	
2.2 Component 2: Agricultural Health and Food Safety	4,530		4,530	14.4
Animal Health	1,574		1,574	5.0
a. Consultants	138		138	
b. Training	125		125	
c. Civil Works	150		150	
d. Equipment, Vehicles & Supplies	1,161		1,161	
Plant Health	1,400		1,400	4.4
a. Consultants	275		275	
b. Training	628		628	
c. Civil Works	293		293	
d. Equipment, Vehicles & Supplies	204		204	
Food Safety	1,556		1,556	4.9
a. Consultants	370		370	
b. Training	128		128	
c. Civil Works	7		7	
d. Equipment, Vehicles & Supplies	1,051		1,051	
2.3 Component 3: Productive Projects	5,135	810	5,945	18.9
III. CONCURRENT COSTS		7,366	7,366	23.4
3.1 Incremental Staff Hiring		4,343	4,343	
3.2 Maintenance of investments		1,000	1,000	
3.3 Transportation		1,591	1,591	
3.4 Services ⁴		277	277	
3.5 Publications		76	76	
3.6 Meetings		79	79	
IV. CONTINGENCIES	1,713	841	2,555	8.1
SUBTOTAL	18,838	9,269	28,107	
V. FINANCIAL COSTS	3,162	231	3,393	10.7
5.1 Interest	2,942		2,942	
5.2 Credit Commission		231	231	
5.3 Credit Supervision	220		220	
TOTAL	22,000	9,500	31,500	
Percentage	69.8	30.2	100	

³ Local counterpart includes \$893,000 contribution from local private sector as part of cost sharing for Productive Projects (Component 3).

⁴ Services include resources for hiring the auditing firm.

b. Strengthening the agricultural health and food safety services

- 2.37 This category (14.4% of total costs) will finance the consultants to advise the GOJ in updating the legislation for animal health, plant health and food safety; the work methodologies and the implementation of databases and information systems and to advise the GOJ in upgrading the different laboratories. It will also finance training courses for personnel and farmers in risk analysis, HACCP, bacterial isolation, epidemiology, plant quarantine, pest identification, pesticide management, integrated pest management, biological control. It will allocate resources for laboratory, office and field equipment and supplies. The main civil works in this case will be the refurbishing of parish offices and offices in ports and airports, and the refurbishing of the VSD central laboratory, the regional laboratory in Montego Bay, the Monitoring Residues Laboratory and the refurbishing of the Quarantine Station. It will also include eight plant health laboratories. In the case of food safety the MOH Cornwall microbiology laboratory will be upgraded and the PCA Montego Bay Office will be established.

c. Financing Productive Projects

- 2.38 This category (18.9 % of total costs) will include the financing of consultants for project preparation and implementation, training, equipment and civil works for project implementation.

3. Concurrent Costs (US\$7.4 million)

- 2.39 This category (23.4% of total costs) will finance staff hiring for the different components (inspectors, field officers, laboratory technicians, scientific research and staff for laboratories, economists and sociologists for the Planning Division and Agribusiness Development Officers), travel to scientific and commercial meetings, local transportation, scientific publications and meetings of personnel and farmers.

4. Contingencies (US\$2.6 million)

- 2.40 These category (8.1% of total costs) covers price and physical contingencies associated with the program direct costs.

5. Financial Costs (US\$3.4 million)

- 2.41 This category (10.6% of total costs) includes interest that will accrue during the project, the commitment fee on undisbursed balances, and the Bank's inspection and supervision charges.

III. PROGRAM EXECUTION

A. Organization for execution

- 3.1 The executing agency will be the Ministry of Agriculture (MOA) through a Program Implementation Unit (PIU) under the Office of the Ministry's Permanent Secretary. Given that the Program will involve 3 ministries (MOA, MICT, MOH) and the private sector, a Program Steering Committee (PSC) will provide inter-agency coordination, policy guidance, and oversight during the implementation of the Program. The organization and functions to implement the Program is described below. Annex III-1 shows its structure.

1. The Project Steering Committee (PSC)

- 3.2 This Committee will be organized at the level of the office of the Permanent Secretary of the MOA with one senior representative from MOH, MICT, the Ministry of Finance (MOF), the Planning Institute of Jamaica (PIOJ) as well as with two members from private sector organizations. Its chairman will be the MOA's Permanent Secretary. The Director of the PIU will act as the Committee's Secretary. Meeting at least quarterly or at the request of the PIU's Director, the Committee will carry out the following functions: (i) provide Program's policy guidance; (ii) review and approve policies procedures and operating manual; annual work plan; and proposals for agricultural productive projects; (iii) promote inter- organizational cooperation and resolve inter-ministerial conflict; and (iv) review the progress and results of the Program's implementation. The Committee will ratify the appointment of the PIU's Director under terms of reference and selection criteria approved by the Bank. **The establishment of the PSC with representatives of agencies and organizations previously agreed with the Bank will be a contractual condition to be fulfilled prior to first disbursement.**

2. The Project Implementation Unit (PIU)

- 3.3 The establishment of the PIU is justified by the need to coordinate the implementation of a new and transitional model for agricultural support services (from purely public and supply oriented, to mostly private and demand driven). It is expected that during and after project implementation the private sector will gradually pick up most of its activities (including the management of ADUs). The PIU will be responsible for the following functions:
- 3.4 Technical: (i) planning, coordinating, monitoring, and evaluating the activities on the Program's three components and reporting on their execution progress; (ii) assisting the service providers (public and private) in the development of work plans and facilitating the provision of those services to producers and exporters; (iii) promoting the Program's among service users, identifying Program opportunities among those users, and facilitating their approach to service providers and service resources; (iv) promoting farmer organizations and assisting

them in the preparation of productive projects; (v) linking agricultural producers with the buyers of their products, (vi) preparing or assisting in the preparation of terms of reference, preparing bidding documents and procuring goods and services in accordance with the Bank's requirements; and (vii) promoting the use of environmental and social guidelines in the preparation of projects .

- 3.5 Financial: (i) establishing and implementing sound financial reporting and controlling systems in accordance with Program's requirements; (ii) requesting and justifying replenishment of funds from Bank's loan resources and ensuring the timely contribution of local counterpart funds; (iii) preparing the Program's financial statements and facilitating their timely audit; and (iv) establishing and managing the Fund to support Component 1 and Component 3 of the Program.
- 3.6 Managerial/Controlling: (i) ensuring the establishment and compliance of work plans and internal and operational controls in accordance with Program's objectives and implementing remedial actions for variances; (ii) promoting coordination, communication and integration of objectives among service providers in the Program's three components; (iii) serving as Program's liaison with the Bank and with Government agencies.
- 3.7 To carry out the above functions, the PIU's central structure will consists of a Director and three technical units, one for each of the components, and one financial/administrative unit. Five ADUs (three to be established in the Program's first year and two in the second) will function regionally from RADA and ARRD offices. These ADUs will also respond to the Director, but functionally their work and results will be monitored by the heads of the technical units for Components 1 and 3, which include activities to be carried out by the ADUs. In addition, the structure includes a Technical Review Committee (TRC) at the level of staff to the Director to review productive project proposals prior to their approval by the PSC. This Technical Review Committee, to be chaired by the Director, will include at least two non-governmental members and its composition will be subject to prior approval by the Bank.
- 3.8 All of PIU's personnel will be recruited locally on a competitive basis. The Director will be a professional manager with solid experience in the implementation of medium size or large programs or projects financed by international organizations. PIU staff will include 8 professional/technical employees and 7 supporting staff.⁵ The cost of the PIU amounts to US\$2.9 million or 9.2% of the total cost of the Program.
- 3.9 **The establishment of the PIU, recruitment of its Director, the financial/administrative officer and of the technical officers for each of the components, will be a contractual condition prior to first disbursement. A large number of technical officers from MOA, MOH, MICT and from private**

⁵ The PIU professional technical staff include: Director, Financial and Administrative Officer, Technical Officers for the 3 components, Assistant to the Technical Officer responsible for Component 2, Environmental Officer, and Accountant.

sector organizations, with the support of ten consultants/months, have been involved in the preparation of the program. The use of PPF funds for the early establishment of the PIU, to support the fulfillment of the conditions, to design the accounting system and for start up activities as legal studies, policy development and inter-agency coordination, will help the GOJ to continue the momentum in initiating the program.

B. Mechanisms for Program execution

- 3.10 The Program's execution will be guided by a initial four year work plan and annual work plans that will be prepared jointly by the PIU, public and non-public agricultural support service providers, producer and exporter representatives and other key stakeholders. The mechanisms for execution of the three components are described in the following paragraphs.
- 3.11 To carry out Component 1 three Agribusiness Development Units will be established during the first year of the Program execution and two additional ADUs will be established during the second year. The ADUs will diagnose problems, identify opportunities, solve problems that are within their reach, and organize and secure the delivery of support services. The PIU will establish MOUs with public and non-public service providers for the delivery of support services. Producers will be able to apply to the PIU to receive funding from the Agricultural Support Services and Productive Projects Fund to pay for services. The PIU will conduct the procurement of the services provider (subject to the advise and consent of the beneficiary), with the beneficiary paying a minimum of 10% of the grant amount. The PIU will monitor the provision of services financed by the grants and evaluate benefits derived from the services. There are a number of features to this component that will ensure transparency and fair access to grant resources. First, there will be MOUs that establish the relationship between the PIU and selected service providers. Second, the operating regulations for these grants (the final version of which are subject to IDB non-objection) contain clear procurement procedures. Third, in the case of component 1, the PIU will pay service providers directly; beneficiaries will not receive grant money. Fourth, the entire process will be monitored closely by the PIU technical officer in charge of component 1.
- 3.12 The initial plan and the annual work plan for the first year will be prepared as part of the PPF activities. **In accordance with GOJ budgetary process, subsequent annual work plans will be presented to the Bank around November/December of each year. In addition, prior to the execution of component 1 of the program, the borrower shall submit to the Bank evidence of the signing of MOUs between the executing agency and selected public and non-public agricultural sector service providers, the purpose of which are the proper coordination and provision of services to producers and exporters.**
- 3.13 The food safety sub-component in Component 2 involves Agencies/Divisions under MOA, MOH and MICT. To ensure coordination and establish

responsibilities among the participants, inter-ministerial memoranda of understanding (MOU) will be drawn and submitted to Cabinet for approval. **Prior to the execution of component two of the project, the borrower shall submit to the Bank evidence that the Food Safety Coordination Committee has been established and made operational; within six months after the first disbursement of the loan, the borrower shall submit evidence that the MOUs regarding objectives, roles and responsibilities of the different agencies working in food safety have been agreed upon.**

- 3.14 To implement component 3, the PIU will establish operating regulations for the Agricultural Support Services and Productive Projects Fund that describe the procedures for application, approval, and disbursements of grants, including eligibility and selection criteria. A draft of these regulations was developed during the Program's preparation. **The presentation to the Bank of these Regulations in final form will be a condition prior to the first disbursement of the loan.**
- 3.15 The PIU will be responsible for working with the ADUs and the implementing agencies to disseminate information about the projects and invite applications, with particular emphasis on reaching smaller farmers. This will be done through brochures, community meetings, and newspaper and radio advertisements. Once an initial project concept has been formulated, the association will submit an application to the ADU. The ADU will review the initial application to determine whether the project meets the eligibility criteria, which include: (i) the project must be submitted by an association of agricultural producers or exporters that is a legal entity, has documented by-laws, is a non-government entity, and is organized around a common purpose; (ii) the project must be focused on a non-traditional market opportunity for export markets or for commercial domestic markets and the project should expand an existing market opportunity or exploit clearly defined new market opportunities.⁶ If the ADU determines that the project meets the eligibility criteria, the ADU will forward the application to the PIU. The PIU will verify that the project meets the eligibility criteria, determine the resources necessary for project preparation, and, as appropriate, contract with a service provider to assist with the project preparation.
- 3.16 Once the project is prepared, the association will submit the proposal to the PIU. The PIU will convene the Technical Review Committee (TRC). The TRC will review the project proposal to determine whether the project meets the requirements of the component, particularly whether the project is feasible from a financial, technical, and environmental standpoint and that it is sustainable over time. Guidelines for these criteria will be in the operating regulations. If it finds that the project proposal complies with all the Grant regulations, the TRC will prepare a recommendation letter for the PSC. If it deems fit, the PSC will

⁶ A project focusing on traditional commodities (i.e., coffee, cocoa, sugar, coconuts, and bananas) will be eligible for financing only if the project focus on new, value-added products (e.g., flavored coffee, banana chips) for established markets.

approve the project. After obtaining IDB non-objection, the PIU and the association will enter into a contract for the project.

- 3.17 The PIU will monitor financial implementation of the projects continually on a representative sample basis. The ADUs will meet with the association on a regular basis to measure implementation progress against the agreed work plan. The PIU Environmental Officer will monitor implementation to ensure any environmental conditions are met. The project contract will identify indicators, to be selected jointly by the PIU and the association, to verify achievement of the project purpose. At the end of each project, the PIU will organize an evaluation to determine whether the project met, or is likely to meet, its purpose as determined by the indicators. The evaluation will also review implementation issues to determine strengths and weaknesses in project design and management. The PIU shall establish a project database to track all productive projects from application to completion. To ensure transparency, the database will be publicly available, preferably on a web site.

C. Implementation schedule

- 3.18 The Program will be executed in four years. Implementation schedule by source of funds is shown below

Implementation Schedule (in thousands of US\$)					
	Year 1	Year 2	Year 3	Year 4	Total
IDB	4926	7572	4762	4740	22000
GOJ	1412	2492	2374	2330	8608
Private Sector	91	200	268	333	892
Total	6429	10264	7404	7403	31500

D. Financial Management

- 3.19 The management of the Program's financial resources and of the Fund for Components 1 and 3 will be the responsibility of the Financial/Administrative Officer under the delegated authority of the Program's Director. The system of internal controls and financial reporting will include at least the following elements:
- 3.20 The program's accounting system will be computerized using PC equipment and will be documented in the form of a user manual. It will permit the preparation by source of funds of monthly and end of year Statements of Program's Investments and Cash Flows and will contain a subsidiary for the accounting of the Fund for Component 3. Also, its computer program will include an audit trail and the system should be user friendly, so to permit its application in other participating

agencies should the need arise. Finally, the system should permit the consolidation in the Program's financial statements of those counterpart expenditures effected by MICT or MOH.

- 3.21 Separate bank accounts will be kept for bank's loan revolving fund and for the resources from local counterpart. The revolving fund will amount to 5% of the value of the loan. The GOJ system for disbursement of external funds will be maintained for the Bank loan resources. In this system, payments are effected, at the request of the executing unit through the Ministry of Finance, directly by the commercial bank where the funds are deposited. All request for payments or actual payments with local counterpart for Program's activities will originate at the PIU, except for those payments, where because of expediency or because of the nature of the expense, should be effected at the level of the participating agency. This will be the case of local counterpart expenditures for incremental salaries, travel allowance, and other minor current costs effected by MOH and MICT with charges to their budgets. **Prior to the first disbursement the Executing Agency will open the account (s) required to deposit the disbursements of the financing.**
- 3.22 As agreed with MOF starting with fiscal year 2002-03, for all programs' incremental recurrent costs, especially salaries, allotments will be opened under the participating Ministry recurrent budget. Project's accounting will be subject to internal audit from MOA's Internal Audit Office.

E. External Audit

- 3.23 The Program's annual financial statements will be presented to the Bank during the period of execution duly audited by a firm of Certified Public Accountants or Chartered Accountants acceptable to the Bank. Such presentation will take place within 120 days after the closing of each fiscal year.

F. Procurement

- 3.24 Bank procedures will be followed in the procurement of works, goods and consulting services. Internationally competitive bidding will be followed for purchases of more than US\$250 thousand for procurement of goods and related services and US\$1.5 million for construction works. Bids below these ceilings will take place in accordance with local legislation. Consultant services will be hired in accordance with Bank procedures.

G. Maintenance

- 3.25 The Program contains the necessary resources to effect the maintenance for the Program's financed investments. For these resources to be covered with local counterpart MOF has agreed to open allotments, starting with fiscal year 2002-03, under the participating ministries recurrent budget and to keep them opened after project completion. In the first quarter of each fiscal year, beginning with the fiscal year after which the facilities are constructed and for five consecutive years,

the borrower will submit to the Bank, demonstration that the Program's investments are being maintained in accordance with requirements to be agreed upon with the Bank. Part of these requirements will be the proof that the maintenance recurrent allotments remain opened and funded.

H. Project Preparation Facility (PPF repayment)

- 3.26 The GOJ will utilize resources from the PPF/015-JA for the preparatory activities of the Program. These resources amounting to US\$ 250,000 will be recovered from the first disbursement under the proposed loan.

I. Supervision and Evaluation of the Program

- 3.27 The Country Office in Jamaica will take primary responsibility for supervising the Program. There will be additional mechanisms at the PIU to do monitoring and evaluation of the main outputs. The Bank will establish inspection procedures, that includes periodical evaluation missions, so as to ensure satisfactory completion and to verify compliance with agreed measures and benchmarks. The PIU will have resources to establish a base line of the main indicators and to do periodic sampling in order to measure progress in the project goals. The measures to be evaluated and monitored will include: indicators for production, productivity, and exports; farmer income in the program influence area; indicators about service provision (extension, training and adaptive research); investment (purchase of machinery, building of storage, packing and chilling facilities), irrigated area, access to credit (amount of credit), land tenure, employment generation, area for non-traditional crops, market penetration, number of farmers organizations and social and environmental indicators indicating progress in terms of women participation, education and health in rural areas. Component two will have a group of indicators to be monitored in terms of the progress of agricultural health and food safety. For a sample of the base line and main indicators see Annex III-3.
- 3.28 In addition, annual and midterm reviews, to be effected with the participation of the project team and the Representation, will be scheduled shortly before the time of presentation to the Bank of the annual work plans. These reviews will cover the following topics: (i) progress in the execution of the components; (ii) evaluation of the implementation progress of the new institutional mechanism with emphasis on the new system of extension service based on the ADU's; (iii) support in the preparation of the work plans (iv) variance analysis of the base line indicators and benchmarks, reasons and solution. Besides these topics, the mid term review at the second year of the Program, will effect an in depth evaluation of the implementation of the cost recovery mechanisms to be developed during the first year of the Program and about the working of the integrated model for agricultural health and food safety. Considering the institutional innovations included in the program, the GOJ and the Bank agreed to an ex-post evaluation of the program, to be financed by the resources of the project.

J. Environmental Aspects

- 3.29 The budget of the PIU will have resources for the hiring of an environmental officer and for implementation of a mitigation plan that will include:
- a. Monitoring and evaluation system, that will follow and report the main indicators in terms of environmental and social impacts of the program.
 - b. Measures to correct and mitigate any potential negative environmental impact caused by the construction or refurbishing of laboratories.
 - c. The design of a public awareness campaign about the proper use of pesticides and the promotion of the integrated pest management control techniques, in collaboration with the Pesticides Control Authority.
 - d. Training for extension service personnel and farmers organizations in soil conservation, water management, cropping technology, pesticide handling and application, integrated pest management and biological control.

IV. THE BORROWER AND THE PROJECT PARTICIPANTS

A. The Borrower and the Executing Agency.

- 4.1 The Borrower will be the Government of Jamaica. The executing agency will be the MOA through the PIU described in Chapter III. Agencies/Divisions under the MOA, the MOH and the MICT, which are service providers in the Agricultural Sector, will participate in the implementation of the project's outputs. Of these participants, 6 are under the MOA, 3 under the MICT, and 3 under the MOH. This chapter provides an overview and analysis of each.

B. The MOA participating Agencies/ Divisions.

- 4.2 The MOA is responsible for agricultural development and implementation of overall agricultural policy conducting significant activities in the areas of extension, research and development and regulation. Its organization (see Annex IV.1) consists of 10 technical Divisions, 3 supporting Divisions, the statutory agency RADA, and the Office of the Internal Auditor. A Permanent Secretary is the chief operating officer and reports to the Minister. Its staff numbers 1270 employees. During the last three years its total annual budget execution has been at the level of the equivalent of US\$ 32 million representing about 1% of the total annual Government public expenditures. Information on its participating Agencies/Divisions follows.

- 4.3 **Planning, Policy and Development Division (PPDD):** It will conduct the program's studies to implement the mechanism for the identification and prioritization of strategic commodities and regions. With a total of 84 professionals divided among three units and two regions, the Division does economic analysis of projects, develops the Ministry's operational and corporate plans, collects agricultural data, performs land use and analysis surveys, provides soil analysis and manages the Jamaican Geographical Information System. The Division shortcomings relate to the lack of dissemination of studies and the lack of an adequate travel allowances to conduct its work regionally, shortcomings that will be addressed in component one.

- 4.4 **Marketing and Credit Division (MCD):** Its Marketing Research Unit (3 professionals) will support the PIU in the supervision of consultants for the studies related to the acquisition and dissemination of agricultural technology, information and strategic market intelligence. The unit is partially equipped to carry out this responsibility and will be strengthened with resources from component one.

- 4.5 **Plant Quarantine/Produce Inspection Unit (PQ/PD):** A specialized unit of MCD, it is responsible for inspection of imported and exported produce. It has a total of 20 inspectors and 2 entomologists working out of three regional offices. The unit has developed good experience in plant quarantine and entomology. Its shortcomings are: (i) insufficient inspectors to provide adequate inspection

coverage, especially of commercial air and ship passengers; (ii) lack of plant pathology expertise, as the unit does not have a professional in this area; (iii) lack of pesticide residue testing capability; and (iv) poor coordination with the Research and Development Divisions in topics of common interest. These deficiencies will be addressed in component two.

- 4.6 **Research and Development Division (ARDD):** It undertakes research in the areas of crops, plant protection and livestock. With 30 technical people, 8 administrative, and a large complement of daily paid laborers, it manages three research stations (with areas from 120 to 526 hectares) and three small laboratories. The Division has acquired good experience in cattle breeding and production and in crop development and disease protection. Division's shortcomings include: (i) lack of prioritization of research based on market driven priorities; (ii) lack of coordination with other research organizations in the sector; (iii) lack of maintenance of existing infrastructure, and (iv) lack of funds for technical training and upgrading of laboratory equipment.
- 4.7 **Veterinary Services Division (VSD):** It provides advisory service to farmers directly and in collaboration with other agencies, monitors the incidence of animal disease, operates a quarantine facility and enforces quarantine requirements, inspects and certifies imported and exported meats. It also operates a laboratory to screen for antibiotics and pesticides in meat products and conducts a HACCP program for fisheries products geared to the European Union market. Its staff numbering 55 (all but 7 technical) is organized in 4 units. Private veterinarians who work part time (20% of their time) perform the Division's veterinary field services. Improvements required at the Division include: (i) upgrading of laboratory capabilities, including acquisition of new equipment and training of personnel; (ii) refurbishing of facilities in the field; (iii) acquisition of vehicles for field work in animal identification and collection of samples; (iv) computerization of their information system and (v) additional animal health technicians/inspectors for inspection, surveillance and animal identification. .
- 4.8 **Rural Agricultural Development Authority (RADA):** RADA is the primary government agriculture extension service in Jamaica. Although an independent statutory agency under MOA, in practice it acts like another Division of that Ministry. Its assigned functions are rather ample and include training, technical assistance, marketing extension, plant protection, social services/home economics (primarily micro enterprises for women), livestock production, school agricultural programs and farm roads repairs and maintenance. In addition to the head office in Kingston, it has offices in each of the 13 parishes and in 60 Area Extension offices divided along electoral lines. The parish offices provide administrative support to field operations. RADA's total staff numbers 423 with slightly more administrative staff (220) than technical (203). Of the 423 staff, 340 are located in the field and the rest in Kingston. Most of its budget derives from government allocations through the MOA's budget. Its most recent budget execution for fiscal year 2000 shows expenditures for the equivalent of US\$ 7.8 million of which US\$6.0 million (77%) represented current costs.

- 4.9 RADA's strengths lie in plant protection, in its Production Marketing and Special Products Unit which has built a good experience working with and developing farmers groups, assessing market needs, and disseminating market information, and in its good cadre of subject matter specialist in its Training Unit. RADA's shortcomings, however, are several and include: (i) an ample assignment of responsibilities inconsistent with its resources and capabilities; (ii) outdated approaches for the delivery of extension services based on unilateral interventions that prevent collaborative or demand- driven work with farmers; (iii) limited technical capabilities due to the insufficient number of specialists and lack of adequate training at the level of extension officers and agricultural assistants; (iv) degraded condition of many area extension offices due to the lack of maintenance and the absence of basic utilities services; and (v) lack of resources for staff's travel to work at the field. These problems will be addressed by the allocation of resources in component one.

1. MOA's financial administration

- 4.10 The Finance and Accounts Division is the financial administration head unit for the Ministry, but is mainly concerned with the fiscal financial requirements. This Division is organized in a Budget office (3 accounting staff) and a Expenditure Control and Accounts Office which, in turn, is divided into three offices: (a) Commitment Control (control of allotments and availability of funds-3 accounting staff); (b) Payments (payments of staff salaries and the Ministry goods and services-16 accounting staff); and (c) Final Accounts (accounting and cashiering activities-13 accounting staff).
- 4.11 At the project level, accounting is decentralized to the project implementing units with small accounting offices reporting to the project's manager. At the project level there are basic project accounting systems which are kept manually. The absence of accounting manuals or written procedures appears to be the general rule rather than the exception. This problem affects the timing of accounting, and replenishment in several projects.

2. Internal and external audit

- 4.12 MOA has an internal audit office concerned with ex-post auditing of expenditures. External Audit is carried out by the Office of Jamaica Auditor General. In the case of the European Union Eastern Jamaican Agricultural Support Project, a CPA firm also carries out the project's external audit.

C. The MICT participating Agencies/Divisions

- 4.13 MICT is responsible for fostering investment and strengthening productive capacity and competitiveness of industry to obtain higher levels of outputs and increases in exports. Through the Standards Act (1973) and the Processed Foods Act (1959) it has policy, regulatory and development functions for food products of a non- animal nature. Information on the MICT Division/Agencies that participates in the program follows:

- 4.14 **Food Storage and Prevention of Infestation Division (FSPID)**: It's stated mission is to ensure the safety and wholesomeness of food/feed entering commerce. The Division enforces the Food Storage and Prevention of Infestation Act (1958) and has interpreted its mandate under this Act quite broadly to include all aspects of food safety as well as some aspects of pesticide control. There are the following shortcomings that are aimed to be resolved through the activities in component 2 of the project: (i) a need to review the legislation to delineate responsibilities so as to avoid the duplication of efforts with other food safety sub-sector entities; (ii) limitation in the number of food inspectors and upgrading of the laboratories to meet international standards of accreditation.
- 4.15 **Jamaican Bureau of Standards (JBS)**: An autonomous Agency under the MICT, the JBS is responsible for developing and enforcing national standards. With regards to agriculture, its responsibility includes the development of national standards for produce (in conjunction with MOA), and for administering standards for processed foods. Its staff numbers 260, which includes 12 food inspectors. JBS will benefit through the project's component 2 from the revision of legislation to clarify roles and to avoid duplications of functions with other food safety entities, and from the financing of two food technologists and the participation in training courses in food technology.

D. The MOH participating Agencies/Divisions

- 4.16 The MOH is responsible for the implementation of the overall health policy and for ensuring the provision of cost effective, preventive, curative and rehabilitative health services. Through the Public Health Act (1975), the Food and Drugs Act (1974) and the Pesticide Control Act, have policy and regulatory functions for food and pesticides. The MOH is decentralized into four Regional Authorities providing the health services in their regions, including food safety inspection (60 inspectors) and veterinary public health inspection (14 inspectors). MOH Divisions/agencies that participate in the program are:
- 4.17 **Health Promotion and Protection Division (HPPD)**: It is responsible for establishing policy and guidance within the Ministry with respect to Food Safety and Veterinary Public Health. It also works closely with the regional inspectors to develop work plans and priorities and to provide training. To effect this work its Environmental Health Unit has only one food safety officer and one veterinary public health officer. Project component 2 will complement this staff with one system engineer and two technical assistants.
- 4.18 **National Public Health Laboratory (NPHL)**: Consisting of several units, the one with relevance to the project is the Microbiology Laboratory (ML), charged with analyzing food samples collected by regional public health inspectors. The ML is staffed with 4 lab personnel for the current lab at Kingston, with an additional one being trained at present to operate a second lab in Cornwall. The ML is designed to react to incidences of food- borne diseases; it is not equipped or staffed to handle routine monitoring required under a food safety surveillance system.

Project component 2 aims to resolve this constraint through additional personnel (3 technicians) and the upgrading of the laboratory at Cornwall.

- 4.19 **Pesticides Control Authority (PCA)**: A statutory agency under the Ministry of Health, PCA main functions include the registration of pesticides, quality and residue analysis, licensing, and disposal of unwanted/obsolete stock. Its staff consists of 6 people (4 technical and 2 support). Of its operating budget, which amounts to US\$200 thousand, 50% is covered by fees and 50% by the GOJ (MOA). The agency is well operated; short run requirements include: (a) the need to clearly delineate responsibilities and reach an agreement with the FSPD and JBS regarding the registration of pest control operators and pesticide labeling; (ii) the opening of an office in Montego Bay; (iii) increasing the number of inspectors. Project component 2 includes resources for these requirements.

E. MOA's historical budget analysis

- 4.20 The Jamaican Government works with three budgets: (i) recurrent for current costs; (ii) capital A for capital costs entirely financed with government resources; and (iii) capital B for capital costs financed with external resources and government local counterpart. A summary of the MOA budget execution for the last three fiscal years by source of financing is presented below (see details in Annex IV). All amounts are expressed in values of March 2000.

MOA Historical Budget (in thousands of US\$)					
Fiscal Years ⁷	FY 1998	FY 1999	FY 2000	AVERAGE	AVE %
Current Costs – GOJ	18990.6	21651.7	19115.4	19919.2	64.7
Capital Costs	10078.1	9639.6	12894.3	10870.7	35.3
Capital A – GOJ	3440.4	4103.9	4881.4	4141.9	13.5
Capital B – GOJ	3949.8	3140.0	4879.0	3989.6	13.0
Total Capital – GOJ	7390.2	7243.9	9760.4	8131.5	26.4
Capital B-External Resour.	2687.9	2395.7	3133.9	2739.2	8.9
Grand Total	29068.7	31291.3	32009.7	30789.9	100.0

- 4.21 On the average, current costs represented 64.7% and capital costs 35.3%. GOJ fully financed the current costs and 75% of the total capital costs, with external resources financing the other 25% of capital costs. Local resources for investments amounted to an annual average of around US\$8 million, split rather evenly between projects fully financed with local resources (Capital A) and local Counterpart (Capital B). In absolute terms, notwithstanding an increase in FY 1999, current costs reverted the last fiscal year to a level of around US\$19 million. Investments increase from an annual level of around US\$10 million in the first two years to a level of about US\$13 million in the last year.

⁷ Fiscal Years (FY) run from 1st of April to 31st of March and by convention are designated by its ending year.

V. INSTITUTIONAL AND FINANCIAL VIABILITY

A. Institutional and Technical Viability

- 5.1 The project components are designed to address specifically the main institutional constraints identified. To address the lack of budget funding and incentives, the project will establish a strict system of priorities in terms of regions and commodities; it will also promote cost recovery and cost sharing systems in most of the program's activities and will promote competition in the provision of services between the government agencies and the private providers. The approach to service provision will be radically changed, from a supply- oriented and top down approach to a demand driven and participatory one. Innovative elements will be introduced to facilitate the coordination between the farmers and the service suppliers and among the government agencies involved in agricultural support services. The promotion of farmer organizations and the introduction of the Fund for Agricultural Support Services and Productive Projects will help to mobilize agricultural services for local producers and to focus the attention of government agencies on competitive opportunities. The organization of farmers will promote substantial economies of scale in the provision of services. The project will also help all public agencies responsible for extension, marketing, planning, research and strategic information with the acquisition of new equipment and training of technical personnel.
- 5.2 In the case of component one, the provision of services will be accompanied by competitiveness studies to determine the fields of action in terms of commodities and regions. These studies, that will be reviewed periodically, will guide the investments in agricultural research (training and experimental stations) and the location of ADUs. In the case of Agricultural Health and Food Safety, the investments will follow the establishment of coordination mechanisms between the different institutions. In the case of productive projects, the eligibility of activities as land tenure regularization and the financing of shared investments will help the farmers in accessing credit to finance their share of the projects.

B. Financial Viability

1. MOA's budgetary projections

- 5.3 The following table summarizes the MOA's projections for the period FY (Fiscal Year) 2001- FY 2005. The proportion of current costs to capital costs in the projections (63% and 36.6% respectively) is consistent with the experience of the last three years (65% and 35% respectively). Current costs are expected to increase slightly in real terms from the historical level of US\$20 million and be fully covered with GOJ budgetary resources.

MOA BUDGETARY PROJECTIONS (In US\$ millions of March 2000 value)							
	FY2001	FY2002	FY2003	FY2004	FY2005	Ave	Ave. %
1. Current Costs	20.4	20.9	21.5	22.0	22.6	21.5	63.4
2. Capital Costs	10.6	12.9	17.1	11.3	10.1	12.4	36.6
a. IDB Program	-	6.4	10.3	7.4	7.4	6.3	18.6
b. Other Programs	10.6	6.5	6.8	3.9	2.7	6.1	18.0
Total Costs	31.0	33.8	38.6	33.3	32.7	33.9	100.0
FINANCING							
1. GOJ-Current	20.4	20.9	21.5	22.0	22.6	21.5	63.4
2. Capital							
a. GOJ ⁸	6.6	4.2	5.6	5.0	4.7	5.2	15.4
b. Ext. Cap	4.0	8.7	11.5	6.3	5.4	7.2	21.2
IDB	-	4.9	7.6	4.8	4.8	4.4	13.0
Other External	4.0	3.8	3.9	1.5	0.6	2.8	8.2
Total Financing	31.0	33.8	38.6	33.3	32.7	33.9	100.0

5.4 In terms of averages, capital expenditures will increase from the US\$10.8 annual historical level to the projected annual of US\$12.4 million (a 14.8% increase). However, the required local financing is expected to actually decrease from the annual average of US\$8.1 million in the last three years, to a projected annual of US\$5.2 million (a 36% decrease). This apparent contradiction mostly arises from the Program, which represents 50% of the projected investments but it has a financial pari- passu of 70/30. In absolute terms, the highest level of projected investments and of GOJ budgetary contribution during the program's execution is expected to occur in FY 2003 with levels of US\$17.1 million and US\$5.6 million respectively. In comparison, these highest levels during the last three fiscal years were US\$12.9 million for investments and US\$9.8 million for GOJ contribution, both in FY 2000. From a purely financial perspective, these relative and absolute comparisons between the projected and the historical periods strongly suggest that the local counterpart is viable in view of the historic proven track. They also alert to the need to strengthened execution capacity to deal with an increased projected level of investments. The nature of the capacity required (contract administration, and promotion, management and supervision of the program's components) was taken into account in the design of the PIU.

2. Recurrent costs

5.5 During project preparation it was estimated that annual value of the recurrent costs for the activities covered for the Program after its completion, namely, US\$1.6 million for MOA, US\$312 thousand for MOH and US\$214 thousand for MICT. In each case the aggregate of salaries, maintenance, training and transportation represent 94% of the total annual recurrent costs. These costs will be covered during the period of Program's execution with counterpart resources. The plans for their coverage afterwards consist of: (a) the continuation of the

⁸ Includes contribution to the Program from the private sector.

related recurrent budget allotments to be opened at the beginning of FY 2002-03, during the execution period; and (b) the design and implementation of a cost recovery system.

- 5.6 Continuation of allotments: Project related current costs have been financed, as project costs, with capital budgets, which stop at project's end leaving no budgetary allotment for their continuing financing. During the preparation the team asked the MOF that the Program's related current expenses that are financed by counterpart funds, will be covered by allotments in the participating Ministry's recurrent budget. This administrative measure will have two effects: the allotments will not disappear at the closure of the capital B budget at Program's completion; and their annual funding will be part of the budgetary exercise for the recurrent budget.
- 5.7 Cost Recovery System: During project preparation preliminary work was done for the development of a Cost Recovery System (CRS). The work concentrated on the MOA because of its relative importance in terms of the value of its Program's components and recurrent costs. It was ascertained that MOA has an incipient recovery system. For instance, its Veterinary Services Division (VSD) and its Rural Physical Planning Division (RPPD) already collect fees for laboratory analysis work. Additional user fees for inspection and certification by VSD have been established by regulation but not yet implemented; user fees for Plant Quarantine/Produce Inspection Unit have been approved by Cabinet and are awaiting decision.
- 5.8 The number of income producer services needs to be expanded and the level of tariff increased. The preparatory work identified 6 MOA units with the potential of realizing an aggregated annual revenue of US\$450 thousand within two years, or 28% of the expected recurrent costs after project completion. In comparison, the current annual revenue for the units in the previous paragraph is US\$90 thousand. Furthermore, a system has to be found to permit the service provider to retain and use the revenue collected. At present by law these revenues have to be transferred to the Consolidated funds, but there are notable exceptions, like in the case of the Bank's Parish Infrastructure Project (1197/OC-JA). The Program includes resources for specialized consultants to work at the MOA in the development of a cost recovery system during its first year and to support its implementation in the second. Their objective is to reach the coverage of within 40% to 50% of the recurrent cost through fees by the time the Program is completed, a sensible objective in line of the percentage (28%) identified as reachable within two years in the preparatory work. **Within twelve months after the final disbursement of the financing the GOJ will submit evidence of the submission to Cabinet of a cost recovery system which includes a mechanism for revenue retention by the agricultural service providers. This system has to be implemented within twenty-four months of the first disbursement.**

C. Economic Viability

- 5.9 The evaluation of the program was done at market and economic prices for each component and for the entire program. The costs considered are those calculated in Chapter Two for each of the components. The costs of the PIU were assigned to each component according to the proportion of the direct costs represented for each of them. The benefits and profitability of each component (NPV and IRR) at market prices, were estimated as following:

1. Program benefits

- 5.10 To estimate this program's benefits a set of different assumptions were made in each of the components. In component one, the assumption is that as a result of the component, the productivity of priority commodities experience increases of 7% per year over the four-year project period, compared with 0.7% without the project. The productivity indicator utilized is Gross Margin (GM), defined as the Value of Production (VP) at farm gate prices of the priority crops, less their Variable Costs of Production (VC). An increasing rate of adoption of the recommendations by farmers was assumed (25% in the first year, 50% in the second, 75% in the third and 100% in the fourth year) and two ceilings regarding the maximum amount of farmers that would adopt the recommendations were considered: 100% and 40%.
- 5.11 In component two, a set of different assumptions were made for animal health, plant health and food safety. Four sources of benefits were evaluated for animal health. The first two consider the losses that could occur if the present rates of prevalence of bovine brucellosis and bovine tuberculosis increase without the project. The third examines the losses that could occur if the New World ScrewWorm (NWSW), now in the process of eradication from Jamaica, would enter again to the country without the project. The benefits in all these cases correspond to the value of the avoided losses. The fourth source of benefits examined is the higher price that could be obtained if the Queen Conch (*Strombus gigas*) could be exported to the European Union, (EU) instead of USA.
- 5.12 Two sources of benefits for plant health were analyzed. One is that the program will reduce the probability of entrance of the Pink Mealy-bug to the country. The other is that the program will reduce the fumigation costs of yams exported to the USA, and it will also reduce the amount of yam export losses due to nematodes. In the case of food safety two sets of assumptions were analyzed. The first is related to the potential impact on tourism expenditure that the high attack rate of traveler's diarrhea (23.6%) could originate. The second refers to the outbreaks' investigation costs that could be saved with the program's activities.
- 5.13 The benefits of the productive project component were estimated assuming a 50% increase in the net incomes of 1,500 farmers and their families at the end of the implementation period of four years. Consumption series were used as a proxy of family income. Regarding the rate of growth of income after the four years are

completed for each cohort of beneficiaries, two alternatives were examined: the historic rate of growth of 3.7% per year and the second considering that the 10.6% project rate of growth will be maintained until year 10th.

2. Evaluation of the project at economic prices

- 5.14 Three scenarios have been developed in order to have an overall view of the ASSP as a program. Combining the different assumptions the evaluation developed an initial base scenario, a more conservative one, and the third, a pessimistic one. To evaluate the benefits at economic prices several adjustments were made in order to transform market prices in economic values. The adjustments were made in the discount rate, the price of traded goods and the wage rate.. The first general conclusion that can be obtained from its analysis is that the program as a whole is profitable from the society's perspective. Even in the pessimistic scenario, the EIRR would be equal to the discount rate. The EIRR goes from 37% in the base scenario, to 25% in the conservative one, to just 10% in the pessimistic (equal to the discount rate). The NPV varies between US\$25.6 million to just US\$0.18 million. The second conclusion is that the private and the economic rate of return of the program as a whole is in practice the same for each scenario. The main difference between both evaluations is in their NPV's. Due to the lower discount rate of the economic evaluation, the ENPV is higher for the three scenarios, than the market NPV.

D. Social and Environmental Impact and proposed actions

- 5.15 The environmental and social impact assessment concluded that agriculture as it is now practiced in Jamaica contributes to land degradation and agro-chemical contamination. If the status-quo remains the situation could worsen in the next few years. The project is designed to correct those problems and by focusing on improved use of agricultural inputs, better farming practices and increased surveillance of plant and animal health, it will generate significant positive environmental and social impacts, thereby improving the conditions of farmers in Jamaica – a great majority of whom are poor. The research, extension and marketing support will tend to redirect resources to non-traditional exports and will improve agricultural practices in relation to soil conservation, handling and use of agro-chemicals and increase efficiency of water use. Strengthening agricultural health and food safety services will encourage the use of biological controls such as integrated pest management and reduce the occurrence of pest infestation and animal diseases, reducing the amount of pesticide use. Finally, in the case of productive projects the Project Team has developed a rigorous screening process using eligibility criteria to guide the selection process and eliminate projects with potentially negative criteria impacts. The environmental officer at the PIU, in addition to other activities, will ensure that the environmental review process as well monitoring and evaluation are carried out effectively.

- 5.16 In terms of potentially negative environmental impacts, there are two main sources of concern those that result from potential land use changes during cultivation (erosion, deforestation, water quality deterioration) and those that related to the inappropriate use of agricultural inputs (fertilizers, pesticides). In both cases, the impacts of the project tend to be positive and where this is not the case the project design includes the appropriate mitigation measures, as outlined in the ESIR.
- 5.17 With regard to land use changes, the strengthening of agricultural research and extension support services will offer producers, through the improved agricultural research and extension support services, better production systems and technologies that are more appropriate for sloping agricultural terrain. In addition, these technologies will enhance productivity and should reduce the demand for land and the pressure on forest conversion. These methods will be introduced through extensive training programs targeted at producers' groups and technical outreach personnel. To mitigate the risk that new productive projects could result in negative environmental consequences, in those areas of slope in excess of 20%, soil conservation techniques will be promoted and the project will promote investments that will involve the use of appropriate tree species. A biodiversity enhancement program is included to support in-situ conservation of native, endemic and regional species of fruit trees and horticultural crops. A germplasm bank will be developed at Hope Botanical Gardens to assist the effort.
- 5.18 With regard to the inappropriate use of agricultural inputs, the project is giving special attention to improved handling and use of pesticides and fertilizers- through its first and second components to reduce the use of hazardous chemicals in agricultural production and decrease point and non-point sources of pollution. As a result, run-off from agricultural uses of chemicals, causing eutrophication along coastal estuaries and forced closures of wells used for drinking water, should be decreased by the new standards, rules and regulations that are to be prepared and implemented by the project. A campaign to promote the use of Integrated Pest Management and to reduce the use of pesticides will be part of the first two components of the project. In collaboration with the Pesticides Control Authority, the project will also build on the screening models already in place to select agro-chemicals appropriate to the crops and soils of an specific area; the design of reporting and control system for the use of pesticides and the management of residues and the implementation of training activities designed for the appropriate use of agro-chemicals.
- 5.19 Similarly, the emphasis on plant/animal health and food safety will be protective of the human population generally by guaranteeing higher quality plants, animals, products and by-products that are produced locally, as well as those that are imported. Furthermore, the emphasis on high payoff productive projects and high value added commodities should expand the demand for labor - especially opportunities for female labor in the management and operation of new agro-processing enterprises.

- 5.20 The agricultural Census of 1996 revealed that 74.3% of individual farmers were men and 25.7% women. Men and women are involved in all aspects of cropping and livestock rearing. Women usually participate in tasks such as seed application, fertilizing, weeding, harvesting and agro-processing, and are the chief marketers of produce. The program has activities in all these tasks and women will be targeted to increase their knowledge and skills and to improve their crop production, processing and marketing activities. In absence of special measures, female farmers could be under-represented in training and promotion activities. To avoid this problem, female farmers targeted for participation in the training programs should be leaders from a wide cross section of farming communities. About 200 of them should be trained as trainers, so that they will teach additional women in their communities. The environmental officer at PIU will review the selection, course participation and number of women trained.

E. Important Issues

- 5.21 Sustainability of project activities is always an issue; therefore the project design devoted significant attention to it. The emphasis on promoting farmers organizations and in developing private-public partnerships, based on the private commercial sector's profit motives, should help to successfully confront this issue, as it should also help the development of efficient cost recovery or cost sharing mechanisms in the different services while maintaining acceptability high quality standards. The introduction of ADUs will help MOA's agencies to manage the issue of farmer organizations in a more effective way.
- 5.22 As this report states, Jamaica's small number of competitive rural enterprises is due to a series of constraints, including the availability of credit and the lack of secure land tenure in some areas of the country. The program includes land tenure regularization and the promotion of credit access, as eligible activities in the productive project component, as proposed by the project team.
- 5.23 The program will ask for the hiring of additional staff to strengthen service delivery. Given the fiscal restrictions faced by the GOJ, the new personnel will have to be phased in a gradual fashion. Starting in Fiscal year 2002-03, the Ministry of Finance, will include the recurrent costs in the recurrent budget of each agency, instead of Capital B budget, to enhance the sustainability of the program.
- 5.24 Making a contribution in hilly areas of the country will be especially challenging because of their natural resources degradation problems, actual and potential. In designing research and technical assistance actions in this area, local experience gained from other donor projects and the experience of international research organizations will be drawn on. Instead of excluding those areas from the project activities the program will promote the financing of projects that use the appropriate tree species and technologies.

- 5.25 Finally, effective coordination of the disparate and overlapping functions of public sector agencies involved in agricultural health and food safety will be a major challenge. The project will help in the design and implementation of the coordination mechanisms, work plans and regulation that are needed in this context. Through the project, within one year after the first disbursement it will be expected that those institutions will be working in an integrated fashion.
- 5.26 Macroeconomic conditions have partially influenced the competitiveness of Jamaican Agriculture on the last few years. The strengthening of agricultural support services and resulting increases in productivity should partially mitigate this influence.

STRUCTURE OF OBJECTIVES OF THE AGRICULTURAL SUPPORT SERVICES PROGRAM IN JAMAICA

PROGRAM OBJECTIVES	COMPONENTS OF THE PROGRAM				
	I. Strengthening the Delivery of Agricultural Support Services to Producers and Exporters	II. Strengthening and Consolidating Agricultural Health and Food Safety Services			III. Implementing Payoff Projects for Producer Organizations
		Animal Health	Plant Health	Food Safety	
the incomes of producers and exporters					
the competitiveness of agriculture in domestic and international markets	The productivity of priority commodities will experience increases of 30% during the four year project period that are attributable to the agricultural support services provided on a sustainable basis.				
Strengthening the delivery of agricultural support services to producers and exporters	Purpose To develop critical capacity for delivery of efficient, relevant and cost-effective agricultural support services including marketing, credit, extension, research, and information to producers and exporters	Purpose To ensure that Jamaica will be in full compliance with its responsibilities under the World Trade Organization (WTO) and will be able to protect itself against foreign animal diseases and take advantage of the opportunities the WTO offers Jamaican producers.	Purpose To strengthen the delivery of plant health services so that Jamaica can develop an internationally recognized plant health system that would satisfy WTO-SPS requirements and improve food security and trade	Purpose To enhance the capacity of the country to provide safe food for human consumption domestically and internationally; to develop a more effective surveillance and response capacity to reported outbreaks of foodborne illness; and to raise public awareness about food safety.	Purpose To create and exploit new markets and overseas market opportunities for producers and exporters of traditional agricultural products
Strengthening and consolidating agricultural health and food safety services	Outputs 1. Agriculture support services delivery system improved, established and operating. 2. Memoranda of Understanding (MOUs) with agricultural support services agencies developed and executed. 3. Mechanism for the identification and prioritization of strategic commodities and regions implemented. 4. Fund for agricultural support services procurement established and operating. 5. Agricultural technology and strategic market intelligence acquired and disseminated. 6. Research stations improved. 7. Equipment to strengthen the agricultural support services in the Ministry of Agriculture acquired and distributed. 8. Field office facilities of ARDD and RADA upgraded 9. Technical personnel trained. 10. Producers trained and producer organizations strengthened.	Outputs 1. Animal Health policy expanded, clarified, updated and adopted. 2. Coordination mechanisms strengthened. 3. Legislation developed, updated and enacted. 4. Personnel hired and deployed. 5. Personnel trained. 6. Equipment acquired and distributed. 7. Books, journals and databases acquired and available. 8. Animal Health Public Awareness Campaign implemented. 9. Data bases developed/record system strengthened. 10. Methodologies established and updated. 11. Facilities improved. 12. Central Animal Health Diagnostic Laboratory upgraded. 13. National Livestock Identification Program established and maintained.	Outputs 1. Plant Health policy updated, approved and operationalized. 2. Coordination mechanisms reviewed, streamlined and strengthened. 3. Legislation updated. 4. Personnel hired and deployed. 5. Personnel and farmers trained. 6. Equipment acquired, distributed and maintained. 7. Methodologies reviewed, updated and introduced. 8. Facilities refurbished and established. 9. Information system established and maintained. 10. Laboratories rationalized and enhanced. 11. Surveillance mechanism strengthened and expanded. 12. Components of national pest list verified.	Outputs 1. National food safety policy established and adopted. 2. Coordination mechanisms implemented. 3. Legislation developed, updated and enacted. 4. Personnel hired and deployed. 5. Personnel trained. 6. Equipment acquired and maintained. 7. Books, journals and databases acquired and available. 8. Public awareness campaign implemented. 9. Data bases developed/record system strengthened. 10. Methodologies updated. 11. Infrastructure strengthened. 12. Laboratory practices enhanced.	Outputs 1. Fund established. 2. Productive Project mechanism established and operational. 3. Information about Projects disseminated to producers and exporters. 4. Approximately 20 Projects (benefiting producers) approved and implemented.

LOGICAL FRAMEWORK OF COMPONENT #1
“STRENGTHENING THE DELIVERY OF AGRICULTURAL SUPPORT SERVICES TO PRODUCERS AND EXPORTERS”

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	IMPO ASSUM
al capacity for delivery of efficient, effective agricultural support services ural extension, research, marketing and ion, to producers and exporters.	<p>Situation at the end of the implementation</p> <ul style="list-style-type: none"> - Producers declare that agricultural support services are provided on a timely, relevant, and cost-effective basis. - Producers widely voice satisfaction with the agricultural support services they are provided. - The productivity of priority commodities experience increases of 30 percent over the four-year project period, which are directly attributable to research, extension, marketing and information services made available on a sustainable basis. <p>(On <i>prima facie</i> grounds, priority commodities are roots/tubers, fish, goats, herbs/spices, papaya and other fruit crops, plantains, and selected vegetables. During the project period, commodity priorities will be refined as a result of careful studies and analyses at the macroeconomic level and enhanced interactions with producers at the local level.)</p>		
<p>support services delivery system ablished and operating.</p> <p>f Understanding (MOUs) with upport services providers developed and</p> <p>or the identification and prioritization of odities and regions implemented.</p> <p>ultural support services procurement d operating.</p> <p>chnology and strategic market quired and disseminated.</p>	<ol style="list-style-type: none"> 1. The current system is improved by introducing five Agribusiness Development Units (ADUs) to link agricultural support services from the public and non-public sectors to producers and exporters. ADUs share RADA and ARDD facilities in strategic regions, and are led by Agribusiness Development Officers (ADOs) who facilitate the identification of opportunities for raising competitiveness. They have access to Program funding to procure and deliver support services to producers and exporters, who cost-share progressively. Years 1-4. During the third year all the program the PIU will start negotiating with service providers the transfer of ADUs to the private sector, where feasible. 2. Agreements with public and non-public agricultural support services providers are developed and executed. The types of services supplied, their costs, and plans for cost-sharing are spelled out. Year 1. 3. Staff of the MOA's Planning Division are trained to detect competitiveness by region, commodity, and producer type using specialized software and (largely) secondary data. Priorities are examined in annual Program review meeting with producer and service agency representatives; also, quarterly ADU meetings are held to foster additional interactions between services personnel and local producers and ground-truth conclusions of the annual meeting. Annual meetings are advisory to the PSC; quarterly ones advise the PIU and ADUs. Years 1-4 4. A \$1.0 million fund is established to partially finance services supplied by providers selected by producers who cost-share, along with other organizations. ADOs access these resources through the PIU. Service providers will help produce problem diagnoses and solutions, and identify and exploit opportunities Years 1-4. 5. ARDD shifts more effort to accessing technologies from overseas and intensifying adaptive research at home to select technologies most appropriate to Jamaica's harsh environments. Outreach by producers and professionals are also fostered. Technology packages are profiled; they and extension materials are disseminated to producers, ADOs, and support services for priority commodities/regions. The Program will support general market surveys, contract Market Access Specialists in three key export markets, partially financed through a cess on exports, and a new, cutting edge market and technology communications network. Years 1-4. 	<p>Surveys of producers and producer organizations</p> <p>Executed MOUs.</p> <p>Published proceedings of annual and quarterly meetings.</p> <p>FCI operations manual and annual financial reports.</p> <p>Annual reports of ARDD, Marketing and Credit, and RADA; also, the annual value of the cess generated/MASs annual costs.</p>	<ul style="list-style-type: none"> - Cooperat public/pr services i - Fully qua sector ser personnel priority c regions, a areas. - Producer with man skills/ fin resources sharing c develop - Agricultu services a genuinely benefits f forces wi Program sharing. - Leadersh and ADU definition consensus project pr plans.

<p>ions improved.</p> <p>strengthen the agricultural support e Ministry of Agriculture acquired and</p> <p>ilities of ARDD and RADA upgraded.</p> <p>sonnel trained.</p> <p>ned and producer organizations</p>	<ol style="list-style-type: none"> 6. Buildings, labs, irrigation systems, pasture, greenhouses are improved at the Research Stations of Orange River, Bodles, and Montpelier to provide services to increase the efficiency, productivity and competitiveness of the local farmer in crop and livestock production. These improvements will allow for the implementation of a research strategy comprising work on research stations, collaboration with research institutions and networking with regional and international organizations. 7. Vehicles, computers and related software, audio visual equipment and accessories, extension field kits, field equipment, and office equipment are acquired for RADA and the MOA, including ARDD, the Marketing Divisions, and Planning. See list attached. 8. Plumbing, electricity, phone lines, meeting rooms for producers, office space, and other essential facilities are added to RADA and ARDD field offices (up to six) that will house the ADUs, making them more inviting places for staff offices and meetings between support service personnel and producers. Essential animal pens in ARDD experiment stations are repaired. Years 1-2. 9. 725 course participants from RADA and the MOA are trained in 29 short courses, plus 17 officers through the M.Sc. degree (8 local, 9 overseas). Short courses deal with 23 different topics, ranging from agronomy to water management. M.Sc. training will be in 12 different fields. Years 1-4. 10. 1,250 producers are trained in agribusiness development, social organization, mgmt, and new agricultural practices through short courses, workshops, and field days in priority regions. Emphasis is placed on strengthening producer organizations. Y 2 - 4. 	<p>Inspections at research stations</p> <p>Visual inspections of equipment inventories.</p> <p>Visual inspections and photos.</p> <p>Evaluations by course participants and ADOs.</p> <p>Evaluations by course participants and ADOs.</p>	<ul style="list-style-type: none"> - Service a - producers donors co - Service p choices a objective - Basic tec available outside J relevant t priorities - Adequate maintena budgeted of equipr for its ma life. - High qua instruction for locall short cou available - High qua instruction for short workshop days is av Jamaica
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LOGICAL FRAMEWORK OF THE ANIMAL HEALTH SUB-COMPONENT

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Full compliance with its responsibilities under the organization (WTO) and will be able to protect itself from animal diseases and take advantage of the opportunities available to Jamaican producers.	<p>Situation at the end of the implementation</p> <ul style="list-style-type: none"> - Other countries allow the importation of Jamaican animals and animal products. - No foreign animal diseases are introduced to Jamaica, or if a foreign animal disease is introduced, it is eradicated rapidly. - Jamaica has effective animal health surveillance and animal identification systems. 		
Health policy expanded, clarified, updated and adopted.	1. Policy is expanded, clarified, updated and approved by Minister of Agriculture and the Cabinet. The Permanent Secretary heads the committee in charge of the policy.	Policy document approved by MOA and the Cabinet.	1-13 Funds available as planned
Coordination mechanisms strengthened	2. Coordination mechanisms established, MOUs executed when necessary, with objectives, roles and responsibilities of the parties involved defined.	MOUs executed.	In case of a foreign animal disease introduction, additional funds can be made available by government for eradication activities
Legislation developed, updated and enacted	3. Animal health legislation, regulations and standards reviewed and updated, new legislation enacted.	Legislation approved by Parliament	Trained personnel remain within government service
Personnel hired and deployed	4. 15 animal health technicians/inspectors, 4 technologists (at central animal health diagnostic laboratory: 2 for residue analysis and 2 for disease diagnosis), 2 research scientists (microbiology and virology), 2 information systems technicians, and 1 secretary (for the central animal health diagnostic laboratory) are hired, deployed, trained and put to work.	Personnel hiring records.	Government employees take ownership of and responsible for outputs
Personnel trained	5. 4 people trained in improved laboratory techniques and diagnosis (training done overseas for four weeks: 2 in microbiology and 2 in residue analysis-they will return and train the other 21 laboratory professionals and technicians as in-service training); 42 people trained in HACCP (training done by a foreign consultant in Jamaica in two groups of 21 for one week each); 2 people trained in virus and bacterial isolation (training done overseas for one month-2 in virus isolation; 2 in bacterial isolation), 2 people trained in risk analysis (training done overseas for 1 month); 42 people trained in survey techniques and sampling procedures (training done in house with local trainer for one week); 5 people trained in epidemiology and foreign animal diseases (training done overseas for two weeks); 5 people trained in computer applications; (training done locally for one week); one person participating in the OIE, regional OIE, and WTO-SPS meetings each year.	Records of the training, pre and post test and certificates	Government cabinet and parliament are in support of the project and necessary legislative and policy changes
Equipment acquired and distributed	6. List attached.	Purchasing records and on site inspection	Government will support recommendations with additional resources if necessary. Cabinet approves policy Legislation is approved in time Government agrees to hire if required Funds available and purchased approved in time, speedy curative procedures Target public is receptive Computer equipment is obtained under #6. Resources are available to implement consultant's recommendations

als and databases acquired and made available	7. As required.	Purchasing records and on site inspection	Government will make fun building maintenance availa
th Public Awareness Campaign implemented	8. Develop and implement animal health public awareness campaign, targeting livestock producers, processors, food handlers, butchers and organizations, educational institutions in order to improve awareness of animal health issues. NOTE: This campaign is different from the food safety public awareness campaign	Interviews, reports and examination of materials used for the campaign	Government will have reso expertise to implement recommendations of consul
Developed/record system strengthened	9. Animal Health databases on results of inspections, surveillance hazards, third countries importing requests data, residues and exposure assessment, laboratory data, import and export activities, animal health regulations, livestock identification, eradication and control programs is developed, continuously updated and made available at a website.	Physical examination	Producers support program and equipment available on continual basis
ies established and updated	10. Inspection, surveillance, laboratory and research systems and procedures such as GLP, HACCP, risk analysts and quality assurance, laboratory safety, new analytical and testing procedures implemented.	Interviews, reports and manuals examination	
proved	11. 2 parish offices refurbished (Highgate in St. Mary and Savlanur in Westmoreland); 1 regional laboratory refurbished (St. James, Montego Bay-about 50 square meters/) and 1 central laboratory (Kingston) refurbished including the monitoring residues unit, upgraded and expanded, and one large and small animal quarantine station (Kingston) refurbished.	On site inspection	
mal Health Diagnostic Laboratory upgraded	12. Upgrading of laboratory to incorporate GLP and prepare to meet international standards for accreditation for disease testing, microbiology, residue testing. (Already being executed by IICA/CIRAD)	Documents and certifications examination	
estock Identification Program established and	13. National Livestock ID Program for ruminants implemented and maintained.	Verification of the records	

LOGICAL FRAMEWORK OF THE PLANT HEALTH SUBCOMPONENT

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>delivery of plant health services so develop an internationally recognized system that would satisfy WTO-SPS and improve food security and trade</p>	<p>Situation at the end of the implementation</p> <p>Reduction in rejection of exports due to pest/pesticide contamination; reduction in production losses due to pests; prompt containment or eradication of newly introduced pests, laboratories operating properly, international and domestic legal requirements satisfied.</p>		
<p>Policy updated, approved and implemented</p> <p>Coordination mechanisms reviewed, streamlined and enhanced</p> <p>Legislation updated</p> <p>Personnel hired and deployed</p> <p>Farmers trained</p>	<ol style="list-style-type: none"> 1. IPM draft policy expanded to cover all plant health, approved and made operational, outlining vision, mission, strategies and roles of all the relevant agencies. Year 1 2. Coordination mechanisms established between relevant institutions e.g. RADA, MINAG-RDD, CARIDI, UWI and commodity boards, memoranda of understanding developed, roles and responsibilities defined and approved, joint work plans developed and adopted – yr 1-3 3. Relevant plant health legislation and regulations e.g. Plant Quarantine Act and Agricultural Produce Act reviewed and updated, new legislation enacted – yr 1-2 4. 8 PQ/PI officers, 1 RADA plant protection specialist, 6 ARDD plant protection officers, 5 RADA extension officers, 5 RADA field assistants and 2 RADA drives hired and deployed ; travel allowances available- yr 1-2 5. A total of 9 training courses given locally to groups of personnel from RADA, ARDD and young scientists from organizations with which there are signed MOUs...12 from PQ/PI and 2 from ARDD and 2 from RADA will be trained in Plant Quarantine in the US and UK respectively; 15 will be trained locally in pest risk analysis; 188 in pest recognition locally, 153 in pesticide mgmt and IPM locally, 2 from ARDD will receive overseas training in IPM and become supplementary resource persons to conduct the training locally, 153 will be trained in biocontrol locally and 1 ARDD will receive more in-depth training overseas; 3 will receive overseas training in post harvest technology; 9 will be trained in computer applications and serve as in-house resource persons to assist others. A total of 8 persons from ARDD will receive training overseas in pest identification/diagnosis (5 persons), honeybee pathology and beekeeping(1 person) and leach respectively in nematology and virology. A total of 8 international meetings (2/yr) will be attended including USDA, IPPC, WTO. A minimum of 5000 farmers trained per year in pest and pesticide management and traceback procedures. yr 1-4 6. Field and laboratory equipment for pest collection and identification, specimen isolation and culture, glassware, computer hardware and software, GIS and GPS tools, video camera, projectors and screens, small scale processing equipment, vehicles, radios, 2 incinerators purchased and distributed yr. See list yr 1-4 	<p>Document examination</p> <p>Memorandum of understanding issued, joint work plans</p> <p>Legislation gazetted</p> <p>Employment and deployment records</p> <p>Records of the training, pre and post test and examination certificates</p> <p>Purchasing document examination and on site inspection</p>	<ul style="list-style-type: none"> - Funding available as per outputs 1-12 - In case of exotic pest Government would provide additional resources for containment/eradication - Trained personnel re-employment in government service - Government employment of and re-employment of the outputs - Government remaining supporting the project necessary policy and changes that might be required - Need for policy support relevant decision making process facilitated - Need for coordination of different decision making agencies and processes. Linkage with food security ensured. - Availability of commodity draughtsmen is assured directed at ensuring completion of the project - Government commitment to vacant posts and expansion process of additional recruitment - Personnel available to implement work plans in place

<p>Techniques reviewed, updated and introduced</p> <p>Furnished and established</p> <p>System established and maintained</p> <p>Nationalized and enhanced</p> <p>Diagnostic mechanisms strengthened and</p> <p>of national pest list verified</p>	<p>7. Existing methodologies in surveillance, traceback inspection, import/export certification, pest management research, laboratory analysis, diagnosis, extension, reviewed, streamlined and adopted and relevant new methodologies introduced yr 1-2</p> <p>8. 4 inspection offices established at seaports, 4 RADA agricultural offices expanded (Kingston, St Mary, eastern and western zones), 6 plant health laboratories (4 ARDP, 2 RADA, 2 PQ/PI) and 1 PQ/PI fumigation shed constructed. yr 1-2</p> <p>9. A plant health information system (hardware, software, methodologies and databases) established with components addressing pesticide availability and use, pest resistance, management practices, records of pest outbreaks, record of pest status, actionable pest lists, research results locally and in other countries. – yr 1-4</p> <p>10. Scope of 8 existing laboratories at MINAG, commodity boards, SRC, CARDI and UWI reviewed and rationalized, MOUs established, at least four laboratories are operated at GLP standards, and at least one lab is accredited at international standards, identities dependent on consultant recommendation :- capability for diagnostics enhanced, <i>outputs linked with 4, 5, 6, 8 ; yr 1-3</i></p> <p>11. Existing system reviewed, collaborative national surveillance program designed and implemented in 14 parishes, information processed and incorporated into database, improved system evaluated, travel allowances available; <i>outputs linked with 4, 5, 6, 7 yr 1-4</i></p> <p>12. Draft pest list reviewed for pests affecting 6 major non-traditional crops and 4 major vegetable imports. Pest short lists (1 per commodity) verified by surveys and laboratory diagnosis. 10 pest distribution maps (1/crop) produced. <i>Yr 1-2</i></p>	<p>Interviews, reports and manuals examination</p> <p>On site inspection</p> <p>On site examination, report reading</p> <p>On site examination, document inspection</p> <p>Field visits, report and database examination.</p> <p>Specimen and report examination</p>	<p>to be trained</p> <ul style="list-style-type: none"> - Funds available and acquisition processes - Methodologies appropriate - Linkage ensured with initiatives - Facilities available - Different data sets available and accessible - Support of decision-making - Trained manpower available - Resources and expertise for execution
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LOGICAL FRAMEWORK OF THE FOOD SAFETY SUBCOMPONENT

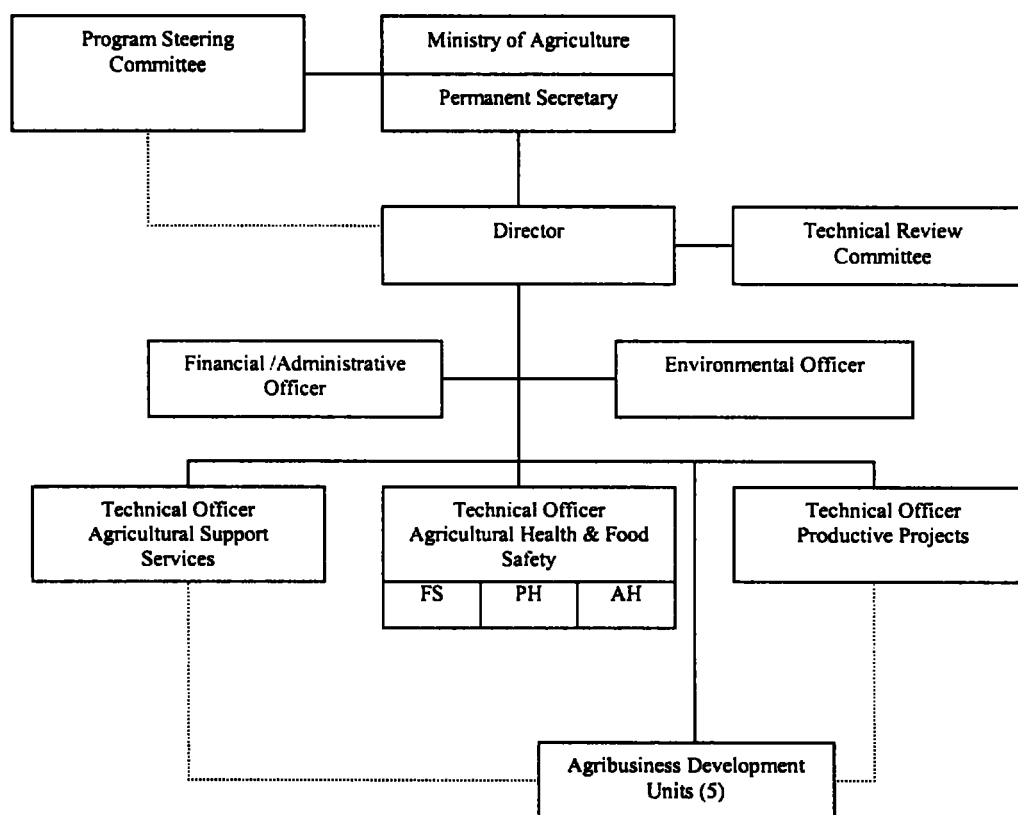
OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	
	Situation at the end of the implementation		
Capacity of the country to provide safe food for consumption domestically and internationally; to develop a surveillance and response capacity to reported foodborne illness; and to raise public awareness about food safety	Improved surveillance system, effective response to avoid or minimize hazards from foodborne illness, risk assessment and management implemented, and food safety education programs implemented, thus meeting high standards of food safety and raising public awareness.		
Food safety policy established and adopted	1. Policy in relevant ministries reviewed, integrated, updated, approved by Cabinet. Permanent Secretary will head the committee that updates the policy	1. Document examination	Policy first year
Coordination mechanisms implemented	2. Coordination mechanisms established, MOU with roles and responsibilities defined, MOU supported and approved and joint work plans developed and adopted	2. Memorandum of understanding issued	Effective mechanism
Legislation developed, updated and enacted	3. Food safety legislation, regulations and standards reviewed and updated, new legislation enacted	3. Legislation gazetted	Legislation time
Personnel recruited and deployed	4. 5 food inspectors (FSPID), 5 pesticide inspectors (PCA), 3 laboratory analysts (MOH), 2 technical assistants (MOH), 2 food technologists (MCT), and 1 system engineer (MOH), deployed, trained and put to work; travel allowances available	4. Verification of personnel registration and physical allocation	Government hire the
Personnel trained	5. 20 international meetings attended (1 person per meeting), 50 food inspectors trained in HACCP (local), 15 inspectors trained in Risk Analysis (local), 40 analysts trained on improved laboratory techniques (local), 4 researchers on advanced thermal processing (local), 6 trained in food processing (local), 10 inspectors trained on pesticide registration and license procedures and techniques (local), 15 inspectors trained in sampling techniques, survey procedures and investigation of outbreaks (local), 150 extensionists for sampling field procedures for food safety (local), 4 analysts trained for pesticides residues analysis (local). Local training approximately 1 week; 30 3-week foreign attachments undertaken	5. Records of the trainings, pre and post test and certificates examination	Personnel in place
Equipment acquired and maintained	6. Purchasing of quality control, inspection, microbiology testing, chemistry equipment, temperature data logging and associated software, computers and software, data show, video camera, projectors and screens, GPS, sampling and laboratory supply, small scale processing equipment, video cassettes, cooling chest, DNA fingerprinting (PCR), vehicles, radios, cell phones,	6. Purchasing document examination and on site inspection	Funds a purchase in time, procedure
Manuals and databases acquired and available	7. Books, journals and databases necessary for the Food Safety programs will be made available. Detailed list pending	7. Purchasing document examination and on site inspection	Funds a purchase in time

<p>renewal campaign implemented</p>	<p>8. Develop, establish, implement food safety educational program targeting farmers, farm workers, packers, food processors and distributors, transporters, retailers (public and private), all food handlers (including those in health care and tourist establishments), consumers, including children, to teach basics of food safety and safe food handling techniques. Campaign intended to raise awareness about food safety, increase demand for safer food, and reduce the incidence of food borne illness</p>	<p>8. Interviews, reports and examination of materials used for the campaign</p>	<p>The target to improve habits a</p>
<p>developed/record system strengthened</p>	<p>9. Food safety databases on results of research, inspections, surveillance hazards, countries importing requests data, pesticide registration, residues and exposure assessment, farm and farmers registration, food handlers certification, will be developed and continuously updated and available at a website</p>	<p>9. Physical examination</p>	
<p>gies updated</p>	<p>10. Inspection, surveillance, laboratory and research systems and procedures such as GLP, HACCP and RA implemented, new analytical and testing procedures, mapping, lotting system for trace back implemented</p>	<p>10. Interviews, reports and manuals examination</p>	<p>Product willing method</p>
<p>re strengthened</p>	<p>11. MOH Cornwall microbiology laboratory upgraded and established (existing space), PCA Montego Bay office established (PCA to share PQ/PI or MOH office).</p>	<p>11. On site inspection</p>	<p>Funds a purchas in time</p>
<p>practices enhanced</p>	<p>12. Laboratories (FSPID, NPHL) reviewed and revised to incorporate GLPs and prepare to meet international standards for accreditation.</p>	<p>12. Accreditation documents and certifications examination</p>	<p>Comm empow collabor process</p>

LOGICAL FRAMEWORK OF COMPONENT #3
"IMPLEMENTATION OF SELECTED HIGH PAYOFF PRODUCTIVE PROJECTS"

OBJECTIVES	INDICATORS	MENAS OF VERIFICATION	IMPORTANT ASS
and exploit new domestic and overseas opportunities for producers and exporters -traditional agricultural sector	Situation at the end of the implementation <ul style="list-style-type: none"> - New domestic and overseas market opportunities opened for beneficiaries in domestic hotels, food chains, processing firms, and supermarkets - Increased value of products sold by beneficiaries to export markets and to domestic hotels, food chains, processing firms and supermarkets - Higher profitability of agricultural producers and exporters over time due to new opportunities, increased quality, and consistency of supply. 	Proper monitoring and evaluation information	
established			
Productive Projects operating mechanism established and made operational	<ol style="list-style-type: none"> 1. A US\$7.0 million Fund is established and made operational US\$6.0 million to support the Productive Projects Component and US\$1.0 million to support the provision of agricultural support services under Component I 2. Operating manual (including eligibility and decision criteria, application forms, and application procedures) approved and made operational 3. Information about Productive Projects widely disseminated among producers, exporters, and processing firms all over Jamaica thorough booklets, radio advertisement, and 35 information sessions held with producers and exporters organized by ADUs and services providers such as RADA, the JAS, and JEA. 4. About 30 Productive Projects are approved, financed, implemented, monitored, and evaluated throughout Jamaica over a four-year period. 	<p>Project and Bank records</p> <p>Inspection of Manual and other instruments approved</p> <p>Booklets, application forms, records of project meetings, contracts with local radios, and interviews.</p> <p>Monitoring and evaluation reports of projects implemented and physical inspection</p>	<p>Macroeconomic perfor stable during project in</p> <p>International prices of export crops remain sta project implementation</p> <p>Farmers and buyers are contribute with a share costs and in higher-cos willing to find other so funding</p> <p>Private providers of ex training, and technical become interested in w projects</p> <p>Farmers are interested</p>
Information about Productive Projects initiated to producers and exporters			
Productive Projects approved, financed, and implemented			

ASSP Organizational Chart



JAMAICA AGRICULTURAL SUPPORT SERVICES PROGRAM (JA-0111)
BIDDING SCHEDULE
TENTATIVE PROCUREMENT PLAN¹

Principal Procurement	Financing Bank %	Method²	Prequal	Amount (US\$ Thousands)	Publication (Half of)
Equipment					
Laboratory Equipment					
1 (Plant Health, Food Safety)	100	LB	NO	123	01
2 (Animal Health, Plant Health, Food Safety)	100	ICB	NO	1320	02
3 (Animal Health)	100	LB	NO	148	03
Support Services Equipment					
1 (Support Services)	100	LB	NO	187	01
2 (Animal Health, Plant Health)	100	LB	NO	67	01
3 (Support Services)	100	LB	NO	187	02
4 (Plant Health, Food Safety)	100	LB	NO	115	02
Consultants					
1 (Support Services, Plant Health)	100	LB	NO	170	01
2 (Support Services)	100	LB	NO	100	02
3 (Animal Health, Plant Health)	100	LB	NO	200	02
Civil Works ³					
1 (Animal Health)	100	LB	NO	150	01
2 (Support Services)	100	LB	NO	1100	01
3 (Plant Health, Food Safety)	100	LB	NO	300	01
4 (Support Services)	100	LB	NO	325	02
Consultants ⁴					
1	100	LB	NO	470	01
2	100	LB	NO	500	02
3	100	LB	NO	240	03
4	100	LB	NO	200	04

In addition to the above procurement, the Productive Projects Component (Component 3) provides US\$6 million for grants to support equipment, civil works and services. These projects will be demand driven, therefore actual procurement will be subject to the timing and nature of approved project proposals. Procurement for the Productive Projects will be in accordance with IDB and local bidding requirements.

ICB International Competitive Bidding

LB Local Bidding

Local bidding regulations: Under US\$10,000, contracts may be awarded without tenders. Over US\$10,000 and less than US\$50,000 contracts may be awarded without tenders, but written quotations shall be obtained. Over US\$50,000, tenders must be invited in the local press.

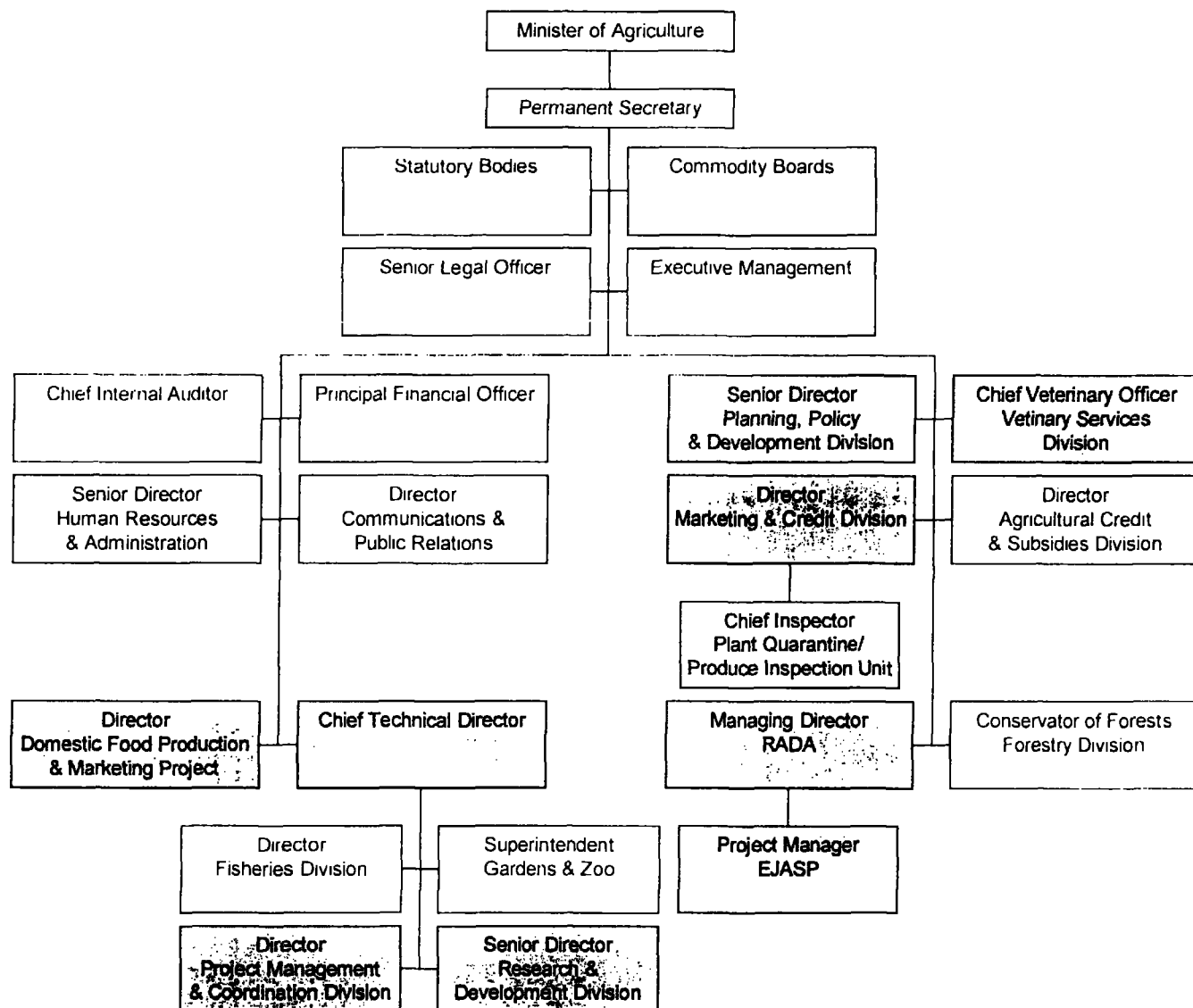
Civil works will include refurbishment of research stations, offices, and laboratories.

There will be multiple individual consultancies; no firms are scheduled to be hired.

PROJECT DEVELOPMENT OBJECTIVES AND KEY PERFORMANCE INDICATORS

OBJECTIVES	KEY INDICATORS
Increase the competitiveness of Jamaican agriculture, making a substantial contribution to increase the income of agriculture producers.	Increases in: <ul style="list-style-type: none"> a. Production b. Productivity (land, labor) c. Exports (total and selected markets in the project's priority commodities and regions) d. Increases in income of selected farm families that have been included in productive projects financed by the program
COMPONENT	KEY INDICATORS
Strengthening the delivery of Agricultural Support Services.	1.1 Use of extension by service provider 1.2 Use of improved seeds in selected commodities 1.3 Number of farmer associations organized by the program 1.4 Number of producers trained by the program 1.5 Number of land parcels with tenure regularized by the program 1.6 Number of Business Plans developed by ADUs
Strengthening and consolidating agricultural health and food safety services.	2.1 Number of pest problems or animal diseases or food borne illnesses out-breaks detected and investigated 2.2 Percent of exports and imports inspected 2.3 Reduction in exports rejections due to pesticide or pest contamination 2.4 People trained in new methodologies: HACCP, risk analysis and trace-back 2.5 Agrochemicals registered and inspected for control purposes 2.6 Number of samples analyzed by laboratories 2.7 Number of Laboratories with international accreditation
Implementation of high pay off production products.	3.1 Number of productive projects presented by ADUs and for agricultural producers and per cent approved by 3.2 Use of credit by program producers: amount of loans, payment period, and interest rate 3.3 Increase in investment by project's farms: <ul style="list-style-type: none"> a. Value of machinery, equipment, and installations (storage, packing houses) b. Increase in irrigated area c. Area in tree crops
Social and environmental Indicators.	4.1 Cropping area by type of products, trees, roots tubers, vegetables, pastures, etc. in areas affected by program 4.2 Indicators about soil erosion and salinization of farms included in the program 4.3 Agrochemicals utilization at areas affected by program 4.4 Biological control use (%area) in priority commodities and areas 4.5 Number of women included in the program (training and productive projects.)

Ministry of Agriculture



PROPOSED RESOLUTION

JAMAICA. LOAN ____/OC-JA TO THE GOVERNMENT OF JAMAICA
Agricultural Support Services

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Government of Jamaica, as Borrower, for the purpose of granting it a financing to cooperate in the execution of the Agricultural Support Services Project. Such financing will be for the amount of up to twenty two million dollars of the United States of America (US\$22,000,000) from the Single Currency Facility of the Ordinary Capital Resources of the Bank, and will be subject to the "Special Contractual Conditions" and the "Terms and Financial Conditions" of the Executive Summary of the Loan Proposal.