Industry Council for Development

THE DEVELOPMENT OF A NATIONAL COMMERCIAL SEED INDUSTRY IN HAITI

Report of an ICD Reconnaissance Mission

Submitted to:
The U.S. Agency for International Development
Port-au-Prince, Haiti

April, 1985

Project # 931-1121

300 EAST 44th STREET ▪ NEW YORK, NEW YORK 10017 ▪ TELEPHONE: (212) 867-5017 ▪ CABLE: INDUCODEV ▪ TELEX: 23 89 76

BEST AVAILABLE COPY

TABLE OF CONTENTS

Chapter		Page
I.	INTRODUCTION	1
II.	MISSION SCOPE OF WORK AND ITINERARY	2
III.	BACKGROUND ON ICD AND COOPERATION WITH USAID	3
IV.	ACKNOWLEDGEMENTS	4
V.	HAITI'S AGRICULTURAL SECTOR	5
VI.	SEED INDUSTRY BACKGROUND	7
VII.	SUMMARY OF MISSION DISCUSSIONS	13
VIII.	CONCLUSIONS OF THE RECONNAISSANCE MISSION	25
IX.	PROPOSALS FOR ACTION	31
X.	IMPLICATIONS FOR COST SHARING BETWEEN ICD AND USAID	32

I. Introduction

In late February, 1985, ICD was invited by Mr. Jerome French, USAID-Haiti Mission Director, to carry out a brief reconnaissance mission to assess the potential for the development of a national commercial seed industry in Haiti. This request was in response to a strong interest by Haiti's Minister of Agriculture, Dr. Franz Flambert, in promoting private sector investment in Haiti's seed industry, and in formulating, with USAID's assistance, a strategy under which the industry would be developed.

The request also followed a considerable amount of work carried out through USAID's Integrated Agricultural Development Project, and Agricultural Development Support I and II, to identify improved varieties of key food crops for cultivation in Haiti, and to test the production of seed of the new varieties through pilot contract-growing schemes with large local farmers. The positive results of these efforts pointed to the need to dramatically increase the production of the new genetic material, and extend its dissemination to Haiti's 700,000 small farmers. While previous USAID-supported efforts had focused on the introduction and pilot-production of new seed varieties, USAID-Haiti now felt the need to focus on the policy and

operational environments for commercial seed production, and on the roles of the government and private enterprise in the development of a commercially viable national seed industry.

II. Mission Scope of Work and Itinerary

The scope of work of the ICD reconnaissance mission is summarized by the following extract from a cable to ICD from USAID-Haiti, requesting assistance from ICD. This cable is reproduced in full as Annex 1 of this report:

> "The purpose of this three day mission will be to explore the possibilities of developing a commercially viable seed industry in Haiti. Given the short time period, this will be based on interviews/discussions with the Minister of Agriculture, potential private sector seed growers, and private agro-industry interests. Additionally, the team will be provided with previous reports of Mission-sponsored activities in seed development."

The ICD reconnaissance mission was composed of: Dr. Alexander Grobman, ICD Senior Associate, founder and President of a basic seed company in Peru, and former Deputy Director of CIAT; and Edward L. Gibson, ICD Program Coordinator. The ICD team visited Haiti from March 26 to March 29, 1985. Its itinerary, which is included in full as Annex 2, of this report, included discussions with the Minister of Agriculture and his senior staff, private sector agricultural input suppliers, other entrepreneurs, and international development agency officials.

The ICD team also held repeated discussions with USAID staff, and presented its conclusions and recommendations to the USAID Mission Director at an exit briefing on March 29.

III. Background on ICD and Cooperation with USAID

ICD is a non-profit development organization headquartered in New York. Its objective is to assist economic and social development by contributing, on a non-commercial basis, expertise from international industry to developing country governments and international development organizations. ICD is supported in this effort by forty companies from fifteen countries that support the objectives and principles of the Council, and agree to contribute expertise to Council activities as a contribution to the development process.

Since 1980 ICD has received a grant from USAID to assist governments in the design of commercial seed industry strategies and programs. ICD's key resource in this effort has been the knowlege of executives from established seed industries in the U.S., Europe, and the developing world. In 1984 USAID expanded its grant to encompass the wider range of agro-industries. Under this project, formerly entitled Commercial Seed Industry Development Program (CSIDP) and now renamed Agro-industrial Development Program, ICD has provided assistance to: the Government of Turkey, in the design of a national seed system to

support the expansion of a national private sector seed industry; the Ivory Coast, in the conversion of a government-administered seed project into a national commercial seed enterprise, and the identification of potential investors; Thailand and Sudan, in the training of senior seed industry managers in commercial seed industry management. Other CSIDP country projects have included Tanzania, the Caribbean (CARICOM nations), and Pakistan. In addition, under the current Agro-industrial Development Program ICD is assisting Jamaica in the design of a gourmet foods export project, and USAID and the Government of Somalia in the design of a strategy for launching a national edible oils industry.

IV. Acknowledgements

The ICD team members would like to acknowledge the very valuable assistance provided by Dr. Abdul Wahab, USAID-Haiti Assistant Agricultural Development Officer. On very short notice Dr. Wahab organized a comprehensive itinerary, provided important guidance and information, and accompanied the mission throughout its stay in Haiti. The hospitality he and his wife provided the ICD team members was also enjoyed and appreciated.

V. Haiti's Agricultural Sector

According to a United Nations classification, Haiti is one of the 30 "least developed countries", (LDC's), the only one in this group in the American Continent. Several criteria identify the LDC's, including an annual per capita income of less than $125. and a rate of literacy of 20% or less.

Some background information on the characteristics of agriculture in Haiti, as seen through several indicators, is presented here in order to describe the context in which a seed industry would operate.

It is estimated that the number of farmer production units in Haiti is between 600,000 and 700,000, working on anywhere between 850,000 and 1,100,000 hectares of arable land. Some 47% of the farm units are 0.5 hectares (ha) or smaller, 40% between 0.51 and 2.0 ha. At the highest level, 2% of the farm units are over 5.0 ha, with a limited number exceeding several thousand hectares. Family production units may involve more than 1 parcel of land, which in many cases includes owned, as well as rented land.

Agriculture represents about 44% of gross domestic product. Crops for domestic consumption amount to 80% of total sector output. Major yearly crop output estimates are the following: corn, 250,000 MT; sorghum, 220,000 MT; rice, 107,000 MT,

sugarcane, 873,000 MT; cassava, 145,000 MT, pulses, 83,000 MT; coffee, 34,000 MT. Average yields of corn, sorghum, and common beans are around 1 MT/hectare, while rice yields are around 2.2 MT/hectare.

Growth of the agricultural sector averaged 1.1% (1970-1980), lower than the 2.4% rate of population growth. The Government of Haiti has not consistently provided support to agricultural development at the level required by the sector. Investment in the agricultural budget of the public sector is around 8% of national budget, an investment not commensurate with the importance of agriculture in the economy of Haiti. Government activity in the sector is also beset by inconsistent or non-existent development policies; limited extension services; institutional weakness; and poor coordination between government agencies.

Haitian farmers use limited amounts of agricultural inputs (fertilizers, seeds of improved varieties, pesticides), in part due to limited extension work on the advantages of their use; in part due to high costs of such inputs, inaccessibility of credit, and high risk due to weather and market uncertainties. About 40% of the area under crop cultivation is on slopes greater than 20 degrees, which is highly subject to erosion. Limited rainfall in some areas reduces yield potential and irrigation has not been fully developed in large parts of the country.

International aid agencies, both public and private, have been present in Haiti in a variety of agricultural projects. USAID, in particular, has been active in integrated agricultural development projects in Haiti which continue at present. The World Bank conducts a major agricultural development project in the north coast; UNDP finances projects on coffee production, watershed management and farmer cooperative organization.

VI. Seed Industry Background

Although a growing number of farmers have reportedly begun planting improved seed, the vast majority of farmers save a portion of their harvest to meet their seed requirements for the following season. In many cases where farmers are faced with cash flow difficulties, and must dispose of their entire produce at harvest, they purchase new seed materials at local village markets at the start of the new crop season. In most cases these purchases are made at high prices without assurance of purity, viability, or vigor. In these situations (for both saved and purchased seed), farmers sow up to 20 seeds per hill in the case of corn, sorghum, and legumes. This is clearly an inefficient use of inputs, raises the cost of production to the farmer, and does little to relieve him from uncertainty and the probability of low yields. Government and development agencies have recognized the need to make available high quality seed of improved varieties to farmers, and have initiated a number of efforts in that direction.

In 1977 a seed corn production program was launched by the government, with support from the French Government and technical assistance from IICA. An organization known as CECOSAM (Centre de Conditionnement et Stockage de Semences Ameliorees) initiated operations at a plant in Damien, built with a capacity for corn seed processing of about 1 MT/hour. A variety of corn, Eto Amarillo from Colombia, was introduced. After three years of operation, the project was closed down, and has been inactive since 1981. Several reasons were given for terminating the project, among them a lack of acceptance by farmers of the Eto Amarillo variety. However, it is apparent that high operating costs, on the basis of low seed volumes and long delays in paying contract farmers affected the project quite seriously, and this may have been the main reason for its demise. The CECOSAM plant is in a good state of repair, and with some minor improvements it could expand its capacity and be used for servicing some of the future seed processing needs in Haiti. Staff paid by the Ministry of Agriculture is still assigned to the plant, although it lies idle..

Jointly with CECOSAM, a national Service for the Provision of Improved Seed (Service Nationale pour l'Approvisionnement de Semences Ameliorees SENASA), was developed in 1979. SENASA's functions were to apply the results of research on seeds through extension to farmers and to coordinate all seed industry activities. SENASA's activities were brought to an end in 1983.

SENASA elaborated a series of regulations to be enacted in legislation. The basic technical support for this activity came from a 1973 FAO mission to Haiti. To the ICD mission's knowledge, such legislation exists in informal form, since there is no seed law in Haiti.

Varietal research and introduction work has been carried out in several instances by different institutions. A Virginia Polytechnic Institute (VPI) contract with AID for research, procured past information on varietal performance. A UNDP/FAO project at Limbe also experimented with better varieties of crops. A Government of Taiwan technical assistance program has contributed information in performance of rice varieties and rice production technology in the Artibonite valley.

The agricultural Development Support II. (ADS II.) project of USAID programmed technical assistance from FY 1978 to FY 1981, including agricultural experiment station development, and a seed development program.

A research and extension project component of the Integrated Agricultural Development Project of USAID in Haiti was contracted to Texas A & M University (TAMU). The project started in early 1981 and is being phased out in 1985. The research component of the project introduced a limited number of cultivars of corn, sorghum, rice, soybeans, common beans,

cassava, sweet potato, potato, winged beans, cowpeas, pigeon peas, and a few other minor crops. These varieties were tested at experiment stations and farmers' fields for three years. Out of them, a number of varieties were selected by the TAMU and Haitian agronomist team for multiplication in Haiti: 4 of corn, 1 of sorghum, 3 of cassava, 4 of black beans, 1 of red beans, 10 of sweet potato, 1 of pigeon peas, 1 of cowpeas and 2 of peanuts

A Mississippi State University (MSU) mission visited Haiti in March, 1984 for the purpose of reviewing the progress of food crop varietal development, and to determine the need for a seed production and supply program. The mission advised USAID/Haiti to engage in a pilot seed production program on corn and beans. In addition to making seed of improved corn and bean varieties available to farmers, the proposed pilot program was also aimed at testing farmer acceptance of the new varieties.

The 1984 MSU team considered the establishment of a private seed system in Haiti highly improbable, and accepted a continuing GOH involvement in seed distribution, in spite of its recognized difficiencies. Involvement of the private commercial sector, including agricultural supply houses, was deemed necessary, but the mission recommended a program of government subsidization of seed prices in order to enhance farmer acceptance of the new varieties.

The TAMU team initiated a pilot program of seed multiplication of corn, sorghum, beans, pigeon peas, cassava, sweet potatoes and cowpeas in late 1984. Production was contracted out to large farmers. A total of 50 hectares of corn, 6 of sorghum, 10 of beans, 3 of sweet potatoes, 5 each of pigeon peas and cowpeas were planted under fixed payment per hectare contracts.

At the time of the visit of the ICD mission, the harvest of beans was underway, with impressive yield results.

All indications received by the ICD mission pointed to the fact that the USAID-supported varietal introduction and seed production efforts have had a very positive impact. They have been noticeably increasing farmer awareness of the new varieties, to the extent that seed dealers reported a higher degree of varietal differentiation by farmers purchasing seed from them than had been the case in the past. This has led some dealers to stock and trade in varieties introduced by the USAID-supported programs. Small farmers in areas surrounding USAID's contract growers have also been reported to have approached the growers to purchase seed from them at prices of $1.00 per pound.

It also appears that these efforts have generated entrepreneurial interest in the seed industry, both among farmers with the capability to become contract growers for a

seed industry, and among agricultural input suppliers, which have closely observed USAID's results, and have become interested in expanding upon them on a commercial basis.

VII. Summary of Mission Discusssions

A. Meeting with the Ministry of Agriculture

The mission met with senior officials from the Ministry, including the Minister of Agriculture, and the Director of Food Production. The main points of discussion were the following:

-The Ministry views the lack of improved seed of high quality to be one of the key "bottlenecks" impeding the development of Haiti's agriculture.

-It is also the Ministry's view that improved seed has a relatively high acceptance among a large number of Haiti's farmers. Many were introduced to high yielding varieties in the aftermath of hurricanes, when they were widely distributed at no cost to farmers. (In this respect, many may have been "spoiled" by the provision of free seed.) Major constraints to the use of improved seed by farmers include very high prices currently prevailing in Haiti, and the inaccessibility of distribution channels for most farmers. The Director of Food Production estimated that the percentage of farmers prepared to accept improved seed in Haiti ranged between 50 to 60 percent. (Most people subsequently interviewed questioned the magnitude of that figure. Private sector and development agency representatives put that figure at about 10 to 20 percent).

-The Minister of Agriculture stated that the development of a national seed industry has been given a very high priority by his government. He also stated his view that the Government must not be permanently involved as a seed producer in the industry. The role of production, processing, and sale of improved seed in Haiti must be assigned to the private sector. The Government role should be a promotional and regulatory one, "showing the way" rather than playing a central role.

-The Minister also expressed the view that a seed industry must be launched without delay. He also suggested that, in order to gain swift results, and increase the quantities of seed available to Haiti's farmers, the growing of seed should initially be carried out by larger farmers that possess expertise and a history of progressive cultural practices.

-The Government would be willing to lease the CECOSAM seed processing plant to private entrepreneurs wishing to launch seed production operations. This would substantially reduce investment capital requirements for such entrepreneurs.

-ICD mission members suggested to the Minister that a first critical step toward launching a national seed industry would be a clear policy statement by the government of the

relative attributions of the public and private sectors, as well as the establishment within the Ministry of Agriculture of an entity to oversee the activities of the industry, and carry out key public functions of promotion, adaptive research, truth in labeling enforcement and quality control. A seed law would also need to be enacted. These and other policy steps on the part of the government would clearly establish the "rules of the game" under which a national seed system would develop. A model that ICD helped develop for Turkey was reviewed, and it was suggested that, if consistent with Government of Haiti goals, ICD would be willing to help develop a national seed system model for Haiti, tailored closely to conditions prevailing in Haiti's agricultural sector and economy. The Minister expressed considerable interest in this approach, and suggested that the matter be pursued between the Government, USAID, and ICD.

B. Meetings with the Private Sector

As the itinerary shows, the mission met with several firms that are actively involved in the importation and local distribution of agricultural inputs and equipment. Except for one entrepreneur that specializes in the fertilizer business, all have interests in the importation, trading, and distribution of improved seed in Haiti.

The following information and impressions were obtained from these interviews:

1) Production of improved seeds on a commercial basis was carried out in Haiti during the late 1950's, prior to the Cuban Revolution. Gerard Boucard and Mr. Boncy, of Darbouco, indicated that (presumably under partnership) they had produced 100,000 lbs. of hybrid corn seed (Cornelli 54) per year on a farm in the Artibonite valley, under license from Cornelli Seed Company, managed by Frederico Poey, Sr., of Cuba. Approximately 20,000 lbs of this production was exported to Central America. Operations ceased when single cross parental seed could no longer be obtained from Poey's seed company, which at that time was the only supplier of hybrid seed corn adapted to the tropics.

2) Improved seed handled by Haitian distributors comes from several sources:

-Hybrid seed corn is imported from Pioneer Seed Company. CIF cost per lb. was quoted by one supplier at $1.00. Resale price to the farmer was quoted as ranging from $1.50 to $2.00 per lb.

Seed of an open pollinated corn variety from the Dominican Republic (CESDA 28) is imported by Gerard Boucard, and sold locally at 80 cents per lb. wholesale, $1.00 per lb retail.

Operation Double Harvest, a large farming concern, is Boucard's largest wholesale customer.

La Maquina 7827, La Maquina 7928, and Les Anglais are three seed corn varieties available now to Haitian farmers. A USAID pilot seed production program is producing seed of the former two (as well as of an open pollinated opaque-2 variety from CIMMYT, called Population 65). Dealers indicated that they sell these varieties to farmers at prices averaging 80 cents per lb. Several dealers indicated that they are popular varieties, with Les Anglais well adapted to high elevation cultivation, and La Maquina to lowland cultivation.

Vegetable seeds are imported from several sources, primarily Holland (Royal Sluis), and the United States (Keystone, Arco, Northrup King).

In the aftermath of hurricanes large amounts of seed have been imported for emergency distribution by the government and PVO's to farmers.

3) Distribution systems for improved seed are the same as those for fertilizer, pesticides, and other agricultural inputs sold by private sector dealers. These vary from dealer to dealer. One dealer sells primarily from his Port-au-Prince location.

Farmers and independent traders purchase seed directly from him for resale by the marmite (a retail measurement averaging 5 to 6 pounds) in local markets or the countryside. Large farmers will also purchase large volumes of seed for their own use. (Among the large farming groups, Operation Double Harvest was frequently mentioned by dealers as an important customer.)

Most dealers, however, claimed to have more extensive distribution networks throughout the country. The typical pattern involved the dealer in Port-au-Prince selling to agents in secondary cities, which in turn sold seed through a network of independent sub-dealers in outlying areas. These sub-dealers sold seed to farmers, small retailers, or to "Madam Sarahs", which sold seed in small quantities, along with other goods, in markets, or directly to farmers.

The sophistication and size of these distribution networks varied according to dealer. One dealer claimed to have three agronomists in one region, setting up demonstrations, and expanding his company's network of sub-dealers. He indicated that this approach had proved highly effective in sparking interest by farmers in improved cultural practices, and expressed plans for placing additional agronomists in other regions of the country.

Another entrepreneur engaged in the importation, mixing, and

sale of fertilizers described a similar system for the distribution of fertilizers. He claimed to have a network of seven large dealers, which purchased on credit from his company, and sold to a network of twenty-five smaller dealers throughout the country. These small dealers sold fertilizers to retailers, directly to farmers, or to Madam Sarahs, which resold by the marmite. During discussions with the mission this dealer expressed a very keen interest in including seeds in a "technical package" of inputs which could be distributed by his company. He indicated that he would be willing to accompany this with demonstrations and traning programs to instruct farmers in the use of these packages for crop production. Since his company is already involved in soil testing services and fertilizer demonstrations, it would appear to have the capability to add this to its portfolio of activities.

Most dealers indicated that Private Voluntary Organizations (PVO's) were important, and in some regions the only, customers for their products. In the absence of effective government extension systems PVOs appear to offer critical channels for the transmission of improved agricultural techniques to small farmers. Some dealers indicated that they sell inputs at wholesale prices (although not necessarily in wholesale quantities) to PVOs as a market development strategy, since in many cases PVO's are their only means of reaching the small farmer. This is particularly true in the north and north-western part of the country.

4) All private sector dealers indicated that farmers, once they have become aware of the potential benefits of improved seed, have been willing to pay for it, even at high prices. This includes small farmers that, either by observation of neighboring farmers' crops, or active demonstration efforts by government and the private sector, have become aware of the impact of improved seed on crop yields. One large farmer who is presently producing seed under contract for USAID, told the mission that he has been selling seed of open pollinated corn varieties for one dollar per pound to neighboring small farmers that have observed or heard about crop yields on his farm. Estimates of prices small farmers would be willing to pay for improved seed ranged from $ .80 to $1.50 per pound. This type of situation is, of course, more accentuated in regions with relatively large progressive farming populations (e.g. the Artibonite Valley, the Les Cayes region, Leogane, Cul de Sac, etc.).

In addition, dealers indicated that there is much greater varietal differentiation by small farmers today than was the case even a short while ago. Indeed, particularly in regard to seed corn varieties, the mission noted that dealers themselves are specializing in the varieties they sell. For example, as noted earlier, the Boucard's import and sell open pollinated corn varieties from the Dominican Republic. Darbouco and Agro-technique are selling La Maquina and Les Anglais seed

corn. Other dealers are selling imported hybrids along with varieties. Several dealers indicated that this specialization is a direct result of increased demand by farmers for specific varieties. They indicated that, in the past, small farmers seeking improved seed requested it without regard to type or variety. This change is undoubtedly due in large part to the success of USAID-supported efforts over the last year to introduce new varieties of corn, beans, sorghum and other crops through its ADP project, since for the most part the varieties for which demand has increased are those introduced through the USAID program.

5) All private sector representatives questioned by the mission stated that a strong potential exists for developing a local private sector seed industry. They indicated that, based on their experience in the local trading and distribution of seed, the present market is sufficiently large and profitable, and possesses enough growth potential, to justify local production by the private sector. In fact, several entrepreneurs are actively considering it. One dealer the mission interviewed stated that he had plans to start seed production "within two to three years", and has already identified land for that activity. This particular dealer has received training in agro-processing, and in seed processing, and is considering setting up his own processing plant. Other input suppliers also expressed similar plans, stated that they had land available,

and had considered importing processing equipment. The fertilizer dealer mentioned earlier expressed a strong interest in taking on the entire chain of seed production, processing, and distribution as an addition to his fertilizer business. None of the dealers mentioned the lack of investment credit or capital as a major problem for starting up operations, although a number mentioned receiving technical assistance, or finding a qualified technical partner, as a pre-requisite to entering the business.

The mission also asked these entrepreneurs whether they would be interested in leasing the CECOSAM processing plant from the government. Responses to this question were mixed. Those that had already been considering importing processing equipment preferred not to lease the plant from the government. Others, however, indicated that the availability of the plant would provide an additional incentive to entering the seed processing business.

The mission also met with two large farmers in the Cul de Sac and Leogane regions who are currently producing seed under contract to USAID. Both of these farmers expressed a strong interest in becoming contract growers for private seed companies. However, they expressed the need for technical assistance in seed production if a contract growing arrangement were to be made.

6) The seed crops most frequently mentioned by entrepreneurs as being of interest were: corn, sorghum, beans, and rice. Limited interest was also expressed in vegetable seed production, particularly by the management of Operation Double Harvest. While input suppliers felt there might be scope for them in local vegetable seed production, it appeared that, for the forseeable future, they would prefer to limit their activity in that area to imported vegetable seed.

7) Grain prices in Haiti are considerably higher than in most other countries. This situation may be caused by the very low yields of crops and market inefficiencies. Corn, for example was at the equivalent of $9.29 a bushel in March 1985, against $2.83 in the U.S.A. A similar situation exists for beans, and sorghum.

Seed prices in Haiti are also higher than in other countries. For example, CIF price for hybrid corn seed in Haiti is $1.00/lb. to the distributor, and is sold to farmers from $1.50 to $2.00/lb. Open pollinated corn seed (La Maguina sells for $0.80/lb., while the price of corn grain is around $0.16/lb. The ratio of 5 to 1 or 6 to 1 is used in South American countries for pricing hybrid corn seed--not open pollinated seed, giving price levels much lower than those that apply in Haiti.

It therefore appears that local seed production could have a significant impact in lowering seed prices paid by Haitian farmers. Carried out on an efficient basis, local seed production could easily compete with imported seed, giving local producers an advantage for developing markets, and making it easier for farmers to afford and plant seed of improved varieties.

8) The main obstacles forseen by the private sector to the development of a local seed industry included:

-The lack of extension systems for reaching the vast majority of Haiti's farmers. The majority of distribution and extension activities will have to be carried out by the private sector.

-The lack of credit for the purchase by farmers of agricultural inputs. It also appears that any significant expansion of input use by farmers will have to be accompanied by increases in credit (and risk) from private sector input suppliers.

-government interference in the activities of a seed industry once it is established and operational.

VIII. Conclusions of the Reconnaissance Mission

It is the conclusion of the mission that there is scope for private sector involvement in the production, processing, and distribution of high-quality, improved seeds in Haiti. Based on three days of interviews, field visits, and discussions with public and private sector individuals directly involved in the sector, the mission concluded that the basic elements for launching a local commercial seed industry are in place. These include:

-A commitment at the highest level of government to support and promote the privatization of the seed industry.

-An expressed interest by entrepreneurs presently involved in the supply of agricultural inputs (including seeds) to enter the business as producers, processors, and distributors of seed.

-A growing awareness and acceptance by local farmers of improved seed varieties, and a willingness on their part to pay for improved seed, even at price levels that exceed those found in other developing countries.

-The existence of distribution and retail channels that reach a sufficiently large number of farmers to provide, at least initially, a viable market for local seed companies.

It should be emphasized that these conclusions were arrived at after only a brief stay in Haiti. The brevity of the mission did not allow for confirmation of these conclusions in the field, for in-depth market analysis, or for an on site evaluation of the extent and effectiveness of the distribution channels that were described to the mission by local entrepreneurs. These should all be subjects of further analysis. Also, the seriousness of local entrepreneurial interest in the seed industry, and the specific conditions under which they would enter the industry in the short term, would need to be clearly ascertained prior the start-up of a national seed program.

There seems to be no reason why the farmers of Haiti should not make rational decisions about adopting new varieties of their traditional crops, provided they see for themselves, in a clear, unmistakable form, the value of such varieties. Paying for seeds of such crops at fair market value should be no deterrent to their acquisition, if - again - their value is easily perceived. Experience in other developing countries, as well as that observed by the mission during its brief stay in Haiti, indicates that farmers are capable of, and willing to, acquire seeds of improved varieties at fair market prices.

Nevertheless, pricing of seeds in Haiti is carried out at much higher levels than those found in other countries, both for

open-pollinated and hybrid varieties. A competitive market situation for the seed industry, without monopolistic or oligopolistic manipulations should be developed and supported. Every possible effort should be made to have several suppliers, with different products, and possibly different varieties and hybrids. The scope and size of operation of such an industry will, at the outset, be small when compared to other developing countries with established seed industries. Nevertheless, it could play a critical role in the development of Haiti's agriculture.

Seed production in Haiti should be geared initially to the production, processing and distribution of the following seed types.

a) Corn, open pollinated and hybrid.
b) Sorghum, open pollinated and hybrid.
c) Virus-free bean seed.
d) Irrigated rice.
e) Seeds of various minor pulses: cowpea, pigeon pea, winged bean, etc.

A commercial seed industry in Haiti is likely to spring up from the coordinated activities of agricultural input-supply houses, large farmers, and fertilizer mixers. Government support and promotion action will accelerate the seed industry's reach

within Haiti's farming community. Yet initially, even in the absence of significant government support and promotion, the production and distribution of seeds could be organized along profit-making lines, through existing as well as improved marketing channels, from producer/processors of improved seed to regional dealers, PVO's, small retailers, and farmers.

If a national seed industry is to develop and prosper in Haiti, the respective roles and responsibilities of the public and private sector must be clearly defined. This should be the first step toward establishing a commercial seed industry in Haiti. A successful national seed system is based on a dynamic partnership between the government and the private sector, each playing a critical role in the distinct functions that make up the components of the system. The functions of production, processing, and distribution carried out by the private sector must be supported by parallel government activity in research, testing, quality control, certification, legislation, and extension. In the short run, the private sector can operate without such fully developed government activities. In the long-run, however, it is critical that these be in place if the industry is to grow in a coordinated manner, to the benefit of Haiti's agricultural sector. In addition, if the seed industry is to provide viable economic opportunities to local entrepreneurs, government policies toward the sector, including pricing policies, varietal introduction restrictions, and other

relevant legislation, must be clearly articulated from the outset.

From its discussions with the Minister of Agriculture and his senior staff, the ICD mission concluded that the Government of Haiti is anxious to promote the development of a national commercial seed industry. It appears willing to make the necessary commitments to attract investment in the industry, and to establish a policy and operational framework within which the industry can prosper. The timing, therefore, seems highly opportune for a concerted effort by USAID to build upon its earlier success in introducing the production of new seed varieties in Haiti by supporting efforts to establish a commercial seed industry, along with its key operational components.

While the steps outlined so far concern measures necessary to establish a seed industry, it should be emphasized that a seed industry program must not be designed in a vacuum. Rather, it should be seen by USAID and the Government of Haiti as a key component in a concerted program to increase food crop production in Haiti. The ICD mission has already expressed its belief that the basic elements for launching a local seed industry are in place, and that, based on discussions with the private sector and the government, enough demand for improved seed presently exists to support the start-up of private seed industry activity. Private sector distribution systems can also

play an important role in generating new demand for improved seed. However, the long-term growth and viability of the industry, and its prospects for making a significant impact on Haitian agriculture, will require that it eventually be integrated into a larger extension, credit, and marketing program, aimed at increasing small farmer food crop production.

It is therefore suggested that, in addition to playing a promotional and catalytic role in the launching of a national seed industry, USAID consider supporting an integrated basic food crop production program which would be coordinated with the development of the seed industry. While it is beyond the scope of this report to describe such a program, it is at least useful to note that USAID has had positive experience with similar programs in other countries, notably Peru. In that country USAID and the Government supported a program, executed with the private sector, which included a "supervised credit" component for small farmers, along with demonstrations of dramatic yield increases through the use of improved seed and other technologies, as well as a marketing strategy designed to protect farmer income from immediate price decreases resulting from higher yields. This program was highly successful in increasing farmer willingness and capability to improve cultural practices and plant hybrids and improved varieties of seed. It was also an important stimulus to the development of the local seed industry. It could provide a model for similar efforts in Haiti.

IX. Proposals for Action

ICD recommends that the following steps be taken towards establishment of a national seed system and a viable commercial seed industry in Haiti:

1. A follow-up ICD advisory mission, composed of 3-4 persons, including senior seed industry executives, to design a model for a National Seed System in Haiti. The ICD mission would present an action plan for establishing the system, including legal, administrative, and operational components. The mission would also outline respective roles for public and private sector organizations in the operation of the system, as well as options for private sector involvement in the production, processing, and distribution of seed. This mission, of approximately two weeks' duration, would take place in the second half of June, 1985. (A proposed scope of work for the mission, which was left with USAID-Haiti prior to the reconnaissance mission's departure, is included as Annex 3 of this report).

2. Active promotion by USAID/ICD of the private seed industry concept among Haitian entrepreneurs, as well as identification of possible foreign technical partners. (USAID/ICD)

3. Removal of structural constraints that might impede the establishment of a private seed industry (as identified by the June ICD mission), through enactment of appropriate legislation, and implementation of other action recommendations for public sector components of the national seed system. (GOH/USAID)

4. Development of a coordinated corn-sorghum-beans production program for Haiti, including a demonstration/extension component, supervised credit, market stabilization, and input (seed, fertilizer, pesticide) supply components. (USAID/GOH/Haitian private sector)

X. Implications for Cost Sharing Between USAID-Haiti and ICD

It is proposed that the following cost-sharing arrangement be carried out between USAID-Haiti and ICD:

-Costs of ICD expert and staff time (fees, salaries, etc) will be financed by ICD, either as industry contributions or through its centrally-funded grant from USAID.

-Administrative costs, including final report preparation will be financed by ICD through its centrally-funded grant from USAID.

-Costs of round-trip air fare for ICD mission members will be financed by USAID-Haiti.

-Per diem expenses and costs of in-country transportation for ICD mission members will be financed by USAID-Haiti.

Final agreement on this cost-sharing arrangement will be subject to the approval of USAID-Washington (Office of Rural and Institutional Development) and USAID-Haiti.

Annex 1.

PROGRAM FOR MESSRS ALEX GROBMAN AND ED GIBSON

Industry Council for Development

Dates of TDY: 03/26 - 03/29/85

Purpose: To explore possibilities for establishment of a national commercial Seed Industry and identify private and public roles and responsibilities in such an undertaking.

DATE	TIME	
03/26	15:45	Arrive EA No. 979 - Go to Saliba Building Meet with Dr. Abdul Wahab. Go to Castel Haiti Hotel
	8:00	Hotel pick up for Saliba. Meet with Dr. Cusumano and Abdul Wahab and Jan Turcan.
	9:00	Meeting with Mr. Bob Cheaney - T.A. Team leader Texas A & M University.
	9:45	Gerard Boucard.
	11:00	Meet with Dr. Percy Aitken-Soux, IICA Representative.
	12:00	Tour of CECOSAM (Seed processing and storage center) facilities.
	13:00	Meet Minister of Agriculture, Dr. Franz Flambert; Director-General, Michel Ange Ligorde; Director of PDAI, Antoine Mathelier, and member of the Faculty (FAMV)
	14:00	Agrotechnique - Mr. Claude Derenoncourt
	15:00	Darbouco - Mr. Boncy
	16:00	Agri-Supply - Pierre F. Leger, Ann B. Hauge
03/28	08:00	Hotel pick-up for Saliba
	08:30	Famosa - Mr. Nassim Mourra, Delmas 31

DATE	TIME	
	10:00	Haytian Tractor, Mr. Reynold Bonnefil
	11:00	Art Van Wingerden
	12:00	ASA, Mr. J. Currely
	13:00	Tour Seed Multiplication Sites at Leogane and Crois des Bouquets
	18:00	Return to Hotel
03/29	8:00	Hotel pick-up for Saliba
	8:30-9:30	Exit briefing with Director, Deputy Director and Staff of ARDO and OPED
	9:30-12:30	Finalize report
	PM	Depart Haiti

TELEGRAM

ANNEX 2

FROM: AMEMBASSY PORT AU PRINCE

CLASSIFICATION: UNCLASSIFIED

12356
E.O. XXXXX
TAGS:
SUBJECT: Request for Assistance in Exploring Private Sector Role in the Development of a Commercial Seed Industry for Haiti
ACTION:

N/A

SECSTATE WASH DC

UNCLASSIFIED PORT AU PRINCE 1616 PRIORITY

AID
amb/dcm

AIDAC

FOR: ST/RD/SE Att. Christopher Mock, Please pass to Ed Gibson, Program Coordinator for Industry Council for Development, New York.

INFO: Clem Weber LAC/DR/RD

REF: A. Telecom, French/Mock

B. Telecom, Gibson/French 02/20/85

C. Cable from ICD, 03/05/85

D. Telecom, Wahab/Gibson 03/15/85

E. Telecom, Wahab/Gibson, 03/18/85

F. Telecom, Gibson/Wahab 3/20/85

1. As indicated in ref A and B, Mission presently considering alternative approaches for production and distribution to small farmers certified seed material of improved varieties of Haiti's principal food crops. Your assistance in providing services from ICD is required.

DRAFTED BY:	DRAFTING DATE	TEL. EXT.	CONTENTS AND CLASSIFICATION APPROVED BY:
AHWahab:ACL	03/20/85		JFrench:DIR

CLEARANCES:

Vincent Cusumano, C/RDO (Cleared in Draft)

Phyllis Dichter, D/DIR

UNCLASSIFIED
CLASSIFICATION

50153-101

3/19/85 TOLT

OPTIONAL FORM 1
(Formerly FS-41
January 19
Dept. of Sta

BEST AVAILABLE COPY

2. Background: Under the USAID on-going Integrated Agricultural Development Project (IADP) and ADS II as well as ADS I (now completed) several improved varieties of corn, sorghum, grain legumes, roots and tuber crops have been identified. Unless enough seed material is produced rapidly for dissemination to the country's 700,000 small farmers, these efforts will fall short of complete success. For the most part, Haiti's small producers replant material from their previous crop. In cases of cash flow difficulties, however, farmers are forced to dispose of all of their produce at harvest, after which seed material is purchased at the local village markets when the crop season commences. This result in a further overall deterioration of the financial situation of the small farmer since he has to pay significantly higher prices for seed material without assurance of purity, viability and vigor. As a result of such uncertainties farmers sow up to 20 seeds per hill in the case of corn, sorghum and legumes. Certainly, this practice significantly influences the cost of production and thus the prices of these commodities in the market place. Recent estimates of total area cropped to corn, sorghum, and edible grain legumes as well as of present seed requirements are presented below:

CROP	Ha GROWN IN TWO SEASONS	SEED REQUIREMENTS Mt.
Maize	200,000	5,000

UNCLASSIFIED

Classification

Sorghum	120,000	1,200
beans	40,000	2,200
Pigeon pea	40,000	136

In early 1984, through the AID Strengthening grant with Mississippi State University (MSU) Seed Project, Mission requested and obtained assistance for field testing of hypothesis that promising germplasm has been identified under the IADP. This test is underway using large private contract growers who by this spring will have produced enough seed material for 30,000 on farm verification trials. MSU's emphasis was mainly on the production of seed. Now, Mission would like to focus on the policy environment for seed operations, on pricing and marketing and most importantly on the roles of the Ministry of Agriculture, and private enterprises in the development of a commercially viable national seed industry.

3. Scope of Work: Per ref C Mission appreciative of Industry Council for Developments (ICD) willingness and readiness in deploying technical assistance team to determine whether or not there is a scope for the Commercial Development of a Seed Industry in Haiti. The purpose of this three day mission would be to explore the possibilities of developing a commercially viable seed industry in Haiti. Given the short time period, this will be based on interviews/discussions with the Minister

UNCLASSIFIED

Classification

of Agriculture, potential private sector seed growers and private agro-industry interests. Additionally, the team will be provided with previous reports of Mission sponsored activities in seed development, (e.g. Mississippi State University Spring '84 Report).

4. Time: Per ref F, Mission accepts three day TDY period from 3/26 to 3/29.

5. Action Requested: Please issue Invitational Travel Order for Round Trip Ticket and for per-diem for Grobman and Gibson as per Telcom E, Grobman from Lima, Peru, and Gibson XXXX from New York. It is mission understanding that salaries and other expenses will be covered under centrally funded Agro-Industrial Development Project No. 931-1131.

The following funding citation should be used to issue travel orders: Appropriation 72-1131021.3

Allotment LDAA-83-25521-AG13

MCMANAWAY

UNCLASSIFIED

Classification

OPTIONAL FORM 153A
(Formerly FS-413A)
January 1975
Dept. of State

50153-201

TENTATIVE SCOPE OF WORK FOR A FOLLOW-UP ICD MISSION FOR THE DEVELOPMENT OF A NATIONAL SEED INDUSTRY MODEL FOR HAITI

Timing : Late June/eraly July
Duration : Approximately two weeks

Purpose

To develop a model for the development of a National Seed System, tailored to conditions prevailing in Haiti, which will form the basis for launching a local private sector seed industry. The model, including structural, administrative, and operational components, would be action-oriented. It would delineate the respective roles of the public and private sector in the production, processing, distribution, promotion, and regulation of improved seeds in Haiti. Options for private sector activity would be presented.

The recommendations of the ICD mission would be presented to the Minister of Agriculture, with the objective of obtaining a clear policy commitment from the government, as well as commitments for action. Options for AID's role in catalyzing this process would also be explored.

Mission Composition

It is suggested that an ICD mission be fielded as soon as possible to carry this out. The mission would be led by Dr. Alexander Grobman, ICD Senior Associate, who would be assisted by Edward Gibson, ICD Program Coordinator. In addition, the team would also include a senior commercial seedsman with substantive LDC experience. We have options, including a Brazilian seed company president with experience in developing systems throughout Brazil, including the North East (also an ICD member); an entrepreneur with experience in East Africa; and a U.S. seedsman formerly in charge of LDC business operations for his company. Whether any of these people or others would be necessary or available for the mission is still a matter to be explored by ICD.

Mission Activities

These would include:

1. Field trips to key agricultural areas: discussions with farm leaders; coops and pre-coops; PVOs; private ag-supply distributors; and other entities that would concernably play a role in the use and distribution of improved seed.

2. meetings with the Minister of Agriculture and his staff to discuss implementation of seed system.

3. Further meetings with potential contract growers and Haitian entrepreneurs.

4. Develop jointly with USAID personnel and Ministry of Agriculture staff the components of the National Seed Industry Model within the framework of a policy decision of the Ministry of Agriculture to promote a Commercial Seed Indsutry Development Program In Haiti.

ANNEX 4

ADMINISTRATIVE STRUCTURE

National Government (Ministry of Agriculture; State Planning Organization)

LEGAL STRUCTURE

National Seed Policy (New)
National Seed Law (Revised or New)
- Phytosanitary Law

Agricultural Investment Law (Amended)
Foreign Investment Law (Interpreted)
Truth in Labelling Regulation (New)

OPERATIONAL STRUCTURE

		Control					
New Variety Introduction	Testing	Certification	Truth to Labelling	Production	Marketing	Extension	Research
-Free import of foreign varieties	What -Experimental varieties -Advanced varieties -Released varieties How -Through own personnel -Through contract personnel Where -Leased or rented land (Plot) -Own land (Plot) -Farmer co-operators (Commercial)	-Own varietal identity control -Publicly developed varieties subject to certification at registered and commercial levels -Privately developed self-pollinated varieties optional -Private hybrids non-certified	-Own lab control of crop purity, noxious weeds, germination, foreign matter, humidity -Varietal name	-Private varieties -Multiplication of commercial seed from government produced foundation seed -Production under contract with: a. Farmers b. Government Seed Farms	-Retail marketing through own or government marketing organizations -Export marketing: direct or through foreign partner	-Company program -Coordination with other input companies -Collaboration with Government agencies	-New varities developed using local and foreign genetic material

Diagram of model seed system developed by ICD for Turkey

BEST AVAILABLE COPY

Figure 1

	New Variety Introduction	Testing	Control: Certification	Control: Truth to Labelling	Production	Marketing	Extension	Research
PUBLIC SECTOR	-Phytosanitary regulations	-Released varieties of private and public origin -Experimental public varieties -Information on results of tests on a yearly and cumulative basis	-Basic seed -First generation registered (occasional) -Commercial seed produced by Government institutions of varieties originating in Government institutions or otherwise submitted for certification	-Sampling of all marketed seed lots, at timely intervals -Control of truth to labelling and minimum standards on crop purity, noxious weeds, germination, foreign matter, humidity on all marketed seeds	Limited to: -basic and foundation seed of public variety -production of certified seed for strategic crop variety - phasing out on a 5-year plan Contract production for private sector	-Marketing of certified seed of strategic crop varieties, and of private sector seed through retail outlets	Ministry of Agriculture program including crop specific campaigns	-Research on industry wide problems (disease, pests, etc) -New varieties for strategic crop seeds -Administration national gene resource storage and utilization