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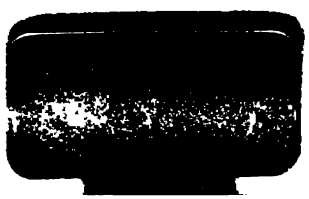
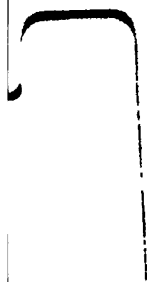
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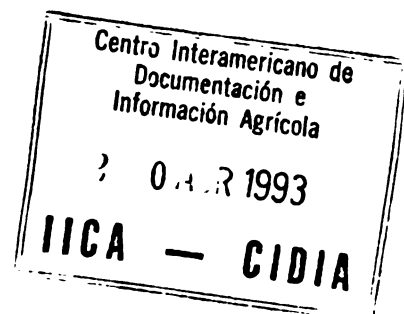
HAITI AGRICULTURAL SECTOR ANALYSIS

January, 1993

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INTERAMERICAN INSTITUTE FOR COOPERATION ON AGRICULTURE
OFFICE IN HAITI





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3. The third part describes the process of identifying and measuring key performance indicators (KPIs). It highlights the need to select indicators that are relevant to the organization's strategic goals and to establish clear targets and benchmarks for these indicators.

4. The fourth part discusses the importance of regular monitoring and reporting of KPIs. It notes that this allows management to track progress, identify areas of concern, and make timely adjustments to the organization's strategy and operations.

5. The fifth part addresses the challenges associated with data collection and analysis, such as ensuring data quality, addressing biases, and protecting privacy. It offers suggestions for how to overcome these challenges and ensure the integrity of the data.

6. The sixth part concludes by summarizing the key findings and recommendations of the study. It reiterates the importance of a robust data management system and the need for ongoing evaluation and improvement of the organization's performance measurement processes.

EXECUTIVE SUMMARY

Haiti has long been the poorest country in the Western Hemisphere, and has experienced an accelerated deterioration of socioeconomic conditions during the past decade. Gross Domestic Product (GDP) per capita dropped 21 percent during the eighties, from US\$431 in 1980 to \$341 in 1989. Caloric intake was an average of 1,902 KCal/day in 1986, and the infant mortality rate in 1988 was 116 per one thousand live births. Although data on Haiti are generally of questionable validity, it is commonly agreed that 75 to 85 percent of Haiti's 1991 estimated population of 6.5 million live in absolute poverty.

Haiti is also the second oldest republic in the Western Hemisphere. It has had 21 constitutions and 41 chiefs of state in its 187 years of existence. In recent history, after sustaining 27 years (1958 to early 1986) of repressive dictatorship under the Duvaliers (father and son), Haiti entered a 5 year crisis in succession to power that included two military governments (one of them twice), an attempt at national elections in November 1987 which were violently terminated by the military, an illegitimate "elected" civilian president, and an appointed provisional president who finally presided over the first credible democratic elections in the country's history. It was hoped that Haiti had finally made a break with its turbulent past.

The events of the last 14 months, however, indicate that the leadership crisis is not yet over, and the arrival of a legitimate, stable democratic government has been further delayed. The latest change of government -- on September 30, 1991 -- was in the form of a military coup d'etat, with the purpose of removing the new democratically-elected president, Jean-Bertrand Aristide, from office. The international community has condemned the coup, and is working through the multinational forum provided by the Organization of American States (OAS) to restore a democratic, constitutional government to Haiti. As part of the OAS efforts, the member states have frozen Haitian government assets and imposed a trade embargo on the country, which has had an adverse effect on the economy. The OAS is also promoting dialogue among the various factions in an attempt to achieve a democratic, constitutional resolution to the problem. After 14 months, the situation remains fluid, and few analysts are willing to predict how or when the latest crisis will be resolved. It appears increasingly likely that the United Nations will become involved in a mediator role.

To assess the impact of the crisis on the agricultural sector since September 1991, this report uses a commodity systems approach focussing on yields and factors influencing yields, and the crisis' impact on the key participants in Haiti's commodity systems, individual farmers and farm households, and key public, commercial, and non-governmental organizations involved in the agricultural sector.

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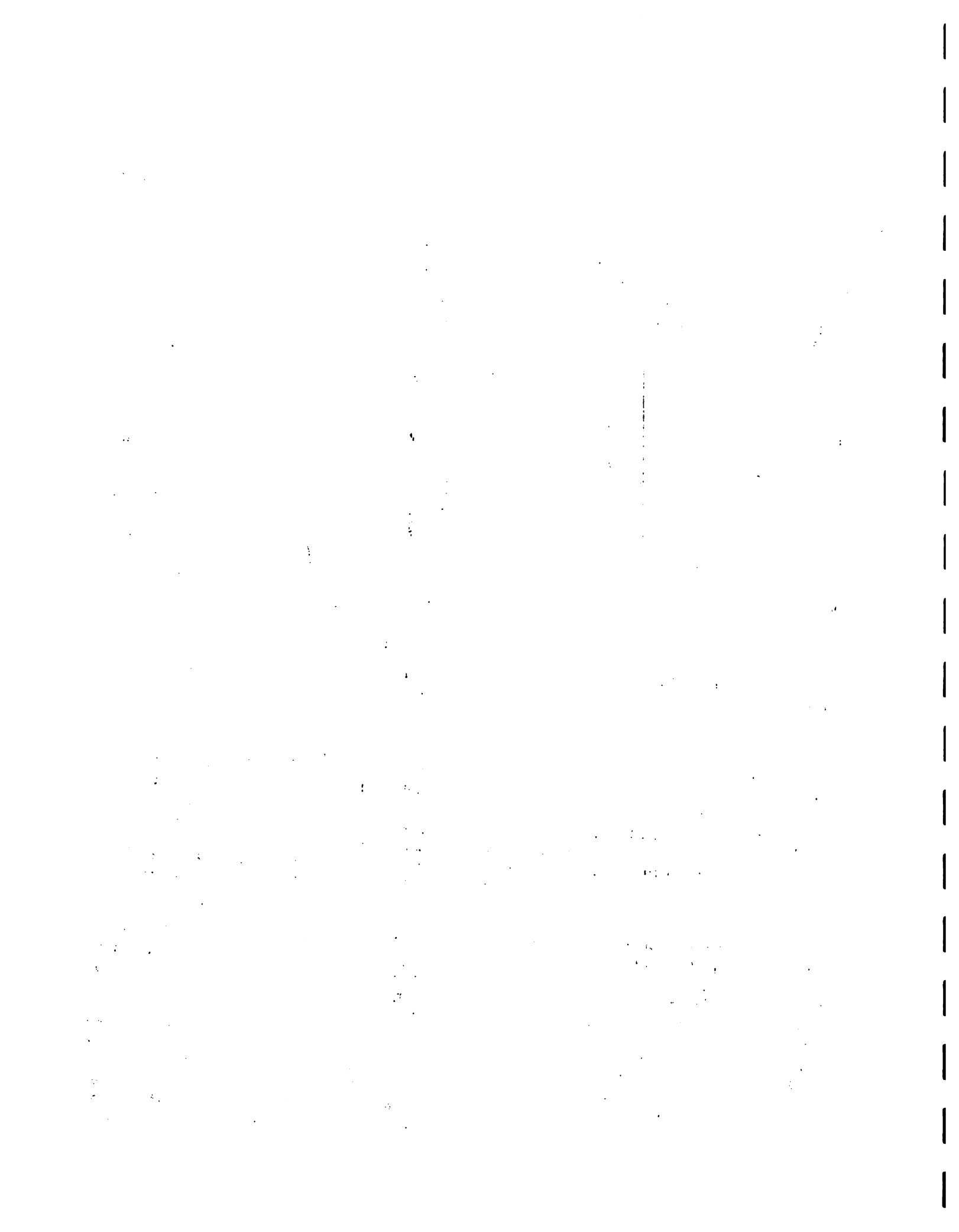
In regard to the overall macroeconomic context, recent analyses demonstrate that for Haitian fiscal year (FY) 1992 (October 1991 - September 1992), GDP decreased by an astounding 12 percent. This figure is arrived at, in summary, by comparing the difference between the increase in money supply, which was 28 percent, with the rate of inflation, which was about 40 percent, mirroring the devaluation of the gourde (this assumes almost zero percent inflation for Haiti's principal trading partner, the U.S., during the same timeframe). The effects of this devaluation/inflation, combined with the effects of the embargo, have had a serious impact on almost all sectors of the economy.

Although most consumer prices jumped by 10-20 percent during the first three weeks following the coup, and fuel prices increased 40 percent in November 1991, the significant devaluation did not really begin until about February-March 1992. Analysis of the period since September 1991 can thus be thought of in two phases. During the first phase, from October 1991 through February-March 1992, a number of immediate and highly visible effects of the crisis occurred, including the imposition of the embargo and serious lack of fuel and electricity during November and December 1991. The second phase, from March-April 1992 to the present, may be considered the "coping" period, when Haitians and internationals alike realized that a resolution was not likely for some time, and that means had to be found to survive until that time.

Performance in the agricultural sector was compromised negatively by both natural factors and an array of internal factors deriving from the economic effects of the political crisis and embargo.

Droughts affected numerous parts of the country. The most damaging was felt during the late 1991 growing season, resulting in poor harvests early in 1992. This led to famine condition in certain areas, notably the far Northwest, La Gonave and the Cotes de Fer along the south-central coast. For the remainder of 1992, rainfall throughout the country returned to normal or near-normal, and did not exert any further adverse influence on crop production.

Internal factors affecting crop production included the lack of capital for the purchase of seeds, labor, and for some crops, fertilizer. Diminished capital resulted in part from poor harvests, in part from the substitution of less-demanding (and less lucrative) crops, and in part from the greater expenses required to purchase food and other basic commodities due to price increases. Substantial numbers of livestock were sold to raise cash, further decapitalizing the small farmer. The production of rice, beans and vegetables was constrained by irrigation failures brought on by the drought, and then further limited by higher fuel prices and lack of engine replacement parts. Fertilizer was not



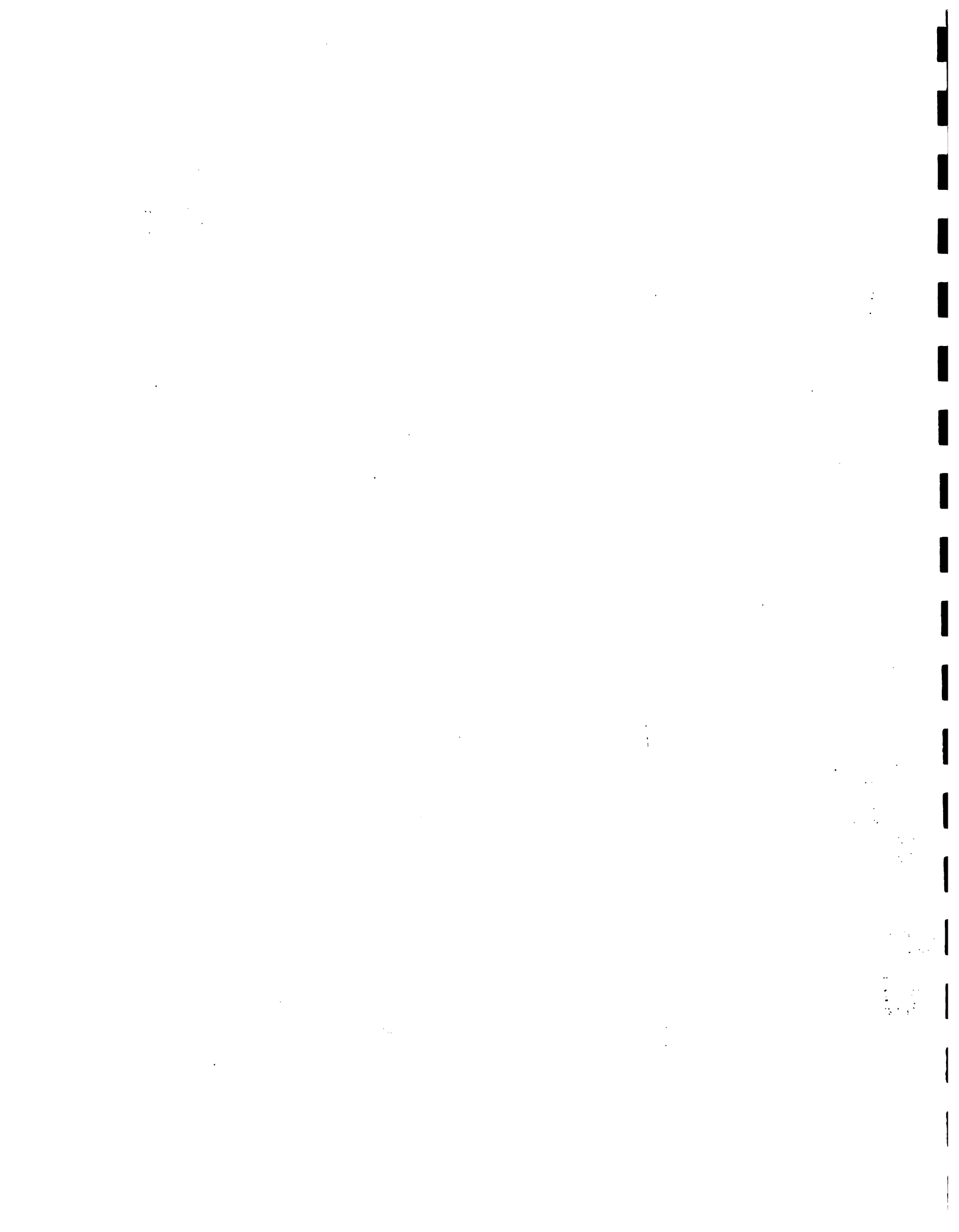
available at certain times, and retail prices increased significantly.

The largest estimated decreases in crop production were for plantain (-35%) and rice (-34%). Field beans followed with a decrease of just under 20%, and other crops such as maize, roots and tubers, and sorghum also experienced declines on the order of 10-15%.

Although production of Haiti's agricultural export crops did not decline in a major way, performance of the export subsector decreased by 97 percent. Essential oils also declined precipitously by 75 percent for vetiver (due to closure and /or decreased processing at the factories as a result of higher fuel costs) and by essentially 100 percent for lime oil (currently being stored by at least one processor for future shipment to the US market.) Although solid data is not readily available, it appears that the nascent cut flower/ornamental plant market was also closed. Sisal exports declined by an estimated 35 percent, and coffee exports were 21 percent lower than the average of the two previous years. Factors affecting coffee (the country's most important export crop), which is mostly sold to European countries not participating in the embargo, include the continuing low international prices, increased transport costs, and disrupted shipping schedules. Most production destined for the US market ceased altogether.

Livestock production, which contributes at least 15 percent of the agricultural GDP, was affected both indirectly and directly by the economic crisis. A limited field survey suggests that in some areas as much as 50 percent of the livestock holdings were sold to raise cash for food and other necessities. A report prepared in May states that this decapitalization has affected 40 percent of small and mid-level farmers, and 15 percent of the larger farmers. The swine industry, adversely affected by the unavailability and/or high prices of feed concentrates, seems to have been the hardest hit. Virtually all commercial poultry production had ceased by the end of 1991 due to high costs of feed and the unavailability of fertile eggs. By February 1992, the major producer had managed to import eggs, and enjoyed a relatively non-competitive market for a short time, and then faced still high feed prices and competitive chicken imports from Holland. Meat, although still readily available has increased in price from a low of 11 percent for beef, to nearly 90 percent for port.

Deforestation has been accelerated by increased charcoal production substituting for higher priced butane, and as generation. It has been estimated that some 1,200 hectares (or one percent of Haiti's remaining forest cover) has been cut during the past year. Perhaps more importantly, the positive momentum achieved by the reforestation projects (all of which were in suspension) has been arrested. Although some efforts are being



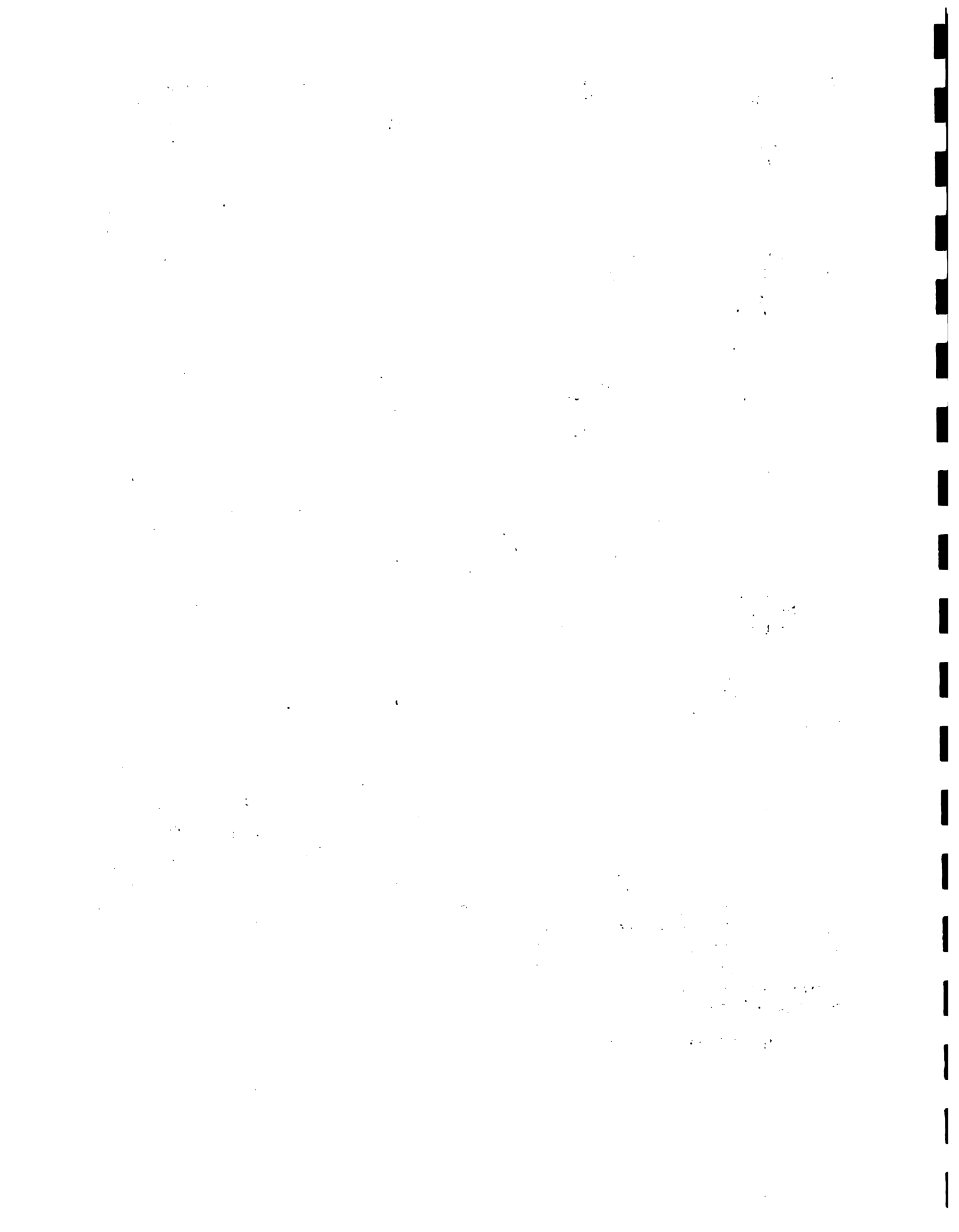
reactivated, the scale of activities has been considerably narrowed. An estimated 10 percent of the 2000 hectare Macaya Biosphere Reserve was destroyed by fires set to clear land for agriculture. Certain knowledgeable workers in Haiti conclude that the deforestation/soil erosion/environmental protection battle in Haiti has been set back half a decade.

The crisis has affected farmers and farm households, with net incomes for the urban and rural poor decreased by at least the 12 percent represented by the decrease in GDP and more likely along the order of 30-40 percent as an effect of devaluation.

The vast majority of Haitians, particularly the poor, rely on a number of income sources not just agriculture or wage labor. There is measurable evidence that income from the primary sources (agriculture and wage labor) and other sources (migration, remittances) decreased substantially, particularly during the first 6 to 9 of the last 14 months, and that basic expenditures for food have increased greatly. In agriculture, decreases were due to a combination of the drought with the increased cost, or in some cases absolute lack, of inputs for agricultural production relative decreases are not yet known. Wage employment in Port-au-Prince has decreased greatly which has probably had a "ripple-effect" into the informal sector constraining the overall job market, including full-time and casual laborers coming in from rural areas. Remittances from international emigrants decreased considerably in the six months immediately following the coup, and have now moved to 80-88 percent of pre-coup levels. The 40 percent devaluation of the gourde, and the major increases in basic food prices, have probably had the greatest impact on the poor forcing an increase in the proportion of income spent on food just to survive.

The impact of the crisis on public, commercial, and non-governmental organizations is less immediately visible, with long-term trends not yet apparent. The Ministry of Agriculture, Natural Resources, and Rural Development (MARNDR) and its many parastatal regional development organizations have maintained civil service roles and salaries, but have had virtually no operating expenses since donor funded projects were suspended in October 1991. This budgetary limitation has affected performance of a number of irrigation systems, particularly those whose electrical pumps were unoperable due to the failure of regional generators and lack of diesel back-ups. Although certain MANRDR agents are reportedly using personal funds to conduct field trips and field work, ministry overalls effectiveness has decreased substantially. The government did provide some funding for an "emergency program" for infrastructure repair in June-August 1992. Given increasing prices and lack of export receipts due to the embargo, it is not clear where the public sector will continue to find funds even to maintain salaries.

It is likely that the NGO sector will emerge from the crisis



without long-term damage, although a few organizations have already folded and others may simply dissolve over time. From a wider perspective, a more common problem has been small farmers' lack of confidence in working with organizations seen as outside their manageable sphere of interests. While this reaction clearly depends on the type of NGO and its activities, the crisis has precipitated a more general perception of this problem and warrants monitoring.

Most of Haiti's medium and large scale commercial agribusinesses have decreased volume and personnel but are managing to find new markets (domestic or non-embargoed international) and new sources (non-embargoed international or contraband) for critical imported inputs. The study team undertook a survey of 42 such firms and found only 7 that had ceased operations altogether, with only 5 of those closures attributable to the embargo. 3 of which involved mango export. The decreased volume and activities of remaining firms have definitely led to increased unemployment and decreased income for participating farmers and farm families. Long-term damage should be expected for particular firms due to loss of established markets. After one year of embargo, however, the overall sector is exhibiting a remarkable resilience that bodes well for the maintainance of certain Haitian agriculture production and markets at home and abroad in spite of these short-term hardships. The longer term welfare of the small farmers, however, is much less certain.

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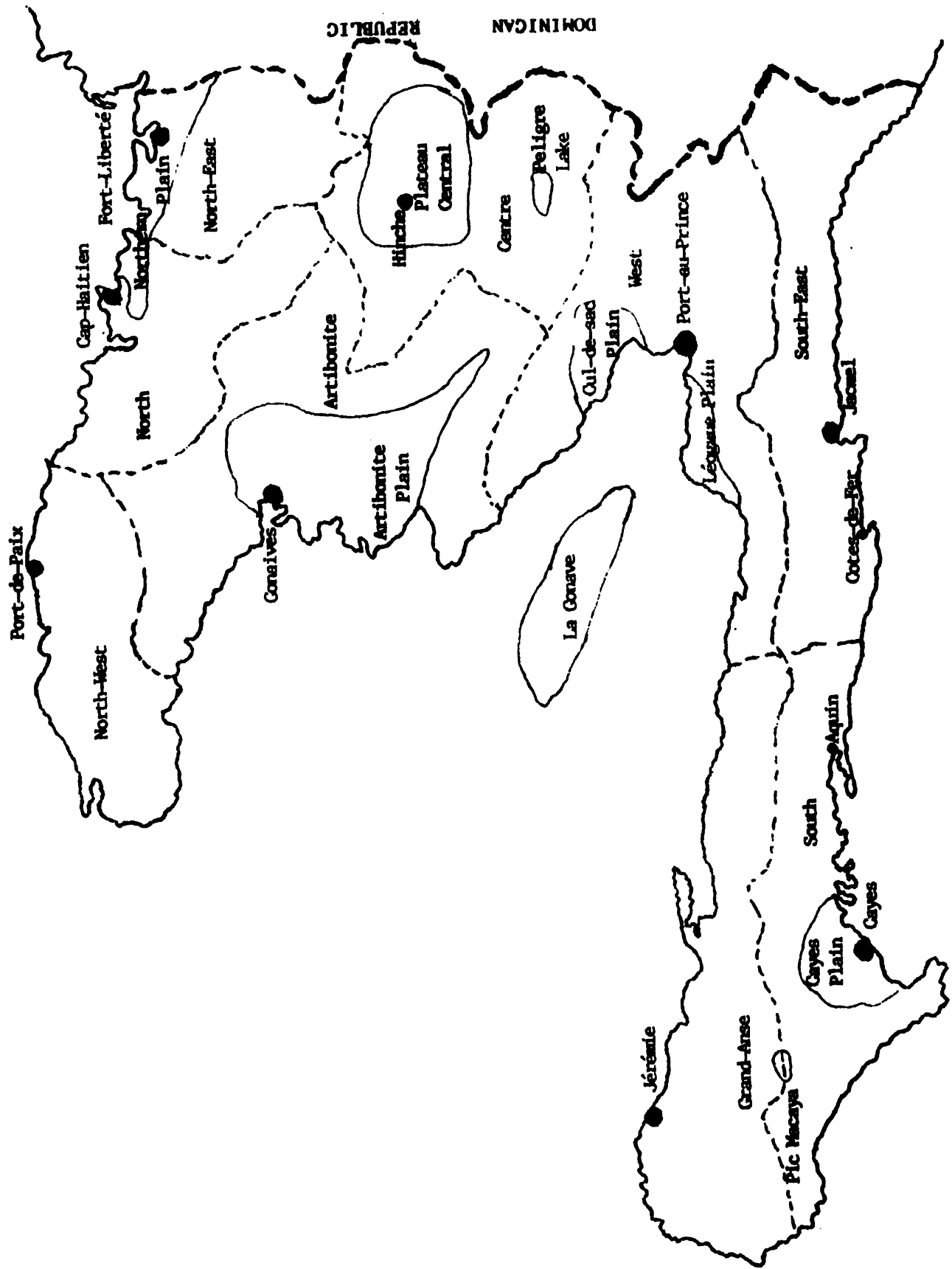
2. The second part of the document outlines the specific requirements for record-keeping, including the need to maintain original documents and to keep copies of all transactions. It also discusses the importance of regular audits and the need to report any discrepancies immediately.

3. The third part of the document discusses the consequences of failing to maintain accurate records, including the potential for fines and penalties. It also discusses the importance of training staff on proper record-keeping procedures and the need to establish a strong internal control system.

4. The fourth part of the document discusses the importance of transparency and accountability in the financial system. It emphasizes that all transactions should be clearly documented and that the results of audits should be made available to the public.

5. The fifth part of the document discusses the importance of ongoing monitoring and evaluation of the record-keeping system. It emphasizes that the system should be regularly reviewed and updated to ensure that it remains effective and efficient.

MAP OF HAITI



1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is essential for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent data collection practices and the use of advanced analytical techniques to derive meaningful insights from the data.

3. The third part of the document focuses on the role of technology in data management and analysis. It discusses how modern software solutions can streamline data collection, storage, and processing, thereby improving efficiency and accuracy.

4. The fourth part of the document addresses the challenges associated with data management, such as data quality, security, and privacy. It provides strategies to mitigate these risks and ensure that the data remains reliable and secure throughout its lifecycle.

5. The fifth part of the document concludes by summarizing the key findings and recommendations. It stresses the importance of a data-driven approach in decision-making and the need for continuous monitoring and improvement of data management processes.

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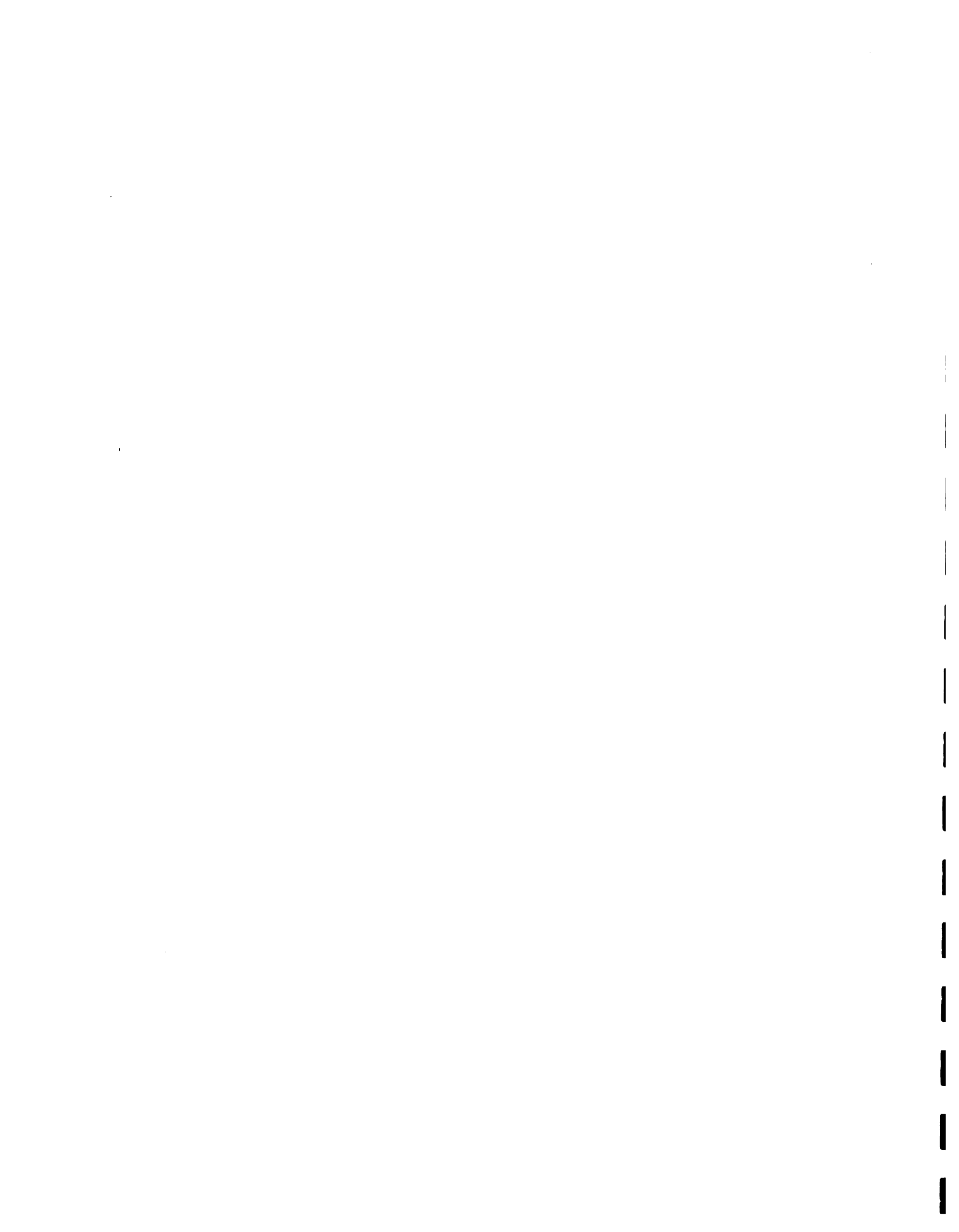
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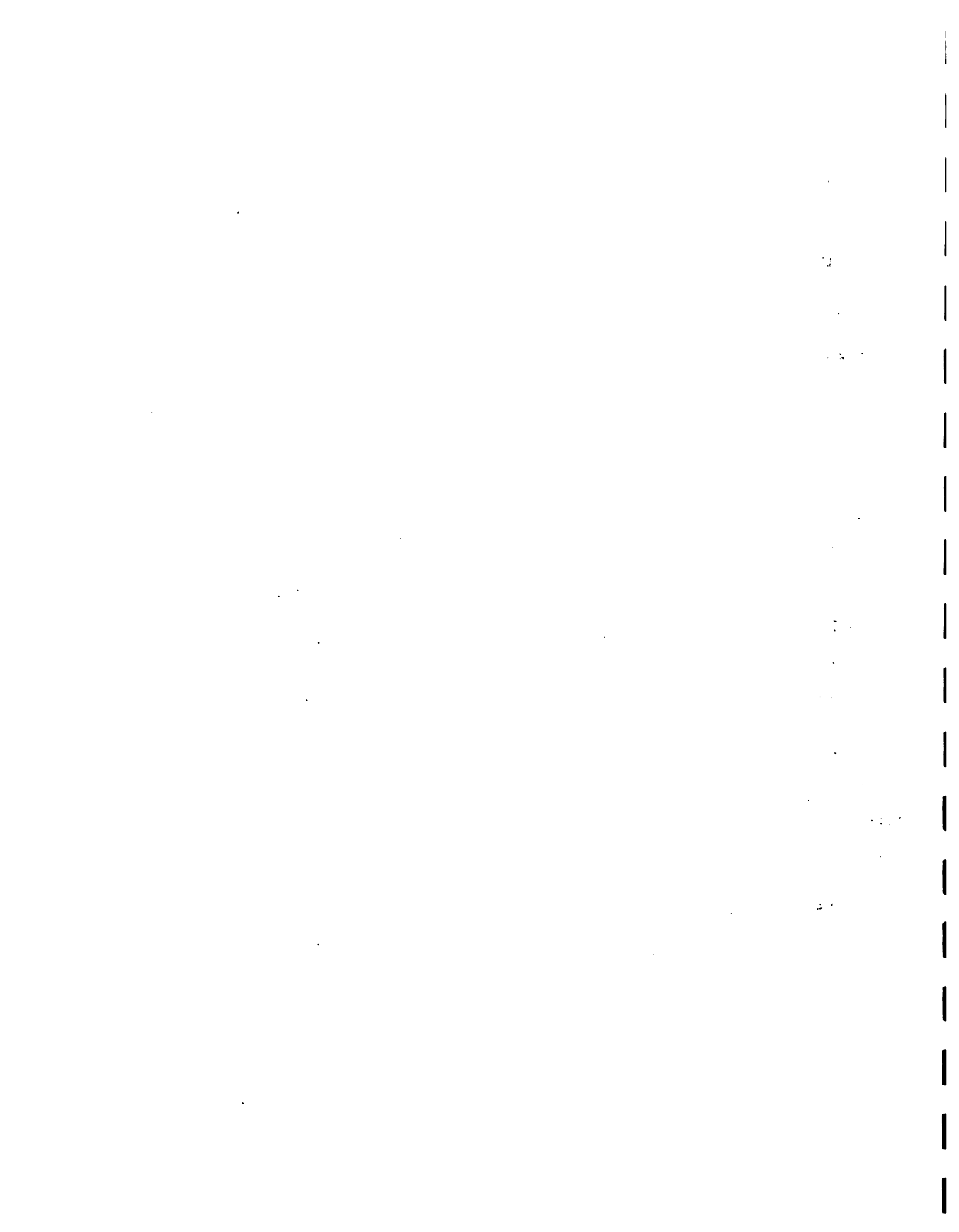
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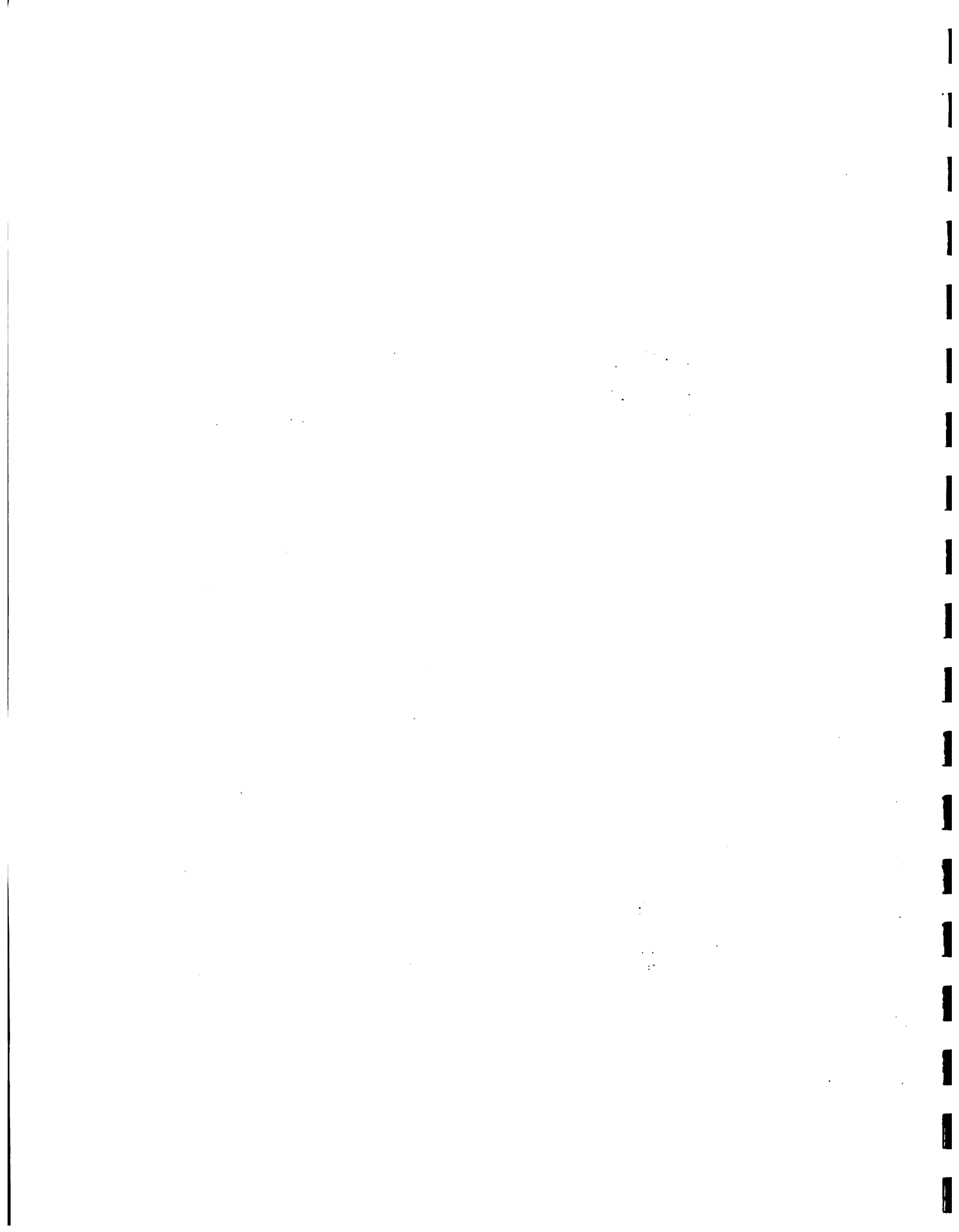


List of Acronyms

ADIH	Association des Industries Haitiennes
ADS-II	Agricultural Development Support Project II
ANDAH	Association Nationale des Agro-Professionnels Haitiens
APA	Association des Producteurs Agricoles
APVA	Association des Paysans de la Vallée de l'Artibonite
ASDEC	Coffee Exporters Association
BCA	Banque de Credit Agricole
CADCO	Coffee Advisory Committee
CAPS	Center for Health Policy Analysis
CARHa	Centre d'Accueil des Rapatriés Haitiens
CARE	Catholic Association for Relief Everywhere
CHI	Child Health Institute
CIAT	Centro Internacional de Agricultura Tropical
CIMMYT	Centro Internacional para el Mejoramiento del Maiz y el Trigo
CIP	Centro Internacional de la Papa
COOPEP	Cooperative des eleveurs de poulets
CRIN	Caribbean Rice Improvement Network
CRUDEM	Comité de Relèvement de Milot
DRI-ASILE	Développement Régional Intégré de l'Asile
DRI-JER	Développement Régional Intégré de Jérémie
EEC	European Economic Community
FAMV	Faculty of Agronomy and Veterinary Medicine
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross Domestic Product



GOH	Government of Haiti
HASCO	Haitian-American Sugar Company
HATREXCO	Haitian Transfer Express Company
HAVA	Haitian Association of Voluntary Agencies
HECS	Household Expenditures and Consumption Survey
IDB	International Development Bank
IFAD	International Fund for Agricultural Development
IHSI	Institut Haitien de Statistique et d'Informatique
IICA	Inter-American Institute for Cooperation on Agriculture
IRD	Integrated Rural Development
MARNDR	Ministère de l'Agriculture, des Ressources Naturelles et du Développement Rural
MEDA	Mennonite Economic Development Association
MT	Metric Ton
NGO	Non Governmental Organization
OAS	Organization of American States
ODBFA	Organisme de Développement du Bassin Versant du Fleuve Artibonite
ODN	Organisation pour le Développement du Nord
ODNO	Organisation pour le Développement du Nord-Ouest
ODPG	Organisation pour le Développement de la Plaine des Gonaives
ODVA	Organisation pour le Développement de la Vallée de l'Artibonite
ORE	Organisation pour la Réhabilitation de l'Environnement
PADF	Pan-American Development Foundation
PREPIPPA	Projet de Réhabilitation des Périmètres Irrigués de la Plaine de l'Arcahaie
PRINSA	Promoteurs et Investisseurs, S.A.



SHAISA	Societe Haitienne d'Agro-Industries S.A.
SOFIHDES	Societe Financiere Haitienne de Developpement S.A.
SONIAN	Société de Nutrition Animale
SSE	Small-Scale Enterprises
TOC	Technology, Organization, Credit
UCONG	Coordination Unit for Non-Governmental Organizations
U.S.	United States
U.S.A.	United States of America
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
USMAN	Usine a Mantegues

1. INTRODUCTION

1.1 Summary of Current Situation

Haiti has long been the poorest country in the Western Hemisphere, with a deterioration of socioeconomic conditions over the past decade. Gross Domestic Product (GDP) per capita dropped by 21 percent during the eighties, from US\$431 in 1980 to \$341 in 1989. Caloric intake was an average of 1,902 KCal/day in 1986, and the infant mortality rate in 1988 was 116 per one thousand live births. Although data about Haiti are generally of questionable validity, it is commonly agreed that 75 to 85 percent of Haiti's 1991 estimated population of 6.5 million live in absolute poverty.

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The events of the last 14 months, however, indicate that the leadership crisis is not yet over, and the arrival of a legitimate, stable democratic government has been further delayed. The latest change of government -- on September 30, 1991 -- was in the form of a military coup d'état financed by private business interests, with the purpose of removing the new democratically-elected president, Jean-Bertrand Aristide, from office. The international community has condemned the coup, and is working through the multinational forum provided by the Organization of American States (OAS) to restore a democratic, constitutional government to Haiti. As part of the OAS effort, the member states have frozen Haitian government assets and imposed a trade embargo on the country, which has had an adverse effect on the economy. The OAS is also promoting dialogue among the various factions in an attempt to achieve a democratic, constitutional resolution to the problem. After 14 months, the situation remains fluid, and few analysts are willing to predict how or when the latest crisis will be resolved. There is also concern that any resolution may be only temporary, with continued political uncertainties resulting in little economic

¹. Portions of this and the subsequent paragraph were originally presented by the author in a USAID/Haiti document, Humanitarian Food Assistance Program, December 1991.

recovery and a general worsening of socioeconomic conditions, particularly among the poor.

This report attempts to look at changes in Haiti's agricultural sector during this latest crisis, and to provide the Inter-American Institute for Cooperation on Agriculture (IICA) with recommendations for programmatic actions to promote sustainable agriculture in the future. During the course of its work, the team encountered numerous analyses and opinions as to the impact of the crisis on agriculture, which are summarized in subsequent sections of the report. It also, however, encountered two basic points of view as to the overall nature of the crisis, which are necessary to understand in order to better interpret some of the individual and institutional behavioral changes which have occurred.

From one perspective, the September 30, 1991 coup has fundamentally altered the political landscape as well as the future course of Haitian political history. This view is premised on the belief that the 1990/91 elections, by their very legitimacy, credibility, and wide participation, brought -- for the first time in Haitian history -- the clear expression of the hitherto mute political voice of the large majority of Haitians. The coup, then, is seen as a response to the people's choice, to a democratically-elected government, by the military and the elite political class, the traditional holders of power. In other words, this political crisis is not just a vying for power among various political factions, it is in fact a mortal struggle between the common people and the traditional political class and their military allies. This perspective illuminates why the embargo is so strongly supported by the common people, and the dramatic increase in high-risk emigration via boats in the 14 months since the coup. It is also the basic reason for the OAS-imposed embargo and numerous bilateral diplomatic sanctions.

The opposing perspective of the coup fails to recognize the qualitative difference between the 1990 election of Aristide and the nature of the long course of political history. This perspective cites the fact that of Haiti's 41 heads of state, only 7 actually completed standard terms of office. (In all, 7 served for more than 10 years, 9 declared themselves chiefs of state for life, and 29 were either overthrown or assassinated in office.) The primary proponents of this perspective, the traditional political class, portray the 1991 coup as a simple redress of power in the face of Aristide's abuse of his office, only one in a long series of such events. This perspective thus views the current situation as normal, with the current de facto government as no less legitimate than previous ones, and international sanctions as unwarranted, pernicious meddlings in the internal affairs of an autonomous state.

Because IICA is an OAS agency, in accordance with various OAS declarations it has suspended all activities with the Government



of Haiti (GOH) since shortly after the coup. It is currently providing humanitarian assistance to the Haitian people, through its Community Food Production (TOC) project, and continuing to monitor the agricultural sector. Given the practical realities of implementing these activities, IICA must deal with the proponents of each of these two perspectives, and still strive to maintain a neutral stance in regard to either. This report attempts the same neutrality.

1.2 Objectives of the Report

The purpose of this report is to provide IICA/Haiti with an overview of significant changes in the agricultural sector during the period September 1991 to November 1992, with particular emphasis on behavioral changes of the key actors in the sector, i.e. the Haitian population in general and Haitian institutions, both public and private sector. It is considered a companion piece to the IICA/IFAD Agricultural Sector Assessment of May 1991. It will in turn be complemented by additional, more detailed studies in 1993.

The specific objectives of the study team were as follows:

Obj. #1: to identify the significant changes in the agricultural sector in Haiti in the last year, and to determine the impact of those changes on the Haitian population and institutions;

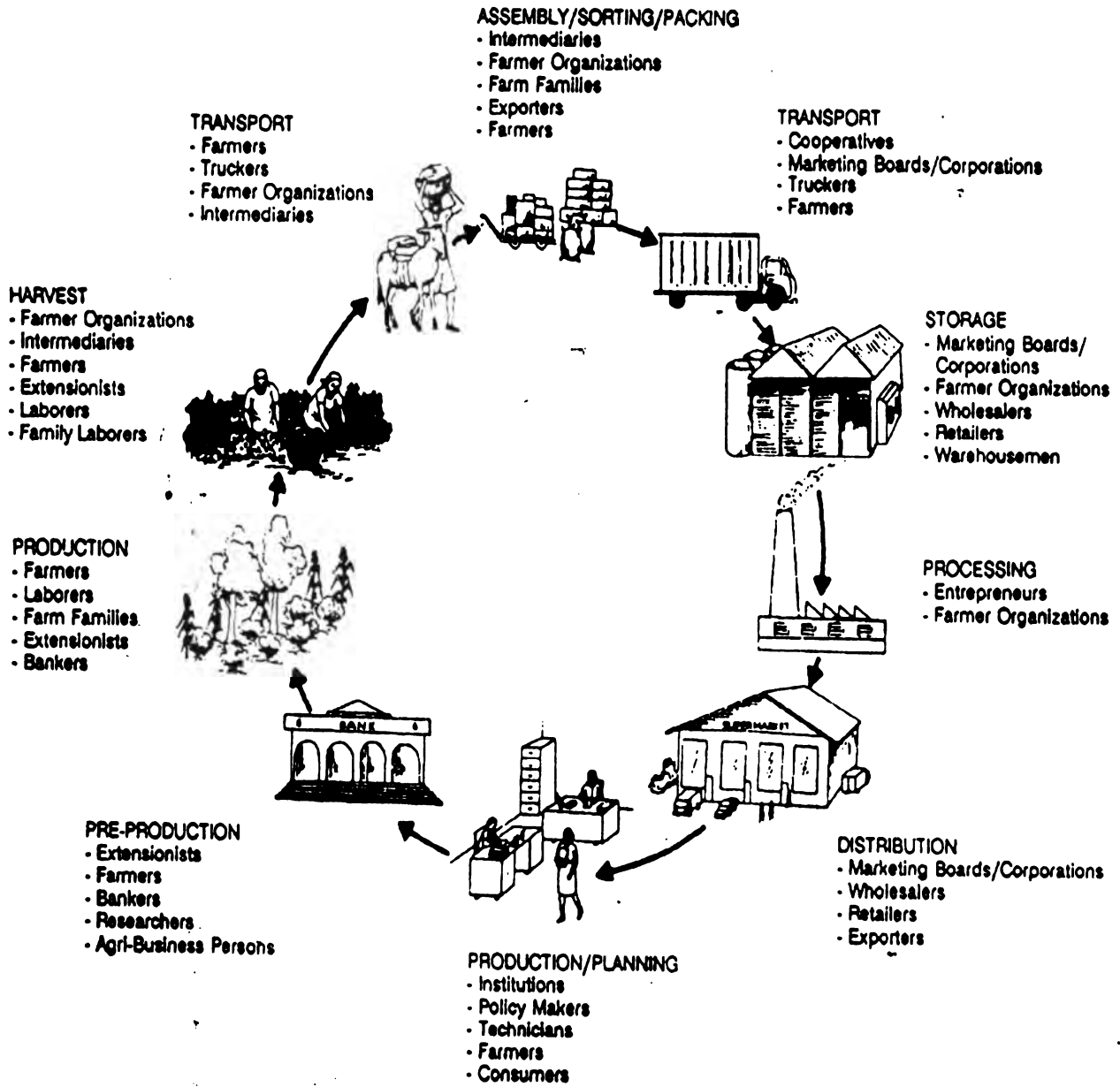
Obj. #2: to provide recommendations to IICA/Haiti as to which institutions and what actions might be most appropriate for future programs to promote sustainable agricultural production.

The team's analysis of changes in and the impact of the crisis is based on a simplified version of the commodity systems approach developed by Jerry La Gra of IICA, who has substantial experience in agriculture and agricultural marketing in Haiti, in collaboration with the Postharvest Institute for Perishables of the University of Idaho, and the ASEAN Food Handling Bureau. Figure 1-1 is reproduced from La Gra's work, and described in the following paragraphs:

...the commodity system is visualized as a circle, extending from production planning (decision making) through production, harvest and distribution to consumers, thereby setting the stage for the next cycle of planning, production, etc. The components depicted in Figure 1-1 are applicable, in general, to all food crops, as well as livestock and fisheries. ... The only stage in Figure 1-1 which may be irrelevant for some commodities is processing.



Figure 1-1: Participants in the Commodity System



Source: LA GRA, 1990



Figure 1-1 also identifies the different types of participants functioning at the diverse points in most commodity systems. These include types of individuals such as farmers, truckers, and marketing intermediaries, and institutions such as ministries of agriculture, farmers organizations, and marketing boards. Types of participants vary with the crop, country, and particular circumstances. (La Gra, pp. 17-18)

The report that follows is organized according to the commodity systems and actors therein. Section 2 discusses the impact of the crisis on various agricultural subsectors and commodities produced, and Sections 3 and 4 the impact on the key participants, individuals and households (3) and public and private organizations and institutions (4). Given Haiti's lack of market or role differentiation, this combination of the vertical commodity assessments with horizontal institutional analyses is considered necessary for a more complete understanding of impact overall.

1.3 Methodology

The report was prepared by a team of 5 professionals during a three week period in October-November 1992. The team consisted of an IICA/Haiti Senior Agricultural Specialist, a Consultant Institutional Analyst, a Consultant Natural Resources Specialist, a Consultant Private Sector Specialist, and an IICA Local Organizations Specialist. Most of the work was conducted in Port-au-Prince, with telephone calls to or visits with people coming in from other regions as necessary. Two of the team members undertook a short field trip to Gonaives Department to talk with farmers and professionals working in the productive Artibonite Valley.

The study's basic methodology was rapid reconnaissance, which includes:

- o Review of available literature;
- o Tabulation and analysis of available secondary data on relevant indicators, such as commodity production, prices, etc.; and
- o Structured informal interviews with key informants and, where suitable, groups of informants.

In order to assure that comparative base data were collected on the various actors involved, the team developed formal information collection guides for use in interviewing public, for-profit private and not-for-profit private institutions involved in agriculture. The results of these more structured interviews are presented in summary in section 4.

Given time and logistic constraints, and the generally tense mood of the country, a rigid scientific sampling methodology was

not possible. A straightforward, more directive approach was utilized in the selection of institutions pursuant to this report, which the team considered more appropriate to the task at hand without compromising the ranges of types and sizes of institutions represented. It should be further noted that a certain degree of restraint and tact was necessary in dealing with members of public sector institutions due to the understandable sensitivity and even hostility on the subject of economic ramifications arising from the events in this 14 month period.

Sections 1, 2, and 3 were drafted first, while the institutional data were collected, and reviewed by knowledgeable professionals in the development community in Port-au-Prince. The institutional analysis was completed later, and gaps and trends identified in Section 4.



2. THE AGRICULTURAL SECTOR SEPTEMBER 1991 THRU NOVEMBER 1992

2.1 Summary of Economic Conditions

The de facto Government of Haiti is the strongest proponent of the viewpoint that the coup d'état of September 30, 1991 was simply a normal change of Haitian government. It is thus trying to conduct the normal business of government in spite of sanctions. There are a number of papers and analyses that discuss the notable changes in monetary policy,² and it is not the intent of this report to restate all of them.² The important point is that the government has increased greatly domestic borrowing and the money supply to enable it to keep up the illusion of "business as usual", resulting in rapidly escalating devaluation of the gourde and a concomitant parallel rapid inflation. These measures, and their effects, have had a major effect on all facets of the economy. One of the more succinct summaries of the situation is found in a USAID report from June 1992, which states, "Measured by all indicators pertinent to economic performance, the Haitian economy by the end of May 1992 was in freefall ..." (USAID Enhancing Food Security Project Paper, p. 47). Little has changed since that time.

Recent analyses demonstrate that for the Haitian fiscal year (FY) 1992 (October 1991 - September 1992), GDP decreased by 12 percent. This figure is arrived at, in summary, by comparing the difference between the increase in money supply, which was 28 percent, with the rate of inflation, which was about 40 percent, mirroring the devaluation of the gourde (this assumes almost zero percent inflation for Haiti's principal trading partner, the U.S., during the same timeframe). The effects of this devaluation/inflation, combined with the effects of the embargo, have had an effect on almost all sectors of the economy.

Although most consumer prices jumped by 10-20 percent during the first three weeks following the coup, and fuel prices increased 40 percent in November 1991, the significant devaluation did not really begin until about February-March 1992. Analysis of the period since September 1991 can thus be thought of in two phases. During the first phase, from October 1991 through February-March 1992, a number of immediate and highly visible effects of the crisis occurred, including the imposition of the embargo and major lack of fuel and electricity during November and December 1991. The second phase, from March-April 1992 to the present, may be considered the "coping" period, when Haitians and internationals alike realized that a resolution was not likely for some time, and that means had to be found to survive until that time.

². Of interest is the recent book by Jerry Tardieu, Embargo sur Haiti. Les premières conséquences, and the Government's "Livre Blanc: Conséquences de l'Embargo ..." as well as internal analyses by USAID and the French Cooperation Mission.



Part of this "coping" behavior involved the de facto government increasing the money supply in order to maintain the illusion of normalcy, thus fueling the rapid devaluation. Given the market distortions that are now becoming evident from the devaluation and various embargo-related activities, although the situation seems much more "normal", it may be that this latter period will have a greater impact on Haiti's overall economy in the long term.

The early impact of the political crisis and enactment of the embargo, however, should not be given short shrift. During the first four months of the crisis, when Haiti's hydroelectric generation capacity was at an all-time low due to drought, fuel for back-up power generation was extremely scarce, and new non-embargoed export markets had not yet been identified, many industries and employers shut down totally or went to very limited production schedules. Based on information from the Association Des Industries Haitiens (ADIH), USAID/Haiti estimated the number of workers laid off at 128,100, or almost half of the nation's total formal sector labor force, as of December 11, 1991 (USAID/Haiti Monitoring Report, December 1991). While some of these workers were hired back in February -March as conditions stabilized, the overall loss of income during that period of time, and the "ripple effect" throughout the country, contributed to a loss of confidence on the part of investors and workers that will not be easy to rebuild.

Many of the businesses that did attempt to continue operating did not find it easy to maintain acceptable profit margins. Even prior to the significant devaluation, banks were very reluctant to finance imports to Haiti, even from Europe, as they were uncertain whether boats would be stopped by the U.S. authorities. Fewer boats meant higher prices for both imports and exports. Freight rates for necessary inputs from non-embargo suppliers -- usually Europe or Japan -- were generally much higher than from traditional sources, i.e. the U.S. or the Caribbean. It took time for Haitian companies to research and arrange financing for cargos large enough to secure freight rates that would not make products uncompetitive with other imports if the embargo ended abruptly. Hopes of an early termination of the embargo, which lasted through at least January-February 1992, led many businesses to delay procurement of the more expensive supplies from Europe (or elsewhere) in order to avoid being caught.

It is extremely important to note that although basic food was exempted from both the OAS and US embargoes, inputs essential for Haitians to grow their own food, such as fertilizer, seeds, and pesticides, were not exempted until late May 1992 from the U.S. embargo, and have never been exempted by other OAS states. The lack of seeds and fertilizers at the start of the growing season in March-April 1992 created particular stress on the



agriculture sector, although after the exceptions were made much recuperation was possible.

After the initial four-to-six months of uncertainty and major factory and business closings, the devaluation began to escalate. In September 1991, at the time of the coup, the premium for U.S. dollars in the parallel market was 50 percent. In March 1992, six months later, it was 75 percent. By June 1992, only three months later, it was 110 percent. While the escalation leveled off somewhat after that as part of the government's "coping" monetary policy, this decrease in the value of the gourde, on top of the increased freight rates from non-embargo suppliers, further increased the need for financial backing and/or credit for importers to secure competitively priced goods. Many banks are still reluctant to provide financing, given the uncertain environment and generally deteriorating repayment rates at Haitian banks. What has happened, or rather what is happening, is that many of Haiti's small and medium-scale merchants and businesses are finding it increasingly difficult to stay in business. There is an increasing concentration of economic activity into the hands of fewer and fewer very large players.

At the same time, it must be noted that the embargo itself is providing some protection to domestic industries that have in the past found it hard to compete with imported goods. The poultry and egg subsector for example, has grown as a result of a lack of imported eggs from the traditional sources of the U.S. and the Dominican Republic. There are also some examples of creative import substitution which may turn out to be positive in the long run, such as use of native bagasse and compost as opposed to increasingly expensive fertilizer. For the most part, however, most of the Haitian population has turned into individual and institutional "embargo-runners", and required goods, while expensive, can generally be found.

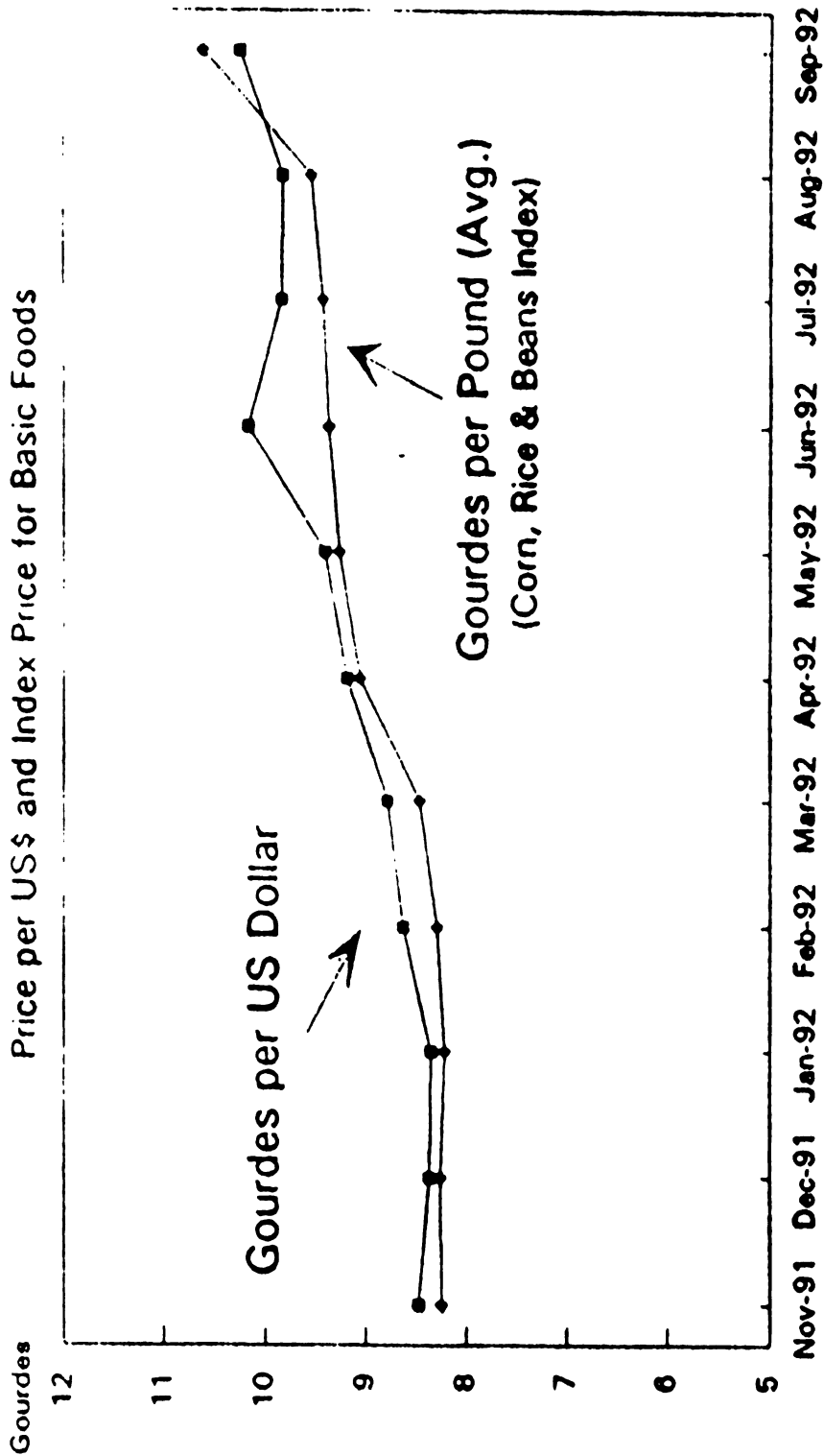
Of particular interest in this situational analysis is the direct positive relationship between the devaluation of the gourde, which for Haiti during FY 92 is considered equivalent to inflation, and the average retail price of one pound of corn, rice, and beans, the local staple foodstuffs. This comparison was recently carried out in the USAID/Haiti Humanitarian Situation Monitoring Report Update of October 15, 1992, and is reproduced as Figure 2-1.



Evolution of the Gourde

Figure 2-1:

Price per US\$ and Index Price for Basic Foods





The figure is most interesting when taken in the context of what has happened, or not, in the past year in Haiti. That is, under normal circumstances one would expect food prices to change in response to supply or demand, and during the past year one would assume some changes in both. Recent studies, by PLANECONOMICS before the coup (August 1991), and by the Center for Health Policy Analysis of the Haitian Child Health Institute (CHI/CAPS) at this time (estimated issuance December 1992), indicate that in Haiti this is not the case. Both studies performed sophisticated regression analyses on the relationship of food commodity prices with a number of variables, and determined that the supply of a given commodity has no significant relationship with retail price. (The CHI/CAPS analyses even corrected for the effects of devaluation, and used constant prices.)

It appears that in Haiti, with its open economy in spite of international efforts to the contrary, the retail price of basic food commodities may be more a function of monetary policy than of supply of domestic or imported goods. This conclusion begs the obvious question of what besides monetary policy influences price, if supply is not significant, and section 5 will include some recommendations for studies in this regard. The important point for this situational analysis, however, is that because the monetary policy has been profligate in the last year, retail prices have soared. Subsequent sections of this report will highlight the fact that these increases being passed to the producers, and that most farmers are suffering, rather than benefitting, from these increases.

2.2 Agricultural Production

Constraints to agricultural production during the past 15 months included natural factors such as droughts, international factors such as low coffee prices, and an array of internal factors including the timely availability of capital and necessary inputs (e.g., seeds and fertilizer).

Droughts, some quite severe, affected numerous parts of the country such as portions of the Plateau Central, the Northwest and Northeast, and the South/Grande Anse. The major impact was during the fall season of 1991 and the first season of 1992. By the second and third seasons of this year, rainfall throughout most of the country had returned to normal or near-normal expectations, and did not exert a negative influence on crop production.

International price factors continued to affect coffee (more the harvest than actual production) and sisal processors also reported lower price offers from international buyers.

Numerous internal factors, which appear to derive from the political and economic crisis in Haiti, combined to reduce agricultural production during the past year. Table 2-1 lists the



major crops, a consensus estimate for normal production, and the percent decrease from this production realized for the latter 1991 and 1992 seasons. For export crops, the decrease in volume shipped is also presented. These values are mostly estimates, and their derivations or sources are presented in the accompanying text.

For some crops (e.g., rice, beans and vegetables), lack of irrigation due to inoperational infrastructure was the major limiting factor. Higher fuel prices and/or scarcity of replacement parts account for the infrastructure breakdowns. In addition to reduced irrigated perimeters, lack of capital for seed purchase and higher retail prices and/or unavailability of fertilizer at certain times were other factors cited as having negative impacts on bean production. Lack of capital and fertilizer was also cited for decreases in maize and plantain production. As prices for virtually all commodities increased, purchase of food consumed the limited capital resources (including increased sales of livestock to generate more income) and funds for the purchase of seeds, labor and fertilizer became scarce. Numerous crop substitutions occurred, emphasizing low cost/low input crops such as sorghum and cassava, as farmers in various regions juxtaposed their limited options. The availability of vegetable seeds was almost non-existent last March.

The largest decreases in crop production were for plantain (-35 percent) and rice (-34 percent). Field beans followed with just under 20 percent and other crops such as maize, roots and tubers, and sorghum also experienced significant reductions.

Among the export crops, the volume of mangos shipped decreased by 97 percent. Essential oils also declined precipitously by 75 percent for vetiver (due to a decrease in processing for lack of fuel) and essentially 100 percent for lime oil (currently being stored for future shipment to the US market.) Although quantifiable data is not readily available, it appears as if the cut-flower/ornamental export market was also closed. Sisal exports declined by an estimated 35 percent, and coffee exports were 21 percent lower than the average two previous years. A lucrative market in the US for fresh-water shrimp, produced by one entrepreneur, was also closed.



Table 2-1: Decreases in Crop Production/ Exports for 1991-1992

	<u>Estimated Normal Production</u>	<u>Decrease From Normal Production</u>	<u>Export Crops Decrease in Volume</u>
<u>Cereal Crops</u>			
Maize	370,000 MT	-15%	
Sorghum	174,000 MT	-7 to 10%	
Rice	195,000 MT	-32 to 36%	
<u>Oil & Protein Crops</u>			
Field Beans	50,000 MT	-17 to 20%	
Peanuts	34,000 MT	N/A	
Coconut	N/A	N/A	
<u>Roots and Tubers</u>			
	550,000 MT	-15%	
<u>Beverage Crops</u>			
Coffee	34,000 MT	N/A	-21%
Cocoa	2 MT	N/A	Undetermined
<u>Sugar Cane</u>			
	30,000 MT (processed)	N/A	Undetermined
<u>Fruits</u>			
Mangos	90,000 MT	N/A	-97%
Plantain	300,000 MT	-35%	
Banana	210,000 MT	N/A	
Avocado	50,000 MT	N/A	
Lime	7,000 MT	N/A	
Other citrus	33,000 MT	N/A	
<u>Vegetable Production</u>			
	N/A	Unquantifiable but significant decrease	
<u>Other Non-Basic Crops</u>			
Tobacco	175 MT	NC	
Sisal	6,200 MT	N/A	-35%
Cotton	5,600 MT	N/A	Factory closed prior to 9/91
<u>Essential Oil</u>			
Vetiver	N/A	N/C	-75%
Lime Oil	N/A	N/C	-100%
Amyris	N/A	N/A	
<u>Cut Flower/Ornamentals</u>			
	N/A	N/A	-75 to 100%

N/A = data not available; NC = no change.

Source: Derived from accompanying text.

2.2.1 Crop Production

2.2.1.1 Cereal Crops

The principle cereal crops, in order of total annual production according to GOH/MARNDR figures, are maize (185,000 MT), rice (136,000 MT) and sorghum (125,000 MT). In terms of surface area planted, maize (231,250 ha.) and sorghum (156,250 ha.) lead, but the average yield per hectare is only 0.8 MT, and are followed by rice (59,250 ha.) which yields an average of 2.3 MT/ha. (IICA/IFAD 5/91:60, based on 1980-1986 data). The yield figures are consistent also with more recent studies conducted by the USAID/MARNDR Agricultural Development Support Project II (ADS-II) in 1990 which report 0.83 MT/ha. for maize, 0.73 for sorghum, and 2.25 MT/ha. for rice (study cited in World Bank 2/91:Tables A-12, A-13 and A-14). Approximately 30% of the marketed maize and sorghum are destined for livestock feeds (World Bank 2/91:13) with the poultry industry being the major consumer.

Maize.

Studies conducted by area-frame sampling techniques under the ADS-II project reveal that total production may be far greater than that reported by MARNDR. These studies suggest a production level of perhaps 370,000 MT from 448,000 hectares. According to ANDAH (6/92:11), the total surface area planted to maize did not change appreciably during the past year. Although certain areas such as the irrigated perimeters of the Cul-de-Sac and Gonaives were not planted to maize due to the lack of water availability, and although portions of the maize hectarage on the Leogane and Artibonite plains were planted to short-term sorghum, additional hectares of maize were substituted for rice in the Artibonite Valley and St. Raphael. Rainfed maize production areas in the mountains also appeared to be of normal magnitude.

Although ANDAH states that the harvest seemed to be average for most regions, both the de facto Government White Book on the embargo (8/92:12) and the USAID Monitoring Report (10/92:28) show an overall decrease from the average production of 15 percent. The USAID report states that reasons for decreased production in certain areas included lack of water, seeds, capital and fertilizer.

Sorghum.

Sorghum is one of the principle foods consumed by low income families. As with maize, the ADS-II survey suggests higher production figures than those reported by the GOH/MARNDR: 174,000 MT produced from 230,000 hectares. Estimates reported for total surface area planted for the 1992 season do not indicate any reduction. There has been some substitution of short-cycle sorghums for other crops for a variety of reasons. Although lack of water (rain), cash, seeds and/or fertilizer were cited in the USAID Monitoring Report (10/92) as reasons for reduced production, the USAID report states that overall production for the year only decreased 7 percent from the norm, and the de facto Government White Book claims a total decrease of 10 percent (8/92:12).

Rice.

The most recent surveys (ADS-II) report rice production at 195,000 MT from 86,700 hectares (World Bank 2/91:37-38). Contraband rice imports account for an estimated 40 percent of the total domestic consumption. A considerable amount of contraband importation takes place within the legal system via the practice of underinvoicing. This can be assessed relatively easily by comparing the "declared" licensed rice import price with the market price. This contraband has had a major impact on reducing domestic producer and consumer prices since 1986 (World Bank 2/91:10,13).

Rice production has been substantially and adversely affected by the embargo. In one area surveyed by ANDAH, only 3000 of the normal 10,000 hectares were planted because the irrigation systems were not functioning. ANDAH estimated this resulted in a 15,000 MT deficit production for the first season. Similarly, they estimated a 15-20 percent decrease in surface area planted for the second season, which would cause a deficit of another 15,000 MT. Farmers interviewed stated they would also be applying only 50 percent of the fertilizer normally used (ANDAH 6/92:16). The de facto Government White Book on agriculture (8/92:12) claimed that rice production was 36 percent lower than that of the previous year. USAID Monitoring Report figures show a reduction of 32 percent (10/92:28).

Rice production in the Artibonite Valley, the major production area, suffered the most with an estimated 50 percent overall reduction due to non-functional irrigation systems and lack of/or high priced fertilizer. This is the area where CRIN estimates 2-3 fold increases in yield can be attained. This local industry is highly threatened now due to three interacting factors. First, the comparative productive advantage enjoyed by this area (according to the World Bank) is threatened by the depreciating value of the gourde (which will translate into higher costs of production). Second, the contraband rice (estimated at 40 percent of total domestic consumption) depresses producer revenues by

competition. Third, the currently selective nature of the embargo, which excludes rice as an embargoed commodity, further exacerbates this competition.

2.2.1.2 Oil and Protein Crops.

The most important pulse crop in Haiti is the field bean (red or black) and Pigeon Pea constitutes another important protein crop. Two oil crops, although oil extraction does not constitute the primary utilization of these crops, are peanut and coconut.

Field Beans (Phaseolus vulgaris).

Field beans are an important crop and provide the major protein source for Haiti's population. In terms of surface area planted, field beans, at about 90,000 hectares, rank fifth, behind maize, sorghum, coffee and sugarcane (IICA/IFAD 5/91:60). Although the production has remained stagnant at about 50,000 MT per year for the past fifteen years, there is strong evidence that the economic crisis precipitated by the embargo has had a substantially detrimental impact on bean production during the past year.

ANDAH (6/92:12) reports that throughout the mountains, where field beans are a major crop planted in February and March, a 20-30 percent reduction in area planted was observed. Lack of capital for seed purchase, a significant expense for this crop, was cited as the reason. Harvests for the West, South, Grande-Anse and Artibonite were reduced for the first season, and additional post-harvest losses were incurred from unseasonable rains. The lower Plateau Central was the only region which reported good yields. ANDAH estimated that the April-May harvest was 5-6,000 MT less than normal. Based on the total average annual production, this decrease represents about 10 percent. Since field beans are a major cash crop, overall farm revenues also suffered a significant decline.

The de facto Government White Book on the embargo (8/92:12) claims that the total reduction in field bean production actually approaches 10,000 MT (or 20 percent of the annual average production) because certain irrigation perimeters were not functional due to lack of fuel and repair parts for the pumps. Tardieu (92:35-36) further states specifically that some 2,000 hectares of irrigable plains land were foregone during December only for lack of electric power. While not specifically cited by any of these sources, lack of, or high prices, probably also precluded the use of fertilizer for a portion of this crop, with consequent lower yields. The USAID Monitoring Report (10/92:28) also states that bean production for the year was only 83 percent of the norm.

Accordingly, there appears to be no doubt that the production of field beans was severely and negatively affected by the embargo



with the following consequences: reduction in irrigation potential due to lack of power and spare parts; some reduction in yields due to lack of fertilizers; and general lack of investment capital at the farmer level to purchase seeds. This latter problem will be exacerbated further because the bean crop is a major source of revenue for the farmers.

Oil Crops.

IICA/IFAD (5/91:60) reports, based on World Bank data, the average production of peanuts between 1980-1986 was 34,000 MT. This yield was produced on an average 45,000 hectares. No further information is available concerning the impact of the embargo on peanut production.

The coconut palm is a widely distributed, naturalized species in Haiti. No systematic data are available on production. The only identifiable impact from the embargo has been the continued importation from the Dominican Republic of coconuts by the truckload.

2.2.1.3 Roots and Tubers.

The principle crops in this category include yams, sweet and irish potato, cassava or manioc, and malanga. All of these crops, grown under a variety of conditions, constitute an important staple food (starch) source for Haiti. The importance of these crops is clearly indicated by the estimated annual production: 500,000 - 600,000 tons (compared, for example, with maize at 370,000 tons; rice at 195,000 tons; sorghum at 174,000; and beans at 50,000 tons).

Given that virtually every farm grows one or more of these crops for both home consumption and sales, it is likely that these crops have been a major means of survival during the embargo months as other crops and commodities have become either more scarce or more expensive.

ANDAH (6/92) reported that there has been a substantial shift towards planting sweet potato in place of rice and corn in the Artibonite, and beans on the Cayes plain. Cassava has replaced some of the plantain on the Arcahaie plain. All of these crop substitutions have most likely been effected due to a lower cost for planting materials and/or maintenance for the root and tuber crops verses those crops replaced.

Market costs for these crops (data cited is for sweet potato) seems to be conflicting. According to the USAID Monitoring Report (10/92:17) the average price in three Port-au-Prince markets did not change between September 1991 and September 1992. In fact, during April-May 1992 the price even decreased by up to 16 percent. To the contrary, ANDAH (6/92:18) states that sweet potato prices



have increased 8-20 percent in the Northeast, the Artibonite, and the South (although unstated, most figures presented by ANDAH cover the period from pre-coup September 1991 to April-May 1992). ORE (4/92:4) also reports that sweet potato prices increased 50 percent from April 1991 to April 1992. Since increased transportation costs for these bulky products, and possibly the desire to extract additional income from a low-production cost crop, would tend to drive prices up, the price differentials between the data reported by these three sources cannot be explained.

One other factor reported in the USAID Monitoring Report (10/92:25,27,29) may be significant to the overall food supply. Seasonal production estimates are presented for nine zones and three cropping seasons (Jan.-May 92; June-Aug. 92; and Sept.-Dec. 92) for sweet potato, yams and cassava. The projected production, as a percentage of the normative yield for each of these three seasons and crops respectively are as follows, in percentage:

	<u>SWEET POTATO</u>	<u>YAM</u>	<u>CASSAVA</u>
Season 1	62	70	70
Season 2	100	79	75
Season 3	100	100	100

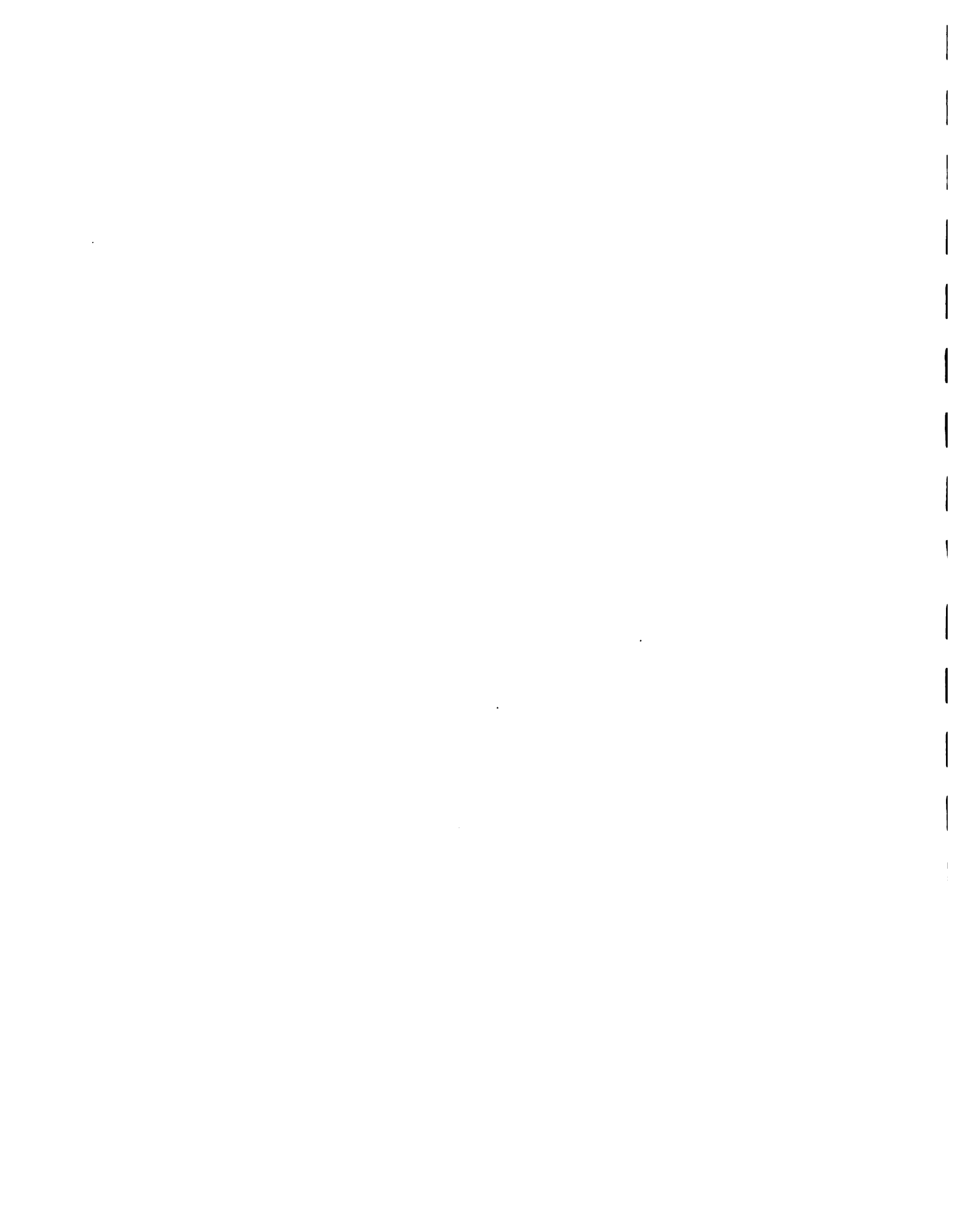
The deficits were predicted based on less than normal rainfall.

2.2.1.4 Beverage Crops.

The two principle beverage crops are coffee and cocoa, with coffee being second only to rice in terms of overall economic value, and by far the most important export crop.

Coffee.

For decades coffee has been the most important agricultural export commodity. In 1989, coffee accounted for 64% of the total value of the major export crops, including mangos. In terms of in-country values of crop production, coffee ranks second only to rice, and is followed by sweet potato and beans (all) respectively (World Bank 2/91:A2). In 1988, local consumption of coffee exceeded the quantity exported (IICA/IFAD 5/91:18). Coffee is grown on approximately 135,000 hectares. This crop, along with its associated shade trees, accounts for 54% of the total area considered to be under permanent perennial vegetative cover (9% of the country's terrestrial land). In terms of actual surface area, the cultivated coffee "forest" is even more ecologically important than the remaining "natural" forests (107,000 ha.) An estimated



250,000 farmers grow coffee, and the crop provides direct or indirect employment to nearly 2.4 million people. Coffee is also important because the crop can serve as collateral under the traditional credit system (i.e., loans from speculators) and the harvest/selling period does not coincide with other major crops, which serves to improve the overall cash flow at the farm level.

Probably less than 10 percent of Haiti's export coffee is purchased by countries involved in the embargo (5.1 percent to Japan and 0.54 percent to the USA in 1990; 9 percent to Japan and 4.1 percent to the USA in 1989 according to the Ministry of Commerce and Industry). Italy, Belgium and France, respectively, purchase at least 75 percent of the annual export product from Haiti. Nonetheless, the embargo has negatively affected the coffee subsector. Fuel prices and unavailability at certain times have resulted in higher internal transportation costs and less volume transported (at least partially because lower farm gate prices decreased both harvest and sales.) Coffee normally exported via Jamaica was blocked by the embargo, and had to be sent directly to Europe which disrupted exportations as new arrangements had to be negotiated and freight prices increased. Since June 1992, according to one exporter, French boats have refused Haitian products, and transport was undertaken with Russian vessels, but on a much more irregular basis. Some of these costs were also supported by the producers, lowering revenues even more (de facto Government White Book on the embargo 8/92:16). Even payment arrangements had to be altered by some of the exporters because transfers via US banks were also prohibited.

Table 2-2 presents the monthly exports of coffee (number of 60 kg. sacks) for the three most recent years. It is important to view this data with the understanding that coffee exports have been declining since the 1987-88 season, most probably as a result of the precipitous fall in international prices. Specifically, with exports at 294,170 sacks for the 1987-88 season; 225,366 sacks for 1988-89; 189,080 sacks for 1989-90; and 182,329 sacks for 1990-91; the annual decreases were -23 percent, -16 percent, and -4 percent, respectively. Comparing the data available from Table 2-2 (and omitting the normally low volume last month of the coffee year, September, for each of the three years because the 1992 information is not yet available) it appears that the declining trend stabilized somewhat between the 1989-90 and 1990-91 seasons at nearly 182,000 sacks per year. However, comparing the 11 month average for these two years with the 11 reported months for the 1991-92 season (142,668 sacks exported), there has been a further decline of over 21 percent. Given the problems cited in the previous paragraph, it is reasonable to assume that a substantial amount of this decline can be attributed to the embargo and related effects. Examining the intra-year data more closely provides further supportive evidence for this thesis. The average number of sacks exported for the first three months of either prior year is about 47,000, as compared to only 16,000 for the 1991-92



season. This decrease of some 65 percent occurred during the fuel crisis which immediately followed the coup d'etat and the subsequent embargo. The abnormally high volumes exported in June and July of 1992 provide further testimony to unseasonal shipping patterns and an overall disruption of the typical transport, processing and exporting system.

Table 2-2: Coffee Exports by Month, 1989-1992
 (Number of 60 kg. Sacks)

	<u>1989-90</u>	<u>1990-91</u>	<u>1991-92</u>
October	12,023	16,085	1,914
November	10,765	12,920	4,985
December	24,365	18,365	8,815
January	19,470	19,325	18,225
February	20,570	17,835	15,395
March	18,010	22,800	10,145
April	25,707	23,595	21,000
May	19,930	17,745	15,235
June	11,310	14,280	18,089
July	13,080	11,970	24,790
August	6,220	6,909	4,075
SUBTOTAL	181,450	181,829	142,668
September	7,630	500	NA
TOTAL	189,080	182,329	NA

 Source: Ministry of Commerce and Industry, Statistics Services

An indirect effect of the embargo and escalating prices for most commodities in Haiti, coupled with the even lower prices paid for coffee for reasons previously cited, has been the accelerated conversion of coffee holdings into other more lucrative forms of agricultural production. Writing in 1991 and citing international coffee at the 1989 price of \$0.90/lbs. (down from \$1.70 in 1986), the World Bank (2/91:iv) stated that the relative price of coffee with respect to competing crops such as maize and sorghum had not been improved by the elimination of the export tax due to the decline of world prices. By September 1992, international prices had declined even further to \$0.60/lbs. In some regions known to IICA, farmers are not even harvesting their coffee because they can't recover their costs with the current low prices. This conversion begins with cutting the shade trees, and has been fueled by the demand for charcoal during the past year. Once the land clearing is complete, annual crops such as maize, sorghum and



beans (if the farmer can afford the seeds) are planted to generate short-term revenues. The negative impact on the deteriorating environment is yet another consequence of this trend.

Cocoa.

Cocoa is approximately tied with sugar (formerly) and the essential oils as an export crop with an annual value of about US \$3 million. (All of these crops rank behind coffee, mangos and sisal.) The annual volume varies considerably: from a 20-year peak of 3.6 MT in 1984 to almost the 20-year low of 1.1 MT in 1990. The average volume exported for the 5-year period 1986-1990 was 2 MT according to data collected by the IICA team (nearly 30% lower than data reported by the World Bank, 2/91: Table A4). International prices have also fluctuated considerably, and have likely been a factor with regard to the depressed export volume in 1990 (world price decrease of 38 percent, local price decrease of 45 percent) and an apparent rebound to nearly 2.3 MT exported through October 1991 (Tardieu 92:51), when the international price increased by 25 percent.

The wide range in annual export volumes and fluctuations in world prices make it difficult to evaluate the overall impact of the embargo of this crop. The ability to stock this relatively small volume commodity in favor of improved prices is yet another confounding factor. The fact that the majority of cocoa is exported to Germany suggests that overall there would be no reason to expect a significantly detrimental impact on the industry.

However, there have been negative impacts from the embargo with respect to the cocoa cooperatives organized in 1984 by MEDA (Mennonite Economic Development Association). For the 5-year period 1986-1990, the MEDA cooperatives controlled an average of 18 percent of the cocoa export market. These cooperatives benefitted by the elimination of the ubiquitous speculator "middlemen", and all proceeds returned to the producer except a 15 percent charge for administration. A total of eleven cooperatives were formed and involved nearly 4000 producers. Unfortunately, 80 percent of the cocoa exported via MEDA was destined for the USA, and another 10 percent to Canada (the remaining 10 percent was exported to the French Antilles). The USA and Canada export market has been totally closed. At present, only two of the MEDA cooperatives continue to function, and the majority of the remaining producers have returned to dealing with the major export houses and their speculators.

2.2.1.5 Sugarcane.

While sugarcane and sucrose production were relatively stable into the 1980s, recent years have seen a slow decline in area planted to cane, and a more rapid decline in productivity. From a total of 85,000 tons processed per annum up to 1980, the



quantity decreased to around 30,000 tons in 1990. This figure represents less than 30 percent of the domestic consumption (IICA/IFAD 5/91:19). Combined factors including low world prices, inefficient production, decline in the U.S. protected market share and contraband imports have resulted in reduced operations and finally closure of the sugar mills (World Bank 2/91:41). All four sugarcane mills in Haiti are currently closed: Darbonne/Leogane (1986); Centrale Dessalines/Cayes (1989); Welsh/Cap Haitian (1990) and HASCO/Port-au-Prince (1992). There are rumors that Welsh plans to reopen.

A significant quantity of sugarcane produced is consumed by local artisanal alcohol factories. According to information obtained by the IICA team, this amount has been steadily increasing as follows: 1986 - 27 percent; 1988 - 40 percent; and 1991 - 50 percent. With the closure of the mills, sugarcane is now either converted to artisanal alcohol, consumed locally, or converted to an artisanal "brown sugar" (rapadou), especially in the Plateau Central region. ANDAH (6/92:14) reported that even the demand for the alcohol product declined during the past year in the West as surplus mangos were substituted for the "clairin" usually served to agricultural labor forces in partial payment for their work. Production of rapadou also suffered as a result of contraband sugar imported from the Dominican Republic. The USAID Monitoring Report (10/92:17) states that between September 1991 and September 1992, refined and unrefined sugar prices increased by 29 percent and 25 percent, respectively.

2.2.1.6 Fruits and Other Tree Crops.

The major crops in this category include mango, citrus (lime), other citrus (orange, grapefruit, mandarin), banana and plantain. Coconut is included with the Oil and Protein Crops (2.2.1.2). There are also numerous local fruits such as Breadfruit (*Artocarpus communis*), Avocado, and others which are locally important but for which virtually no regular and reliable data are available. The most important of these crops, both from a food and economic point of view, are mangos and plantain.

Mango Production and the Associated Export Market.

Among the multitude of mango varieties extant in Haiti, the Fransik (or Madame Francis) is not only a large, non-fibrous variety, but is harvested during a 10-month season while Mexico, the major source of mangos for the U.S. market, only has mango production for a 4-month period. As a result, a significant export market for the Haitian Fransik has developed since the mid 1980s. By 1989, mango had moved into the second position for agricultural export revenues (see Table 2-3), still considerably behind coffee, but surpassing sisal, the combined essential oils, cocoa and sugar. The estimated annual production by 1990 was 90,000 tons (World Bank 2/91:40).



Table 2-3: Value in US\$ Millions of Mango Exports (1985-1992)

<u>1985</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>
3.9	4.5	4.0	5.2	4.4	5.2	0.12
No. of 5 kg. flats (millions):				2.1	2.5	0.06

 Source: World Bank 2/91:16 (1985-1989 data), and USDA figures priced FOB P-au-P @ US \$2.10/flat.

The effects of the embargo on mango production and the associated industry have been varied, but some of these may have a mid to long-term detrimental impact on this nascent industry. First, the foreign exchange was essentially lost. Second, many of those jobs related directly to export activities were also lost because the primary U.S. market was completely closed. However, producers and marketers still derived substantial revenues from increased internal market sales. ANDAH (6/92:14) states specifically that mango prices did not change much from the previous year, and that producers had no problems selling their product. This increased local market derived from a general shift among the poorer levels of society to less costly foods. Alternative commercial uses of mango have been developed, such as the introduction of boiled green mangos in the Northwest, and the export of pickled mangos to Europe.

On the detrimental side, during the past year there has been an increase mango tree cutting to produce plank wood and/or charcoal. ORE (4/92:2) reports the cutting of trees which were bearing export quality mangos. An undoubtedly more widespread problem highlighted by Tardieu (92:50) has been the destruction of certain local varieties of mangos perceived by needy farmers NOT to have substantial export value. Unfortunately, the "top-working" of these trees (i.e., grafting improved quality mango budwood onto established trees) could effectively convert these trees to export quality production within 1-2 years, thereby increasing the volume of exportable mangos to the lucrative U.S. and European markets. Newly planted trees require 4-5 years to begin production. Tardieu also notes (92:48) that a prolonged absence of Haiti mangos (the embargo is entering its second year) on the international market will force importers to seek other sources. This, coupled with much more intensive research in other Caribbean and Latin American countries to produce the more desired "red" mango during the same seasons as the Haitian Fransik, might ultimately eliminate the niche currently enjoyed by Haiti.



Plantain.

Plantain, although frequently overlooked as a crop (or confused with bananas), is an important product. With an estimated production of 300,000 MT/year, plantain (or "banane" in Haiti as opposed to "figue" for sweet bananas) is not only one of the largest crops in terms of production volume, it is also among the most profitable on a per area basis. Moreover, as a perennial crop, it is well suited for environmentally suitable agroforestry systems. Plantains have potential for increased domestic production/consumption, and as an export crop (World Bank 2/91:40-41).

While most farmers include at least some plantain within their low input cropping mix, a considerable but unknown portion is commercially produced under both fertilized and irrigated conditions. ANDAH (6/92:12) states that the scarcity of water and its high cost on the Arcahaie Plain drastically reduced production. Cassava was even substituted for plantain in some plantations. Likewise, the high cost of fertilizer and periodic lack of supplies also precluded maximized production as its use was foregone. The USAID Monitoring Report (10/92:25,27) claims that due to lack of water and fertilizer, overall plantain production was only 63 percent of the normal during the Jan.-May 1992 season, and 71 percent during the June-August season. Note that the USAID expected normal year total production is only 113,000 MT, as compared to the World Bank estimated of 300,000 MT. Although a 58 percent price increase was recorded in three Port-au-Prince markets for the most common type of plantain between September and November 1991, the price subsequently dropped and there was no net price change between September 1991 and September 1992 (10/92:17).

Other Fruit Crops.

For some of the other fruit crops, estimated annual production by USAID surveys (cited in World Bank 2/91:40) are as follows: banana (*Musa*), 210,000 tons; avocado, 50,000 tons; other citrus, 33,000 tons; and lime, 7,000 tons. No data are available concerning specific changes in fruit crop production over the past 14 months. (The USAID Monitoring Report treats all fruits as a combined category, and while net decreases were projected for the first two seasons apparently due to drought and/or irrigation constraints, these data seem difficult to interpret in a meaningful manner). In previous years, however, when the demand for income surpassed the local use or value of the fruit, both mango and avocado trees have been cut to produce wood or charcoal. Since this activity has been reported for mangos (ORE 4/91:2), it is logical that there has been some reduction in current, and future, avocado production as well. With the importance of limes to the essential oil market (see Section 2.2.1.8) one processor has initiated the nursery production and subsequent free distribution of seedlings to farmers (and



presumably future producers). The army actually assisted with the distribution of these seedlings during 1992. Finally, according to the World Bank (2/91:40) only 10-20 percent of the annual fruit harvest is marketed; the remainder is consumed locally.

2.2.1.7 Vegetable Production.

Vegetables such as onions, carrots, cabbage, tomatoes, eggplant, lettuce, beets and others are grown in Haiti primarily as cash crops rather than for home consumption. This is strongly evidenced by the fact that the major production occurs in suitable areas near the major populations centers. Most vegetable production is situated either in favorable high elevation settings (e.g., Kenscoff, Furcy, Seguin, Rochelois, Goyaviers and Salagnac) or is associated with irrigation perimeters (e.g., the Cul-de-Sac plains). There is no production or revenue data available.

Both the ANDAH report (6/92:12) and the defacto Government White Book (8/92:12) report a 50 percent reduction in surface area planted for some of these crops. In some cases, lack of irrigation water and/or fertilizer necessitated the reduction in plantings; a high incidence of white fly attacks on the Gonaives eggplant crop was also cited. Lack of availability and the exorbitant price for the commonly used fungicide, ridomil, is cited in Tardieu (92:35) as yet another constraint. It may be that the unavailability of seeds constituted the single most major constraint on vegetable production during the first year of the embargo. According to a survey conducted in March 1992 (USAID Monitoring Report 5/92) the total availability of seeds for the six most commonly planted vegetables was 1,022 pounds (1,000 pounds of carrot seeds, 22 pounds for cabbage, none for onion, tomato, lettuce or beet). The normal annual supply is 65,300 pounds.

One industry and its associated farmers particularly hard hit was tomato processing. Although some references claim that the entire annual production was lost, the monopoly company, SHAISA, reported to the IICA team that its production was reduced greatly and pretty much confined to its own land (totalling less than 1000 hectares). It did, however, cancel their production contracts with 600 local producers who farmed a combined area of over 1000 additional hectares. The principle reason provided was the difficulty in operating the SHAISA processing plant due to the unavailability of fuel, repair parts and product containers.

Several other entrepreneurs had been producing cucumbers for an export market. This activity ceased entirely, and one of the producers shifted to sorghum production. Cayenne peppers (used for hot sauce) were becoming an increasingly important specialty crop in areas such as Cap Haitian and Les Cayes. Although no specific data are available on the production or value of this commodity, it is known that a major buyer was a well known US



company and therefore it is assumed that this market has been closed due to the embargo.

2.2.1.8 Other Non-Basic Crops.

In Haiti, non basic crops include tobacco, sisal, cotton, several essential oils (vetiver, amyris and lime) and cut flowers/ornamental plants. All except tobacco are export commodities.

Tobacco.

Tobacco is not an important crop in terms of surface area planted in Haiti, but serves a significant role in reducing the foreign exchange deficit. Moreover, the cigarette manufacturing company in Haiti is the single largest private tax payer in the country. Tobacco production received at the factory for the past two years has been about 350,000 pounds. This provides 30-35 percent of the factory requirement to meet the demand for their local brand of cigarettes. The remaining percentage is imported, not because production cannot be increased in Haiti, but because additional types of tobacco which can not be grown in-country are required for the total blend. The production required by the company is cultivated on a few hundred hectares under contract arrangements. Additional tobacco is produced on small plots to supply local artisanal demand, but this is a very minor amount. Seeds are selected from each crop for subsequent planting. Tobacco production in Haiti was not significantly affected by the embargo. However, total costs were increased because all supplies had to be sourced in Europe with corresponding higher costs than normal.

Sisal.

Although production, and therefore revenues, seem to vary considerably, by the end of the 1980's, sisal and mango competed for the number two position among the agricultural exports with a total value of US \$5 million. One of the principle sisal factories in Haiti estimates that over 100,000 people are engaged in sisal production. Two companies claimed a 35 percent decrease in operations. ANDAH (6/92:14) reports that the majority of the primary processing plants in the south were closed through April, and that prices had declined by 50 percent.

Cotton.

Between 1980-1986, an average of 5,600 MT of cotton were produced per year on 12,500 hectares (IICA/IFAD 5/91:60). The last reported data on production of cotton as an export commodity were for 1984 at 6,000 MT. It is reported that the principle cotton processing factory closed, prior to the 1991 coup d'etat.



Essential Oils.

The three essential oils produced and processed in Haiti are vetiver, lime and amyris. Both production volume and revenues from exports have declined over the past decade, and with one notable exception (the production and distribution of one million lime seedlings per year by one major processor) little effort has been expended to reverse this trend. Total export revenues in 1989 were US \$3.6 million.

ANDAH (6/92:14) reports that many of the vetiver processing plants did not open for the 91-92 season. Increased energy costs to operate the plants, rather than any decrease in raw material production, appears to have been the controlling factor. This factor also affected amyris oil production, with certain plants operating at only 25 percent of their capacity. Since virtually all vetiver oil is marketed in Europe, the embargo impacted primarily in-country processing activities (via higher fuel costs) which indirectly affected the open export sales due to decreased product volume.

Such was not the case for lime oil, which is marketed in the U.S. Exports have ceased totally since the embargo. One major lime processing plant continues to function (buying limes at the same price paid the previous year). This factory has decided to expand their storage capacity, with the attendant risks, to weather the embargo and with the view of increasing future market share. This is the same company which began a five year program to distribute free seedlings to increase lime production and availability for future purchase.

Cut Flowers and Ornamental Plants.

This is a small, but apparently lucrative, agribusiness, which has evolved primarily during the past half decade. There is no organized data collection or statistical reporting, and the category has not been included in previous agricultural sector assessments. Likewise, the percentage of production used to satisfy local demand, as opposed to that destined for export, is not known.

The survey of agribusinesses conducted by IICA included one participant in this category. Specializing in roses, this enterprise reported that prior to the embargo they were exporting 100 dozen per day to Canada and the U.S. Since the embargo, 30 dozen have been sold locally per day. Another concern known to one of the IICA team members claims to have had \$75,000 of stock developing for export prior to the embargo. None of this exportation was realized and all production has been suspended.



2.2.2 Livestock Production

Reports indicate that sales of livestock have increased substantially during the embargo months. ANDAH (6/92:5) reports that livestock sales increased by 150 million gourdes over their normal levels between December 1991 and April 1992. Because all classes of livestock held at the peasant farm level serve as reserve capital, these sales indicate farmers' need to raise cash as a response to general loss of work opportunities (and/or remittance revenue) and the highly inflationary prices for virtually all basic commodities. The ANDAH survey (although of limited sample size from two zones) confirms this hypothesis.

Two-thirds of the farmers interviewed by the ANDAH survey in the South-East (n=15) sold animals between December and April, six of these specifically stated the sale was necessitated in order to buy food. The average numbers of animals sold by the respondents (0.4 cattle; 1.8 swine; 1.6 sheep/goats) can be equated to approximately one-half of their holdings. Similar results were obtained from a survey in the Artibonite region. In the South, 75% of the poorer farmers interviewed have sold cattle, which for this class of farmer might well represent their single holding. This situation is also reported by ORE (4/92:5). In a survey conducted by several NGOs operating in the vicinity of Les Cayes, results showed that goats were becoming scarce in several areas including Lazile, Chardonniere and Les Anglais. The gravity of this situation is illustrated further in the ORE report: "The practice of 'gardinage' whereby a second party looks after the livestock for the owner (in return for a percentage of the sale price and offspring) has also been affected. The 'gardiens' are prematurely returning the livestock to the owner for immediate payment of their share. Since owners lack the cash to repay the 'gardien' they are forced to sell at a loss" (ORE 4/92:5).

The ANDAH report (6/92:28) also states that 2/3 of the herd (presumably sheep and goats) in the "Far West" and La Gonave have already been slaughtered. CARE, an NGO with a strong presence in the northwest, also reports substantial increases in animal sales (pers. comm. 8/92). At the time of the ANDAH survey (April), increased sales were not yet reported for the Central Plateau; the farmers stating that they were saving their goats to finance the forthcoming crop season. This season has since passed.

The large increase in sales has resulted in a serious decapitalization both in terms of reserve savings (i.e., the bank account on the hoof) and in actual revenues received. ANDAH reports that live animal prices have decreased by 20-40 percent in the South (6/92:28). ORE reports collaborating values for the percent decrease in prices from April 1991 to April 1992 which are specifically 35 percent for cattle, 26 percent for swine and 28 percent for goats (4/92:5). ANDAH (6/92:5) states that this



decapitalization has affected 40 percent of the small and mid-level farmers, and 15 percent of the bourgeois farmers.

Although meat prices have also increased (see Table 2-4), the augmentations (with the exception of poultry, see below) reflect an over-supply of available meat (which might be considered a luxury commodity in Haiti).

**Table 2-4: Retail Meat Prices, Marche Hyppolyte, Port-au-Prince
 Sept. 1991 to Nov. 1992 (All prices in gourdes/
 pound.)**

	<u>Sept.91</u>	<u>June 92</u>	<u>Nov.92</u>	<u>% Change</u>
beef	9.00	10.00	10.00	11%
goat	11.00	13.00	15.00	36%
pork	8.00	10.00	15.00	88%
chicken	8.00	12.00	10.00	25%

 Sources: ANDAH 5/92:20 and IICA Team.

2.2.2.1 Livestock Feeds and the Swine Industry.

The absence of livestock feed concentrates and other additives became apparent in January 1992. This absence affected primarily the swine and poultry industries (see below). Between January and April, actual prices for wheat-shorts (son de ble) increased from 20-50 percent over pre-coup prices (ANDAH 6/92:22). With the closure of the parastatal wheat processing plant due to the cessation of wheat imports, son de ble was no longer produced in Haiti. Contraband product could occasionally be found, but at prices ranging between \$38-40 Haitian per sack. During the same period, corn and sorghum "shorts" (i.e., milling by-products) had increased more than 50 percent. In February, a shipment of soybean meal was received, but at a price of 4000 gourdes/tonne. The pre-September price was 1500 gdes/T (ANDAH 6/92:15,22).

2.2.2.2 Poultry Production.

By the end of 1991, the unavailability of fertile eggs and the increased costs of protein concentrates resulted in the closing of virtually all commercial poultry production operations. In February 1992, the principle producer managed to import fertile eggs, but a 40-60 percent increase in feed prices and the subsequent increase in chick prices from 2 to 4.50 gourdes resulted in a 25-40 percent increase in chicken meat prices on the market over December 1991 prices. Chicken imports from Holland (a country not supporting the embargo) in March, sold at pre-crisis prices and lowered consumer costs, but entered into competition with the



struggling local producers. The peasant cooperative in the Cul-de-Sac (COOPEP) remains closed (ANDAH 6/92:15).

The de facto Government White Book (8/92:12) states that between September 1991 and July 1992, poultry production had been reduced by 50 percent (from 600,000 to 300,000 pounds) and egg production had decreased by 70 percent (from 100,000 to 30,000 units). Although not specifically cited, it is assumed that these decreases reference one or more specific commercial producers, since, for example, total egg production for 1986 was estimated by the World Bank at 2.5 million dozens (IICA/IFAD 1991:20). This information also contradicts information from major egg producers interviewed by the team.

2.2.2.3 Conclusions.

It appears from all indications that Haitian farmers have been selling a much higher number of livestock than usual in order to meet cash needs for the purchase of food and other basic commodities, to pay for agricultural labor and other necessary expenditures. In effect, they have been liquidating their savings accounts. Given "average" numbers for livestock holdings, it is not unreasonable to assume that perhaps 50 percent of the average holdings have been sold. This does not necessarily imply that all or even the majority of these animals have been slaughtered. There is a limited demand for meat in Haiti (as a function of disposable income) and it does not seem likely that animals have been slaughtered in excess of the demand. In fact, Tardieu (1991:40) reports that there has been a 50 percent decrease in slaughterhouse activity. Most likely, those people with adequate means (other sources of income, large land holdings, etc.) have been able to purchase livestock at discounts of at least 30 percent. Thus, the disparity between the poorer and the more wealthy Haitian has been increased.

2.2.3 Forestry and Environmental Rehabilitation.

The extreme gravity of the forestry resources and overall environmental conditions prevalent in Haiti have been well documented. From an estimated 21 percent natural forest cover in 1945, only 107,000 hectares (4 percent) remain today. Another 4.8 percent (135,000 ha.) of "cultivated" forest cover remains as a coffee/shade tree complex, but even this is threatened as farmers, faced with low returns from coffee, convert these areas to more immediately profitable agricultural exploitations - often field beans planted on recently cleared fields.

The impact attributable to the political crisis and embargo has been dramatic. Most notable has been the substantial increase in wood cutting for charcoal production. While the limited data available on this impact to date are not directly equatable, some illustrative calculations can be made. The de facto Government



White Book (8/92:32) stated that an additional 68,000 trees had to be cut each month for charcoal production in order to replace the embargoed butane cooking gas. This loss approximates one-third of the surviving trees planted during the peak years of the agroforestry projects. Note that this figure does not include the additional demand from kerosene-based industries (bakeries, dry-cleaning, etc) many of which also had to convert back to wood fuels. ANDAH (6/92:32) calculated that the equivalent of 600 hectares of forests were cut between November 1991 and April 1992 to supply the increased charcoal demand. Projecting this figure over the past seven months leads to a combined deforestation during the embargo period of about one percent of Haiti's remaining forest cover. This is the most conservative calculation possible, and overall effects are undoubtedly higher. Charcoal production has become the leading agro-business in Haiti during the past twelve months.

2.2.4 Fisheries and Aquaculture.

The fisheries and aquaculture subsector in Haiti exploits both the coastal marine and limited natural and man-made fresh-water resources. Techniques and equipment are primitive, employing precarious boats, beach seines and fish traps, resulting in an estimated average annual catch of 5,000 tonnes, well below the FAO calculation of a sustainable yield of 12-14,000 tonnes per year (MARNDR Agric. White Book, 9/92:p.53-54).

The majority of fish imported to Haiti (about 12,000 tonnes per year) derive from Canada. It is interesting to note that although Canada is a strong supporter of the embargo, it has not interrupted its export product to Haiti.

During the 1980's, the principle export from this subsector was lobster, which decreased in value from US \$3.5 million in 1982 to US \$1 million by the end of the decade (IICA/IFAD 5/91:21). This decline resulted from over-exploitation. As the majority of this commerce was to either the U.S. or Canada, it was abruptly halted by the embargo. Exports have been reinitiated slowly by each of the six major players, destined for Saint Martin, Guadeloupe and Guyana, and transported by both Haitian commercial air carriers and Air France.

There are several commercial aquaculture enterprises in Haiti. The largest, Aquaculture de Nippes, S.A., produced fresh water shrimp for export to the United States. This activity was completely suspended due to the embargo. This company, along with AquaFarm, S.A., continues to produce Tilapia and Carp for local markets. Two other private farms in the Artibonite (with 400 and 30 hectares) are under construction with the goal of exporting salt-water shrimp (MARNDR Agric. White Book 9/92:56-57).



In addition to the obvious cessation of lobster and fresh-water shrimp exports due to the embargo, certain other effects can also be identified. Given the "free" nature of this resource and the increased prices of most other foods, it is logical that the exploitation of both coastal and inland waters was increased. The exception to this would be those relatively few fishermen utilizing motored craft, due to the drastic increases in fuel prices and decreased availability of replacement parts. This negative impact is minimal. According to the only seller of outboard motors in Haiti, the two major fishing "companies" each have about 20-25 motors loaned out to "small fishermen." MARNDR does not think that the total number of motorized small fishermen exceeds 100. Those fishermen and associated marketers relying on either rural cold storage for the temporary preservation of their catch prior to shipment to Port-au-Prince, or the tourist trade at the beach hotels, undoubtedly suffered a decline in revenues due to decreased electrical supplies and tourists (Tardeau 92:42).

2.3 Agricultural Inputs.

The principle categories of inputs for Haitian agriculture are land, seeds, tools, labor, fertilizer and agri-chemicals for selected crops and credit. Land, labor and the majority of seeds utilized for the staple crops are essentially indigenous products, whereas fertilizer, pesticides, fungicides and other agri-chemicals, tools and selected seeds and credit funds derive from external sources.

As noted in Section 2.1, although basic food was exempted from both the OAS and US embargoes, inputs essential for Haitians to grow their own food, such as fertilizer, seeds, and pesticides, were not exempted until late May from the U.S., and have never been exempted by other OAS states. Even after the exemption was granted by the U.S. on humanitarian grounds, importers still were required to obtain licenses from the U.S. Treasury Department. No data are available on changes in land-holdings as a result of the crisis, although there are some reports of small holders selling land to generate income to survive. Given the lack of reliable data, however, on any changes, the team was unable to identify any trends.

2.3.1 Tools and Other Agricultural Implements.

The vast majority of Haitian agricultural production is accomplished by hand-labor and tools such as machetes and various types of hoes and pickaxes. Although generally available from the agricultural supply houses and the "general stores" in small towns, there tends to be an overall shortage of tools actually in the hands of farmers. This situation probably derives from either a lack of capital, or a reluctance to purchase tools until absolutely necessary. ANDAH (6/92:22) reports that between January and May 1992, wholesale prices for tools increased 5-10 percent and retail



prices increased 20-30 percent. At the retail level, this was a 40-70 percent increase from year-ago prices. This may not have had a significant impact on small-holding agricultural production simply because it would be expected that purchases of new tools would be deferred in all but the most urgent cases.

For the larger landholders and agribusinesses employing mechanized farming techniques, increased fuel prices and the frequently reported lack of replacement parts probably had a more definitive negative impact on the production from these operations. No specific data was collected.

2.3.2 Seeds.

Virtually all staple crops (i.e., maize, sorghum, rice and beans) are grown from locally produced seeds. For maize, sorghum and beans, this seed is characterized by a lack of selection, improper processing and storage and low germination. Frequently, there is no differentiation between comestible grain and seed for planting. Even tobacco seeds are selected from crops grown in-country. There is a limited production of hybrid sorghum, mostly by the larger, mechanized farms. Much of this production is destined for livestock feed, especially poultry. With the exception of the rice program and a modest effort by ORE in the Les Cayes locality, there is virtually no significant seed research/ improvement activity in Haiti.

The one agricultural sub-sector which was most adversely impacted was vegetable production. As described in Section 2.2.1.7, the majority of these crops are grown from imported seeds and, during the month of March for which data is available, there was an extreme shortage. How much this reflects production for the entire year is not known. Since there seems at present to be an adequate supply of most vegetables available on the market, it is possible that the March shortage was more a matter of being "caught-short" and was remedied thereafter from other sources.

2.3.3 Labor.

Wages paid to agricultural laborers increased (and thus costs to farmers employing such labor also increased) in certain parts of the country between January and June 1992. Although changes in labor demands and wages are normal depending on the crop and season, the reported increases exceeded normal levels. According to ANDAH (6/92), wages for laborers increased 50-70 percent in Arcahaie, La Gonave, and Petit-Goave, and 20-25 percent in the North and the South over wages in January 1992. Although no increases were reported for the Artibonite, the Plateau Central and the Southeast, ANDAH notes that even though basic wages paid did not increase in these latter areas, actual costs did increase because the cost of providing the standard meals for workers was higher.



The price for animal traction services in the St-Michel locality of the Plateau Central was also reported to have increased by 45% (ANDAH 6/92).

2.3.4 Fertilizer.

Fertilizer demand for a "normal" year in Haiti is not well documented. The World Bank's 1991 Agricultural Sector Review estimated use at less than 7 kg/ha, compared to 90 kg/ha in Asia and 120 kg/ha in the industrialized world. Given approximately 1 million hectares of cultivated land, this would mean that use was approximately 7,000 MT/year. As illustrated below, even during the embargo, recorded imports were more than double that figure. Prior to the embargo, the major supplier was the Dominican Republic, with shipment by land possibly less well-documented than port entries might have been. There are thus no accurate baseline data against which to measure imports and changes in levels during the past year. Most knowledgeable observers estimate that demand is in the range of 20,000-25,000 MT/year, with rice farmers accounting for at least 70 percent of the total use.

Table 2-5 below provides a summary of the dates and quantities of complete and granular urea fertilizer imported during the September 1991 to December 1992 period.

**Table 2-5: Fertilizer Imports September 1991 - December 1992
(Metric Tons)**

<u>Date</u>	<u>Two Major Importers</u>	<u>Dominican Plants</u>	<u>Totals</u>
Sept. 91	3,150	0	3,150
March 92	3,000	1,000	4,000
June 92	<u>4,670</u>	<u>1,000</u>	<u>5,670</u>
Sub-totals	10,820	2,000	12,820
Nov-Dec 92	5,300	0	5,300
Totals	16,120	2,000	18,120

Source: Personal communication from one major supplier,
November 1992

It should be noted that the tonnages above represent the combined amounts of granular urea and complete fertilizer imported during the September 1991 - December 1992 period, with urea accounting for 12,320 MT of the total, or almost 70 percent. Data were not available on stocks in country, either with resellers or at the farm level, at the time of the coup.



The supplies have been sold directly by the major importers to farmers, and to numerous resellers who service rural areas. As will be discussed below, due to shortages and some speculation, retail prices have fluctuated greatly, depending on time and location. As demonstrated in Table 2-6 below, wholesale urea prices have more-or-less simply increased in parallel with the devaluation of the gourde, in spite of the increased cost of freight to Port-au-Prince. Price of complete fertilizer has in some cases increased slightly more, due to lack of supply of the preferred 12-12-20 and substitution of a higher quality 15-15-15 mix from Europe.

Table 2-6 below provides a summary of the net changes in wholesale prices in Port-au-Prince by one major importer for September 1991 and September 1992. Given the fierce competition in the fertilizer sub-sector, they may be considered indicative of prices for all importers.

**Table 2-6: Wholesale Fertilizer Prices in Port-au-Prince,
September 1991 and September 1992
(Prices in Haitian Dollars)**

<u>Type</u>	<u>September 1991</u>	<u>September 1992</u>	<u>% Change</u>
Complete	H\$ 18/100 lb bag (12-12-20)	H\$ 28/100 lb bag (15-15-50)	55.6 %
Urea	H\$ 20/50 kg bag	H\$ 28.50/50 kg bag	42.5 %

Source:	IICA	Team interviews,	November 1992

The aggregate figures in Table 2-7 disguise the fact that there were a number of periods of fertilizer shortage when importers had next to no stocks and retailers resold at black market prices. The resultant high prices forced many farmers to either shift to low-fertilizer crops, if they could find the necessary seeds, or to try to grow their normal crop with less fertilizer. As previously discussed in Section 2.2.1.1, rice production in particular suffered greatly due to the fertilizer scarcity and price problems.

A summary of the actual periods of scarcity follows. Of particular important is the scarcity of urea, and lack of preferred complete fertilizer, in May and June, when the major rice crop most requires it:



Complete Fertilizer

- nearly no stocks from October 1, 1991 to March 15, 1992;
- after March 15, 1992, farmers were often unable to obtain the traditional formula of choice, which is generally 12-12-20, but could opt for a high quality and more expensive European 15-15-15;
- nearly no stocks from November 1 to mid December 1992; the major importers unloaded another 1300 MT of complete fertilizer ingredients and 1000 MT of complete fertilizer at the end of 1992.

Urea

- nearly no stocks mid-January to mid-March 1992;
- nearly no stock May 1 to June 15, 1992.

The periods of scarcity were due to a number of factors. Some, such as the devaluation and the need for suppliers to find new sources, new shipping channels, and additional financing, were summarized for businesses in general in section 2.1. In the case of fertilizer, this was particularly important because the Dominican Republic and Trinidad had been the largest traditional suppliers. Additionally, the Haitian rice farmer prefers the highest quality of granular urea available in the world. While urea was always available to importers on the world market, the specific type of urea the Haitian farmer will pay for was not always available. The importers were understandably not interested in investing in products they didn't think they could sell.

Finally, fertilizer in Haiti has tended to be a low margin business relative to other commodities sold in Haiti, such as flour, sugar, and rice, and has not attracted well-funded new investors. Once the leading fertilizer importers found ways to bring in new stocks after the embargo began, the likelihood of new entries into the fertilizer supply business rapidly vanished, along with the black market margins. This is an example of market concentration among the larger firms, although in this case it appears that the market dominance and competition may have served to keep prices down.

2.3.5 Agri-Chemicals.

Specific information concerning the use of agri-chemicals in Haiti is not easily compiled. The World Bank (2/91) reports that rice is the only cereal crop which receives regular treatments. Other peripheral comments extracted from various reports suggests that some of the vegetable crop production also relies on the application of agri-chemicals. FAO data cited by the World Bank (2/91:A-6) indicates that US \$2.3 million dollars of pesticides were imported in 1987.



Concerning the impact of the embargo, it is reasonable to assume that these products were both less available and more expensive during the past year, and production of those crops which relied upon these products suffered. The de facto Government White Book on the embargo (8/92:14) states that Ridomil, the insecticide of choice in Haiti (actually a fungicide) increased in price threefold since the embargo (gourdes 20 per pound to gourdes 58).

2.4 Marketing

The embargo seems directly responsible for a number of significantly adverse effects on the internal marketing system. The major increase in fuel prices (see Table 2-8) has effected negatively all transportation costs. Not only are basic fares and charges higher, but there seem to be noticeably less transport trucks on the road. ANDAH states that transportation costs increased 25-100% between September 1991 and January 1992. This in turn caused a 10-15% price increase for basic foodstuffs (6/92:4). Tardieu states (reasonably but without supportive data) that the spoilage of perishables has increased by 10%, especially during the fuel shortage months of October 1991 through January 1992 (92:24). For the first year of the embargo, road conditions deteriorated considerably due to heavy rains and lack of maintenance (ANDAH 6/92:5,17).

The frequent non-availability and high cost of obtaining spare parts, tires and other maintenance items was cited by virtually every business concern interviewed by the IICA team as a major constraint. The de facto Government White Book on the embargo (8/92:13) states that an estimated two-thirds of the 10,000 Madame Saras have been forced out-of-business by a depletion of their capital. Moreover, many of these claim they will not be able to reinitiate their activities in any substantial way even after the embargo due to the lack of start-up capital.

Table 2-8: Fuel Prices in Haiti, September 1991 - Present

<u>Commodity</u>	<u>Retail Price/Gallon in Haitian Dollars</u>			
	<u>9/91</u>	<u>11/91</u>	<u>12/91</u>	<u>Present</u>
Gasoline	2.60	3.70	3.75	3.75
Diesel	1.75	2.40	2.45	2.45

 Source: Texaco, Port-au-Prince, November 1992



3. IMPACT ON THE POPULATION

3.1 Impact on Population Dynamics

Program analysis and planning in Haiti during "normal" times are constrained by inadequate knowledge of Haitian demographics, and analysis during the crisis has fared no better. The last Haitian census was undertaken in 1982 and was never fully analyzed. This paper uses recent Ministry of Health data for 1991 and the 1982 census as a base, and adjusts the disaggregated data to arrive at the generally accepted 1991 total of 6.5 million for the resident population. All figures should be considered indicative.³

Total Population 1991:	6,500,000 rounded
Port-au-Prince Metro Area:	1,512,270
Regions:	
West (inc. PAP)	2,620,019
Central	1,709,773
South	1,230,739
North	913,758

Secondary Cities over 10,000 inhabitants (Region):

Cap Haitien (North)	204,270
Gonaives (Center)	46,612
Les Cayes (South)	45,091
St. Marc (Center)	37,488
Jeremie (South)	28,688
Port-de-Paix (North)	24,107
Jacmel (Center)	21,300
Petite Rivière de l'Arti. (Ctr)	15,667
Hinche (Center)	15,622
Sub-total	438,845

The estimates above indicate that 23.3 percent of the population lives in the capital, and an additional 6.7 percent in the secondary cities, for a total of 30 percent urban population. Even if one subtracts this urban group from the total, comparing the remaining population with Haiti's estimated 28,000 square kilometer area results in a population density for rural areas of 162 inhabitants/km², which is dense given its fragile resource base.

The demographic situation has always been quite fluid, and only understood in its larger parameters. It is clear from field

³. The first paragraph and demographic figures were developed in December 1991 for a USAID/Haiti paper on its Humanitarian Food Assistance Program. They derive from the best estimates available to the Consultant at that time.

visits, discussions with knowledgeable individuals, and a few local-level studies of varying quality, however, that population movement is a key strategy for economic survival in Haiti, particularly by the agriculturally-based population. That is, seasonal, short-term, or longer-term temporary or permanent emigration decreases the household's overall risk by providing more diverse sources of income than only agriculture or artisanal production might provide. It can also provide for periodic infusions of larger capital to undertake important investments, i.e. house construction, land clearing, etc.

In general, there have been three kinds of population movement during "normal" periods: rural-rural, rural-urban (primarily to Port-au-Prince), and international. Each is summarized briefly below to provide a basis for understanding of changes that have occurred in the past year.

Historically, rural-rural migration has entailed primarily the movement of men in response to seasonal demands for agricultural labor in the major productive areas of Haiti, especially the Artibonite and the Cayes plain. The dimensions of this movement, even in normal years, are not well documented. Based on experience in other countries, it is assumed that any data that exist are seriously underestimated because of the relative intractability of this sort of data. It is known, however, that levels are in the tens-of-thousands of persons range, on a seasonal basis.

The second kind of migration common to Haiti has been rural-urban, and while it has included movement to secondary cities, it has been primarily understood as directed to Port-au-Prince. This rural-urban migration has been a major factor in the growth of Port-au-Prince, where more than half of the urban households are headed by first generation arrivals. Women have tended to predominate in this kind of migration. The Lavalas movement, in "La Chance Qui Passe," states that there are 130-140 women for every 100 men in Port-au-Prince, and that women dominate the informal sector, the salaried assembly sector, and service as domestics. (Operation Lavalas, November 1990, p. 78 ff).

The third kind of historically-common population movement has been international, including emigration to North America and the circum-Caribbean region. It is generally estimated that there are 1 million Haitians in each of the United States and the Dominican Republic. Up to the current period, the migrants heading north to the U.S. and Canada were generally from the urban entrepreneurial and skilled labor classes. By comparison, it is generally believed that most Haitians travelling to the Dominican Republic, St. Maarten, Surinam, and Guyana are recruited for seasonal agricultural labor and are much poorer, illiterate, and rural than their compatriots heading north. A recent report by the Centre d'Accueil des Rapatriés Haitiens (CARHa) states that of the



Paper on the embargo, for example, estimates that the trading undertaken by Madame Sarah's is down by 33 percent. Although some of this activity is picked up in national accounts and some micro-level surveys, much of it simply goes on outside the realm of formal or official accounts.

The discussion of agricultural income above highlights some of the income losses and strategies to overcome them, including charcoal manufacture. One of the many sectors that is related, but not usually captured in agricultural discussions, is the artisanal sector based on agricultural products. In summary, many rural households undertake some small artisanal manufacture which can be for local sale and use, such as mats or fishing nets or baskets, or for sale to an intermediary for export. Previous discussions have demonstrated that income is down in practically all sectors, so it is likely that the small artisanal sector for the local market is also suffering due to a lack of purchasing power and thus lack of demand. The artisanal export sector was in almost total closure for the first 6-9 months of the embargo, and only began to rebound when the U.S. Department of the Treasury began issuing licenses more freely. Even so, the estimated thousands of rural artisans who derived some portion of their income through such small scale manufacture clearly suffered. Some exporters have even warned that rural families were cutting such valued tree species as white palm in order to make charcoal, which will have a negative effect on the sector for years to come.

3.2.3 Conclusions on Income and Expenditures

The average pre-coup per capita income of Haiti's population, either in the aggregate or by strata, is not known with adequate precision to form any statistical conclusions as to its absolute or relative decrease in the past 14 months. It is certain that net income for the urban and rural poor has definitely decreased, at least by the 12 percent decrease in GDP and more probably along the order of 30-40 percent, representing the effects of devaluation.

It is certain that the vast majority of Haitians, and particularly the poor, rely on a number of income sources rather than just agriculture or just wage labor. There is measurable evidence that income from the primary sources of income (agriculture and wage labor) and other sources (migration, remittances) decreased substantially, particularly during the first 6 to 9 of the last 14 months, and that basic expenditures for food have greatly increased. In agriculture, decreases were due to a combination of the drought with the increased cost, or in some cases absolute lack, of inputs for agricultural production, although farmgate prices have not been recorded so relative decreases are not known. Wage employment in Port-au-Prince has greatly decreased, which has probably had a "ripple effect" into the informal sector which has constrained the overall job market, both full time and casual laborers coming in from rural areas.



Remittances from international emigrants decreased considerably in the six months immediately following the coup, and have now moved to 80-88 percent of pre-coup levels. The 40 percent devaluation of the gourde, and the major increases in basic food prices, have probably had the greatest impact on the poor, in terms of increasing the proportion of income they must spend just on food to survive.

3.3 Impact on Food Security and Nutrition

The CHI/CAPS report-in-progress that has been cited earlier focuses on food security and nutrition, and it is not the intent of this paper to try to summarize the detailed findings. That report should be available from CAPS and USAID (the funding source) in early 1993 and will likely prove to be the primary current reference on the subject.

It is important, however, to emphasize that food security does not imply food self-sufficiency, but rather "access to sufficient food for all people at all times for healthy and productive lives." As summarized in Chapter 2 of this paper, food imports -- both commercial and concessional -- have been providing an increasing share of Haiti's energy requirements for a number of years. Because much of these imports between 1987 and 1991 were unrecorded contraband, and because there is little agreement among sources as to Haiti's own production in a given year, it is extremely difficult to construct any sort of food balance sheet or quantify the food gap for any period of time. USAID reviewed a number of documents and found that estimates of the average food gap in Haiti ranged from 97,000 MT to 336,000 MT, for a difference of over 300 percent (USAID/Haiti Enhancing Food Security Project Paper, August 1991).

The more reliable way to determine the impact on the population of any perceived "food gap" and thus the degree of food security during the past 14 months is to assess nutritional data. In terms of a pre-coup baseline, the 1978 National Nutritional Survey revealed that almost three-quarters of children under five years of age were undernourished, with approximately 30 percent suffering from moderate or severe malnutrition (second and third degree Gomez classification). Furthermore, 6.4 percent of children examined were wasted (weight for height less than 80 percent of the NCHS/CDC reference median) and 23.6 percent were stunted (height for age value less than 90 percent of the reference median). Though there were only slight variations in malnutrition rates between regions, there were marked urban-rural differences with urban children, on the average, doing better. (It is important to disaggregate urban areas into marginal and non-compromised areas



because children living in marginal urban zones were nutritionally more similar to rural areas and at times significantly worse.)⁴

The 1990 CDC-MSPP survey assessed the drought-prone areas of Haiti (eight districts north of Port-au-Prince). Of the approximately 1000 children surveyed, the prevalence of low height/age (an indicator of chronic malnutrition) was 40.6 percent, and the prevalence of low weight/height (an indicator of acute malnutrition) was 4.2 percent. Approximately 34 percent of all children surveyed had low weight/age (an indicator of undernourished children).

The USAID/CHI monitoring team has also been collecting nutritional data since shortly after the September 1991 coup, and has essentially found little change from the baseline status. The October 15, 1992 Monitoring Report concluded that **"Nationwide, malnutrition in children has remained relatively constant over the past year, with approximately 50 percent of children classified as normal.**

Several of the donors and NGOs that have been undertaking concessional feeding during the crisis claim that the nutrition would have been much, much worse in selected drought-affected areas had the feeding programs not continued, and the team has no reason to doubt the veracity of this claim. USAID, the World Food Program, and the EC provided food for 0.7 to 1 million Haitians during the critical March - July "hungry season", and it is likely that this food did prevent increased incidence in M2 and M3 malnutrition, particularly in the vulnerable areas of the poor urban Port-au-Prince, the Northwest, and selected parts of the Central Plateau. The emergency feeding program was phased out as the first season harvest became available in August-September, and total feeding is now down to below 700,000, over 70 percent of which is regular school feeding by NGOs affiliated with USAID. Due to the double consequences of the embargo and the drought, however, it is difficult to predict whether similar emergency programs will be required to maintain food security in deficit areas in the future. The final CHI/CAPS report will no doubt have some recommendations in this regard.

⁴. This and the following paragraph were initially presented in the USAID/Haiti Humanitarian Food Assistance Program, December 1991.



approximately 1 million Haitians in the Dominican Republic, 3-5 percent work as cane cutters, 50-60 percent work in the informal sector (artisans, petty traders, etc.), and as seasonal agricultural laborers in the coffee, rice, tobacco, and banana industries, and 30-40 percent work in construction (CARHa, p. 4).

These three basic types of population movement have been both seasonal and short-term, long-term but still temporary, and permanent. The seasonal and/or short-term variety might include a young man migrating to the Artibonite for the rice planting season or to the Dominican Republic to cut can for one year, then returning home with some money with which to get married. The long-term but still temporary variety would include the thousands of Haitians in the U.S. who obtain legal immigration and find good jobs, work until age 65, and return to Haiti with U.S. Social Security checks and possibly a company pension to support them in old age. Permanent migration includes the thousands of Haitians in Canada, the U.S., and the Dominican Republic who have found good, or at least remunerative, work and comfortable living situations and will likely never return.

These types of migration have produced various income streams which have an impact at the level of the individual, the household, and the nation, and which are summarized below:

- 1) regularized, seasonal employment income, most typically from agricultural labor (local, national, or international) or artisanal manufacturing and sale during off-season months;
- 2) regularized remittances to rural households from urban or international migrants;
- 3) crisis remittances to rural households from urban and international migrants, i.e., set sums sent for specific events, such as funerals, education costs, marriages, illness, etc.;
- 4) returning migrants' investment monies, specifically designated for a particular transaction, e.g. land or livestock purchase, house construction, etc.; and
- 5) negative flow, i.e. rural to urban, for "social investment" in the younger generation, i.e., sending a child to Port-au-Prince for education or training purposes.

The events and circumstances engendered by the 1991 coup have altered population movement in and out of Haiti, which has had a number of effects on these income streams and thus an impact on overall rural economic productivity. The more significant of these are summarized in the following paragraphs.

Early in the crisis, in the weeks immediately following the coup, there was a substantial out-migration from the Port-au-Prince metropolitan area. In November 1991, the Child Health Institute (CHI), found 44 percent of the 150,000 households in Port-au-Prince's major slum of Cité Soleil empty. Many observers believed that Cité Soleil was fairly typical for poor areas of the metropolitan area, and that as many as 500,000 people (one third the population of Port-au-Prince) moved to rural areas during that time. CHI researchers found reasons for leaving included political, economic, and family factors. Although CHI has not reported on population movement since that time, it appears that most people returned to the capital by February - March 1992, as the security situation stabilized and the "hungry season" began in rural areas. It can be hypothesized that this major population movement had an enormous impact on resource levels in rural areas. Not only did regularized remittances from Port-au-Prince cease, but also many urban-centered seasonal opportunities for employment. These losses of historically-important income compounded the burden of greater demand on rural agricultural resources for the simple care and feeding of the fleeing urbanites.

In addition to the mass exodus from Port-au-Prince, many of the light manufacturing and industrial sector plants closed or curtailed operations as a response to the trade sanctions and to lack of access to fuel to power their machines: A USAID Monitoring report from December 1991 stated that 128,100 persons had been laid off as of December 11, or slightly over half the total national formal sector workforce. This major decrease in formal sector employment undoubtedly had a "ripple effect" throughout the informal sector, thus constraining temporary and seasonal employment yet further. Although some factories reopened in February-March 1992 when fuel became more available, it is likely that those rural households that depended on temporary wage labor to get them through the "hungry season" were severely affected.

Opportunities for income diversification through international emigration were also drastically reduced in 1991. Prior to the coup, in June 1991, the Government of the Dominican Republic announced that it would no longer permit Haitian labor contracts in the sugar cane fields, and an estimated 50,000 workers were forcibly returned to Haiti. More than 20,000 of the repatriates passed through a Haitian Red Cross reception center at Bon Repos, about an hour from Port-au-Prince. The Red Cross established other centers at key transit points, at Anse a Pitre in the Southeast, Ouanaminthe in the Northeast, and Thomassique and Belladère in the Central Region. Although the Dominican Government had specifically stated it was only returning persons under 15 years of age and over 65 years of age, statistics collected by CARHa at Bon Repos demonstrate that barely 10 percent of the repatriates fell into this category. The others were men between the ages of 20 and 40, who returned to a Haitian economy ill-equipped to absorb their skills and energies.



In October 1991, in the days following the September 30 coup, the U.S. Embassy stopped issuing or extending Haitians' U.S. visas of all types. With the traditional "escape hatches" blocked, the more enterprising persons took to the seas as "boat people" trying to get into the U.S.

The U.S. government has maintained an interdiction program for Haitian's attempting to reach the U.S. by boat since 1981. According to the U.S. Embassy in Port-au-Prince, the total number of persons interdicted and returned in just the last year (October 1, 1991 to October 31, 1992) has been 28,317. This is more than the total of 23,027 in the preceding 10 years. In addition to these returnees, over 30,000 "boat people" interdicted and detained by the U.S. at Guantanamo Bay in early 1992 have been granted temporary asylum in the U.S.

The team was not able to get statistics on the place of origin of those Haitians who were granted asylum. The Haitian Red Cross, however, has developed statistics on the 28,317 returnees by place of origin, as follows: 32% from Grand Anse (Pestel, Leogane, Ti Goave); 19% from Northwest; 14% from Central Region; 13% from Southern Region; and 4% from Port-au-Prince. Given the fact that the Grand Anse is a traditional departure area, and that people have a tendency to withhold information from authorities, these data may not be significant.

In summary, outside of perhaps the estimated 30,000 boat people granted asylum in the U.S. and other countries, there does not appear to have been any permanent changes in Haitian demographics as a result of the crisis. Excluding the mass exodus from Port-au-Prince following the coup, people have in general tended to be much less mobile than normal due to security considerations and prohibitions on normal emigration channels. This decreased population mobility has very likely had a significant dampening effect on household income and well-being, as will be described in more detail below.

3.2 Impact on Income and Expenditures

As stated in the introduction to this report, GDP and per capita income decreased by 21 percent between 1980 and 1989; all indications are that it has experienced a more precipitous decrease in the 1991-92 period. Haiti's 1991 GDP, in current prices, is estimated at 16,112 million Gourdes. Dividing by the estimated population of 6.5 million persons results in a 1991 per capita income of 2,479 Gourdes. At the beginning of 1991, when the exchange rate was still approximately 7.5 Gourdes to US\$1.00, this equated to US\$330 per capita. At the end of 1991, when the exchange rate was about 8.3 Gourdes to US\$1.00, it equated to US\$299, for a 9.4 percent decrease in real terms in one year.

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As stated in section 2.1, however, GDP decreased by 12 percent in the 1991-92 period, which means that GDP would be about 14,179 million Gourdes for 1992. If one assumes the standard 1.9 percent increase in population, to 6.626 million, the per capita GDP would be 2,140 Gourdes. **At the current rate of 10.1 Gourdes to US\$1.00, the GDP per capita is only US\$212, or an almost 30 percent loss of income in one year.**

This significant decrease in income is summarized in Table 3-1. It must be emphasized that these figures are indicative averages.

**Table 3-1: Indicative Decrease in Haitian Per Capita GDP
September 1991 to November 1992**

<u>Date</u>	<u>GDP per capita in gourdes</u>	<u>Exchange Rate</u>	<u>GDP per capita in current US\$</u>	<u>% Change</u>
Jan. 1991	2,479	7.5	330	-
Dec. 1991	2,479	8.3	299	-09.4
Nov. 1992	2,140	10.1	212	-29.1

Source: IICA Team calculations, November 1992

While these figures are dramatic, they can only be interpreted in terms of order of magnitude of loss, and cannot be considered absolute. An indeterminate proportion of the Haitian peasant's income comes from the informal sector and migrant remittances, and is simply not captured by such standard measures as GDP. In 1987, for example, GDP was reported as 10,803 million Gourdes and the population was approximately 6.1 million, for a per capita GDP of 1,770 Gourdes (US\$354). During that same period, the highly-regarded Household Expenditures and Consumption Survey (HECS) undertaken by the Institut Haitien de Statistique et d'Informatique (IHSI) recorded that the total mean annual household expenditures were 11,486.30 Gourdes for a mean family size of 4.87, or average per capita expenditures of 2,359 (US\$472). **This means that documented expenditures were 33 percent more than the income derived through the macroeconomic data.** The macroeconomic data simply do not capture all income.

The IHSI HECS findings on household expenditures can be considered a more exact proxy indicator for overall household incomes in Haiti than can formal sector GDP estimates. Outside of HECS, there have been no national and very few reliable sub-national surveys on income against which to judge change over the past year. Using HECS as a base, the following paragraphs examine the possible impact of the crisis on household expenditures, and

from that derive some tentative conclusions on impact on incomes and well-being.

3.2.1 Household Expenditures

The HECS data are broken out by rural and urban households, with weighted percentages being 71.9 percent rural respondents, and about 28 percent urban. The study found that the mean rural household expenditures were 8,118.20 Gourdes (US\$1,624), or only 40 percent of the mean urban household expenditures of 20,094.18 Gourdes (US\$4,019). The mean rural household size was slightly smaller than the urban, at 4.77 persons compared to 5.11 persons. The per capita expenditures were thus 1,702 Gourdes (US\$340) for rural areas as compared to 3,932 Gourdes (US\$786) for urban areas.

Food was by far the largest single category of expenditures, at an average of 56 percent of the total. For households in rural areas, 62 percent of total expenditures went towards food, whereas in urban areas the figure was only 40 percent. In the urban areas, as might be expected, 93 percent of the total food expenditures were for purchased food, and only 7 percent were calculated as the value of harvested or gift food (which was split about evenly). In the rural areas, however, 76 percent of total food expenditure was for purchased food, with only 18 percent for harvested, and about 6 percent for gift food. This means that due to lack of adequate on-farm storage, most farm households generally sell what they produce and buy it back later for consumption, rather than storing it on site. It must be emphasized that the harvested and gift sources were relatively more important for small, low income rural households, particularly in the north and south regions. Overall, however, the expenditures on food purchase were higher than the value of harvest or gift food.

These figures are particularly important in terms of what has happened to retail food prices in Haiti in the past 14 months. The Child Health Institute (CHI), with funding from USAID, has collected data on retail food and charcoal prices since shortly after the coup. For an averaged "food basket" retail price of rice, corn, and beans, it reported a 44.7 percent increase between September 1991 and September 1992 for the Port-au-Prince area (USAID Monitoring Report October 15, 1992).

The effects of the devaluation and crisis on prices in outlying areas are less well-documented. The USAID Monitoring Report for October 15, 1992 illustrate that in the major Croix des Bouquets wholesale market near Port-au-Prince, prices have also increased, although not to the same extent. Retail prices in the northern markets of Port-de-Paix, Cap Haitien, and Thomassique have generally stayed higher than or equal to the index price for Port-au-Prince of November 5, 1991 (which was about 10-20 percent higher than September 1991, depending on the commodity). Retail prices in the productive region of Estere, and throughout the South

(Jeremie, Fonds des Negres, Les Cayes, Jacmel) have generally stayed much lower than the index price. In all cases except Port-au-Prince, which exhibits a steady rise, prices have fluctuated to the extent that no trend analysis is possible. Given the lack of reference data for early 1991, the relative increases cannot be analyzed. If USAID and CHI maintain the survey through another year, the seasonal trends and real increases may become more apparent.

There are some records of prices maintained by NGOs in specific locations throughout Haiti which also document price increases. The Organisation for the Rehabilitation of the Environment (ORE) in Camp Perrin assessed food prices in April 1992 as compared to April 1991, and found a 70 percent increase for grain corn, a 57 percent increase for corn meal, a 25 percent increase for black beans, an 80 percent increase for sorghum, and about a 50 percent increase for sweet potatoes (Finnigan, ORE, April 1992). ORE also noted a shift from higher to lower priced commodities, with consumption of beans decreasing and consumption of sweet potatoes and sorghum increasing. Of interest is ORE's finding that Port-au-Prince prices were unusually low compared with prices in Camp Perrin. ORE opined that this phenomenon was "...probably due to reduced buying power in the capital, and the exodus of people to the provinces." (Finnigan, p. 4).

The ANDAH reports undertaken with Embassy of France financing also provide data on changes in price throughout the country, and give some indication that the changes reported in the larger markets by USAID are similar to those in many smaller markets. The ANDAH report of June 1992 reports some very odd trends and differentials, such as a 60 percent difference in the price of maize between the Artibonite and the Southeast, and a 40 percent difference for beans between the South and the Northwest. Many of these differences can probably be attributed to the high costs of transport, but some degree of speculation (either fuel or food commodities or both) is likely to be involved as well. Because of the results of the CAPS and PLANECONOMICS studies reported in Chapter 2, which found that at least on a national level, food prices in Haiti have no relationship to availability, it is unclear just how the prices or the differences have evolved.

Given the high percentage of total household expenditures going towards food reported in the HECS work, and the increases in retail food prices for the Port-au-Prince and some secondary city markets reported by USAID/CHI, it is fairly certain that the urban poor at least must spend a much greater proportion of their total expenditures on purchased food, just to survive, and must need to curtail other expenditures to do so. Anecdotal reports from Port-au-Prince (and throughout the country) suggest that one area of expenditure that is suffering is school fees, with many schools remaining open and allowing children to attend even though fees are not paid, in the hopes that parents will be able to pay later.

It is more difficult to determine the extent of the impact of the crisis on rural expenditure patterns. The USAID/CHI data are for retail food prices in market towns, and not for farmgate or local market sales. Thus although the retail prices of a number of commodities have increased greatly in the last year, it is not clear how much of this increase has been passed on to the farmer, thus increasing rural incomes. Because rural families tend to sell and then buy back the greater proportion of their food, gains from increased farmgate, if any, may be negligible. The embargo severely limited gasoline and diesel supplies in the first 3-4 months of the crisis, which seriously constrained all transportation, public and private, in the country (ref. Chapter 2). Although fuel from non-OAS member sources has been readily available since that time, transport prices have remained higher than the pre-coup levels and in some cases have increased to compensate for deteriorating infrastructure. These increased transport prices are believed to have seriously constrained the movement of agricultural produce outside of urban areas, where the retail prices are reported. The increase in necessary expenditures for fuel has limited the entire marketing cycle, from individual producer, to local trader, to the ubiquitous Madame Sarah, to even national export houses.

As discussed in Chapter 2, the embargo and international sanctions have also led to a dramatic rise in the cost and availability of fertilizer and other imported chemical inputs, and the overall scarcity of quality and high yielding seeds. As discussed in Chapter 2, several written and verbal reports demonstrate that farmers have responded to the need for increased expenditures on inputs by shifting cropping patterns because of these increased costs. In some cases, such as rice farming in the Artibonite, farmers are simply trying to grow the same crop with less or no supplemental inputs. In other cases, as reported in Chapter 2 of this paper, they are shifting to crops which require no supplemental or at least imported inputs, such as sorghum. ANDAH and USAID reports from the April - June 1992 period suggested that farmers were also planning to plant less area for the first season, due to less money to pay day laborers. As stated in Chapter 2, current estimates of the first season harvest suggest that this problem was less significant than originally thought.

In summary, given available data on the increase in food prices it is probable that poor urban families, at a minimum, must spend an increased share of total expenditures on food, just to survive. Given increases in the cost of transport, and thus market activity, and of fertilizer, it is likely that poor rural families are similarly effected. A brief discussion of what has happened to income in the face of these rapidly escalating expenditures follows.

3.2.2 Household Incomes

The primary major categories of income for the average rural household may be categorized as agriculture production and processing, regular or intermittent wages, petty trading, artisanal industries, and periodic or regular remittances. The HECS study carefully focusses on expenditures rather than income, and the team could not find any detail in the HECS reports on income sources. Thus the proportion of income from each of the different sources, in terms of either pre-coup baseline information, or measurements since that time, are not known on a reliable basis.

As discussed above, the HECS data reported that annual per capita expenditures were 1,702 Gourdes (US\$340) for rural areas as compared to 3,932 Gourdes (US\$786) for urban areas in 1986/87. These data are much higher than other sources, that place rural per capita income at around \$150. As summarized below in the discussion of food security, given: 1) the increasing share of commercially imported food in terms of overall food availability in Haiti; 2) the documented tendency (HECS) for rural and urban Haitians to buy food, even if they are farmers; and 3) the fact that overall nutritional levels, in fact, have not decreased over the past 12 years, including during the crisis of 1991-92; it is clear that the higher figure, or some higher figure, must be more nearly accurate. Given increased prices, the population simply could not be maintaining its current (albeit low) nutritional status with income levels currently documented.

That is, if one reviews the data on nutrition with the data on production and imports, one must conclude that the average Haitian is buying an increasing share of imported food, and that the income to do so must be available or nutrition would be suffering. Nutrition data are among the most reliable datasets in Haiti, and do not demonstrate any deterioration of status. Thus the higher HECS figure on expenditures, which, with inflation, would be much higher today, or some other higher figure, must be more accurate in terms of actual income than the lower official GDP or other estimates, even for the rural poor. The team explored what has happened to three basic channels of income, basic agricultural, international remittances, and the other informal sector, during the last 14 months, with findings presented in paragraphs 3.2.2.1 - 3.2.2.3 below.

The HECS reports do provide a breakdown on the employment of the head of household, with only 12.4 percent of households surveyed either employers or salaried employees, 65.5 percent claiming to be independent or family workers, and 22.1 percent unemployed or unspecified. The survey also asked for the occupation of the head of household, with 48.4 percent agricultural workers, 15.4 percent sales/office/household workers, 10.2 percent in industry/transport, a mere 3.7 percent professional/scientific/governmental, and 22.4 percent unemployed or unspecified. Given



the commonly accepted figure of 65 percent of the Haitian labor force being engaged in agriculture, it is likely that some of this latter category were in fact landless casual laborers who happened to be unemployed at the time of the study. The HECS data also only reflect the occupation of the head of household, so it can be assumed that other adult household members are also engaged in agriculture (and other occupations).

3.2.2.1 Agricultural Income

As stated in Chapter 2, income from agriculture has decreased in the last 14 months, both as a result of the devaluation of the gourde and consequent inflation of the price of inputs, as well as due to the virtual closure of the agricultural export sector (coffee, cocoa, mangoes, etc.) due to the trade embargo. Chapter 4 on institutions provides more detail on the number of lay-offs and factory closings in the agricultural export industry.

Wages paid to agricultural laborers increased (and thus costs to farmers employing such labor also increased) in certain parts of the country between January and June 1992, which is normal given differing levels of demand at those dates. According to the June 1992 ANDAH report, wages for laborers increased 50-70 percent in Arcahaie, la Gonave, and Petit-Goave, and 20-25 percent in the North and the South over wages in January 1992, with no increases for the Artibonite, the Plateau Central and the Southeast. The ANDAH report notes that even though basic wages paid did not increase in these latter areas, because workers are also provided meals, and because the cost of food was increasing, one could conclude that the total wages were higher.

The June 1992 ANDAH document also reports that the price of maize and sorghum seeds were 40-60 percent higher in April 1992 than in April 1991, and that bean seeds were 10-20 percent higher. It further notes that the retail price of small agricultural tools, such as hoes, picks, and machetes, was 20-30 percent higher than the previous year. Retail prices for livestock feed, including wheat bran and concentrate for swine, increased 20 to 50 percent over prices prior to the crisis. The price of fertilizer varied considerably according to national supplies (see Box). One possible positive effect of the embargo is a noted (though unquantified) increase in the use of organic fertilizers, such as bat manure and sugar cane refuse (bagasse).

Finally, the ANDAH report documents increases in the price of transformation (milling) and marketing, primarily transportation, with a reported increase of 230 percent in the price for milling rice.

Because ANDAH reports primarily on relative increases in percentage terms, and because the reference point for all but seeds are September 1991, it is difficult to assess which part of the

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increase is due to the combined effects of devaluation/ inflation, which are common seasonal phenomena, and which are due more directly to the embargo. Both from the ANDAH work and from discussions with farmers and other professionals, it is clear that the costs of agricultural production were substantially higher for the first and second seasons of 1992 than in the previous year. Although there is a lack of data on farmgate prices, it is generally assumed that profits to farmers suffered in spite of significant increases in consumer prices.

In the export sector, it has been estimated that there has been a major loss of income as well. The recent book by Jerry Tardieu on the embargo attempts to quantify the effects. Table X, below, is adapted from Tardieu's book. The original table also provides an estimate of the value of the crop effected by the embargo (chiffre d'affaires affecté), but in the absence of an explanation of where the figures came from the team was unsure of their validity. The numbers of population effected by the crisis are generally accepted, with changes made by IICA as noted. **It must be emphasized that, given that most Haitian farm enterprises are composed of mixed cropping systems and livestock, these figures are not additive. Rather, farmers who are engaged in cereal production may easily be involved in mango or milk production as well, and farmers who raise coffee are definitely engaged in plantain or other shade plant/tree production to protect the coffee.** The table is useful, however, to indicate the relative magnitude of the impact on the agricultural population.

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Table 3-2: Estimated Population Effected by the Crisis, by Crop

<u>Commodity</u>	<u>Population</u>
Rice-grains-cereals	2,000,000
Fruits-vegetables	20,000
Tomatoes	50,000
Milk products	6,500
Mangoes	2,000,000
Sugar	150,000
Rum	600
Coffee	250,000

Sources:

The basic table is adapted from Jerry Tardieu, Embargo sur Haiti: Les premières conséquences, Port-au-Prince, 1992, Table 7. Adjustments in the number of persons effected for coffee were made by the IICA team, from 100,000 to 250,000, based on IICA work in the coffee subsector. The IICA team seriously questions the high number for the mango subsector, but has no alternative data source.

The one agribusiness that has experienced growth is small and medium scale charcoal manufacture. In Haiti, as in other countries, rural populations tend to cut trees and make charcoal as an income generation exercise, when other sources of income are scarce. As discussed above and below, income from all sources has definitely decreased in rural Haiti in the past 14 months, and the increase in charcoal manufacture is but one more indicator of the extent of this decrease. As discussed in Chapter 2, during the first four months following the coup, when propane and butane gas were scarce, charcoal demand increased quite suddenly, and supply rose to meet it. This is not unusual, and must be considered normal market behavior. What is interesting is that the supplies have not decreased since that time, even though cooking gas is now in more-or-less steady supply. Charcoal supplies have, in fact, reached such high levels that prices have greatly decreased, with a 31.7 percent decrease in the retail price at three Port-au-Prince markets between September 1991 and September 1992. This suggests that supply has greatly exceeded demand for some time, and that charcoal producers -- who are essentially rural farmers, traders, and artisans -- are simply desperate for any sort of income, however small.

3.2.2.2 Remittances

It is extremely difficult to get any hard data on official or unofficial remittances to Haiti. There are two major licensed transfer houses, HATREXCO and Bobby Express, which claim that

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combined they account for an estimated 70 percent of the total market share. Both have offices in the U.S. and Canada, and HATREXCO has offices in Europe. Both also have branch offices in secondary cities around Haiti. Their activities are complemented by the activities of several smaller transfer houses, and by an unknown number of private agents who personally transport hard currency in and out of the country for a small commission. The team was told that these private agents could account from anywhere from 12 percent to 60 percent of the total remittances coming into Haiti.

The team was able to get average data from one of the big houses, from which it has constructed the following very tentative estimates. It must be emphasized that the big house believes that it has 30-40 percent of the total share of remittances, i.e. an average of 35 percent of funds through both licensed transfer houses and private agents. Most observers believe that the average of 35 percent is actually of the amount only through licensed transfer houses, and that funds transferred by private agents may be much higher than the big house estimates. This hypothesis is supported by other indicators, particularly import data. The team, however, has absolutely no way of calculating the difference. Table 3-3 below should thus be considered the lowest estimate for remittances, with totals as much as three times higher.

**Table 3-3: Recorded Private Remittances to Haiti,
Pre- and Post-Coup**

All estimates are in millions of U.S. dollars.

<u>Time Period</u>	<u>One House Average/Month (35% of total)</u>	<u>National Estimated Totals/Month</u>	<u>National Totals Annualized</u>
pre-9/30/91	\$1.5 - \$1.7	\$4.3 - \$4.9	\$51.6 - \$58.8
9/30/91-3/31/92	\$0.3 - \$0.7	\$0.9 - \$2.0	Not Annualized
8/1/92-10/31/92	\$1.2 - \$1.5	\$3.4 - \$4.3	\$40.8 - \$51.6

Source: Confidential communication with IICA team from major transfer house, November 1992

The table demonstrates that, for at least one of the big transfer houses in Haiti, remittances in the six months following the coup dropped to only 20-40 percent of pre-coup levels, and then slowly increased to 80-88 percent of the pre-coup levels. These tentative data are corroborated by anecdotal information, which generally supports the idea that remittances are down about 15



percent from before the coup. As discussed in Section 1 above on population movement, the sharp decrease in the six months following the coup is ascribed to the decrease in traditional patterns of movement and uncertainties about overall conditions in Haiti. The overall 15 percent decrease is generally attributed to a combination of events in Haiti with the recession in the U.S.

The data suggest that pre-coup recorded annual remittances to Haiti were between \$50 and \$60 million per year, or \$7-\$9 per person per year, with a decrease to perhaps \$6 - \$8 per year at this time. This does not make up the necessary difference between recorded GDP per capita (\$221) and what is likely necessary to survive, even at minimum levels. The team concludes that other sources of income, both from unrecorded private remittances and through the unrecorded informal sector, must be contributing a greater share than previously thought.

3.2.243 Other Informal Sector Activities

Informal sector activities in agriculture, ranging from small carpentry and basket shops to pump repair to food preparation, are believed to be extremely important to the household and national economy. Numerous of the larger agribusinesses interviewed in the course of this IICA report, for example, rely on the formal and informal small-scale enterprises (SSEs) for any number of services, including repair of machinery, manufacture of required materials (e.g. mats, baskets, various tools), as well as trading in particular gathered products, i.e. orange or lemon peels, mangos, etc. While some of the impact of the crisis on these activities can be derived from the commercial sector discussion in Chapter 4 of this report, much is simply outside of recorded activities. It is known, however, that these type of activities account for a significant portion of rural households' incomes.

A 1979 national survey of small scale enterprises (SSEs), agricultural and other, concluded that there were 8,500 SSEs in localities with population over 1000, and possibly many more in localities with fewer than that number of people. The average number of people employed was 4.2, resulting in total employment of about 34,000 persons. Several sub-national studies since that time have confirmed both the high numerical levels of SSEs throughout the country, and the average of 3 - 5 persons employed by each one. **Exclusive of tailoring, which accounted for 46 percent of all enterprises, agriculturally-based SSEs accounted for almost 40 percent of the all SSEs.** (Haggblade, Defay, and Pitman, 1979). Many of these enterprises are not formally registered, and have very few capital assets. They are, however, important sources of income for the persons involved.

Much of the informal sector is also petty trading and services, moving goods from one part of the country (or from outside of the country) from one place to another. The GOH White



4. IMPACT ON AGRICULTURAL INSTITUTIONS

In addition to the impact on individuals and households discussed in the preceding section, the crisis has had a profound impact on many of the organizational participants involved in the agricultural sector. The impact on individuals and households in agriculture might be considered a short-term, temporary impact, with the expectation that once "normal" political and economic conditions are achieved, a return to pre-crisis household income levels will only take one-to-two years. Unfortunately, this does not appear to be the case. Chapter 2 documents both the deterioration of a major part of the country's productive natural resource base, due to rapid depletion of forest cover and some tree crops for charcoal production, and the probable depletion of animal breeding stock, due to slaughter of livestock to generate cash. The destruction of these basic resources is being compounded by a slow but significant deterioration in the capacity of institutions of all types to support commodity production processes.

4.1 Key Actors in the Agriculture Sector

The key institutional actors in Haiti's agricultural sector come from four basic orientations: the public sector; the for-profit private, or commercial sector; the not-for-profit private sector, including NGOs and cooperatives, which interact most directly with the more informal traditional and more recent farmer associations; and individual farmers and farm households. Section 3, which preceded this discussion, describes the impact of the crisis on the latter group; its impact on the first three of these groups is covered in sections 4.1.1 - 4.1.3 below.

Prior to the more detailed discussion of each of these groups, however, it is useful to summarize their overall role in the agriculture sector. As stated in Section 1.2, it is recognized that a given participant's involvement in a given function varies by commodity, by season, by year. Table 4-1, however, demonstrates that each has some usual degree of involvement in almost all functions of commodity systems in Haiti.



**Table 4-1: Level of Involvement by Sector
in Major Agricultural Functions**

<u>Major Functions</u>	<u>Sector</u>	<u>Public</u>	<u>Comm</u>	<u>NGO</u>	<u>Farmers</u>
Policy/Planning		H	H	M	L
Pre-Production		H	H	H	H
Production		H	H	L	H
Harvest		L	H	L	H
Transport		L	H	M	M
Assemb/Sort/Pack		L	H	M	M
Transport		L	H	L	L
Storage		L	H	L	L
Processing		L	H	L	L
Distribution		L	H	M	H/L

Key: H = High usual level of involvement;
M = Moderate usual level of involvement;
L = Low usual level of involvement.

Source: IICA Team estimates, November 1992

The table highlights of some of the aspects of participation which are characteristic of Haitian agriculture:

- The public sector has an appropriate high level of involvement in policy and planning, and in pre-production, which includes research, extension, input supply, and infrastructure development. What is somewhat unusual, at least in comparison with a number of other countries in the world, is its high degree of involvement in direct production. As documented in the IICA Agriculture Sector Assessment of May 1991, the Government of Haiti is the largest single landholder in the country. Through its parastatal RDOs, it is also directly responsible for maintenance of and water management at the primary and secondary canal levels for over 90 percent of the irrigated land, and runs a number of farms itself. As will be discussed in summary, this active role in direct production is costly and possibly not the most effective role for the public sector to play.

- The for-profit private, or commercial sector, has a high degree of involvement in all functional areas, and, although this table does not reflect it, in all commodities. As will be discussed in 4.1.2 below, Haiti's medium and large agribusinesses have historically had a strong direct influence on policy, and basically dominate post-production functions

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for all export crops and some domestic food crops, e.g. rice. As summarized in section 2.1, the current crisis seems to be constricting this sector's activities somewhat, possibly forcing out the smaller actors and decreasing the number of players overall.

- Although NGOs have in general been particularly strong in Haiti, and had received an increasing share of donor development funds in the 1980s, they are more important in health, education, and other social sectors, and are not a particularly strong force in the agriculture sector. There have been some notable exceptions to this characterization, including the activities of some coffee cooperatives in the 1970s and of the Agricultural Producers Association (APA) during the 1987-1991 period. At the present time, NGOs, cooperatives, and farmer associations are particularly low key.

- Individual farmers and farm households have few links to and thus little voice in policy formulation or planning. They dominate pre-production (land preparation), production, and harvest. The individual farmers have less involvement in subsequent transport, processing, and distribution/marketing, unless a member of the household is also a Madame Sarah or transporter. Due to an absolute lack of on-farm storage and lack of participation in various distribution functions, most farmers in Haiti have become net consumers of agricultural production. As discussed in Section 3, the current crisis and concomitant increase in basic prices has exacerbated this trend.

The roles of the first three of participants, and changes during the past year, are discussed below. The effects of the crisis on individual farmers has been discussed in depth in Section 3.

4.1.1 The Public Sector

The key public sector organizations active in agriculture in Haiti include the following:

- the Ministry of Agriculture, Natural Resources, and Rural Development (MARNDR) and its various departments;
- four major regional development offices (ODRs), including one for the North (ODN), the Northwest (ODNO), the Plain of Gonaive (ODPG) and the Artibonite Valley (ODVA); there are also references to a number of other such regional offices, for the Artibonite Watershed (ODBFA), Jeremie (DRI-JER), Asile (DRI-ASILE), and the Arcahaie Plan (PREPPIPA), but it is not clear how many of these are organizations to be sustained and

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how many are temporary offices created to manage donor-funded projects;

- one only partially functional parastatal credit institution, the Bureau de Credit Agricole (BCA); although beyond the scope of this Situational Analysis, the fact that Haiti has no financial institutions, either public or private sector, that provide production credit to small farmers, needs to be underscored once more.

- the faculty of Agronomy and Veterinary Medicine (FAMV); and

- one major grain mill that recently closed (La Minoterie d'Haiti) and the related Societe de Nutrition Animale (SONIAN), which is also closed.

The government also owned three sugar mills, Darbonne Sugar Mill in Leogane, closed since 1986; Central de Dessalines in Les Cayes, closed since approximately 1987/88, but recently sold to private Haitian agribusiness; and the Cap Haitien Sugar Mill, closed since about 1987/88.

The IICA team undertook a small number of informal interviews with public sector personnel from Ministry headquarters at Damien, and at various sites in Gonaives District. No comprehensive survey of the public sector was possible. The following comments derive from review of secondary data, including the very recent White Paper on Agriculture and the new, draft, Decentralization Plan, as well as these informal interviews and the pre-coup experience of the IICA personnel.

The structure of the government's efforts in agriculture is fractionalized and seemingly inefficient. The current structure of the MARNDR includes the main ministry at Damien, near Port-au-Prince, nine Departmental Agricultural Directorates corresponding to the nine socio-political Departments, 22 Agricultural Districts, and a varying number of other offices at lower levels (Decentralization Plan, p. 3). The Ministry had 2,515 agents staffing this structure in June 1992, of which 443 were senior officer, 806 were mid-level technicians and administrators, and 1,266 were low level technicians and support staff (Le Livre Blanc de l'Agriculture, p. 7). As of 1986, only 29 percent of these agents were officially posted at Damien, although a report from that time suggests that many only worked a three-day week in the districts, spending the other two days travelling to and from Port-au-Prince where they had their families. (Brinkerhoff and Goldsmith, p. 10, citing Victor).

At the same time, there are probably at least 2000, if not more, agricultural personnel staffing the various RDOs around the country. The IICA team managed to get information on only one, the ODVA, which had approximately 550 agents based at its



headquarters outside of St. Marc during 1991. Like the other RDOs, the ODVA is a parastatal government agency under the oversight ("sous tutelle de") of the MARNDR, with its own budgetary processes and a separate -- and more remunerative -- personnel system. It is theoretically supposed to be self-financing, but, after over 40 years of existence, is still a major drain on the government budget. The ODVA headquarters are located approximately one-half hour from the St. Marc District Agricultural Office, the ODPG headquarters are 10 minutes up the road from the Gonaive Departmental Offices, etc. Yet there are virtually no reports or documents which discuss the roles, relationships, complementarities, and redundancies between the MARNDR offices and the RDOs.

According to Brinkerhoff in 1987, "The absence of a national network of local units for agriculture and other sectors has of necessity led to the creation of special organizations to deliver services, usually with the hope that eventually the sectoral ministries would build local operational capacity through collaboration with the new organization." (Brinkerhoff and Goldsmith, p. 11). Unfortunately, these "new organizations" seem to have proliferated, possibly as a way to obtain more flexibility in hiring and paying staff that would be permitted under the MARNDR civil service scales, and possibly -- with donor support -- as a way to bypass potentially corrupt government financial systems. This IICA team could not get simple confirmation of the continued existence, or at least operational capabilities, of several of the organizations summarized above. The very recent MARNDR Decentralization Plan, which discusses a new ministerial structure which responds to the 1987 Constitution by adding MARNDR agents as far as the communal section level, does not mention the fate of the RDOs currently or in the future.

One earlier report did suggest that the MARNDR try to look at the ensemble of its activities:

Coordination between the agricultural regions and agricultural districts must be harmonized. Central headquarters of the Ministry are organized along functional lines and the regions and districts are organized geographically. The two organizational structures require increased coordination to assure that all technical specialties available at the center are accessible to the regions and districts that need them. (Peat, Marwick, Mitchell & Co., p. 40, translation by IICA team).

If the Ministry wishes to be efficient about carrying out its mandate to promote agriculture overall in Haiti, it must begin to rationalize the Ministry/RDO relationships in a responsible manner. That is, as long as donors were willing to finance the redundant organizational structures it could be argued that, although inefficient, they were valid in that they provided donors with



confidence (or something) that led to a net gain in development for the country overall. Now that all donor projects and aid have been suspended, these redundant structures are being revealed as costly and, in some cases, not terribly useful. The crisis period thus provides the MARNDR an opportunity to re-evaluate seriously the worth of each parastatal, with emphasis on the RDOs, and determine if its net benefits, without donor support, continue to make sense. A restructuring and decentralization that includes the RDOs along with the MARNDR would be a valuable long-term outcome of an otherwise somber period of time.

By far the greatest institutional impact on the public sector's ability to carry out its mandate since the crisis began has been the significant decrease in operating expenses due to the suspension of virtually all donor-funded projects. Section 2 of this paper provides more detail on the decrease in overall levels for investment purposes. The recent "Livre Blanc" on agriculture documents the decrease in the government Investment Budget over time, from more than 94 million gourdes in 1986 to 59 million gourdes in 1988, until its disappearance in 1988/89. (Livre Blanc de l'Agriculture, p. 9). At the same time, the Operating Budget has increased, from 25 million gourdes in 1984/85 to 51 million gourdes in 1991/92. The "Livre Blanc" states "...with an operating budget which only meets salaries (96 percent) and a development budget of which a significant proportion finances salaries as well, the investments in the sector hardly responds to identified needs." (Livre Blanc de l'Agriculture, p. 9).

The IICA team spent some time with ODVA agents and found that they had undertaken a number of creative efforts to keep the Artibonite irrigation works open, including some temporary staff lay-offs and use of students for extension work, and obtaining spare parts and fuel from sympathetic suppliers on credit. ODVA is trying its best to improve the ratio of salaries to development costs of whatever budgetary resources it gets, and the team lauds this effort. Unfortunately, it has been dependent on multilateral bank financing (the latest project was with the IDB, for US\$11.5 million) since about 1973, and all such financing has been in suspension since the coup. The organization, and most of the other field agriculture agencies in Haiti, is staffed and structured to operate on a much larger scale that it is likely the government will ever be able to support. It is important that such organizations begin to accept this reality, and make some very difficult decisions regarding what they can continue to pursue in the absence of outside assistance. Possibilities of selling (privatizing) certain components of their operations, such as demonstration farms or small mills, should be investigated. The results of such deliberations are likely to be sobering, but should be pursued before debt from "sympathetic suppliers" force them to shut down altogether.



A second major impact to agriculture that involves the public sector has been the decreased level of operation and finally, recent closing, of the parastatal Minoterie (flour mill). This is nominally due to the fact that although wheat flour for human consumptions was exempted from the embargo and has been widely available throughout the crisis, whole wheat was not exempted, and the Minoterie has not been able to operate. (It must be noted that it is generally agreed that the Minoterie was operating on government subsidies for some time, and was never financially viable even in the absence of an embargo, but the team did not pursue this line of inquiry). While humans have continued to have access to wheat flour for bread, the closure of the Minoterie has led to an almost complete lack of the wheat bran ("son de blé) by-product which was a popular swine feed additive. The cost of wheat bran has increased from about H\$8/100 lb. bag before the coup to about H\$38-H\$40 for the same amount, when it can be found. This, along with many other factors discussed in section 2, may contribute to the major decline in swine production in Haiti over the longer term.

Other government parastatals are carrying on at about the same level as the MARNDR, that is, meeting salaries and some very minimal office expenses, but not much else. If the suspension of donor funds continues, the government will need to undertake some very serious rethinking of its mandate and priorities in order to maintain any effectiveness at all.

4.1.2 Non-Governmental Organizations (NGOs)

Autonomous and voluntary organizations have been active in Haiti since at least the 1950's. A March 1988 report undertaken by the Pragma Corporation for USAID/Haiti, "Options for Service Delivery Through NGOs," estimated that there were at that time between 800 and 1500 non-governmental organizations operating in Haiti, and that donor assistance reached approximately 400 of them (Morton, 1988, p. 5). The May 1991 IICA/IFAD Agricultural Sector Assessment, citing information from the Ministry of External Planning, External Cooperation, and Civil Service (Fonction Publique), reports that there were approximately 750 NGOs, of which only 149 were registered at the Coordination Unit for Non-Governmental Organizations (UCONG) (see IICA/IFAD, p. 51). Given the fact that non-profit entities can register with the government through any number of channels, i.e. as cooperatives, foundations, labor unions, associations, or "recognized as publicly useful" (reconnu d'utilité publique), it is likely that the citation of 149 only represents those that clearly call themselves NGOs. Given the concerns about government corruption in the Duvalier era, and the concerns about instability since that time, donors have increasingly viewed NGOs as a viable and effective channel for assistance.

Non-governmental organizations and cooperatives active in agriculture range from large, international organizations such as the Pan American Development Foundation (PADF) and CARE International to some very small, locally-based Haitian groups. Informal and/or unregistered farmer associations are nominally included in this category. The IICA/IFAD report also cited data from UNCONG that demonstrated that approximately 23 percent of the total number of NGOs work in the agriculture sector, but this study team questions that assertion. It is likely that less than 20 (out of a total of 750 or 800) NGOs in Haiti -- exclusive of informal farmer groups or associations -- are devoted solely to agriculture, with trained technical staff and specialized facilities or equipment. Rather, the majority of NGOs operating in the country focus on improving the welfare of the poor through multiple activities, which often includes some agricultural training or provision of inputs as one of many efforts.

The IICA team interviewed 14 NGOs known to have some activities in agriculture which it felt represented the range of NGOs active in the sector. The results of the interviews are summarized in Table 4-2, with the more complete information collection guides available at the IICA/Haiti office. The sample interviewed included two membership-based associations (APA and HAVA), five international NGOs (PADF, CARE, MEDA, World Vision, and CRUDEM), and seven wholly Haitian NGOs, with activities covering most of the country. Three of the nine members of the HAVA Agricultural Committee were included in the sample. As reflected in the table, only three of the 14 NGOs devoted 100 percent of their programs to agriculture, with the others ranging from 25 percent to 90 percent.

The group covered all commodity system functional areas, ranging from policy lobbying by APA to small farmer cocoa production export with MEDA; most NGOs interviewed, however, focussed on the pre-production activities of training, extension, and provision of inputs, including seeds, breeding stock, and credit.

The purpose of the survey was to identify the impact of the crisis on NGO activities in agriculture, and to determine if there were any impacts that would continue to effect their ability to work. As reflected in Table 4-2, all but two of the NGOs interviewed decreased staff in the period involved, with 9 of the 12 sustaining more than 50 percent reduction. In the case of PADF, the decrease was especially significant, with approximately 1200 field agents who were paid on a per-task basis suddenly laid off. The table demonstrates that ORE and CARE International also laid off large numbers of personnel when donor-funded projects were suspended,



Table 4-2: Effects of Crisis of 1991/92 on Selected Agriculture MSO's

Name of MSO	National or International	Program Location	% Program in Agricultural	Program Focus	B U D G E T		PERSONNEL		Comments
					90/91	91/92	90/91	91/92	
Agricultural Producers Association (APA)	Haitian	Nationwide	100%	Agr policy TA; inputs	200,000	20,000	5	2	Activities very limited since the coup. Donor (USAID) funds terminated. Membership uncertain.
Pan American Dev't Foundation (PADF)	International US	Nationwide	100%	Agroforestry Food Crops, Trng	>500,000	>500,000	75 f-t 1200 p-t	10 f-t 0 p-t	All activities were suspended internal policies and lack of donor (USAID) financing. Plans are underway to resume activities in Nov. 92, with full-time staff back up to about 50 by 11/15/92
Organisation pour la Réhabilitation de l'Environnement (ORE)	Haitian	Dept. du Sud	100%	Watershed Mgmt. Crop improvement Grafting Fruit Trees Mango Improvement	>500,000	>500,000	129	45	Mango project (USAID funds) activities terminated 12/91. Watershed mgmt activities (USAID funds) terminated 9/92. New seed project being negotiated Continuing work with sustainable seed projection, and basic soil conservation/fruit tree grafting.
Institut Chrétien de la Vie Rurale	Haitian	Violet Pte. Goave, Desruisseaux	90%	Agriculture ed. and training	80,000	80,000	7	3	Training reduced.
Memnonite Economic Development Association (MEDA)	International Canada	Grande Anse	75%	Training & TA assistance in cocoa production & mktg	N/A	N/A	4	1	Program worked with cocoa farmer groups. Crisis prohibits export and limits farmer group meetings. Reduced external funding.



Table 4-2 Page 2: Effects of Crisis of 1991/92 on Selected Agriculture NGO's

Name of ONG	Haitian or Internat'l	Program Location	% Program in Agricul.	Program Focus	B U D G E T		PERSONNEL	Comments	
					90/91	91/92			90/91
Integrated Rural Development (IRD)	Haitian	Cayes, Grand Anse,	45%	Agroforestry livestock, TA	>500,000	100,000 -500,000	11	5	From 9/91 to 7/92, 70% of field activities suspended due to inability to hold meetings & lack of financing from primary sources (USAID & PADF). As of 11/92, all micro-projects reactivated, except for project with PADF, tentative start early 1993.
CARE International funds)	Internat'l US	Gonaives, NJ	40%	Agroforestry	>500,000	>500,000	218	26	Agroforestry project (USAID suspended shortly after coup. Discussions underway to reactivate modified version of project. Separate humanitarian ass't project undertaken early 92 now complete.
Parole et Action	Haitian	Gros Morne Pln de l'Arbre Pln de Cul de Sac	40%	Agriculture ed. and training	250,000	250,000	12	12	No major program change. Difficulties working in certain zones due to inability to hold large group meetings.
Organizasyon Devlopman Kominoté	Haitian	Pignon Plat. Central	40%	Soil conservation education, reforest., cooperative training, food storage	40,000	40,000	12	10	Training activities reduced, activities not affected.
Haitian Association of Voluntary Agencies (HAVA)	Haitian	Nationwide	30%	Agr. credit, legal assistance marketing, information	300,000	150,000	29	14	Many activities suspended due to coup. Funding not available (USAID). Credit groups and commercial agents unable to meet. General insecurity made activities difficult.

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Table 4-2 Page 3: Effects of Crisis of 1991/92 on Selected Agriculture NGO's

Name of ONG	Mission or Internat'l	Program Location	% Program in Agricul.	Program Focus	B U D G E T		PERSONNEL		Comments
					90/91	91/92	90/91	91/92	
World Vision Internat'l	Internat'l US & Canada	Nationwide	30%	Soil conserv. education	300,000	300,000	75	75	No program change. Some delays during first 6 mos. of crisis, including difficulties in holding group meetings.
Centre Rural Dev'ment (CRUDEH)	Internat'l Canada	North-Trou Milot, Grande Rivière Plaine de Nord	30%	Soil conserv.	150,000	100,000	34	22	Programs in health and education maintained without problems. Activities in soil conservation, farmer training were terminated due to lack of financing.
Council des Eglises Evangéliques d'Haiti (CEEH)	Haitian	PAP, Sud, Artibonite	30%	Soil conserv. livestock, educ.	200,000	50,000	12	5	Programs in soil conservation, goat breeding, cashew production, livestock raising, production reduced. Goats sold. Financing reduced, group education meetings not possible.
Organisation pour le Développement National et l'Evangélisation (OONIE)	Haitian	Nationwide	25%	Soil conserv.	35,000	100,000	NA	NA	No specific agricultural staff. No external financing, no major reduction in activities.

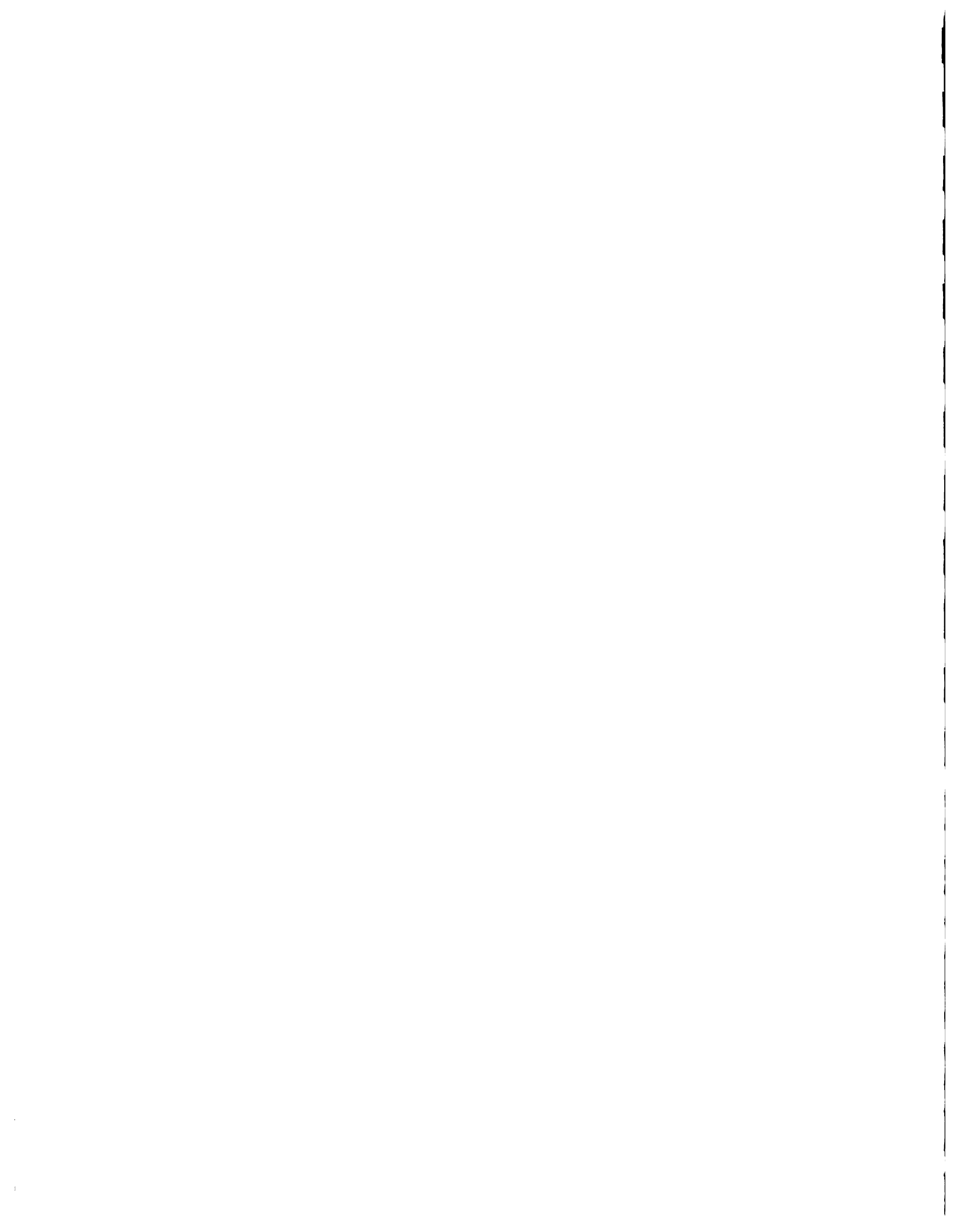


The survey attempted to capture change in funding levels of the NGOs in a pre- and post-coup d'état period. Due to many of the organizations' understandable reluctance to provide exact budget figures, the survey asked them simply to categorize themselves as large (greater than US\$500,000/year), medium (between US\$100,000 and US\$500,000), and small (under US\$100,000). Although not well reflected in the table, interviews revealed that 11 out of the 14 experienced significant loss of external financing. As summarized in the "comments", this lack of financing meant that numerous projects and project components had to be shut down.

Because so few of the NGOs are devoted wholly to agriculture, and because beneficiary populations overlap substantially, the survey did not ask the NGOs to estimate with precision the number of farmers or farm families effected by the suspension of activities. Conversations with the responsible personnel indicate that several thousand persons have been directly effected, either through personnel lay-offs or activity suspension, and several tens-of-thousands indirectly touched.

Outside of the obvious devaluation and concomitant increase in prices, the most common impact on programs identified by those NGOs interviewed -- both formally for the survey and more informally -- was an inability to hold large meetings. That is, most of the NGO's work through formal or informal farmer groups or pre-cooperatives, ranging in size from 4 or 5 to 20 or more. In many parts of the country, particularly during the first 6 months of the crisis, the authorities did not allow group meetings at all, and there are reports of harassment of specific NGOs or farmer groups that tried to continue activities. Although the situation has eased somewhat in the last 6 months, there are still many areas of the country where groups cannot convene and group activities, such as training sessions, simply cannot be undertaken. This constraint has a considerable dampening effect on NGO programs and peasant group activities in all sectors, and must be considered in any planning for future program implementation in Haiti.

Most of the organizations are maintaining some level of program activity, however reduced, and are proceeding on the assumption that some event will allow for a return to normalcy and eventual full reactivation of their programs. PADF and CARE International have recently received reactivation approval from USAID so that their work in agroforestry, modified to focus on land use systems, can continue. Once PADF is fully reactivated, it is likely that IRD will restart again too. ORE has proposals in with several donors and is cautiously optimistic it will be able to increase its program activities sometime during the next year. HAVA has had to severely cut back on field activities and group meetings, but is maintaining an active publication program to keep its members involved and informed.

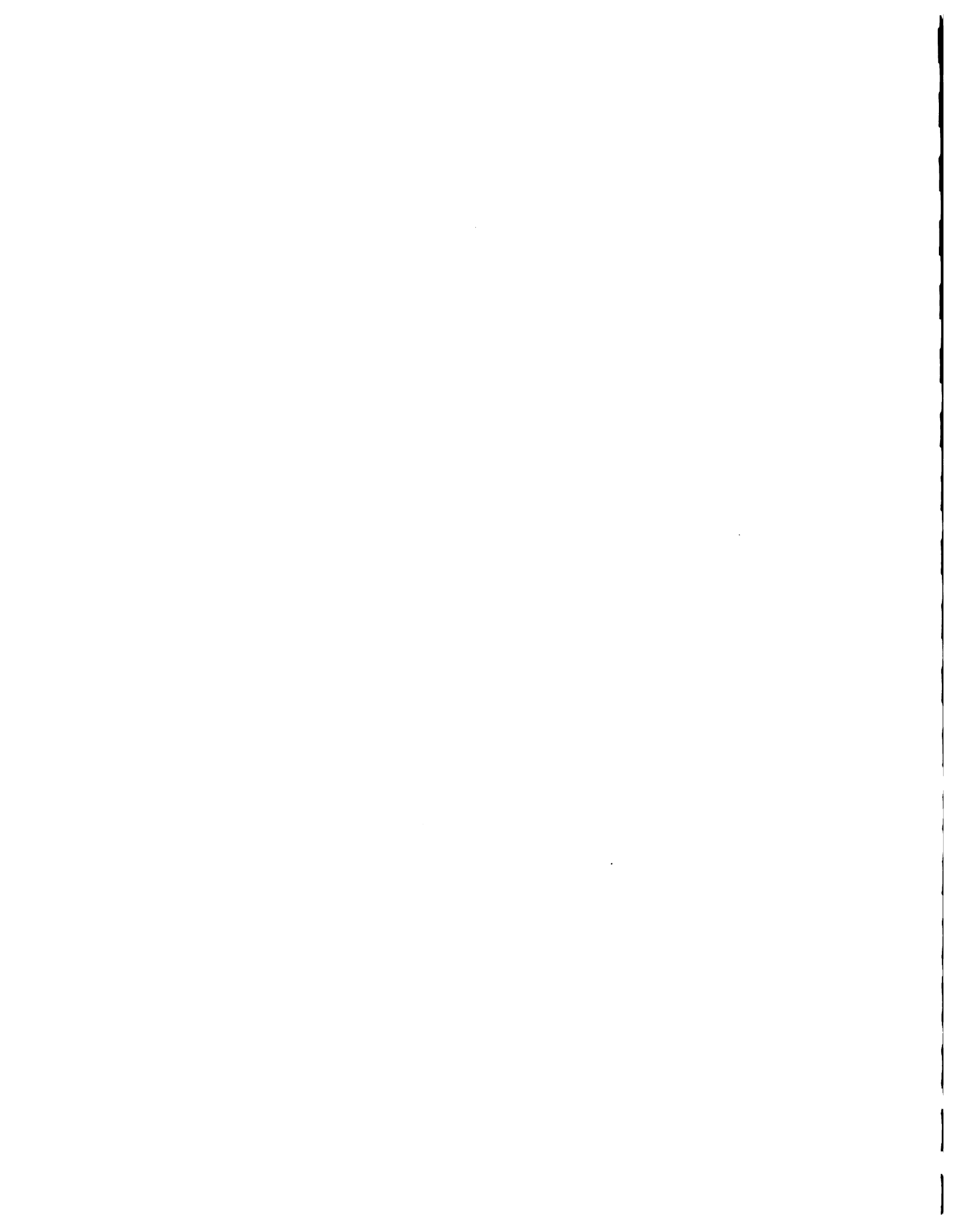


It is thus likely that the NGO sector will emerge from the crisis without long-term damage, although a few organizations have already folded and others may simply dissolve over time. A more common problem over the long-term may be a major lack of confidence on the part of the small farmers in working with organizations viewed as outside their manageable sphere of interests. While it is likely that this reaction would depend on the type of NGO and its activities, it has manifested itself and is a trend to monitor.

For example, in 1991 the Agricultural Producer's Association (APA) was composed of approximately 50 medium or large scale agribusiness members and 87 small farmer associations representing almost 80,000 rural producers. Many of the leaders of the small farmer associations made at least monthly trips to Port-au-Prince to participate in APA meetings, and almost all the associations were represented at the annual General Assemblies. The relationship was viewed with cautious skepticism by both sides, but over the 1987-1991 period, a number of common problems were overcome and some important networking begun. Among these were providing an important liaison between large and small agricultural producers and the government by serving on committees dealing with such matters as the struggle against contraband, agro-industrial development, the promotion of national products (COPRONA), and the promotion of local meat. APA also financed, with USAID or other donor assistance, sector studies on swine nutrition, poultry pathology, rabbit and chicken raising, production of fertile eggs, etc., which were geared to all levels of producers.

One very active small farmer group was the Association des Paysans de la Vallée de l'Artibonite (APVA), which had been an active and vocal part of APA since about 1988, when APA was first reaching out to small farmers. There are at least two other farmer organizations in the lower Artibonite Valley, but one, CDVA (the "Comité Consultatif de Développement avec les Planteurs de la Vallée de l'Artibonite"), was recently organized in response to encouragement by ODVA to enable it to work with farmers, and the other (PUVA) is considered to be dominated by large landowners. APVA has about 950 small farmer members, of which about 300 are active. The President of APVA, a small farmer from the Artibonite, serves as Vice President of APA. APA lost its USAID funding in September 1991, and did not hold its General Assembly that year. As its board members -- both large agribusiness and small farmers -- hold a number of opposing perspectives of the coup and the current political-economic situation, it stopped holding monthly board meetings in order to avoid internal strife. The farmers in the Artibonite, as represented through APVA, are discouraged in their efforts to work with the larger agribusiness firms and are focussing more on what they can do themselves.

Although the problems with APA may be peculiar to its mandate and its diverse membership, the reluctance of peasants to trust outsiders may be more pervasive than before. NGOs working in the

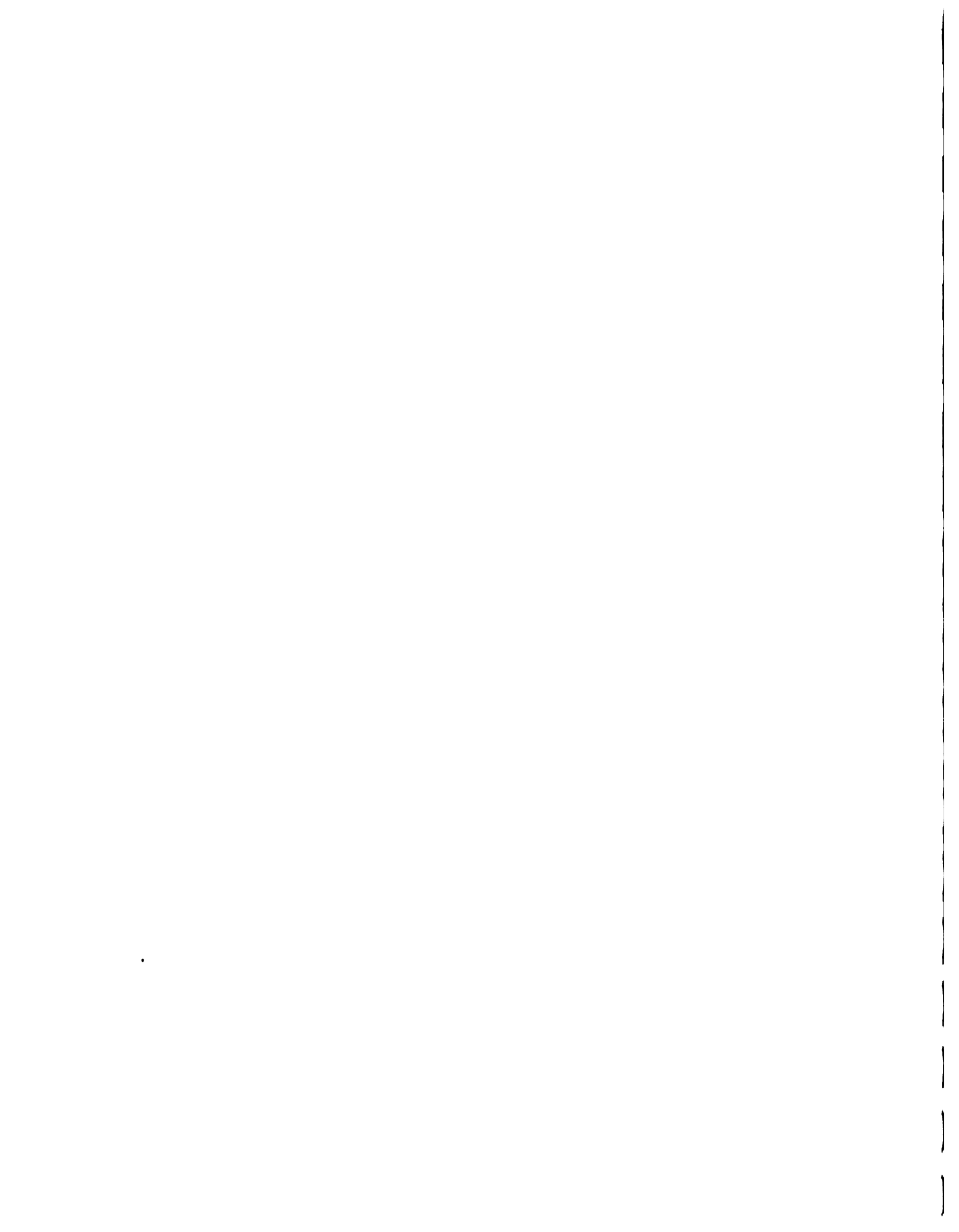


agriculture sector will have to carefully establish and then work to maintain technical and organizational credibility if they are to have their desired impact on development. Given the continuing problems with holding meetings, it is likely that NGOs activities overall will need to remain fairly low key for the foreseeable future.

4.1.3 The Private Commercial Sector

Although agriculture as a percent of GDP has declined over the last decade, Haiti's commercial enterprises are still actively engaged in all aspects of the sector. While the current crisis has had a generally negative effect on overall activities, some innovative coping mechanisms have emerged which may foretell shifts in the sector over the longer-term.

For-profit private sector actors in agriculture range from very small scale tool manufacturers, Madam Sarahs, and transporters, to major vertically integrated firms that dominate such commodity subsectors as tomatoes, broiler/fryers, and coffee (through a very recent merger). Consideration of "the commercial sector" generally focusses on the medium and large scale players, ranging from a low of about US\$10,000 in annual revenues to well over US\$500,000 in annual revenues. A 1989 directory compiled by Haiti's development bank, SOFIHDES, includes 113 medium and large-scale agribusiness firms, which were classified into 150 entries by primary commodity classes/ functions in Table 4-3.



**Table 4-3: 113 Medium and Large Scale Agribusinesses
in Haiti by Commodity/Function, 1989**

Aquaculture and Fisheries	4
Coffee and Cocoa	17
Sugar Cane	10
Food Crops	12
Livestock (Cows-Goats-Swine)	13
Mango and Other Exotics Export	10
Flowers and Ornamental Plants	9
Essential Oils and Spices	15
Fruits and Vegetables	10
Consulting Services	8
Sisal	3
Tobacco	3
Agricultural Processing	13
Input Sales and Distribution	14
Poultry Production	9
Total	150 entries

 Source: SOFIHDES, Qui Est Qui dans
 l'Agribusiness en Haiti, Port-au-Prince,
 15 Novembre, 1989.

Although there have been some changes since the SOFIHDES pamphlet was issued in 1989, in general, the commercial sector engaged in agriculture is still probably composed of between 125 and 175 enterprises, many with tightly interlocking directorates. The enterprises have periodically organized themselves into more formal lobbying associations, such as APA or the Coffee Exporters Association (ASDEC) or the Mango Exporters Association (LEOCO), which occasionally have been truly representative, but occasionally have turned into cartels for one or more of the stronger members. There are no functional marketing boards in Haiti, for example. To be sure, certain large businesses are extremely well organized with well-integrated operations. For the most part, however, the agribusiness/agro-industry subsector may be characterized as being highly competitive as a group and somewhat disorganized overall.

In order to better understand the impact of the crisis, and particularly the embargo, on this group, the IICA team undertook an informal survey of 42 enterprises which it believes reflects the status of the medium and large scale commercial sector. The team makes no claim as to the sample's statistical validity, but notes that it includes all of the largest agribusinesses (USMAN, PRINSA, SHAISA, Barbancourt, etc.) and about 25-40 percent of the all others with annual turnover of more than about US\$50,000/ year.

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The completed information collection guides are available at the IICA/Haiti office, with a summary of findings presented as Table 4-4.

Table 4.5 summarizes the commodity focus of the 42 enterprise IICA sample, and Table 4-6 summarizes the activities by functions. Note that the list of functions is a more detailed variation on La Gra's typology used elsewhere in this paper.

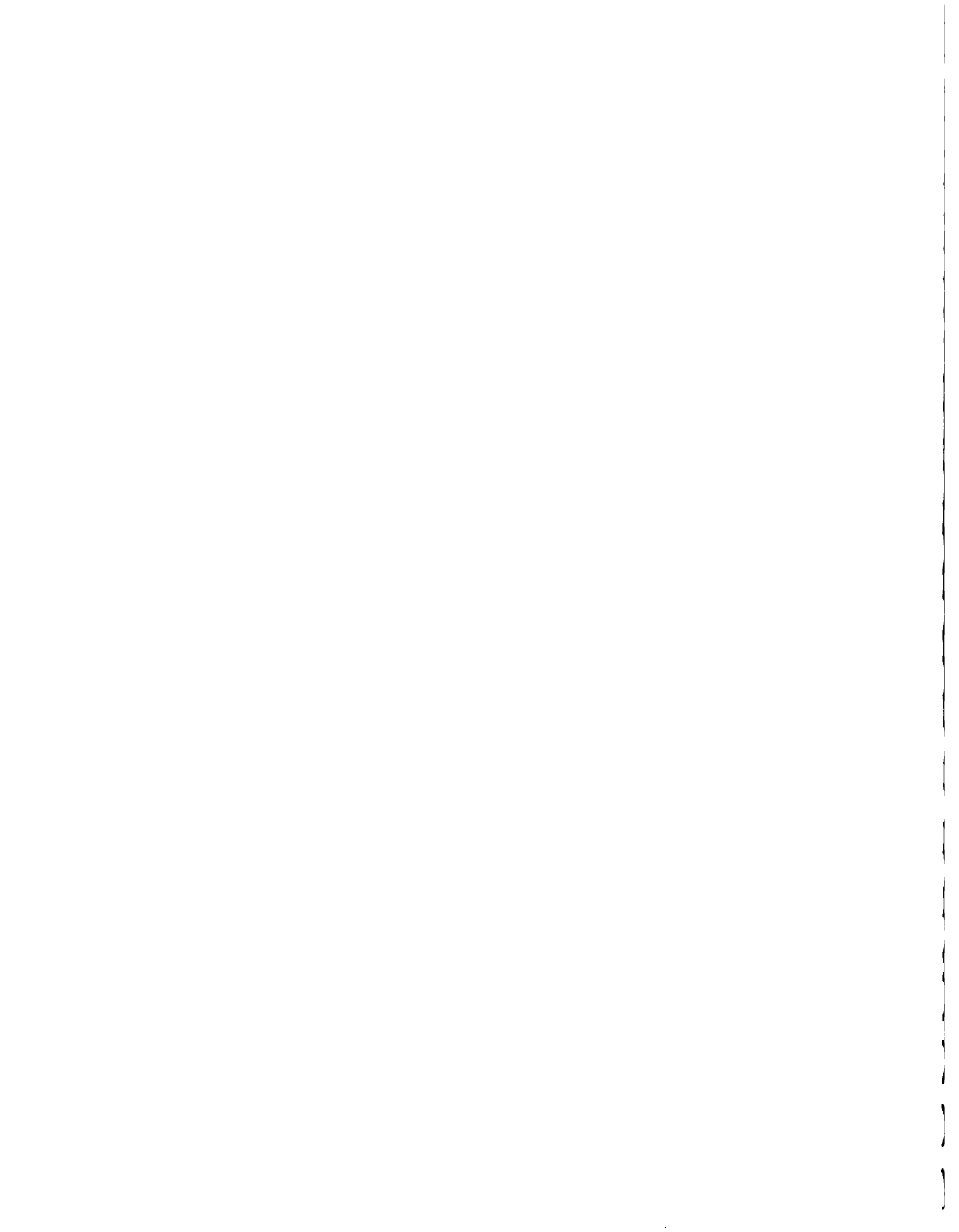


Table 4-4: Summary of Commercial Agribusinesses Interviewed in Survey

Name of Enterprise	Geographic Location	Primary Commodities	Primary Functions	REVENUES		PERSONNEL		Comments on Changes between 1990/91 and 1991/92
				90/91	91/92	90/91	91/92	
Denrees Haitiennes	P-au-P	Coffee	Processing & Export	VL	VL	74	74	Merger with USMAN and Madsen, original volume not effected.
Madsen Import Export	P-au-P	Coffee	Export & Processing	VL	VL	-	-	Merger with USMAN and Denrees Alimentaires original volume not effected.
USMAN	P-au-P	Coffee	Processing & Export	VL	VL	425	425	Merger with Denree Haitiennes & Madsen, original volume not effected.
L.O. Baptiste	P-au-P	Coffee	Processing & Export	L	M	256	256	Very little effect on business
MADROSA	P-au-P	Coffee	Processing	M	M	175	21	Significant decrease in volume processed
Perry Export-Import	P-au-P	Mango	Export	VL	M	353	103	Suspension of export to US; export of pickled mangoes to Europe.
Haitian Tropical Mgmt Bouquets	Croix des Bouquets	Mango	Export & Production	L	S	145	14	All exports suspended
JMB Export	P-au-P	Mango	Export	VL	S	19	0	Complete suspension of activities; totally closed.
Barbancourt	P-au-P	Sugar Cane/ Rum	Processing & Production	L	L	130	128	30% decrease in activities.
M. Celestin	Cul de Sac	Sugar Cane/ Mixed farming	Production	M	S	52	42	Suspension of livestock production; significant decrease other commodities.
Ets. G. Valles	P-au-P	Sugar Cane	Processing	VL	L	93	93	Technical difficulties during year, but production and volume OK

KEY: VL = Over US\$500,000/year; L = US\$100,000 - US\$500,000 per year; M = US\$10,000 - US\$100,000 per year; S = Under US\$ 10,000/year

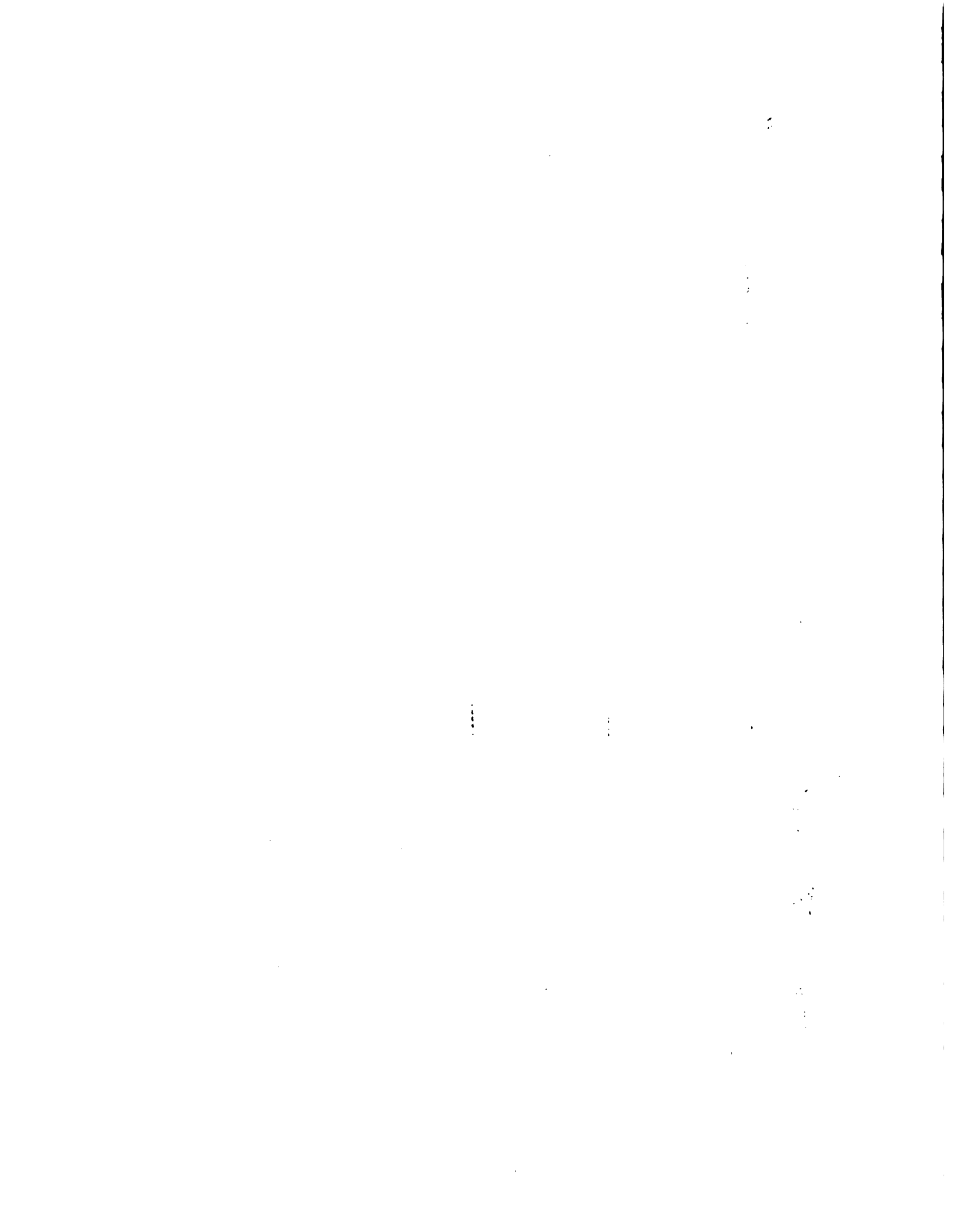


Table 4-page 2: Summary of Commercial Agribusinesses Interviewed in Survey

Name of Enterprise	Geographic Location	Primary Commodities	Primary Functions	REVENUES		PERSONNEL		Comments on Changes between 1990/91 and 1991/92
				90/91	91/92	90/91	91/92	
Comme Il Faut	P-au-P	Tobacco	Processing	VL	VL	300	170	Slight decrease in activities; emphasis on maize production for local market; stopped cucumber production for export
GEFESA	P-au-P	Cereals	Processing	L	S	71	7	Almost total suspension of activities
RIVASA	P-au-P	Cereals	Processing	L	L	66	66	More logistic and resupply problems due to crisis; little change in activities
COPRAGSA	Leogane Cayes	Cereals	Production	L	L	37	37	Has doubled production since beginning of crisis
AGRIPLEX	Croix des Bouquets	Cereals	Production	M	M	16	16	Has increased production since beginning of crisis
SHEEPA	Hinche	Cereals	Processing	M	S	72	11	Greatly effected by the crisis. Many projects delayed.
Key Ben	Corail	Rice	Production	M	S	16	0	Total suspension of activities
SHAISA (FAMOSA)	Croix des Bouquets	Tomatoes	Processing & Production	VL	VL	170	170	Production and credit greatly decreased. Over 600 contracts with small farmers cancelled.
A. Roy	Seut d'Eau	Banana	Production	L	M	27	9	Almost total suspension of activities due to crisis and to lack of public infrastructure
SAFICO	P-au-P	Sisal & Export	Processing	L	M	134	134	Crisis & world prices have decreased gross sales
Twincord S.A.	P-au-P	Sisal	Processing	VL	L	81	81	Significant decrease in local and export sales

KEY: VL = Over US\$500,000/year; L = US\$100,000 - US\$500,000 per year; M = US\$10,000 - US\$100,000 per year; S = Under US\$ 10,000/year

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Table 4-4page 3: Summary of Commercial Agribusinesses Interviewed in Survey

Name of Enterprise	Geographic Location	Primary Commodities	Primary Functions	REVENUES		PERSONNEL		Comments on Changes between 1990/91 and 1991/92
				90/91	91/92	90/91	91/92	
Fermes Armory	P-au-P	Poultry	Production	VL	S	165	9	Significant decrease in production, now recovering little by little
Daddy's Ferme	Bon Repos	Poultry/Eggs	Production	M	M	11	11	Market is promising; little fear of competition from imports;
E. Chatelain	Tabarre	Poultry	Production	M	M	7	7	Difficulties with financing and obtaining technical needs
Laiterie Bovan	Bon Repos	Poultry/Eggs	Production	M	M	13	13	Little change in market; required to stock feed; low liquidity
Prinsa	Bon Repos	Poultry	Production	VL	VL	295	295	Little effect on business; some expansion plans delayed
G. Héraux	Croix des Bouquets	Goats	Production	S	-	7	0	Closed due to looting
Aquaculture de Nippes	Nippes	Shrimp	Production	M	S	30	0	Complete closure due to loss of US market
Costa Nursery Farm International	Gressier	Exotic plants	Production & Export	M	M	51	51	Production and export problems during first 6 mos overcome; now suffering financial problems due to destruction of home office by Hurricane Andrew in Florida
Echer Poux	P-au-P	Flowers	Production	M	S	9	9	Suspension of all exports; significant decrease in local sales

KEY: VL = Over US\$500,000/year; L = US\$100,000 - US\$500,000 per year; M = US\$10,000 - US\$100,000 per year; S = Under US\$ 10,000/year

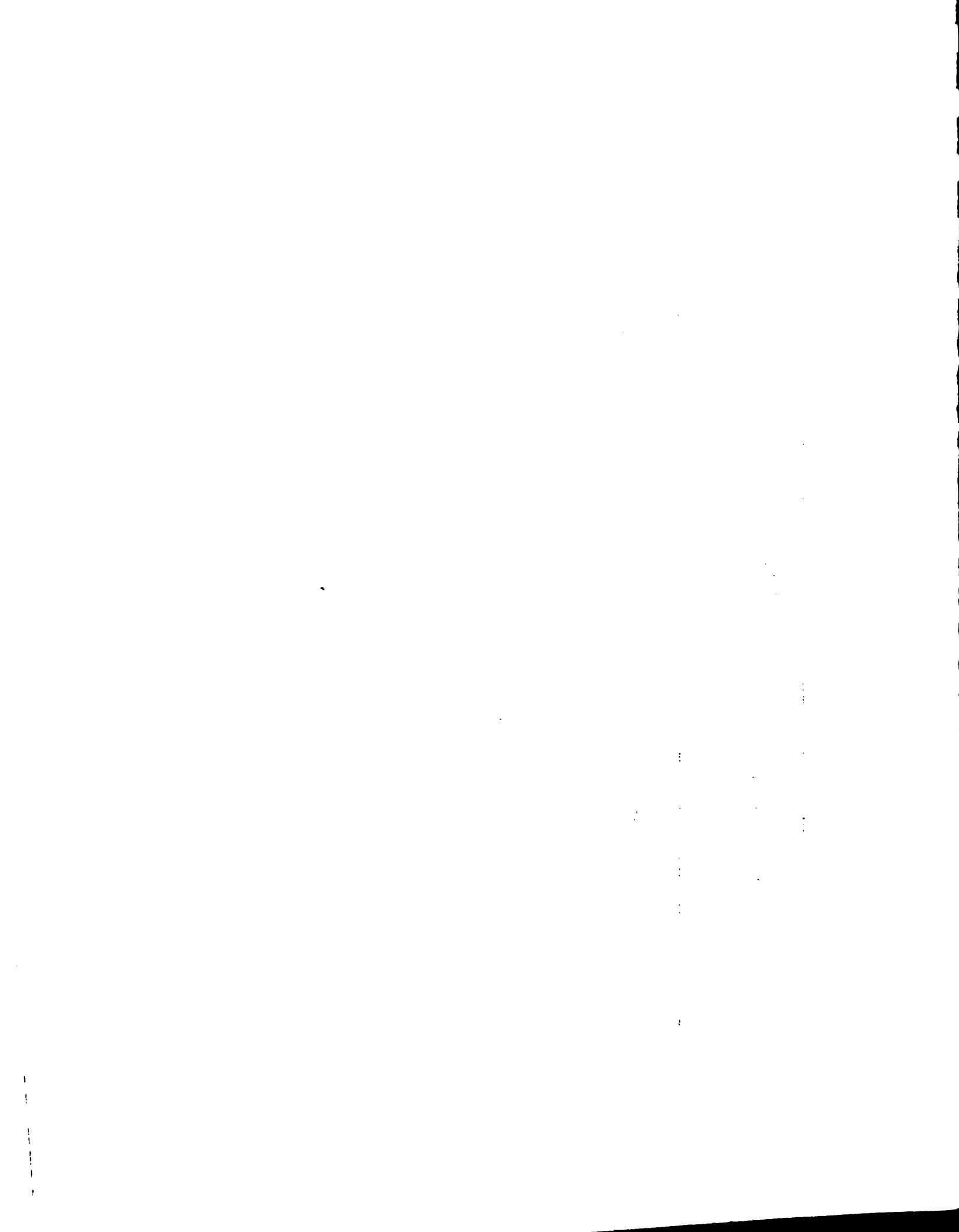


Table 4-4 page 4: Summary of Commercial Agribusinesses Interviewed in Survey

Name of Enterprise	Geographic Location	Primary Commodities	Primary Functions	REVENUES		PERSONNEL		Comments on Changes between 1990/91 and 1991/92
				90/91	91/92	90/91	91/92	
UMARON	Mippes	Lime Oil	Processing	\$	\$	7	7	Suspension of lime oil export to US; activities greatly reduced
Caribbean Flavors	P-au-P	Vetiver	Processing & Export	L	L	14	14	Oil processing suspended; purchase of oil and export continuing & increasing
AgriSupply	P-au-P	Fertilizer Vetiver Lime Oil	Input supply Processing & Export	VL	VL	75	75	Increase in fertilizer imports & sales; Suspension of lime oil export to US; Vetiver processing and export to Europe OK
Agrotechnique	P-au-P	Ag. Inputs	Input Supply	VL	L	70	70	Shifted out of input supply, into cereal production, will stay in cereals in future
Ressources Industrielles	P-au-P	Ag. Inputs	Input supply	L	S	2	2	Significant decrease in sales; shifted to non-agricultural activities
Haytian Tractor	P-au-P	Ag. Equipment	Input Supply	VL	L	87	45	Significant decrease in business
Roy et Associates	P-au-P	Consulting	Planning	M	S	3	2	No studies in agriculture sector; Firm closed
SOFIDNES	P-au-P	Finance	Credit	VL	VL	14	14	Significant decrease in business; increase in delinquent accounts
SOPRAGH	P-au-P	Ag. Inputs	Input Supply	L	L	13	13	50% decrease in turnover

KEY: VL = Over US\$500,000/year; L = US\$100,000 - US\$500,000 per year; M = US\$10,000 - US\$100,000 per year; S = Under US\$ 10,000/year

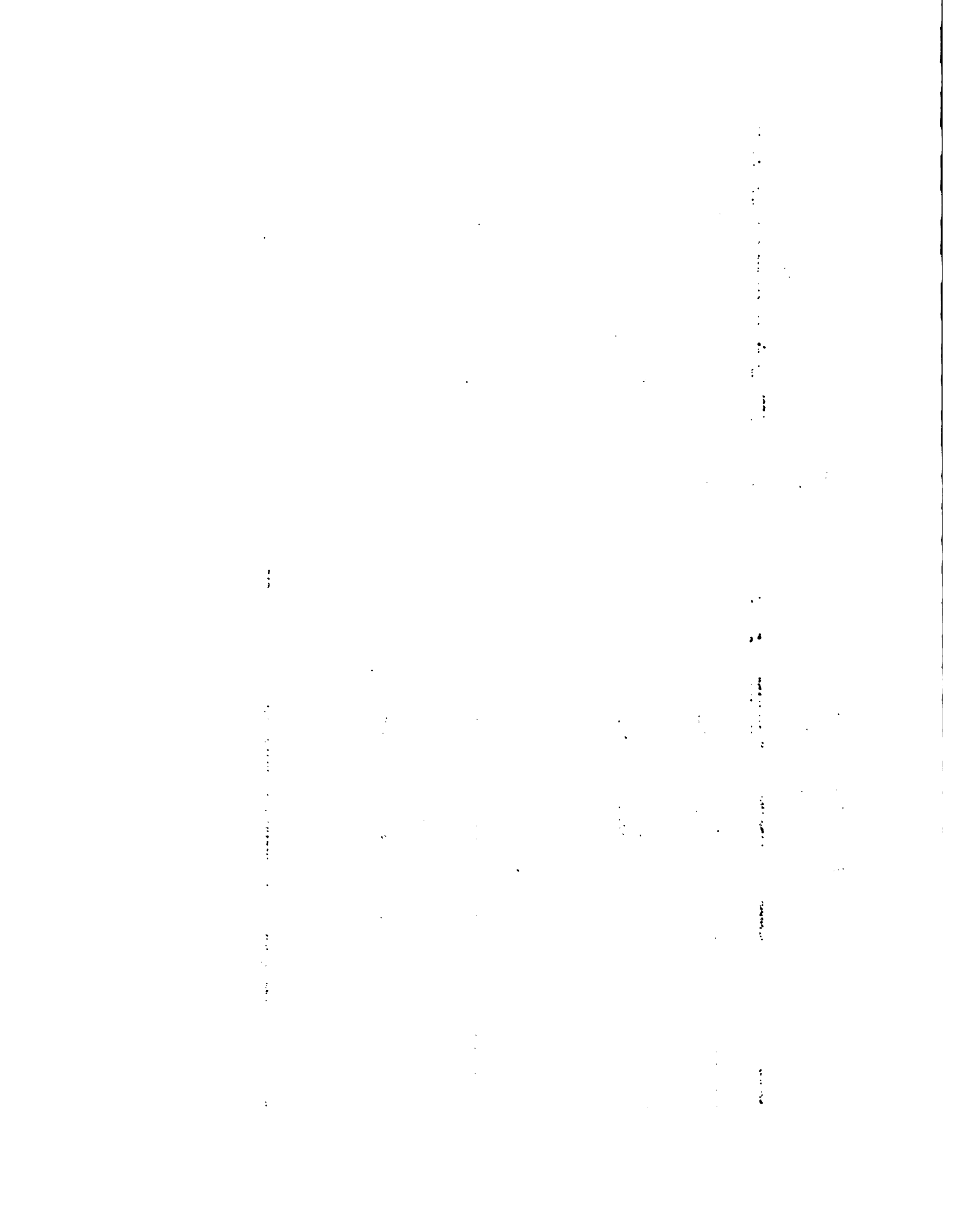


Table 4-5: Commodity Focus of 42 Medium and Large Agribusinesses in IICA Survey, November 1989

<u>Commodity Subsectors</u>	<u>Number of Responses</u>
Aquaculture and Fisheries	3
Coffee	5
Sugar Cane, Clairin, Rum	3
Food Crops & Tobacco	10
Livestock & Poultry	11
Mangoes, Fruits, and Vegetables	7
Flowers and Ornamental Plants	2
Essential Oils	5
Consulting Services	3
Sisal	2
Input Sales and Distribution	10
Total	61

Source: IICA Team, November 1992

Table 4-6: Functional Foci of 42 Medium and Large Agribusinesses in IICA Survey, November 1989

<u>Functional Area</u>	<u>Number of Responses</u>
PRE-PRODUCTION	
Policy/Planning	32
Feasibility Studies	12
PRODUCTION	
Production	26
Research and Development	14
Extension	5
Producer Organization	5
Credit	13
Input Supply	13
Training	9
POST-HARVEST HANDLING	
Quality Control	31
Transport	29
MARKETING	
Market Information	14
Processing	20
Intermediary	15
Export	19

Source: IICA Team, November 1992

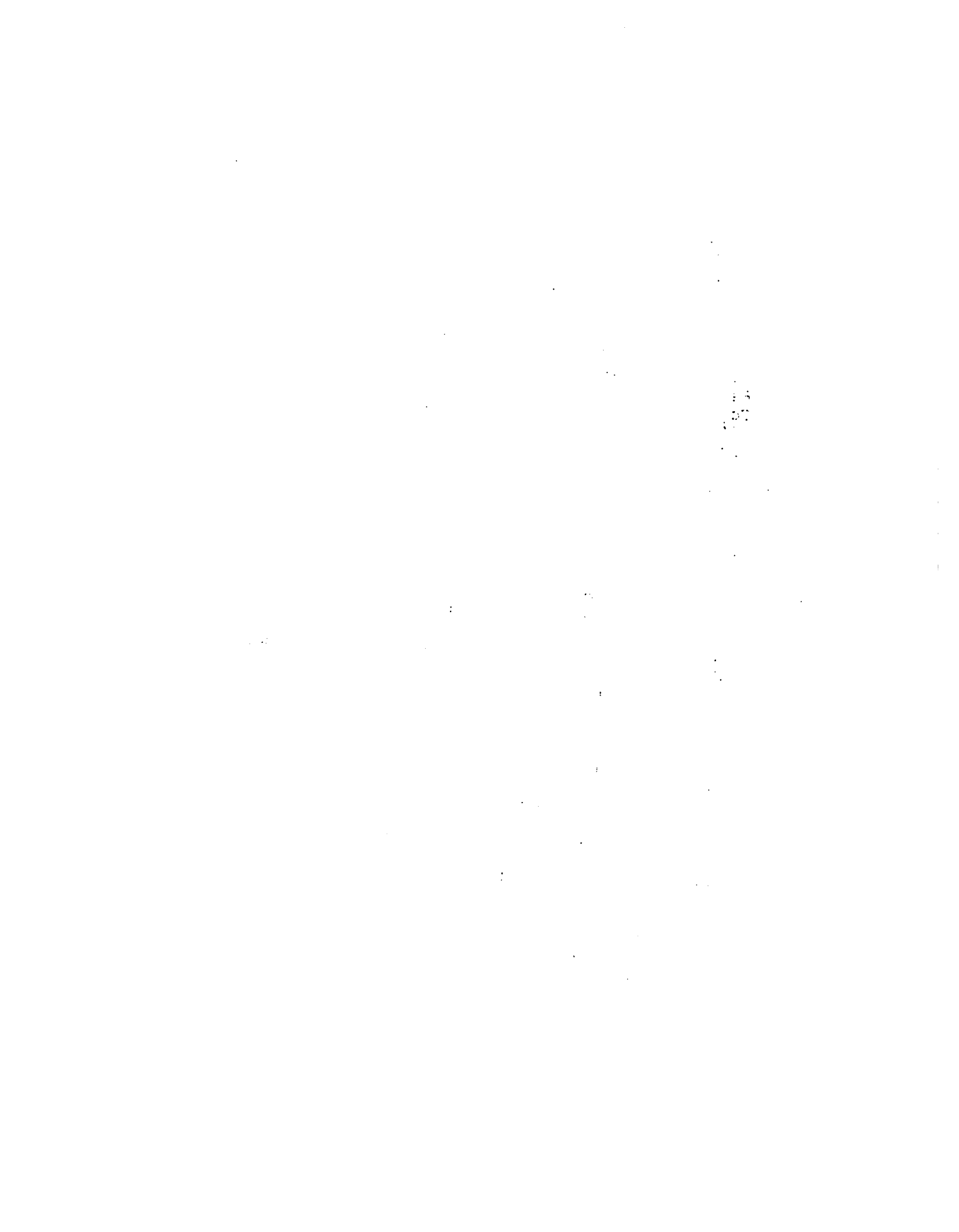


Table 4-5 demonstrates the wide range of commodities in which Haiti's agribusinesses are involved, ranging from basic food crops for the domestic market to exotic fruits and cut flowers for export, with no significant shifts from the SOFIHDES listing in 1989. The sector's functional activities, as shown in Table 4-6, illustrate two points of interest: 1) over half of the enterprises are in direct production, with corollary activities in pre-production and post-harvest handling and (almost half in) processing; and 2) less than 20 percent are involved in farmer training, extension, or group organization. The first finding suggests that over half of the sample have fairly well integrated operations, that link pre-production with production with post-harvest handling with processing. The second finding suggests a rather substantial lack of investment in participating farmer development by these larger operators, which will be discussed further in subsequent paragraphs.

Table 4-4 provides a summary of changes that the 42 enterprises sustained over the last 14 months. Only 7 ceased operations completely, and of these one merged with another firm, thus not really incurring a net loss of business, and one was a goat farm that was looted and destroyed in the weeks following the coup. The remaining 5 were in shrimp export (1), mango export (3), and irrigated rice production (1).

Four enterprises reported an increase in business, although none claimed net increases in profits due to increased input costs. These four included one egg production firm, two millet farms, and one input supply firm. The increases in egg production and input supply were attributed to the lack of competition from traditional suppliers due to the embargo, i.e. de facto protection of Haitian businesses, whereas the millet farmers are simply meeting local demand. Haiti's only cigarette manufacturer also increased purchase of local tobacco to blend with imports, due to a decrease in availability of imported U.S. tobacco.

Only four enterprises reported no significant change in business volume. Two of these were in coffee export, with traditional markets in non-embargoed European countries. They coffee exporters did, however, claim increased difficulties with shipping schedules and logistics. Of the remaining two, one was in clairin production, and one in broiler/fryers, i.e. both geared toward the local market. The remaining 28 enterprises reported decreases in volume of business, ranging from a modest 10 percent decrease to those claim the only reason they can stay open is due to a good family reputation.

The decrease in business volume is confirmed by the comments of SOFIHDES, the development bank that has traditionally supported agribusiness ventures. SOFIHDES has experienced a significant increase in delinquent payments since the embargo, with delinquencies now almost at 25 percent as compared to an average

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of 5 percent before the crisis. Key personnel at the bank note the increased risk involved in investment due to the embargo, and a general decrease in new opportunities in the lending market. The enterprises that could convert from export to domestic market have fared better than those that had to find new, non-embargoed, export markets. All firms have difficulties with input supply, including spare parts.

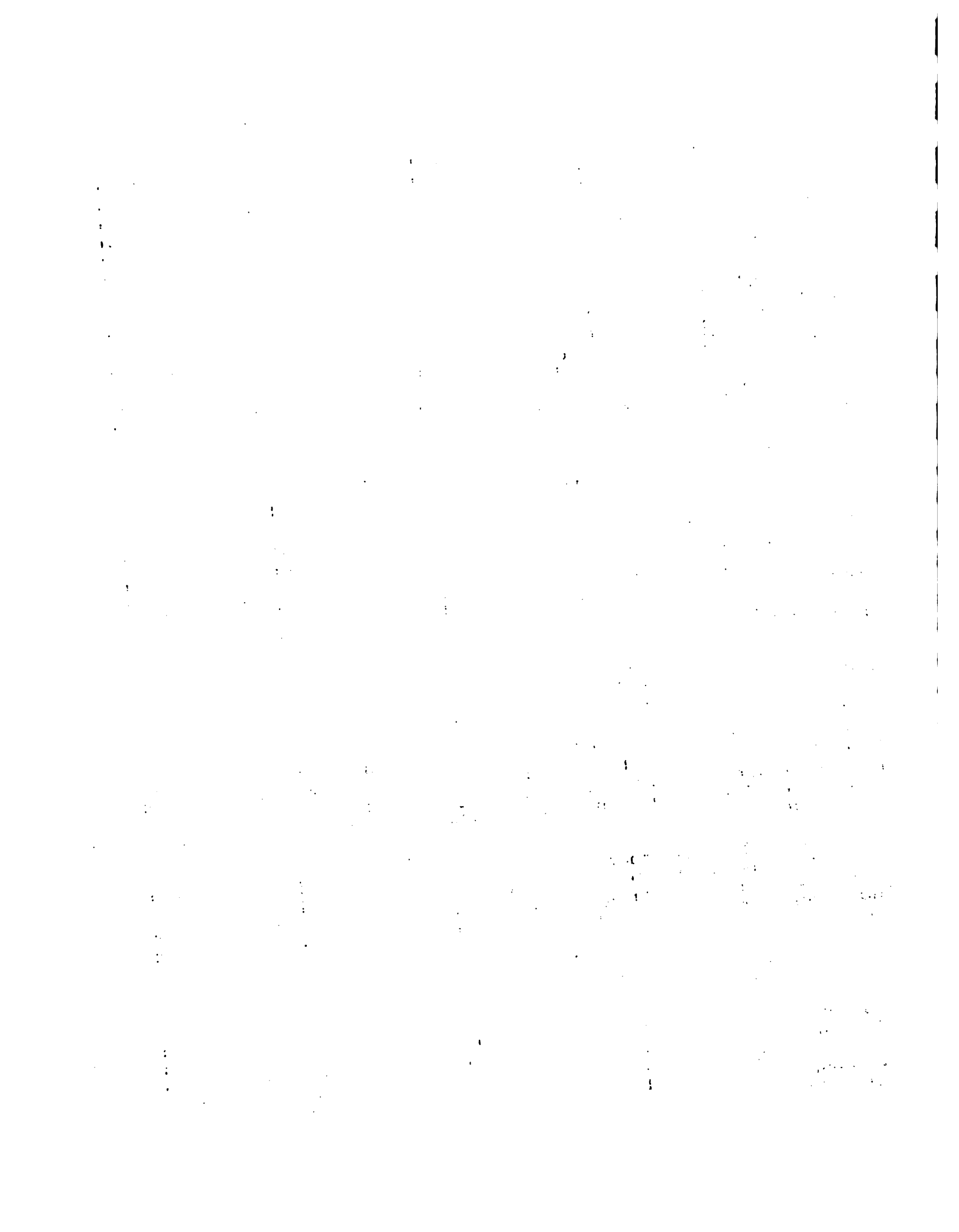
Eight of the firms in the IICA survey initiated new business ventures. At least four have done so simply to stay in business. The shrimp exporter who lost his U.S. market is trying to shift to tilapia production for local consumption, and a lime oil processor/exporter is trying to shift to more organized conch harvest and sales. One consulting firm is moving into import/export of consumer goods to try to maintain some income, and a lime oil producer reported he might have to move into charcoal production.

The four other new ventures are less in response to economic crisis than to possibilities for new income due to the protection the embargo affords. One food processing firm believes the embargo is a healthy stimulus to local firms, and has launched a new line of corn chips. One large farmer has financed a feasibility study of rehabilitating some major irrigation works in the Cul de Sac Plain, and another is increasing multiplication of cereal seeds in response to increased local demand. These entrepreneurs state that Haitian businesses will simply get more creative and more productive if the embargo endures.

Some of the firms reported putting expansion plans on hold, but others are continuing with business development. One lime oil enterprise has invested in special drums to store the oil over a longer period, and is continuing to buy from its small farmer clients. Importantly, the enterprise is also continuing a five year program of lime tree planting, providing seedlings free to participating farmers and other organizations. This sort of "enlightened self-interest" is uncommon in Haiti, and should be encouraged.

The Table shows that almost half, or 20 enterprises, have had to decrease personnel levels, and the remainder, or 22 enterprises, have experienced no change in personnel. None reported any net increases in personnel. Three have maintained personnel levels, but reduced salaries.

The enterprises all worked with a varying number of small farmers, transporters, and wage laborers. The millet farm that has increased production now employs 2500 laborers, which is an increase over prior years. About 1500 workers have retained jobs with one of the large coffee exporters, and 800 workers have remained with another. The 500 small farmers and 200 small breeders that work with the major poultry producer are similarly unaffected.



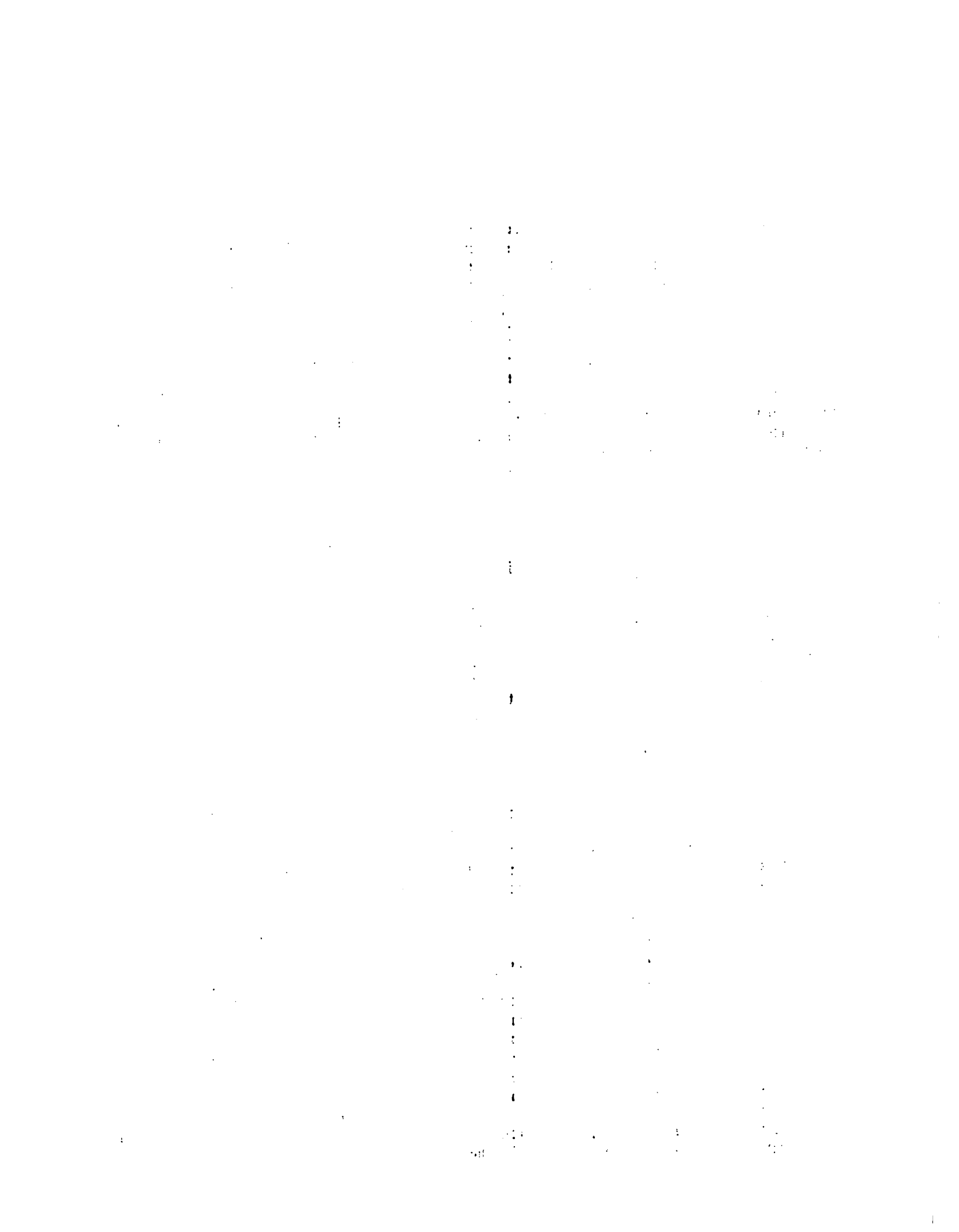
Workers and farmers affiliated with other commodities have not fared as well. The sisal industry reports the largest involvement of the rural population, with an estimated 100,000 persons effected by decreases in volume processed over the last year. Approximately 6,000 - 10,000 small mango producers have lost their traditional markets with the exporters, and about 500 small poultry producers or workers have lost income and/or jobs in that subsector. An estimated 350 workers have been laid off by the rum manufacturer, and 500 by the rice farm that ceased production. The major tomato processor reports that he worked with 600 contract farmer/producers prior to the embargo, providing inputs and selected seed and guaranteeing purchase of quality produce, but that now he only works with a few of the larger farms. While none of these job or market losses are as yet permanent, some of the farmers may be forced to rent or even sell their land in order to survive, thus contributing to productivity declines in the long-term.

In summary, the survey demonstrates that the commercial sector has experienced a net decrease in volume and activities overall which has definitely led to increased unemployment and income of participating farmers and farm families. There may also be some long-term damage done to selected firms due to loss of established markets, i.e. the shrimp farm may not be able to re-establish its relationship with Disney World. After one year of embargo, however, the overall sector is exhibiting a resilience that bodes well for their continued existence over the longer term. As described in section 3 of this paper, the fate of the small producer, however, is much less certain.

4.2 Impact of Changes on Sustainable Production

The embargo has had a serious effect on revenues of all types of Haitian institutions, be they public sector, commercial sector, NGO, or small individual farmer or farm family. The short-term effects have been recorded above, with modest discussion of impact over the medium- and long-term. The paragraphs below discuss some possible trends in terms of institutional behaviors.

Some observers believe that the greatest effect on institutions overall is the greatly increased awareness of the extreme dependence of the government -- for investment funding -- and the private sector -- for markets, inputs, and services -- on external parties. Many feel that the crisis, and particularly the embargo, will have a long-term positive effect by forcing the key players to focus much more on local production in general, and local agricultural production in particular. In terms of the government, this effect would include greatly decreasing expenditures on extraneous and/or non-productive activities, and focusing solely on supporting a sound policy and regulatory environment that supports food production and export crops that can maximize participation of small farmers (e.g. coffee, cocoa,



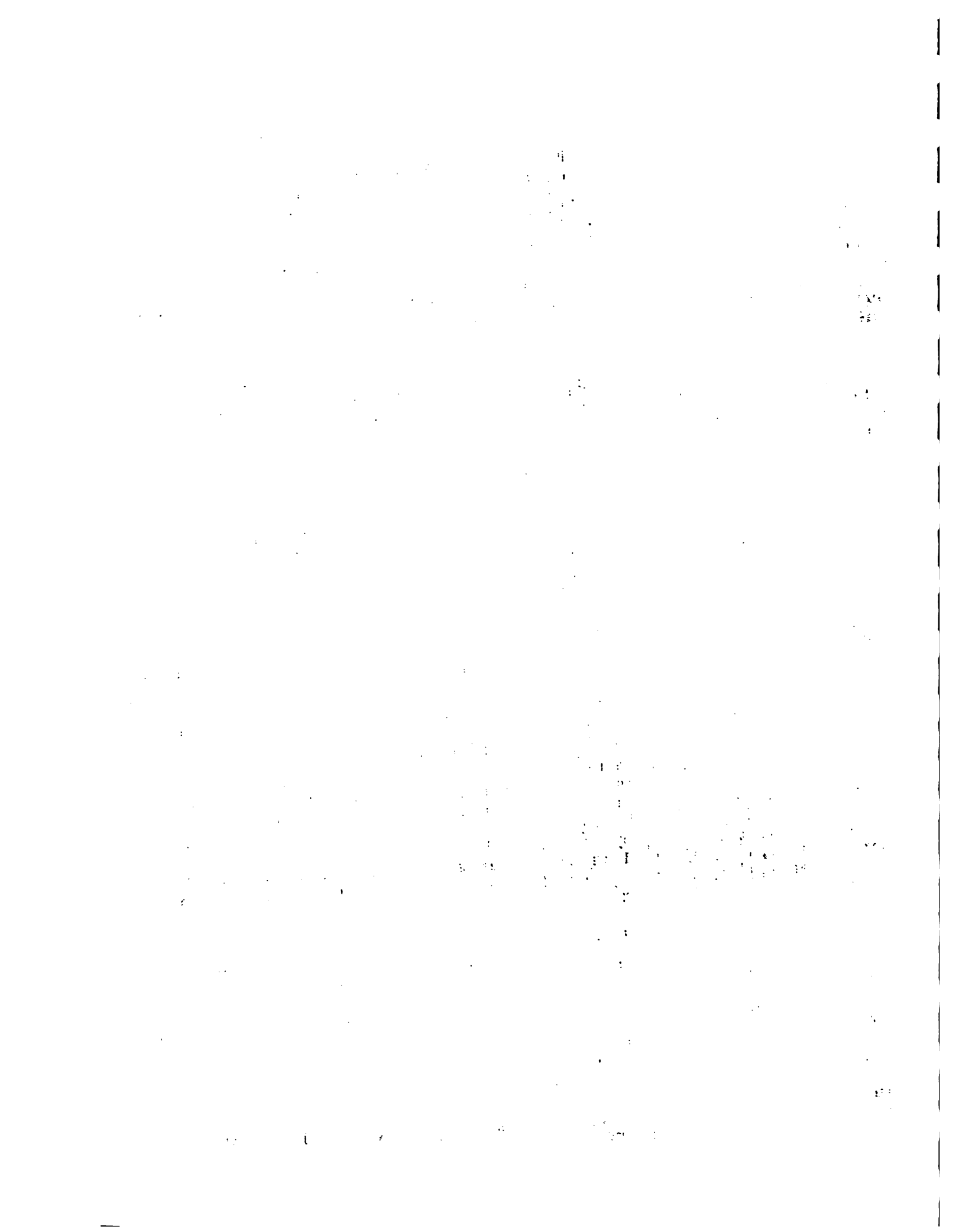
mangos). In terms of the public and private sector, this effect would also include new or additional research into possibilities of expanding the local market for local products or variations thereof, rather than focussing solely on export. Finally, it would include a new look at traditional products, which have technically been left to the informal sector but which, with the protection of the embargo, may become more financially interesting to larger investors. One example given would be local production of corn flakes and popcorn, the import of which is currently valued at US\$2 million/year.

The embargo and crisis have forced all players -- the government, NGOs, the commercial sector, and small farmers -- to become much more efficient as input prices continue to rise. This increase in efficiency, ranging from revising shifts at processing plants to organizing field trips better to save fuel, is likely to be beneficial in the longer term.

Also, and in a more neutral sense, the crisis has led to all parties undertaking a reassessment on the value of land in Haiti, particularly in terms of its agricultural potential. Several of the agribusinesses interviewed has shifted to food crop production, and indeed increased it, in response to their export markets being closed out. The team interviewed an entrepreneur who has almost 400 ha. on the Central Plateau which he recently visited for the first time in five years, as he is thinking that it is time he developed it. Thus, some of the absentee landlords may once again become producers, possibly leading to increased productivity.

Some of these "positive trends", particularly having the large commercial players reassessing local products and land, can be a double-edged sword. That is, the interest and ability of larger entrepreneurs to finance research and development and marketing of given products could easily displace local producers and traders. And, importantly, a large landowner returning to his/her farm could lead to displacement of tenants and sharecroppers, at a time when the economy is ill-equipped to absorb new laborers. **There are real concerns that there will be an increased concentration of control, or at least proprietary use, of productive resources in the hands of fewer, larger, players.**

Haiti is in many ways a zero-sum environment at this time, with all choices being much narrower than before and with the stakes in many ways much higher. If a larger enterprise fails, the owner can't simply go to the US for a few years to recuperate his/her losses, because visas are not being issued. Indeed, s/he may have trouble getting bank financing in Haiti, because of decreased foreign exchange availability, or in another country, simply because s/he is Haitian. If a small holder gets pushed off his/her land, s/he can't go to the Dominican Republic for a few years. If a piece of equipment critical to ODVA for irrigation works breaks, it cannot be replaced easily and any replacement will



be very, very expensive. The institutions must turn simply inward and increase efficiencies to the extent possible, and try to hold on for better days.

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1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in financial matters. This section also touches upon the legal implications of failing to maintain such records, which can lead to severe consequences for individuals and organizations alike.

2. The second part of the document delves into the specific requirements for record-keeping, including the types of documents that must be retained and the duration for which they should be kept. It provides a detailed overview of the various categories of records, such as financial statements, contracts, and correspondence, and outlines the best practices for organizing and storing these documents to ensure they are easily accessible and secure.

3. The third part of the document addresses the challenges associated with record-keeping, particularly in the context of digital information. It discusses the risks of data loss, corruption, and unauthorized access, and offers strategies to mitigate these risks. This includes the use of secure storage solutions, regular backups, and access controls to protect sensitive information.

4. The fourth part of the document provides a comprehensive overview of the legal and regulatory framework governing record-keeping. It highlights the various laws and regulations that apply to different sectors and types of records, and explains how these requirements can vary significantly. This section is particularly useful for organizations operating in regulated industries, where compliance with record-keeping standards is a critical component of their operations.

5. The fifth and final part of the document offers practical advice and tips for implementing an effective record-keeping system. It discusses the importance of developing clear policies and procedures, training staff on proper record-keeping practices, and regularly reviewing and updating the system to reflect changes in requirements and technology. The document concludes by emphasizing that a well-maintained record-keeping system is not only a legal requirement but also a valuable asset for any organization.

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