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# **BCA Loan Analysis Manual**

Prepared for the Strengthening Rural Credit Services  
Project, Bureau de Crédit Agricole

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CHAPTER ONE  
INTRODUCTION

OBJECTIVES AND PAST PRACTICES OF  
THE BUREAU DE CREDIT AGRICOLE

The primary objective of the Bureau de Credit Agricole (BCA) is to increase the income of rural Haitian households through the provision of agricultural credit to small-scale farmers. A complementary BCA objective is to perform this function in a financially viable, self-sustaining manner.

Since the Bureau was established approximately 25 years ago, most ECA loans have gone to agricultural credit societies (SACs). A SAC comprises 7 to 15 farmers who band together to receive a group loan, which is in turn divided among the SAC members for individual activities. SAC loans are generally untied, unsupervised, and uncollateralized credit for agricultural production and agriculture-related activities. They are secured only by the SAC's collective moral guarantee and unlimited group liability. The loans are usually granted without any formal prefeasibility or feasibility study, for approximately one year, discounted 14 percent (12 percent interest and 2 percent commission); an additional 2 percent mandatory savings account ("savings guarantee") is also paid upon loan retirement. Before September 1982, the interest rate was 9 percent, so with commission, one-year loans were discounted 11 percent.

The BCA has made loans to about 7,000 SACs to date, and as of March 1983, there were approximately 3,000 SACs with loans outstanding. Loans have ranged from ₡ 2,500 to ₡ 25,000, with the 1980-1981 average at about ₡ 8,300 (₡ 5.00 = \$ 1.00). Any loan above ₡ 25,000 must be approved by the BCA's Administrative Council.

The BCA has also granted loans to individuals for activities similar to those of SACs, under similar terms and procedures, but at an annual interest rate of 15 percent rather than 12 percent. Although precise figures are not currently available, individual loans have made up a much smaller proportion of the BCA's total loan portfolio than have loans to SACs. Individual loans have ranged from \$ 250 to \$ 25,000, with a 1980-1981 average of about \$ 2,700.

A third category of BCA loans has been for group-organized and -managed activities. These loans, primarily for agricultural cooperatives and precooperatives, have been few in number (about a dozen), but have generally been much larger than either SAC or individual loans. Group loans have ranged from \$ 25,000 to \$ 200,000, with a 1980-1981 average of about \$ 48,000.

#### PURPOSE OF STUDY

Although the BCA is still dedicated to providing credit to rural families to increase agricultural production and income, it would like to establish more rigorous and systematic methods for determining loan amounts and terms. The Bureau is also contemplating the expansion and diversification of its current loan portfolio to include both individually managed and group-managed small- and medium-scale enterprises (SMEs). This would allow it to exploit the development potential of linkages between agricultural production, and agricultural processing, storage, and marketing. This study was commissioned in order to lay the groundwork for potential growth and diversification of the portfolio.

The purpose of this manual is to assist the BCA to:

- Rationalize lending for agricultural production, by preparing input-output farm enterprise budgets that allow BCA field agents to derive loan recommendations consistent with farmers' resources and the profitability of the enterprise for which the loan is intended;
- Identify areas for potential BCA portfolio expansion and diversification, by examining specific individually and group managed SMEs to which the BCA might extend credit; and
- Present a systematic yet flexible procedure for evaluating SME loan applications and determining lending terms, by preparing model budget worksheets to assist BCA field agents in assessing the administrative and financial viability of proposed enterprises.

The goal of the above changes in BCA operations is to minimize the risk and maximize the return to the BCA's total loan portfolio.

#### STUDY METHODOLOGY

The study team began its work in Haiti by holding a series of discussions with:

- BCA staff at headquarters and in the field;
- Government of Haiti ministries and technical services, such as the Department of Agriculture, Natural Resources, and Rural Development (DARNDR); Agricultural and Industrial Development Institute (IDAI); National Cooperative Council (CNC); and Haitian Coffee Cooperative (CCH);
- AID officials; and
- The Haitian Development Foundation.

The team complemented these initial discussions with a review of BCA files; DARNDR reports; IDAI dossiers; and documents from ONAPI, FENU, FAO, the World Bank, AID, and FAC.

The bulk of the study team's time was spent conducting field interviews with past, current, and prospective BCA clients, at the following locations:

February 19-February 25 -- Cap-Haitien and Gonaives;

February 28-March 5 -- Hinche and Les Cayes; and

March 7-March 12 -- Port-au-Prince and Jacmel.

The study team concluded its mission in Haiti by discussing its preliminary findings and recommendations with BCA headquarters staff and AID officials. The team then incorporated suggested modifications into its draft report, and finalized this manual at DAI's headquarters in Washington, D.C.

#### STUDY OUTPUT

According to the study team's scope of work,

The end-product from this team is a manual of one-page budgets of costs and returns (and net profits) expected from the production of one year of one unit of each of the loan purposes for which the BCA plans to give loans. These budgets should show the costs, returns, and net profits with the details on cost of inputs presented in a way that will make it obvious to the field-level loan-disbursing agent how much credit should be given. Also the appropriate term for each loan purpose should be indicated, as well as the grace period, if appropriate.

The study team used this scope of work as its point of departure, but increased the detail and depth of each model budget to facilitate adjustments by BCA field agents when they apply these models to specific loan applications.

Each farm enterprise budget (Chapter Two) is divided into three parts:

- General Characteristics. This subsection gives a brief picture of the farmer's total land holdings and status of ownership, family labor available for work on the farm or for raising livestock, kind and size of livestock currently owned by the loan applicant, as well as a quick inventory of the farmer's tools and equipment;
- Agronomic Information. This includes information pertaining to the method of land preparation, the nature of the farmer's technological package, and the length of the growing season; and
- Income Statement. The statement comprises three parts: (i) input use, as well as costs attached to their use; (ii) revenue, calculated by multiplying the total marketable yield by the prevailing market price at harvest; and (iii) performance measures, such as gross margin, and net revenue after loan repayment.

Each individually managed SME budget (Chapter Three) is divided into two parts, a prefeasibility screening questionnaire and a model feasibility study. Chapter Three contains three prefeasibility questionnaires, one each for loan applications to:

- Establish a new business;
- Expand an existing business; or
- Provide working capital that increases profits but maintains current production levels.

The first two prefeasibility questionnaires cover the loan applicant's credit history and management capability, the market demand for the enterprise's product, equipment maintenance requirements, and raw materials and skilled labor supply. The third questionnaire focuses on whether the client is a good credit risk, and whether the cost savings outweigh any additional costs of buying in bulk.

Each SME feasibility study has the following components:

- General Characteristics. A summary of the enterprise's product, management requirements, production capacity, present and future market demand, investment requirements, raw materials, potential loan purposes, amount, repayment period, collateral requirements, special risks, and the model budget data source;
- Calculation of Loan Amount. A statement of the initial investment and working capital requirements needed to establish or expand a business, the loan applicant's contribution to this investment, and the loan amount and terms as used in the model feasibility study;
- Break-even Analysis. A calculation of the enterprise's fixed and variable costs and the minimum quantity of sales required to cover those costs, as well as a comparison of this break-even quantity with both the expected amount of sales and the enterprise's total production capacity; and
- Cash Flow Analysis. An analysis of the cash inflows and outflows to help ensure that the loan repayment schedule and terms coincide with the business cycle.

The material for group-managed enterprises in Chapter Four is also divided into two parts, a prefeasibility screening questionnaire and financial viability worksheets. As with the individually managed SME budgets, the BCA agent should administer the prefeasibility questionnaire for group-managed enterprises before completing the financial viability worksheets. The questionnaire identifies the most common reasons for the failure of group-managed enterprises, and so should screen out many of applicants (perhaps 50 percent) for group loans without any financial calculations. This should save the BCA agent considerable time and expense in evaluating loan applications.

The prefeasibility questionnaire is divided into five parts:

- The group's credit history;
- The comparative advantage of group activities;

- The group's administrative capacity;
- A supply analysis; and
- A demand analysis.

If all answers to the prefeasibility questionnaire are positive, then the BCA agent should proceed to the financial viability worksheets. Each financial viability analysis package consists of the following components:

- General Enterprise Characteristics. This serves as a cover sheet, and describes the activity under consideration, the region from which presented data was taken, the enterprise's expected market, model budget components that follow the cover sheet, and special considerations for each type of proposed activity;
- Projected Cash Flow. This projection is calculated with a BCA loan, for the loan repayment period. It compares cash receipts with cash disbursements over time, to ensure that the loan terms and repayment schedule do not compromise the enterprise's operating liquidity. This cash flow emphasizes the need for loan disbursement and repayment to coincide with the business cycle of the client's enterprise;
- Break-even Analysis. This is also calculated with a BCA loan. It determines the enterprise's fixed and variable costs, and the minimum quantity of sales needed to cover these costs. The break-even sales level is then compared with the expected sales level, to determine the enterprise's safety margin. For storage and marketing activities, a table is presented that indicates the breakeven level of purchases and resales with each of a wide range of assumed product markups; and
- Loan Guidelines. These summarize the preceding financial analysis, and extract the critical elements from each worksheet. These elements include the enterprise's minimum initial investment, minimum working capital for one year, minimum contribution from the group, expected retained earnings at the end of the loan repayment period, BCA loan terms, minimum group size, break-even and expected sales levels, price and cost assumptions, expected rebates to group members, and expected market for the enterprise's product.

The model enterprise budgets presented in this manual are only one of an assortment of analytic tools for determining the viability of loan applicants' proposed activities and setting terms for loan disbursement and collection. These budgets should not be used in isolation of complementary decision-making aids, nor should they be a substitute for good judgment and common sense if the numbers seem inaccurate or fabricated.

## CHAPTER TWO

### FARM ENTERPRISE BUDGETS

#### INTRODUCTION

##### Definition of Haitian Farm Enterprises

The study team defined Haitian farm enterprises as the production of distinct crops or livestock commonly found in the areas covered by BCA activities. This included crops grown individually or in combinations. A budget for a farm enterprise was calculated both from household data gathered through one-time personal interviewing during a three-week field visit to all five BCA regions, and from a review of documents currently being used by IDAI for loan analysis.

##### Purpose and Composition of Farm Enterprise Budgets

The aim of the input-output budgets presented in this manual is to derive loan recommendations that are consistent with farmers' resources and the profitability of the enterprise for which the loan is intended. Furthermore, enterprise budgets are important in farm income analysis because they help to explain the internal structure of the farm as a whole, and to show the relative strength of each enterprise. These enterprise budgets, therefore, are instrumental in an attempt to: (i) assess the profitability of each enterprise relative to the resources used; (ii) compare the relative efficiency of various enterprises on the farm; and (iii) provide a basis for making rational decisions about the type and size of the farm enterprise to be supported by a loan program.

For each enterprise budget presented in this section, three main parts can be distinguished:

- General Characteristics. This sub-section gives a brief picture of the farmer's total land holdings and the ownership status, family labor available for work on the farm or for raising livestock, kind and number of livestock currently owned by the potential loan applicant that could be used either as collateral or as an indication of the farmer's previous experience in livestock raising, and a quick inventory of the farmer's tools and equipment.
- Agronomic Information. This sub-section includes information pertaining to the method of land preparation; the technological package used by farmers; and the length of the growing season, which is important in establishing the loan repayment schedule.
- Income Statement. This sub-section comprises three parts:
  - Input use, as well as costs attached to their use. The opportunity cost of family labor or operator labor is not included in the computation. The loan term was generally based on the crop cycle, and on the possibility of giving out one loan for two or more cropping seasons without disrupting the production process;[1]
  - Revenue, including the total marketable yields of crops, as well as their market prices during the harvest period; and
  - Performance measures available to make loan decisions, such as the gross margin, size of loan repayment, and net revenue after loan repayment, which aids in determining whether the revenue accruing from the production of a given enterprise can support a loan of a given amount, and whether at the end of the period the enterprise can refinance itself without further loans under ceteris paribus conditions.

### Use of Farm Enterprise Budgets

In terms of agricultural loan analysis, enterprise budgets alone are not sufficient. They must be integrated into a farm income statement that takes into consideration all the activities of the farmer, the variation in his stock (if any), and his consumption needs. Therefore, these farm enterprise budgets should be seen as the beginning of a process and not as a powerful

tool to make loan decisions; otherwise, the BCA will be vulnerable to defaults. Furthermore, the data base from which the enterprise budgets was drawn was limited and heterogenous. Because of these shortcomings, the following representative budgets should be interpreted with care and under no circumstances should be used as a blueprint; they must be adjusted to fit specific cases, taking into account differences in such variables as yields, prices, technology, and cropping systems, by doing a partial budget, and making appropriate adjustments.

### SELECTION PROCESS

The type and frequency of crops and animals surveyed are presented in the following table. Altogether, 19 different crops or livestock were studied during the study team's three-week field visit. These crops and livestock were surveyed through 48 interviews, geographically distributed as follows:

- 14 in the Cap-Haitien region;
- 11 in the Gonaives region;
- 9 in the Hinche region; and
- 6 in the Les Cayes region.

By crop or by livestock, interviews range from seven for cowpeas/beans to one for swine production. Data were complete enough to draw up budgets for 14 crops or crop categories and for two different types of livestock.

TYPE AND FREQUENCY OF CROPS AND  
LIVESTOCK SURVEYED BY REGION

CROPS/LIVESTOCK	CAP -					TOTAL
	HAITIEN	GONAIVES	HINCHE	LES CAYES	P-AU-P	
Banana-Plantain	1	0	0	1	1	3
Sugar Cane	1	0	2	1	0	4
Cowpeas/Beans	2	3	1	1	0	7
Maize	1	2	1	0	0	4
Irrigated Rice	0	2	1	1	0	4
Swamp Rice	0	0	1	0	0	1
Millet	0	0	1	0	0	1
Groundnuts	0	0	1	0	0	1
Sweet Potatoes	0	1	0	0	0	1
Cassava	1	0	0	0	0	1
Coffee	1	0	0	1	0	2
Cotton	0	1	0	0	0	1
Tomatoes	1	1	0	1	0	3
Irish Potatoes	0	0	0	0	1	1
Garlic/Shallots	0	1	0	0	0	1
Carrots/Onions	0	0	0	0	1	1
Cabbage/Peas	0	0	0	0	1	1
Yams	2	0	0	0	1	3
Egg Production	1	0	0	0	0	1
Broiler Production	1	0	0	0	1	2
Cattle Fattening	1	0	0	1	0	2
Swine Fattening	0	0	0	1	0	1
Goat Production	0	0	1	0	0	1
Tobacco	1	0	0	0	0	1
<b>Total</b>	<b>14</b>	<b>11</b>	<b>9</b>	<b>8</b>	<b>6</b>	<b>48</b>

## MODEL BUDGETS

- 1) Cereals
  - Maize
  - Irrigated Rice
  - Maize/Cowpeas
- 2) Grain legumes
  - Cowpeas/Beans
  - Groundnuts
- 3) Root and tubers
  - Cassava
  - Irish Potatoes
  - Yams
- 4) Legumes
  - Tomatoes
  - Onions/Carrots
  - Cabbage/Peas
- 5) Export Crops
  - Banana-Plantain
  - Sugar Cane
  - Coffee
- 6) Livestock Enterprises
  - Broiler Production
  - Cattle Fattening

In these model farm enterprise budgets, all monetary figures are in gourdes, and all area figures are in carreaux (1 carreau = 1.2 hectares).

IRRIGATED MAIZE ENTERPRISE BUDGET, PER CARREAU,  
BCA AREA[1], HAITI, 1983

I. GENERAL CHARACTERISTICS

1. Total land area available	8 cx
2. Total land area under cultivation this season	3 1/4 cx
3. Total number of plots	4 (1 cx, 1 cx, 3/4 cx, 1/2 cx)
4. Tenure system	Owned: 2 1/4 cx; Rented: 1 cx
5. Farm organization	Millet/Maize, Banana-Plantain, Millet/Maize
6. Family labor available	4
7. Livestock owned	Cows (10); Donkeys (5); Horses (4); Poultry (35); Goats (15)
8. Tools and equipment	Picks (1); Cutlasses (3); Hoes (3); Pruning Knives (2); Shovels (1)

II. AGRONOMIC INFORMATION

1. Method of land preparation	Manual
2. Use of improved seeds	Improved seeds
3. Use of manure	No
4. Use of fertilizer	Yes
5. Use of insecticides	Yes
6. Length of growing season	3 months

III. INCOME STATEMENT

1. EXPENSES

1.1 Non-labor expenses

	(in gourdes)
Seeds (10 marmites @ 8 gourdes/marmite)	80
Fertilizer 16-10-20 (5 100-lb. sacks @ 70 gourdes/sack)	350
Sevin (8 lbs @ 6 gourdes/lb)	48
Irrigation fees (30 gourdes)	30
Rental cost of land (50 gourdes)	50
Sub-total	558

1.2 Labor input and expenses	
Land preparation (200 person-days)	320
Seeding (15 person-days)	
Weeding (50 person-days/weeding x 2 weedings)	450
Fertilizer application (2 person-days)	
Irrigation labor and sevin application (17 person-days)	60
Harvesting/transport/shelling (80 person-days)	120
Sub-total	950
1.3 TOTAL	1,508
1.4 Loan amount (1,508 ÷ .92)	1,639
1.5 Loan term	6 months
2. REVENUE	
2.1 Total marketable yield	1,000 marmites
2.2 Unit price of output at harvest	3 gourdes/marmite
2.3 Cash sales	(in gourdes) 3,000
3. PERFORMANCE MEASURES	
3.1 Gross margin (2.3 - 1.3)	1,492
3.2 Amount of loan repayment	1,672
3.3 Net revenue after loan repayment (2.3 - 3.2)	1,328

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1 Data Source: Personal interviews with farmers in Cap-Haitien, Gonaives, and Hinche; IDAI documents.

IRRIGATED RICE ENTERPRISE BUDGET, PER CARREAU,  
BCA AREA[1], HAITI, 1983

<b>I. GENERAL CHARACTERISTICS</b>	
1. Total land area available	5 cx
2. Total land area under cultivation this season	3 cx
3. Total number of plots	4 (1 cx, 3/4 cx, 1/2 cx, 1/4 cx)
4. Tenure system	Owned
5. Farm organization	Maize/Cowpeas; Rice; Cotton; Banana-Plantain/Maize
6. Family labor available	4
7. Livestock owned	Horses (1); Poultry (35); Donkeys (1); Goats (5)
8. Tools and equipment	Hoes (1); Cutlasses (2); Axes (1); Shovels (1)
<b>II. AGRONOMIC INFORMATION</b>	
1. Method of land preparation	Tractor-hiring services
2. Use of improved seeds	Yes (Madame Gougousse)
3. Use of manure	No
4. Use of fertilizer	Yes
5. Use of insecticides	Yes
6. Length of growing season	4-5 months (possibility of 2 crops per year)
<b>III. INCOME STATEMENT</b>	
1. EXPENSES	
1.1 Non-labor expenses	
	(in gourdes)
Seeds for the nursery (40 marmites @ 5 gourdes/marmite)	200
Fertilizer 16-20-0 (3 bags @ 70 gourdes/bag)	210
Urea (4 50-lb bags @ 45 gourdes/bag)	180
Malathion (12 lbs @ 2.5 gourdes/lb)	30
Tractor-hiring service cost	600

Irrigation tax	42
Sub-total	1,262
1.2 Labor input and expenses	
Nursery labor (60 person-days)	—
Transplanting (60 person-days)	140
Weeding (150 person-days/weeding x 2 weedings)	600
Irrigation labor (18 person-days)	90
Fertilizer application (10 person-days)	—
Harvesting and transport (120 person-days)	500
Sub-total (568 person-days)	1,330
1.3 T O T A L (568 person-days)	2,592
1.4 Loan amount (2,592 - .86)	3,014
1.5 Loan term	1 year
2. REVENUE	
2.1 Total marketable yield	1,000 marmites
2.2 Unit price of output at harvest	5 gourdes/marmite
	(in gourdes)
2.3 Cash sales	5,000
3. PERFORMANCE MEASURES	
3.1 Gross margin (2.3 - 1.3)	2,408
3.2 Amount of loan repayment	3,074
3.3 Net revenue after loan repayment (2.3 - 3.2)	1,926

1 Data Source: Personal interviews with farmers in Gonaives and Les Cayes; IDAI documents.

MAIZE/COWPEAS ENTERPRISE BUDGET, PER CARREAU,

BCA AREA[1], HAITI, 1983

I. GENERAL CHARACTERISTICS

- |  |  |
|--|--|
| 1. Total land area available                     | 2 cx   |
| 2. Total land area under cultivation this season | 2 cx   |
| 3. Total number of plots                         | 3 (1 cx; 1/2 cx; 1/2 cx)                                 |
| 4. Tenure system                                 | Owned all plots  |
| 5. Farm organization                             | Sugar Cane; Maize/Cowpeas; Banana-Plantain/Maize/Cowpeas |
| 6. Family labor available                        | 5  |
| 7. Livestock owned                               | Horses (1); Goats (13); Poultry (12)                     |
| 8. Tools and equipment                           | Hoes (3); Pruning Knives (2); Cutlasses (3)              |

II. AGRONOMIC INFORMATION

- |                               |  |
|-------------------------------|--|
| 1. Method of land preparation | Hoe cultivation                                |
| 2. Use of improved seeds      | No   |
| 3. Use of manure              | Yes  |
| 4. Use of fertilizer          | No   |
| 5. Use of insecticides        | No   |
| 6. Length of growing season   | 3-4 months (maize)<br>2-2 1/2 months (cowpeas) |

III. INCOME STATEMENT

1. EXPENSES

1.1 Non-labor expenses

	(in gourdes)
Maize seeds (10 marmites @ 7 gourdes/marmite)	70
Cowpeas seeds (40 marmites @ 12 gourdes/marmite)	480
Sub-total	550

MAIZE/COWPEAS

1.2 Labor input and expenses	
Land preparation (120 person-days)	720
Sowing - maize (40 person-days)	280
- maize (60 person-days)	420
Manure application (10 person-days)	—
Weeding (80 person-days per weeding x 2)	400
Harvesting - maize (30 person-days)	—
- cowpeas (45 person-days)	100
Sub-total	1,920
1.3 TOTAL	2,470
1.4 Loan amount (2,470 - .92)	2,685
1.5 Loan term	6 months
2. REVENUE	
2.1 Total marketable yield	maize: 700 marmites cowpeas: 400 marmites
2.2 Unit price of output at harvest	4 gourdes/marmites (maize) 3 gourdes/marmittes (cowpeas)
	(in gourdes)
2.3 Cash sales (2,800 + 1,200)	4,000
3. PERFORMANCE MEASURES	
3.1 Gross margin (2.3 - 1.3)	1,530
3.2 Amount of loan repayment	2,738
3.3 Net revenue after loan repayment (2.3 - 3.2)	1,262

1 Data Source: Personal interviews in Cap-Haitien and Hinche; IDAI documents.

COMPEAS/BEANS[1] ENTERPRISE BUDGET, PER CARRFAU,

ECA AREA, [2] HAITI, 1983

I. GENERAL CHARACTERISTICS

- |  |   |
|--|---|
| 1. Total land area available                     | 3 cx  |
| 2. Total land area under cultivation this season | 2 1/2 cx  |
| 3. Total number of plots                         | 5 (1 1/4 cx, 1/2 cx, 1/4 cx, 1/4 cx, 1/4 cx)                    |
| 4. Tenure system                                 | Owns all his plots  |
| 5. Farm organization                             | Rice; Beans; Maize/Beans/Banana-Plantain; Maize/Millet; Rice    |
| 6. Family labor available                        | 6   |
| 7. Tools and equipment                           | Hoes (3), Cutlasses (3), Spades (2), Shovels (2), Pick-Axes (2) |
| 8. Livestock owned                               | Cows (2), Goats (12), Horses (1)                                |
| 9. Non-farm occupation                           | Sell "planches"   |

II. AGRONOMIC INFORMATION

- |                               |                   |
|-------------------------------|-------------------|
| 1. Method of land preparation | Manual            |
| 2. Use of improved seeds      | Traditional seeds |
| 3. Use of manure              | No                |
| 4. Use of fertilizer          | Yes               |
| 5. Use of insecticides        | Yes               |
| 6. Length of growing season   | 2 1/2 - 3 months  |

III. INCOME STATEMENT

1. EXPENSES

1.1 Non-labor expenses

	(in gourdes)
Seeds (50 marmites @ 13 gourdes/marmite)	650
Fertilizers Ammonium Sulfate (360 lbs @ .60 gourdes/lb)	216
Potassium Sulfate (240 lbs @ .60 gourdes/lb)	144
Sevin 50% (6 lbs @ 36 gourdes); Malathion (12 lbs @ 30 gourdes)	66

COMPEAS/BEANS

Dithane (5 lbs @ 25 gourdes); renting of "pulversateur" (10 gourdes)	35
Irrigation tax (84 gourdes)	1,145
Sub-total	1,195
1.2 Labor input and expenses[3]	
Land preparation (45 person-days)	200
Seeding (32 person-days)	96
Weeding/bedding (only once) (40 person-days)	120
Irrigation (10 person-days); insecticide application (20 gourdes)	70
Fertilizer application (4 person-days)	20
Harvesting and transport (20 persons-days)	120
Sub-total	626
1.3 T O T A L	1,821
1.4 Loan amount[4] (1,821 - .92)	1,979
1.5 Loan term	6 months
2. REVENUE	
2.1 Total marketable yield	520 mamites
2.2 Unit price of output at harvest	9 gourdes/mamite
2.3 Cash sales	(in gourdes) 4,680
3. PERFORMANCE MEASURES	
3.1 Gross margin (2.3 - 1.3) (2.3 minus 1.3)	2,859
3.2 Amount of loan repayment	2,019
3.3 Net revenue after loan repayment (2.3 - 3.2)	2,661

1 Mono-cropping

2 Data Source: personal interviews with farmers in Gonaives, Jacmel, Vallee de L'Artibonite, and Les Cayes.

3 On the average, hired labor was paid 10 gourdes per person-day for land preparation and 3 gourdes per person-day for other field operations - note that during land preparation, the labor day was also longer (about 8 hours) than during the rest of the cropping season (4 hours on the average).

4 Assuming that loan is to cover the total cost (1.3).

GROUNDNUTS ENTERPRISE BUDGET, PER CARREAU,  
BCA AREA[1], HAITI, 1983

I. GENERAL CHARACTERISTICS

1. Total land area available	3 cx
2. Total land area under cultivation this season	2 cx
3. Total number of plots	3 (1 cx, 1/2 cx, 1/2 cx)
4. Tenure system	Owned
5. Farm organization	Maize/Millet/Banana-Plantain; Maize/Cassava; Groundnuts
6. Family labor available	2
7. Livestock owned	Oxen (3); Goats (3); Horses (1); Donkeys (1)
8. Tools and equipment	Hoes (1); Cutlasses (1)

II. AGRONOMIC INFORMATION

1. Method of land preparation	Animal traction
2. Use of improved seeds	No
3. Use of manure	No
4. Use of fertilizer	No
5. Use of insecticides	Yes
6. Length of growing season	3-4 months

III. INCOME STATEMENT

1. EXPENSES

1.1 Non-labor expenses	(in gourdes)
Seeds (30 marmites @ 15 gourdes/marmite)	450
Sevin (6 lbs @ 10 gourdes/lb)	60
Cost of land preparation	150
Sub-total	660

GROUNDNUTS

1.2 Labor input and expenses	
Seeding (10 person-days)	30
Weeding (30 person-days/weeding x 2 weedings)	180
Spraying of sevin (1 person-day)	10
Harvesting-transport (20 person-days)	60
Sub-total	280
1.3 T O T A L	940
1.4 Loan amount	1,011
1.5 Loan term	6 months
2. REVENUE	
2.1 Total marketable yield	800 marmites
2.2 Unit price of output at harvest	2 gourdes/marmite
	(in gourdes)
2.3 Cash sales	1,600
3. PERFORMANCE MEASURES	
3.1 Gross margin (2.3 - 1.3)	660
3.2 Amount of loan repayment	1,031
3.3 Net revenue after loan repayment (2.3 - 3.2)	569

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1 Data Source: Personal interviews with farmers in Ospalis and Hinche; IDAI documents.

CASSAVA ENTERPRISE BUDGET, PER CARREAU,  
BCA AREA[1], HAITI, 1983

I. GENERAL CHARACTERISTICS

1. Total land area available	2 3/4 cx
2. Total land area under cultivation this season	2 3/4 cx
3. Total number of plots	4 (1/2 cx, 1/2 cx, 1 cx, 3/4 cx)
4. Tenure system	3 plots owned and 1 plot rented
5. Farm organization	Banana-Plantain; Banana-Plantain/Maize/Cowpeas; Cassava; Sugar Cane
6. Family labor available	3
7. Livestock owned	Poultry (20)
8. Tools and equipment	Hoes (2); Cutlasses (2); Shovels (1).

II. AGRONOMIC INFORMATION

1. Method of land preparation	Hoe cultivation
2. Use of improved seeds	No
3. Use of manure	No
4. Use of fertilizer	No
5. Use of insecticides	Yes
6. Length of growing season	12 months

III. INCOME STATEMENT

1. EXPENSES

1.1 Non-labor expenses	(in gourdes)
Cuttings	175
Sevin (15 lbs @ 10 gourdes/lb)	150
Cost of spraying (rent + operator labor)	50
Land rental cost	120
Sub-total	495

CASSAVA

1.2 Labor input and expenses	
Land preparation (70 person-days)	350
Planting (10 person-days)	40
Weeding (50 person-days per weeding x 3 weedings)	450
Harvesting/transport	180
Sub-total	1,020
1.3 TOTAL	1,515
1.4 Loan amount (1,515- .86)	1,762
1.5 Loan term	12 months
2. REVENUE	
2.1 Total marketable yield	8 tons
2.2 Unit price of output at harvest	400 gourdes/ton
	(in gourdes)
2.3 Cash sales	3,200
3. PERFORMANCE MEASURES	
3.1 Gross margin (2.3 - 1.3)	1,685
3.2 Amount of loan repayment	1,797
3.3 Net revenue after loan repayment (2.3 - 3.2)	1,403

1 Data Source: Personal interviews with farmers in Cap-Haitien and Hinche.

IRISH POTATOES ENTERPRISE BUDGET, PER CARREAU,  
BCA AREA[1], HAITI, 1983

I. GENERAL CHARACTERISTICS

1. Total land area available	3 cx
2. Total land area under cultivation this season	3 cx
3. Total number of plots	3 (1 1/4 cx, 1 cx, 3/4 cx)
4. Tenure system	Owned
5. Farm organization	Irish potatoes; Onions/Carrots; Irish potatoes
6. Family labor available	5
7. Livestock owned	Cows (4); Horses (1); Poultry (15); Pigeons (8).
8. Tools and equipment	Hoes (2); Cutlasses (1); Shovels (1); Watering Cans (2); Pick (3); Pumps (1); Pruning Knives (3).
9. Non-farm occupation	Tap-tap driver

II. AGRONOMIC INFORMATION

1. Method of land preparation	Manual
2. Use of improved seeds	Yes (Renova)
3. Use of manure	No
4. Use of fertilizer	Yes
5. Use of insecticides	Yes
6. Length of growing season	5-6 months (possibility of 2 crops per year)

III. INCOME STATEMENT

1. EXPENSES	(in gourdes)
1.1 Non-labor expenses	
Seed (50 100-lb boxes @ 225 gourdes/box)	11,250
Fertilizer 12-12-20 (30 100-lb bags @ 30 gourdes/bag)	900
Dithane (40 lbs @ 5 gourdes/lb)	200
Sub-total	12,350

1.2 Labor input and expenses	
Land preparation (70 person-days)	600
Seeding (10 person-days)	—
Weeding/bedding (48 person-days/weeding x 2 weeding)	384
Spraying (4 person-days)	—
Harvesting and transport (40 person-days)	—
Sub-total (172 person-days)	984
1.3 T O T A L (172 person-days)	13,334
1.4 Loan amount (13,334 - .86)	15,505
1.4 Loan term	One year
2. REVENUE	
2.1 Total marketable yield	150 boxes
2.2 Unit price of output at harvest	125 gourdes/box
	(in gourdes)
2.3 Cash sales	18,750
3. PERFORMANCE MEASURES	
3.1 Gross margin (2.3 - 1.3)	5,416
3.2 Amount of loan repayment	15,815
3.3 Net revenue after loan repayment (2.3 - 3.2)	2,935

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1 Data Source: Personal interviews with farmers in Kenscoff; IDAI documents.

YAMS ENTERPRISE BUDGET, PER CARREAU,  
BCA AREA(1), HAITI, 1983

I. GENERAL CHARACTERISTICS

1. Total land area available	6 cx
2. Total land area under cultivation this season	5 cx
3. Total number of plots	4 (3 1/2 cx, 1/2 cs, 1 3/4 cx, 1/4 cx)
4. Tenure system	Owns all his plots
5. Farm organization	Banana-Plantain/Beans/Maize; Coffee/Maize; Coffee/Banana-Plantain/Maize; Yams.
6. Family labor available	2
7. Livestock owned	Mules (2); Poultry (12)
8. Tools and equipment	Hoes (12); Picks (12); Cutlasses (12); Pruning Knives(12); Shovels (12); Rakes (12).

II. AGRONOMIC INFORMATION

1. Method of land preparation	Manual (hoe cultivation)
2. Use of improved seeds	Use of traditional seedlings from previous harvest
3. Use of manure/compost	Yes
4. Use of fertilizer	Yes
5. Use of insecticides	Yes
6. Length of growing season	12 months

III. INCOME STATEMENT

1. EXPENSES

1.1 Non-labor expenses

	(in gourdes)
Seedlings (1,800 plants @ 4 gourdes/plant)	7,200
Fertilizer 16-10-20 (8 bags @ 70 gourdes/bag)	500
Compost (12 tons @ 75 gourdes/ton)	900
Dithane (6 lbs @ 5 gourdes/lb); Dieldrine (4 lbs @ 10 gourdes/lb)	70
Renting of sprayer (5 gourdes)	5

Cost of stakes	100
Sub-total	8,835
1.2 Labor input and expenses	
Land preparation (120 person-days)	600
Hole digging (20 person-days)	100
Planting and bedding (150 person-days) (including transport of plants)	500
Weeding (50 person-days/weeding x 3 weedings)	750
Staking the yam plants (25 person-days)	125
Fertilizer application (10 person-days)	
Harvesting and transport (125 person-days)	625
Sub-total	2,700
1.3 TOTAL	11,535
1.4 Loan amount (11,535 - .86)	13,413
1.5 Loan term	One year
2. REVENUE	
2.1 Total marketable yield (in loads of 65 kgs.)	180 loads
2.2 Unit price of output at harvest	150 gourdes/load
	(in gourdes)
2.3 Cash sales	27,000
3. PERFORMANCE MEASURES	
3.1 Gross margin (2.3 - 1.3)	15,465
3.2 Amount of loan repayment	13,681
3.3 Net revenue after loan repayment (2.3 - 3.2)	13,319

1 Data Source: Personal interviews with farmers in Cap-Haitien and Jacmel; IDAI documents.

2 We assume here that the loan purpose is to cover total cash cost (1.3).

TOMATOES ENTERPRISE BUDGET, PER CARREAU,  
BCA AREA[1], HAITI, 1983

I. GENERAL CHARACTERISTICS	
1. Total land area available	2 cx
2. Total land area under cultivation this season	2 cx
3. Total number of plots	2 (1 cx, 1 cx)
4. Tenure system	Owms land
5. Farm organizations	Rice, Tomatoes
6. Family labor available	Only one person supervising
7. Livestock owned	None
8. Tools and equipment	Sprayers (1); Hoes (1); Cutlasses (1).
II. AGRONOMIC INFORMATION	
1. Method of land preparation	Manual
2. Use of improved seeds	Improved (Ti-Joselyn)
3. Use of manure	No
4. Use of fertilizer	Yes
5. Use of insecticides/fungicides	Yes
6. Length of growing season	3-4 months (possibility of 2 crops per year)
III. INCOME STATEMENT	
1. EXPENSES	
1.1 Non-labor expenses	(in gourdes)
Seeds (1.2 lbs needed for nursery)	100
Fertilizer 10-20-20 (950 lbs @ .70 gourdes/lb)	665
Ammonium sulfate (700 lbs @ .60 gourdes/lb)	420
Irrigation tax	225
Sevin (24 lbs @ 10.6 gourdes/lb); Dithane (24 lbs @ 9/lb)	434

Copper sulfate (12 lbs @ 15 gourdes/lb)	180
Nematicides (132 lbs @ 3.50 gourdes/lb)	462
Adherent (1 gallon @ 30 gourdes/gallon)	30
Sub-total	2,516
1.2 Labor input and expenses	
Land preparation (labourage, hersage, billonnage) (60 persons-days)	300
Nursery labor (20 person-days)	150
Transplanting (40 person-days)	250
Weeding (70 person-days/weeding x 2 weedings)	350
Spraying (15 person-days)	100
Fertilizer application + bedding (30 person-days)	250
Harvesting and transport (50 person-days)	450
Sub-total (285 person-days)	1,840
1.3 T O T A L (285 person-days)	4,366
1.4 Loan amount	4,695
1.5 Loan term	6 months
2. REVENUES	
2.1 Total marketable yield	28 tons
2.2 Unit price of output at harvest	275 gourdes/ton
	(in gourdes)
2.3 Cash sales	7,700
3. PERFORMANCE MEASURES	
3.1 Gross margin (2.3 - 1.3)	3,334
3.2 Amount of loan repayment	4,789
3.3 Net revenue after loan repayment (2.3 - 3.2)	2,911

1 Data Source: Personal interviews in Quartier Morin, Les Cayes, and Pont Sonde; IDAI documents.

ONIONS/CARROTS[1] ENTERPRISE BUDGET, PER CARREAU,  
BCA AREA, HAITI, 1983[2]

I. GENERAL CHARACTERISTICS

- |  |  |
|--|--|
| 1. Total land area available                     | 1 3/4 cx   |
| 2. Total land area under cultivation this season | 1 3/4 cx   |
| 3. Total number of plots                         | 2 (3/4 cx, 1 cx)   |
| 4. Tenure system                                 | Owned  |
| 5. Farm organization                             | Irish potatoes/Onions; Onions/Carrots                    |
| 6. Family labor available                        | 3  |
| 7. Livestock owned                               | Cows (2); Poultry (25)                                   |
| 8. Tools and equipment                           | Hoes (1); Shovels (1); Cutlasses (1); Pruning Knives (3) |

II. AGRONOMIC INFORMATION

- |                               |                                       |
|-------------------------------|---------------------------------------|
| 1. Method of land preparation | Hoe cultivation                       |
| 2. Use of improved seeds      | Yes                                   |
| 3. Use of manure              | No                                    |
| 4. Use of fertilizer          | Yes                                   |
| 5. Use of insecticides        | No                                    |
| 6. Length of growing season   | Onions: 5 months<br>Carrots: 5 months |

III. INCOME STATEMENT

1. EXPENSES

1.1 Non-labor expenses

	(in gourdes)
Onions: Seeds for the nursery (6 lbs @ 190 gourdes/lb)	1,140
Carrots: Seeds for the nursery (3 lbs @ 40 gourdes/lb)	120
Fertilizer (12-12-20) (10 bags (100 lbs @ 75 gourdes/bag)	750
Malathion (20 lbs @ 2.5 gourdes/lb)	50

ONIONS/CARROTS

Dithane (2 lbs @ 13 gourdes/lb)	26
Sub-total	2,086
1.2 Labor input and expenses	
Nursery preparation (20 person-days)	100
Transplanting onions (120 person-days)	720
Transplanting carrots (120 person-days)	100
Land preparation (100 person-days)	240
Weeding (100 person-days/weeding x 2 weedings)	500
Harvesting and transport of onions (45 persons-days)	270
Harvesting and transport of carrots (12 person-days)	—
Sub-total	1,930
1.3 TOTAL	4,016
1.4 Loan amount (4,016 - .89)	4,512
1.5 Loan term	9 months
2. REVENUE	
2.1 Total marketable yield	100 bags (of 100-125 lbs) 300 bunches (1 bunch=20 lbs)
2.2 Unit price of output at harvest	75 gourdes per bag 20 gourdes per bunch
	(in gourdes)
2.3 Cash sales (7,500 + 6,000)	13,500
3. PERFORMANCE MEASURES	
3.1 Gross margin (2.3 - 1.3)	9,484
3.2 Amount of loan repayment	4,602
3.3 Net revenue after loan repayment (2.3 - 3.2)	8,898

1 Relay-cropping:  
onions: April → August  
carrots: May → September

2 Source: Survey data (Kenscoff).

CABBAGE/PEAS ENTERPRISE BUDGET, PER CARREAU,  
BCA AREA, HAITI, 1983[1]

<b>I. GENERAL CHARACTERISTICS</b>	
1. Total land area available	2 cx
2. Total land area under cultivation this season	2 cx
3. Total number of plots	2 (1 cx, 1 cx)
4. Tenure system	Owned
5. Farm organization	Irish potatoes; Cabbages
6. Family labor available	9
7. Livestock owned	Horses (1); Cows (4); Goats (7); Pigeons
8. Tools and equipment	Hoes (5); Axes (5); Pruning Knives (10); Cutlasses (4)
9. Non-farm occupation	Trading
<b>II. AGRONOMIC INFORMATION</b>	
1. Method of land preparation	Hand cultivation
2. Use of improved seeds	Yes
3. Use of manure	No
4. Use of fertilizer	Yes
5. Use of insecticides	No
6. Length of growing season	3-4 months (possibility of 2 crops per year)
<b>III. INCOME STATEMENT</b>	
1. EXPENSES	
1.1 Non-labor expenses	
	(in gourdes)
Seeds for the nursery (3 marmites of cabbage seeds @ 110 gourdes/marmite)	330
Seeds (peas) (2 marmites @ 12.5 gourdes/marmite)	25
Fertilizer 12-12-20 (12 50-lb bags @ 50 gourdes/bag)	600
Sub-total	955

CABBAGE/PEAS

1.2 Labor input and expenses	
Nursery preparation (16 person-days)	80
Land preparation (150 person-days)	750
Transplanting (20 person-days)	—
Weeding (100 person-days/weeding x 2 weedings)	500
Harvest and transport (60 person-days)	200
Sub-total	1,530
1.3 T O T A L	2,485
1.4 Loan amount (2,485 - .92)	2,701
1.5 Loan term	6 months
2. REVENUE	
2.1 Total marketable yield	110 bags 40 marmites
2.2 Unit price of output at harvest	30 gourdes/bag 2 gourdes/marmite
	(in gourdes)
2.3 Cash sales (3,300 + 80)	3,380
3. PERFORMANCE MEASURES	
3.1 Gross margin (2.3 - 1.3)	895
3.2 Amount of loan repayment	2,755
3.3 Net revenue after loan repayment (2.3 - 3.2)	625

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1 Source: Survey data (Port-au-Prince area).

BANANA-PLANTAIN[1] ENTERPRISE BUDGET, PER CARREAU,  
BCA AREA[2], HAITI, 1983

I. GENERAL CHARACTERISTICS					
1.	Total land area available		18 cx		
2.	Total land area under cultivation this season		18 cx		
3.	Total number of plots		3 (6 cx, 7 cx, 5 cx)		
4.	Tenure system		Own land under cultivation		
5.	Farm organization		Only bananas-plantain on all plots		
6.	Family labor available		Operator only (for supervisory purposes)		
7.	Livestock owned		Cows (10); Donkeys (5); Poultry (35); Horses (1); Goats (15).		
II. AGRONOMIC INFORMATION					
1.	Method of land preparation		Tractor hiring services		
2.	Use of improved seeds		Traditional seedlings are used		
3.	Use of manure		No		
4.	Use of fertilizer		Yes		
5.	Use of insecticides/nematocides		Yes		
6.	Length of growing season		10-13 months		
III. INCOME STATEMENT					
1. EXPENSES					
1.1 Non-labor expenses					
		1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR
Plants	2,400 plants @ .35 gourdes/plant	840	-	-	-
Fertilizers	15-15-15 (1,200 lbs @ .70 gourdes/lb)	840	840	840	-
	Potassium sulfate (600 lbs @ .50 gourdes/lb)	300	300	300	300
	Insecticides/nematocides	360	360	360	360
	Cost of hiring tractor for land preparation	600	-	-	-
	Sub-total	2,940	1,500	1,500	660

BANANA-PLANTAIN

1.2 Labor input and expenses[3]				
Pegging, hole digging, and seeding (100 person-days)	660	-	-	-
Fertilizer application (12 person-days)	60	60	60	20
Insecticide/nematocide application (6 person-days)	30	30	30	30
Weeding (48 person-days/weeding x 3 weeding)	720	720	720	720
Thinning (24 person-days)	180	180	180	180
Harvesting and transport (80 person-days)	600	600	600	600
Sub-total	2,250	1,590	1,590	1,550
1.3 T O T A L (270 person-days)	5,190	3,090	3,090	2,210
1.4 Loan amount[4] (5,190 - .98)	5,296	-	-	-
1.5 Loan term		4 years, with a 1-year grace period		
2. REVENUE				
2.1 Total marketable yield ( in bunches)	1,700	1,600	1,600	1,500
2.2 Unit price of output at harvest (7.5 gourdes/bunch)	7.5	7.5	7.5	7.5
2.3 Cash sales (2.1 times 2.2)	12,750	12,000	12,000	11,250
3. PERFORMANCE MEASURES				
3.1 Gross margin (2.3 - 1.3)				
3.2 Amount of loan repayment	7,560 106	8,910 2,281	8,910 2,281	9,040 2,387
3.5 Net revenue after loan repayment (2.3 - 3.2)	12,644	9,719	9,719	8,863

- 1 Mono-cropping.
- 2 Data Source: personal interviews with farmers in Cap-Haitien and Gonaives; IDAI documents.
- 3 The cost of labor is on a task basis.
- 4 Assuming that loan amount is to cover the total cash cost (1.3).

SUGAR CANE[1] ENTERPRISE BUDGET, PER CARREAU,  
BCA AREA[2], HAITI, 1983

I. GENERAL CHARACTERISTICS

- |  |   |
|--|---|
| 1. Total land area available                     | 5 3/4 cx  |
| 2. Total land area under cultivation this season | 4 3/4 cx  |
| 3. Total number of plots                         | 5 (2 cx, 1 1/2 cx, 1/2 cx, 1 cx, 3/4 cx)                        |
| 4. Tenure system                                 | Owned: 5 cx; Rented: 3/4 cx                                     |
| 5. Farm organization                             | Sugar Cane, Maize/Millet/Banana-Plantain, Maize/Cowpeas, Fallow |
| 6. Family labor available                        | 4   |
| 7. Livestock owned                               | Horses (1); Donkeys (1); Cows (3); Goats (13); Poultry (50)     |
| 8. Tools and equipment                           | Cutlasses (2); Hoes (4); Axes (2); Shovels (1); Rakes (3).      |

II. AGRONOMIC INFORMATION

- |                               |                          |
|-------------------------------|--------------------------|
| 1. Method of land preparation | Manual (hoe cultivation) |
| 2. Use of improved seeds      | Traditional cuttings     |
| 3. Use of manure              | No                       |
| 4. Use of fertilizer          | Yes                      |
| 5. Use of insecticides        | No                       |
| 6. Length of growing season   | 12 months                |

III. INCOME STATEMENT

1. Expenses				
1.1 Non-labor expenses				
Cutting 60 loads of cuttings @ 5 gourdes/load	300	—	—	—
Fertilizer 16-10-20 (10 bags (100 lb) @ 70 gourdes/bag	700	700	700	700
Land rental cost	450	450	450	450
Sub-total	1,450	1,150	1,150	1,150

SUGAR CANE

1.2 Labor input and expenses[3]				
Land preparation (120 person-days)	480	—	—	—
Planting (30 person-days)	170	—	—	—
Weeding (75 person-days/weeding x 2 weedings)	660	660	660	660
Fertilizer application (20 person-days)	145	145	145	145
Harvesting and transport (220 person-days)	1,600	1,400	1,200	1,000
Sub-total (465 person-days)	3,055	2,205	2,005	1,805
1.3 T O T A L (465 person-days)	4,105	2,955	2,755	2,555
1.4 Loan amount[4] (4,105 - .98)	4,189	-	-	-
1.5 Loan term				
	4 years with a 1-year grace period			
2. REVENUE				
2.1 Total marketable yield (80, 70, 60, and 50 tons)	80	70	60	50
2.2 Unit price of output at harvest 65 gourdes/ton	65	65	65	65
2.3 Cash sales	5,200	4,550	3,900	3,250
3. PERFORMANCES MEASURES				
3.1 Gross margin (2.3 - 1.3)	1,095	1,595	1,145	695
3.2 Amount of loan repayment	84	1,804	1,804	1,888
3.3 Net revenue after loan repayment (2.3 - 3.2)	5,116	2,746	2,096	1,362

1 Mono-cropping.

2 Data Source: personal interviews with farmers in Cap-Haitien, Hinche, and Les Cayes; IDAI documents.

3 On the average, hired labor was paid 5 gourdes per person-day.

4 Assuming that loan purpose is to cover the total cash cost (1.3).

COFFEE ENTERPRISE BUDGET, PER CARREAU,  
BCA AREA[1], HAITI, 1983

<b>I. GENERAL CHARACTERISTICS</b>								
1. Total land area available								
			3 cx					
2. Total land area under cultivation this season			3 cx					
3. Total number of plots			5 (1 cx, 1 1/2 cx, 1/2 cx)					
4. Tenure system			Owned					
5. Farm organization			Coffee; Coffee/Banana-Plantain/Maize; Mangoes/Citrus/Beans/Cassava					
6. Family labor available			6					
7. Livestock owned			Cows (4); Poultry (15); Pigeons (10)					
8. Tools and equipment			Hoes (4); Cutlasses (3); Pick-Axes (2); Shovels (1); Rakes (2)					
<b>II. AGRONOMIC INFORMATION</b>								
1. Method of land preparation			Hoe cultivation					
2. Use of improved seeds			No					
3. Use of manure			No					
4. Use of fertilizer			Yes					
5. Use of insecticides			No					
6. Length of growing season			Perennial crop (20 years)					
<b>III. INCOME STATEMENT</b>								
1. EXPENSES			1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR	5TH YEAR	6TH YEAR
1.1 Non-labor expenses					(in gourdes)			
Plants (6,000 plants @ .60 gourdes/plant)			3,600	—	—	—	—	—
Fertilizers: 20-10-20 (240 lbs @ .70 gourdes/lb)			168	168	168	336(480 lbs)	336	336
Ammonium sulfate (120 lbs @ .50 gourdes/lb)			60	60	60	—	—	—
Velvet bean seeds (80 marmites @ 2 gourdes/marmite)			—	—	160	—	—	—
Seed (cowpeas) (60 marmites @ 8 gourdes/marmite)			480	480	—	—	336	336

1.2 Labor input and expenses

Land clearing	180	—	—	—	—	—
Hole digging (5000 @ .25 gourdes/hole)	1,250	—	—	—	—	—
Planting (5000 @ .10 gourdes/plant)	500	—	—	—	—	—
Weeding (50 person-days/weeding x 3 weedings)	350	350	350	150	—	—
Fertilizer application (25 person-days)	125	125	125	125	125	125
Mulching (5 person-days)	—	—	25	—	—	—
Pruning (10 person-days)	—	—	—	50	50	50
Shelter control (5 person-days)	—	—	—	25	25	25
Sowing of velvet beans (5 person-days)	—	—	30	—	—	—
Harvesting (cowpeas) (90 person-days)	200	200	—	—	—	—
Harvesting (coffee) (75; 300; 600; 1000 person days)	—	—	225	900	1,800	2,500
Sub-total	2,605	675	755	1,250	2,000	2,700
1.3 TOTAL	6,913	1,383	1,143	1,586	2,336	3,036
1.4 Loan amount (6,913 - .98)	7,054	—	—	—	—	—
1.5 Loan term						

6 years with a grace period of 3 years

2. REVENUE

2.1 Total marketable yield	Cowpeas	700 marmites	700 marmites	—	—	—
	Coffee	—	—	750 lbs.	1,500 lbs.	2,000 lbs.
2.2 Unit price of output at harvest	3 gourdes/marmite 3 gourdes/lb					3,000 lbs.
2.3 Cash sales		2,100	2,100	2,250	4,500	6,000
2.3 Cash sales						9,000

3. PERFORMANCE MEASURES

3.1 Gross Margin (2.3 - 1.3)		-4,813	717	1,107	2,914	3,664
3.2 Amount of loan repayment[2]		141	—	—	4,375	3,612
3.3 Net revenue after loan repayment (2.3 - 3.2)		1,959	2,100	2,250	125	2,388
						5,642

1 Data Source: Personal interviews with farmers in Fonds de Negres.

2 The loan repayment schedule was calculated as follows: 20% of principal payable in year 4, 40% in year 5, and 40% in year 6.

BROILER PRODUCTION BUDGET FOR A UNIT OF 100 CHICKS,  
BCA AREA[1], HAITI, 1983

I. GENERAL CHARACTERISTICS

1. Total land area available	N.A.
2. Total land area reserved for livestock	N.A.
3. Tenure system	N.A.
4. Family labor available for livestock raising	N.A.
5. Livestock currently owned	N.A.

II. LIVESTOCK INFORMATION

1. Availability of breeds	N.A.
2. Availability of medical supplies	N.A.
3. Availability of veterinarian services	N.A.
4. Availability of agricultural surpluses	N.A.
5. Market outlet situation:	N.A.
- Can market absorb expected production?	
- Where will the output be sold?	
6. Duration of a production cycle	2 1/2 - 3 months

III. INCOME STATEMENT FOR A PRODUCTION CYCLE

1. EXPENSES

1.1 Fixed expenses

(in gourdes)

Building of a hen-house (about 100 ft.[2])	600
Feeding and drinking - pens	160
Scale	225
Sub-total	985

1.2 Variable expenses

Period 1: First ten days of the operation	
Acquisition of chicks (100 @ 2 gourdes/chicks)	200

Feeding (.06lbs of concentrate/day/chick), i.e. .60 gourdes/chick for the period	60
Medical supplies (e.g. Tylan): (.04 gourdes/chick)	10
Labor (.08 gourdes/chick) for vaccination	10
Heating cost	10
Mortality rate (10%)	
Sub-total	290
Period 2: Last 2 - 2 1/2 month of fattening	
Feed (concentrate, maize, wheat bran, 3 gourdes/chick and bi-calcium phosphate)	270
Medical supplies	6
Mortality rate (3%)	
Labor (exclusively family)	
Sub-total	276
1.3 TOTAL	1,551
2. LOAN AMOUNT[2] 566 - .92	615
3. LOAN TERM	6 months (for 2 cycles of production)
4. REVENUE	
Sale of 87 chickens (3 lbs/chicken, 4 gourdes/lb)	1,044
5. PERFORMANCE MEASURES	
Gross margin (1044-648) (4 - depreciation on fixed expenses assuming 3-year life expectancy, or \$ 648)	396
Amount of loan repayment	627
Net revenue after loan repayment (4 - 1.3)	417

- 
- 1 Data Source: personal interviews with farmers in Cap-Haitien and Port-au-Prince; ODN documents.
  - 2 It was assumed in this budget that the labor will come exclusively from the family pool and that the loan purpose will not cover fixed expenses.

CATTLE FATTENING BUDGET, FOR UNIT OF 4 CATTLE,

BCA AREA[1], HAITI, 1983

I. GENERAL CHARACTERISTICS

1. Total land area available	N.A.
2. Total land area reserved for livestock	N.A.
3. Tenure system	N.A.
4. Family labor available for livestock raising	N.A.
5. Livestock currently owned	N.A.

II. LIVESTOCK INFORMATION

1. Availability of breeds	N.A.
2. Availability of medical supplies	N.A.
3. Availability of veterinarian services	N.A.
4. Availability of agricultural surpluses	N.A.
5. Market outlet situation:	N.A.
- Can market absorb expected production?	
- Where will the output be sold?	
6. Duration of fattening process	5 months

III. INCOME STATEMENT FOR A 6-MONTH PERIOD

1. EXPENSES	(in gourdes)
1.1 Fixed Expenses	
Annual rental cost of 30m <sup>2</sup>	50
Feeding and drinking pens	100
Farm equipment and tools (depreciation)	30
Manure pit	90
Sub-total	270

## 1.2 Variable Expenses

Acquisition of cattle	
4 cattle (350kg) @ 600 gourdes/head	2,400
Fodder (4 tons @ 20 gourdes/ton)	80
Wheat bran (400 lbs @ .25 gourde/lb)	100
Cotton oil-cake (350 lbs @ .25 gourde/lb)	88
Molasses (230 lbs @ .25 gourde/lb)	58
Urea 920 lbs @ .60 gourdes/lb)	12
Medical supplies	80
Veterinarian services	100
Stable litter (12 kg/cattle @ .5 gourde/kg)	24
Cords	15
Labor (exclusively family)	—
Sub-total	2,957
1.2      T O T A L	3,227
2. LOAN AMOUNT[2] (600 + 557) * .92	1,258
3. LOAN TERM	6 months
4. REVENUE	
1. Sale of 4 cattle (430kg) @ 1000 gourdes/head	4,000
2. Sale of manure (12 tons @ 30 gourdes/ton)	360
3. Total revenue	4,360
5. PERFORMANCE MEASURES	
Gross margin (4.3 - 1.3)	1,133
Amount of loan repayment	1,283
Net revenue after loan repayment (4.3 - 2)	3,077

- 1 Data Source: personal interviews with farmers in Gonaives and Fonds de Negres; IDAI documents.  
 2 It is assumed in this budget that the farmer already has 3 cattle, and needs credit only for a fourth one and other variable expenses.

## CONCLUSIONS

Specific Risks and Returns

A review of the model farm enterprise budgets indicates that farm enterprises fall into three distinct but not mutually exclusive categories. The first category is those enterprises that can support a loan only with a grace period: banana-plantain, sugar cane, and coffee. The second category is those enterprises that can support a loan without any grace period, but cannot refinance themselves at the end of a given production cycle: maize/cowpeas, groundnuts, Irish potatoes, irrigated rice, tomatoes, cabbage/peas, cassava, irrigated maize, and broiler production. The third category, which overlaps with the first category, comprises farm enterprises, some with a grace period and some without, that can refinance themselves at the end of the loan period: banana-plantain, yams, cattle fattening, cowpeas, and onions/carrots.

The third category is composed of good risk enterprises for the BCA. Another category of farmers that is a good risk for the BCA is farmers who own their land and/or some livestock, either of which can serve as collateral in case of loan default. However, the BCA must also consider factors such as nutritional impact, labor intensity, and future markets. For example, cowpeas/beans have a very high protein content; rice farming is labor intensive, and vegetables such as tomatoes and cabbage, although potentially very profitable, have a very limited scope for market expansion.

The BCA should protect itself by requiring the entrepreneur to contribute 30-40 percent of the total cost of the production in terms of fixed assets, cash, and/or family labor. Particularly high-risk crops are sugar cane and coffee; in fact, given the role

of CALDOS in sugar cane processing, it will be very difficult for the BCA to carry out a successful credit program without a three way agreement between the farmer, BCA, and CALDOS.[2]

### BCA Operational Implications

BCA agents at all levels should be well trained in the use and interpretation of farm enterprise budgets before the manual is put into use. Even though the farm enterprise budgets in this chapter offer some guidelines on how to determine loan amount, loan terms, and loan repayment schedule, their uses must be seen strictly as a framework for agricultural loan analysis, and figures they contain must be adjusted to specific cases at hand. However, it will not be cost effective to do this partial budgeting for each individual member of a SAC. Detailed feasibility studies should be done only for entire SACs (or subgroups within SACs), large individual loans, and large livestock enterprises. The BCA's Division of Studies and Research should update the model budgets as needed.

Finally, BCA activities should be geared toward supporting technological packages proven and tested by the Department of Agriculture; this is not the case at present.

NOTES

- 1 Assuming an annual interest rate of 12 percent for one-year loans and 14 percent for multi-year loans, and 2 percent commission for both loan categories, the total cash expenses (or out-of-pocket expenses) were generally used to compute the total loan amount needed for an enterprise. For the short-term loan, the 12 percent interest and 2 percent commission were both discounted, whereas in the case of multi-year loans, the commission was discounted, and an undiscounted 14 percent annual interest rate was used to ensure an equivalent yield to the BCA farm enterprise loan portfolio.
- 2 This scheme may not be necessary for farmers who go beyond the production of sugar cane as an end-product, and instead consider syrup as the end-product.

## CHAPTER THREE

INDIVIDUALLY MANAGED SMALL- AND  
MEDIUM-SCALE ENTERPRISES

## INTRODUCTION

Definition of Haitian Individually Managed Small- and Medium-Scale Enterprises

The study team used a loose definition of individually managed small- and medium-scale enterprises (SMEs) while preparing this manual. Most enterprises the team studied fell into the micro-enterprise category, with a total capitalization of under \$50,000, and with six or fewer employees. It was more difficult to determine an upper limit at which enterprises ceased to be small or medium scale. The largest enterprise examined in the study, a clairin producer, requires an initial investment of about \$115,000.

All enterprises comprised rural and off-farm activities. This study placed special emphasis on enterprises with strong linkages to agriculture. However, the BCA should clearly define the scale of operations, sector, and location of its target client group before beginning lending operations.

Purpose and Composition of SME Budgets

The purpose of the SME budgets is to demonstrate an approach by which loan disbursement criteria and terms for SME loans can be derived. The model budgets presented in this chapter thus are composed of two main components: general prefeasibility studies that should be administered by the BCA loan agent to all loan applicants, and feasibility studies that they should conduct only for those enterprises that pass the prefeasibility test. The prefeasibility studies should help to screen out about 50 percent of loan applicants, so that the time-consuming task of preparing a feasibility study can be limited to the most promising applicants.

Three different loan prefeasibility studies are presented:

- To establish a new business;
- To expand an existing business; or
- To provide working capital that increases profits but maintains current production levels.

The riskiest type of loan, to establish a new business, has the most comprehensive prefeasibility study. This prefeasibility study, and the one to expand an existing business, cover similar topics:

- The loan applicant's credit history;
- The loan applicant's management capability;
- Market demand for the enterprise's product;
- Equipment maintenance requirements; and
- Raw materials and skilled labor supply.

Only if the BCA loan agent is confident of the following conditions should he proceed to the next stage of the loan approval process, the feasibility study:

- The loan applicant will use the loan for the intended purpose and repay it on time;
- The loan applicant is capable of successfully managing his/her business;
- A strong demand exists for the enterprise's product;
- The enterprise will not experience equipment breakdowns that will endanger loan repayment; and
- Critical shortages of raw materials and skilled labor are not expected.

Working capital loans that allow entrepreneurs to purchase inputs during seasons when the price is low, or in larger wholesale quantities with lower unit costs, would not require the

same in-depth scrutiny. The prefeasibility study for a working capital loan that does not expand current production focuses on whether the client is a good credit risk, and whether the cost savings outweigh any additional costs of buying in bulk (that is, loan interest and fees, and storage and transport costs).

After a positive response to the appropriate prefeasibility study, the BCA agent should conduct more in-depth feasibility analyses. To assist the agent in conducting these analyses, this chapter includes feasibility studies of some typical enterprises currently operating throughout Haiti. Each feasibility study has the following components:

- General Characteristics. A summary of the enterprise's product, management requirements, production capacity, present and future market demand, investment requirements, raw materials, potential loan purposes, amount, repayment period, collateral requirements, special risks, and the model budget data source.
- Calculation of Loan Amount. A statement of the initial investment and working capital requirements needed to establish or expand a business, the loan applicants contribution to this investment, and the loan amount and terms as used in the model feasibility study.
- Break-even Analysis. A calculation of the enterprise's fixed and variable costs, and the minimum quantity of sales required to cover those costs. This "break-even quantity" is compared with the expected amount of sales, as well as with the enterprise's production capacity, to analyze the potential for reaching this break-even quantity.
- Cash Flow Analysis. An analysis of the cash inflows and outflows to help ensure that the loan repayment schedule and terms coincide with the business cycle. Loans must be disbursed when the entrepreneur needs them (before the busy season, for example) or they will be less effective, thus endangering loan repayment. The cash flow analysis helps to determine when the loan should be disbursed, and whether at the end of the loan period sufficient funds exist to continue operations at the same level or if additional loans will be required.

Use of SME Budgets

The study team constructed its SME budgets using the following procedures. For each case, the team:

- Inserted different potential loan amounts and purposes in the Calculation of Loan Amount section, and then selected one pair for the subsequent feasibility study;
- Determined the terms cited in the feasibility study according to the business's market cycle and cash flow;
- Assumed loans were disbursed prior to the high demand season and repaid after the high demand season
- Based the repayment schedule on the firm's liquidity to ensure the continued viability of the enterprises after the loan was repaid;
- Chose 16.5 percent, the effective yield of the BCA's current 15 percent discounted interest rate, as the annual interest rate governing multi-year loans;
- Discounted all loans by 2 percent for administrative charges and charged a 2 percent savings guarantee fee at the time of loan retirement, adhering to current BCA loan policies; and
- Itemized the potential contribution from the owner toward the loan purpose in each budget, under the assumption that if the entrepreneur does not also have something at stake, the loan should not be granted.

The model budgets presented in this chapter are only one tool of many in determining loan disbursement and recovery criteria. Each enterprise is unique. The numbers presented in the clairin producer's budget, for example, will probably differ from a future client who wishes to produce clairin. Although the motorized millers in this section operate quite profitably, this does not mean that any new milling operation automatically would be profitable.

For this reason, these budgets should be viewed only as a methodological tool. That is, before granting loans, the agent should go through the steps outlined in this section: a pre-feasibility study and then, if warranted, a feasibility study based on one of the following model SME budgets. The numbers in these budgets are presented merely to give a sense of what range might be expected, for example, the variable costs of bread-making should be similar for most bakeries.

#### LIST OF INTERVIEWS BY REGION AND ACTIVITY

The following table indicates what types of enterprises were examined during three weeks of fieldwork. It should be noted that although the study team examined 40 enterprises throughout Haiti, comprising 23 different activities, it used a very small sample (1-6 enterprises per activity) to derive composite budgets. These enterprises were chosen by BCA agents in each region as those that seemed to have the most potential for growth, required loans, and/or had strong backward linkages to agriculture.

#### SELECTION PROCESS

Feasibility studies of 11 of the 23 activities examined are presented in this section. The remaining 12 activities are not presented in-depth because:

- The data were not considered to be trustworthy (fish farming, for example); and/or
- The activity was not a high priority for the BCA (for example, did not have strong links with agriculture).

Type and Location of Individually Managed Small- and Medium-Scale Enterprises Surveyed

	Cap-Haitien	Gonaives	Hinche	Les Cayes	Port-au-Prince	Total
Fishing	0	0	0	6	0	6
Fish Farming	0	1	0	0	1	2
Fish Drying	0	0	0	0	2	2
Motorized Corn Milling	2	0	0	1	0	3
Hand Corn Milling	0	0	0	0	1	1
Motorized Sugar Cane Milling and Sugar Cane Syrup Production	0	1	0	0	0	1
Sugar Cane Milling Service (animal traction)	0	0	1	0	0	1
Motorized Sorghum Milling	0	0	0	1	0	1
Motorized Coffee Decortication	2	0	0	0	0	2
Motorized Rice Decortication	1	1	0	1	0	3
Bread-making (bakery)	1	0	1	0	0	2
Bread-making (cassaverie)	1	0	0	0	0	1
Clairin Production	0	1	1	0	0	2
Brown Sugar Production	0	0	1	0	0	1
Salt Production	0	1	0	0	0	1
Artisan Production (sisal weaving)	0	0	0	1	0	1
Plow Production	0	0	0	1	0	1
Fishnet Production	0	0	0	1	0	1
Cement Block Production	0	0	0	1	0	1
Blacksmithing	1	0	1	0	0	2
Carpentry	0	0	1	1	0	2
Tailoring	0	0	2	0	0	2
Orange Peel Marketing	1	0	0	0	0	1
<b>Total Number of Enterprises Surveyed</b>	<b>9</b>	<b>5</b>	<b>8</b>	<b>14</b>	<b>4</b>	<b>40</b>
<b>Total Number of Activities Surveyed</b>	<b>7</b>	<b>5</b>	<b>7</b>	<b>9</b>	<b>3</b>	<b>23</b>

MODEL BUDGETS

Part I: SME Prefeasibility Studies

1. Prefeasibility Study to Establish a New Business
2. Prefeasibility Study to Expand an Existing Business
3. Prefeasibility Study for a Working Capital Loan that Maintains Current Production Levels

Part II: SME Feasibility Studies

1. Fishing
2. Hand Corn Milling
3. Motorized Corn Milling
4. Motorized Rice Decorticating
5. Bread-making
6. Sugar Syrup Production
7. Clairin Production
8. Salt Production
9. Fishnet Production
10. Plow Manufacturing
11. Cement Block Production

PREFEASIBILITY STUDY TO ESTABLISH A NEW BUSINESS

Client Name \_\_\_\_\_  
 Client Address/Location \_\_\_\_\_  
 Application Number \_\_\_\_\_  
 Date \_\_\_\_\_  
 BCA Office \_\_\_\_\_  
 BCA Agent \_\_\_\_\_  
 Loan Purpose \_\_\_\_\_  
 Amount Requested \_\_\_\_\_

I. CREDIT HISTORY

Name of Credit Source	Loan Purpose	Loan Amount	Outstanding Loan Balance	Repayment Record

1. If the loan applicant has ever received a loan, has he/she repaid it on time? Yes \_\_\_ No \_\_\_
2. If the loan applicant has never received a loan, then does his/her reputation in the community lead you to believe that he/she will use the loan for the stated purpose and repay it on time? Yes \_\_\_ No \_\_\_

IF YOU BELIEVE THAT THE LOAN APPLICANT WILL USE THE BCA LOAN FOR THE INTENDED PURPOSE AND REPAY IT ON TIME, THEN CONTINUE TO THE NEXT SECTION; IF NOT, DENY THE LOAN REQUEST.

II. MANAGEMENT SKILLS

3. Has the loan applicant ever successfully managed a non-farm enterprise? Yes \_\_\_ No \_\_\_
4. Has the loan applicant ever successfully managed the same activity in the past? Yes \_\_\_ No \_\_\_

IF YOU BELIEVE THAT THE APPLICANT HAS DEMONSTRATED THE CAPABILITY TO MANAGE THIS NEW ENTERPRISE PROFITABLY (i.e., SUPERVISE PRODUCTION, MARKET THE PRODUCT OR SERVICE, REPAY THE LOAN ON TIME), THEN CONTINUE TO THE NEXT SECTION. IF NOT, DENY THE LOAN REQUEST.

III. MARKET DEMAND

- 5. Do other enterprises in this zone produce the same good or service as that proposed by the applicant? Yes \_\_\_ No \_\_\_
- 6. Do these enterprises currently supply as much of this good/service as the market can absorb? If no, Yes \_\_\_ No \_\_\_
- 7. Is the estimated unmet demand for this good/service great enough to allow a new enterprise to operate profitably in this zone? Yes \_\_\_ No \_\_\_

IF YOU ARE CERTAIN THAT A STRONG DEMAND EXISTS FOR THE PROPOSED ENTERPRISE'S GOOD/SERVICE, THAT CANNOT BE MET BY EXISTING ENTERPRISES, THEN CONTINUE TO THE NEXT SECTION.

IV. EQUIPMENT MAINTENANCE

- 8. Does this enterprise depend upon equipment that is difficult and expensive to repair? (e.g., problems securing spare parts and mechanics)? If yes, Yes \_\_\_ No \_\_\_
- 9. Are spare parts and qualified mechanics available to service the critical equipment in a timely fashion? Yes \_\_\_ No \_\_\_
- 10. Is there a good possibility that this equipment will break down during the BCA loan repayment period, thereby endangering loan repayment? Yes \_\_\_ No \_\_\_

IF YOU BELIEVE THAT THE ENTERPRISE WILL NOT HAVE ANY EXPENSIVE EQUIPMENT BREAK-DOWNS DURING THE LOAN REPAYMENT PERIOD, THEN CONTINUE TO THE NEXT SECTION.

V. RAW MATERIALS AND SKILLED LABOR SUPPLY

11. Would the enterprise have access to a reliable supply of raw materials at a stable price?

Yes \_\_\_ No \_\_\_

12. If the business requires skilled labor, will there be any difficulties attracting this skilled labor?

Yes \_\_\_ No \_\_\_

IF THE BUSINESS IS NOT EXPECTED TO FACE CRITICAL SHORTAGES OF RAW MATERIALS AND SKILLED LABOR THAT WOULD JEOPARDIZE ITS PROFITABILITY AND LOAN REPAYMENT, THEN CONDUCT THE FEASIBILITY STUDY.

PREFEASIBILITY STUDY TO EXPAND AN EXISTING BUSINESS

Client Name \_\_\_\_\_  
 Client Address/Location \_\_\_\_\_  
 Application Number \_\_\_\_\_  
 Date \_\_\_\_\_  
 BCA Office \_\_\_\_\_  
 BCA Agent \_\_\_\_\_  
 Loan Purpose \_\_\_\_\_  
 Amount Requested \_\_\_\_\_

I. CREDIT HISTORY

Name of Credit Source	Loan Purpose	Loan Amount	Outstanding Loan Balance	Repayment Record

1. If the loan applicant has ever received a loan, has he/she repaid it on time? Yes \_\_\_ No \_\_\_
2. If the loan applicant has never received a loan, then does his/her reputation in the community lead you to believe that he/she will use the loan for the stated purpose and repay it on time? Yes \_\_\_ No \_\_\_

IF YOU BELIEVE THAT THE LOAN APPLICANT WILL USE THE BCA LOAN FOR THE INTENDED PURPOSE AND REPAY IT ON TIME, THEN CONTINUE TO THE NEXT SECTION; IF NOT, DENY THE LOAN REQUEST.

II. MANAGEMENT SKILLS

3. Is the loan applicaant currently managing his/her enterprise successfully? Yes \_\_\_ No \_\_\_
4. Is the loan applicant capable of undertaking the increased responsibilities generated by a higher scale of production (e.g., tighter inventory and/or quality control, labor supervision, equipment maintenance, establishment of financial records)? Yes \_\_\_ No \_\_\_

IF YOU ARE CONFIDENT THAT THE LOAN APPLICANT IS CAPABLE OF SUCCESSFULLY MANAGING THE INCREASED RESPONSIBILITIES, THEN CONTINUE.

III. MARKET DEMAND

- 5. Does this business have any problems selling what it currently produces? Yes \_\_\_ No \_\_\_
- 6. Do you believe the enterprise could expand production and sales without BCA assistance? Yes \_\_\_ No \_\_\_
- 7. If this enterprise received a loan to expand production, is there evidence that it could sell this increase in production at the same current price? Is there sufficient unmet demand to increase production (e.g., will customers buy this increase in output/service)? Yes \_\_\_ No \_\_\_
- 8. If this business expanded, would similar businesses in the area be hurt? Yes \_\_\_ No \_\_\_
- 9. If production increased, is it likely that product quality would decline? Yes \_\_\_ No \_\_\_

IF YOU BELIEVE THAT THIS ENTERPRISE WILL BE ABLE TO SEEL THE INCREASE IN PRODUCTION ANTICIPATED BY THE LOAN REQUEST, THEN CONTINUE TO THE NEXT SECTION. IF NOT, DENY THE LOAN REQUEST.

For Equipment Loans:

IV. EQUIPMENT MAINTENANCE

- 10. Is it difficult and expensive to repair this equipment? Yes \_\_\_ No \_\_\_
- 11. Is there a good possibility that this equipment will break down during the BCA loan repayment period, thereby endangering timely loan repayment? Yes \_\_\_ No \_\_\_

IF YOU BELIEVE THAT THE ENTERPRISE WILL NOT HAVE ANY EXPENSIVE EQUIPMENT BREAK-DOWNS DURING THE LOAN REPAYMENT PERIOD, THEN CONTINUE TO THE NEXT SECTION.

V. RAW MATERIALS AND SKILLED LABOR SUPPLY

12. If the enterprise expands its production capacity, will it have difficulty securing the needed increases of raw materials at a stable price?

Yes \_\_\_ No \_\_\_

13. If the enterprise expands, will it be difficult to hire qualified skilled labor to increase production?

Yes \_\_\_ No \_\_\_

IF BUSINESS IS NOT EXPECTED TO FACE CRITICAL SHORTAGES OF RAW MATERIALS AND SKILLED LABOR, THEN CONDUCT THE FEASIBILITY STUDY.

PREFEASIBILITY STUDY FOR WORKING CAPITAL LOAN THAT  
MAINTAINS CURRENT PRODUCTION LEVELS

Client Name \_\_\_\_\_  
 Client Address/Location \_\_\_\_\_  
 Application Number \_\_\_\_\_  
 Date \_\_\_\_\_  
 BCA Office \_\_\_\_\_  
 BCA Agent \_\_\_\_\_  
 Loan Purpose \_\_\_\_\_  
 Amount Requested \_\_\_\_\_

I. CREDIT HISTORY

Name of Credit Source	Loan Purpose	Loan Amount	Outstanding Loan Balance	Repayment Record

1. If the loan applicant has ever received a loan, has he/she repaid it on time? Yes \_\_\_ No \_\_\_
2. If the loan applicant has never received a loan, then does his/her reputation in the community lead you to believe that he/she will use the loan for the stated purpose and repay it on time? Yes \_\_\_ No \_\_\_

IF YOU BELIEVE THAT THE LOAN APPLICANT WILL USE THE BCA LOAN FOR THE INTENDED PURPOSE AND REPAY IT ON TIME, THEN CONTINUE TO THE NEXT SECTION; IF NOT, DENY THE LOAN REQUEST.

WITHOUT LOAN			WITH LOAN		
Price/Unit	Quantity	Total	Price/Unit	Quantity	Total
(A) Input					
Sub-Total					
(B) Trans- port Costs					
(C) Storage Units					
(D) BCA In- terest Charge					
(E) Total					

IF THE TOTAL IN LINE (E) WITH THE BCA LOAN IS LESS THAN WITHOUT THE LOAN, THEN CONDUCT THE FEASIBILITY ANALYSIS TO DETERMINE WHETHER THE ENTERPRISE IS PROFITABLE.

A. SMALL-SCALE FISHING:  
GENERAL CHARACTERISTICS

PRODUCT DESCRIPTION: Small fish and lobsters

MANAGEMENT REQUIREMENTS: Low-level skills required; ability to market fish in timely manner necessary

PRODUCTION CAPACITY: Varies greatly according to ocean conditions  
maximum production (at Cayes):  
Fish: 50 lbs/week  
Lobster: 13 small/week  
25 large/week

MARKET DEMAND: Present demand: Much greater than current supply  
Future demand: Expected to remain high

INVESTMENT REQUIREMENTS: Low initial investment  
1-2 person rowboat Ø300  
Equipment 540  
Total Ø840

RAW MATERIALS: None

EQUIPMENT MAINTENANCE: Equipment must often be replaced; rowboat expected to operate 2.5 years, but frequent small repairs necessary

LOAN POSSIBILITIES:

<u>Potential Loan Purpose</u>	Working capital
<u>Specific Loan Purpose</u>	Repair rowboat and/or equipment
<u>Potential Loan Range</u>	Ø100-300
<u>Potential Loan Repayment Period</u>	1-2 years
<u>Potential Collateral Requirement</u>	Rowboat
<u>Comments</u>	Cash flow should be adequate to cover any repair costs; loan should not be required

MODEL BUDGET [1]
Equipment purchases
Purchase rowboat and/or equipment
Ø300-1,000
1-2 years
Rowboat and equipment
Prospective applicants should be grouped into fishermen societies and given loans through those societies

SPECIAL RISKS: Lobster production is declining in the area, endangering the long-run profitability of the enterprise

MODEL BUDGET DATA SOURCE: Interviews with fishermen in Cayes and Jacmel

[1] The model budget falls within this category. See following pages for specific assumptions.

B. SMALL-SCALE FISHING:  
CALCULATION OF LOAN AMOUNT

	MODEL BUDGET ASSUMPTIONS (gourdes)	ACTUAL CASE (gourdes)
<u>Investment Costs</u>		
2-person rowboat	300	
9 fishnets @ Ø30 each	270	
3 lobster nets @ Ø25 each	75	
2 oars @ Ø10 each	20	
Cord	100	
Bucket	25	
Raincoat	50	
Sub-Total	Ø840	
<u>Working Capital for 3 Months</u>		
Salary to loan recipient @ Ø500/month	1,500	
Repairs & miscellaneous @ Ø40/month	120	
Sub-Total	1,620	
Total	2,460	
<u>Contribution from Loan Applicant</u>		
Salary to loan recipient	1,500	
30% of remaining costs (@ Ø960)	288	
Sub-Total	1,788	
<u>Remaining Costs</u>	672	
<u>BCA Loan Amount</u> Ø672/.83	809	
<u>Loan Purpose and Terms</u>		
Loan Purpose:	Purchase of rowboat and fishing equipment (establish new enterprise)	
Loan Repayment Period:	One payment made at end of one year	
Loan Interest and Fees:	15% interest and 2% commission discounted; 2% principal paid at end of loan period for forced savings ("savings guarantee")	

III-19

C. SMALL-SCALE FISHING:  
BREAK-EVEN ANALYSIS

Annual Fixed Costs

ITEM	ASSUMPTIONS	AMOUNT (gourdes)
Fishnets	9 fishnets @ Ø30 each are purchased every 6 months	540
Lobster nets	1 18' lobster net @ Ø25 is purchased every 6 months	50
Oars	2 oars @ Ø10 each are purchased each year	20
Cord	Ø100 worth of cord is purchased every 2 months	600
Bucket	1 bucket @ Ø25 is purchased each year	25
Raincoat	1 raincoat @ Ø50 is purchased every 6 months	100
Repairs and miscellaneous	Rowboat and nets must be repaired every 15 days @ Ø20 per repair	480
Rowboat	A Ø300 rowboat has a 2.5-year life	120
Minimum salary to owner	Ø500/month	6,000
Tax payment	No taxes paid	0
BCA loan interest and savings guarantee	Ø800 loan for one year discounted at 17%; 2% of principal paid as savings guarantee	<u>152</u>
Total annual fixed costs		Ø8,087

Variable Costs  
No variable costs

Break-even Point (BEP) for Mixed Catch

	MODEL BUDGET ASSUMPTION	ACTUAL CASE
Annual fixed costs (F)	ø8,087	_____
Variable costs (V)	0	_____
Sales price of fish (P <sub>F</sub> )	ø4.5/lb	_____
Sales price of lobster (P <sub>C</sub> )	ø15/lb	_____
Quantity of fish sales (Q <sub>F</sub> ) and lobster sales (Q <sub>L</sub> )	4.5 (2Q <sub>L</sub> ) + 15Q <sub>L</sub> = 8,087	_____
Required for break-even <sup>1</sup>	Q <sub>L</sub> = 337 lbs Q <sub>F</sub> = 674 lbs	_____
Expected quantity of fish sales (E <sub>F</sub> )	1,560 lbs	_____
E <sub>F</sub> /Q <sub>F</sub>	2.3	_____
Expected quantity of lobster sales (E <sub>L</sub> )	750 lbs	_____
E <sub>L</sub> /Q <sub>L</sub>	2.2	_____
Production capacity of fish (C <sub>F</sub> )	2,010 lbs	_____
Q <sub>F</sub> /C <sub>F</sub>	34%	_____
Production capacity of lobster (C <sub>L</sub> )	1,500 lbs	_____
Q <sub>L</sub> /C <sub>F</sub>	$\frac{337}{1,500} = 22\%$	_____

Comments

If we assume that twice as much fish as lobster is caught, then 674 lbs of fish and 337 lbs of lobster must be sold to cover fixed costs. Since actual fish and lobster sales are expected to double these break-even quantities, the BCA loan will enable the enterprise to generate a healthy profit. These break-even quantities of fish and lobster are only 34% and 22% of production capacity, and barring unforeseen circumstances should be attained.

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D. SMALL-SCALE FISHING:  
PRO-FORMA CASH FLOW WITH BCA LOAN FOR ONE YEAR  
(in gourdes)

	I Good Season: February-May	II Bad Season: June-July	III Good Season: August-December	IV Bad Season: January
<u>Opening Balance</u>	0	4,432	4,982	10,062
<u>Cash Inflow</u>				
Investment				
BCA loan[1]	168	0	0	0
Fish sales[2]	800	0	0	0
Lobster sales	2,700	630	3,375	315
<u>Total</u>	<u>4,200</u>	<u>1,200</u>	<u>5,250</u>	<u>600</u>
Total	7,868	6,262	13,607	10,977
<u>Cash Outflow</u>				
Rowboat purchase	300	0	0	0
Equipment purchase[3]	840	200	845	100
Minimum salary to owner	2,000	1,000	2,500	500
Repairs and miscellaneous	160	80	200	40
Rent	0	0	0	0
Taxes	0	0	0	0
Other expenses	0	0	0	0
<u>Total</u>	<u>3,300</u>	<u>1,280</u>	<u>3,545</u>	<u>640</u>
<u>Cash Inflow - Cash Outflow</u>	4,568	4,982	10,062	10,337
BCA loan repayment[4]	136	0	0	816
<u>Closing Balance[5]</u>	4,432	4,982	10,062	9,521

Notes on Cash Flow:

- [1] Assume a one year 800 loan discounted by 17%.
- [2] Assume 150 lbs of fish and 70 lbs of lobster are sold each month during the good season; 70 lbs of fish and 40 lbs of lobster are sold each month during the bad season. The selling price remains constant at 4.5/lb for fish and 15/lb for lobster.
- [3] Assume all investment equipment is purchased at beginning of cash flow period (early February); 100 of cord is purchased each month thereafter; after 6 months (August), 9 new fishnets, a lobster net and a raincoat are purchased.
- [4] Interest on the BCA loan is paid at the time of loan disbursement; repayment of principal and 2% savings guarantee is made at the end of the one-year loan.
- [5] The closing balance at the end of the year is sufficient to cover the costs of purchasing new equipment and a larger boat; only 500/month are taken for the owner's salary, and profits are reinvested in the business.

A. CORN HAND MILL:  
GENERAL CHARACTERISTICS

PRODUCT DESCRIPTION: MILLED CORN  
Hand mill not primarily for commercial use;  
usually purchased by farm families to  
substitute for motorized milling services.

MANAGEMENT REQUIREMENTS: Low level

PRODUCTION CAPACITY: 25 lbs/hour

MARKET DEMAND:

Present Demand: Low due to cheap motorized milling services;  
appropriate for use by isolated farm  
families

Future Demand: Expected to decline

INVESTMENT REQUIREMENTS: Relatively low

RAW MATERIALS: Seasonal supply

EQUIPMENT MAINTENANCE: No problem; extremely durable

LOAN POSSIBILITIES:

Potential Loan Purpose  
Specific Loan Purpose

Potential Loan Range

Potential Loan Repayment  
Period

Potential Collateral  
Requirement

MODEL BUDGET[1]

Equipment  
Purchase coarse grinder and fine  
grinder mills  
\$500-\$1,500

1-3 years

Lien on equipment

SPECIAL RISKS: Since these mills are primarily used by farm families to mill their produce for self consumption, they may not generate the necessary cash income for loan repayment. The price of the hand mill service is 20 times that of the motorized milling service, thereby eliminating its use in areas where the cheaper, higher quality service is available. Thus, the BCA should not fund hand mills and motorized mills in the same area.

MODEL BUDGET DATA SOURCE: Interviews with hand mill owner in  
La Vallee de Jacmel

[1] The model budget falls within this category. See following pages for specific assumptions.

B. CORN HAND MILL:  
CALCULATION OF LOAN AMOUNT

	MODEL BUDGET ASSUMPTIONS (gourdes)	ACTUAL CASE (gourdes)
<u>Investment Costs</u>		
1 coarse grinder	ø750	_____
1 fine grinder	750	_____
Workshop	<u>1,000</u>	_____
SubTotal	ø2,500	_____
<u>Working Capital for 1 Month</u>		
Salary to owner	<u>500</u>	_____
Subtotal	500	_____
Total	3,000	_____
<u>Contribution from Loan Applicants</u>		
Workshop	1,000	_____
Salary to owners	500	_____
20% of grinder's cost (ø1,500)	<u>300</u>	_____
Subtotal	1,800	_____
<u>Remaining Costs</u>	1,200	_____
<u>BCA Loan Amount</u>		_____
ø1,200/9.8	1,225	_____
<u>Loan Purpose and Terms</u>		
Loan Purpose:	To purchase manually operated corn miller (establish new enterprise)	_____
Loan Repayment Period:	2 years semiannual payments	_____
Loan Interest and Fees:	2% discounted for commission; 16.5% annual interest charged on a declining balance 2% of principal charged for savings guarantee at time of last loan repayment	_____
<u>Comments</u>		
Medium-high risk loan in financial terms; character reference for loan recipient will be especially important. Geared to lower income corn-growing farm families in areas without motorized corn millers.		_____
		_____
		_____
		_____
		_____

C. CORN HAND MILL:  
BREAK-EVEN ANALYSIS

Annual Fixed Costs

ITEM	ASSUMPTIONS	AMOUNT (gourds)
Depreciation	2 mills have 40-year life (1500/40)	37.50
Salary to owner/ operator	Ø500/mo	6,000.00
Annual interest and loan fees	Annual cost of savings commission (1225).04/2)	24.50
	Annual interest charge	<u>155.45</u>
Total annual fixed costs		6,217.45

Variable costs

No variable costs

Break-even Point for Manually Operated Corn-Milling Service

	MODEL BUDGET ASSUMPTION	ACTUAL CASE
Annual fixed costs (F)	Ø6,217.45	_____
Variable costs (V)	0	_____
Price (P) per lb.	Ø.80	_____
Quantity	.8Q = Ø6,217.45 Q=7,771	_____
Expected quantity of corn to be milled by hand (lbs) (E)	780	_____
$E/Q$	780/7771 = 10%	_____
Annual production capacity (C) (24 hrs x 365)	219,000	_____
$Q/C$	3.5%	_____

Comments

Although it is theoretically possible for this service to attain its break-even quantity, it seems most unlikely. Thus, the BCA should not encourage loans to those who wish to sell their hand-milling service on a commercial basis.

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Break-even Point for Selling Hand-Milled Corn vs. Unmilled Corn

	MODEL BUDGET ASSUMPTION	ACTUAL CASE
Selling price of un- milled corn per mar- mites ( $P_U$ )	Ø3 at harvest	_____
Selling price of mil- led corn per mar- mite ( $P_M$ )	Ø5-8 at harvest (Ø6.5 average)	_____ _____
Unmilled Corn + Milled Corn	(2.5 marmittes of grain = 1 marmite of corn flour	_____ _____ _____
Annual fixed cost of hand mill use ( $F_H$ )	Ø217.45	_____
Number of unmilled marmittes of corn (Q)	$3Q = 6.5 (Q/2.5) + 217.5$ $Q = 543.75$	_____ _____
Number of milled marmittes ( $Q/2.5$ )	$543.75/2.5 = 217.50$	_____

Comments

If the individual harvests more than 544 marmittes of corn each year, it would pay to borrow funds to purchase a hand mill. This assumes that this individual has no access to a motorized mill. Since the hand mill would be solely used by the household, no cash flow analysis is included.

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D. CORN HAND MILL:  
PRO-FORMA CASH FLOW

Since the hand mill would be used solely by the household, no cash flow analysis is included.

A. MOTORIZED CORN MILLING:  
GENERAL CHARACTERISTICS

PRODUCT DESCRIPTION: Corn-milling service

MANAGEMENT REQUIREMENTS: Maintenance and operation of equipment

PRODUCTION CAPACITY: 2,500 marmites/day

MARKET DEMAND:  
 Present demand: Seasonal, much lower than capacity  
 Future demand: Depends upon growth of corn production

INVESTMENT REQUIREMENTS: High initial investment

RAW MATERIALS: Seasonal shortages

EQUIPMENT MAINTENANCE: Low maintenance costs during first few years; after 3 years of operations repairs are frequent (1-2 per year) and expensive; equipment must be carefully maintained throughout life

LOAN POSSIBILITIES:

<u>Potential Loan Purpose</u>	Working capital
<u>Specific Loan Purpose</u>	Repair equipment
<u>Potential Loan Range</u>	Ø500-Ø2,000
<u>Potential Loan Repayment Period</u>	6 months-1 year
<u>Potential Collateral Requirement</u>	Equipment

MODEL BUDGET[1]
Equipment
Purchase motor and/or corn miller Ø7,000-Ø25,000
1-4 years
Lien on equipment

SPECIAL RISKS: This is a medium-high risk loan since machinery may break down, causing long periods when no milling is done; and/or

- If corn production drops, then demand for the milling service will fall correspondingly
- Most mills seem to be operating well below capacity; thus, sufficient demand may not exist to establish new mills

MODEL BUDGET DATA SOURCE: Interviews with corn millers in Cayes, Cap-Haitien, and Gonaives

[1] The model budget falls within this category. See following pages for specific assumptions.

B. MOTORIZED CORN MILLING:  
CALCULATION OF LOAN AMOUNT

	MODEL BUDGET ASSUMPTIONS (gourdes)	ACTUAL CASE (gourdes)
<u>Investment Costs</u>		
Diesel motor (Yanmar)	⧘ 19,750	_____
Corn mill and accessories	7,563	_____
Land	2,000	_____
Workshop	<u>5,000</u>	_____
Subtotal	⧘ 34,313	_____
<u>Working Capital for 1 Month</u>		
Motor fuel	250	_____
Lubricant	30	_____
Grease	10	_____
Labor	200	_____
Salary to owner	<u>500</u>	_____
Subtotal	990	_____
Total	35,303	_____
<u>Contribution from Loan Applicant</u>		
Salary to owner	500	_____
Land	2,000	_____
25% of remaining costs (⧘32,803)	<u>8,303</u>	_____
Total	10,803	_____
<u>Remaining Costs</u>	24,500	_____
<u>BCA Loan Amount</u> ⧘24,500/.98	25,000	_____
<u>Loan Purpose and Terms</u>		
Loan Purpose:	To purchase motor corn miller, fuel and lubricants and hire labor (establish new enterprise)	_____ _____ _____
Loan Repayment Period:	3 years, annual payments	_____ _____
Loan Interest and Fees:	2% discounted for commission; 16.5% annual interest charged on a declining balance; 2% of principal charged for savings guarantee at time of last loan repayment	_____ _____ _____ _____ _____

C. MOTORIZED CORN MILLING:  
BREAK-EVEN ANALYSISAnnual Fixed Costs

ITEM	ASSUMPTIONS	AMOUNT (gourdes)
Depreciation	1 diesel motor @ Ø19,750 with 10-year life	1,975.00
	1 corn mill and accessories @ Ø7,563 with 15-year life	504.20
	1 workshop @ Ø5,000 with 20- year life	250.00
Labor	2 persons @ Ø10/day	5,760.00
Lubricant		348.00
Grease		120.00
Repairs		500.00
Taxes		75.00
Salary to owner	Ø500/month	6,000.00
Annual interest and loan fees	(Ø25,000).04/3 = annual cost of savings and commission	333.00
	Annual interest charge:	2,889.95
	First year           4,125.00	
	Second year       2,953.82	
	Third year <u>1,589.49</u>	
	8,668.36 + 3	<u>2,889.45</u>
Total annual fixed costs		18,754.65

Variable Costs per 2,500 Marmites of Corn  
(maximum daily production)

ITEM	ASSUMPTIONS	AMOUNT (gourdes)
Diesel	4 gallons @ Ø8.50/gallon	<u>34</u>
Total variable costs		34

Break-even Point for Corn Milling Service

	MODEL BUDGET ASSUMPTION	ACTUAL CASE
Annual fixed costs (F)	Ø18,754.65	_____
Variable costs per marmite (V)	Ø.0004	_____
Price (P)	Ø.20/marmite	_____
Quantity of marmites needed to be milled in order to break-even (Q)	$.20Q = 18,754.65 + .0004Q$ $Q = 93,961$	_____
Expected quantity of corn to be milled (in marmites) (E)	175,800	_____
$E/Q$	1.9	_____
Production capacity (C)	912,500	_____
$Q/C$	10%	_____

Comments

The corn mill is operating at 20% cf capacity, indicating that the market could not support the establishment of new corn mills. The expected level of milling sales is estimated at twice the break-even point. This volume will vary substantially across zones.

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D. MOTORIZED CORN MILLING:  
PRO-FORMA CASH FLOW WITH BCA LOAN FOR THREE YEARS  
(in gourdes)

	YEAR 1		YEAR 2		YEAR 3	
	Harvest Season: December-May	Slow Season: June-November	Harvest Season: December-May	Slow Season: June-November	Harvest Season: December-May	Slow Season: June-November
<u>Opening Balance</u>	0	10,184	4,816	14,010	8642	17,404
<u>Cash Inflow</u>						
Investment	10,803	0	0	0	0	0
BCA loan	25,000	0	0	0	0	0
Sales revenue[1]	<u>20,160</u>	<u>15,000</u>	<u>20,160</u>	<u>15,000</u>	<u>20,160</u>	<u>15,000</u>
Total	55,963	25,184	24,976	29,010	28,802	32,404
<u>Cash Outflow</u>						
Equipment purchases	27,313	0	0	0	0	0
Land purchase	2,000	0	0	0	0	0
Workshop purchase	5,000	0	0	0	0	0
Diesel fuel[2]	4,896	2,500	4,896	2,500	4,896	2,500
Lubricant, grease[3]	190	190	190	190	190	190
Labor[4]	2,880	2,880	2,880	2,880	3,312	3,312
Repairs	0	500	0	500	0	500
Taxes	0	75	0	75	0	75
Salary to owners	<u>3,000</u>	<u>3,000</u>	<u>3,000</u>	<u>3,000</u>	<u>3,000</u>	<u>3,000</u>
Total	45,279	9,145	10,966	9,145	11,398	9,577
<u>Cash Inflow-Cash Outflow</u>	10,684	16,039	14,010	19,865	17,404	22,827
BCA fees and loan repayment	<u>500</u>	<u>11,223</u>	<u>0</u>	<u>11,223</u>	<u>0</u>	<u>11,723</u>
<u>Closing Balance[5]</u>	10,184	4,816	14,010	8,642	17,404	11,104

Notes:

- [1] Assume sales during the harvest season (December-May) of 4,200 marmites milled per week and 3,125 marmites/week milled from June-November, @ \$2.00 per marmite.
- [2] The owner uses about 24 gallons of fuel per week during December-May @ \$8.50/gal = \$4,896 for 6 months; about half of this quantity is used during June-November.
- [3] The owner uses about one gallon of lubricant each month @ \$30 per gallon and \$10 worth of grease; about the same amount of lubricant and grease is used during the slow season.
- [4] Assume the price of labor remains constant during the first 2 years and rises by 15% the 3rd year.
- [5] The closing balance is sufficient to cover any anticipated shortfalls. If the current pattern continues, the business should generate sufficient profits to cover the cost of purchasing another motor when this one ceases to function.

A. MOTORIZED RICE DECORTICATING:  
GENERAL CHARACTERISTICS

PRODUCT DESCRIPTION: Rice-decortivating service

MANAGEMENT REQUIREMENTS: Maintenance and operation of equipment

PRODUCTION CAPACITY: 2,500 marmites/day

MARKET DEMAND:

Present demand: Seasonal, much lower than capacity

Future demand: Depends upon growth of rice production

INVESTMENT REQUIREMENTS: High initial investment

RAW MATERIALS: Seasonal shortages

EQUIPMENT MAINTENANCE: Low maintenance costs during first few years; after 3 years of operations, repairs are frequent (1-2 per year) and expensive. Equipment must be carefully maintained throughout life.

LOAN POSSIBILITIES:

Potential Loan

Purpose

Specific Loan

Purpose

Potential Loan

Range

Potential Loan

Repayment Period

Potential Collateral

Requirement

Working  
capital  
Repair  
equipment  
\$500-\$2,000

6 months-1 year

Equipment

MODEL BUDGET [1]

Equipment

Purchase motor  
and/or rice miller  
\$7,000-\$25,000

1-4 years

Lien on equip-  
ment

SPECIAL RISKS: This is a medium-high risk loan since machinery may break down, causing long periods when no milling is done; and/or

- If rice production drops, then demand for the milling service will fall correspondingly
- Most mills seem to be operating well below capacity; thus, sufficient demand may not exist to establish new mills

MODEL BUDGET DATA SOURCE: Interviews with rice millers in Cayes, Cap-Haitien, and Gonaives

[1] The model budget falls within this category. See following pages for specific assumptions.

B. MOTORIZED RICE DECORTICATING:  
CALCULATION OF LOAN AMOUNT

	MODEL BUDGET ASSUMPTIONS (gourdes)	ACTUAL CASE (gourdes)
<u>Investment Costs</u>		
Diesel motor (Yanmar)	Ø19,750	_____
Rice mill and accessories	12,430	_____
Land	2,000	_____
Workshop	<u>5,000</u>	_____
Subtotal	Ø39,180	_____
<u>Working Capital for 1 Month</u>		
Motor fuel	250	_____
Lubricant	30	_____
Grease	10	_____
Labor	200	_____
Salary to owner	<u>500</u>	_____
Subtotal	990	_____
Total	40,170	_____
<u>Contribution from Loan Applicant</u>		
Salary to owner	500	_____
Land	2,000	_____
Workshop	5,000	_____
25% of remaining costs (Ø32,670)	<u>8,170</u>	_____
Total	15,670	_____
<u>Remaining Cost</u>	24,500	_____
<u>BCA Loan Amount</u>		_____
Ø24,500/.98	25,000	_____
<u>Loan Purpose and Terms</u>		
Loan Purpose:	To purchase motor rice miller, fuel, and lubricants and hire labor (establish new enterprise)	_____
Loan Repayment Period:	3 years, annual payments	_____
Loan Interest and Fees:	2% discounted for commission; 16.5% annual interest charged on a declining balance: 2% of principal charged for guaranteed savings at time of last loan repayment	_____

C. MOTORIZED RICE DECORTICATING:  
BREAK-EVEN ANALYSIS

Annual Fixed Costs

ITEM	ASSUMPTIONS	AMOUNT (gourdes)
Depreciation	1 diesel motor @ Ø19,750 with 10-year life	1,975
	1 rice decorticator and accessories @ Ø12,430 with 15-year life	829
	1 workshop @ Ø5,000 with 20-year life	250
Labor	2 persons @ Ø10/day	5,760
Lubricant		348
Grease		120
Repairs		500
Taxes		75
Salary to owner	Ø500/mo	6,000
Annual interest and loan fees	(Ø25,000) .04/3 = Annual cost of savings and commission	333
	Annual interest charge: First year 4,125.00 Second year 2,953.82 Third year 1,589.49 <u>8,668.36</u> ÷ 3	2,889.95
Total Annual Fixed Costs		19,079.45

Variable Costs per 2,500 Marmites of Rice  
(maximum daily production)

ITEM	ASSUMPTIONS	AMOUNT (gourdes)
Diesel	4 gallon @ Ø8.50/gallon	<u>34</u>
Total variable costs		34

Break-even Point for Rice-Decortivating Service

	MODEL BUDGET ASSUMPTION	ACTUAL CASE
Annual fixed costs (F)	₱19,079	_____
Variable costs per marmite (V)	₱.0004	_____
Price (P)	₱.20/marmite	_____
Quantity of marmites needed to be decorticated in order to break-even	$.20Q = 19,079 + .0004Q$ $Q=95,588$	_____ _____
Expected quantity of rice to be milled (in marmites) (E)	175,800	_____
$\frac{E}{Q}$	1.8	_____
Production capacity (C)	912,500	_____
$\frac{Q}{C}$	10%	_____

Comments

The rice decorticator is operating at 20% of capacity, indicating that the market could not support the establishment of new rice mills. The expected level of milling sales is estimated at twice the break-even point. This volume will vary substantially across zones.

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D. MOTORIZED RICE DECORTICATING:  
PRO-FORMA CASH FLOW WITH BCA LOAN FOR THREE YEARS  
(in gourdes)

	YEAR 1		YEAR 2		YEAR 3	
	Harvest Season: December-May	Slow Season: June-November	Harvest Season: December-May	Slow Season: June-November	Harvest Season: December-May	Slow Season: June-November
<u>Opening Balance</u>	0	10,184	4,816	14,010	8,642	17,404
<u>Cash Inflow</u>						
Investment	15,670	0	0	0	0	0
BCA loan	25,000	0	0	0	0	0
Sales revenue[1]	<u>20,160</u>	<u>15,000</u>	<u>20,160</u>	<u>15,000</u>	<u>20,160</u>	<u>15,000</u>
Total	60,830	25,184	24,976	29,010	28,802	32,404
<u>Cash Outflow</u>						
Equipment purchases	32,180	0	0	0	0	0
Land purchase	2,000	0	0	0	0	0
Workshop purchase	5,000	0	0	0	0	0
Diesel fuel[2]	4,896	2,500	4,896	2,500	4,896	2,500
Lubricant, grease[3]	190	190	190	190	190	190
Labor[4]	2,880	2,880	2,880	2,880	3,312	3,312
Repairs	0	500	0	500	0	500
Taxes	0	75	0	75	0	75
Salary to owners	3,000	3,000	3,000	3,000	3,000	3,000
Total	50,146	9,145	10,966	9,145	11,398	9,577
<u>Cash Inflow-Cash Outflow</u>	10,684	16,039	14,010	19,865	17,404	22,827
BCA Fees and loan repayment	<u>500</u>	<u>11,223</u>	<u>0</u>	<u>11,223</u>	<u>0</u>	<u>11,723</u>
<u>Closing Balance[5]</u>	10,184	4,816	14,010	8,642	17,404	11,104

Notes:

- [1] Assume sales during the harvest season (December-May) of 4,200 mammites decorticated per week; and 3,125 mammites/week decorticated from June-November, @ \$2.00 per mammite.
- [2] The owner uses about 24 gallons of fuel per week during December-May @ \$8.50/gal=\$4,896 for 6 months; about half of this quantity is used during June-November.
- [3] The owner uses about one gallon of lubricant each month @ \$30 per gallon and \$10 worth of grease; about the same amount of lubricant and grease is used during the slow season.
- [4] Assume the price of labor remains constant during the first 2 years and rises by 15% the 3rd year.
- [5] The closing balance is sufficient to cover any anticipated shortfalls. If the current pattern continues, the business should generate sufficient profits to cover the cost of purchasing another motor when this one ceases to function.

A. BAKERY:  
GENERAL CHARACTERISTICS

PRODUCT DESCRIPTION: Wheat flour bread

MANAGEMENT REQUIREMENTS: Ability to maintain high product quality, sanitary facilities, supervise labor, purchase raw materials, and market output on a wholesale and retail basis

PRODUCTION CAPACITY: 8,000 platters per month

MARKET DEMAND:

Present demand: Considered a luxury item, dependent upon rural families' purchasing power and cost of food substitutes; market greater in urban centers

Future demand: If rural incomes increase, then demand for bread is also expected to increase

INVESTMENT REQUIREMENTS: Medium-scale initial investment in land, building, and equipment (Ø17,000)

RAW MATERIALS: The supply of imported wheat flour is scarce, and may be in short supply at times

EQUIPMENT MAINTENANCE: Equipment rarely requires repair

LOAN POSSIBILITIES:

Potential Loan Purpose  
Specific Loan Purpose

Working capital  
Purchase 2-3 months' stock of flour

MODEL BUDGET[1]

Equipment purchase  
Purchase oven, mill, and/or supplies  
2,200-6,000

Potential Loan Range

Ø24,080-36,120

Potential Loan Repayment Period

6 months-1 year

1-3 years

Potential Collateral Requirement

Land, building, oven, and equipment are worth about Ø17,000 when new; other assets must be found to fully collateralize a loan to purchase 2-3 months of flour

Oven, mill, and supplies

**SPECIAL RISKS:** If a loan is given to purchase equipment, working capital should also be provided to purchase raw materials. Construction and equipment purchases should occur during the period of low market demand, so that the bakery can begin operation when demand is greatest. Thus, the loan should be disbursed prior to the period of high demand

**MODEL BUDGET DATA SOURCE:** Interviews with bakers in Cap-Haitien and Hinche.

[1] The model budget falls within this category. See following pages for specific assumptions.

B. BAKERY:  
CALCULATION OF LOAN AMOUNT

	MODEL BUDGET ASSUMPTIONS (gourdes)	ACTUAL CASES (gourdes)
<u>Investment Costs</u>		
Land value	Ø5,000	_____
Building construction	4,000	_____
Oven	3,500	_____
Tables, etc.	1,300	_____
Hand mill	2,200	_____
Platters	600	_____
Aprons, bonnets, etc.	397	_____
Subtotal	Ø16,997	_____
<u>Working Capital for 1 Month (high season)</u>		
Flour	12,040	_____
Commission	2,730	_____
Labor	840	_____
Other inputs	5,610	_____
Salary to clerk	350	_____
Salary to owner	500	_____
Subtotal	22,067	_____
Total	39,067	_____
<u>Contribution from Loan Applicant</u>		
Land	5,000	_____
Building construction	4,000	_____
Tables, platters, bonnets	2,297	_____
Commission	2,730	_____
Labor	840	_____
Salary to clerk	350	_____
Salary to onwer	500	_____
Contingency	320	_____
16% of remaining costs (Ø23,350)	3,750	_____
Total	19,467	_____
<u>Remaining Costs</u>		
Oven	3,500	_____
Hand mill	2,200	_____
75 sacks flour	9,900	_____
Other inputs	4,000	_____
Total	19,920	_____
<u>BCA Loan Amount</u> Ø19,920/.83	24,000	_____

Loan Purpose and Terms

Loan Purpose: Purchase oven, hand mill, flour, and miscellaneous inputs (establish new enterprise)

Loan Repayment Period: 1 year

Loan Interest and Fees: 15% interest and 2% commission discounted from the loan; 2% savings guarantee and loan principal repaid at the end of one year

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Comments

A \$24,000 loan will enable the entrepreneur to construct an oven and purchase enough flour for several weeks of operations. Before loan disbursement, the entrepreneur should have the building and remaining equipment and supplies in place. The entrepreneur should contribute his/her salary as an indication of good faith and should be able to hire labor with his/her own funds.

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C. BAKERY:  
BREAK-EVEN ANALYSIS

Annual Fixed Costs

ITEM	ASSUMPTIONS	AMOUNT (gourdes)
Platters	300 platters/year @ Ø2.00 each	600
Machine cleaning	Ø60/month	720
Perles	6 perles purchased each year @ Ø12.5 each	75
Aprons	7 aprons purchased every 6 months @ Ø16 each	224
Bonnets	7 bonnets purchased every 6 months @ Ø7 each	98
Water transport	Ø200/month	2,400
Clerk's salary	Ø350/month	4,200
Depreciation of hand mill	One handmill must be pur- chased every 4 years; each hand mill costs Ø1,000	250
Taxes		215
Minimum salary to owner	Ø500/month	6,000
BCA loan interest, commission, and savings	17% of Ø24,000 loan dis- counted (Ø4,080) plus 2% of principal for sav- ings guarantee (Ø480)	<u>4,560</u>
Total annual fixed costs		19,342

Variable Costs per 100 Platters of Bread

ITEM	ASSUMPTIONS	AMOUNT (gourdes)
Wheat flour	1.3 sacks are required for 100 pl; each sack costs Ø132	172.00
Commission	Ø30 commission is paid per sack of flour to sell bread	39.00
Salt	1 marmite of salt is used for 100 pl; each marmite costs about Ø1.50	1.50
Lard	.5 marmite of lard @ Ø18/marmite	9.00
Labor	Ø9 worth of labor per sack of flour	12.00
Wood transport	Ø200 per 600 pl	35.00
Sugar	3 lbs of sugar @ Ø3 per 100 platters	9.00
Yeast		10.00
Wood		1.00
Gas		2.00
Transport	Ø.5 per sack of flour	<u>.65</u>
Total variable costs per 100 platters		291.15

Break-even Point (BEP) for Bakery

	MODEL BUDGET ASSUMPTION	ACTUAL CASE
Annual fixed costs (F)	Ø19,342	_____
Variable costs per bread platter (V)	Ø2.91	_____
Price of bread per platter (P)	Ø4	_____
Quantity of bread (in platters) required for BEP (Q)	$4Q = 19,342 + 2.91Q$ $Q = 17,745$	_____ _____
Expected quantity of bread sales during loan period (1 year) (E)	56,000	_____
$E/Q$	3.2	_____
Production Capacity (C)	84,000	_____
$Q/C$	21%	_____

Comments

The bakery must sell 17,745 platters of bread per year to cover its annual fixed costs and variable costs. The enterprise is expected to sell three times the break-even quantity. The bakery cannot operate at maximum production capacity due to market conditions.

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D. BAKERY:  
 PRO-FORMA CASH FLOW WITH BCA LOAN FOR 1 YEAR  
 (in gourdes)

	I Bad Season: April-July	II Good Season: August-November	III Good Season: December-March
<u>Opening Balance</u>	0	0	43,730
<u>Cash Inflow</u>			
Investment	17,047	0	0
BCA Loan	24,000	0	0
Sales[1]	<u>0</u>	<u>112,000</u>	<u>112,000</u>
Total	41,047	112,000	155,730
<u>Cash Outflow[2]</u>			
Raw materials (flour, etc.)	17,650	63,830	81,480
Tools and equipment	7,997	0	0
Clerk's salary	0	1,400	1,400
Construction	4,000	0	0
Land	5,000	0	0
Owner's salary	2,000	2,000	2,000
Other costs	<u>320</u>	<u>1,040</u>	<u>1,040</u>
Total	36,967	68,270	85,920
<u>Cash Inflow-Cash Outflow</u>	4,080	43,730	69,810
BCA fees and loan repayment	<u>4,080</u>	<u>0</u>	<u>20,480</u>
<u>Closing Balance[3]</u>	0	43,730	49,330

## Notes:

- [1] Assume bread sales are low during April-July when the disposable income of rural families declines, and that they are high during August-March when income is generated from harvests of coffee, beans, corn, etc. (information from Cap-Haitien region).

The loan should be disbursed in April when sales would be low so that the land can be purchased, the building can be constructed, and all inputs be purchased and stored prior to the good season. Thus, bread production and sales would begin in August.

Assume 7,000 platters of bread are sold each month during the good season from August-March, and 3,500 platters are sold each month from April-July. The selling price of a platter of bread is  $\text{Ø}4$ .

[2] During the first and second 4 months of operations fixed expenses are expected to be:

Machine cleaning @ $\text{Ø}60/\text{month}$	240
Water transport @ $\text{Ø}200/\text{month}$	800
Clerk salary @ $\text{Ø}350/\text{month}$	1,400
Minimum salary to owner @ $\text{Ø}500/\text{month}$	<u>2,000</u>
Total	4,440

To produce 28,000 platters of bread, costs of  $\text{Ø}81,480$  are incurred. (See variable costs enumerated in break-even analysis; since some flour and raw materials were purchased during April-July ( $\text{Ø}17,650$ ), about  $\text{Ø}63,830$  must be disbursed for raw materials and labor.

[3] At the end of the one year period,  $\text{Ø}49,330$  remains for reinvestment after the loan has been repaid. Since bread sales drop during April-July, this is sufficient working capital to cover the enterprise's costs and an additional loan should not be required unless market demand increases.

A. SUGAR SYRUP PRODUCTION:  
GENERAL CHARACTERISTICS

PRODUCT DESCRIPTION: Pressed sugar cane that has been boiled to form syrup

MANAGEMENT REQUIREMENTS: Ability to supervise labor, maintain equipment and product quality, secure raw materials input and market output

PRODUCTION CAPACITY: 750 drums per year

MARKET DEMAND:

Present Demand: Far greater than supply  
Future Demand: Expected to remain high

INVESTMENT REQUIREMENTS: High initial investment

RAW MATERIALS: Seasonal shortages of sugar cane; 4-month milling season

EQUIPMENT MAINTENANCE: Low motor maintenance costs during first few years; after 3 years of operation repairs are frequent (1-2 per year) and expensive; equipment must be carefully maintained throughout life

LOAN POSSIBILITIES:

<u>Potential Loan Purpose</u>	Working capital
<u>Specific Loan Purpose</u>	Purchase sugar cane and/or repair equipment
<u>Potential Loan Range</u>	Ø1,000-Ø3,000
<u>Potential Loan Repayment Period</u>	6 months
<u>Potential collateral Requirement</u>	Equipment

MODEL BUDGET[1]	
Equipment Purchase motor and/or mill	Ø7,000-Ø25,000
	1.5-3.5 years
Lien on equipment	

SPECIAL RISKS: High demand for sugar syrup makes this a relatively low-risk loan; sugar cane shortages and mechanical difficulties are the main threats to timely loan reimbursement

MODEL BUDGET DATA SOURCE: Sugar syrup producers in Cap-Haitien and Hinche and IDA files

[1] The model budget falls within this category. See following pages for specific assumptions.

B. SUGAR SYRUP PRODUCTION:  
CALCULATION OF LOAN AMOUNT

	MODEL BUDGET ASSUMPTIONS (gourdes)	ACTUAL CASE (gourdes)
<u>Investment Costs</u>		
Diesel motor (Yanmar)	Ø19,750	_____
Sugar mill and accessories	8,500	_____
Land	2,000	_____
Workshop	5,000	_____
Subtotal	Ø35,250	_____
<u>Working Capital for 1 Month (Season=January-April)</u>		
Purchase 162 tons sugar cane @ Ø10/ton	1,620	_____
Cane-cutting costs	500	_____
Transport	500	_____
Labor (sugar cane presser)	250	_____
1 mill operator	125	_____
Diesel fuel	455	_____
Miscellaneous	250	_____
Salary to owner	500	_____
Subtotal	4,200	_____
Total	39,450	_____
<u>Contribution from Loan Applicant</u>		
Land	2,000	_____
Workshop	5,000	_____
Salary to owner	500	_____
30% of remaining costs (Ø31,950)	9,585	_____
Total	17,085	_____
<u>Remaining Costs</u>	22,365	_____
<u>BCA Loan Amount</u> Ø22,365/.98	23,000	_____
<u>Loan Purpose and Terms</u>		
Loan Purpose:	To purchase diesel motor and sugar cane mill, and provide working capital to purchase sugar cane and pay operating expenses during first month of operation (establish new enterprise)	_____ _____ _____ _____ _____ _____

Loan Repayment  
Period:

2.5 years (one payment each  
year at end of milling season,  
first payment due after 6  
months)

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Loan Interest  
and Fees:

2% commission discounted from  
loan; annual payment required  
at 16.5% effective annual  
interest rate; 2% of principal  
paid as a savings guarantee  
with the last loan installment  
payment

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C. SUGAR SYRUP PRODUCTION:  
BREAK-EVEN ANALYSIS

<u>Annual</u>	<u>Fixed</u>	<u>Cost</u>
ITEM	ASSUMPTIONS	AMOUNT
Depreciation	1 diesel motor @ Ø19,750 with 10-year life	1,975
	Sugar cane mill at Ø8,500 with 15-year life	567
	Workshop	250
Labor		
Mill Operator unskilled		1.25 250
Lubricant and grease		468
Miscellaneous		250
Salary to owner		6,000
Interest and Fees on Loan		
	Fees                   920/2.5	368
	Interest	<u>2,397</u>
Total Annual Fixed Costs		12,650
<u>Variable Costs per Drum of Sugar Syrup</u>		
ITEM	ASSUMPTIONS	AMOUNT (gourdes)
Diesel fuel	3.5 gallons/drum @ Ø8.5/gallon	30
Sugar cane	2.5 tons/drum @ Ø10/ton	<u>25</u>
Total Variable Costs		55

Break-even Point for Sugar Syrup Production

	MODEL BUDGET ASSUMPTION	ACTUAL CASE
Annual fixed costs (F)	12,650	_____
Variable costs per ton of sugar (V)	55	_____
Price (P)	ø150/drum	_____
Quantity of sugar needed to be milled to break-even (Q)	$150Q = 12,650 + 55Q$ $Q = 133$ drums	_____
Expected quantity of sugar syrup production (E)	250 drums	_____
$E/Q$	1.9	_____
Production Capacity (C)	750 drums	_____
$Q/C$	18%	_____

Comments

The mill is expected to sell twice as many drums of sugar cane as necessary to break-even. Lack of sugar cane during two-thirds of the year prevents the mill from operating at full capacity.

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D. SUGAR SYRUP PRODUCTION  
PRO-FORMA CASH FLOW WITH BCA LOAN FOR 2.5 YERAS  
(in gourdes)

	YEAR 1		YEAR 2		YEAR 3
	December-May	June-November	December-May	June-November	November-December
<u>Opening Balance</u> (1)	0	16,683	13,683	23,818	20,818
<u>Cash Inflow</u>					
Investment(2)	6,000	0	0	0	0
BCA loan	23,000	0	0	0	0
Sales revenue(3)	<u>37,500</u>	<u>0</u>	<u>37,500</u>	<u>0</u>	<u>37,500</u>
Total	66,500	16,683	51,183	23,818	53,318
<u>Cash Outflow</u>					
Equipment	28,250	0	0	0	0
Sugar cane	6,450	0	6,450	0	6,450
Transport	2,000	0	2,000	0	2,000
Unskilled labor	1,000	0	1,000	0	1,000
Operator	500	0	500	0	500
Diesel	1,819	0	1,819	0	1,819
Taxes and miscellaneous	1,000	0	1,000	0	1,000
Salary to owner	<u>3,000</u>	<u>3,000</u>	<u>3,000</u>	<u>3,000</u>	<u>3,000</u>
Total	44,019	3,000	15,769	3,000	15,769
<u>Cash Inflow-Cash Outflow</u>	22,481	13,683	35,414	20,818	42,549
BCA fees and loan repayment	<u>5,798</u>	<u>0</u>	<u>11,596</u>	<u>0</u>	<u>12,956</u>
<u>Closing Balance</u>	16,683	13,683	23,818	20,818	30,493

Notes:

- [1] Assume land and workshop in place and motor purchased in December. Sugar cane processing occurs January-April.
- [2] Assume a minimum up-front investment of G6,000 to contribute to the purchase of equipment and sugar cane.
- [3] Assume 250 drums of syrup sold @ G150/drum.
- [4] Assume 645 tons of sugar cane purchased @ G10/ton.

A. MEDIUM-SCALE CLAIRIN PRODUCTION:  
GENERAL CHARACTERISTICS

PRODUCT DESCRIPTION: Alcoholic beverage distilled from sugar cane syrup

MANAGEMENT REQUIREMENTS: Ability to supervise labor and production process, maintain product quality, purchase raw materials, store and market output

PRODUCTION CAPACITY: 25 barrels high quality clairin per week

MARKET DEMAND:

Present Demand: Greater than current supply

Future Demand: Expected to remain high

INVESTMENT REQUIREMENTS: High initial investment (land, building, and equipment = \$115,000)

RAW MATERIALS: Seasonal shortages of sugar cane syrup

EQUIPMENT MAINTENANCE: Equipment and building repair is not frequent

LOAN POSSIBILITIES:

Potential Loan Purpose  
Specific Loan Purpose

Potential Loan Range  
Potential Loan Repayment Period  
Potential Collateral Requirement  
Comments:

MODEL BUDGET[1]	
Working capital	Equipment purchase
Purchase sugar syrup when price is low and supply plentiful to expand production	Purchase distillery and barrels
Ø 25,000 - Ø100,000	Ø75,000 - Ø150,000
1 year	1-2 years
Equipment	Equipment
Strong market demand ensures that loan to purchase and store sugar cane syrup will yield a large return	Investment requirement may exceed BCA loan ceiling

SPECIAL RISKS: Seasonal shortages of sugar syrup

MODEL BUDGET DATA SOURCE: Interview with clairin producer in St. Marc, (Gonaive Region)

[1] The model budget falls within this category. See following pages for specific assumptions.

B. MEDIUM-SCALE CLAIRIN PRODUCTION:  
CALCULATION OF LOAN AMOUNT

	MODEL BUDGET ASSUMPTIONS (gourdes)	ACTUAL CASE (gourdes)
<u>Investment Costs</u>		
Land value	₺ 30,000	_____
Building and equip- ment value	30,000	_____
Cost of barrels	<u>54,000</u>	_____
Subtotal	₺114,000	_____
<u>Working Capital for 3 Months[1]</u>		
Drums	3,600	_____
Labor	6,480	_____
Wood	3,600	_____
Syrup	90,000	_____
Minimum salary to owner	4,500	_____
Miscellaneous	<u>1,000</u>	_____
Subtotal	109,180	_____
Total	223,180	_____
<u>Contribution from Loan Applicant</u>		
Initial investment costs	114,000	_____
Minimum salary to owner	4,500	_____
Drums, labor, wood, miscel- laneous	14,680	_____
30% of sugar syrup costs	<u>27,000</u>	_____
Total	160,180	_____
<u>Remaining Costs</u>	63,000	_____
<u>BCA Loan Amount</u>		_____
₺63,000/.83	76,000	_____
<u>Loan Purpose and Terms</u>		
Loan Purpose:	Working capital to purchase raw materials	_____
Loan Repayment Period:	One payment made at end of one year	_____
Loan Interest and Fees:	15% interest and 2% commission discounted from initial loan	_____

Comments

Ø63,080 will allow the entrepreneur to purchase 252 drums of sugar syrup when the price is Ø250 (during November-May). The price rises to Ø300/drum from June-October. the enterprise can then operate closer to its production capacity.

[1] Using same assumptions as those elaborated in the break-even analysis.

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C. MEDIUM-SCALE CLAIRIN PRODUCTION:  
BREAK-EVEN ANALYSIS

Annual Fixed Costs

ITEM	ASSUMPTIONS	AMOUNT (gourdes)
Equipment purchases Drum (Ø60 x 20)12	Use 20 drums/month @ Ø60 each	14,400
Depreciation Barrels (Ø150)35/4	Purchase 35 barrels every 4 years; each costs Ø60	1,313
(Ø200) (6)/7	Purchase 6 barrels every 7 years; each costs Ø200	171
(Ø1,000x14)/10	Purchase 14 large barrels every 10 years; each costs Ø1,000	1,400
(Ø3,000)2/10	Purchase 2 large barrels every 10 years; each costs Ø300	600
(Ø2,500)3/10	Purchase 3 large barrels every 10 years; each costs Ø2,500	750
(Ø20,000)/4	Purchase one large cooking pot every 4 years; one costs Ø20,000	5,000
Building and boiler Building	Assume life of 30 yrs; cost Ø30,000	1,000
Repairs (Ø150/2)	Spend Ø150 to repair building every 2 years	75
Taxes	Pays Ø125 each month and Ø1,500 once a year	3,000
Storage costs		0
Minimum salary	Ø500 per month for 3 equal partners	18,000
BCA loan interest and debt repayment		<u>76,000</u>
Total annual fixed costs		121,709

Variable Costs per Drum of Clairin Production

ITEM	ASSUMPTIONS	AMOUNT (gourdes)
Labor	2 heatings are required @ 9 per heating labor costs (3x3 persons)	18
Wood	10/drum	10
Syrup	250/drum (price after sugar cane harvest)	250
Total variable costs		278

Break-even Point (BEP) for Medium-Scale Clairin Production

	MODEL BUDGET ASSUMPTION	ACTUAL CASE
Annual fixed costs (F)	121,709	_____
Variable costs (V)	278/drum	_____
Price of clairin (P)	600/barrel (1 barrel = 1 drum)	_____
Quantity of clairin production required for BEP (Q)	$600Q = 121,709 + 278Q$ $Q=377.97$	_____
Expected quantity of clairin sales (E)	1,300 drums	_____
$E/Q$	3.4	_____
Production capacity (C)	1,300 drums	_____
$Q/C$	29%	_____

Comments

The enterprise must sell 334.5 barrels of clairin per year to cover its annual fixed and variable costs. The enterprise currently sells 890 barrels per year. With the BCA loan, the enterprise will be expected to sell 1,300 drums, or 100% of its production capacity.

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D. MEDIUM-SCALE CLAIRIN PRODUCTION  
 PRO-FORMA CASH FLOW WITH BCA LOAN FOR ONE YEAR  
 (in gourdes)

	I Good Season: November-May	II Bad Season: June-October
<u>Opening Balance</u>	0	80,785
<u>Cash Inflow</u>		
Investments	27,000	0
BCA loan	76,000	0
Sales[1]	<u>504,000</u>	<u>276,000</u>
Total	607,000	356,785
<u>Cash Outflow</u>		
Purchase of syrup[2]	460,000	0
Purchase of equip- ment[3]	15,900	8,000
Purchase of wood[4]	8,400	4,600
Labor	15,120	8,280
Reparations	1,000	0
Salaries	10,500	7,500
Taxes[5]	2,375	625
Other costs	<u>0</u>	<u>1,000</u>
Total	513,295	30,005
<u>Cash Inflow-Cash Outflow</u>	93,705	326,780
BCA fees and loan repayment	<u>12,920</u>	<u>76,000</u>
<u>Closing Balance</u>	80,785	250,780

## Notes:

- [1] Assume same level of sales with loan as without loan during the good season: 120 barrels/month @ ¤600 per barrel (120x7=840 barrels during good season).
- [2] Currently purchases 140 drums of syrup per month during the good season @ ¤250/drum or ¤245,000. Assume that 252 drums of additional syrup (¤63,000) will be purchased with the BCA loan and ¤152,000 will be purchased from profits made on sugar cane sales.

- [3] Assume that during 7 months of operations, the enterprise purchases:

140 drums @ Ø60	8,400
1 large cooking pot	5,000
Barrels	<u>2,500</u>

Total	15,900
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- Assume that during 5 months of operations during the bad season, the enterprise purchases:

100 drums @ Ø60	6,000
Barrels	<u>2,000</u>

Total	8,000
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- [4] Assume that 460 barrels of clairin will be produced during the entire bad season (June-October) @ Ø10/drum for wood and @ Ø18/drum for labor.
- [5] The enterprise currently pays Ø125 each month and Ø1,500 once a year for taxes. Assume tax payment is made during the good season.



B. SALT PRODUCTION:  
CALCULATION OF LOAN AMOUNT

	MODEL BUDGET ASSUMPTIONS (gourdes)	ACTUAL CASE (gourdes)
<u>Investment Costs</u>		
Land	10,000	_____
Construction of 5 basins @ Ø20,000 each	<u>100,000</u>	_____
Subtotal	110,000	_____
<u>Working Capital for 5 Basins for 6 Months</u>		
Basin repair and cleaning every 6 months @ Ø1,500 each cleaning	2,000	_____
Minimum salary to owner Ø500/yr	<u>6,000</u>	_____
Subtotal	8,000	_____
Total	118,000	_____
<u>Contribution from Loan Applicant</u>		
Land	10,000	_____
Minimum salary to owner	6,000	_____
Construction of 5 basins (already established)	<u>100,000</u>	_____
Total	116,000	_____
<u>Remaining Costs</u>	2,000	_____
<u>BCA Loan Amount</u> Ø2,000/.905	2,210	_____
<u>Loan Purpose and Terms</u>		
Loan Purpose:	Repair and clean 5 salt basins (maintain production)	_____
Loan Repayment Period:	6 months (2 months to repair basins followed by 4 months of salt harvests)	_____
Loan Interest and Fees:	7.5% interest and 2% commis- sion discounted; 2% of principal charged for savings guarantee at time of loan repayment	_____

C. SALT PRODUCTION:  
BREAK-EVEN CALCULATION

Annual Fixed Costs

ITEM	ASSUMPTIONS	AMOUNT (gourdes)
Cleaning	Ø1,500 per cleaning every six months	3,000
Minimum salary to owner	Ø500 per month	6,000
BCA loan interest	11.5% of Ø2,210	<u>254</u>
Total fixed costs	9,254	

Variable Costs

None

Break-even Point for Salt Production

	MODEL BUDGET ASSUMPTIONS	ACTUAL CASE
Annual fixed costs (F)	Ø9,254	_____
Variable costs (V)	0	_____
Sales price of salt (P)	Ø10/basket	_____
Quantity of sales required for break-even (Q)	10Q = 9,254 Q=9,254	_____
Expected quantity of Salt Sales from 5 basins (E) (200 baskets per basin)	1,000	_____
$E/Q$	1.1	_____
Production capacity (C) (300 baskets per basin)	1,000	_____
$Q/C$	93%	_____

Comments

The expected quantity of salt sales is only slightly higher than that required for break-even. If this enterprise is the sole source of the owner's income, then this loan should be considered a high risk to the BCA.

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D. SALT PRODUCTION:  
PRO-FORMA CASH FLOW WITH THE BCA LOAN FOR ONE YEAR  
(in gourdes)

	I October-November	II December-March	III April-September
<u>Opening Balance</u>		0	5,746
<u>Cash Inflow</u>			
Investment[1]	1,000	0	0
BCA loan[2]	2,210	0	0
Sales revenue[3]	<u>0</u>	<u>10,000</u>	<u>0</u>
Total	3,210	10,000	5,746
<u>Cash Outflow</u>			
Repair and cleaning expenses[4]	2,000	0	1,500
Minimum salary to owner[5]	<u>1,000</u>	<u>2,000</u>	<u>3,000</u>
Total	3,000	2,000	4,500
<u>Cash Inflow-Cash Outflow</u>	210	8,000	1,246
BCA fees and loan repayment[6]	<u>210</u>	<u>2,254</u>	<u>0</u>
<u>Closing Balance[7]</u>	0	5,746	1,246

Notes:

- [1] Assume owner contributes his/her salary during construction period derived from the previous season's earnings.
- [2] Assume the BCA gives a  $\text{g}2,210$  loan immediately before the dry season begins to assist the repair and cleaning of basins.
- [3] Salt production and sales only occur during the 4 month dry season in Gonaives.
- [4] Repair and cleaning normally costs  $\text{g}1,500$  every 6 months. The first cleaning and repair is expected to be more extensive than usual and therefore costs  $\text{g}2,000$ .
- [5] Assume  $\text{g}500$  per month.
- [6] 9.5% is discounted from the  $\text{g}2,210$  loan (7.5% interest and 2% commission). A 2% forced savings fee is added to the repayment of loan principal after 6 months. Loan repayment should be made at the end of the owner's sales period in March.
- [7] The closing balance at the end of the one year period ( $\text{g}1,246$ ) covers the owner's salary for the 2 months prior to the resumption of salt production. However, if sales only begin in late December, the owner would have to secure funds ( $\text{g}254$ ) to cover his/her salary needs during December, (e.g.,  $\text{g}500 - 246 = \text{g}254$ ).

A. FISHNET PRODUCTION:  
GENERAL CHARACTERISTICS

PRODUCT DESCRIPTION: Handmade fishnets (200 meters long)

MANAGEMENT REQUIREMENTS: Ability to supervise extremely labor intensive production process

PRODUCTION CAPACITY: 12 persons required to produce one net per month; given management skills and lack of workspace, it is probably not feasible to produce more than three nets per month

MARKET DEMAND:

Present Demand: High - Japanese nets are the major competitor

Future Demand: Depends upon the price and quality of imported nets

INVESTMENT REQUIREMENTS: Low initial investment

RAW MATERIALS: In abundant supply; imported thread can be purchased locally

EQUIPMENT MAINTENANCE: None required

LOAN POSSIBILITIES:

Potential Loan Purpose

Specific Loan Purpose

Potential Loan Range

Potential Loan Repayment Period

Potential Collateral Requirement

Comments

MODEL BUDGET [1]	
Working capital	
Purchase thread, material, and labor	Ø3,000 - Ø9,000
	1-2 years
	Personal assets
Examine the feasibility of expanding production without constructing a workshop and the market for domestically produced nets prior to loan approval.	

SPECIAL RISKS: Product quality may decline if production is increased

MODEL BUDGET DATA SOURCE: Interview with fishnet producer in Les Cayes

[1] The model budget falls within this category. See following pages for specific assumptions.

B. FISHNET PRODUCTION:  
CALCULATION OF LOAN AMOUNT

	MODEL BUDGET ASSUMPTION (gourdes)	ACTUAL CASE (gourdes)
<u>Investment Costs</u>		
No equipment necessary	Ø 0	_____
No workshop costs (production occurs on beach)	0	_____
No storage costs (materials stored in owner's home)	0	_____
Subtotal	Ø 0	_____
<u>Working Capital for 2 Months</u>		
1 net produced each month @ Ø3,385 for new materials and labor	6,770	_____
Minimum salary to owner Ø500/month	<u>1,000</u>	_____
Subtotal	7,770	_____
Total	7,770	_____
<u>Contribution from Loan Applicant</u>		
Salary to owner	1,000	_____
39% of remaining costs (Ø6,770)	<u>2,620</u>	_____
Total	3,620	_____
<u>Remaining Costs</u>	4,150	_____
<u>BCA Loan Amount</u> 4,150/.83	5,000 [1]	_____
<u>Loan Purpose and Terms</u>		
Loan Purpose:	Purchase raw materials and labor necessary for fishnet production	_____ _____ _____
Loan Repayment Period:	One year	_____ _____
Loan Interest and Fees:	15% interest and 2% commis- sion discounted; 2% principal paid at end of loan period for forced savings.	_____ _____ _____ _____ _____
[1]	The same loan amount could be given if the owner wanted to expand production from zero to one nets per month, one to two nets per month, or from two to three nets per month.	_____ _____ _____ _____ _____

C. FISHNET PRODUCTION:  
BREAK-EVEN ANALYSIS

Annual Fixed Costs

ITEM	ASSUMPTION	AMOUNT (gourdes)
Minimum salary to owner	Ø500/month	6,000
Taxes	0	0
Interest and fees on BCA loan	Ø5,000 discounted by 17% + 2% savings guarantee	<u>950</u>
Total annual fixed costs		6,950

Variable Costs per 200 Meter Net

ITEM	UNIT COST	AMOUNT USED FOR ONE NET	TOTAL COST FOR ONE NET (gourdes)
Thread	Ø20/roll	40 rolls	800
Cord	Ø35/roll	6 rolls	210
Rubber floats	Ø1/each	250 floats	250
Sinker	Ø3/lb	300 lbs	900
Labor Costs			
Thread work			1,000
Cord work			175
Sinker work			<u>50</u>
Total variable costs			3,385

Break-even Point for Fishnet Production

	MODEL BUDGET ASSUMPTION	ACTUAL CASE
Annual fixed costs (F)	6,950	_____
Variable costs (V)	Ø3,385	_____
Price of one net (P)	Ø4,000	_____
Quantity of nets required to break even (Q)	$4,000Q = 6,950 + 3,385Q$ $Q=11.3$	_____
Expected quantity of net sales (E)	12	_____
$E/Q$	1.1	_____
Production capacity (C)	36	_____
$Q/C$	31%	_____

Comments

The net producer must sell at least 12 nets in order to break even; the producer is expected to sell that number of nets.

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D. FISHNET PRODUCTION  
 PRO-FORMA CASH FLOW WITH BCA LOAN FOR ONE YEAR  
 (in gourdes)

	I January-June	II July-December
<u>Opening Balance</u>	0	4,840
<u>Cash Inflow</u>		
Investment[1]	0	0
BCA loan[2]	5,000	0
Sales revenue[3]	<u>24,000</u>	<u>24,000</u>
Total	29,000	28,840
<u>Cash Outflow</u>		
Raw materials and labor costs[4]	20,310	20,310
Minimum salary to owner[5]	<u>3,000</u>	<u>3,000</u>
Total	23,310	23,310
<u>Cash Inflow-Cash Outflow</u>	5,690	5,530
BCA fees and loan repayment	<u>850</u>	<u>5,100</u>
<u>Closing Balance[6]</u>	4,840	430

## Notes:

- [1] Assume the owner actually does not invest any of his/her own funds.
- [2] Assume a Ø5,000 one-year loan.
- [3] Assume 1 net sold each month @ Ø4,000.
- [4] 1 net produced each month @ Ø3,385.
- [5] Ø500/month minimum salary.
- [6] If the owner does not contribute any funds to this venture, then he/she will have few funds remaining (Ø430) to purchase raw materials to produce nets for the next year. Another BCA loan would be required to start production for the next year. If the loan were used to increase production from 1 to 2 nets per month, then sufficient profits would be generated to provide working capital for the next year.

A. MANUALLY PRODUCED PLOW MANUFACTURING:  
GENERAL CHARACTERISTICS

PRODUCT DESCRIPTION: Iron agricultural plows

MANAGEMENT REQUIREMENTS: Must be technically competent to manufacture plows and maintain quality standards; must be able to train and supervise labor, purchase iron, and aggressively market the product to government agencies and individuals

PRODUCTION CAPACITY: 3 plows every 2 days (9 per week or approximately 470 per year)

MARKET DEMAND:

Present demand: Dependent upon government-financed agricultural development projects; current demand is far less than production capacity

Future demand: Dependent upon agricultural development strategies and their implementation

INVESTMENT REQUIREMENTS: Relatively low initial investment of about Ø6,500

RAW MATERIALS: Dependent upon different grades of imported iron that may be scarce at times

EQUIPMENT MAINTENANCE: No problem

LOAN POSSIBILITIES:

<u>Potential Loan Purpose</u>	Working capital
<u>Specific Purpose</u>	Purchase 2-3 months' supply of iron
<u>Potential Loan Range</u>	Ø10,000 - Ø15,000
<u>Potential Loan Repayment Period</u>	1-3 years
<u>Potential Collateral Requirements</u>	Equipment

<p>MODEL BUDGET[1]</p> <p>Equipment purchase</p> <p>Purchase basic equipment to manufacture plows</p> <p>Ø10,000 - Ø20,000</p> <p>3-7 years</p> <p>Lien on equipment and building</p>
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SPECIAL RISKS: If a loan is given to purchase equipment to establish a plow-making enterprise, then working capital should be provided as part of the loan. Construction and all major equipment purchases made by the entrepreneurs should occur during the low demand period of April-December. The BCA loan should be disbursed in October, so that the enterprise can be fully operational by January when demand is heaviest.

[1] The model budget falls within this category. See following pages for specific assumptions.

B. PLOW MANUFACTURING:  
CALCULATION OF LOAN AMOUNT

	MODEL BUDGET ASSUMPTIONS (gourdes)	ACTUAL CASE (gourdes)
<u>Investment Costs</u>		
Workshop	Ø5,000	_____
Land	5,000	_____
1 forge	1,000	_____
1 welder	3,500	_____
Wire thread	2,500	_____
1 transformer	1,000	_____
1 drill	1,500	_____
3 sledge-hammers @ Ø90 each	270	_____
3 hammers @ Ø32.50 each	98	_____
1 vice	500	_____
2 tongs @ Ø30 each	60	_____
1 metal saw	30	_____
Other tools	150	_____
Subtotal	Ø20,608	_____
<u>Working Capital for 1 Month</u> (high season-assume 17 plows manufactured and sold)		
Iron and coal costs (Ø302 x 17)	5,134	_____
Labor (Ø50 x 17)	850	_____
Salary to owner	500	_____
Subtotal	6,484	_____
Total	27,092	_____
<u>Contribution from Loan Applicant</u>		
Workshop	5,000	_____
Land	5,000	_____
1 week iron and steel	1,364	_____
Wire	1,000	_____
1 Transformer	1,000	_____
3 sledge hammers	270	_____
3 hammers	98	_____
1 vise	500	_____
2 tongs	60	_____
1 metal saw	30	_____
Other tools	150	_____
Labor	850	_____
Salary to owner	500	_____
Total	15,822	_____

Remaining costs

Forge	1,000
Welder	3,500
Wire	1,500
Drill	1,500
Iron and coal	<u>3,770</u>

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Total	11,270
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BCA Loan Amount

Ø11,352/.98	11,500
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Loan Purposes and Terms

Loan Purpose: Purchase basic equipment to  
 manufacture plows (establish  
 new enterprise)

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Loan Repayment  
 Period: 5 years

Loan Interest  
 and Fees: 2% commission discounted from  
 loan; semiannual payments  
 required at 16.5% effective  
 annual interest rate and 2%  
 savings guarantee required to  
 be paid with last loan  
 installment

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Comments

The workshop, tools, and salary to owner  
 should be contributed by the loan applicant;  
 the loan should cover the cost of heavy  
 equipment, wire, and some raw materials to  
 enable production to begin

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C. PLOW MANUFACTURING:  
BREAK-EVEN ANALYSISAnnual Fixed Costs

ITEM	ASSUMPTION	ANNUAL COST (gourdes)
Depreciation		
1 forge	Ø1,000 with 40-year life	25.00
3 hammers	Ø32.50 with 5-year life	19.50
3 sledge-hammers	Ø90 with 5-year life	54.00
1 welder	Ø3,500 with 10-year life	350.00
1 vice	Ø500 with 10-year life	50.00
1 transformer	Ø1,000 with 10-year life	10.00
2 tongs	Ø30 with 1-year life	60.00
1 metal saw	Ø30 with 3-year life	10.00
1 drill	Ø1,500 with 10-year life	150.00
Other tools	Ø150 with 2-year life	75.00
Workshop	Ø5,000 with 40-year life	<u>125.00</u>
Subtotal		928.50
Salary to owner	Minimum of Ø500/month	6,000.00
Annual loan interest		1,253.00
Cost of savings and commission	460/5	92.00
Tax contribution	Annual fee	<u>80.00</u>
Subtotal		7,425.00
Total annual fixed costs		83,353.50

Variable Costs per Plow

ITEM	ASSUMPTIONS	AMOUNT (gourdes)
Iron		
3/8-1 1/2		50
1/4-1 1/4		40
1/4-8-4		35
5/16		15
1/2		10
Pla		20
Bolts		50
Soudi		50
Pinti		12
Charcoal		20
Labor		<u>150</u>
Total Variable Costs		452

Break-even Point for Plow Manufacturer

	MODEL BUDGET ASSUMPTION	ACTUAL CASE
Annual fixed costs (F)	ø7,478.50	_____
Variable costs per plow (V)	ø452	_____
Price of one plow (P)	ø550	_____
Number of plow sales needed to break even (Q)	$550Q = 8,353.5 + 452Q$ $Q = 85$	_____
Expected annual number of plows sold (E)	86	_____
$E/Q$	1.1	_____
Production Capacity (C)	470	_____
$Q/C$	16%	_____

Comments

The enterprise must sell 85 plows to cover its fixed and variable costs, it is expected to sell 86 plows each year. However, since future demand for plows is uncertain, this should be considered a high risk loan.

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D. PLOW MANUFACTURING:  
PRO-FORMA CASH FLOW WITH BCA LOAN FOR FIVE YEARS  
(in gourdes)

	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5	
	Oct-Mar	Apr-Dec								
Opening Balance	0	12,737	10,216	11,683	9,012	10,479	7,968	9,395	6,184	7,651
<b>Cash Inflow</b>										
Owner investment[1]	0	0	0	0	0	0	0	0	0	0
BCA loan	11,500	0	0	0	0	0	0	0	0	0
Sales[2]	34,224	13,200	34,224	13,200	34,224	13,200	34,224	13,200	34,224	13,200
Total	45,724	25,937	44,440	24,883	43,236	23,679	42,152	22,595	40,408	20,851
<b>Cash Outflow</b>										
Raw materials and labor[3]	28,024	10,848	28,024	10,848	28,024	10,848	28,024	10,848	28,024	10,848
Equipment[4]	0	60	0	210	0	90	0	750	0	134
Minimum salary to owner	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Taxes	0	80	0	80	0	80	0	80	0	80
Total	31,024	13,988	31,024	14,138	31,024	14,018	31,024	14,678	31,024	14,062
<b>Cash Inflow-Cash Outflow</b>	14,700	11,949	13,416	10,745	12,212	9,661	11,128	7,917	9,384	6,789
BCA fees and loan repayment[5]	1,963	1,733	1,733	1,733	1,733	1,733	1,733	1,733	1,733	1,963
Closing Balance[6]	12,737	10,216	11,683	9,012	10,479	7,968	9,395	6,184	7,651	4,826

Notes:

- [1] Assume that the entrepreneur has purchased all taxed assets required for plow production (land, workshop, coal and iron, wire thread, transformer, sledge hammers, hammers, vise, tongs, metal saw) prior to loan disbursement.
- [2] Assume 50 plows are sold between January and March and 4 plows per month are sold between April-December:  
 October-December 12 plows  
 January-March 50 plows  
 Total no. of plows 62 plows @ \$550 each = \$34,225  
 April-December 24 plows @ \$550 each = \$13,200
- [3] Each plow costs \$452 to make.
- [4] Purchases are as follows (in gourdes):
- |                  | End of year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|------------------|---------------|--------|--------|--------|--------|
| 2 pliers         | 60.00         | 60.00  | 60.00  | 60.00  | 60.00  |
| 3 hammers        |               |        |        |        | 19.50  |
| 3 sledge hammers |               |        |        |        | 54.00  |
| 1 metal saw      |               |        | 30.00  |        |        |
| Other tools      |               | 150.00 |        | 690.00 |        |
| Total            | 60.00         | 210.00 | 90.00  | 750.00 | 133.50 |
- [5] Loan expense during the first six months is the 2% fee discounted from the principal (\$230) plus the semi-annual loan payment made at the end of 6 months (\$1,733).
- [6] The closing balance is sufficient to cover emergency cash outflows during the 5-year period. The sum remaining after the last loan repayment is made can cover the cost of one month's raw materials and labor during the good season.

A. CEMENT BLOCK PRODUCTION:  
GENERAL CHARACTERISTICS

PRODUCT DESCRIPTION: Cement blocks used for construction purposes

MANAGEMENT REQUIREMENTS: Ability to secure contracts with public and private sector construction projects; estimate construction trends and adjust production accordingly

PRODUCTION CAPACITY: 320 blocks/day (100,000/year); production easily expanded or contracted to meet demand

MARKET DEMAND:

Present demand: Unstable

Future demand: Dependent upon construction

INVESTMENT REQUIREMENTS: Low initial investment; no workshop usually required

RAW MATERIALS: Sand price varies with season (price drops during dry season); cement price remains constant

EQUIPMENT MAINTENANCE: No equipment maintenance

LOAN POSSIBILITIES:

	MODEL BUDGET[1]	
<u>Potential Loan Purpose</u>	Working capital	Equipment purchase
<u>Specific Loan Purpose</u>	Purchase sand when price is low	Purchase drums, pails and block molds
<u>Potential Loan Range</u>	Ø2,000-Ø3,000	Ø1,500-Ø3,000
<u>Potential Loan Repayment Period</u>	6 months-1 year	1-2 years
<u>Potential Collateral Requirement</u>	Personal assets	Personal assets and equipment

SPECIAL RISKS: Market demand highly unstable

MODEL BUDGET DATA SOURCE: Interview with block producer in Hinche

[1] The model budget falls within this category. See following pages for specific assumptions.

B. CEMENT BLOCK PRODUCTION:  
CALCULATION OF LOAN AMOUNT

	MODEL BUDGET ASSUMPTIONS (gourdes)	ACTUAL CASE (gourdes)
<u>Investment Costs</u>		
1 bourrette	¢ 400	_____
4 pails @ ¢25 each	100	_____
3 drums @ ¢40 each	120	_____
2 20 boxes @ ¢300 each	600	_____
2 15 boxes @ ¢250 each	500	_____
2 10 boxes @ ¢200 each	400	_____
Subtotal	¢2,120	_____
<u>Working Capital for Four Months</u> (assume sales of 21,000 blocks within 4 months)		
3,150 bags of sand @ ¢1.00/bag	3,150	_____
1,050 sacks of cement @ ¢25/sack	26,250	_____
210 drums of water @ ¢2.40/drum	504	_____
315 person days of labor @ ¢22/day	6,930	_____
Subtotal	¢36,834	_____
Total	¢38,957	_____
<u>Contribution from Loan Applicant</u>		
Initial investment	2,120	_____
Normal purchase of sand during dry season (1,075 bags)	1,075	_____
1,050 sacks of cement	26,250	_____
210 drums of water	504	_____
315 person-days of labor	6,930	_____
Total	¢36,879	_____
<u>Remaining Costs</u>	2,075	_____
Loan Required to Purchase		_____
<u>BCA Loan Amount</u>		_____
¢2,075/.83	2,500	_____
<u>Loan Purpose and Terms</u>		
Loan Purpose:	Purchase sand	_____
Loan Repayment		_____
Period:	1 year	_____
Loan Interest and Fees:	15% interest and commission discounted from the loan; 2% savings guarantee and loan principal repaid at the end of one year	_____ _____ _____ _____

C. CEMENT BLOCK PRODUCTION:  
BREAK-EVEN ANALYSISAnnual Fixed Costs

ITEM	ASSUMPTIONS	AMOUNT (gourdes)
Depreciation		
Pails	4 pails @ ₡25 each with 15-year life	6.70
Drums	3 drums @ ₡40 each with 8-year life	15.00
Wheel Barrow	1 @ ₡400 with 8-year life	50.00
Block Molds	2 20" molds @ ₡300 each 2 15" molds @ ₡250 each 2 10" molds @ ₡200 each, all with 15-year life	100.00
Salary to owner	₡500/month	6,000.00
BCA loan interest and fee	17% discounted and 2% forced savings on ₡2,500 loan	<u>475.00</u>
Total annual fixed costs		6,646.70

Variable Costs per 100 Blocks Produced

Sand	15 bags of sand required (assume all purchased dur- ing dry season at ₡1 per bag)	15.00
Cement	4 sacks of cement @ ₡25 per sack	100.00
Labor	1 person-day @ ₡20 per day	20.00
Water	1 drum @ ₡2.40	<u>2.40</u>
Total variable costs per 100 blocks		137.40



D. CEMENT BLOCK PRODUCTION:  
PRO-FORMA CASH FLOW WITH BCA LOAN FOR ONE YEAR  
(in gourdes)

	I January-June	II July-December
<u>Opening Balance</u>	0	0
<u>Cash Inflow</u>		
Investment[1]	0	0
BCA loan[2]	2,500	0
Sales revenue[3]	<u>45,000</u>	<u>37,500</u>
Total	47,500	37,500
<u>Cash Outflow</u>		
Sand[4]	7,305	945
Cement[5]	30,000	25,000
Labor[6]	6,000	5,000
Water[7]	720	600
Salary to owner[8]	<u>3,000</u>	<u>3,000</u>
Total	47,025	34,545
<u>Cash Inflow-Cash Outflow</u>	475	2,955
BCA fees and loan repayment	<u>475</u>	<u>2,550</u>
<u>Closing Balance[9]</u>	0	405

## Notes:

- [1] Assume the owner does not reinvest any funds into the enterprise from the previous period.
- [2] A  $\text{Ø}2,500$  one-year loan was received, but discounted at 17%.
- [3] An average of 5,000 blocks per month are assumed to be sold during January-June @  $\text{Ø}1.50$  per block. About 25,000 blocks (4,167/month) are sold between July-December @  $\text{Ø}1.50$ /block.
- [4] 7,305 bags of sand are purchased @  $\text{Ø}1.00$  each with all available cash; 4,500 bags are required to produce the 30,000 bricks sold during January-June; the 2,805 remaining sacks are stored. To produce 25,000 bricks during July-December 3,750 sacks of sand are needed; at least 945 additional sacks must be purchased at  $\text{Ø}1.00$  in August (when the price is low) to attain this anticipated production level. We assume that only this quantity is purchased since the price drops again in December-January.
- [5] 1,200 sacks of cement are required to produce 30,000 blocks (January-June); 1,000 sacks of cement are needed to produce 25,000 blocks; each cement sack costs  $\text{Ø}25$ .

- [6] 300 person-days are required to produce 30,000 blocks;  
250 person days are required to produce 25,000 blocks;  
each person day costs \$20.
- [7] 300 drums of water are required to produce 30,000 blocks;  
250 drums of water are required to produce 25,000 blocks;  
each drum costs \$2.40.
- [8] \$500 per month salary to the owner is assumed.
- [9] The closing balance of \$405 cannot buy sufficient stocks of sand in December-January when the sand price is low (\$1.00 vs \$1.25). Thus, unless the entrepreneur increases his/her profits or invests his/her funds to purchase sand, another working capital loan will be required right after the first one is repaid.

## CONCLUSIONS

Specific Risks and Returns

The following figure summarizes the risks and returns to individually managed SMEs for which the study team conducted feasibility studies. Fishing, sugar syrup, and clairin have the highest market demand of all the products reviewed. Fishermen are the only off-farm entrepreneurs who could be organized readily into societies, since many already work in groups.

Although motorized milling is an extremely high value-added off-farm activity, the market for this service was saturated in all areas the team visited. Only if agricultural production increases would additional mills be needed in these areas. Hand corn milling cannot compete effectively with the motorized service since it is 20 times as expensive; however, hand mills would be extremely valuable to isolated farm families who do not have access to motorized mills.

White bread is a luxury good that relies upon imported wheat and has its greatest market in urban areas. Demand for the product is expected to increase if rural incomes rise.

Salt production through evaporation of sea water from huge basins yields a relatively low return to investment. Since each basin is extremely costly, it is important to examine carefully any stated needs for working capital. Those that construct many \$20,000 basins may have alternative sources of funds.

The market for plows seems small; increased plow production must be tied to strategies being promoted by agricultural extension services. If the agricultural extension agents promote the use of plows and provide farm management technical assistance,

Risks and Returns to Individually Managed Small- and Medium-Scale Enterprises

	Market Demand	Financial Return	Other Development Considerations
Fishing			
Fish	High, year-round	Moderate, to net fishing	Labor-intensive Low initial investment High protein source
Lobster	High, year-round	High Supply is decreasing	Foreign exchange generator Luxury good
Hand Corn-Milling Service	Small commercial market Strong competition from motorized mills Primarily for farm family use	High	Low initial investment High value-added activity Labor intensive
Motorized Milling/Decortivating Service (maize, sugar cane, rice, coffee)	Market seasonal saturated in most zones Most mills operating well under capacity	Moderate	High initial investment Imported equipment used High value-added activity
Bakery (white bread)	Seasonal	High	Dependent upon imported flour Low nutrition staple substitute
Sugar Syrup/Brown Sugar Production	High	High	Import substitute High value-added activity Provides market for sugar cane
Clairin Production	High	Extremely high	Provides market for sugar cane Alcoholic beverage
Salt Production	Moderate, year-round	Low	High initial investment Import substitute Non-iodized
Plow Manufacturing	Low Dependent on GOH agricultural development strategy and implementation	Low	High initial investment Locally produced equipment to increase agricultural production
Fishnet Production	High, year-round	Moderate	Extremely labor intensive Import substitute Primary input for small-scale fishing
Cement Block Production	Moderate local private Dependent upon GOH and donor construction projects	Moderate	Low initial investment Key input for infrastructure projects

then the BCA might consider financing the expansion of small-scale plow manufacturers. The same reasoning applies to cement block producers. Loans to this sector should be coordinated with construction project activity.

The demand for domestically produced fishnets also seems high, but it may be difficult to increase the production of this extremely labor intensive activity. A fisherman might be able to manage 12 people spinning one net each month on the beach; it is unlikely he could triple that production level.

#### BCA Operational Implications

Granting loans to individual small and medium off-farm enterprises is very different from lending to agricultural societies. SME loans:

- Carry a higher risk;
- Incur higher administrative costs due to screening procedures;
- Require different disbursement procedures;
- Require loan agents familiar with SME operations; and
- Require a different information system.

The BCA, therefore, needs to establish policy guidelines upon which to grant loans. The budget studies assumed that loans could be given for working capital, equipment purchases, or both. Working capital could be provided to on-going enterprises, while equipment purchases could be used to establish new enterprises. In most cases equipment purchase loans should be accompanied by working capital loans to ensure that the enterprise can begin operations at a reasonable level.

The BCA agents must be carefully trained in the methodology used to form these budget studies before any loan disbursements occur. Without sufficient training, loan default rates will be high.

The BCA should coordinate its activities carefully with agricultural development activities in each region. For example, the market for milling machines seems saturated in many regions. If grain production increases, however, then the demand for this service will also increase. Or, plow production depends upon techniques being promoted by the agricultural extension agencies.

In addition, the BCA should collaborate with IDAI to ensure that their operations will not overlap.

Given limited funds, the size of loans determines how many loans will be disbursed. For example, the BCA must decide if it wishes to fund one medium-sized clairin producer or three small-scale producers.

CHAPTER FOUR  
GROUP-MANAGED ENTERPRISE BUDGETS

INTRODUCTION

Definition of Haitian Group-Managed Enterprises

The study team defined Haitian group-managed enterprises as activities that were organized and administered collectively. Thus, most groups examined were either cooperatives or precooperatives. Agricultural credit societies (SACs), the BCA's traditional lending vehicle, were excluded from group-managed enterprises, as their group loans were for individual on-lending.

Although all groups were engaged in agricultural activities (production, processing, storage, or marketing), they varied considerably in terms of scale of activity and years of experience. Groups ranged in size from 10 to 2,000 members; some were still being formed, while others had been in existence for more than 35 years.

Purpose and Composition of Group-Managed Enterprise Budgets

The purpose of group-managed enterprise budgets is to demonstrate a systematic yet flexible procedure for evaluating loan applications and determining lending terms. They are thus designed to assist BCA loan agents in assessing the organizational and financial viability of proposed group-managed activities, to minimize the risk and maximize the return to the BCA's portfolio of collectively utilized loans.

Group managed enterprise budgets are divided into two major components: a prefeasibility questionnaire, and financial viability worksheets. The BCA agent should administer the prefeasibility questionnaire before completing the financial viability worksheets. The questionnaire identifies the most common reasons for the failure of group-managed enterprises, so should screen out

approximately half of all applicants for group loans without any financial calculations, and thus save the BCA agent considerable time and expense in evaluating loan applications.

The prefeasibility questionnaire is divided into five parts:

- The group's credit history;
- The comparative advantage of group activities;
- The group's administrative capacity;
- A supply analysis; and
- A demand analysis.

All questions in each section must have an affirmative response to proceed to the next section, so that questioning can be terminated at several different points along an 18-question logical progression.

The objective of the prefeasibility questionnaire is to determine if, in the BCA agent's judgment, the loan applicant will:

- Repay the loan completely and on time;
- Realize greater profits if the proposed activity is undertaken collectively rather than individually;
- Manage its operations efficiently and equitably;
- Generate a relatively reliable supply of its product; and
- Sell all that it plans to produce.

If all answers to the prefeasibility questionnaire are positive, then the BCA agent should proceed to the financial viability worksheets. Each financial viability analysis package consists of the following components:

- General enterprise characteristics;
- A projected cash flow;
- A break-even analysis; and
- Loan guidelines.

General Enterprise Characteristics serves as a cover sheet, and describes the activity under consideration, the region from which presented data were taken, the enterprise's expected market, model budget components that follow the cover sheet, and special considerations for each type of proposed activity.

The projected cash flow is calculated with a BCA loan, for the loan repayment period. It compares cash receipts with cash disbursements over time, to ensure that the loan terms and repayment schedule do not compromise the enterprise's operating liquidity. This cash flow emphasizes the need for loan disbursement and repayment to coincide with the business cycle of the client's enterprise.

The break-even analysis is also calculated with a BCA loan. It determines the enterprise's fixed and variable costs, and the minimum quantity of sales needed to cover these costs. The break-even sales level is then compared with the expected sales level, to determine the enterprise's safety margin. For storage and marketing activities, a table is presented that indicates the break-even level of purchases and resales with each of a wide range of assumed product markups.

The loan guidelines summarize the preceding financial analysis, and extract the critical elements from each worksheet. These elements include the enterprise's minimum initial investment, minimum working capital for one year, minimum contribution from the group, expected retained earnings at the end of the loan repayment period, BCA loan terms, minimum group size, break-even and expected sales levels, price and cost assumptions, expected rebates to group members, and the expected market for the enterprise's products.

### Use of Group-Managed Enterprise Budgets

The group-managed enterprise budgets presented in this section are but one of an assortment of analytic tools for determining the viability of loan applicants' proposed activities and setting terms for loan disbursement and collection. These budgets should not be used in isolation of complementary decision-making aids, nor should they be a substitute for good judgment and common sense if the numbers seem inaccurate or fabricated.

Moreover, these budgets are models that illustrate a process for evaluating loan applications and that present general lending guidelines for a variety of group managed enterprises. Thus they are neither comprehensive nor static. They were assembled based on a limited sample of group enterprises studied during three weeks of fieldwork. These budgets do not cover every zone and subzone of Haiti, nor do they cover every actual or conceivable type of group-managed activity.

The budgets must therefore be tailored to fit each loan application rather than applied universally and indiscriminately, for the assumptions upon which they are built must be modified to accommodate relevant prices, costs, and operating conditions. Such adaptation of the model budgets requires skills and judgment that can be acquired only through training and experience. Although time is the only generator of experience, the BCA should offer its agents rigorous classroom and field training to enhance their analytic skills before the Bureau attempts to apply this manual to its ongoing operations. Moreover, the BCA should coordinate the utilization of these model budgets with local experts well versed in dealing with group-organized and -managed activities, such as CNC (National Cooperative Council) and CCH (Association of Coffee Cooperatives of Haiti) officials.

## LIST OF INTERVIEWS BY ACTIVITY AND STAGE OF PRODUCTION

The following table presents a summary of group managed enterprises investigated during three weeks of field study. These enterprises are listed by activity and stage of production, rather than by activity and region, as these activities did not vary greatly by location. The priorities of all five BCA regional bureaus are covered by this sample, for the study team asked each bureau to identify and arrange interviews with those groups it felt were the most promising candidates for future BCA assistance. Twenty-five cooperatives or precooperatives were interviewed, and information was gathered for 90 model budgets covering 30 different group-managed enterprises.

## SELECTION PROCESS

The prefeasibility screening questionnaire covers all current and potential group managed enterprises. However, only eight financial viability analyses covering 19 types of enterprises are presented. Nine other activities are covered in other sections of this report because:

- They are usually undertaken individually; and
- They are less profitable when undertaken collectively.

Maize, rice, and sugar cane production, together with cattle fattening and marketing, can be found in Chapter Two, "Farm Enterprise Budgets." Maize and rice processing, as well as bread baking, can be found in Chapter Three, "Individually Managed Small- and Medium-Scale Enterprise Budgets." Swine fattening and marketing were eliminated from the entire report due to the current moratorium on swine production.

## SUMMARY: GROUP-MANAGED ENTERPRISES

ACTIVITY	PRODUCTION	PROCESSING	STORAGE	MARKETING
Coffee Commercialization	0	4	7	7
Maize Farming and Commercialization	1	4	6	6
Millet Commercialization	0	0	5	5
Rice Farming and Commercialization	1	1	2	2
Cow Peas/Beans Commercialization	0	0	5	5
Sugar Cane Farming	1	0	0	0
Cattle Fattening and Commercialization	0	3	0	3
Swine Fattening and Commercialization	0	2	0	2
Beekeeping and Honey Commercialization	2	2	2	2
Fishing and Fish Commercialization	2	0	0	2
Gabion Fabrication and Commercialization	2	0	0	2
Bread Baking and Commercialization	<u>1</u>	<u>0</u>	<u>0</u>	<u>1</u>
	10	16	27	37

TOTAL: 25 Cooperatives or Precooperatives  
 30 Activities  
 90 Model Budgets

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MODEL BUDGETS

Part I: Prefeasibility Screening Questionnaire for Production, Processing, Storage, and Marketing Activities Undertaken By Groups

Client Name \_\_\_\_\_  
 Client Address \_\_\_\_\_  
 Number of Members \_\_\_\_\_  
 Application Number \_\_\_\_\_  
 Date \_\_\_\_\_  
 BCA Office \_\_\_\_\_  
 BCA Agent \_\_\_\_\_  
 Loan Purpose \_\_\_\_\_

COMPLETE THE FOLLOWING QUESTIONNAIRE BEFORE CONDUCTING FINANCIAL ANALYSES OF BCA LOAN APPLICATIONS. CLIENT RESPONSES TO THIS QUESTIONNAIRE WILL OFFER A PRELIMINARY INDICATION OF THE APPROPRIATENESS AND FEASIBILITY OF ACTIVITIES PROPOSED FOR BCA FINANCING. FURTHER FINANCIAL ANALYSIS USING THE GUIDELINES AND SAMPLE BUDGETS IN PART II IS WARRANTED ONLY IF ALL ANSWERS TO THE QUESTIONS AFTER SECTION A ARE POSITIVE. OTHERWISE, THE APPLICANT IS INELIGIBLE TO RECEIVE A BCA LOAN. COMPLETE SECTION A, CREDIT HISTORY, FOR THOSE GROUPS THAT HAVE PREVIOUSLY RECEIVED LOANS. FOR GROUPS WITHOUT A CREDIT HISTORY, PROCEED TO SECTION B.

A. Credit History

Name of Credit Source	Loan Purpose	Loan Amount	Loan Balance Outstanding	Repayment Record

1. Has the group repaid all of its loans completely and on time? Yes \_\_\_\_\_ No \_\_\_\_\_

IF YES, PROCEED TO SECTION B. IF NO,

2. Has action been taken to prevent future loan delinquency/default by the group? Yes \_\_\_\_\_ No \_\_\_\_\_

IF YES, PROCEED TO SECTION B. IF NO, THE GROUP IS INELIGIBLE FOR A BCA LOAN.

B. Comparative Advantage of Group Activities

3. Is the proposed activity more profitable (e.g., through cost savings or production increases) when undertaken collectively rather than individually? Yes \_\_\_\_\_ No \_\_\_\_\_
4. Is the group now receiving or certain to receive non-BCA technical assistance? Yes \_\_\_\_\_ No \_\_\_\_\_

IF BOTH ANSWERS ARE AFFIRMATIVE, PROCEED TO SECTION C. IF EITHER ANSWER IS NEGATIVE, THE GROUP SHOULD APPLY FOR A BCA LOAN VIA BCA AGRICULTURAL CREDIT SOCIETIES (SACs), AND THUS, INDIVIDUAL ON-LENDING.

C. Administrative Capacity

5. Does the group have a leader who can organize its members? Yes \_\_\_\_\_ No \_\_\_\_\_
6. Does the group have someone available and qualified to manage its activities? Yes \_\_\_\_\_ No \_\_\_\_\_
7. Does the group have someone available and qualified to do its accounting? Yes \_\_\_\_\_ No \_\_\_\_\_
8. Do group members have a common tie? For example, do they all live in the same community or cultivate the same crops? Yes \_\_\_\_\_ No \_\_\_\_\_
9. Does the group have a work plan and production schedule? Yes \_\_\_\_\_ No \_\_\_\_\_
10. Are the roles and responsibilities of group officers and members clearly defined? Yes \_\_\_\_\_ No \_\_\_\_\_
11. Does the process of officer selection allow group members to choose truly representative leaders? Yes \_\_\_\_\_ No \_\_\_\_\_
12. Does the process of officer removal allow group members to exercise final veto power over the actions of their elected leaders? Yes \_\_\_\_\_ No \_\_\_\_\_

IF ALL ANSWERS ARE AFFIRMATIVE, PROCEED TO SECTION D. IF ANY ANSWERS ARE NEGATIVE, THE GROUP IS INELIGIBLE FOR A BCA LOAN.

D. Supply Analysis

- 13. Does the group have adequate work and/or storage facilities if the BCA loan is not for this purpose? Yes \_\_\_ No \_\_\_
- 14. Does the group have appropriate tools and equipment if the BCA loan is not for this purpose? Yes \_\_\_ No \_\_\_
- 15. Are spare parts and qualified mechanics available to service critical equipment in a timely manner? Yes \_\_\_ No \_\_\_
- 16. Does the group have a relatively reliable supply of critical inputs? Yes \_\_\_ No \_\_\_
- 17. Does the group have a reliable means of transporting its product to the selling point? Yes \_\_\_ No \_\_\_

IF ALL ANSWERS ARE AFFIRMATIVE, PROCEED TO SECTION E. IF ANY ANSWERS ARE NEGATIVE, THE GROUP IS INELIGIBLE FOR A BCA LOAN.

E. Demand Analysis (Answer Question 18a or 18b or 18c. Do Not Answer More Than One Question.)

- 18a. IF THE BCA LOAN IS TO INCREASE PROFITS AT THE GROUP'S CURRENT LEVEL OF PRODUCTION: Can the group currently sell all that it produces? Yes \_\_\_ No \_\_\_
- 18b. IF THE BCA LOAN IS TO INCREASE THE GROUP'S CURRENT LEVEL OF PRODUCTION: Is there sufficient demand to support increased production, i.e., will customers buy the group's increased output? Yes \_\_\_ No \_\_\_
- 18c. IF THE BCA LOAN IS TO BEGIN A NEW ACTIVITY: Is there sufficient unmet demand to support the group's new activity? Yes \_\_\_ No \_\_\_

IF THE ANSWER TO QUESTION 18a or 18b or 18c IS AFFIRMATIVE, PROCEED TO PART II, "FINANCIAL VIABILITY ANALYSIS." IF THE ANSWER IS NEGATIVE, THE GROUP IS INELIGIBLE FOR A BCA LOAN.

Part II: Financial Viability Worksheets for Production, Processing, Storage, and Marketing Activities Undertaken By Groups

Financial viability worksheets are presented for the following group-managed activities:

- 1) Coffee Processing, Storage, and Marketing;
- 2) Maize Storage and Marketing;
- 3) Millet Storage and Marketing;
- 4) Rice Storage and Marketing;
- 5) Cow Pea/Bean Storage and Marketing;
- 6) Beekeeping and Honey Processing, Storage, and Marketing;
- 7) Motorized Fishing and Fish Marketing; and
- 8) Gabion Fabrication and Marketing.

Each financial viability analysis is divided into four parts:

- General Enterprise Characteristics;
- Projected Cash Flow with BCA Loan;
- Break-even and Expected Sales Levels with BCA Loan; and
- Loan Guidelines.

## A. GENERAL ENTERPRISE CHARACTERISTICS

ACTIVITY: Processing, storage, and marketing of coffee;  
ongoing activity

REGION: Nationwide

MARKET: Export

MODEL BUDGET COMPONENTS:

- 1) 9-month cash flow projection with a \$ 50,000 BCA loan;
- 2) 9-month break-even analysis with a \$ 50,000 BCA loan; and
- 3) Loan guidelines for the processing, storage, and marketing of coffee.

SPECIAL CONSIDERATIONS:

- 1) Financially and technologically infeasible to do individually;
- 2) Primary generator of foreign exchange for Haiti;
- 3) Technical and financial assistance available from the Office for the Promotion of Exportable Products (OPRODEX), the National Cooperative Council (CNC), the Coffee Cooperative Association of Haiti (CCH), the ILO, FAO, and USAID ("Strengthening Coffee Cooperatives Project");
- 4) Profitability is highly dependent on a volatile world coffee market; and
- 5) Complementary assistance is needed for the regeneration of coffee production.

## B. PROJECTED CASH FLOW WITH BCA LOAN FOR NINE MONTHS (in gourdes)

LOAN PURPOSE: Assist ongoing enterprisesTYPE OF ENTERPRISE: Processing, storage, and marketing of coffeeLOCATION: Nationwide

<u>CASH RECEIPTS</u>	I July - Sept	II Oct - Dec	III Jan - Mar
Investment (1)	75,000	111,909	41,373
BCA Loan (2)	150,000	0	0
Sales (3)	0	0	270,000
<b>TOTAL</b>	<b>225,000</b>	<b>111,909</b>	<b>311,373</b>
<hr/>			
<u>CASH DISBURSEMENTS</u>			
Purchase of Raw Materials (4)	90,000	65,000	35,000
Purchase of Equipment (5)	0	0	2,000
Purchase of Tools	0	0	0
Repairs	0	0	0
Wages and Salaries (6)	6,775	4,970	2,735
Construction	0	0	0
Rent	0	0	0
Taxes	0	0	0
Transport (7)	0	0	5,000
Other Expenses (8)	566	566	377
<b>TOTAL</b>	<b>97,341</b>	<b>70,536</b>	<b>45,112</b>
<hr/>			
<u>PRE-LOAN CASH BALANCE</u>	127,659	41,373	266,261
Loan Interest and Commission (9)	15,750	0	0
Loan Principal and Savings Guarantee (10)	0	0	153,000
<u>CASH BALANCE</u>	111,909	41,373	113,261
Rebate (11)	0	0	40,200
<u>NET CASH BALANCE</u> (12)	111,909	41,373	75,061

COFFEE PROCESSING, STORAGE, AND MARKETING CASH FLOW FOOTNOTES

- 1) Investment comprises members' shares and retained earnings for the first quarter, and cash balance forward for subsequent quarters.
- 2) The BCA loan is to purchase harvested coffee from cooperative members. It is for 9 months, at 12 percent annually plus a 2 percent commission and 2 percent mandatory savings ("savings guarantee"). Loan interest and commission are discounted, and the principal is repaid at the end of the third quarter, together with the mandatory savings.

- 3) Sales are based on the following:

$$60,000 \text{ lbs } @ \text{ } \text{¢} 4.50/\text{lb} = \text{ } \text{¢} 270,000$$

- 4) Coffee purchases from cooperative members are based on the following:

	NUMBER OF POUNDS	@	¢/POUND	=	TOTAL GOURDES SPENT
1st Quarter	30,000	@	3.00	=	¢ 90,000
2nd Quarter	20,000	@	3.25	=	¢ 65,000
3rd Quarter	10,000	@	3.50	=	¢ 35,000

- 5) The only equipment purchased is 1,000 jute sacks at ¢ 2.00 per sack.

- 6) Wages and salaries are calculated as follows:

CATEGORY	NUMBER OF EMPLOYEES	X	WAGE/SALARY PER QUARTER OR UNIT	=	TOTAL WAGES/ SALARIES PER QUARTER
a) General	10 (1st Quarter)	x	¢ 225	=	¢ 2,250
	7 (2nd Quarter)	x	¢ 225	=	1,575
	5 (3rd Quarter)	x	¢ 150	=	750
b) Guard	1 (All Quarters)	x	¢ 75	=	75
c) Manager	1 (All Quarters)	x	¢ 300	=	300
d) Asst. Manager/ Secretary	1 (All Quarters)	x	¢ 200	=	200
e) Mechanic	1 (1st Quarter)	x	¢ 300	=	300
f) Sorters (By Bag Sorted)	500 (1st Quarter)	x	¢ 5/Bag	=	2,500
	334 (2nd Quarter)	x	¢ 5/Bag	=	1,670
	167 (3rd Quarter)	x	¢ 5/Bag	=	835

- 7) Transport is calculated as follows:

$$1,000 \text{ sacks } @ \text{ } \text{¢} 5.00/\text{sack}$$

8) Other costs include:

Gasoline - ₡ 7.25/day x 26 days x 3 months = ₡ 566/Quarter  
(1st and 2nd)

₡ 7.25/day x 26 days x 2 months = ₡ 377/Quarter  
(3rd Quarter)

9) See footnote #2.

10) Ibid.

11) This rebate to cooperative members equals ₡ .67 per pound of coffee.

12) The outstanding cash balance at the end of the third quarter will allow the cooperative to leverage another BCA loan the following season.

C. COFFEE PROCESSING, STORAGE, AND MARKETING  
 BREAK-EVEN ANALYSIS: 9-MONTH TIME FRAME  
 (in gourdes)

FIXED COSTS PER 9 MONTHS

Interest, Commission, and Savings Charges	¢ 18,750
Depreciation (Factory and Glacis @ 20 Years, Furniture and Equipment @ 10 Years)	9,813
Structural Outlays	0
Equipment Repair	0
Rent	0
Taxes	0
Minimum Salary to Owner	0
Other	0
Total Fixed Costs (F)	¢ 28,563

VARIABLE COSTS PER UNIT (1 POUND OF PROCESSED COFFEE)

PRODUCT	INPUT	COST	USE PER UNIT PRODUCED	TOTAL COST PER UNIT
1 Pound of Processed Coffee	Jute Sack	¢ 2.00/sack	1/60	¢ .03
	Labor	¢ .24/lb	1	.24
	Miscella- neous	¢ .11/lb	1	.11
Total Variable Costs Per Unit (V)				¢ .38

BREAK-EVEN CALCULATION

M = Markup

Q = Break-even volume of sales

$$(M) \times (Q) = (F) + (V) \times (Q)$$

$$¢ .40 (Q) = ¢ 28,563 + ¢ .38 (Q)$$

$$(Q) = 1,428,150 \text{ pounds} \div 60 \text{ pounds/sack} = 23,803 \text{ sacks}$$

If the markup is ¢ .40 per pound of processed coffee, then the break-even level of processed coffee sales is 23,803 sacks.

If the markup is: The break-even level of processed coffee sales is:

¢ .50	Break-even	3,967	sacks
¢ .60	Markup if	2,164	
¢ .70	Coffee Sales	1,488	
¢ .80	are Exceeded	1,133	

	~ Expected		
	¢ .86	Coffer. Sales: 992	↑ Safety Margin With Weighted Average of Expected Markups and with Anticipated Coffee Sales ↓
	¢ .90	915	
	1.00	768	
	1.10	661	
	1.20	581	
	1.30	517	
Weighted Average of Expected Markups:	1.33	501	
	1.40	467	Break-even Coffee Sales If Expected Markup is Exceeded
	1.50	425	
	1.60	390	
	1.70	361	
	1.80	335	
	1.90	313	
	2.00	294	

## D. PROCESSING, STORAGE, AND MARKETING OF COFFEE LOAN GUIDELINES

ITEM	MODEL BUDGET	ACTUAL BUDGET
1) Minimum initial investment		
Land	\$ 3,900	
Factory	98,217	
Glacis	9,217	
Drier	6,019	
Depulper	4,900	
Decorticator	14,500	
Motor	21,000	
Furniture	964	
Total	\$ 158,717	
2) Minimum working capital for 1 year		
Purchase of coffee	190,000	
Labor	14,480	
Other	6,509	
Total	\$ 212,989	
3) Minimum contribution from group	158,717	
4) Expected retained earnings at the end of the third quarter (1)	73,061	
5) BCA loan terms		
Purpose	70 percent of the working capital needed for 1 season's supply of coffee	
Amount	\$ 150,000	
Annual interest rate	12 percent	
Commission	2 percent	
Mandatory savings	2 percent	
Repayment period	9 months	
Repayment schedule	Discounted commission, and interest; principal and mandatory savings at the end of 3rd quarter	

1 These retained earnings will allow the group to leverage a similar BCA loan the following season.



## A. GENERAL ENTERPRISE CHARACTERISTICS

ACTIVITY: Maize storage and marketing; ongoing activity

REGION: Jacmel

MARKET: Domestic

MODEL BUDGET COMPONENTS:

- 1) Nine-month cash flow projection with a \$ 50,000 BCA loan;
- 2) Nine-month break-even analysis with a \$ 50,000 BCA loan; and
- 3) Maize storage and marketing loan guidelines.

SPECIAL CONSIDERATIONS

- 1) Considerable wealth needed to undertake individually;
- 2) Relatively new group activity for Haiti;
- 3) Technical and financial assistance available from the National Agricultural Commercialization Service (SECA), and the National Cooperative Council (CNC);
- 4) The timing of maize storage and marketing varies by region, as it entails speculation based on widely fluctuating but predictable local seasonal demand; and
- 5) The primary development impact of maize storage and marketing is to redistribute income from merchants to producers.

## B. PROJECTED CASH FLOW WITH BCA LOAN FOR NINE MONTHS (in gourdes)

LOAN PURPOSE: Assist ongoing enterpriseTYPE OF ENTERPRISE: Storage and marketing of maizeLOCATION: Jacmel

<u>CASH RECEIPTS</u>	I July - Sept	II Oct - Dec	III Jan - Mar
Investment (1)	10,000	27,850	51,950
BCA Loan (2)	50,000	0	0
Sales (3)	0	42,750	23,750
TOTAL	60,000	70,600	75,700
<hr/>			
<u>CASH DISBURSEMENTS</u>			
Purchase of Raw Materials (4)	25,000	17,500	0
Purchase of Equipment (5)	1,000	500	0
Purchase of Tools	0	0	0
Repairs	0	0	0
Wages and Salaries (6)	400	400	0
Construction (7)	0	0	0
Rent	0	0	0
Taxes	0	0	0
Transport	0	0	0
Other Expenses (insecticide) (8)	500	250	0
TOTAL	26,900	18,650	0
<hr/>			
<u>PRE-LOAN CASH BALANCE</u>	33,100	51,950	75,700
Loan Interest and Commission (9)	5,250	0	0
Loan Principal and Savings Guarantee (10)	0	0	51,000
<u>CASH BALANCE</u>	27,850	51,950	24,700
Rebate (11)	0	0	15,000
<u>NET CASH BALANCE</u> (12)	27,850	51,950	9,700

MAIZE STORAGE AND MARKETING CASH FLOW FOOTNOTES

- 1) Investment comprises contributions from group members for the first quarter, and cash balance forward for subsequent quarters.
- 2) The BCA loan is for the purchase of group members' maize, for one nine-month season. The loan interest is 12 percent annually, with 2 percent commission and 2 percent mandatory savings ("savings guarantee"). The commission and interest are discounted, and the principal is repaid at the end of the third quarter, together with the mandatory savings.
- 3) Sales are calculated as follows:
  - Quarter II - 10,000 marmites less 5% during storage,  
@ ¢ 4.5/marmite
  - Quarter III - 5,000 marmites less 5% during storage,  
@ ¢ 5.0/marmite
- 4) Maize purchases are calculated as follows:
  - Quarter I - 10,000 marmites @ ¢ 2.5/marmite
  - Quarter II - 5,000 marmites @ ¢ 3.5/marmite
- 5) The only equipment purchased is jute bags, as follows:
  - Quarter I - 500 bags @ ¢ 2.00/bag
  - Quarter II - 250 bags @ ¢ 2.00/bag
- 6) Wages are paid to buyers, as follows:
  - 10 buyers/day x 16 days/quarter x ¢ 2.5/day
- 7) The group should construct a secure, dry storage depot before receiving any BCA assistance.
- 8) Insecticide costs are calculated as follows:
  - Quarter I - 67 pounds @ ¢ 7.5/pound
  - Quarter II - 33 pounds @ ¢ 7.5/pound
- 9) See footnote #2.
- 10) Ibid.
- 11) The rebate is calculated at ¢ 1.00/marmite x 15,000 marmites.
- 12) The net cash balance at the end of the third quarter will allow the group to leverage a similar BCA loan the following season.

C. MAIZE STORAGE AND MARKETING  
 BREAK-EVEN ANALYSIS: 9-MONTH TIME FRAME  
 (in gourdes)

FIXED COSTS PER 9 MONTHS

Commission and Interest Charges	¢ 5,250
Savings Guarantee	1,000
Depreciation	2,350
Structural Outlays	0
Equipment Repair	0
Rent	0
Taxes	0
Minimum Salary to Owner	0
Other	0
Total Fixed Costs (F)	¢ 8,600

VARIABLE COSTS PER UNIT (1 MARMITE OF MAIZE)

PRODUCT	INPUT	COST	USE PER UNIT PRODUCED	TOTAL COST PER UNIT
1 Marmite of Maize	Jute Sack	¢ 2.00/sack	.05	¢ .10
	Insecticide	¢ 7.50/lb	.007	.05
	Buyer	¢ 2.50/day	.016	.04
Total Variable Costs Per Unit (V)				¢ .19

BREAK-EVEN CALCULATION

M = Markup

Q = Break-even volume of sales

$$\begin{aligned} (M) \times (Q) &= (F) + (V) \times (Q) \\ \text{¢ } .20 (Q) &= \text{¢ } 8,600 + \text{¢ } .19 (Q) \\ (Q) &= 860,000 \text{ marmites} \end{aligned}$$

If the markup is ¢ .20, then the break-even level of maize sales is 860,000 marmites.

<u>If the markup is:</u>	<u>The break-even level of maize sales is:</u>
¢ .30	Break-even 78,182 marmites
.40	Markup if 40,952
.50	Expected Maize 27,742
.60	Sales are 20,976
.70	Exceeded 16,863
-----	
	~ Expected
.79	Maize Sales: 14,333
.80	14,098
.90	12,113
1.00	10,617
1.10	9,451
1.20	8,515
1.30	7,748
1.40	7,107
1.50	6,565
1.60	6,099
1.70	5,695
Weighted Average of	1.80 5,342
Expected Markups:	1.84 5,212
-----	
1.90	5,029
2.00	4,751
2.10	4,503
2.20	4,279
2.30	4,076



Safety Margin  
With Weighted  
Average of  
Expected Mark-  
ups and with  
Anticipated  
Maize Sales

Break-even  
Maize Sales If  
Expected Markup  
is Exceeded

D. MAIZE STORAGE AND MARKETING LOAN GUIDELINES

ITEM	MODEL BUDGET	ACTUAL BUDGET
1) Minimum initial investment		
Building (block and corrugated iron)	¢ 47,000	_____
2) Minimum working capital for 1 year	45,550	_____
3) Minimum contribution from group	10,000	_____
4) Expected retained earnings at the end of the third quarter (1)	9,700	_____
5) BCA loan terms		
Purpose	Working capital for maize purchases	_____
Amount	¢ 50,000	_____
Annual interest rate	12 percent	_____
Commission	2 percent	_____
Mandatory savings	2 percent	_____
Repayment period	9 months	_____
Repayment schedule	Discounted commission, and interest; principal and mandatory savings at the end of 3rd quarter	_____
6) Minimum group size	500 active members	_____
7) Break-even sales level with expected markup	5,212 marmites of maize per year	_____
8) Expected markup	¢ 1.84 per marmite (weighted average)	_____
9) Expected sales level	14,250 marmites of maize per year	_____
10) Expected sales level ÷ break-even sales level	2.7 times greater	_____

1 These retained earnings will allow the group to leverage a similar BCA loan the following season.

- |                                      |                    |       |
|--------------------------------------|--------------------|-------|
| 11) Expected storage loss            | 5 percent          | _____ |
| 12) Expected buying price of maize   | ¢ 2.5-3.5/marmite  | _____ |
| 13) Expected selling price of maize  | ¢ 4.5-5.0/marmite  | _____ |
| 14) Expected rebate to group members | ¢ 1.00 per marmite | _____ |
| 15) Expected market                  | Domestic           | _____ |

## A. GENERAL ENTERPRISE CHARACTERISTICS

ACTIVITY: Millet storage and marketing; ongoing activity

REGION: Cap-Haitien

MARKET: Domestic

MODEL BUDGET COMPONENTS:

- 1) Nine-month cash flow projection with a ¢ 25,000 BCA loan;
- 2) Nine-month break-even analysis with a ¢ 25,000 BCA loan; and
- 3) Millet storage and marketing loan guidelines.

SPECIAL CONSIDERATIONS:

- 1) Considerable wealth needed to undertake individually;
- 2) Relatively new group activity for Haiti;
- 3) Technical and financial assistance available from the National Agricultural Commercialization Service (SECA), and the National Cooperative Council (CNC);
- 4) The timing of millet storage and marketing varies by region as it entails speculation based on widely fluctuating but predictable local seasonal demand; and
- 5) The primary development impact of millet storage and marketing is to redistribute income from merchants to producers.

## B. PROJECTED CASH FLOW WITH BCA LOAN FOR NINE MONTHS (in gourdes)

LOAN PURPOSE: Assist ongoing enterpriseTYPE OF ENTERPRISE: Storage and marketing of milletLOCATION: Cap-Haitien

<u>CASH RECEIPTS</u>	I Sept - Nov	II Dec - Feb	III Mar - May
Investment (1)	10,000	5,475	5,475
BCA Loan (2)	25,000	0	0
Sales (3)	0	0	33,250
<b>TOTAL</b>	<b>35,000</b>	<b>5,475</b>	<b>38,725</b>
<hr/>			
<u>CASH DISBURSEMENTS</u>			
Purchase of Raw Materials (4)	25,000	0	0
Purchase of Equipment (5)	1,000	0	0
Purchase of Tools	0	0	0
Repairs	0	0	0
Wages and Salaries (6)	400	0	0
Construction (7)	0	0	0
Rent	0	0	0
Taxes	0	0	0
Transport	0	0	0
Other Expenses (insecticide) (8)	500	0	0
<b>TOTAL</b>	<b>26,900</b>	<b>0</b>	<b>0</b>
<hr/>			
<u>PRE-LOAN CASH BALANCE</u>	8,100	5,475	38,725
Loan Interest and Commission (9)	2,625	0	0
Loan Principal and Savings Guarantee (10)	0	0	25,500
<u>CASH BALANCE</u>	5,475	5,475	13,225
Rebate (11)	0	0	3,000
<u>NET CASH BALANCE</u> (12)	5,475	5,475	10,225

MILLET STORAGE AND MARKETING CASH FLOW FOOTNOTES

- 1) Investment comprises contributions from group members for the first quarter, and cash balance forward for subsequent quarters.
- 2) The BCA loan is for the purchase of group members' millet for one nine-month season. The loan interest is 12 percent annually, with 2 percent commission and 2 percent mandatory savings ("savings guarantee"). The commission and interest are discounted, and the principal is repaid at the end of the third quarter, together with the mandatory savings.
- 3) Sales are calculated as follows:
 

Quarter III - 10,000 marmites less 5% during storage,  
@ ¢ 3.5/marmite
- 4) Millet purchases are calculated as follows:
 

Quarter I - 10,000 marmites @ ¢ 2.5/marmite
- 5) The only equipment purchased is jute bags, as follows:
 

Quarter I - 500 bags @ ¢ 2.00/bag
- 6) Wages are paid to buyers, as follows:
 

10 buyers/day x 16 days/quarter x ¢ 2.5/day
- 7) The group should construct a secure, dry storage depot before receiving any BCA assistance.
- 8) Insecticide costs are calculated as follows:
 

Quarter I - 67 pounds @ ¢ 7.5/pound
- 9) See footnote #2.
- 10) Ibid.
- 11) The rebate is calculated at ¢ .30/marmite x 10,000 marmites.
- 12) The net cash balance at the end of the third quarter will allow the group to leverage a similar BCA loan the following season.

C. MILLET STORAGE AND MARKETING  
 BREAK-EVEN ANALYSIS: 9-MONTH TIME FRAME  
 (in gourdes)

FIXED COSTS PER 9 MONTHS

Commission and Interest Charges		¢ 2,625
Savings Guarantee		500
Depreciation		2,350
Structural Outlays		0
Equipment Repair		0
Rent		0
Taxes		0
Minimum Salary to Owner		0
Other		0
		0
Total Fixed Costs (F)		¢ 5,475

VARIABLE COSTS PER UNIT (1 MARMITE OF MILLET)

PRODUCT	INPUT	COST	USE PER UNIT PRODUCED	TOTAL COST PER UNIT
1 Marmite of Millet	Jute Sack	¢ 2.00/sack	.05	¢ .10
	Insecticide	¢ 7.50/lb	.007	.05
	Buyer	¢ 2.50/day	.016	.04
				.04
Total Variable Costs Per Unit (V)				¢ .19

BREAK-EVEN CALCULATION

M = Markup

Q = Break-even volume of sales

$$\begin{aligned} (M) \times (Q) &= (F) + (V) \times (Q) \\ \text{¢ } .20 (Q) &= \text{¢ } 5,475 + \text{¢ } .19 (Q) \\ (Q) &= 547,500 \text{ marmites} \end{aligned}$$

If the markup is ¢ .20, then the break-even level of millet sales is 547,500 marmites.

<u>If the markup is:</u>		<u>The break-even level of millet sales is:</u>	
¢ .30	Break-even	49,773	marmites
.40	Markup if	26,071	
.50	Expected	17,661	
.60	Millet Sales	13,354	
.70	are Exceeded	10,735	
<hr/>			
.76	~ Expected	9,605	Safety Margin with Expected Markup and Millet Sales
.80	Millet Sales:	8,975	
.90		7,711	
Expected Markup: 1.00		6,759	
<hr/>			
1.10		6,016	Break-even Mil- let Sales If Expected Markup is Exceeded
1.20		5,421	
1.30		4,932	
1.40		4,525	
1.50		4,179	
1.60		3,883	
1.70		3,626	
1.80		3,401	
1.90		3,202	
2.00		3,025	
2.10		2,866	
2.20		2,724	
2.30		2,595	

## D. MILLET STORAGE AND MARKETING LOAN GUIDELINES

ITEM	MODEL BUDGET	ACTUAL BUDGET
1) Minimum initial investment		
Building (block and corrogated iron)	¢ 47,000	_____
2) Minimum working capital for 1 year	26,900	_____
3) Minimum contribution from group	10,000	_____
4) Expected retained earnings at the end of the third quarter (1)	10,225	_____
5) BCA loan terms		
Purpose	Working capital for millet purchases	_____
Amount	¢ 25,000	_____
Annual interest rate	12 percent	_____
Commission	2 percent	_____
Mandatory savings	2 percent	_____
Repayment period	9 months	_____
Repayment schedule	Discounted commission, and interest; loan principal and mandatory savings at the end of 3rd quarter	_____
6) Minimum group size	500 active members	_____
7) Break-even sales level with expected markup	6,759 marmites of millet per year	_____
8) Expected markup	¢ 1.00 per marmite	_____
9) Expected sales level	9,500 marmites of millet per year	_____
10) Expected sales level ÷ break-even sales level	1.4 times greater	_____

1 These retained earnings will allow the group to leverage a similar BCA loan the following season.

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- |                                      |                   |       |
|--------------------------------------|-------------------|-------|
| 11) Expected storage loss            | 5 percent         | _____ |
| 12) Expected buying price of millet  | ¢ 2.5/marmite     | _____ |
| 13) Expected selling price of millet | ¢ 3.5/marmite     | _____ |
| 14) Expected rebate to group members | ¢ .30 per marmite | _____ |
| 15) Expected market                  | Domestic          | _____ |

## IV-35

## A. GENERAL ENTERPRISE CHARACTERISTICS

ACTIVITY: Rice storage and marketing; ongoing activity

REGION: Artibonite

MARKET: Domestic

MODEL BUDGET COMPONENTS:

- 1) One-year cash flow projection with a ₡ 60,000 BCA loan;
- 2) One-year break-even analysis with a ₡ 60,000 BCA loan; and
- 3) Rice storage and marketing loan guidelines.

SPECIAL CONSIDERATIONS

- 1) Considerable wealth needed to undertake individually;
- 2) Relatively new group activity for Haiti;
- 3) Technical and financial assistance available from the National Agricultural Commercialization Service (SECA), and the National Cooperative Council (CNC);
- 4) The timing of rice storage and marketing varies by region, as it entails speculation based on widely fluctuating but predictable local seasonal demand; and
- 5) The primary development impact of rice storage and marketing is to redistribute income from merchants to producers.

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## B. PROJECTED CASH FLOW WITH BCA LOAN FOR ONE YEAR (in gourdes)

LOAN PURPOSE: Assist ongoing enterpriseTYPE OF ENTERPRISE: Storage and marketing of riceLOCATION: Artibonite

<u>CASH RECEIPTS</u>	I Jan-Mar	II Apr-June	III July-Sept	IV Oct-Dec
Investment (1)	10,000	13,950	13,950	5,900
BCA Loan (2)	60,000	0	0	0
Sales (3)	0	0	23,750	95,000
<b>TOTAL</b>	<b>70,000</b>	<b>13,950</b>	<b>37,700</b>	<b>100,900</b>
<hr/>				
<u>CASH DISBURSEMENTS</u>				
Purchase of Raw Materials (4)	45,000	0	30,000	0
Purchase of Equipment (5)	1,500	0	1,000	0
Purchase of Tools	0	0	0	0
Repairs	0	0	0	0
Wages and Salaries (6)	400	0	300	0
Construction	0	0	0	0
Rent	0	0	0	0
Taxes	0	0	0	0
Transport	0	0	0	0
Other Expenses (8)	750	0	500	0
<b>TOTAL</b>	<b>47,650</b>	<b>0</b>	<b>31,800</b>	<b>0</b>
<hr/>				
<u>PRE-LOAN CASH BALANCE</u>	22,350	13,950	5,900	100,900
Loan Interest and Commission (9)	8,400	0	0	0
Loan Principal and Savings Guarantee (10)	0	0	0	61,200
<u>CASH BALANCE</u>	13,950	13,950	5,900	39,700
Rebate (11)	0	0	0	30,000
<u>NET CASH BALANCE</u> (12)	13,950	13,950	5,900	9,700

RICE STORAGE AND MARKETING CASH FLOW FOOTNOTES

- 1) Investment comprises contributions from group members for the first quarter, and cash balance forward for subsequent quarters.
- 2) The BCA loan is for the purchase of group members' rice (paddy), for one 12-month season. The loan interest is 12 percent annually, with 2 percent commission and 2 percent mandatory savings ("savings guarantee"). The commission and interest are discounted, and the principal is repaid at the end of the fourth quarter, together with the mandatory savings.
- 3) Sales are calculated as follows:
  - Quarter III - 5,000 marmites less 5% during storage,  
@ ₡ 5.0/marmite
  - Quarter IV - 20,000 marmites less 5% during storage,  
@ ₡ 5.0/marmite
- 4) Rice purchases are calculated as follows:
  - Quarter I - 15,000 marmites @ ₡ 3.0/marmite
  - Quarter III - 10,000 marmites @ ₡ 3.0/marmite
- 5) The only equipment purchased is jute bags, as follows:
  - Quarter I - 750 bags @ ₡ 2.00/bag
  - Quarter III - 500 bags @ ₡ 2.00/bag
- 6) Wages are paid to buyers, as follows:
  - Quarter I - 10 buyers/day x 16 days/quarter x ₡ 2.5/day
  - Quarter III - 10 buyers/day x 12 days/quarter x ₡ 2.5/day
- 7) The group should construct a secure, dry storage depot before receiving any BCA assistance.
- 8) Insecticide costs are calculated as follows:
  - Quarter I - 100 pounds @ ₡ 7.5/pound
  - Quarter III - 67 pounds @ ₡ 7.5/pound
- 9) See footnote #2.
- 10) Ibid.
- 11) The rebate is calculated at ₡ 1.20/marmite x 25,000 marmites.
- 12) The net cash balance at the end of the fourth quarter will allow the group to leverage a similar BCA loan the following season.

C. RICE STORAGE AND MARKETING  
 BREAK-EVEN ANALYSIS: 1-YEAR TIME FRAME  
 (in gourdes)

FIXED COSTS PER 12-MONTH SEASON

Commission and Interest Charges		¢ 8,400
Savings Guarantee		1,200
Depreciation		2,350
Structural Outlays		0
Equipment Repair		0
Rent		0
Taxes		0
Minimum Salary to Owner		0
Other		0
		0
Total Fixed Costs (F)		¢ 11,950

VARIABLE COSTS PER UNIT (1 MARMITE OF RICE)

PRODUCT	INPUT	COST	USE PER UNIT PRODUCED	TOTAL COST PER UNIT
1 Marmite of Paddy Rice	Jute Sack	¢ 2.00/sack	.05	¢ .10
	Insecticide	¢ 7.50/lb	.007	.05
	Buyer	¢ 2.50/day	.016	.04
				.04
Total Variable Costs Per Unit (V)				¢ .19



## D. RICE STORAGE AND MARKETING LOAN GUIDELINES

ITEM	MODEL BUDGET	ACTUAL BUDGET
1) Minimum initial investment		
Building (block and corrogated iron)	₱ 47,000	_____
2) Minimum working capital for 1 year	79,450	_____
3) Minimum contribution from group	10,000	_____
4) Expected retained earnings at the end of the fourth quarter (1)	9,700	_____
5) BCA loan terms		
Purpose	Working capital for rice purchases	_____
Amount	₱ 60,000	_____
Annual interest rate	12 percent	_____
Commission	2 percent	_____
Mandatory savings	2 percent	_____
Repayment period	12 months	_____
Repayment schedule	Discounted commission, and interest; loan principal and mandatory savings at the end of 4th quarter	_____
6) Minimum group size	500 members	_____
7) Break-even sales level with expected markup	6,602 marmites of rice per year	_____
8) Expected markup	₱ 2.00 per marmite	_____
9) Expected sales level	23,750 marmites of rice per year	_____
10) Expected sales level ÷ break-even sales level	3.6 times greater	_____

1 These retained earnings will allow the group to leverage a similar BCA loan the following season.

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- |                                      |                    |       |
|--------------------------------------|--------------------|-------|
| 11) Expected storage loss            | 5 percent          | _____ |
| 12) Expected buying price of rice    | ₱ 3.0/marmite      | _____ |
| 13) Expected selling price of rice   | ₱ 5.0/marmite      | _____ |
| 14) Expected rebate to group members | ₱ 1.20 per marmite | _____ |
| 15) Expected market                  | Domestic           | _____ |

IV-43

## A. GENERAL ENTERPRISE CHARACTERISTICS

ACTIVITY: Cow peas/bean storage and marketing; ongoing activity

REGION: Leogane

MARKET: Domestic

MODEL BUDGET COMPONENTS:

- 1) Six-month cash flow projection with a ¢ 25,000 BCA loan;
- 2) Six-month break-even analysis with a ¢ 25,000 BCA loan; and
- 3) Cow pea/bean storage and marketing loan guidelines.

SPECIAL CONSIDERATIONS:

- 1) Considerable wealth needed to undertake individually;
- 2) Relatively new group activity for Haiti;
- 3) Technical and financial assistance available from the National Agricultural Commercialization Service (SECA), and the National Cooperative Council (CNC);
- 4) The timing of cow pea/bean storage and marketing varies by region, as it entails speculation based on widely fluctuating but predictable local seasonal demand; and
- 5) The primary development impact of cow pea/bean storage and marketing is to redistribute income from merchants to producers.

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## B. PROJECTED CASH FLOW WITH BCA LOAN FOR SIX MONTHS (in gourdes)

LOAN PURPOSE: Assist ongoing enterpriseTYPE OF ENTERPRISE: Storage and marketing of cow peas/beansLOCATION: Léogâne

<u>CASH RECEIPTS</u>	I March - May	II June - August
Investment (1)	10,000	10,172
BCA Loan (2)	25,000	0
Sales (3)	0	28,500
<b>TOTAL</b>	<b>35,000</b>	<b>38,672</b>
<hr/>		
<u>CASH DISBURSEMENTS</u>		
Purchase of Raw Materials (4)	22,500	0
Purchase of Equipment (5)	250	0
Purchase of Tools	0	0
Repairs	0	0
Wages and Salaries (6)	200	0
Construction (7)	0	0
Rent	0	0
Taxes	0	0
Transport	0	0
Other Expenses (insecticide) (8)	128	0
<b>TOTAL</b>	<b>23,078</b>	<b>0</b>
<hr/>		
<u>PRE-LOAN CASH BALANCE</u>	11,922	38,672
Loan Interest and Commission (9)	1,750	0
Loan Principal and Savings Guarantee (10)	0	25,500
<u>CASH BALANCE</u>	10,172	13,172
Rebate (11)	0	2,500
<u>NET CASH BALANCE</u> (12)	10,172	10,672

COW PEAS/BEAN STORAGE AND MARKETING CASH FLOW FOOTNOTES

- 1) Investment comprises contributions from group members for the first quarter, and cash balance forward for subsequent quarters.
- 2) The BCA loan is for the purchase of group members' cow peas/beans, for one six-month season. The loan interest is 12 percent annually, with 2 percent commission and 2 percent mandatory savings ("savings guarantee"). The commission and interest are discounted, and the principal is repaid at the end of the second quarter, together with the mandatory savings.
- 3) Sales are calculated as follows:
 

Quarter III - 2,500 marmites less 5% during storage,  
@ ¢ 12.0/marmite
- 4) Cow peas/bean purchases are calculated as follows:
 

Quarter I - 2,500 marmites @ ¢ 9.0/marmite
- 5) The only equipment purchased is jute bags, as follows:
 

Quarter I - 125 bags @ ¢ 2.00/bag
- 6) Wages are paid to buyers, as follows:
 

5 buyers/day x 16 days/quarter x ¢ 2.5/day
- 7) The group should construct a secure, dry storage depot before receiving any BCA assistance.
- 8) Insecticide costs are calculated as follows:
 

Quarter I - 17 pounds @ ¢ 7.5/pound
- 9) See footnote #2.
- 10) Ibid.
- 11) The rebate is calculated at ¢ 1.00/marmite x 2,500 marmites.
- 12) The net cash balance at the end of the second quarter will allow the group to leverage a similar BCA loan the following season.

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C. COW PEAS/BEAN STORAGE AND MARKETING  
BREAK-EVEN ANALYSIS: 6-MONTH TIME FRAME  
(in gourdes)

FIXED COSTS PER 6 MONTHS

Commission and Interest Charges	\$ 1,750
Savings Guarantee	500
Depreciation	2,350
Structural Outlays	0
Equipment Repair	0
Rent	0
Taxes	0
Minimum Salary to Owner	0
Other	0
	0
Total Fixed Costs (F)	\$ 4,600

VARIABLE COSTS PER UNIT (1 MARMITE OF COW PEAS/BEANS)

PRODUCT	INPUT	COST	USE PER UNIT PRODUCED	TOTAL COST PER UNIT
1 Marmite of Cow Peas/Beans	Jute Sack	\$ 2.00/sack	.05	\$ .10
	Insecticide	\$ 7.50/lb	.007	.05
	Buyer	\$ 2.50/day	.016	.04
				.04
Total Variable Costs Per Unit (V)				\$ .19

BREAK-EVEN CALCULATION

M = Markup

Q = Break-even volume of sales

$$\begin{aligned} (M) \times (Q) &= (F) + (V) \times (Q) \\ \text{\$ } .20 (Q) &= \text{\$ } 4,600 + \text{\$ } .19 (Q) \\ (Q) &= 460,000 \text{ marmites} \end{aligned}$$

If the markup is  $\text{\$ } .20$ , then the break-even level of cowpeas/beans sales is 460,000 marmites.

The break-even level of cowpeas/beans sales is:

If the markup is:

\text{\\$ } .30		41,818	marmites
.40		21,904	
.50		14,839	
.60		11,220	
.70		9,020	
.80		7,541	
.90		6,479	
1.00		5,679	
1.10	Break-even	5,055	
1.20	Markup if	4,554	
1.30	Expected Cow	4,144	
1.40	Peas/Beans	3,802	
1.50	Sales are	3,511	
1.60	Exceeded	3,262	
1.70		3,046	
1.80		2,857	
1.90		2,690	
2.00		2,541	
2.10		2,408	
-----			
	~ Expected Cow Pea/Bean Sales:		
2.13		2,371	
2.20		2,289	
2.30		2,180	
2.40		2,081	Safety Margin
2.50		1,991	With Expected
2.60		1,909	Markup and
2.70		1,833	Cow Pea/
2.80		1,762	Bean Sales
2.90		1,697	
Expected Markup:	3.00	1,637	
-----			
3.10		1,581	Break-even Cow Pea/ Bean Sales If Expected Markup is Exceeded
3.20		1,528	
3.30		1,479	

## D. COW PEAS/BEAN STORAGE AND MARKETING LOAN GUIDELINES

ITEM	MODEL BUDGET	ACTUAL BUDGET
1) Minimum initial investment		
Building (block and corrogated iron)	¢ 47,000	_____
2) Minimum working capital for 1 year	23,078	_____
3) Minimum contribution from group	10,000	_____
4) Expected retained earnings at the end of the second quarter (1)	10,672	_____
5) BCA loan terms		
Purpose	Working capital for cow pea/bean purchases	_____
Amount	¢ 25,000	_____
Annual interest rate	12 percent	_____
Commission	2 percent	_____
Mandatory savings	2 percent	_____
Repayment period	6 months	_____
Repayment schedule	Discounted commission, and interest; loan principal and mandatory savings at the end of second quarter	_____
6) Minimum group size	500 active members	_____
7) Break-even sales level with expected markup	1,637 marmites of cow peas/beans per year	_____
8) Expected markup	¢ 3.00 per marmite	_____
9) Expected sales level	2,375 marmites of cow peas/beans per year	_____
10) Expected sales level + break-even sales level	1.5 times greater	_____

1 These retained earnings will allow the group to leverage a similar BCA loan the following season.

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- |  |                    |       |
|--|--------------------|-------|
| 11) Expected storage loss                    | 5 percent          | _____ |
| 12) Expected buying price of cow peas/beans  | ¢ 9.0/marmite      | _____ |
| 13) Expected selling price of cow peas/beans | ¢ 12.0/marmite     | _____ |
| 14) Expected rebate to group members         | ¢ 1.00 per marmite | _____ |
| 15) Expected market                          | Domestic           | _____ |

## A. GENERAL ENTERPRISE CHARACTERISTICS

ACTIVITY: Beekeeping and honey commercialization; ongoing activity

REGION: Nationwide

MARKET: Domestic

MODEL BUDGET COMPONENTS:

- 1) Five-year cash flow projection with a ₡ 100,000 BCA loan;
- 2) Five-year break-even analysis with a ₡ 100,000 BCA loan; and
- 3) Beekeeping and honey commercialization loan guidelines.

SPECIAL CONSIDERATIONS:

- 1) Beekeeping can best be done individually, but honey processing, storage, and marketing are more viable when undertaken collectively;
- 2) Beekeeping is a common small-scale rural activity in Haiti;
- 3) Technical and financial assistance are available from the Ministry of Agriculture and the Government of France (FAC);
- 4) July through August is a difficult and risky period, because beehives must be fed daily, and are often depleted anyway; and
- 5) Haitian honey is not yet of exportable quality, and the size of unmet local demand is unknown.

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B. PROJECTED CASH FLOW WITH BCA LOAN FOR FIVE YEARS (in gourdes)

LOAN PURPOSE: Assist ongoing enterprise

TYPE OF ENTERPRISE: Beekeeping and honey commercialization

LOCATION: Nationwide

	YEAR 1				YEAR 2				YEAR 3			
	I June-Aug	II Sept-Nov	III Dec-Feb	IV Mar-May	V June-Aug	VI Sept-Nov	VII Dec-Feb	VIII Mar-May	IX June-Aug	X Sept-Nov	XI Dec-Feb	XII Mar-May
<u>CASH RECEIPTS</u>												
Investment(1)	100,000	114,725	138,275	163,775	160,147	90,772	116,272	141,772	133,144	59,244	82,794	108,294
BCA Loan (2)	100,000	0	0	0	0	0	0	0	0	0	0	0
Sales (3)	45,000	76,500	76,500	76,500	45,000	76,500	76,500	76,500	45,000	76,500	76,500	76,500
TOTAL	245,000	191,225	214,775	240,275	205,147	167,272	192,772	218,272	183,144	135,744	159,294	184,794
<u>CASH DISBURSEMENTS</u>												
Purchase of Raw Materials(4)	30,000	51,000	51,000	51,000	30,000	51,000	51,000	51,000	30,000	51,000	51,000	51,000
Purchase of Equipment (5)	4,375	0	0	0	0	0	0	0	0	0	0	0
Purchase of Tools (6)	9,525	1,950	0	0	0	0	0	0	9,525	1,950	0	0
Repairs	0	0	0	0	0	0	0	0	0	0	0	0
Wages & Salaries	0	0	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0	0	0	0	0
Rent	0	0	0	0	0	0	0	0	0	0	0	0
Taxes	0	0	0	0	0	0	0	0	0	0	0	0
Transport	0	0	0	0	0	0	0	0	0	0	0	0
Other Expenses (food) (7)	84,375	0	0	0	84,375	0	0	0	84,375	0	0	0
TOTAL	128,275	52,950	51,000	51,000	114,375	51,000	51,000	51,000	123,900	52,950	51,000	51,000
<u>PRE-LOAN CASH BALANCE</u>												
Loan Interest and Principal (8)	116,725	138,275	163,775	189,175	90,772	116,272	141,772	167,272	59,244	82,794	108,294	133,794
Commission and Savings Guarantee (9)	0	0	0	29,128	0	0	0	29,128	0	0	0	29,128
NET CASH BALANCE (10)	2,000	0	0	0	0	0	0	0	0	0	0	0
	114,725	138,275	163,775	160,147	90,772	116,272	141,772	138,144	59,244	82,794	108,294	104,666

BEEKEEPING AND HONEY COMMERCIALIZATION  
 PROJECTED CASH FLOW WITH BCA LOAN FOR THREE YEARS - CONTINUATION  
 (in gourdes)

	YEAR 4				YEAR 5			
	XIII June-Aug	XIV Sept-Nov	XV Dec-Feb	XVI Mar-May	XVII June-Aug	XVIII Sept-Nov	XIX Dec-Feb	XX Mar-May
<u>CASH RECEIPTS</u>								
Investment (1)	104,666	35,000	60,791	86,291	82,663	3,763	27,313	52,813
BCA Loan (2)	0	0	0	0	0	0	0	0
Sales (3)	45,000	76,500	76,500	76,500	45,000	76,500	76,500	76,500
TOTAL	149,666	111,791	137,291	162,791	127,663	80,263	103,813	129,313
<u>CASH DISBURSEMENTS</u>								
Purchase of Raw Materials (4)	30,000	51,000	51,000	51,000	30,000	51,000	51,000	51,000
Purchase of Equipment (5)	0	0	0	0	0	0	0	0
Purchase of Tools (6)	0	0	0	0	9,525	1,950	0	0
Repairs	0	0	0	0	0	0	0	0
Wages & Salaries	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0
Rent	0	0	0	0	0	0	0	0
Taxes	0	0	0	0	0	0	0	0
Transport	0	0	0	0	0	0	0	0
Other Expenses (food) (7)	84,375	0	0	0	84,375	0	0	0
TOTAL	114,375	51,000	51,000	51,000	123,900	52,950	51,000	51,000
<u>PRE-LOAN CASH BALANCE</u>								
Loan and Interest	35,000	60,791	86,291	111,791	3,763	27,313	52,813	78,313
Principal (8)	0	0	0	29,128	0	0	0	29,128
Commission and Savings Guarantee (9)	0	0	0	0	0	0	0	0
<u>NET CASH BALANCE</u> (10)	35,000	60,791	86,291	82,663	3,763	27,313	52,813	47,185

BEEKEEPING AND HONEY COMMERCIALIZATION CASH FLOW FOOTNOTES

- 1) Investment comprises contributions from group members for the first quarter, and cash balance forward for subsequent quarters.
- 2) The BCA loan is for working capital only, for five years at 14 percent annually, with 2 percent commission, and 2 percent mandatory savings ("savings guarantee"). The commission is discounted, interest and loan principal are paid in 5 equal installments at the end of each year, and the mandatory savings is paid at the end of the fifth year, upon loan retirement.
- 3) Sales revenues are end-of-quarter figures that are then applied to the purchase of honey from group members during the following quarter. Calculations were made using ¢ 15.00/gallon as a buying price, ¢ 22.50/gallon as a selling price, and the following quantities each quarter:
 

QUARTERS	QUANTITIES
I, V, IX, XIII, XVII	2,000 gallons of honey
II-IV, VI-VIII, X-XII, XIV-XVI, XVIII-XX	3,400 gallons of honey
- 4) Raw material refers to honey produced by group members, purchased at ¢ 15.00/gallon.
- 5) The only heavy equipment the group would add to its stock is 5 honey extraction machines, at ¢ 875.00 each.
- 6) Tools and clothing needed, all on an annual basis, are:

ITEM	QUANTITY	PRICE	TOTAL
Burners	50	¢ 25.00	¢ 1,250.00
Shovels	50	10.00	500.00
Knives	50	10.00	500.00
Wire masks	50	15.00	750.00
Gloves	25	15.00	375.00
Pails	100	20.00	2,000.00
Drums	64	75.00	4,800.00
Pollen taps	50	25.00	1,250.00
Accounting books	10	5.00	50.00
			¢ 11,475.00

- 7) This item refers to food for the bees during the rainy season, usually a daily rotation of one-half pound of flour, one pound of sugar, and three bananas per beehive. This food costs ₡ 135.00 per rainy season per hive; each of the group's 25 members has 25 hives, so the rainy season food bill for the group comes to ₡ 84,375 (₡ 135 x 25 hives x 25 members).
- 8) See footnote #2.
- 9) Ibid.
- 10) At the end of the fifth year, the group has enough cash on hand to continue operations at the same level with a loan of ₡ 50,000, half the amount of the group's prior loan.

C. BEEKEEPING AND HONEY COMMERCIALIZATION  
BREAK-EVEN ANALYSIS: FIVE-YEAR TIME FRAME  
(in gourdes)

FIXED COSTS PER YEAR

Commission	¢	400.00
Interest Charges		9,128.00
Savings Guarantee		400.00
Depreciation		9,551.00
Structural Outlays		0
Equipment Repair		0
Rent		0
Taxes		0
Minimum Salary to Owner		0
Other (food)		0
		84,375.00
Total Fixed Costs (F)	¢	102,854.00

VARIABLE COSTS PER UNIT (GALLON OF HONEY)

NO VARIABLE COSTS:

TOTAL VARIABLE COSTS PER UNIT (V) = 0

BREAK-EVEN CALCULATION

$$\begin{aligned}
 (P) \times (Q) &= (F) + (V) \times (Q) \\
 \text{¢ } 22.5 (Q) &= \text{¢ } 102,854 \\
 (Q) &= 4,572 \text{ gallons/year}
 \end{aligned}$$

RATIO OF EXPECTED TO BREAK-EVEN LEVEL OF SALES:

E = 12,200 gallons/year  
E/Q = 2.7 times greater

KEY

P = Selling Price  
Q = Volume of Sales  
E = Expected Volume of Sales

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## D. BEEKEEPING AND HONEY COMMERCIALIZATION LOAN GUIDELINES

ITEM	MODEL BUDGET	ACTUAL BUDGET
1) Minimum initial investment		
625 boxes @ \$ 50/box	\$ 31,250.00	_____
10 hives @ \$ 75/hive	750.00	_____
15 swarms on branches @ \$ 100/swarm	1,500.00	_____
50 burners @ \$ 25/burner	1,250.00	_____
50 shovels @ \$ 10/shovel	500.00	_____
50 knives @ \$ 10/knife	500.00	_____
50 wire masks @ \$ 15/mask	750.00	_____
25 gloves @ \$ 15/glove set	375.00	_____
100 pails @ \$ 20/pail	2,000.00	_____
64 drums @ \$ 75/drum	4,800.00	_____
50 pollen taps @ \$ 25/tap	1,250.00	_____
10 accounting books @ \$ 5/book	50.00	_____
5 extracting machines @ \$ 875/machine	4,375.00	_____
1 storage depot	<u>7,500.00</u>	_____
	\$ 56,850.00	_____
2) Minimum working capital for 1 year of moderate production (12,200 gallons of honey)	\$ 267,375.00	_____
3) Minimum contribution from group	100,000.00	_____
4) Expected retained earnings at the end of Year 5 (1)	47,185.00	_____

1 These retained earnings will enable the group to continue operations at the same level with a loan of \$ 50,000, half of the amount of the group's prior loan.

5) BCA loan terms			
	Purpose	One-half the cost of one year's honey purchases	_____
	Amount	¢ 100,000	_____
	Annual interest rate	14 percent	_____
	Commission	2 percent	_____
	Mandatory savings	2 percent	_____
	Repayment period	5 years	_____
	Repayment schedule	Discounted commission, interest and loan principal in 5 equal payments at the end of each year; mandatory savings upon loan retirement at the end of the fifth year	_____ _____ _____ _____ _____ _____ _____ _____ _____
6)	Minimum group size	25 active members	_____
7)	Break-even sales level	4,572 gallons of honey/year	_____
8)	Expected sales level	12,200 gallons of honey/year	_____
9)	Expected sales level ÷ break-even sales level	2.7 times greater	_____
10)	Expected price of food	¢ 135/hive/rainy season	_____
11)	Expected buying price of honey	¢ 15.00 per gallon	_____
12)	Expected selling price of honey	¢ 22.50/gallon	_____
13)	Expected market	Domestic	_____ _____

A. GENERAL ENTERPRISE CHARACTERISTICS

ACTIVITY: Motorized fishing; new activity

REGION: Jacmel

MARKET: Domestic

MODEL BUDGET COMPONENTS:

- 1) One-year cash flow projection with a \$ 25,000 BCA loan;
- 2) One-year break-even analysis with a \$ 25,000 BCA loan; and
- 3) Motorized fishing loan guidelines.

SPECIAL CONSIDERATIONS:

- 1) Financially and technologically infeasible to do individually;
- 2) Relatively new activity for Haiti;
- 3) Technical and financial assistance available from the Government of France (FAC);
- 4) The boat motor must be imported; and
- 5) Motorized fishing in the Jacmel area is a high-risk endeavor because it requires adaptation of current morning coastal fishing to multi-day, deep-sea fishing beyond the continental shelf in order to generate revenues sufficient to cover investment and operating expenses.

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## B. PROJECTED CASH FLOW WITH BCA LOAN FOR ONE YEAR (in gourdes)

LOAN PURPOSE: Establish new enterpriseTYPE OF ENTERPRISE: Motorized fishingLOCATION: Jacmel region

	I	II	III	IV
<u>CASH RECEIPTS</u>				
Investment (1)	72,410	25,770	30,040	33,650
BCA Loan (2)	25,000	0	0	0
Sales (3)	17,745	17,745	17,745	17,745
TOTAL	115,155	43,515	47,785	51,395
<hr/>				
<u>CASH DISBURSEMENTS</u>				
Purchase of Raw Materials (4)	4,070	4,070	4,070	4,070
Purchase of Equipment (5)	72,410	0	660	0
Purchase of Tools	0	0	0	0
Repairs (6)	1,561	1,561	1,561	1,561
Salaries to Owners (7)	4,500	4,500	4,500	4,500
Construction	0	0	0	0
Rent	0	0	0	0
Taxes	0	0	0	0
Transport (8)	683	683	683	683
Other Expenses (9)	2,661	2,661	2,661	2,661
TOTAL	85,885	14,475	14,135	13,475
<hr/>				
<u>PRE-LOAN CASH BALANCE</u>	29,270	30,040	33,650	37,920
Loan Interest and Commission (10)	3,500	0	0	0
Loan Principal and Savings Guarantee (11)	0	0	0	25,500
<u>NET CASH BALANCE</u> (12)	25,770	30,040	33,650	12,420

MOTORIZED FISHING CASH FLOW FOOTNOTES

- 1) Investment comprises contributions from group members and FAC for the first quarter, and cash balance forward for subsequent quarters.
- 2) The BCA loan is for working capital only, for one year at 12 percent annually, with 2 percent commission and 2 percent mandatory savings ("savings guarantee"). The commission and interest are discounted, and the principal is repaid at the end of the fourth quarter, together with the mandatory savings.
- 3) Sales are calculated on the following daily catches:
- |                     |   |                |
|---------------------|---|----------------|
| 20 lbs. @ ₡ 3.5/lb. | = | ₡ 70/day       |
| 50 lbs. @ ₡ 2.5/lbs | = | <u>125/day</u> |
|                     |   | ₡ 195/day      |
- 4) Primary material inputs are, on a daily basis:
- |          |                 |
|----------|-----------------|
| Dye      | ₡ 1.27/day      |
| Gasoline | 36.25/day       |
| Oil      | <u>7.20/day</u> |
|          | ₡ 44.72/day     |
- 5) Necessary equipment for motorized fishing is as follows:
- |  |            |
|--|------------|
| Boat (13'x7'x6') with<br>3-speed motor | ₡ 71,429   |
| 4 single-piece nets<br>@ ₡ 87.25 each  | 349        |
| 4 three-piece nets<br>@ ₡ 77.75 each   | 311        |
| 12 fishlines<br>@ ₡ 26.75 each         | <u>321</u> |
|  | ₡ 72,410   |
- 6) Repairs were calculated as follows:
- |  |                    |
|--|--------------------|
| Nets - ₡ 175 every<br>15 days            | ₡ 1,062/quarter    |
| Boat (paint) - ₡ 500<br>every 6 months   | 250/quarter        |
| Boat (planks) - ₡ 2,000<br>every 2 years | <u>249/quarter</u> |
|  | ₡ 1,561/quarter    |

- 7) Salaries to owners were calculated on the basis of a 12-person group which rotated 3-person teams weekly. Each fisherman was assumed to earn ¢ 125 per month.
- 8) Transport costs were figured at ¢ 7.50 per day.
- 9) The group of fishermen interviewed while constructing this budget received the use of a motorized boat and all complementary equipment from FAC in return for paying FAC 15 percent of each day's catch, or ¢ 2,661 quarterly.
- 10) See footnote #2.
- 11) Ibid.
- 12) The net cash balance at the end of the fourth quarter will allow the fishermen to continue the same level of operations without further assistance from the BCA.

C. MOTORIZED FISHING BREAK-EVEN ANALYSIS: ONE-YEAR TIME FRAME  
(in gourdes)

FIXED COSTS PER YEAR

Commission and Interest Charges	¢ 3,500
Savings Guarantee	500
Depreciation	8,623
Structural Outlays	0
Equipment Repair	6,244
Rent	0
Taxes	0
Minimum Salary to Owners	18,000
Other (15% of catch to FAC)	10,644
<b>Total Fixed Costs (F)</b>	<b>¢ 47,511</b>

VARIABLE COSTS PER UNIT (1 POUND OF FISH)

PRODUCT	INPUT	COST	USE PER UNIT PRODUCED	TOTAL COST PER UNIT
1 pound of fish	Dye	¢ 1.27/day	1/70	¢ .018
	Gasoline	36.25/day	1/70	.518
	Oil	7.20/day	1/70	.103
	Transport	7.50/day	1/70	.107
<b>Total Variable Costs Per Unit (V)</b>				<b>¢ .746</b>

BREAK-EVEN CALCULATION

$$\begin{aligned}
 (P) \times (Q) &= (F) + (V) \times (Q) \\
 \text{¢ } 2.79(Q) &= \text{¢ } 47,511 + \text{¢ } .746(Q) \\
 (Q) &= 23,244 \text{ pounds of fish per year}
 \end{aligned}$$

RATIO OF EXPECTED TO BREAK-EVEN LEVEL OF SALES

$$\begin{aligned}
 E &= 25,550 \text{ pounds of fish per year} \\
 E/Q &= 1.1 \text{ times greater}
 \end{aligned}$$

KEY

- P = Selling Price
- Q = Break-even Volume of Sales
- E = Expected Volume of Sales

D. MOTORIZED FISHING LOAN GUIDELINES

ITEM	MODEL BUDGET	ACTUAL BUDGET
1) Minimum initial investment		
Boat (13'x7'x6') with 3-speed motor	¢ 71,429	_____
4 single-piece nets @ ¢ 87.25 each	349	_____
4 three-piece nets @ ¢ 77.75 each	311	_____
12 fishlines @ ¢ 26.75 each	<u>321</u>	_____
	¢ 72,410	_____
2) Minimum working capital for 1 quarter of moderate production (6,370 lbs. of fish)	13,475	_____
3) Minimum contribution from fishermen and/or FAC	72,410	_____
4) Expected retained earnings at the end of the fourth quarter (1)	12,420	_____
5) BCA loan terms		
Purpose	Working capital for two quarters	_____
Amount	¢ 25,000	_____
Annual interest rate	12 percent	_____
Commission	2 percent	_____
Mandatory savings	2 percent	_____
Repayment period	1 year	_____
Repayment schedule	Discounted commission and interest; loan principal and mandatory savings at end of fourth quarter	_____
6) Minimum group size	12 members	_____
7) Break-even sales level	23,244 pounds of fish per year	_____

<sup>1</sup>These retained earnings will allow the fishermen to continue operations at the same level without further BCA assistance.

- |  |                                |       |
|--|--------------------------------|-------|
| 8) Expected sales level                          | 25,550 pounds of fish per year | _____ |
| 9) Expected sales level ÷ break-even sales level | 1.1 times greater              | _____ |
| 10) Expected price of gasoline                   | ¢ 7.25/gallon                  | _____ |
| 11) Expected price of repairs                    | ¢ 1,561/quarter                | _____ |
| 12) Expected salaries to owners                  | ¢ 4,500/quarter                | _____ |
| 13) Expected selling price of fish               | ¢ 2.5-3.5/lb.                  | _____ |
| 14) Expected market                              | Domestic                       | _____ |

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## A. GENERAL ENTERPRISE CHARACTERISTICS

ACTIVITY: Production and marketing of gabions; new activity

REGION: Nationwide

MARKET: Domestic

MODEL BUDGET COMPONENTS:

- 1) Three-year cash flow projection with a \$ 50,000 BCA loan;
- 2) Three-year break-even analysis with a \$ 50,000 BCA loan; and
- 3) Gabion production loan guidelines.

SPECIAL CONSIDERATIONS:

- 1) Financially and technologically infeasible to do individually;
- 2) Relatively new activity for Haiti;
- 3) Technical and financial assistance available from the National Cooperative Council (CNC), Ministry of Agriculture's Artisan Service, the Organization for Development of the North (ODN), and the Government of France (FAC);
- 4) The primary input, wire, must be imported upon payment three months in advance; and
- 5) Gabion producers are highly dependent upon the public sector market.

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**PROJECTED CASH FLOW WITH BCA LOAN FOR THREE YEARS**  
(in gourdes)

LOAN PURPOSE: Establish new enterprise

TYPE OF ENTERPRISE: Production of gabions

LOCATION: Nationwide

	-----YEAR 1-----				-----YEAR 2-----				-----YEAR 3-----			
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
<b>CASH RECEIPTS</b>												
Investment (1)	8,875	9,000	35,890	27,060	27,510	36,341	37,601	49,901	40,664	52,964	65,264	77,564
BCA Loan (2)	50,000	0	0	0	0	0	0	0	40,664	52,964	65,264	77,564
Sales (3)	0	37,800	37,800	67,500	51,075	51,975	67,500	67,500	0	0	0	0
<b>TOTAL</b>	<b>58,875</b>	<b>46,800</b>	<b>73,680</b>	<b>95,560</b>	<b>78,585</b>	<b>88,316</b>	<b>105,101</b>	<b>117,401</b>	<b>108,164</b>	<b>120,464</b>	<b>132,764</b>	<b>145,064</b>
<b>CASH DISBURSEMENTS</b>												
Purchase of Raw Materials (4)	40,000	0	35,700	27,013	27,489	35,700	35,700	35,700	35,700	35,700	35,700	35,700
Purchase of Equipment (5)	625	0	0	0	0	0	0	0	0	0	0	0
Purchase of Tools (6)	250	0	0	0	0	0	0	0	0	0	0	0
Repairs	0	0	0	0	0	0	0	0	0	0	0	0
Wages & Salaries (7)	0	10,920	10,920	19,500	14,755	15,015	19,500	19,500	19,500	19,500	19,500	19,500
Construction (8)	8,000	0	0	0	0	0	0	0	0	0	0	0
Rent	0	0	0	0	0	0	0	0	0	0	0	0
Taxes	0	0	0	0	0	0	0	0	0	0	0	0
Other Expenses	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>48,875</b>	<b>10,920</b>	<b>46,620</b>	<b>46,513</b>	<b>42,244</b>	<b>50,715</b>	<b>55,200</b>	<b>55,200</b>	<b>55,200</b>	<b>55,200</b>	<b>55,200</b>	<b>55,200</b>
<b>PRE-LOAN CASH BALANCE</b>												
Loan and Interest Principal (9)	10,000	35,880	27,060	49,047	36,341	37,601	49,901	62,201	52,964	65,264	77,564	89,864
Commission and Savings Guarantee (10)	0	0	0	21,537	0	0	0	21,537	0	0	0	21,537
<b>NET CASH BALANCE (11)</b>	<b>9,000</b>	<b>35,880</b>	<b>27,060</b>	<b>27,510</b>	<b>36,341</b>	<b>37,601</b>	<b>49,901</b>	<b>40,664</b>	<b>52,964</b>	<b>65,264</b>	<b>77,564</b>	<b>67,327</b>

GABION PRODUCTION CASH FLOW FOOTNOTES

- 1) Investment comprises contributions from group members for the first quarter, and cash balance forward for subsequent quarters.
  - 2) The BCA loan is for working capital only, for three years at 14 percent annually, with 2 percent commission and 2 percent mandatory savings ("savings guarantee"). The commission is discounted, interest and loan principal are paid in 3 equal installments at the end of each year, and the mandatory savings is paid at the end of the third year, upon loan retirement.
  - 3) The primary material input of gabion production, wire, must be imported. The resulting 3-month time lag means that the group cannot produce or sell any gabions during the first quarter. Subsequent sales revenues are based on a production level of between 168 and 300 gabions per quarter depending on working capital available to import wire, with a selling price of \$ 225.00 per gabion. Expected sales are as follows:
 

Quarter I:	0 gabions
Quarters II-III:	168 gabions
Quarter V:	227 gabions
Quarter VI:	231 gabions
Quarters IV, VII-XII:	300 gabions
- However, projected production capacity is 390 gabions per quarter under optimal conditions.
- 4) As described in footnote #3, the primary material input of gabion production is imported wire, which sells for \$ 4.25 per kilogram.
  - 5) The only equipment necessary for gabion production is workbenches. The cash flow is based on 5 hand-built wooden workbenches, the appropriate number for a workgroup of 10 people; each workbench costs \$ 125.
  - 6) Gabion production requires small hand-tools such as wire cutters, wire benders, etc.
  - 7) This item consists of salaries paid to group members at \$ 32.50 per gabion per worker. It takes two workers to build one gabion in one day, so the group can make 5 gabions daily.
  - 8) Gabion production requires a secure storage facility. The cash flow is based on a moderately-sized, traditional (wood or clay and thatch) storage depo .
  - 9) See footnote #2.

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10) Ibid.

11) The outstanding cash balance at the end of the 12th quarter will permit the gabion producers to continue to buy wire one quarter ahead without further BCA assistance.

C. GABION PRODUCTION  
BREAK-EVEN ANALYSIS: THREE-YEAR TIME FRAME  
(in gourdes)

FIXED COSTS PER YEAR

Commission	\$ 83.00
Interest Charges	1,218.00
Savings Guarantee	83.00
Depreciation	144.00
Structural Outlays	0
Equipment Repair	0
Rent	0
Taxes	0
Minimum Salary to Owner	0
Other	0
	0
Total Fixed Costs (F)	\$ 1,528.00

VARIABLE COSTS PER UNIT (1 GABION 3M<sup>3</sup>)

PRODUCT	INPUT	COST	USE PER UNIT PRODUCED	TOTAL COST PER UNIT
Gabion 3m <sup>3</sup>	Wire	\$ 4.25/kg	28 kgs	\$ 119.00
	Labor	32.50/day	2 days	65.00
Total Variable Costs Per Unit (V)				\$ 184.00

BREAK-EVEN CALCULATION

$$\begin{aligned}
 (P) \times (Q) &= (F) + (V) \times (Q) \\
 \$ 225 (Q) &= \$ 1,528 + \$ 184.00(Q) \\
 (Q) &= 38 \text{ gabions/quarter}
 \end{aligned}$$

RATIO OF EXPECTED TO BREAK-EVEN LEVEL OF SALES

$$\begin{aligned}
 E &= 168 \text{ to } 300 \text{ gabions/quarter} \\
 E/Q &= 4.4 \text{ to } 7.9 \text{ times greater}
 \end{aligned}$$

## KEY

P = Selling Price  
 Q = Break-even Volume of Sales  
 E = Expected Volume of Sales

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## D. GABION PRODUCTION LOAN GUIDELINES

ITEM	MODEL BUDGET	ACTUAL BUDGET
1) Minimum initial investment		
Storage depot	ø 8,000	
5 workbenches	625	
Wire-working tools	250	
	ø 8,875	
2) Minimum working capital for 1 quarter of moderate production (300 gabions per quarter)	55,200	
3) Minimum contribution from group	8,875	
4) Expected retained earnings at the end of quarter XII (1)	67,327	
5) BCA loan terms		
Purpose	Supply of wire for one quarter	
Amount	ø 50,000	
Annual interest rate	14 percent	
Commission	2 percent	
Mandatory savings	2 percent	
Repayment period	3 years	
Repayment schedule	Discounted commission, interest and loan principal in 3 equal payments at the end of each year; mandatory savings upon loan retirement at the end of the third year	
6) Minimum group size	10 members	
7) Break-even sales level	38 gabions/quarter	

1. These retained earnings will allow the cooperative to continue to buy wire 1 quarter in advance, but without further BCA assistance.

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- |   |                                   |       |
|---|-----------------------------------|-------|
| 8) Expected sales level                           | 168 to 200 gabions/quarter        | <hr/> |
| 9) Expected sales level + break-even sales level  | 4.4 to 7.9 times greater          | <hr/> |
| 10) Expected price of wire                        | ¢ 4.25/kg                         | <hr/> |
| 11) Expected price of labor                       | ¢ 32.50/day                       | <hr/> |
| 12) Expected selling price (3m <sup>3</sup> unit) | ¢ 225/unit                        | <hr/> |
| 13) Expected market                               | GOH, international donor agencies | <hr/> |

## CONCLUSIONS

### Specific Risks and Returns

The following figure summarizes the risks and returns to group-managed activities for which model budgets were prepared. Coffee processing, storage, and marketing is a high value-added activity that generates foreign exchange and redistributes income from merchants to producers. It offers a high financial return, but is dependent on a seasonal, quite volatile export commodity market.

Rice, maize, and cowpeas/bean storage and marketing are similar to coffee storage and marketing in that the financial return is high, and they redistribute income from merchants to producers. The two primary differences are that rice, maize, and cowpeas/bean storage and marketing, unlike coffee processing, do not generate new income, and are dependent on widely fluctuating but predictable domestic seasonal demand rather than on unpredictable foreign demand.

Millet storage and marketing offers only a moderate financial return, because the price of millet does not rise as much as that of rice, maize, and cowpeas/beans during the post-harvest months. In most other respects, the risks and returns to millet storage and marketing are similar to those of rice, maize, and cowpeas/bean storage and marketing.

Beekeeping and honey commercialization also offers only a moderate financial return, due primarily to uncertain domestic demand and the fact that Haitian honey is not of export quality. However, beekeeping does not require a large initial investment and is amenable to modular expansion, and honey has a positive development impact because of its high protein content.

RISKS AND RETURNS TO GROUP-MANAGED ENTERPRISES

ENTERPRISE	SIZE OF GROUP	MARKET DEMAND	FINANCIAL RETURN	OTHER DEVELOPMENT CONSIDERATIONS
Coffee Processing, Storage, and Marketing	75-800 members	Seasonal, highly volatile export commodity market	High	Generates foreign exchange; high value-added activity; redistributes income from merchants to producers
Rice Storage and Marketing	50-500 members	Widely fluctuating but predictable domestic seasonal demand	High	Redistributes income from merchants to producers
Maize Storage and Marketing	50-500 members	Widely fluctuating but predictable domestic seasonal demand	High	Redistributes income from merchants to producers
Millet Storage and Marketing	50-500 members	Widely fluctuating but predictable domestic seasonal demand	Moderate	Redistributes income from merchants to producers
Cow Peas/Bean Storage and Marketing	50-500 members	Widely fluctuating but predictable domestic seasonal demand	High	Redistributes income from merchants to producers
Beekeeping and Honey Commercialization	25-50 members	Honey not export quality; uncertain domestic demand	Moderate	Not labor intensive; amenable to modular expansion; high protein content
Motorized Ocean Fishing	12-48 members	High, year-round domestic demand	Negative	Motor imported; high initial investment; labor intensive; high protein content
Gabion Production and Marketing	10-20 members	Public sector (GOH, international agencies) is primary market	High	Wire (sole material input) imported; labor intensive; decreases maintenance costs when used for infrastructure development

Motorized ocean fishing offers a negative financial return, given current fishing practices and technology. Two other drawbacks to motorized fishing are its high initial investment and imported motor. However, if new technologies and practices are forthcoming, motorized ocean fishing could cater to high, year-round domestic demand. Moreover, fishing is labor intensive, and fish have a very high protein content.

The last group activity investigated, gabion fabrication and marketing, is a relatively new, highly lucrative collective enterprise. Gabions can be produced in small groups, is labor intensive, has a steady public sector market, and decreases maintenance costs when used for infrastructure development. The principal drawback to gabion production is that the sole material input, wire, must be imported.

#### BCA Operational Implications

Lending to groups for collectively managed farm and off-farm activities is very different from lending to agricultural credit societies for individually managed farm enterprises. Group-managed enterprises not only entail the usual technical and financial constraints of individually managed activities, but creditor risk is further compounded by the organizational and management problems inherent in any collective endeavor. These risks also make group loans more expensive to administer, for they require rigorous screening and continuous supervision, especially since they tend to be large loans weakly guaranteed by limited group liability.

Operationally, this means that the BCA must:

- Establish policy guidelines for lending to group managed enterprises that reconcile the tradeoffs between higher risks and administrative costs, and greater clientele coverage;

- Develop clear group screening and supervision procedures and specific lending guidelines for its field agents;
- Train its agents to apply the model budget methodology to specific loan applications;
- Utilize the expertise of local institutions whose primary work is fostering the growth and development of group-managed activities; and
- Implement all changes slowly and on a pilot basis, under careful supervision and detailed monitoring.

## CHAPTER FIVE CONCLUSIONS

### GENERAL

Although the study team has done its best to prepare a useful collection of model enterprise budgets for BCA field agents to use in evaluating loan applications and in setting lending terms and procedures, it drew up these budgets in a policy vacuum and amid considerable operational ambiguity. Thus, before the BCA attempts to apply any of the budgets presented in this manual, it should determine:

- Its administrative and financial capability to expand and diversify operations, as the BCA is currently in danger of spreading itself too thin, while not yet having fulfilled its primary mandate;
- The risks and returns to loan portfolio expansion and diversification with the BCA's current and projected resource base and cost structure, since lending to both individually and group managed SMEs entails very different professional skills, operational procedures, and financial exposure than those of lending to small-scale farmers through agricultural credit societies;
- Priority crops and SMEs;
- Lending procedures and terms for farm enterprises, and individually and group managed SMEs;
- A detailed plan for the phased implementation of any changes from current policies or procedures;
- Location-specific experiments, on a pilot basis, for new lending activities, and the careful monitoring and assessment of these activities' results; and
- How best to coordinate BCA activities with other agencies working in similar areas.

Moreover, before asking its field agents to use the model budgets presented in this manual, the BCA should:

- o Offer its staff a comprehensive training program on the uses and abuses of these budgets;
- o Teach its field agents how to use complementary decision-making tools;
- o Stress the fact that each budget is only a model that must be adjusted for each specific loan application; and
- o Highlight the importance of qualitative indicators, field experience, and good judgment in making loan decisions and in setting loan terms.

### FARM ENTERPRISE BUDGETS

#### Specific Risks and Returns

A review of the model farm enterprise budgets indicates that farm enterprises fall into three distinct but not mutually exclusive categories. The first category is those enterprises that can support a loan only with a grace period: banana-plantain, sugar cane, and coffee. The second category is those enterprises that can support a loan without any grace period but cannot refinance themselves at the end of a natural production cycle: maize/cow peas, groundnuts, Irish potatoes, irrigated rice, tomatoes, cabbage/peas, cassava, irrigated maize, and broiler production. The third category, which overlaps with the first category, comprises farm enterprises, some with a grace period and some without, that can refinance themselves at the end of the loan period: banana-plantain, yams, cattle fattening, cowpeas, and onions/carrots.

However, the BCA must also consider factors other than the enterprise's financial return, such as nutritional impact, labor intensity, and future markets. For example, cow peas/beans have a very high protein content, rice farming is quite labor intensive, and vegetables such as tomatoes and cabbage, although potentially very profitable, have a very limited scope for market expansion.

In any event, the BCA should protect itself by requiring the entrepreneur to contribute 30-40 percent of the total cost of production in terms of fixed assets, cash, and/or family labor. Farmers who own their land and/or own some livestock are especially good risks. Particularly high-risk crops are sugar cane and coffee; in fact, given the role of CALDOS in sugar cane processing, it will be very difficult for the BCA to carry out a successful credit program without a three-way agreement between the farmer, BCA, and CALDOS.

### BCA Operational Implications

In terms of applying the model budgets, BCA agents must adjust them to accommodate the demands of specific loan requests. However, it will not be cost effective to do this partial budgeting for each individual member of the SAC; instead, detailed feasibility studies should be done only for entire SACs (or subgroups within SACs), large individual loans, and large livestock enterprises. The BCA's Division of Studies and Research should try to update the manual as needed.

Finally, BCA activities should be geared toward supporting technological packages tested and proven by the Department of Agriculture, which is not the case at present.

## INDIVIDUALLY MANAGED SMALL- AND MEDIUM- SCALE ENTERPRISE BUDGETS

### Specific Risks and Returns

The final figure in Chapter Three summarizes the specific risks and returns to individually managed SMEs for which feasibility studies were done. Fishing, sugar syrup, and clairin have the highest market demand of all the products reviewed, while

fishermen are the only off-farm entrepreneurs who could be organized readily into societies, since many already work in groups.

Although motorized milling is an extremely high value added off-farm activity, the market for this service was saturated in all areas visited by the study team. Only if agricultural production increases would additional mills be needed in these areas. Hand corn milling cannot compete effectively with the motorized service since it is 20 times as expensive; however, hand mills would be extremely valuable to isolated farm families who do not have access to motorized mills.

White bread is a luxury good that relies upon imported wheat and has its greatest market in urban areas. Demand for the product is expected to increase if rural incomes rise.

Salt production through evaporation of sea water from huge basins is extremely costly, and it is important to examine carefully any stated needs for working capital. Those who construct many \$ 20,000 basins may have alternative sources of funds.

The market for plows seems small; increased plow production must be tied to strategies being promoted by agricultural extension services. If the agricultural extension agents promote the use of plows and provide farm management technical assistance, then the BCA might consider financing the expansion of small-scale plow manufacturers. The same reasoning applies to cement block producers. Loans to this sector should be coordinated with construction project activity.

The demand for domestically produced fishnets also seems high, but it may be difficult to increase the production of this extremely labor intensive activity. A fisherman might be able to manage 12 people spinning one net each month on the beach; it is unlikely he could triple that production level.

### BCA Operational Implications

Granting loans to individual small- and medium-scale off-farm enterprises is very different from lending to agricultural credit societies. SME loans:

- Are higher risk;
- Incur high administrative costs due to screening procedures;
- Require different disbursement procedures;
- Require loan agents familiar with SME operations; and
- Require a different information system.

The BCA therefore needs to establish policy guidelines upon which to grant loans. The budget studies assumed that loans could be given for working capital, equipment purchases, or both. Working capital could be provided to on-going enterprises, while equipment purchases could be used to establish new enterprises. In most cases, equipment purchase loans should be accompanied by working capital loans to ensure that the enterprise can begin operations at a reasonable level. Also, given limited funds, the size of loans determines how many loans will be disbursed. For example, the BCA must decide if it wishes to fund one medium-sized clairin producer, or three small-scale producers.

The BCA agents must be carefully trained in the methodology used to form these model budgets before they apply manual guidelines in actually disbursing any loans. Without sufficient training, loan default rates will be high.

The BCA should coordinate its activities carefully with agricultural development activities in each region. For example, although the market for milling machines seems saturated in many regions, if grain production increases, then the demand for this

service will also increase. Likewise, plow production depends upon techniques being promoted by the agricultural extension agencies. In addition, the BCA should collaborate with IDAI to ensure that their operations will not overlap.

## GROUP-MANAGED ENTERPRISE BUDGETS

### Specific Risks and Returns

The last figure in Chapter Four summarizes the risks and returns to group-managed activities for which model budgets were prepared. Coffee processing, storage, and marketing is a high value-added activity that generates foreign exchange and redistributes income from merchants to producers. It offers a high financial return, but is dependent on a seasonal, volatile export commodity market.

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