



USAID | **HAITI**
FROM THE AMERICAN PEOPLE

CENTRE DE TRANSFORMATION AGRO-INDUSTRIEL (CETAI) BUSINESS PLAN

Mars 2012

This publication was produced for review by the United States Agency for International Development. It was prepared by CETAI for the WINNER Project.

CENTRE DE TRANSFORMATION AGRO-INDUSTRIEL (CETAI) BUSINESS PLAN

Contract No.EPP-1-00-04-00020-00 Task Order No. 4

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

Table of Contents

Executive Summary.....	2
Company	3
Market.....	5
<i>The Product</i>	5
<i>Size and Trends</i>	6
<i>Competition</i>	10
<i>Customer</i>	12
<i>Marketing Strategy</i>	12
<i>Pricing</i>	12
<i>SWOT Analysis</i>	14
Operation	15
<i>Location of the project</i>	15
<i>Processing</i>	16
<i>Choice of the technology</i>	17
<i>Choice of the equipment</i>	17
<i>Choice of the equipment suppliers</i>	17
<i>Choice of the labor</i>	17
Human Resource	18
<i>Management</i>	18
<i>Labor</i>	18
Finance	19
<i>Project cost</i>	19
<i>Financing plan</i>	19
<i>Investment budget</i>	20
<i>Operational Costs</i>	20
<i>Working capital</i>	22
<i>Cost of capital</i>	22
<i>Dividend policy</i>	22
<i>Income tax</i>	23
<i>Break-even analysis</i>	23
<i>Income Statement</i>	24
<i>Projected Balance Sheet</i>	25
Risk analysis and recommendations	26
<i>Technical risk</i>	26
<i>Commercial risk</i>	26
<i>Contextual risk</i>	26
<i>Operational risk</i>	26
<i>Raw material volume risk</i>	26
Sources:	27

Executive Summary

CETAI stands for **C**entre de **T**ransformation **A**gro-**I**ndustriel. Mr. Carlo Darbouze is the principal promoter of the company. CETAI S.A. is looking for financing from local financial institutions such as the FDI to build and operate a food processing and conditioning plant project based in the Arcahaie region. The plant will primarily condition beans, clean, dehydrate and package them initially in the 50kg polypropylene bags and eventually pack the beans in 1 to 5 lbs pouches.

Mr. Darbouze has more than 25 years of experience in the industry; he has worked for many companies in the USA. Today, he is the General Manager of Miami Bottling & Packaging Group, a company based in North Miami which processes a portfolio of food products and drinks. WINNER, Watershed Initiative for National Natural Environmental Resources, has decided to encourage CETAI by helping organize farmer associations into a cooperative, FACMA, which will integrate CETAI as a shareholder. FACM stake in CETAI is set at 20%. This partnership will yield great benefits for the region, FACMA, and CETAI.

CETAI's business objective is to take advantage of the harvest season in the Corridor of Matheux which starts in June 2012. This document will provide more detailed information on the company, its owners, the beans market, the competition, and the elaborated financial plan.

The total project cost is \$1,630,980.00 US; CETAI will bring \$1,043,766.00 US as equity; CETAI is asking for a loan of **\$587,214.00** US which represents 36% of project cost.

Financing plan		
	Amount	# of shares
Total cost	1,630,980	
Equity already injected	\$ 164,500	1,000
New equity to be injected	\$ 879,266	-
Total equity	\$1,043,766	1,000
New debt to be issued	\$ 587,214	
Total debt	\$ 587,214	36.00%
Total resources	\$ 1,630,980	
Interest rate on debt	8.00%	
Debt maturity (Including the grace period)	6. Years	
Grace period	1 Years	

Company

CETAI is the name of the company; it stands for **C**entre de **T**ransformation **A**gro-**I**ndustriel. CETAI is a food processing and conditioning plant project based in the Arcahaie region. The plant will primarily condition beans, cleaning, dehydrating and packaging them, and as the next step will process banana and vegetable to make a beverage called The Shake (similar to a Nutrament Shake).

CETAI has obtained the support of the Watershed Initiative for National Natural Environmental Resources (WINNER), sponsored exclusively by the USAID. WINNER is working with multiple farmer associations in the Corridor of Matheux region with the aim of creating a Cooperative which in turn will join CETAI as a shareholder.

This partnership of experienced Haitian entrepreneurs and experience farmers holds great potential. It is key to adding value to products that, in the past, could not make it to market due to poor road conditions, poor storage and technical infrastructure. Incorporating the Cooperative into the capital of CETAI will provide added revenues to the farmer/owners and secure minimum quota production for the plant to be operational all season long.

The principles of CETAI have great expertise and experience in designing, building, and setting up a processing and packaging plant. Since the plant will be run and operated by Haitian workers, these employees will receive training on equipment and processes.

Carlo Darbouze is the principle promoter of CETAI. Mr. Darbouze is a Haitian-American electrical and manufacturing engineer with extensive experience (more than 23 years) in the manufacturing sector in southern Florida, USA. Mr. Darbouze is currently the general manager of Miami Bottling & Packaging Grp, located in Miami Florida, since June 2001. The Miami company is a packaging plant and sales office in one. Some of their products are sold in supermarkets all over Miami and Fort Lauderdale. One of their most profitable products is the Madame Gougousse brand which consists of imported rice, packaged in 5 lbs pouches and 25 lbs bags. The other successful product is an energy drink called Deportiva or Sportage which comes in Gatorade like bottles or in a powder form.

Mr. Darbouze holds a Bachelor's degree in Electrical Engineering from CUNY's City College of New York, class of 1989. He is very active in sports and is fluent in French, English, Spanish, and Creole. Mr. Darbouze owns 60% of the company's shares and is the President Directeur General, PDG.

Valbrun Leveque is the treasurer of the CETAI. He has accumulated over 10 years of experience in the business world as a team player having performed a remarkable career and well known for being a pro-active professional developing efficient communication skills with excellent customer service and high standards of quality of operation covering: new account openings, cash handling, proof processing, accounting support, transfer remittance, collections and most of retail banking items. His career in the banking industry spans from 1982 to 2004.

Johnny Edminson Edouard is the Secretary of CETAI.

The "*Federation des Associations du Corridor des Matheux*", known as FACMA, has been registered with the help of USAID/WINNER. This new Cooperative owns 20% of the shares of CETAI. Its contribution,

from its member associations, will be to supply CETAI in raw materials, beans. The 20 associations that make up FACMA, already produce beans from the Chaîne des Matheux area. Their participation in the responsibilities of CETAI will yield an added 20% in dividends along with an open contract for CETAI to purchase its production first before looking for other products elsewhere. FACMA's membership into CETAI is key to the sustained success of the company.

Below is a summary of the academic profile and professional experience of the original promoters of CETAI.

Carlo Darbouze		PDG	60%	Yr
>	General Manager	Miami Bottling & Packaging Group	USA	11
>	Project Engineer	Mapei Corporation	USA	2
>	Plant Manager	Generic Packing Corp.	USA	7
>	Project Engineer	Apex Machine Inc	USA	2
>	Plant Manager	Florida Ordinance Corp.	USA	3
>	Lead Electrician	Standard Motor Products	USA	6
>	Lead Electrician	Joseph Weinstern Electric Co.	USA	3
>	BS Electrical Engineer	City College of NY, CUNY	USA	6

Valbrun Leveque		Treasurer	15%	
>	General Manager	Banque Nationale de Credit	HT	3
>	Asst General Manager	Banque Populaire Haitienne	HT	6
>	Int'l Operations Officer	Banque de l'Union Haitienne	HT	3
>	Asst Branch Manager	First National Bank of Boston	HT	10
>	BS Business Mngt	INAGHEI	HT	?

Johnny Edminson Edouard		Secretary	5%	
>				
>				

FACMA		Member	20%	
>				
>				
>				

Market

The Product

CETAI's overall objective is to become one of the largest processing and packaging plant in Haiti for the following products: beans; banana shake; corn shake (AK-100 / Foskao); banana, potato and breadfruit chip and flour; and organic fertilizer. Due to budget restrictions, CETAI will launch its operation in phases.

- PHASE 1 – Bean processing and packaging, immediately;
- PHASE 2 – Plantain and Corn Shake processing and packaging, by end of 2012;
- PHASE 3 – Plantain, Potato, and Breadfruit Chip processing and packaging, in 2013;
- PHASE 4 – Plantain, Potato, and Breadfruit Flour processing and packaging, in 2013;
- PHASE 5 – Organic Fertilizer processing, in 2013.

We will concentrate on Phase 1 for the purpose of taking advantage of the bean harvest during the months of June and July 2012 in the Corridor of Matheux region.

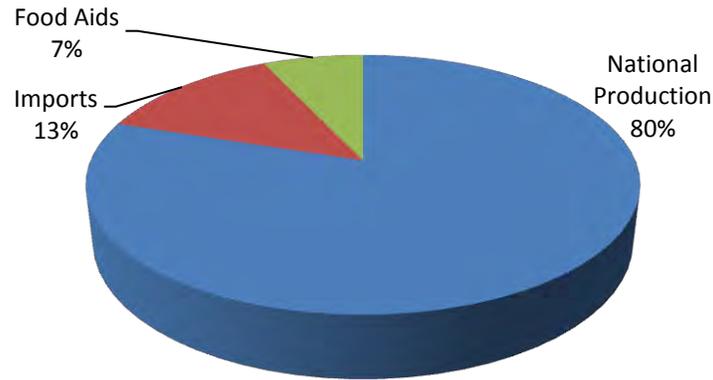
Beans play a significant role in the diet of Haitians. Beans are consumed almost daily with either rice or maize. Haiti's national dish is rice and beans! There are numerous varieties of beans in Haiti; however, CETAI will process 3 types of beans based on their availability: black, red, and white. Black beans are the most consumed, though red and white are preferred. Haitians prefer locally produced beans over imported beans. Beans are grown in humid mountain regions and in irrigated plains. There are two to three harvests per year in the mountain regions. See planting and harvest seasons below:

Data from The Market System for Beans in Haiti (EMMA) & adapted for the region of Matheux

Beans	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Planting Beans in Mountains												
Planting Beans in Plains												
Beans Harvest		Plains				Mountains				Mountains		

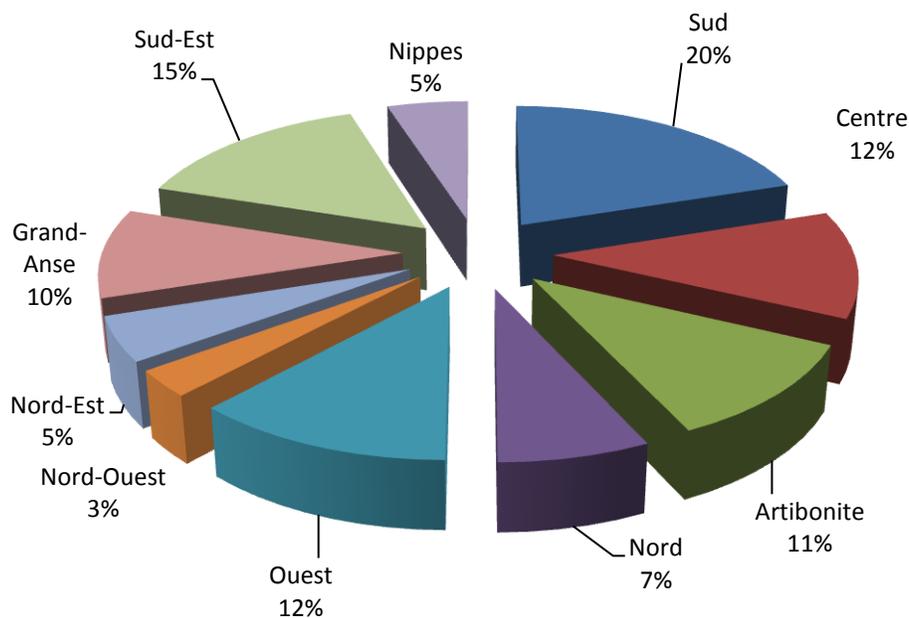
Size and Trends

Studies sponsored by the USAID in Haiti reveal that Haitians consume 70,000 to 80,000 metric tons of beans each year. 80% of the beans in the market place are produced locally. The balance is imported by 3 major importers. Maché Ti Tony is the largest importer wholesaler in Port-au-Prince. The pie chart below shows the source of bean in the Haiti market (note that Food Aids consist of imported beans as well).

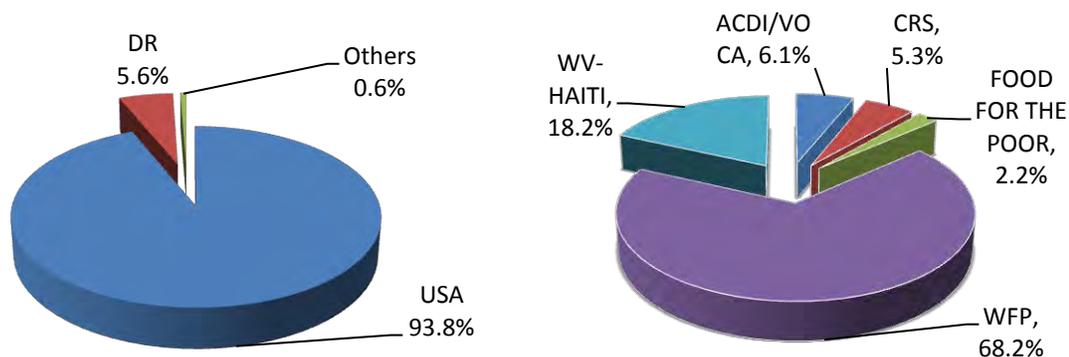


As more rice is imported, more beans are consumed by the Haitian population. There is a direct correlation between rice import/production and beans production/import.

Below is a map of local production of bean in Haiti:



Most imported beans arrive from the USA. World Food Program, WFP, imports more than 68% of NGO imports to Haiti. See the pie charts below:



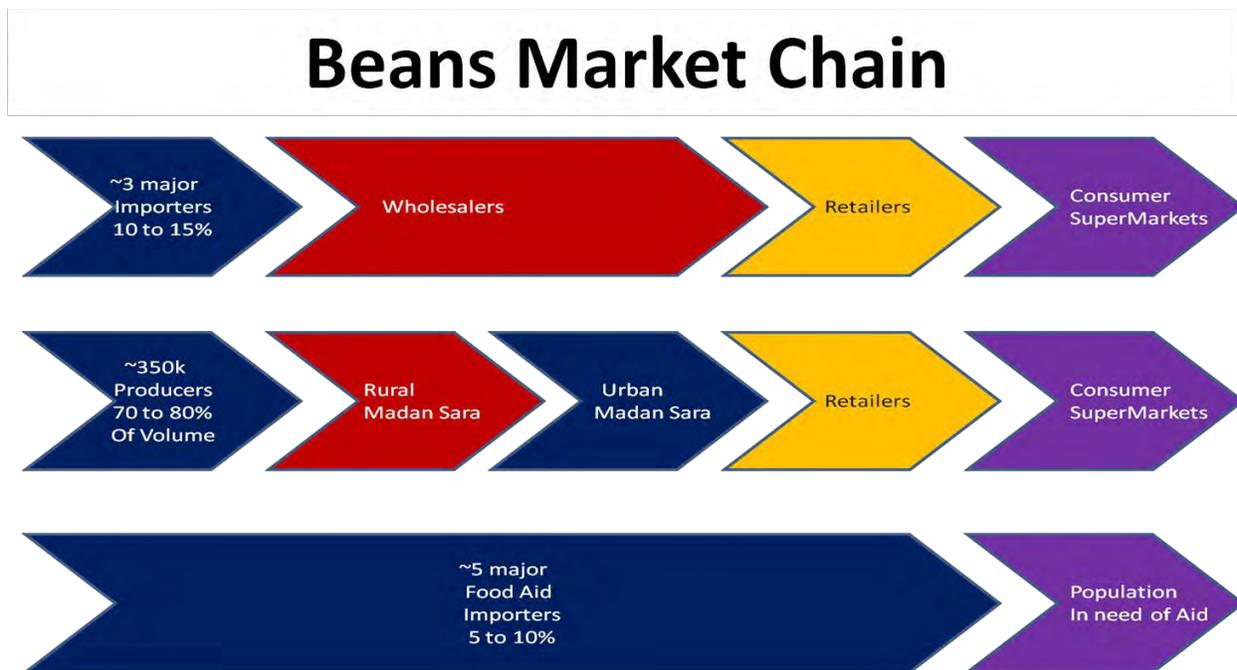
Through these numbers, we've realized that local production will determine the import quantity of beans, and furthermore, the consumption of rice which comprises the main daily dish of Haitians will affect consumption of beans. We can deduce from the information above that approximately 7,000 metric tons of beans are produced in the Ouest Department. That information was also confirmed by representatives of farmer associations whom have met with the principles of CETAI, representatives of WINNER, and Agronome Brière Pierre, consultant for CETAI; that meeting was held on January 23, 2012. Farmers also stated that more than 40% of their production is lost because bad road conditions keep them from reaching the markets (Marché Publique). By building an access road and creating collection centers, the lost production will be recuperated in coming seasons. This is a commitment from USAID/WINNER to CETAI.

Beans Supply Chain for CETAI



CETAI will begin its operations by June of this year, the first harvest season for Mountain farmers of 2012. This year, CETAI will run its production plant 6 hours per day, at a maximum efficiency of 4 metric tons per hour; plant will be operational 5 days a week, 4 weeks per month during 3 months; there are 2 seasons per year. This yield a maximum output for the year of 2,880 metric tons. In 2013, CETAI will increase its capacity by 20%. This can be reached by increasing the hours of operation and also by being more efficient per hour, reaching the maximum installed capacity of 5 metric tons per hour. In 2013, CETAI can reach 50% of the actual production of the Ouest Department.

The beans market chain involves approximately 350,000 producers, thousands of wholesalers, Madame Saras, transporters, and retailers. In the Port-au-Prince area, there are about 50 wholesalers (owners of Depot) and 100 Madame Saras per wholesaler. According to a report by EMMA in February 2010, the number of street retailers is very difficult to quantify.



USAID/WINNER has begun deploying a shell removing machine that it will rent to farmers during the coming June harvest. The machine, Batedeira TR385 fabricated in Brazil by Triton, enable de-pulping to produce more than 300 kg in 1 hour. This machine should be transported to each farmer when s/he is ready to sell to CETAI. See pictures below of product – in this case Black beans in their shells and the TR385:



Next is the TR385 in action and its end product:



The next picture is the humidity meter. At this experiment, we've monitored the humidity level of the beans we've processed at 12.3%, which meets CETAI's recommendation for purchase.



Competition

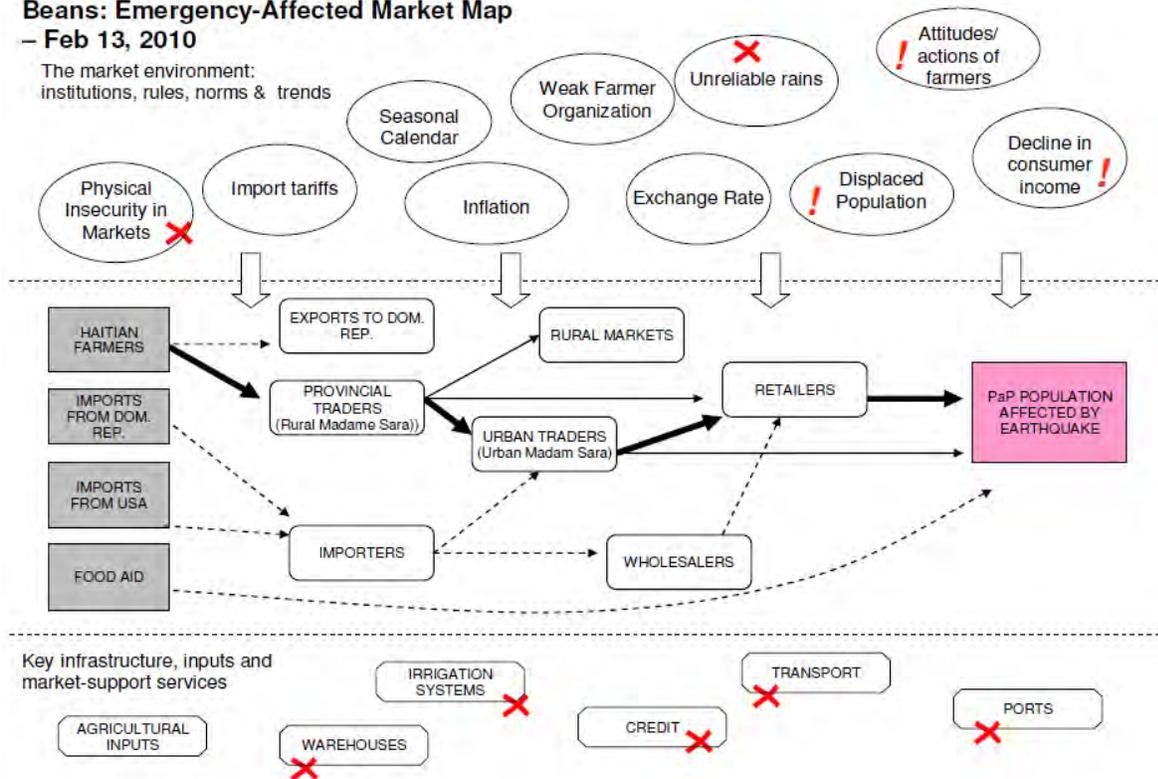
CETAI will be competing with the current market structure and supply chain. Since local beans are preferred over imported beans and if the beans are priced properly, the risk of fierce competition will be mitigated. Competition is not expected to be fierce in the following conditions.

- CETAI aims to produce and sell 50 kg bags of beans as its major and preferred product. This will enable it to enter the supply chain with the same packaging found in imported beans. Outlets for its products are major importers, like Maché Ti Tony, and Food Aid importers like WFP and Food For the Poor. Most likely, these beans are donated to these NGOs. CETAI would make the case to these agencies that purchasing local production will have multiple positive effects such as: encourage farmers; save our mountains; offer a better quality product to the recipients of aid; encourage investment in agro-business; injection of cash in the market (which has its own benefits); reduce imports; etc.
- CETAI would have to settle for lower margins, but it would benefit from volume sales of the 50 kg bags. As CETAI contemplates packaging the beans in 5 lbs and 1 lb pouches, it will then be in fierce competition with supermarket owners who purchase beans at the local street markets and package them in 1 lb to 5 lbs pouches at their stores to increase their margins. Below is what the Bean Market System looked like a few months after the Earthquake:

Beans: Emergency-Affected Market Map

– Feb 13, 2010

The market environment:
institutions, rules, norms & trends



Now, let's examine the competition for the beans produced by the farmers. One of the biggest problems the farmers in the Corridor of Matheux faces is the lack of roads to get their products to

market. Once the roads are cut and the collection centers installed by the WINNER team, CETAI will have to compete with the markets for the production. Although CETAI has a verbal agreement with the farmer associations (see attached process-verbal of the meeting), which are to integrate CETAI as the new Cooperative FACMA, at \$0.40 per lbs with a humidity level of 15% or less, nothing will keep an individual farmer within that Cooperative from reaching the market – via the new public road – and selling at twice what CETAI is prepared to pay. Of course, the increased production and the installation of collection centers will help meet the minimum required for CETAI to be productive and profitable. Pressure will come also from Madame Saras whom have lent money to farmers prior to harvest season for various reasons (sending kids to school, sickness or death in the family, etc.).

The representatives of the Cooperative within CETAI have to be held responsible for a minimum daily quota. Cash must also be available at all times in small denominations to send the signal to farmers that if you need money now, you can sell your production to CETAI and get cash immediately in return. Good bookkeeping and cash flow procedures must be kept. Heads of the Cooperative must be rewarded financially for helping meet the objectives set on a daily basis (commission).

In order to better control the production of beans, WINNER must motivate the farmer to use its de-pulping machines to quickly and efficiently retrieve the beans from its protective shell. This machine, the Batedeira, from Triton, a Brazilian company, automatically separates the skins from the beans, sending the skin in one direction and filling a 50kg bag in 10 minutes. Comparatively, it could take 3 to 4 hours worth of manual labor to have the same efficiency.



Customer

Initially, CETAI customers will be Madame Saras, Wholesalers, Private Importers and Food Aid Importers. These customers will buy bulk from CETAI, ensuring that all production is sold within a week or two of production to limit storage areas. Minimum purchase will be mandatory and at a certain level, CETAI can offer to deliver a full truck load to the customers in the immediate regions such as Greater Metropolitan area of PAP and Saint Marc.

Marketing Strategy

CETAI biggest asset is the fact that it is processing local products, packaging them in the same manner as imported beans. It will have to accentuate the Made In Haiti label during sales pitch and focus on the quality and good taste of the product.

CETAI will not perform mass advertising since its potential customers are few and have a known address or phone number. The personal touch – one on one – will be very effective and with the help of USAID and WINNER, CETAI principles will be introduced to decision makers in the industry / supply chain.

Pricing

CETAI is looking for a net margin (before taxes since CETAI will apply for the Customs and Income Tax Exemption benefits from the 'Comission Interministerielle des Investissements') between 15% and 25%. That translates into a sale price ranging from **\$0.72/lb or \$1.58/kg** to **\$0.90/lb or \$1.98/kg**.

Some wholesalers in Pétion-Ville like Chez Philippe and Depot SAVIN on Rue Villate and Maché Ti Tony claim that they purchase more imported beans because the local bean are not supplied evenly throughout the year and they expire fairly quickly compared to the imports. The folks at Depot SAVIN stated that they do not buy local beans because at one point, the beans were responsible for rotting all other products they had in the depot because their moisture content was high and therefore could not be stored for extended periods. They mostly carry the Pinto beans because the price is very attractive.

Chez Philippe: Imports from Dominican Republic *(this price below has to be taken with a grain of salt)*

Selling price to retailers is \$83.13 per 50 kg bag (\$0.76/lbs);

Depot SAVIN: Imports from Dominican Republic *(this price below has to be taken with a grain of salt)*

Selling price to retailers is \$82.5 per 50 kg bag (\$0.75/lbs);

Maché Ti Tony: Imports from the US *(the prices below have been confirmed on Ti Tony's accounting system)*

Imported cost of Pinto (Prix de revient) in December \$81 per 100lbs bag;

Imported cost of Pinto today is \$84 / 100 lbs bag (\$0.84/lbs);

Imported cost of Black beans in December \$79 / 100 lbs bag (\$0.79/lbs);

Imported cost of Black beans today is \$82 / 100 lbs bag (\$0.82/lbs);

Sale price of Pinto today is \$85 / 100 lbs bag (\$0.85/lbs);

Sale price of Black beans today is \$83 / 100 lbs bag (\$0.83/lbs);

Please see price study below.

Price in Gourdes in PAP

* = Cost (not confirmed)

** = imported beans from USA

*** = imported from Dominican Republic

Beans	Measure	LBS	Depots*** (5 MT/month/depot)		
			Cost*	Sale price	Margin
Black	Sac	110	3,450.00	3,600.00	150.00
Red	Sac	110			-
White	Sac	110			-
Pinto	Sac	110	3,175.00	3,325.00	150.00

LBS	Maché Ti Tony** (75 MT / month)		
	Cost	Sale price	Margin
110	3,608.00	3,652.00	44.00
110			-
110			-
110	3,696.00	3,762.00	66.00

Beans	Measure	LBS	Supermarket		
			Cost	Sale price	Margin
Black	1 marmite	5.00	182.00	220.00	38.00
	ti mamit	1.00	50.00	60.00	10.00
Red	1 marmite	5.00	228.00	327.00	99.00
	1/2 mamit	2.50	114.00	140.00	26.00
White	1 marmite	5.00	228.00	300.00	72.00
Pinto	1 marmite	5.00		210.00	
	ti mamit	1.00		40.00	

LBS	Street Markets		
	Cost	Sale price	Margin
5.50	164.00	200.00	36.00
1.10	33.00	50.00	17.00
5.50		250.00	
5.50		250.00	
5.50	166.25		
1.10			

SWOT Analysis

Strength	<p>Strong knowledge of the processing plant equipment environment and operation;</p> <p>Has long experience in the food processing environment and is familiar with liabilities that are borne out of damaged food products;</p> <p>Has a reliable partner in WINNER, with great knowledge bank and credibility in the production area of Corridor of Matheux and around Haiti;</p>
Weakness	<p>Lack of knowledge in the business start-up environment of Haiti;</p> <p>Lack of personal experience working with farmers and cooperatives;</p> <p>Carlo Darbouze, the principle owner of CETAI, will not be in Haiti consistently once the plant is operational;</p> <p>Lack of equity funds limits the opportunity to put more products in the market during phase 1;</p>
Opportunity	<p>Most production from farmers does not get to market; therefore, building a road will allow CETAI the opportunity to access the excess production;</p> <p>Since Haitian beans are preferred to imported beans, excess production or injection in the market will simply reduce the amount of imported beans;</p> <p>WFP might be able to reserve the production from CETAI during the May/June harvest to meet demand for the hurricane season which runs from June to November every year;</p>
Threat	<p>Building a road to have access to production will also open a route for farmers to get their products to market for a higher return;</p> <p>2,880 MT minimum volume is needed to make the plant investment profitable;</p> <p>High humidity in the beans will increase the currently agreed price per lb set at \$0.40;</p> <p>Timing to secure the financing and order the equipment with import delays and install will put the May harvest season in jeopardy;</p> <p>Farmers will sell beans in bags – there is a high likelihood that heavy material such as rocks will be found inside the bags to increase their weight. That in turn will augment the purchase price for the beans;</p>

Operation

Location of the project

CETAI's processing plant will be located in the region of Arcahaie, more precisely, in the First Communal Section of Boucassin, Habitation Thomas (South corner: 18 47'21.88"N 72 29'09.43"W at an altitude of 62 meters above sea level). This property of more than 380,000 square meters will not only house the plant; most of the land, provided to DDB Corp by the Haitian Government, will be planted with varieties of beans and will serve as a minimum production base for the plant. The plant is only 30 to 40 minutes away from vast production area which will supply it with beans, plantain, potatoes, breadfruit, corn and other agricultural products which can be transformed. See pictures below.



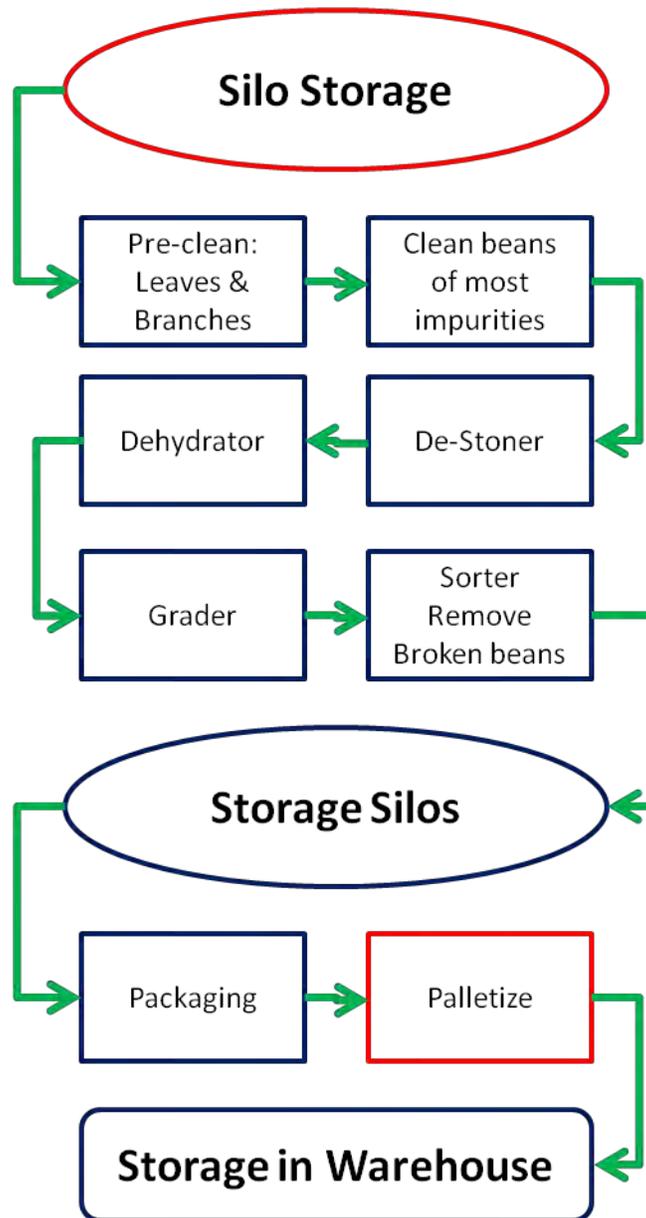
The site is very accessible via trucks or 4x4 vehicles. It is only 1,100 meters from the main road, Route Nationale #1. The locals have a cinder block fabrication plant, owned by the CASEC, Romulus Pierre Andre. Water is abundantly available on site and construction foundation rocks are available nearby. Only river sand will need to be transported from Montrouis during construction. Underground water is available, but an artesian well will have to be dug. Manual labor is also on hand.

Harvest area to be exploited is located in and around the Arcahaie and Montrouis areas, situated at 15 to 30 kilometers from the CETAI plant location.

Polypropylene bags will be provided by the farmers and CETAI will return them as they are reusable.

Processing

The process for any type of beans is as follows (**red** indicates manual process; **blue** indicates process performed by machinery):



Choice of the technology

The technology used in this line of the industry is very standard. It has been deployed in most countries with modernized agricultural infrastructure. This technology is employed in the US, Canada, China, Brazil, as well as in Dominican Republic and other Caribbean countries.

Choice of the equipment

CETAI has chosen this group of equipment because of prior experience with them, taking into account the costs, availability, and delivery lead time.

Choice of the equipment suppliers

CETAI has chosen this group of equipment suppliers because of prior experience with them, their reliability and mostly for their commitment to quality.

Choice of the labor

The labor force will be 100% Haitian. Carlo Darbouze and his associates will train each employee individually on how to manipulate and maintain each equipment. There are plenty of qualified resources in Haiti looking for opportunities in management. One note of caution: since Mr. Darbouze will not reside permanently in Haiti, clear objectives and goals have to be established and management staff will be held accountable to meet these goals. Costs have to be within budget and a reward structure has to be put in place to motivate employees to meet goals.

Human Resource

Management

	#	Yearly Salary	30% Employee Benefit	Total
General Manager	1	\$30,000.00	\$9,000.00	\$39,000.00
Assistant Plant Operation Manager	1	\$20,000.00	\$6,000.00	\$26,000.00
Administrative Assistant	1	6,000.00	1,800.00	7,800.00
Accountants	2	\$8,000.00	\$2,400.00	\$20,800.00
Supervisor	1	\$24,000.00	\$7,200.00	\$31,200.00
				\$124,800.00

Labor

	#	Yearly Salary	30% Employee Benefit	Total
Mechanic	1	\$12,000.00	\$3,600.00	\$15,600.00
Electrician	1	\$12,000.00	\$3,600.00	\$15,600.00
Welder	1	\$12,000.00	\$3,600.00	\$15,600.00
Mechanic Helper	1	\$6,000.00	\$1,800.00	\$7,800.00
Electrician Helper	1	\$6,000.00	\$1,800.00	\$7,800.00
Welder Helper	1	\$6,000.00	\$1,800.00	\$7,800.00
In-house Nurses	2	\$6,250.00	\$1,875.00	\$16,250.00
Quality Control Tech	1	\$14,000.00	\$4,200.00	\$18,200.00
R&D Tech	1	\$14,000.00	\$4,200.00	\$18,200.00
Forklift Operator	2	\$7,000.00	\$2,100.00	\$18,200.00
Machine Operator	15	\$6,000.00	\$1,800.00	\$117,000.00
Daily laborers	5	\$150.00	\$45.00	\$11,700.00
Cleaning Personnel	2	\$3,000.00	\$900.00	\$7,800.00
				\$277,550.00

Finance

Project cost

	Cost already incurred		Cost to be incurred	
	Acquisition Cost	Life Expectancy	Acquisition Cost	Life Expectancy
Land	\$0.00	n/a		n/a
Building			\$374,480.00	20
Equipment			\$706,050.00	5
Generators			\$48,950.00	3
Office Equipment			\$15,000.00	10
Data processing and Com Eq.				3
Software				3
Vehicles			\$72,000.00	5
Leasehold improvement				15
Intangible assets	\$164,500.00			10
Other assets				10
Working capital need	\$150,000.00	n/a	\$100,000.00	n/a
Total	\$314,500.00		\$1,316,480.00	
Project initial cost	\$1,630,980.00			

Financing plan

	Cost already incurred		Additional cost to be incurred		Total
	Equity	Bank loan	Equity	Bank loan	
Land	\$0.00				\$0.00
Building			\$127,323.20	\$247,156.80	\$374,480.00
Equipment			\$465,993.00	\$240,057.00	\$706,050.00
Generators			\$48,950.00		\$48,950.00
Office Equipment			\$15,000.00		\$15,000.00
Data processing and Com Eq.					\$0.00
Software					\$0.00
Vehicles			\$72,000.00		\$72,000.00
Leasehold improvement					\$0.00
Intangible assets			\$164,500.00		\$164,500.00
Other assets					\$0.00
Working capital need			\$150,000.00	\$100,000.00	\$250,000.00
Total	\$0.00	\$0.00	\$1,043,766.20	\$587,213.80	\$1,630,980.00
Percentage of Total Cost		0%	64%	36%	100%

Investment budget

	Year 0	Y 1	Y 2	Y 3	Y 4	Y 5	Y 6	Y 7	Y 8	Y 9	Y 10
Land	\$0										
Building	\$374,480										
Equipment	\$706,050										
Generators	\$48,950				\$48,950				\$48,950		
Office Equipment	\$15,000										
Data processing and Com Eq.	\$0										
Software	\$0										
Vehicles	\$72,000				\$72,000				\$72,000		
Leasehold improvement	\$0										
Intangible assets	\$164,500										
Other assets	\$0										
Working capital need	\$250,000										
Total	\$1,630,980	\$0	\$0	\$0	\$120,950	\$0	\$0	\$0	\$120,950	\$0	\$0

Operational Costs

Operational costs for producing beans are described in the variable and fix cost structure below:

- A. Variable Cost for 1 metric ton of beans is \$1,057.04 (20 gourdes per lb):
- Purchase price of beans with 25% humidity level is \$0.40/lb or \$0.88/kg;
 - It is estimated that the maximum round trip from the plant to the production area is 60 kilometers and that the trucks will carry on average 80 bags of 50kg during each trip. The estimated fuel usage is 6 gallons for the round trip;
 - It is estimated as well that dehydrating the beans will produce a loss of weight of 15% which will increase the price of 1 kg;
 - Generators will be used exclusively during production in order to safeguard equipment from spikes from EDH feed. The main 80 kw generator will run 6 hours each production day at a maximum capacity of 4.6 gallons per hour. Diesel fuel cost is \$3.90/gallon today.

	Quantity	Unit	Unit Cost	Total
Purchase of 1 Metric Ton @ \$0.88/kg	1000	kg	\$0.88	\$880.00
15% loss due to more dehydration	150	kg	\$0.88	\$132.00
Generator Diesel fuel for production	1.15	gallon	\$3.90	\$4.49
Transport from field to plant	1.5	gallon	\$3.90	\$5.85

B. Annual Operational Fixed cost

a. Salaries total \$402,350 and include:

- i. Management salaries per year reach \$124,800 per year, including 30% employee benefits which include ONA, insurance, BONI, etc. There are 6 management employees.
- ii. The labor force is composed of 34 employees with a total yearly salary of \$277,550 including the 30% employee benefit package.

b. Depreciation expenses average \$139,496 and include:

	Y 1	Y 2	Y 3	Y 4	Y 5	Y 6	Y 7
Land	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Building (20y)	\$18,724	\$18,724	\$18,724	\$18,724	\$18,724	\$18,724	\$18,724
Equipment (10y)	\$70,605	\$70,605	\$70,605	\$70,605	\$70,605	\$70,605	\$70,605
Generators (3y)	\$16,317	\$16,317	\$16,317	\$16,317	\$16,317	\$16,317	\$16,317
Office Equipment (5y)	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Data processing and Com Eq.							
Software							
Vehicles (5)	\$14,400	\$14,400	\$14,400	\$14,400	\$14,400	\$14,400	\$14,400
Leasehold improvement (15y)							
Intangible assets (10y)	\$16,450	\$16,450	\$16,450	\$16,450	\$16,450	\$16,450	\$16,450
Other assets							
Total	\$139,496						
Cumulative Depreciation	\$278,992	\$418,488	\$557,984	\$697,480	\$836,976	\$976,472	\$1,115,968

c. Fuel for administration work equals \$4,056

- i. The generator will run with a lower load for 2 hours per day, allowing employees to clean up the plant and prepare the next day. During two hours per day, after each production cycle, the generator will consume 2 gallons per hour. The cost of diesel fuel is set at \$3.90 a gallon but increases to \$4.25 in year 2, then \$0.25 per year.

d. Insurance and maintenance total \$64,559 for the first year and include:

- i. Vehicles are insured at 8%
- ii. Equipment are insured at 2%
- iii. General Assets are maintained at 2%

	Y 1	Y 2	Y 3	Y 4	Y 5	Y 6	Y 7
Insurance & Maintenance	64,559	67,787	71,177	74,735	78,472	82,396	86,516

e. Advertising and promotion total \$172,000 and include:

	Y 1	Y 2	Y 3	Y 4	Y 5	Y 6	Y 7
Advertizing	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Promotion	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Free samples	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000
TOTAL	\$172,000						

f. Other expenses total \$59,000 and include:

	Y 1	Y 2	Y 3	Y 4	Y 5	Y 6	Y 7
Water (3,000 gallons / day)	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
Audit fees	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Security	\$24,000	\$24,000	\$24,000	\$24,000	\$24,000	\$24,000	\$24,000
Total	\$59,000						

Working capital

Working capital is set at \$250,000 based on the following arguments:

- CETAI will produce a minimum of 24 Metric Tons of beans per day;
- Beans will be sold in bulk to Madame Saras, Institutions such as WFP, importers and depot owners;
- Beans are not sold cash on hand, however, a 7 day period has been allocated in extreme cases;
- Inventory capacity is 4 days.

Cost of capital

Loan from FDI will total \$587,214.00 which includes \$100,000 as operating funds. CETAI is proposing 6 years to repay the loan with a grace period of 12 months on payment of capital. Interest rate on debt should run 8% or less. Interest on long term debt are described below:

	Y 1	Y 2	Y 3	Y 4	Y 5	Y 6
FDI Loan Balance	\$587,214	\$587,214	\$469,714	\$352,214	\$234,714	\$117,500
FDI loan associated fees	\$0	\$0	\$1,393	\$2,144	\$2,204	\$1,494
FDI 8% interest fee	\$46,977	\$46,977	\$37,577	\$28,177	\$18,777	\$9,400
Cost of Capital	\$46,977	\$46,977	\$38,970	\$30,321	\$20,981	\$10,894

Dividend policy

1,000 shares have been approved by the board of CETAI. 15% of net profit will be held as a security cushion. 50% of net profit will be distributed to share holders twice a year as of year #6. Balance of net profit will be reinvested in CETAI to expand product line.

Income tax

CETAI will be subject to 30% income tax unless it receives an exemption from income taxes from the “Commission Interministérielle des Investissements” by making that request through the “Formulaire de Demande d’Admission aux Avantages Incitatifs à l’Investissement (Loi du 9 Octobre 2002 publiée le 26 Novembre 2002).

Break-even analysis

Break-even to cover operational costs

	Operational fixed costs	Sales	Margin	Break-even1	Break-even1 / sales
Year 1	842,462	4,547,368	23.05%	3,654,243	80.36%
Year 2	868,784	5,152,497	23.06%	3,767,614	73.12%
Year 3	896,623	5,838,243	23.07%	3,887,314	66.58%
Year 4	925,854	6,615,362	23.07%	4,012,765	60.66%
Year 5	956,547	7,495,869	23.08%	4,144,568	55.29%
Year 6	988,775	8,493,779	23.09%	4,282,594	50.42%
Year 7	1,022,614	9,624,355	23.10%	4,427,772	46.01%
Year 8	1,049,866	10,905,116	23.10%	4,544,767	41.68%
Year 9	1,086,759	12,356,405	23.11%	4,703,325	38.06%
Year 10	1,125,497	14,000,749	23.11%	4,869,887	34.78%

Average	976,378	8,502,974	23.09%	4,228,588	49.73%
---------	---------	-----------	--------	-----------	--------

Break-even to cover operational costs and cost of capital

	Total asset	WACC	Required EBIT	Operational fixed costs	Break-Even2	Sales
Year 1	1,630,980	14.40%	234,861	842,462	4,672,971	4,547,368
Year 2	1,835,381	14.40%	264,295	868,784	4,913,769	5,152,497
Year 3	1,960,269	14.40%	282,279	896,623	5,111,135	5,838,243
Year 4	2,188,329	14.40%	315,119	925,854	5,378,530	6,615,362
Year 5	2,526,206	14.40%	363,774	956,547	5,720,742	7,495,869
Year 6	2,990,344	14.40%	430,610	988,775	6,147,655	8,493,779
Year 7	3,599,782	14.40%	518,369	1,022,614	6,672,234	9,624,355
Year 8	4,186,342	14.40%	602,833	1,049,866	7,154,373	10,905,116
Year 9	4,888,297	14.40%	703,915	1,086,759	7,749,759	12,356,405
Year 10	5,716,099	14.40%	823,118	1,125,497	8,431,417	14,000,749

Average	3,152,203	14.40%	453,917	976,378	6,194,454	8,502,974
---------	-----------	--------	---------	---------	-----------	-----------

Income Statement

Sales @ 30 gdes / LBS		20%	20%	10%	10%
Exchange rate 41.5 gdes	2012	2013	2014	2015	2016
Sales of beans	4,547,368	5,152,497	5,838,243	6,615,362	7,495,869
Commissions	0	0	0	0	0
Net Sales	4,547,368	5,152,497	5,838,243	6,615,362	7,495,869
Cost of beans sold	(3,499,002)	(3,964,370)	(4,491,631)	(5,089,018)	(5,765,857)
Total Cost of Goods Sold	(3,499,002)	(3,964,370)	(4,491,631)	(5,089,018)	(5,765,857)
Gross margin	1,048,366	1,188,127	1,346,612	1,526,344	1,730,012
Salary	(402,305)	(425,399)	(449,848)	(475,522)	(502,478)
Promotion	(172,000)	(172,000)	(172,000)	(172,000)	(172,000)
Insurance & Maintenance	(64,559)	(67,787)	(71,177)	(74,735)	(78,472)
Fuel	(5,102)	(5,102)	(5,102)	(5,102)	(5,102)
Utilities	(59,000)	(59,000)	(59,000)	(59,000)	(59,000)
Total Fix Costs	(702,966)	(729,288)	(757,127)	(786,359)	(817,052)
EBITDA	345,400	458,839	589,485	739,985	912,960
Interest	(46,977)	(46,977)	(38,970)	(30,321)	(20,981)
Other interest expenses	(8,220)				
Depreciation	(139,496)	(139,496)	(139,496)	(139,496)	(139,496)
EBT	150,707	272,366	411,019	570,168	752,483

Projected Balance Sheet

	2012	2013	2014	2015	2016
Asset					
Cash	\$0	\$45,474	\$51,522	\$58,374	\$66,138
Account receivables	\$0	\$227,368	\$257,608	\$291,870	\$330,689
Inventory	\$250,000	\$189,625	\$214,845	\$243,420	\$275,795
Marketable securities	\$0	\$131,429	\$334,305	\$632,171	\$981,637
Total current asset	\$250,000	\$593,897	\$858,280	\$1,225,836	\$1,654,258
Net Fixed asset	\$1,380,980	\$1,241,484	\$1,101,989	\$962,493	\$871,947
Total asset	\$1,630,980	\$1,835,381	\$1,960,269	\$2,188,329	\$2,526,206
Current liability					
Overdraft	\$0	\$0	\$0	\$0	\$0
Accrued interests	\$0	\$8,220	\$0	\$0	\$0
Taxes payable	\$0	\$45,212	\$81,710	\$123,306	\$171,051
Dividends payable	\$0	\$0	\$0	\$0	\$0
Accounts payable	\$0	\$45,474	\$51,522	\$58,374	\$66,138
Total current liability	\$0	\$98,906	\$133,232	\$181,680	\$237,189
Long term debt	\$587,214	\$587,214	\$487,120	\$379,018	\$262,267
Total liability	\$587,214	\$686,120	\$620,351	\$560,697	\$499,456
Paid in capital	\$1,043,766	\$1,043,766	\$1,043,766	\$1,043,766	\$1,043,766
Retained earnings	\$0	\$105,495	\$296,152	\$583,865	\$982,984
Total equity	\$1,043,766	\$1,149,261	\$1,339,918	\$1,627,631	\$2,026,750
Total liabilities & equity	\$1,630,980	\$1,835,381	\$1,960,269	\$2,188,329	\$2,526,206

Risk analysis and recommendations

Technical risk

Technical risks have been minimized due to heavy experience of Mr. Darbouze in the industry. He is an electrical engineer with more than 20 years working with these types of equipment. The processing industry is very stable and technology is very reliable. Spare parts are plentiful in the Miami area; they could be flown into Port-au-Prince over night. Mr. Darbouze will train all technicians on how to use and maintain the machines.

Commercial risk

Although the market can fully absorb the increase in production of beans, it is prudent for CETAI to enter the market as a wholesaler instead of competing with retailers and supermarkets by producing and selling, from day one, the 1 lb and 5 lbs pouches. This will mitigate the risk of shocking and disturbing the current distribution network and force a reaction which could impact CETAI negatively. It is recommended that CETAI management meet and discuss with many wholesalers, importers, and NGOs to present the product even before harvest. This will give a warning to these market players as to what production capacity will be available and enable them to better plan their imports. CETAI also has plenty of leverage room to meet any price challenge albeit for limited period of time. Another advantage for CETAI is that Mr. Darbouze's firm in Miami could purchase and import large quantities of CETAI's production for distribution and sale in the Miami area.

Contextual risk

The overall atmosphere in Haiti is conducive to investment in agro-industry. The government provides incentives to attract local and foreign investors by exempting firms from paying import and income taxes over 5, 10, even 15 years. With the reconstruction of Haiti well underway, demand will increase for local products.

Operational risk

CETAI is located outside of Port-au-Prince, in a remote area of Arcahaie, although easily accessible by SUV. If we take a look at the list of positions within CETAI, we will notice that all positions are manned by more than one person. This alleviates the risk of depending on one employee to perform a critical task. Furthermore, Mr. Darbouze will cross-train machine operators; two generators have been provisioned and will be installed at the plant.

Raw material volume risk

There is a credible risk that the farmers sell their production at a higher price to Madame Saras or at street markets for quick cash. This risk can be mitigated by having the cooperatives offer to remove the beans from the shells as an incentive to sell their products to CETAI. Once the beans have been dried properly, the farmers will ask CETAI to send the machine to their location, process, bag, weigh the beans, and pay the farmer \$0.40 per pound. CETAI will then provide the polypropylene bags and the transport to the processing plant.

Sources:

- *DDB Corporation business plan February 16, 2012;*
- *DDB Corporation business plan February 29, 2012;*
- *Various articles on the web;*
- *Interview with Mr. Carlo Darbouze at plant in Miami;*
- *Interview with Agronome Briere Pierre;*
- *Visit of site at Arcahaie;*
- *Visit of production area in Arcahaie region;*
- *Interview with Agronome Max Augustin of WINNER, Agronome Joel Ducasse;*
- *Market study at Marche de Pétiion-Ville, Mache Ti Tony, Megamart, Delimart, 8 a 8 market, Marche Croix des Bossales, Big Star Market;*
- *February 2010 - The Market System for Beans in Haiti, by EMMA;*
- *June 2012 – Best Market Analysis, Haiti, by and for USAID;*