

# **Seguin, Haiti Eco-Enterprise Mushroom Project**

Community Development International, Inc.

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## **Brief:**

Community Development International, Inc is in the evaluation and planning phase of a new project to bring alternative income generation and job creation mechanisms to the community of Seguin, Haiti. The project proposes to create small micro-enterprises that will process and add value to locally available varieties of edible plants for sale in Port-au-Prince, tourist resorts in Haiti and the Dominican Republic, and in gourmet stores in the United States.

## **About Seguin:**

Seguin is located about 15 miles (as the crow flies) south of the capital, Port au Prince, some 3,000 feet in altitude just south of the National Park "Parc la Visite." The region is estimated to have circa 30 - 40,000 inhabitants and the direct surrounding community of Seguin is estimated to have circa 20,000. The area is completely rural with no electricity grid and no real roads. It is a mostly agricultural region but has become an important area due to several factors: the location marks the "half-way" point between the southern shores of the country and the capital; the location is also home to a major watershed that supplies water for up to 2 million Haitians, large tracts of land producing immense amounts of crops which are shipped and sold throughout the country and one of the last remaining natural forests in Haiti. Due to these factors, and after the January 2010 earthquake, this region, although very rural, continues to grow. In Seguin, as in the rest of the country, a majority of the population is young. Seguin has no less than 5 large primary schools accommodating thousands of children from the area but not a single secondary school.

## **Summary of Activities:**

Our projects include health, education, agriculture, renewable energy, environmental protection and eco-enterprise initiatives and we are working to help create a sustainable, environmentally friendly community with available jobs, education, commerce and health care. Extensive demographic and physical research was completed in July and August 2010 in the area. Most recently we constructed and donated to the population the first free public latrine, which on market-days serves up to 10,000 in an area that has been hit by Cholera since December 2010. Our holistic approach in these various areas aims to create opportunity and socio-economic empowerment as well as civic awareness and environmental stewardship.

By offering educational and eco-entrepreneurial programs and projects, CDI is working towards the goal of reducing dependency and the reliance on subsistence agriculture, to protect the local environment which is home to the last 2% of Haiti's remaining forest cover, and to give the population (and specifically the young) the skills and tools they need to live more sustainable, fulfilled, and prosperous lives.

CDI focuses on Seguin because of its strategic location as well as its relative isolation regarding outside assistance with the present international humanitarian and developmental focus being directed to the urban centers of Haiti. CDI believes that revitalization of rural areas is key to mitigate the problems faced in the country's centers, whether it be economic development, the reduction of urban population growth, environmental protection and associated reduction in vulnerability to disasters such as hurricanes, landslides and floods. The organization was first conceived prior to the Earthquake and it was created after founding members provided humanitarian relief in the Earthquake's immediate aftermath.

**Premise of proposed program:**

Agricultural expansion for the cultivation of staple foods has reduced the forest cover to negligible levels. Deforestation continues to cause increased vulnerability to natural disasters such as hurricanes and deadly landslides, and the once fertile topsoil has been eroded over decades with little space left for widely practiced subsistence agriculture. The area is home to a number of endangered species of flora and fauna. The plant life of the region includes many varieties that could be sustainably exploited and sold in order to create a small array of organic niche products on which to base a diversification of the local economy and to sell to the small but increasing numbers of visitors who come for the region's natural beauty. The population is unaware of the treasures that are bestowed upon them. Education and small scale expansion into new market opportunities will go a long way to launch economic development with revenues re-invested in social development programs such as health and education. These micro-enterprises will also serve to reduce the pressures which are currently and acutely threatening the natural environment and hence contribute to the environmental protection and restoration initiatives undertaken by local partner organizations.

**Objectives:**

- Introducing organic eco-enterprise opportunities based on locally available plant life for processing and sale to spruce economic diversification and development
- Reducing vulnerability to natural disasters by encouraging environmental stewardship through economic incentives that will help to protect and restore the local forest
- Creating revenue for re-investment in social and infrastructure development projects
- Reversing the unsustainable trend towards ever lower agricultural productivity based on archaic subsistence farming techniques and practices by adding new varieties of higher value to the local agricultural production mix
- Educating the population about uses of and sustainable harvesting / foraging for a variety of plant species that grow seasonally or year-round in the region surrounding Seguin

**Goals:**

- Starting with an exploratory project based on seasonally available Chanterelle mushrooms, CDI hopes to generate a model enterprise on which to base future expansion, with which to demonstrate (economically and ecologically sustainable) success, and which may serve as the launch pad for the ultimate production of a variety of organic niche products
- Establish said model enterprise by training a small number of local peasants and adolescents to forage for, clean, process and package Chanterelle mushrooms
- Create small revenue for immediate re-investment and produce product samples to test market conditions locally in Haiti, in the Dominican Republic, and in the United States (CDI has been granted official USDA permission to import a variety of Haitian agricultural products).
- Identifying partners in sales & distribution of Haitian Chanterelle mushrooms, ultimately expanding into other products offering a range of organic gourmet foods to the fine food stores and restaurants in New York City and the United States. In addition, non-chain stores with organic and niche products as well as local farmers markets may be interested in distributing the product(s)

## **Chanterelle Mushrooms:**

Chanterelles are one of the world's most sought after wild mushrooms. The bright yellow to orange cap of this mushroom is very distinctive with its convex, funnel shape (about 3/8 of an inch to 6 inches across) which is wavy in character. Its yellow to orange solid stalk is 1-3 inches long and a quarter to one inch thick and is typically white inside. Chanterelle mushrooms are notoriously hard to cultivate. During the rainy season ( ~ June through November / December) they grow in abundance in the pine forests surrounding the community of Seguin. On a recent visit to Seguin, CDI spent about five hours foraging the forest for Chanterelles with the help of two local teenagers. The group collected about 25 kilograms which produced a net weight of about 2.5 kilograms of dried product. These were sundried, cleaned and packaged as samples to be showcased to potential vendors. Locals do not pick these mushrooms and do not know their potential value. Obviously, Chanterelles are very expensive. The cheapest we were able to find in a random internet search cost \$7 per 4 ounce bag (dried net weight).

According to a contact at the Food Network, who rehydrated and cooked the mushrooms, "they have a good meatiness to them, and, all in all, they are on par with other available dried chanterelles."

## **Preparations made:**

CDI has discussed this project with representatives of the local community and with local partner organizations. All agree that this will be a beneficial first step towards the realization of our mutual socio-economic development and environmental protection goals. A preliminary understanding has been formed between CDI and the owner-operator of a local bakery who agrees to let CDI use the rooftop of his bakery for the drying, processing, packaging and storing of the foraged Chanterelles. In turn, CDI hopes to assist the bakery in its efforts to replace an old diesel generator which poses health hazards to the employees with solar panels or other sources of clean energy. Furthermore, the two teenaged youth who assisted CDI in the collecting of the above samples are willing and eager to become involved in this project on a wage basis.

USDA import permission has been granted for a period of four years starting April 2011.



### **Eco-Enterprise – Mushrooms**

The first in a line of possible organic niche products from Seguin !.  
Dried, cleaned, and packaged from the source.

**>> Income-Generation, Skills-raising, Empowerment,  
Environmental Protection <<**

**Project Needs:**

- Observe and define the exact growing season and variations
- determine gross / net weigh ratio (fresh / dried) at 10 : 1
- estimate average supplies for the first growing season at ~1,000 bags at 4oz of dried product

<u>fresh</u>	<u>dried</u>		
1200	120		
kilograms	kilograms		
2640	264	4224	1056
pounds	pounds	ounces	number of 4oz bags

- define best practices on foraging, cleaning, drying, packaging, shipping, quality assurance, etc.
- procurement of input products needed such as drying and cleaning equipment, bags, labels, etc.
- create vendor-relationships with local Haitian restaurants, hotels, grocery stores, specialty shops, etc and provide them with information and samples of the mushrooms
- explore distribution chain possibilities to export to USA

CDI's recent visit to Seguin focused, among other things, on addressing the above needs. Primarily, CDI created product samples and trained locals to assist in the process. Samples shall continue to be created on an ongoing basis for use as samples for potential buyers and distributors. Based on the results of this pilot testing effort, full-scale production launch shall be implemented as soon as possible.

**Process Description:**

1. Collect mushrooms
2. Transport mushrooms to processing facility
3. Clean mushrooms with brush
4. Place product in Weston Stainless Steel Food Dehydrator and process up to 5lbs of fresh mushrooms at a time for 2-4 hours
5. Collect dried mushrooms in baskets
6. Weigh dried mushrooms into 4 oz portions
7. Place 4 oz portions into 3 x 3 bags, seal, staple on label
8. Place bags into boxes, either 24 or 48
9. Place information onto provided spreadsheets on quantity of bags and boxes filled
10. Store boxes securely
11. Have boxes picked up or delivered to point person who brings them to clients
12. Upon delivery, client gives receipt then either remits payment electronically or to local point person

**Quick View three-year financial projection:**

	cost	revenue	profit / loss	cumulative projected ROI	re-investment rate	re-investment	retained earnings	reimbursement	dividend (25%)	project cash
Y1	\$ 5,000.00	\$ 4,751.40	\$ (248.60)	-5.0%	0%	\$ -	\$ 7,513.90	\$ -	\$ -	\$ -
Y2	\$ 2,000.00	\$ 10,625.00	\$ 8,625.00	120%	10%	\$ 862.50	\$ 7,513.90	\$ 4,650.00	\$ 715.98	\$ 2,147.93
Y3	\$ 2,300.00	\$ 15,125.00	\$ 12,825.00	228%	10%	\$ 1,282.50	\$ 11,542.50	\$ 4,650.00	\$ 1,723.13	\$ 5,169.38
total	\$ 9,300.00	\$ 30,501.40	\$ 21,201.40	205%		\$ 2,145.00	\$ 19,056.40	\$ 9,300.00	\$ 2,439.10	\$ 7,317.30

(see Appendix A for details)

Appendix A - Three year Financial Projection

2012 Growing Season Project Budget Estimate		2013 Growing Season Project Budget Estimate		2014 Growing Season Project Budget Estimate	
<b>Expenses:</b>		<b>Expenses:</b>		<b>Expenses:</b>	
Labor -- up to 3 people for three days a week at a total monthly rate of \$50 for three to four months	\$ 200.00	Labor -- up to 10 people for three days a week at a total monthly rate of \$150 for four to five months	\$ 750.00	Labor -- up to 10 people for three days a week at a total onthly rate of \$200 for four to five months	\$ 1,000.00
Baskets / Drums for foraging	\$ 40.00	Baskets / Drums for foraging	\$ 80.00	Baskets / Drums for foraging	\$ 80.00
<b>Packaging</b>		<b>Packaging</b>		<b>Packaging</b>	
-- bag tubing - 3 inch x 3,000 feet - 1 roll - 12,000 individual 3 x 3 inch bags containing 4 oz	\$ 52.00	-- bag tubing - 3 inch x 3,000 feet - 1 roll - 12,000 individual 3 x 3 inch bags containing 4 oz	\$ -	-- bag tubing - 3 inch x 3,000 feet - 1 roll - 12,000 individual 3 x 3 inch bags containing 4 oz	\$ -
-- tubing dispenser	\$ 16.00	-- tubing dispenser	\$ 20.00	-- tubing dispenser	\$ 25.00
-- <b>sealer</b>	\$ 134.00	-- <b>sealer</b>	\$ -	-- <b>sealer</b>	\$ 150.00
-- sealer blades (6)	\$ 20.00	-- sealer blades (6)	\$ 25.00	-- sealer blades (6)	\$ 30.00
-- bag labels (1 5/16 x 2 3/4 inches), 12,000	\$ 99.60	-- bag labels (1 5/16 x 2 3/4 inches), 12,000	\$ -	-- bag labels (1 5/16 x 2 3/4 inches), 12,000	\$ -
-- <b>printer, toner, paper</b>	\$ 300.00	-- printer, toner, paper	\$ 50.00	-- printer, toner, paper	\$ 75.00
-- <b>refurbished PC</b>	\$ 300.00	-- <b>refurbished PC</b>	\$ -	-- <b>refurbished PC</b>	\$ -
-- food scales (4)	\$ 92.00	-- food scales (2)	\$ 50.00	-- food scales (2)	\$ 60.00
<b>Production</b>		<b>Production</b>		<b>Production</b>	
-- fly nets	\$ 20.00	-- fly nets	\$ 30.00	-- fly nets	\$ 40.00
-- boxes (25) 12 x 10 x 4 inches	\$ 25.00	-- boxes (25) 12 x 10 x 4 inches	\$ 30.00	-- boxes (25) 12 x 10 x 4 inches	\$ 40.00
-- plastic gloves and hand sanitizer	\$ 100.00	-- plastic gloves and hand sanitizer	\$ 120.00	-- plastic gloves and hand sanitizer	\$ 140.00
-- <b>solar panel and installation</b>	\$ 1,000.00	-- <b>solar panel and installation (maintenance)</b>	\$ 50.00	-- <b>solar panel and installation (maintenance)</b>	\$ 50.00
-- cleaning equipment	\$ 100.00	-- cleaning equipment	\$ 120.00	-- cleaning equipment	\$ 135.00
-- <b>Weston Stainless Steel Food Dehydrator</b>	\$ 250.00	-- <b>Weston Stainless Steel Food Dehydrator (maintenance)</b>	\$ 50.00	-- <b>Weston Stainless Steel Food Dehydrator (maintenance)</b>	\$ 50.00
<b>Initial Investment Costs:</b>		<b>Year 2 Investment Costs:</b>		<b>Year 3 Investment Costs:</b>	
4 month operating cost:	\$ 1,984.00	5 month operating cost:	\$ 100.00	5 month operating cost:	\$ 250.00
	\$ 764.60		\$ 1,275.00		\$ 1,625.00
<b>Total cost :</b>	<b>\$ 2,748.60</b>	<b>Total cost :</b>	<b>\$ 1,375.00</b>	<b>Total cost :</b>	<b>\$ 1,875.00</b>
Total cost per 4oz (3 x 3 inch) bag if 1,000 are produced:	\$ 2.75	Total cost per 4oz (3 x 3 inch) bag if 1,500 are produced:	\$ 0.92	Total cost per 4oz (3 x 3 inch) bag if 2,000 are produced:	\$ 0.94
<b>Revenue per sale of 4oz bag (3 x 3 inches)</b>		<b>Revenue per sale of 4oz bag (3 x 3 inches)</b>		<b>Revenue per sale of 4oz bag (3 x 3 inches)</b>	
Wholesale price of 4oz bags (estimated between \$5 and \$10)	\$ 7.50	Wholesale price of 4oz bags (estimated between \$5 and \$10)	\$ 8.00	Wholesale price of 4oz bags (estimated between \$5 and \$10)	\$ 8.50
Packaged in boxes of 24 bags (6lbs)	\$ 180.00	Packaged in boxes of 24 bags (6lbs)	\$ 192.00	Packaged in boxes of 24 bags (6lbs)	\$ 204.00
Packaged in boxes of 48 bags (12lbs)	\$ 360.00	Packaged in boxes of 48 bags (12lbs)	\$ 384.00	Packaged in boxes of 48 bags (12lbs)	\$ 408.00
<b>Profit per sale of 4oz bag: *</b>	<b>\$ 4.75</b>	<b>Profit per sale of 4oz bag: *</b>	<b>\$ 7.08</b>	<b>Profit per sale of 4oz bag: *</b>	<b>\$ 7.56</b>
<b>Total Profit for 1,000 sales: *</b>	<b>\$ 4,751.40</b>	<b>Total Profit for 1,500 sales: *</b>	<b>\$ 10,625.00</b>	<b>Total Profit for 2,000 sales: *</b>	<b>\$ 15,125.00</b>
* shipping and distribution costs not included		* shipping and distribution costs not included		* shipping and distribution costs not included	
<b>Logistics Expenses</b>		<b>Logistics Expenses</b>		<b>Logistics Expenses</b>	
A team of 2 CDI volunteers will be needed on the ground to ensure successful completion of the pilot project (7 - 10 days)		One CDI volunteer will be needed on the ground to ensure successful season kick-off (7 - 10 days)		One CDI volunteer will be needed on the ground to ensure successful season kick-off (7 - 10 days)	
-- roundtrip flight	\$ 1,300.00	-- roundtrip flight	\$ 650.00	-- roundtrip flight	\$ 750.00
-- local transport	\$ 250.00	-- local transport	\$ 300.00	-- local transport	\$ 400.00
-- food / water	\$ 300.00	-- food / water	\$ 200.00	-- food / water	\$ 300.00
<b>Total logistics expenses:</b>	<b>\$ 1,850.00</b>	<b>Total logistics expenses:</b>	<b>\$ 1,150.00</b>	<b>Total logistics expenses:</b>	<b>\$ 1,450.00</b>
<b>Total capital required:</b>	<b>\$ 4,598.60</b>	<b>Total capital required:</b>	<b>\$ 2,525.00</b>	<b>Total capital required:</b>	<b>\$ 3,325.00</b>
<b>from profit re-investment:</b>	<b>\$ -</b>	<b>from profit re-investment (10%):</b>	<b>\$ (862.50)</b>	<b>from profit re-investment (10%):</b>	<b>\$ (1,282.50)</b>
<b>Total capital support requested</b>	<b>\$ 5,000.00</b>	<b>Total capital support requested</b>	<b>\$ 2,000.00</b>	<b>Total capital support requested</b>	<b>\$ 2,300.00</b>