
Analysis of the Beans Chain of Carazo, Nicaragua

November 27, 2008

Carazo Beans Round Table

UNAG Carazo, Alianza Agroecológica de Carazo,

FENACOOOP Carazo, INTA, MAGFOR and

VECO Mesoamérica (VECO MA)

www.vecoma.org



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COOPAD

Contiguo al Parque Infantil La Mascota, Diriamba, Nicaragua.
Tel. 2534-2318. coopad@ibw.com.ni, coopad07@gmail.com

VECO Mesoamérica (VECO MA)

Colonial Los Robles, del Hotel Colón ½ cuadra abajo, Managua,
Nicaragua. Tel. 2278-3775, 2278-1358.
coordinadorSACD@vecoma.org, agronegociosveco@gmail.com, carolina@vecoma.org
www.vecoma.org

UNAG Carazo

Frente a Almacén “El Gallo más Gallo”, Jinotepe, Nicaragua. Tel.
2532-2963, unag_carazo@yahoo.com, silviojino@yahoo.com

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Background



dedicated to seed production.

Beans (*Phaseolus vulgaris*) are among the basic food items in the diet of the Nicaraguan population, and the second most important after maize. All beans consumed in the country are produced locally. The agro-climate conditions of the national territory have influenced favourably for Nicaragua to be self-sufficient as for production of this grain. The large majority of farms are small units, mainly situated on slopes with meagre soils, limited access to production resources (inputs) and only very few of them are

From 2007 onwards, there have been activities with many players and agendas have been set up around the Beans Chain of the South Pacific (Carazo). On June 25, 2008, the Beans Round Table of Carazo sees the light, and brings together the Agro-Ecological Alliance of Carazo, UNAG-Carazo, FENACOOB-Carazo, PCAC-UNAG, INTA, MAGFOR and the Network of Agro-Ecological Producers. The first meeting of the Beans Round Table was held on July 8, 2008. PCAC– UNAG, UCAC – FENACOOB, The Alliance of Agro-Ecological Producers of Carazo, and the Network of Agro-Ecological Producers participate in this meeting. It was agreed there that meetings would take place once per month and that the meeting point would be rotated between the organizations.

Vredeseilanden or VECO (www.vredeseilanden.org) is a Belgian non-governmental organization of development cooperation, which works together with farmers' union organizations and / or economical farmers' organizations which receive technical, methodological and financial support for the Development of Productive Chains in Sustainable Agriculture, for Political Advocacy in favour of Food Sovereignty and Security, and for Responsible Consumption. VECO MA is Vredeseilanden's regional programme for Meso-America (www.vecoma.org). In Nicaragua, Costa Rica and Honduras, VECO gives economical facilitation to farmers' organizations around sustainable and organic agriculture, market access, gender equity focus, interculturality and civil participation. One of the chains given priority by VECO MA is the Beans chain, as beans are mainly produced by small producers and they are part of the basic food basket.

Objectives of the Analysis of the Value Chain

- Elaborate an action plan to improve competitiveness in the Beans Chain of Carazo, Nicaragua.
- Study the functioning of the production, processing and commercialization links, as well as their actors, support services and commercialization channels.
- Promote a participative collaboration between players of the Beans Round Table of Carazo.

The methodology used to elaborate this analysis, uses tools of renowned methodologies in the environment of rural company development (see bibliographic references at the end of this document). The analysis included four main stages: the mapping of the chain, the priority-setting of problems, the definition of marketing strategies and the elaboration of the action plan. The process contained theoretical talks, group exercises and the use of precise questionnaires with key players. The data of the profiles of the families were obtained from the Baseline of beneficiary Beans producers of the Round Table. At the end, the report was socialized among the members of the Beans Round Table, to corroborate the analysis. Table 1 presents a list of participants that contributed to elaborating this study.

Table 1. Participants in the analysis of the Beans Value Chain of Carazo, Nicaragua. October 2008.

NAME	INSTITUTION	TELEPHONE
Miguel Espinoza	PCAC-UNAG Carazo	532-2963
Mario Sandoval	RENICC	280-2204/05
María Eugenia Matus	Red Consumidores	655-5543
Juana Gago	Red Consumidores	655-5543
Alexis Rodríguez	INTA Carazo	532-3054/59
Olga Rugama	Red Consumidores	655-5543
Bosco Navarrete	INTA Carazo	9296107
Marvín Delgado	Cooperativa La Cosecha	660-8095
Emiliano Calderón	COOPPAD	534-2318
Luís Altamirano	REPRAC	624-1364
Miguel Sandino	Mesa de Frijol	898-3784
William Cárcamo	Alianza Agroecológica	6820-765
Allan Chávez	FENACOOP	
Alcides Conrado	MAGFOR	532-0433
Juan Ramón Ramos	UNAG Carazo	532-2963
Edgar Munguía	MAGFOR	810-4272
Fener Ruíz	FENACOOP	655-7927
Leopoldo Rivera	NICARAOCOOP	278-4719
Eduardo Fernández	Cooperativa La Cosecha	866-7471
Maribel Pizzi	PRODESEC IDR	845-2250
Juan Herrera	REPRAC	9373-787
Roberto Aguirre	MAGFOR	459-1385
Celestino Espinoza	REPRAC	689-4183
Carolina Ulmos	VECO MA	278-3775
Marco Vásquez	VECO MA	278-3775

Map of the Chain

The Production Link

Figure 1 presents the Map of the Beans Chain of Carazo. In it, it is shown that there exist various organizations of small conventional bean producers (traditional use of non organic inputs) such as PCAC, COOPAVE and CAPROSEC, PCAC being the one that has most members and the largest planted area. There are also agro-ecological producer groups (non certified organic crops), such as the Network of Agro-ecological Producers (*Red de Productores Agroecológicos*). The independent producers are another important player. There are small, medium and large-scale producers. Table 2 shows the differences among them according to their scale¹.

Table 2. Differentiation of typology of beans producers in Carazo.

INDICATOR	SCALE		
	SMALL	MEDIUM	LARGE
Planted area (blocks)	< 2	2 to 10	> 10
Average yield (quintals/Block)	12	18	16 to 23
Land tenancy	70% own and 30% rented	86% own and 14% rented	100% rented
Destination of production	80% sales and 20% consumption	80% sales and 20% consumption	94% sales and 6% consumption

Among the main inputs are seeds (mainly the INTA Red variety, INTA Masatepe, Criolla, INTA Cárdena, Guaymi and Nueva Guinea). Some producers have covenants with INTA to produce seeds; they buy the “registered” seed at 83 US\$/qq. Those who produce grain, buy “certified” seed from MAGFOR at 110 US\$/qq. As for labour force, about 60 to 70 work hours are required per block, at a cost of 50 to 70 Cordoba per day. Most of the producers use animal traction. Among the non organic input providers are: Agrimesa, Agrovet, Martínez, IDR, Polo de Desarrollo, UNAG, RAMAC and Coodepagro.



One of the services provided to the production link is technical assistance, given by ATP2 (at a cost of 7.0 US\$ / producer), IDR, INTA, MAGFOR, PCAC and FUNICA. This consists mainly of technical follow-up of production, training in agro-ecology, organization and certification issues. The credit is provided by NICARAOCOOP and INTA for the purchase of seeds, paid in species² and in cash; the guarantees required are of secured and the term is five months. FENACOOOP also provides credit at a yearly

¹ Consensual characterization between participants of the Beans Chain of Carazo.

² Payment in species refers to payment with bean seeds.

interest of 6%, and with a term equal to the crop cycle. The certification of seeds is given by MAGFOR at a cost of 5,00 US\$ per block.

The sales prices at community level vary between 500 and 700 Cordoba per quintal, and they resell to wholesalers in Managua between 800 and 900 Cordoba. The small intermediaries can collect on average 1.000 quintals per year, whereas the big ones obtain between 5.000 and 10.000. The quality requirements are concentrated in a humidity of 16 to 18%, and hand-blown.

The Post-harvest and Processing Link

Some organizations, like co-operations and ENABAS, have recollection points in the field, with a recollection capacity between 100 and 400 quintals. They do not classify, and the purchase prices vary between 800 and 1.000 Cordoba per quintal.

Among the processing factories are AGRONEGSA, LAFISE and Centroamericana, which buy the beans at between 600 and 700 Cordoba per quintal (plus a commission of 10% for the intermediary that recollects them in the field). The average price of the processing is 67 to 97 Cordoba per quintal. The estimated capacity is of 35,000 quintals per cycle (first season, second season or minor third season harvest). The quality requirements are from 16 to 18% humidity and hand-blown. Another player in this link is FENACOOOP, who buys the grain at a price of 800,00 Cordoba per quintal and sells (vacuum) processed beans at a price of 1.600,00 Cordoba per quintal.

An important service in this link is the processing factory; INCOPA dries at 15% humidity for 1,3 US\$/quintal. LAFISE and Centroamericano process, blow, classify, polish and package for 3,8 US\$/qq. ENABAS processes seeds at a cost of 18 Cs/qq. Another processor is AGRONEXA.

The Commercialization link

Among the exporters are LAFISE, Centroamericana, NICARAOCOOP and Cooperativo del Campo. Their purchase prices vary between 800 and 900 Cordoba per quintal. A detailed analysis of the export statistics of Nicaragua is presented in the Marketing Strategy section. This analysis shows that the average over 2002-2008 was 2.500.487 US\$/year; 862.084 qq/year and a price FOB of 31 US\$/qq. 90% of the export is destined towards El Salvador, Costa Rica and Honduras.

The farmers' markets like MERCOOP and MERCADO SANO represent a channel for direct sales from the producer towards the consumer. MERCOOP takes place once per month in the city of Jinotepe, and MERCADO SANO every Saturday in Diriamba. In MERCOOP, the average sales volume is 5 quintals of loose beans and 800 pounds of pre-cooked beans, market price. In the Healthy Market (Mercado Sano) of the city of Diriamba, the sales volume reaches 12 quintals per month, and it is commercialized at a price of between 9,00 and 10,00 Cordoba per pound.

The national consumer who buys at a retail price, pays between 12 and 15 Cordoba per pound of loose beans, which is more expensive because the lack of direct links between producers and commercializers. The consumers who buy beans in a bag and with a brand name (mainly sold in supermarkets), pay a higher price. As for the relations between players, the majority are seen to be informal (dotted), the only relation of trust,

and which is most solid (continuous line) is that which exists between the producers who are member of the co-operations and who have recollection points.

Profile of the Beans Producer of Carazo

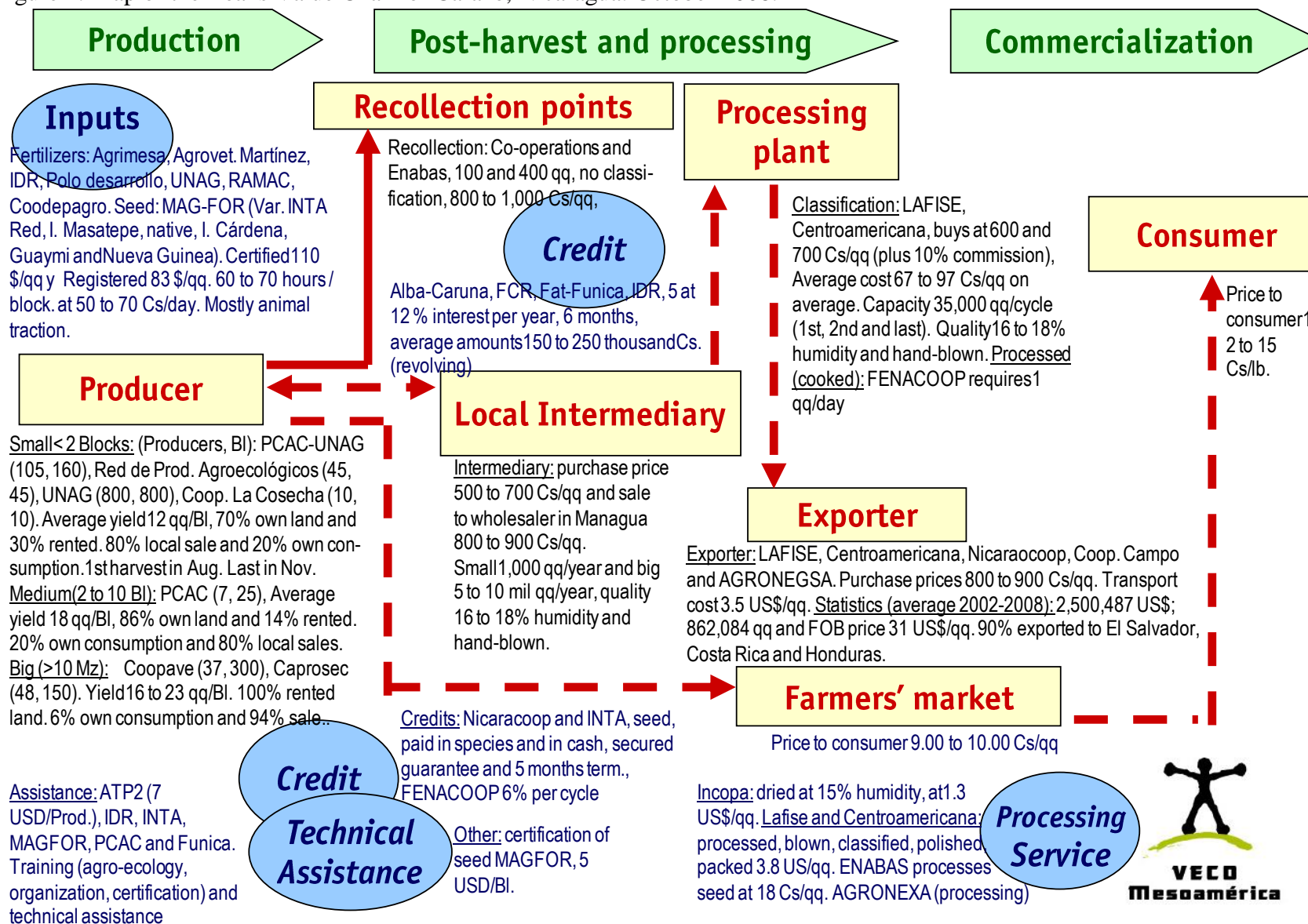
At the end of 2008, the Beans Round Table of Carazo under the auspices of VECO Mesoamerica (www.vecoma.org) realized a Baseline study. This kind of studies provides Information about the Human Capital (persons), Social Capital (remittances); Natural Capital (land and cattle); Physical Capital (technology, transportation, housing and public services); Financial Capital (credit); Policy (relations with organizations) and Strategies for livelihood (Expenses and Incomes). Table 3 presents some data of this study, which show the living conditions of these producers.

Table 3. Profile of the Beans Producer of Carazo. Source: Baseline of the Beans Round Table of Carazo.

VARIABLE	VALUE
2.3.1 Human Capital	
Number of meals per day	2,7
Persons living in the home	5,4
Persons who can read and write	4,4
Persons under 12 year	1,2
2.3.2 Social Capital	
Importance of remittances	
Not important	92%
Little importance	6%
2.3.3 Natural Capital	
Land tenancy	
Own and legalized land	50%
Own land, not legalized (no title)	11%
Rented land	33%
Yielded or borrowed land	2%
Land half own or of parents	3%
Big and / or small cattle	
Families with big and / or small cattle	76%
Heads of bovine cattle	37%
Number of horses	25%
Goats and / or sheep	8%
Pigs	41%
Birds	65%
2.3.4 Physical Capital	
Quality of living conditions	
Ground floor	53%
Cement or concrete floor	46%
Mud walls	29%
Brick or concrete walls	71%
Tile roof	7%
Zinc roof	83%
Number of divisions per house	2,8
Availability of public services	
Electricity	91%
Drinking water	88%
Well or river water	2%
Letrine	97%
Other public services	5%
Public services per family	2,8

These results show that there are many members per family (5,4 persons); the remittances are not important (they depend largely on income from agricultural activities); half of them owns the land and has it legalized, and one third part rents the land; the majority does have small or big cattle, but it are mainly birds; the living conditions are precarious because ground floors have the upper hand, walls are mostly of bricks or concrete, the roofs of zinc and there are only 2,8 divisions per house. As for public services, the majority has access to electric light, drinking water and latrines, diving an average of 2,8 services per family. This profile shows that the beneficiaries of the Beans Round Table are small-scale beans producers with scarce resources

Figure 1. Map of the Beans Value Chain of Carazo, Nicaragua. October 2008.



Prioritizing of Problems

The Carazo Beans Round Table established that the most common problems in the production link are excessive rain, lack of certified seeds, lack of credit, high cost of inputs, scarce and expensive workforce, lack of recollection points and low prices. In the processing links, bad bean quality, high packaging cost (kraft paper bags), high cost of storage, lack of packaging technology, inappropriate retention policies of cooperatives, lack of electronic classification equipment and lack of financing, are identified as common problems. In the commercialization link, grain plagues, reduced storage capacity, high transport cost, lack of market information, lack of financing for recollection, competence of intermediaries in Costa Rica and El Salvador, bad roads and difficult access to ports (for export). The most critical problems for each link have been prioritized in the double entry matrix (ANNEX 1). Table 4 shows the results and the justifications of this prioritization.

Table 4. Problems prioritized according to Beans Chain link.

LINK	PRIORITIZED PROBLEMS	JUSTIFICATIONS
Production	1. Excessive rains	Damages harvests, no produce to sell and impossible to obtain credits, losing the investment in inputs and improved seeds.
	2. Lack of credit	Without credit, it is impossible to purchase certified seeds, inputs or workforce. Neither is it possible to retain the grains, waiting for better prices.
	3. High cost of inputs	Constantly increasing prices of inputs limit profits and create dependency.
Post-harvest and processing	1. Lack of financing	Long time financing is required to purchase classification and packaging technology.
	2. Electronic classification equipment	This equipment would allow purchasing product already ready to be commercialized, as well as to export better quality products.
	3. Inappropriate retention policy	A good policy of the producers' cooperatives would allow having improved grain quality and approved prices.
Commercialization	1. Lack of financing for recollection	Financing is needed to buy and stock products, as well as to compete against the intermediaries in El Salvador and Costa Rica.
	2. Lack of market information	It is better to be well informed when competing against the intermediaries in El Salvador and Costa Rica. That would also allow finding buyers quickly, before the plague damages the product. Product cannot be sold without Information (“(s)he who has the information, is the boss”).
	3. Plagues of stored grains	Damage product quality, causing loss of market share.

Marketing Strategies

Analysis of the Beans Exports of Nicaragua

Table 5 shows an analysis for the red beans exports between 2002 and 2007. The data used are from the Centre of Exports and Imports (CEI). Please note that red beans exports (customs party nr. 713320000) had an average of 275.000,487 US\$, being 862.084 quintals at an average FOB price of 31 US\$/qq. The tendency is good, as the yearly average growth rate in US dollars is 23%, and in quintals 8%; this indicates a significant increase in price, which has been on average 22% per year (although there has been a small reduction in the number of quintals exported since 2007, the price has increased very significantly in 2008).

Table 5. Analysis of the Red and Black Beans exports of Nicaragua. Source: CEI, Carazo Beans Round table analysis.

Concept	2002	2003	2004	2005	2006	2007	2008	Yearly average
US \$	17554.088	13934.336	13359.443	27045.752	35623.200	38658.629	46327.962	27500.487
Quintals	871665	689455	556995	848214	1150337	1131557	7866366	862084
FOB price US\$ / qq	20	20	24	32	31	34	59	31
% increase USD		-21%	-4%	102%	32%	9%	20%	23%
% increase Quintals		-21%	-19%	52%	36%	-2%	0%	8%
% increase Price FOB		0%	19%	33%	-3%	10%	72%	22%

Graph 1 below shows that the months March and April are the ones with major export volumes of red beans. This is possibly due to the fact that the third, small harvest is produced, processed and stored in November and December; also, March and April have the best prices in the international market. October and November have less export, because this is the time for planting, which decreases the offer.

Graph 1. Timeline of red bean export of Nicaragua. Source: CEI, Carazo Beans Round Table analysis.

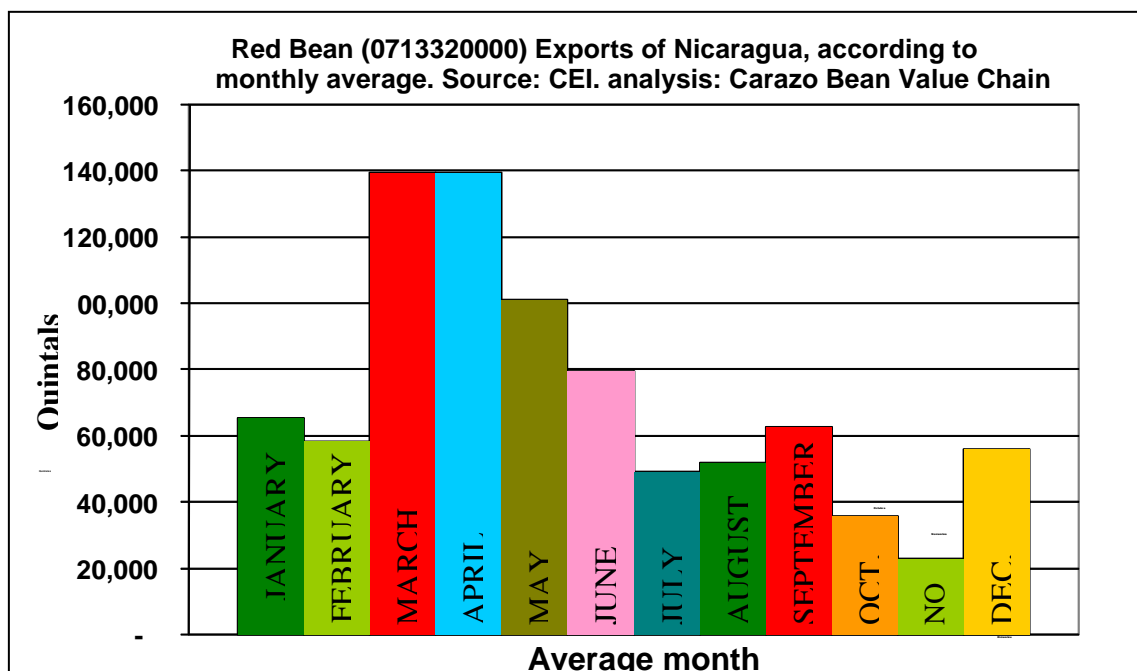


Table 6 shows that the countries that represent 90% of the export destinations of red beans are El Salvador (46%), Costa Rica (31%) and Honduras (12%). The United States are becoming important as a destination country, and are in the fourth place, increasing since 2002.

Table 6. Destination countries for red beans export of Nicaragua. Source: CEI. Carazo Beans Round Table analysis.

Country	Yearly Average Quintals (2002 to 2008)	% Participation
EL SALVADOR	404,477	46%
COSTA RICA	277,379	31%
HONDURAS	108,386	12%
UNITED STATES	63,899	
HAITI	13,622	
GUATEMALA	4,090	
PANAMA	4,083	
UNKNOWN	1,467	
SAUDI ARABIA	982	
GERMANY	880	
SPAIN	474	
MEXICO	451	
PUERTO RICO	440	
CANADA	370	
AUSTRALIA	250	
CHINA(TAIWAN)	0	
TOTAL	881,251	

Market Strategies (product / market)

Applying the product / market matrix of Ansoff, it has been established that the Beans Round Table would work the strategies for market penetration, market development, product development and diversification. Table 7 shows the specific products and markets for each strategy. These strategies will increase the competitiveness of the Beans Chain, as the added value (classification, packaging and processing) will increase profits for the producers' organizations. On the other hand, incursion in new market segments at regional and international level has been proposed.

Table 7. Matrix for product / market strategies for the **cashew** conglomerate in Honduras.

	Existing Markets	New Markets
Existing products	<p><u>MARKET PENETRATION</u></p> <ul style="list-style-type: none"> • Consumption beans, red, black and repainted, separate for local recollectors, Mercoop, COOPPAD and local consumers • “Agro-ecological” beans, separate, direct sales to local consumers • (hand-produced) Semilla Apta in bags for Mercoop and COOPPAD • “Agro-ecological” native and nativized seed with direct sales to producer (Seed Bank) • Certified seed in bags, for INTA, Agronexsa and Nicaraocoop • Cooked beans vacuum packed for Comisariato, Asoc. Jubilados and Supermercados de Pacífico Sur 	<p><u>MARKET DEVELOPMENT</u></p> <ul style="list-style-type: none"> • Black beans exported to Venezuela, Costa Rica, Mexico and / or Guatemala • Red beans exported to El Salvador • Cooked beans, vacuum packaged for the Restaurant Holders’ Association • “Agro-ecological” beans, separate, direct sale to institutional markets (unions, hospitals, army and others). Also in solidarity basket in Managua.
New products	<p><u>PRODUCT DEVELOPMENT</u></p> <ul style="list-style-type: none"> • Packed beans in 1 kg bag, for Mercoop, COOPPAD and local consumers • “Agro-ecological” beans with participative certificate in 1 kg bag for informal local consumers. • Certified seed in bags, for INTA, Agronexsa and Nicaraocoop • Cooked beans with soup, and Soup with seasoning, vacuum packed for Comisariato, Asoc. Jubilados and Supermercados de Pacífico Sur • nail-peeled beans (Camagüe) on local market • Agro-ecological nail-peeled beans (Camagüe) with participative certificate on local market 	<p><u>DIVERSIFICATION</u></p> <ul style="list-style-type: none"> • Packed beans in 1 kg bag for rest of country and for export • Certified participative agro-ecological beans in 1 kg bag for rest of country • Certified seeds in bags for the rest of the country and producers in Honduras and El Salvador • Cooked beans with soup, and Soup with seasoning, vacuum packed for the Restaurant Holders’ Association of Nicaragua • Cooked beans, vacuum packed for small export to nostalgic markets in the USA • Nail-peeled beans (Camagüe) to supermarkets of Managua

Action Plan

Once the most critical problems of the chain and the market strategies of the Beans Round Table had been prioritized, an action plan was defined for a 4 years period. This plan contains vision, mission, objectives, activities, realization indicators, time-table and the institutions interested in supporting each objective. Table 8 presents the action plan of the chain, which shows for each link the objectives, related activities, responsible (interested in supporting) and the execution time-table (2009, 2010 and / or 2011).

Table 8. Action plan of the Carazo Beans Chain for the period 2009 to 2011, for the production, post-harvest / processing and commercialization links.

ACTION PLAN OF THE CARAZO BEANS CHAIN							
Link	Objective	Activities	Indicators	Responsible	2009	2010	2011
Production	Risk of loss due to excessive rains reduced	Train producers in alternative techniques such as level curves, terraces, live fences, incorporation of organic material, zero fieldwork, trenches, dikes and other	300 trained producers (m/f)	La Alianza de Carazo, MAGFOR and VECO MA			
		Associate with cover crops, to reduce rain-induced erosion.					
		Trip to Nueva Guinea to know the production techniques in the rainy season.	6 trips				
		Train producers in the use of climate information sources.	90 producers trained				
		Monitor the climate information (climate periods of MAGFOR)	1 information system				
		Distribute climate information among producers (radio, bulletins and other)	8 municipalities				
		Perform a study to evaluate options for agriculture insurance for beans (with insurers or own funds)	1 study				
		Search information on evaluations of varieties resistant to rain					
		Evaluate the resistance to rains of the native, nativized and DOR 364 varieties in various regions	1 diagnosis with the organization				
		Support the initiative of the agro-ecological production law (concerning agricultural insurance)					
	Producers obtain credits	Manage second floor financing options, such as FCR, ALTERFIN, BANDES (Venezuela), BANCENTRO and other.	2 covenants with a financing institution	La Alianza de Carazo, MAGFOR and VECO MA			
		Manage the access to financing for seeds in species.	1 covenant with MAGFOR				
		Draw an inventory of the legal land situation of the producers	1 inventory				
		Make a covenant with COOPEALIANZA of Costa Rica, for financing of producers	1 covenant with COOPEALIANZA				
		Arrange legal status of the Beans Round Table	1 constitution				
		Manage a credit line as a round table for FDL, FONDEFER, FUNDESER, LAFISE	1 covenant				
		Draft a business plan for production, recollection, processing and commercialization of Beans, to access PYME, PRODESEC, KR2 and other funds.	3 business plans				
		Identify suppliers of alternative credits (other kind of guarantees)	1 directory of suppliers				
	Reduced input dependence	Draft soil analysis of farms	100 farms	La Alianza de Carazo and VECO MA			
		Train producers in the preparation and use of organic inputs	300 producers				
		Promote the use of organic inputs	1 promotion plan				
		Include technicians of state institutions in trainings Municipality INTA, MAGFOR)	1 covenant				
		Train producers in the knowledge of the NTON (Norma Técnica Obligatoria Nicaraguense - Prescribed Technical Standard of Nicaragua) and the Law for Promotion of the Agro-ecological System	100 producers trained				
		Train producers in Good Agricultural Practices	200 producers				
		Promote local suppliers of organic inputs (bokashi, rock flour, worm fertilizer, biofermenters, reproduction material and others)	5 supplying companies				
		Set up demo plots to evaluate rock flours (5 per municipality)	40 demo plots				

Table 5 – continued

Link	Objective	Activities	Indicators	Responsible	2009	2010	2011	
Processing	Processors access credit for recollection	Manage second floor financing options like FCR, ALTERFIN, BANDES (Venezuela) and other.	2 covenants with financial entities	La Alianza de Carazo, Beans Round Table, Nicaragua-coop and VECO MA				
		Make a covenant with COOPEALIANZA of Costa Rica for financing of processors	1 covenant with COOPEALIANZA					
		Manage a credit line as a round table for FDL, FONDEFER, FUNDESER	1 covenant					
		Identify alternative credit suppliers (a different type of guarantee)	1 suppliers' directory					
		Draft a business plan for the production, recollection, processing and commercialization of beans, to access PYME, PRODESEC, KR2 and other funds	3 business plans					
	Classification equipment for export is available	Search funds to acquire equipment	2 managed proposals	Beans Round Table, Nicaragua-coop and VECO MA				
		Train staff in the use of the equipment	10 persons					
		Define rules for use and benefit chain participants	1 regulation					
		Purchase 180 metallic silos to conserve grain and seed	180 silos					
		Make an exchange trip with companies that use this equipment	1 trip					
	commercial alliance developed between producers and processors	Establish a framework covenant between producers' co-operations and processors, with solidarity principles ¹	1 covenant	Beans Round Table, Fenacoop, Nicaragua-coop and VECO MA				
		Define negotiation policy according to solidarity principles	1 purchase / sales policy					
		Follow-up of process						
	Commercialization	Commercializers access credit for recollection	Manage second floor financing options, such as FCR, ALTERFIN, BANDES (Venezuela) and other	2 covenants with financial entities	La Alianza de Carazo, Beans Round Table and VECO MA			
			Make a covenant with COOPEALIANZA of Costa Rica for financing of processors	1 covenant with COOPEALIANZA				
Manage a credit line as a round table for FDL, FONDEFER, FUNDESER			1 covenant					
Identify alternative credit suppliers (a different type of guarantee)			1 suppliers' directory					
Draft a business plan for the production, recollection, processing and commercialization of beans, to access PYME, PRODESEC, KR2 and other funds			3 business plans					
Members of the chain know market information		Train participants to the round table in bean marketing, costs, negotiation elements and promotion techniques	180 persons trained	Beans Round Table, MAGFOR and VECO MA				
		Elaborate a market study to quantify demand, seasonal change of offer, windows for better and worse prices, analysis of competitors and commercialization channels	1 study					
		Set up an information system on Central American markets (imports, demand, buyers and prices)	1 information system					
		Design the means of local distribution through local radio, bulletins, pamphlets, short text messages and others	4 distribution media					
		Promote the services of the information system	1 promotion plan					
		Execute the activities set forward in the Market Strategies (market penetration, market development, product development and diversification)						
		Train round table members in export and import procedures in Central America (AGROLEMPA, CETREX, Dirección General de Aduanas, CEI or other)	60 persons trained					
Damage to stored grain diminished		Train producers, commercializers and the consumers' network in post-harvest and storage of grains	300 persons trained	INTA, La Alianza de Carazo, Beans Round Table and VECO MA				
		Set up a quality control system for recollection and storage (humidity, impurities, cooking, inoquity, plague control, use of good practices)	1 quality control system					
		Form a team of quality inspectors in post-harvest and storage (including consumers' network)	1 team of inspectors					
	Trip to exchange storage experiences	2 trips						
	Set up seed banks in the communities (including seed capital)	16 grain banks						
	Draft and manage a plan for seed banks for PESA FAO	1 proposal						

¹ = Exchange process through which both parties benefit in a win-win relationship with equity and transparency.

Annexes

Annex 1. Problem prioritization matrices in the production, processing and commercialization links.

ESLABON DE PRODUCCION								
	Excessive rains	Lack of certified seeds	Lack of credit	High cost of inputs	Scarce, expensive labour	Lack of recollection centres	Low prices	Frequency
Excessive rain	1	rain	rain	rain	rain	rain	rain	6
Lack of certified seeds			credit	inputs	seeds	seeds	seeds	3
Lack of credit	2			credit	credit	credit	credit	5
High cost of inputs	3				inputs	inputs	inputs	4
Scarce, expensive labour						labour	labour	2
Lack of recollection centres							low prices	0
Low prices								1

THE POST-HARVEST PROCESSING LINK								
	bad bean quality	high cost of packaging (bags)	cost of storage	lack of packaging technology	Inappropriate retention technologies of co-operations	electronic classification equipment	Lack of financing	frequency
bad bean quality		quality	quality	quality	policy	equipment	financing	3
high packaging cost (kraft)			Storage	packaging	policy	equipment	financing	0
cost of storage				packaging	policy	equipment	financing	1
lack of packaging technology					policy	equipment	financing	2
inappropriate retention technologies of co-operations	3					equipment	financing	4
electronic classification equipment	2						financing	5
lack of financing	1							6

THE COMMERCIALIZATION LINK									
	grain plagues	lack of storage capacity	high transport cost	lack of market information	lack of financing for recollection	Competition of intermediaries of C.R. and E.S.	bad roads	difficult access to ports	frequency
grain plagues	3	plagues	plagues	Information	financing	Competition of intermediaries of C.R. and E.S.	plagues	plagues	4
lack of storage capacity			transport	Information	financing	storage	storage	storage	3
high transport cost				Information	financing	transport	transport	transport	4
lack of market information	2				financing	Information	Information	Information	6
lack of financing for recollection	1					financing	financing	financing	7
competition of intermediaries of C.R. and E.S.							Intermediaries	Intermediaries	2
bad roads								roads	1
difficult access to ports									0

Bibliography

- ValueLinks Manual. GTZ et al. 2007.
- Diseño de estrategias para aumentar la competitividad de cadenas productivas con productores de pequeña escala. Proyecto Agroempresas CIAT. Lundy et al, 2003.
- Cadenas de valor. RURALTER.
- Identificación de oportunidades de mercado para productores de pequeña escala. Agrocompanies project CIAT. Vásquez et al. 2007.
- Baseline for beans producers of Carazo. Beans Round Table of Carazo/VECO MA. November 2008.