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ACTIVIDAD RURAL COMPETITIVA (ARCo)

Niche Market Report and Marketing Plan for Cacao

EcoTrade, Inc.

October 11th, 2007

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Bolivia Rural Competitiveness Activity: Bolivian Cocoa Market Review & Analysis for Niche Market Opportunities

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EXECUTIVE SUMMARY

The world chocolate market has undergone a shift over the last 10 years very similar to the changes that have occurred in the coffee market with the emergence of the 'Specialty Coffee Market'. The growth of dark chocolate consumption, driven by well publicized health reports, the introduction of super-premium, single origin and single plantation chocolates and the increase in environmental and social cause driven markets, such as organic and fair trade, all mirror the developments in the coffee markets. In addition, the interest from consumers in higher quality foods and a concern for where their food comes from has driven the development of the specialty chocolate markets.

These trends in chocolate started approximately 10 years ago and they are now consolidating, leading to rapid growth and emerging high end markets. The organic cocoa market has grown from a few thousand tons in 1996 to approximately 27,000 MT in 2007. The organic (and fair trade) chocolate markets have segmented with a range of pricing and qualities, forcing more changes and excellent opportunities in the cocoa market..

US AID and Chemonics' experience supporting coffee producers' transition from lower quality bulk markets to the higher quality, higher value and more direct trading relationships in the specialty markets will be important to cocoa farmers now making these same transitions.

Bolivia's very limited cocoa production is well positioned in that virtually all of its exports are already into the specialty markets. El Ceibo exports organic and fair trade certified product and the newcomer, REPSA, exports 'wild cacao' to the super-premium market in Europe. The challenges El Ceibo is now facing are two fold; they were an early adopter of organic farming practices and market opportunities, but have fallen behind with sales to older, lower quality brands as the organic market has grown and segmented. In response, they must improve quality and marketing skills to remain competitive.

Secondly, newcomer REPSA and their support of the nascent farmer organization CIAAB has posed new challenges to their hegemony and their volumes in the Alto Beni production area. In response, El Ceibo must open up their membership and provide new leadership in the sector. El Ceibo has the organizational structure and management capacity to make these transitions. CIAAB and REPSA face similar challenges in meeting organizational demands and meeting more demanding quality requirements

ARCo can be effective in helping to make cocoa a more competitive alternative crop by assisting actors in the cocoa sector to improve quality in order to sell directly into higher value segments of the specialty chocolate market. Achieving better quality will lead to better prices, which will in turn lead to more

interest in the Farmer Field School productivity programs. Improved prices to farmers, together with improved productivity, are the fundamentals of economic sustainability.

Before aggressive and progressive marketing efforts can be made, quality must be improved from current levels. ARCo's Farmer Field Schools are an excellent vehicle for these efforts along with improved infrastructure for farmers such as fermentation boxes and drying equipment. A 'National Cocoa Quality Competition' among all first tier cooperatives and associations will help create a number of important changes; initiating a 'culture' of quality and establishing quality differences within and outside the Alto Beni for potential segmentation in the marketing of Bolivian cocoa.

Flavor is the essence of premium chocolate and specialty cocoa production. As 'cupping' helped change and grow the specialty coffee market, organoleptic testing of cocoa is new but a very important tool. Establishment of 'cupping' or liquor labs is essential to improve flavor profiles of Bolivian cocoa and access premium markets. Ecuador has been a leader in cocoa flavor analysis and can provide valuable assistance. Judging quality in a national competition would be done on the basis of flavor profiles along the 'Cup of Excellence' lines. Including international buyers in the judging panel will help create interest in an emerging Bolivian Specialty Cocoa market.

Finally, with improved quality and new interest in Bolivian cocoa, progressive partnerships can be established that help support and continue the efforts begun by ARCo and help assure continued growth, quality production along with stable and improved pricing to farmers.

SECTION 1 – TRENDS IN THE SPECIALTY CHOCOLATE MARKETS

Sub-section (a): Global Chocolate Market

In 2006 the United States leads the world as top chocolate retail market, with \$15,585 million in sales or a global 11.4% market share. The United States is followed by the United Kingdom, Germany, Russia and France. Chocolate consumption between 2005 and 2006 among the top ten consuming countries increased the most in Russia (12.7%), followed by Brazil (10.3%), United Kingdom (5.5%) and U.S. (4.8%). [Table 1]

Table 1

Top 20 Chocolate Retail Markets by Country, 2002 - 2006 & Percent Change 2005 and 2006
(\$ millions and percent)

Rank	Country	2002	2003	2004	2005	2006	Change 2006 vs. 2005
1	USA	\$13,840	\$13,959	\$14,063	\$14,868	\$15,583	4.8%
2	United Kingdom	\$5,806	\$6,466	\$7,724	\$8,210	\$8,662	5.5%
3	Germany	\$5,337	\$6,297	\$6,870	\$7,290	\$7,385	1.3%
4	Russia	\$2,334	\$2,847	\$3,673	\$4,386	\$4,945	12.7%
5	France	\$2,896	\$3,609	\$4,099	\$4,368	\$4,407	0.9%
6	Japan	\$2,780	\$2,975	\$3,131	\$3,166	\$3,233	2.1%
7	Italy	\$1,705	\$2,149	\$2,508	\$2,749	\$2,860	4.0%
8	Brazil	\$887	\$963	\$1,298	\$1,643	\$1,813	10.3%
9	Canada	\$1,050	\$1,232	\$1,390	\$1,545	\$1,610	4.2%
10	Australia	\$872	\$1,114	\$1,330	\$1,446	\$1,496	3.5%
11	Switzerland	\$919	\$1,022	\$1,133	\$1,179	\$1,207	2.4%
12	Poland	\$630	\$699	\$856	\$1,064	\$1,111	4.4%
13	Spain	\$567	\$725	\$857	\$960	\$1,020	6.3%
14	Mexico	\$859	\$832	\$843	\$917	\$965	5.2%
15	Turkey	\$379	\$461	\$581	\$774	\$924	19.4%
16	Belgium	\$533	\$643	\$738	\$793	\$811	2.3%
17	Netherlands	\$515	\$642	\$727	\$776	\$787	1.4%
18	Sweden	\$468	\$585	\$684	\$718	\$742	3.3%
19	Norway	\$506	\$592	\$639	\$691	\$708	2.5%
20	Denmark	\$488	\$597	\$673	\$701	\$707	0.9%

Source: NCA, *World Confectionery Report & Export Handbook 2006*.

Note: Data for 2006 are NCA estimates

Sub-section (b): Premium Chocolate Market

The confectionery industry generally defines premium chocolate as product selling over 50¢/ounce (\$8/pound), although some manufacturers and data suppliers may use a different threshold. It can be merchandised as bars, boxed or individual pieces and includes mint patties, truffles, bonbons and chocolate-covered fruit. Irrespective of product type, premium chocolate is marketed using upscale positioning, the degree of which, not surprisingly, varies depending on product price.

The premium segment thrives on dark chocolate, single origins and inclusions of healthy ingredients, such as lavender, cranberry, etc. Product claims usually note natural ingredients and, to an increasing degree, organic and fair-trade certifications. The growing popularity of premium chocolate is evidenced by the fact that Americans are growing more sophisticated in their preferences for chocolate. Thirty-eight percent enjoy single origin chocolate and 15% have eaten fair-trade chocolate, according to a survey conducted in 2006 by Barry Callebaut. Nearly half of the survey respondents (46%) also admitted to eating chocolate at least several times a week. [PR Newswire, viewed July 6, 2007]

The *US Market for Chocolate*¹ divides the premium chocolate category into three segments based upon price points. [Table 2]

Table 2
Premium Chocolate Segments, by Price

Segment	\$/ounce	\$/pound
Everyday gourmet or affordable luxury	\$0.50 - \$1.00	\$ 8.00 - \$15.99
Upscale premium	\$1.01 - \$1.50	\$16.00 - \$23.99
Super premium (über-premium)	>\$1.50	>\$24.00

Source: Packaged Facts, *The US Chocolate Market*, 2007

At the lower end of the premium price spectrum are products marketed as “everyday gourmet” or “affordable luxury.” This segment acts as an entry port for consumers desiring to upgrade their tastes from budget-priced and often overly sweet, mass-marketed products. They carry a price premium over conventional products, but are positioned at the lower end of the premium segment’s price range. Leading everyday gourmet chocolate marketers include Russell Stover, Dove, Lindt, Ferrero, and Whitman’s, which sell through food, drug, and mass channels.

¹ Published in September 2007 by the market Research company Packaged Facts.

Single Origin Bars						
Amano	Venezuela Ocumare (70%)			2.00	\$6.85	\$54.80
Domori	Ecuador Arriba (70%)			2.64	\$6.50	\$39.39
Pralus	Bresil Bar (75%)			3.53	\$8.35	\$37.85
Theo	Venezuela (91%)	X		3.00	\$5.99	\$31.95
Valrhona	Trinidad Gran Couva (64%)			2.62	\$5.00	\$30.53
La Siembra Co-op	Panama Extra Dark (85%)	X	X	1.40	\$2.49	\$28.46
Cluizel	Dominican "Los Ancones (67%)			3.50	\$5.95	\$27.20
Guittard	Colombia Chucuri (65%)			2.00	\$3.35	\$26.80
Vere	Ecuador Ultimo Chocolate (75%)	X		3.00	\$5.00	\$26.67
Dagoba	Madagascar Sambirano (65%)	X		2.00	\$3.00	\$24.00
Dagoba	Dominican Conacado bar	X	X	2.00	\$2.69	\$21.52
Alter Eco	Bolivia Dark Chocolate (73%)	X	X	3.50	\$4.29	\$19.61
Mars/Seeds of Change	La Dominicana (61%)	X		3.53	\$3.99	\$18.08
Chocolove	Dominican Republic (70%)			3.20	\$3.40	\$17.00
Vintage Chocolate	Ecuador Plantations Arriba (75%)			3.50	\$3.42	\$15.63
Average Price						\$27.97
Origin Producers						
Grenada Chocolate Co.	Grenada Extra Bittersweet (71%)	X		4.00	\$5.95	\$23.80
El Rey	Venezuela Gran Saman (70%)			2.80	\$3.25	\$18.57
Santander	Colombia Bittersweet (70%)			2.47	\$2.25	\$14.57
Average Price						\$18.98

- Notes: 1. Includes pure chocolate bars (without flavors or inclusions), whenever possible.
2. OG = Organic Certified
3. FT = Fair Trade Certified

It is interesting to note that fair trade certified chocolate bars are priced the middle of both blended and single origin products with the lower end occupied by the large international brands, Russell Stover, Mars, Hershey and German import and mass market brand, Vivani. What is important for this report is the relatively large number of brands in the premium, organic and fair trade markets and the differentiation that has occurred in the price ranges in each segment. While it was not possible to obtain this type of data for the European market, as a more mature market and a more crowded market, the same trend has already occurred.

Packaged Facts estimates that \$2.7 billion of premium chocolate was sold in the United States in 2006. The premium segment accounts for 16.9% of the total chocolate market, up from 13.3% in 2002. Over the past five years, sales of premium chocolate have grown almost 4 times the rate of conventional chocolate (8.1% versus 2.1% CAGR respectively). In fact, the growth rate for premium chocolate has remained buoyant, as compared with the down-trending growth rate of conventional chocolate. Packaged

Facts estimates that demand for premium chocolate will continue as a leading growth trend in the U.S. chocolate industry. Accordingly, by 2011 premium chocolate sales will expand to 25% of the market, up from 16.9% in 2006, and generate \$4.5 billion in sales.” [Table 3]

Table 4

Premium & Conventional Chocolate Retail Sales and Premium as % of Total, 2002-2006

(\$ millions & percent)

Segment	2002	2003	2004	2005	2006
% Premium	13.3%	13.3%	14.5%	15.1%	16.9%
Premium	\$1,832	\$1,965	\$2,270	\$2,432	\$2,697
Conventional	\$11,924	\$12,842	\$13,380	\$13,662	\$13,254
Total	\$13,756	\$14,807	\$15,650	\$16,094	\$15,951

Source: Packaged Facts, *The US Chocolate Market*, 2007

The US chocolate market, and to a lesser extent, the European chocolate market, are undergoing significant changes that began 10 years ago and are consolidating today. In the US market, the major shift has been from milk chocolate to dark chocolate, driven principally by reports of antioxidant benefits and in a self sustaining manner, by the introduction of new brands with high quality products.

Speaking at CMA’s 2007 Chocolate Symposium, Tom Hernquist, Hershey Senior VP and Global Growth Officer, estimates that dark chocolate penetration of households has risen to 24% in 2006 from 8% in 2004. “Cocoa and dark chocolate will drive the chocolate category for the next hundred years, replacing milk chocolate which was the driver for the last hundred years.”

Within and alongside the trend towards dark chocolate are a number of other significant trends such as ‘single origin’, organic and fair trade are contributing to the changing landscape of the chocolate market and further driving growth. The changes and opportunities today in chocolate and cocoa are very much the same as those experienced in coffee over the last 10 or 15 years. The shift from milk chocolate to dark chocolate is similar to the shift from instant and lower quality coffees to more intense flavorful and interesting coffees, starting with 100% Colombian 15 or 20 years ago and continuing with Starbucks and the ‘Specialty Coffee’ revolution. Today, much of what we have learned from Specialty Coffee can now be applied to the new market of ‘Specialty Cocoa’.

Packaged Facts estimates that \$4.0 billion of dark chocolate was sold in 2006. Dark chocolate's market share increases as it climbs the premium product ladder. For example, while it accounts for 25.1% of sales overall, its utilization climbs to between 50% and 70% among über premium chocolate makers.

As consumers have recognized with wine, coffee, cheese and other food products, terroir (place) and variety (genetics) influence a product's flavor. There are three factors driving the trend of single origin chocolate bars: the quest for unique flavors, marketing differentiation, and meeting the demand of increasingly sophisticated tastes of die-hard chocolate lovers. In their constant pursuit of signature confections, pastry chefs seek chocolate with distinctive flavor profiles "to add more color to the palette," said Guittard Chocolate Company President Gary Guittard at the 2007 CMA Chocolate Symposium. It can be likened to allowing the consumer to "taste travel."

European chocolatiers have been making single origin chocolate for decades. Valrhona was the first company to offer estate grown chocolate, the Gran Couva from Trinidad. The French chocolate maker offers two single origin products, Ampamakia (Madagascar) and Palmira (Venezuela). In 1997 Michel Cluizel, a prestigious private French chocolatier offered its "1st Crus de Plantation" plantation select chocolate from Venezuela. This line has since expanded to products from Dominica Republic, Madagascar, New Guinea and São Tomé. The plantation and single origin select concept has become very popular. Other European chocolate makers have entered this market, upping the competition to offer chocolate made from very rare sources. For example, French chocolatier Pralus sells origin bars from 12 countries, including Cuba, Tanzania and Vanuatu. The Swiss premium chocolate maker Felchlin sells a 68% bar made exclusively from wild cocoa harvested in the upper Amazon region of Bolivia. The *Cru Sauvage* bar retails for about \$20 for a 3-ounce bar. [Table 4]

Guittard was one of the first U.S. manufacturers to make premium single origin chocolate. Launched in 1998, the company's E. Guittard line includes chocolate made from Colombia, Ecuador, Venezuela and Madagascar. Dagoba, in 2005, was the first chocolate maker to introduce a line of organic origins. The company's *Origins* line makes dark chocolate bars from Costa Rica, the Dominican Republic, Ecuador, Madagascar and Peru. Hershey launched in 2006 its *Cocoa Reserve* (Sao Tome, Dominican Republic, Ecuador and Indonesia). The International Chocolate Company sells tasting tablets from Mexico, Ivory Coast and Ecuador. The newest company to enter this niche is Amano Artisan Chocolate, which sells very high quality chocolate from Venezuela and Madagascar at \$6.95 per 2-ounce bar. Origin bars are not restricted only to dark chocolate. For example, since 1991, Omanhene has been selling a 48% "dark" milk chocolate bar made exclusively from Ghanaian beans.

Plantation owners of flavor cacao have also entered an increasingly crowded market. Companies who export to the U.S. include El Rey (Venezuela), Santander/Nacional de Chocolates (Colombia), Grenada Chocolate Company (Grenada) and several from Ecuador. However, these bars retail at a 32% discount compared with European and American chocolate bar makers (average cost about \$18.98 versus \$27.97 per pound). [Table 3]

In summary, while this niche has much more room to grow as consumers discover the variety of bean flavors and as growers upgrade their quality, it has grown increasingly competitive. Single origin chocolate makers have a marketing challenge to differentiate their products and attract consumer attention. Additionally, currency valuations add an important element in product demand. In recent years the plummeting exchange rate of the U.S. dollar against European currencies has overvalued European confectionery products. This situation sparked at least two American chocolatiers to source their semi-finished product from the South American producers, which had favorable change rates.

Sub-section (c): Organic Markets

The organic food industry is positioned to gain from a trifecta of mega-food trends: wellness, health and premium quality. Organic products are firmly identified in consumers' minds as healthier alternatives since, by definition, organic products are free from pesticides, hormones and GMOs. Each food safety scare drives consumers into the organic food camp. These advances in product quality make consumers equate organic with gourmet, as has long been the trend in Europe, and also help justify the higher cost of these products. In addition, expanded product availability in main stream distribution channels makes them available to a wider audience.

Most organic chocolate is targeted at the gourmet consumer, the fastest growing segment of the chocolate market. The first organic chocolate products to hit the markets about ten years ago were bars and cocoa for eating and baking applications. Now products are being introduced into pricier premium categories, namely, truffles, single origin bars, boxed chocolate and bars made with chic, exotic flavors.

Segmented into value/price driven and some of the early makers have not upgraded the quality of their lines to match rising consumer sophistication. Some chocolatiers let the cause behind their bars trump its flavor, a decision that will prevent sales from growing beyond the bar's core constituency. Dagoba is pursuing an interesting marketing strategy, introduces two lines of bars with essentially the same ingredients and price per pound, but different sizes, prices and labels. Its "classic bar" line weighs 2.83

ounces and retails for \$3.49, while its higher end bars with single origin or infused flavors weighs 2.0 ounces and retails for \$3.00.

Although a small part of overall organic food market, organic chocolate sales have been increasing at a very impressive rate. In 2006, for example, sales rose 64.9% to \$119.9 million. During the five-year period between 2002 and 2006 organic chocolate sales grew at a 39.5% CAGR rate, as compared with 3.0% CAGR for the entire chocolate market. Additionally, its market penetration increased to 0.8% from 0.2%. [Table 5]

Increased demand for organic chocolate spurred manufacturers to expand their product development activities. New organic chocolate product introductions were up 154% in 2006, more than double the growth rate for conventional chocolate products. Additionally, chocolate products were the most popular new product category in the confectionery industry.

Table 5

U.S. Organic Chocolate Sales, Growth Rate, CAGR and Market Share, 2002 - 2006

(\$ millions and %)

Statistic	2002	2003	2004	2005	2006	CAGR 5 YR
Sales	\$22.7	\$29.4	\$47.0	\$72.7	\$119.9	
Growth	13.5%	29.5%	59.9%	54.7%	64.9%	39.5
Organic Penetration	0.2%	0.2%	0.3%	0.5%	0.8%	

Source: Packaged Facts, *The US Chocolate Market*, 2007

Natural Foods Merchandiser (December 2006) surveyed consumers of organic, natural and health products and measured the price premium a consumer is willing to pay for food with healthy attributes. [Table 6]

Table 6

Price Premiums Consumers will Pay by Attribute

Attribute	Price Premium
Organic	37%
Fair-trade	33%
Locally Produced (< 100 miles)	32%
Natural	27%
Made with Recycled Packaging	23%

Source: Natural Foods Merchandiser

Given the sales growth of organic chocolate and assuming linear sales growth, Packaged Facts forecast organic chocolate sales approaching \$200 million by 2011, a 42% increase per annum.

Two constraints may temper the optimistic forecast: supply and demand. For other organic products, shortages of key ingredients have become a supply-side constraint. In the Organic Trade Association's *2006 Manufacturer Survey*, 52% of the respondents reported a "lack of dependable supply of organic raw materials has restricted their company from generating more sales of organic products." With 32% of organic cocoa production concentrated in the Dominican Republic, a Hurricane George-style storm could drastically affect world organic cocoa supplies, a category-3 hurricane that directly hit the island in 1998. Additionally, domestic consumption in other organic cocoa producing countries such as Peru, Mexico and Brazil cut into the supply available for export. With robust demand for quality organic products expected to continue for the foreseeable future, ingredient shortfalls will persist.

Consumers, especially Europeans, demand high quality gourmet products. Product from the Dominican Republic, as an example of a producer whose export potential to Europe is hindered by the reputation of its cocoa, is considered poor quality owing to fermentation and drying issues, according to the Research Institute of Organic Agriculture. The Venezuelan government, eager to diversify its economy, has provided \$10 million for organic farming research and training. Limited quantities of organic cocoa are now shipping from Madagascar and will soon be available from Ghana, Ivory Coast, Papua New Guinea and Indonesia.

In Nicaragua the Austrian Development Agency has partially funded a €500,000 (US\$700,000) project to improve yields and bean quality of organic cacao through long term intervention and genetic improvement. The agency is working through the agricultural consultancy Biodiversity International.

Blommer and United Cocoa Processors are the only two organic bean processors with certified U.S. factories. Certified organic European processors include Barry Callebaut, Debelis, ICAM, Maestrani and Bernrain.

Despite these developments, reliable access to supplies of organic cocoa and other organic ingredients remains an issue for manufacturers. If their ingredient forecasts fall short due to rising demand for finished products, manufacturers may not find much relief in the spot market.

Sub-section (d) Fair Trade Markets

Ethical consumerism is moving mainstream. Consumers are increasingly selecting brands based upon the company's commitment to the public and environmental commonweal. They are directing their grocery money to manufacturers that share the same causes, whether to fund environmental issues, producer welfare (fair trade) or local communities. A poster child for ethical consumerism is the fair-trade movement.

The first fair-trade certified chocolate product was UK-based Green & Black's *Maya Gold* chocolate bar introduced in 1994. U.S. leading marketers of fair-trade certified chocolate are Endangered Species Chocolate Company, Dagoba, Lake Champlain Chocolate, Ithaca Fine Chocolates, San Francisco Chocolate Factory and Equal Exchange. United Cocoa Processors is the only U.S.-based fair trade certified processor, while certified European processors include Barry Callebaut, Debelis, ICAM, Maestrani and Bernrain.

In 2006, imports of certified fair-trade cocoa jumped 75% to 1.8 million pounds, while imports of certified fair-trade and organic cocoa vaulted 95% to \$1.4 million pounds. Growth for this niche can be attributed to more licenses issued, a wider distribution of product into the mainstream and more new product introductions. In short, greater supply stokes more demand. "Our research has shown that (logically) consumers – especially specialty shoppers – will buy FTC products, including chocolate – when it's available. It's the 'build it and they will come' phenomenon", says Elizabeth Bertani, TransFair USA's Director of Marketing in a May 2007 interview with Packaged Facts. [Table 7]

Table 7

Imports of Certified Fair-trade & Organic Cocoa Beans, 2002 - 2006

(pounds & percent)

Year	Fair-trade		Fair-trade + Organic		Organic as % of Total
	Pounds	Growth	Pounds	Growth	
2002	14,050	n/a	7,122	n/a	51%
2003	178,888	1173%	173,556	2337%	97%
2004	727,576	307%	618,187	256%	85%
2005	1,036,696	42%	744,238	20%	72%
2006	1,814,391	75%	1,449,841	95%	80%

Source: TransfairUSA

SECTION 2 – Analysis of the Bolivian Cocoa Sector

Sub-section (a): El Ceibo

Background Without being privy to financial statements, from the outside, El Ceibo is visibly a very successful cooperative. They have made significant investments in El Alto in offices, warehouses and a processing facility, a major collection center in Sapecho with ample office and meeting spaces and a recently renovated and expanded fermentation and drying facility. There are trucks and motorcycles, well trained staff and available technicians that have done good work in helping execute ARCo’s Farmer Field School program. El Ceibo has been an early adaptor, even a market leader in the organic and fair trade markets with their name on some customers packaging through long term relationships. It seems, however, that El Ceibo has grown complacent in their relationships, pricing structures and happy to be investing up-stream. With the entry of REPSA into their Alto Beni domain, they have been pushed into action that will hopefully become positive change for El Ceibo and cocoa farmers in the region.

Farm Level Pricing

In the purchase, or reception of cocoa from members, El Ceibo has a good pricing system in place with differentiation per type of cocoa, [Tables 8 and 9]

Table 8: El Ceibo Price Structure for the Purchase of Dry Cocoa

Type of Cocoa	Grade	Bs/QQ	US\$ / MT eq.
Organic	1	680	1,848
Organic	2	650	1,766
Transition	1	600	1,630
Transition	2	570	1,549
Conventional	1	570	1,549
Conventional	2	530	1,440

Table 9: Price Comparisons Between Grades in El Ceibo Pricing

Types of Cocoa and Grades	Bs/QQ	US\$ / MT	% Diff.
Difference b/w Organic Grade 1 and Organic Grade 2	30	82	4.62%
Difference b/w Trans. Grade 1 and Trans. Grade 2	30	82	5.26%
Difference b/w Conv. Grade 1 and Conv. Grade 2	40	109	7.55%
Difference b/w Organic Grade 1 and Transition Grade 1	80	217	13.33%
Difference b/w Organic Grade 2 and Transition Grade 2	80	217	
Difference b/w Organic Grade 1 and Conv. Grade 1	110	299	19.30%
Difference b/w Organic Grade 2 and Conv. Grade 2	120	326	22.64%

There are no ‘second payments’ or year end bonuses for farmers based on quantity or quality of cocoa delivered and results of the cooperative. However, if farmers are shareholders in El Ceibo, then they receive annual dividends.

The fact that El Ceibo is differentiating between Grade 1 and Grade 2 is positive. The difference of only \$82/MT is not bad, but does not likely fully compensate, or create the necessary incentive for farmers to make the extra efforts required to reach a top grade cocoa. Nor does the difference represent the full market value difference between the two grades. Well fermented cocoa with no defects can fetch a premium of \$200 - \$300/MT, or more, over average or lesser quality cocoa, if the flavor is truly superior and the other components of premium pricing are met, such as reliability of future supply.

According to El Ceibo’s Comercial Manager in Alto Beni, almost all cocoa came in as Grade 1, as long as it was not overly humid, or moldy. Grade is determined at the first tier coop, but no cut tests are performed when the cocoa arrives at the main Sapecho warehouse. Little supervision of grading is taking place and little to no quality control is being done involving fermentation levels, or confirmation of any other defects.

***Note:** fermentation levels are critical to flavor development in cocoa and in turn to access to premium niche markets. Under fermented, or poorly fermented cocoa tastes very astringent and bitter, while better fermented cocoa tones down those negative flavors and brings out chocolate flavor and other more complex and valuable flavor notes.*

Although there was no first hand observation of cocoa being received at the first tier coop level; the lack of cut tests at the central warehouse and the Commercial Manager's comments regarding mold and humidity; it is clear that these are their primary concerns, not fermentation and flavor. In fact this was confirmed at the El Alto factory, where the beans with higher levels of fermentation broke in their processes too easily. Rather than adjusting or changing the machinery, they have lowered the quality of their raw material to meet factory limitations -.

Proper cut tests to determine fermentation levels and defects must be done rigorously at the first point of reception (first tier cooperatives) and that grading must be checked at the main warehouse in Sapecho, given the impact of grade determination on costs to the Coop (price to the farmer) and to insure quality.

In order to drive and improve quality, differentiation between Grade 1 and Grade II cocoa at the point of purchase must include the percentage of well fermented beans. There must be a significant enough price differential between the Grades to motivate farmers to achieve these higher prices. With strong financial incentives for farmers to ferment, they will make the effort and even demand, and be willing to pay for, fermentation boxes and drying equipment.

Proper fermentation and differentiation of pricing to farmers on the basis of quality are among the most essential points to improve the quality and value of Bolivian cocoa and improve access to higher value niche markets. Without financial incentives, Farmer Field School based quality training will not be effective on its own.

Commercial strategy and price setting is clearly the domain and prerogative of El Ceibo management. Nonetheless, by showing EL Ceibo the potential for increased revenue from higher quality markets, they should be willing to work with ARCo in the strategies necessary to reach them.

Current Quality and Practices

30% of El Ceibo's cocoa is purchased wet from farmers from areas near Sapecho / Palos Blancos. Given the recently renovated infrastructure, experience and processes, it is likely good quality. During the field visit, only a small sample was briefly examined during a meeting in El Alto. A representative sample is

being sent by ARCo and will be fully analyzed for quality and flavor by EcoTrade and potential clients and the result shared with ARCo as well as El Ceibo.

The remaining 70% of El Ceibo production is fermented in the field by individual farmers. As the crop was substantially over, it was not possible to see much cocoa in process. Three farmers were visited, while quite distant, were all located in Area III. All were considered to be exemplary. All three farms showed great care in their production and have above average yields compared to the area averages.

However, quality was another issue, even with these top tier farmers. At the first visit, with the wife and daughter of Carlos Churqui in Sarraria, Area III, cocoa drying on mats that was almost ready. They had decent fermentation boxes and were building a new wooden drying shed with ACIDI-VOCA support. While a full cut test was not performed due to time constraints, the fermentation level achieved was slightly below where it ideally should be.

Cocoa farmer and fermentation boxes in Alto Beni



Traditional raised drying mats and new drying tables with retractable roof under construction.



They described the fermentation and drying processes they practice as follows:

4 – 5 day fermentation, cover boxes with cloth rags. Cocoa is turned after the first two days and again on the fourth day. 4 days total if the ambient temperature is hot. Full sun drying on mats from the first day, mix or move 4 times a day.

The fact that the farmer has fermentation boxes and is adjusting days of fermentation to ambient temperatures is encouraging application of best practices. However, as in most cases, this farmer is following a ‘rote’ method and not testing or checking the results before drying begins and continuing fermentation if needed. Finally, the drying under full sun the first day is too fast. The beginning of the drying process is also the end of the fermentation process and needs to be done slowly at first.

The second farmer, Justino Mamani, in San Juan de Suapi, had a great mix of banana and cocoa production. Unfortunately, there was no cocoa in process and the farmer’s new ACIDI – VOCA fermentation boxes were serving as a television stand while the old model finished out the season! From the farmer’s general comments, his fermentation and drying practices likely produced a lesser quality cocoa than that of previous farmer we met with.

The third farmer visit was with Silverio Mamani, in San Antonio, Area III. This farmer had very old and inadequate fermentation boxes and some very poor quality cocoa drying on raised mats.

While this was a very small sampling of farmers, and there was no inventories of cocoa to sample and better judge quality, it was apparent that the 70% of cocoa coming into El Ceibo from the field fermented and dried was of fairly low quality and that the controls and incentives for better quality are not in place.

It is important to note that El Ceibo has a model ‘marquesina’ or solar drier at their Sapecho facility but El Ceibo management was not convinced of the effectiveness of the dryer, commenting that it was too slow. There could be a number of factors affecting this: from the type of plastic used, the dryer design, or the orientation to the sun. As this system offers a lower cost (more accessible) and more appropriate technology than the ACDI-VOCA wood and steel driers, it is important that they work well and that the El Ceibo management and Farmer Field School trainers ‘buy into’ the technology.

Solar drier ‘Marquesina’ at El Ceibo, Sapecho facility



El Ceibo from an ‘El Alto’ Perspective

As discussed in the beginning of this section, El Ceibo is by all accounts a successful organization. However, faced with competition from a lower cost competitor (REPSA - CIAAB), El Ceibo is definitely in a vulnerable position. Their large organization and cost structure will be threatened by reduced volumes. El Ceibo has been in a position of leadership for decades and will need to make some difficult decisions, be creative and leverage their strengths in order to come out a stronger organization and continue to lead the sector.

ARCo’s Social Capital Unit is uniquely placed to assist El Ceibo in this transition. As a first step, helping upper management and employees see beyond threats, name calling and claims of ‘unfair competition’. ARCo can help El Ceibo see the bigger picture. Their strength is in their people, their cooperative system and their very significant up-stream investments. A simple analysis of El Ceibo’s internal Strengths and Weaknesses and external Opportunities and Threats could lead to some interesting discussions and changes.

From a first visit to Bolivia as a country and a first exposure to Bolivian’s culture, it is evident that El Ceibo management is insular and conservative. They have developed very good relationships with their customers and appear to be loyal to a fault. However; they have not been open let alone aggressive in seeking new markets, new opportunities or bringing in outside experts either in production or, an export manager that speak English, French or German to facilitate dealings with fast growing markets.

During a visit to the main offices in El Alto, it was interesting to note that the cooperatives’ Mission and Vision Statements and Objectives are prominently displayed in the lobby, but there is no mention the improvement of the well being of their farmer members and their families, or the leadership role in the sector that the cooperative provides. Below is a translation of the Mission and Vision statements on the El Ceibo website

MISION

- Develop in an associative and competitive manner, with the criteria of equality
- Strengthen the management capacity of the agro- industries
- Implement the administrative capacity of the base cooperatives, technical assistance to the cocoa producers

VISION

- Establish ourselves competitively in the market of semi elaborated and finished products derived from cocoa.
- Enter and maintain ourselves competitively in the national market with a diversified line of finished products of coffee, citrus, wood and organically dried fruit
- Improve the human resources that intervene in the agro industrial chain.

Source: El Ceibo website: <http://www.elceibo.org/ceibo.php>

There is a strong emphasis on competitiveness and industrialization, which are important as means to achieve an end, but alone they do not define a meaningful mission or vision. In the 1980's Coca-Cola embarked on an incredible journey of growth and wealth generation by clearly defining its mission, and all business decisions on the basis of improving shareholder value. Cooperatives and El Ceibo can do the same by focusing their mission and business decisions on improving the 'shareholder value', i.e. the livelihoods of their farmer members.

El Ceibo was hoping to absorb the 22 Associations created through the work of Catie and others, but that is clearly now going to CIAAB. With that loss of volume and increased competition, El Ceibo must now look at opening their organization to assure growth. With only 800 farmer members as shareholders, El Ceibo is extremely narrowly held for a 30 year old Coop that has been virtually alone in a cocoa sector of 2,000 to 3,000 farmers. While these founders, managers and shareholders will likely not want to give up equity, much of which has come through international donations, they will need to be convinced of the value of expanding their business, renewing their organization and their position as true leaders and representatives of the Bolivian cocoa sector.

ARCo's Social Capital Unit can help El Ceibo achieve these two 'paradigm shifts'; re-focusing on improving the lives of their farmer members and opening up their membership, creating major milestones for El Ceibo that would greatly contribute to their future success as an organization and to the improvement of the livelihoods of their cocoa farmer members.

Sub-section (b): CIAAB

As is well known to ARCo, the new, producer organization “CIAAB” (Central Integral Agro Ecologico Alto Beni) is a very weak organization, not legally formed and with little to no administrative capabilities. There was not an opportunity to visit any of the 22 Associations under CIAAB, but it is also understood that they are small and weak organizationally. Beginning with the last cocoa season in March, CIAAB created a strategic alliance with REPSA that was referred to as a ‘life raft’. While REPSA’s goals are strictly commercial, the financing and support was badly needed and welcome.

ARCo is establishing programs with CIAAB and REPSA, assisting with organic certification and entering into a Farmer Field School program. From our meeting with REPSA owner, Volker Lehman, it was clear he did not intend to ‘teach’ his business to CIAAB and is intent on maintaining control while building viable volumes for his business. As ARCo is oriented to creating sustainable development via alternative crops through business opportunities, the REPSA – CIAAB relationship is a positive vehicle for doing so. Nonetheless, for the long term viability of CIAAB and its ability to provide services and market access that improve its farmer member’s incomes, it will be necessary to strengthen CIAAB as an organization and, equally or more importantly, strengthen the organization of the 22 farmer associations that form CIAAB. This is another opportunity for ARCo’s Social Capital Unit to support the Business Development team in the cocoa sector.

Sub-section (c): REPSA

REPSA stands for ‘Rainforest Exquisite Products S.A.’ and manufactures and markets finished products such as ‘Top of the World’ roasted coffee, ‘Wild Harvest’ chocolate covered brazil nuts and chocolate covered espresso beans, for sale at the airport and export markets. REPSA principal, Volker Lehman, is very capable with a background in specialty coffee, a ranch in Baure, in the Beni region that lead to a strategic relationship with Swiss Chocolate maker, Felchlin and their “Cru Savage” chocolate.

The entry of REPSA into the Alto Beni market has created a tsunami, with increased competition driving up prices as much as 30% during the crop when El Ceibo was accustomed to setting a price for the season. To date, REPSA reports only having purchased 72 MT, likely less than 10% of the areas production, but the effect has been dramatic. While this competition is positive, whether or not the long term impact will be positive, will depend both on El Ceibo’s reaction as well on CIAAB and its associations ability to grow as viable farmer organizations.

As a small volume business, REPSA is not in the position to provide the technical assistance to farmers that is required to improve production and quality; the services that will help build their business.

ARCo's ability to assist in financing these programs is of strategic value to REPSA; as such, they are likely to be flexible in accepting terms and conditions of the programs that lead to strengthening the strategic partner they would prefer to remain weak.

For its Alto Beni cocoa, REPSA has formed another strategic alliance with 'Pronatec', a large Swiss organic cocoa and sugar trading company that is providing financing and in return has an exclusive on production. With that arrangement and REPSA's savvy, ARCo will not be needed to assist with niche market access. However, there is a great need for ARCo's assistance in improving quality. While REPSA has been very competitive in pricing to farmers, to meet ARCo's goals of making cocoa a more competitive crop, and increasing revenues to farmers, there should be methods in place for monitoring quality and assuring farmers are getting paid premiums for the improved quality.

Sub-section (d): Chocolates Tropicales / Chapare

There was no opportunity to travel to the Chapare region or meet with Chocolates Tropical, a future visit will be necessary to provide in depth analysis and recommendations. From the descriptions of the region, growth in the agricultural sector and the availability of land and quality of the soils, it is clear that the Chapare will be an important area for expansion of the cocoa industry in Bolivia.

SECTION 3 – Recommendations for Quality Improvement Programs

Sub-section (a): Strengthening of quality component of Farmer Field School Training

While the ‘wild cacao’ has been used to create a super-premium chocolate, historically the hybrid cocoa introduced into Bolivia is not known as a fine flavor cocoa and may not be suitable for the super premium market segments. According to Volker Lehman of REPSA, they have had relatively positive feedback from European customers with some lots being classified as similar to a ‘good quality’ Peruvian cocoa. The potential of Bolivian cocoa will only come after significant work in quality improvement and segregation of those qualities and testing and trials done by top chocolate makers. That will take time, and given cocoas seasonality, it will take several seasons, several years and without guarantees.

Independent of whether or not Bolivian cocoa is ‘discovered’ as excellent, good or average, improving quality from the current low levels and creating innovative market linkages can improve prices, or help sustain prices during market down turns. Better prices paid to Bolivian cacao farmers through niche market access will make the cocoa more competitive and make the work in productivity presented through the farmer field schools a more interesting proposition financially.

This is the critical positive feedback loop that this ARCo program offers: improved quality leads to improved prices and income, which heightens interest in productivity improvement through the Farmer Field Schools. Better prices together, with better productivity brings true economic sustainability and competitiveness.

Working with El Ceibo and with CIAAB-REPSA, price differentiation for better qualities will make the improved income possible from the early stages of this program for the farmers that adopt proper post harvest practices and become role models that other farmers will want to follow in order to see the same better income.

Quality, in terms of flavor characteristics, is determined by a number of factors:

Genetic material or varieties of cocoa planted. There are many ‘Trinitario’ and ‘Trinitario – Amazonic’ hybrids that offer good flavor characteristics. Analysis of the flavor characteristics of the planting material being propagated by El Ceibo, as well as the more productive material selected from farmers

plots should be performed in order to include this critical component in plant selection and not make propagation decisions solely on productivity and disease resistance. However, influencing the flavor profile of Bolivia's Alto Beni cocoa through plant selection will take decades.

Soils and Micro-climates: There is little research on the effects of soil conditions and micro climates on cocoa flavor but it is known that there is an effect. A recent study of fine flavor cocoa versus bulk cocoa discovered that the same variety of cocoa planted in Trinidad, Venezuela and Ecuador took on some of the flavor characteristics of these countries. In terms of improving micro climates for better productivity, temperatures can be adjusted through better shade management and soil can be enhancement, preferably through organic methods

Harvest and Post Harvest Practices have extremely significant impact on flavor development and quality and are areas of direct and ready influence by farmers. Great criollo's or great trinitarios can be ruined by harvesting unripe or sick pods, poor fermentation and poor drying. Conversely, 'average' quality Trinitarios and Forasteros can be made great and their flavor potential maximized by harvesting ripe, healthy pods and proper fermentation and good drying techniques.

Improving quality through best practices in Harvest and Post Harvest Practices will be the most effective way to improve quality and improve access to higher value niche markets and make cocoa more competitive and the best way to do this will be through better Farmer Field School training in this area and stronger price differentiation based on quality.

The current Farmer Field School curriculum is focused on improved productivity and is weak on the development of proper harvesting, fermentation and drying skills. **Appendix I** presents Exercise 24 and Exercise 25 of the Farmer Field School Curriculum, which cover didactic experiments, or trials, with farmers to increase their knowledge and understanding of fermentation and the differences in the sale of wet cocoa versus fermented and dried cocoa. Together they represent the entire training on fermentation and drying in the farmer field School curriculum and are insufficient on their own to provide farmers with the tools to understand the basic processes, their importance to flavor development, or how to properly monitor and measure their results. They also do not discuss at all the importance of the drying process to fermentation, flavor development and quality.

Exercise 24 does a good job of allowing farmers to undertake fermentation trials on their own and then together with the group analyze the results. This exercise is good in that it allows the farmers to ferment different ways and with the materials and equipment they already have, without saying that fermentation boxes are absolutely needed. While boxes are generally better, farmers can begin to improve processes right away with better understanding and monitoring of processes.

With some minor modifications, this exercise can be fine to establish a 'base line' of current practices and measurement of current levels of fermentation and quality. Samples should be taken of the different qualities produced by each Cooperative and Association and proper cut tests performed to establish base line fermentation levels. It would be useful at this early stage to set aside some samples from each Area of the Alto Beni in order to begin flavor profiling., This will be relatively costly at first, possibly requiring samples be sent to Ecuador for testing. A few samples from each area should be sufficient to begin the process.

There is one step in this exercise that is not recommended. The farmers are instructed to remove black or 'prieto' beans from the sample before doing a basic cut test. While it is good they suggest the farmers analyze the quantity of black beans from each fermentation process and discuss why there might be more or less, removing these beans changes the results and buyers would not be doing the same.

Exercise 25 is designed to help farmers better understand the yields in dry cocoa from wet cocoa in order to be in a better position to decide how they want to sell their cocoa or to negotiate better the .price or conversion rates when selling wet cocoa and does not discuss or train the farmer in fermentation or drying practices.

Appendix II represents a good explanation of the importance of quality in the production and commercialization of cocoa. As it was developed by the ARD ProNorte program in Ecuador, some of it is specific to Ecuadorian cocoa in how it is graded by their national regulating body ANACACAO. It is a useful document in terms of understanding the importance of quality and does a good job establishing guidelines for commercialization, admirably including quality of service, an often overlooked aspect of quality. However, it does not teach the farmer how to achieve better quality. The document also describes Chemical and Physical characteristics of quality but does not introduce the concept of organoleptic, or flavor, characteristics which are the determining factor for quality in premium or niche markets.

The following additional concepts need to be included or added to new exercises within the farmer field school curriculum:

- Exercise 24 has farmers analyzing the levels of fermentation and, to its merit, asks the farmers to group the cocoa into three groups, well fermented, partially fermented and unfermented. It would be important to make sure that both farmers and trainers are clear as how to classify each of these groups, which is not explained in the exercise.
- Trainers should ask each farmer to taste some of the meat of the bean from each group or level of fermentation and discuss what they taste. Understanding the off-flavors present in the partially fermented and the unfermented beans is an extremely important first step in understanding why proper fermentation drying is so important to flavor to making high quality chocolate.
- The exercise does not explain the basic processes occurring during fermentation. While it is important not to confuse the farmers with complicated chemistry, it is necessary that they have a basic understanding of the processes involved.
- It is impossible to know if a fermentation process is complete or nearing completion, without checking. Traditionally, farmers have been told how many days to ferment and they do that, or less, and then set the cocoa out to dry without checking to see if it is done. Farmers should be cutting 10 beans or more from different areas of their heap, box or sack to see if the beans are no longer purple and if channels have started to form in the center of the cotyledon. If not, they should turn the cocoa, cover it and continue with the fermentation process.
- Drying is an important part of the post harvest process, with the beginning of the drying process actually being the end of the fermentation process. Exercises should be included with different drying methods and their impact on fermentation levels noted and discussed.
- It is positive to have farmers to understand processes and use the equipment and material they have. Nonetheless, it is important to create new exercises that show how to properly use the fermentation boxes being offered to farmers, comparing results with previous methods using older boxes, sacks or heaps.

- When introducing solar dryers, or marquesinas, it will be necessary to include an exercise in drying methods, as well as maintenance and using the marquesina for drying other crops.

Finally, it is important that the fermentation boxes offered to farmers be properly designed. One of the most important factors in design of the fermentation box is proper drainage. Small holes drilled into the floor of the box, as seen in the photo below on the left, have become popular but clog easily and are difficult to locate and clean afterwards. A box with a slatted floor, as shown below, provides optimal drainage and allows needed oxygen for the second stage of fermentation.

Figure 14 Examples of drainage in fermentation boxes



Box with drilled holes in floorboards



Box with slatted floor (recommended)

Sub-section (b): Measurement & Evaluation

Once quality has been improved, as programmed below, new business opportunities can be sought out and the impact measured and monitored in terms of making cocoa a more competitive alternative crop and the direct impact on farmer incomes.

While quality is being improved, it will be important to measure the progress being made and the initial impact on farmer incomes for having produced that better quality. While discussed in more depth below, ARCo should measure the progress made in physical quality characteristics, principally fermentation, price differentials to farmers and flavor characteristics.

Physical Characteristics

The percentage of well fermented beans is the primary measure of flavor potential and should be the primary physical quality indicator. The absence of defects, such as excessive humidity, mold, insect damage, or contamination by smoke during drying, is also important and should be measured and monitored. Bean size will be measured, but is a factor of weather conditions and varieties, it not something we can influence.

All of these physical characteristics are established through sampling and the 'cut test', where 100 beans are cut longitudinally and the interior of the bean is analyzed with the naked eye. Both El Ceibo and REPSA – CIAAB are familiar with both of these procedures, so it will not be necessary to explain or cover them in depth. The principal specifications and indicators recommended are:

- 1) % Well fermented beans
- 2) % Partially fermented beans
- 3) % Unfermented beans
- 4) % slatey beans
- 5) % Mold damaged beans
- 6) % humidity
- 7) Price Grade 1
- 8) Kg sold as Grade 1
- 9) Price Grade 2
- 10) Kgs sold as Grade 2

Data Collection: ARCo will need to work closely with El Ceibo and CIAB REPSA to establish proper sampling methods and record keeping for cut test results. Rather than collect data on all cocoa receptions, ARCo can request that all the cocoa from farmers participating in the Farmer Field Schools to be properly sampled and cut and records kept, along with sales data in price and kilograms sold. As there are relatively large numbers of farmers participating in the program, a representative sample group among participants could be established covering each area of Alto Beni.

Establishing a Base Line: Average fermentation levels should be established at the beginning of the Farmer Field School Cycle and used a base line for the test group. A random sampling of farmers not participating in the Farmer Field Schools should also be established and records kept for this control group. This second data group will be helpful as changes in weather will affect fermentation levels for both groups and help better show improvements.

Frequency of Reporting: ARCO should monitor results on a monthly basis in order to have continual information on quality improvements and know whether or not an impact is being seen or if more training is necessary. Quarterly reports should be produced and analyzed with the Farmer Field School Trainers. Within the quarterly report

Organoleptic or Flavor Characteristics

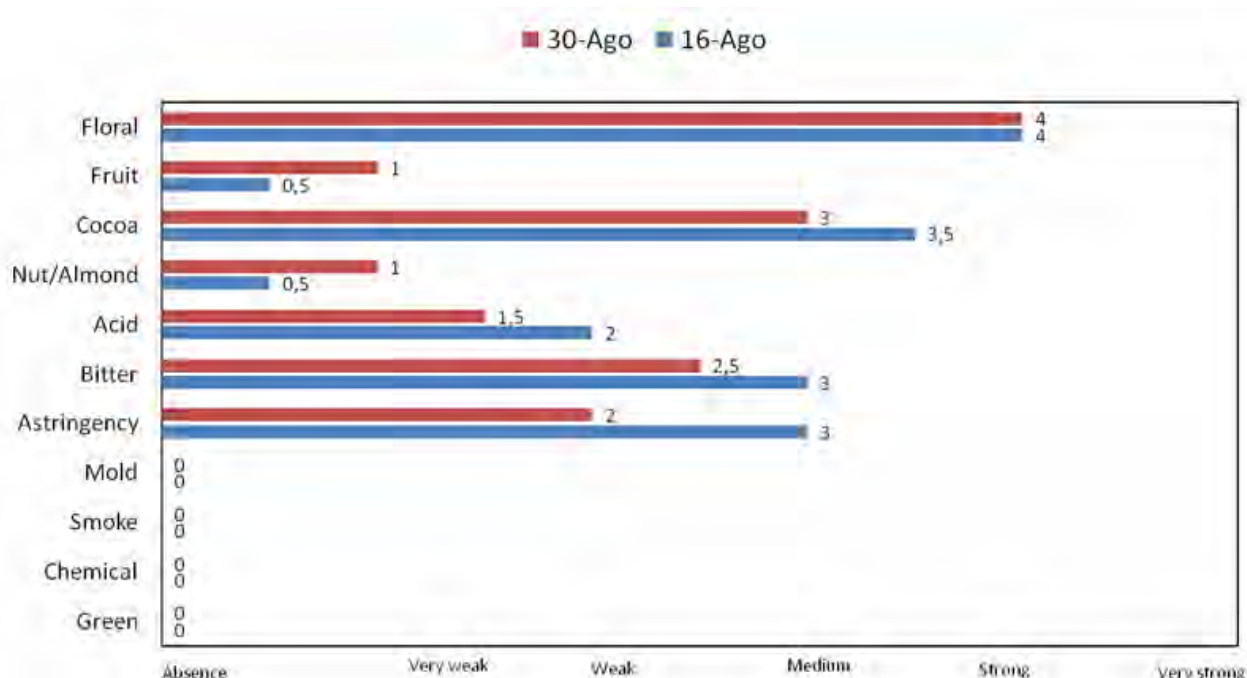
This is a relatively new field of research but is without doubt the most important trend in Specialty Cocoa. As in the coffee market 15 years ago, exporters were analyzing physical defects such as black, yellow or broken beans, sticks, rocks, etc. High quality buyers, on the other hand, were analyzing flavor via the cup test. The specialty market was able to grow and farmers able to sell more coffee into the specialty market when ‘cupping’ was brought into practice at origin. This is now happening in cocoa and the specialty chocolate market.

As flavor (along with availability and reliability of supply) is the determining factor in the ultra premium and premium segments of the organic and fair trade markets, efforts should be focused on improving flavor and will need to be measured and analyzed. Given the proximity and common language, the Ecuadorian research institution, INIAP that participated in the ICCO/CFC study should be considered for support in analyzing flavor profiles of cocoa bean samples, as well as for setting up flavor labs as discussed below.

Recently, a 5 year study was completed on the “Physical, Chemical and Organoleptic Differences between Fine Flavor and Bulk Cocoa. The still unpublished study was financed by the International Cocoa Organization (ICCO) and the Common Fund for Commodities (CFC) and represents a ground breaking shift from all research being focused on productivity and disease resistance to now include the characteristics of flavor. The study involved research centers in fine flavor cocoa producing countries Venezuela, Trinidad and Ecuador and used Ghanaian cocoa as the base line for bulk cocoa. The methods used for this study will become the industry standards for flavor analysis and should be the indicators used by ARCo. **Appendix III** presents a copy of the definitions and rating system used for the different flavor characteristics analyzed.

Measurement & Evaluation: Base line samples should be sent to INIAP from selected Farmer Field School groups as well as from control groups not participating in Farmer Field Schools. Bar graphs like the one above can be used to measure changes in flavor profiles. Sampling, analysis and reporting can be done on a quarterly basis.

Figure 16 Flavor Bar Graph of Two Samples of Ecuadorian Cocoa



Sub-section (c): National Quality Program Competition

Creating a ‘National Quality Program Competition’ would provide a host of benefits and contribute to moving Bolivia toward higher value niche markets. Benefits would include:

- Contribute to creating a quality consciousness among cocoa producers and cocoa sector leaders
- Creating a friendly and positive competitive spirit based on quality
- Help provide insights and data on differences in quality and flavor by region
- Attract attention and interest in quality “Bolivian Specialty Cocoa”

The competition should include samples from individual farmers representing each of the El Ceibo Cooperatives and the CIAAB Associations, as well as representatives from other regions such as Chapare and Beni. El Ceibo’s central Sapecho fermentary should be included as well as the ‘wild cacao’ from REPSA’s Baure facility.

Local Quality & Flavor Labs will have to be established in conjunction with this contest and will be discussed at more length below. A preliminary selection at each of these labs could narrow the samples to one per Coop and Association. From that level, a joint National Panel should be created with representatives from both organizations as well as from the Bolivian chocolate industry. The National Panel can then further refine the selection to the top 20 samples. Each of these producers should receive a fairly significant prize, although making it this far along in the competition should also be point of pride.

An international panel should be created to establish the top five samples and overall winners. Creating an international panel that includes a representative from INIAP and several international chocolate companies that are potential buyers will add some prestige, neutrality and validity to the results. However, most importantly, they will help create interest abroad in an emerging “Bolivian Specialty Cocoa Market”.

Sub-section (d): Establishing ‘Cupping’ or liquor Labs & Training

The work that Chemonics and US AID has done in setting up Cupping Labs for Coffee and training ‘cuppers’ will be of great value as the cocoa sector moves in this direction and this early work is done in Bolivia.

Cupping labs should be established in Alto Beni at both El Ceibo and CIAAB. El Ceibo may want to establish an additional lab in El Alto for R&D purposes if they do not already have one. The labs do not need to have ‘scientific lab’ price tags. While a more complete equipment inventory and budget will have to be established, these labs could be established for between \$5,000 and \$10,000. Training ‘flavor analysts’ or ‘Catadores’ will be more expensive and a program and budget will need to be established. As mentioned above, INIAP in Ecuador will be able to assist in establishing these labs and training ‘cuppers’. Additionally, a few exporters and one Coop in Ecuador have established labs and can also assist.

Sub-section (e): Segmentation, Creating Unique Selling Points for Alto Beni & Areas

Right now, there is no information as to potential differences or ‘Unique Selling Points’ of Bolivian cocoa produced in Alto Beni. The quality improvement programs outlined in this report and the National Quality Program Competition will help establish these differences. When and if differences are identified, additional work can be done to establish other potential marketing tools and ‘attributes’ for these unique cocoas, such as geographical aspects, descriptions of the microclimate, proximity to national forests and ethnic groups that produce the cocoa.

The ‘wild cocoa’ from Baure, referred to locally as ‘criollo’, ‘nacional’ or cacao ‘silvestre’ is a very distinct type of cocoa and from the REPSA – Felchlin “Cru Savage” example, is clearly capable of commanding very high prices in the super-premium segment of the chocolate market. Outside the small amounts of this cocoa grown ‘wildly’ in the Beni region, some very small amounts of this cocoa of this variety has been planted in the Alto Beni.

Production of this ‘Criollo’ cacao is extremely limited. According to REPSA, they do not see much growth beyond their approximately 50 MT from the Beni region and El Ceibo reports sales of only about 15 MT. Further the variety produces very small pods and extremely small beans, both mean lower yields for farmers and the smaller beans means lower yields for chocolate makers. From an interview with cocoa farmer, Hugo Chavez, in Covendo and from conversations with others, it seems these trees are also not very productive.

For these reasons, “Criollo” cocoa is not likely to be a major feature in terms of production or future planting for Bolivia. Nonetheless, some research effort is recommended to find out more about the potential production of this variety and trials done with graft propagation of the more productive specimens and more intensive production techniques.

SECTION 4 – Road Map for Increased Participation in Specialty Chocolate Market and Improved Revenues for Bolivia’s Cocoa Farmers

Road Map for Increased Participation in Specialty Chocolate Market & Improved Revenues for Bolivia’s Cocoa Farmers									
Activity	2007	2008				2009			
	IV Q	IQ	IIQ	IIIQ	IV Q	IQ	IIQ	IIIQ	IV Q
Create & Introduce National Quality Improvement Program									
Applying Quality Improvement during Crop									
National Quality Program Competition									
Marketing of Improved Regional Qualities									
Establishing Partnerships with Buyers									
2nd Annual National Quality Program Contest									
Consolidating Partnerships									

Sub-section (a): Q4 2007: Create & Introduce National Quality Improvement Program

The Palos Blancos office has just begun its second phase of Farmer Field Schools with El Ceibo and is finalizing agreements with CIAAB – REPSA for their first phase of a Farmer Field School program. With the main crop from March, during this 4th quarter of 2007 ARCo should be designing the improved fermentation and quality exercises for the Farmer Field Schools and refining the technological package offered to farmers in terms of infrastructure, type and construction of boxes and marquesinas, as well as proper training in the use of both tools. The budget, design and training for flavor labs should also be done.

Sub-section (b): Q1 – Q2 2008: Applying Quality Improvement during Crop

With the main crop from March to August, with the peak around May – June, the first quarter of 2008 should have a strong implementation of the quality improvement exercises with the smaller amounts of cocoa that come in before the main harvest so that skills are improved before the crop comes in. Significant efforts should also be made to get to as many farmers as possible the fermentation boxes and marquesinas needed. Finally, the first flavor labs should be installed and ‘cuppers’ trained by the second quarter so they will be ready to analyze samples as they come in during the main crop. Conceptualization and planning for the National Quality Program Competition should begin.

Sub-section (c): Q2 – Q3 2008: National Quality Program Competition

By May - June 2008, good quality samples should start to be tendered for the National Quality Program Competition, the selection period should be after the peak of the crop perhaps, the end of June. That process should be completed by Mid July and selected samples sent to the International Jury. Final tasting and

awards event should be scheduled for the end of July to avoid difficulties with August vacation schedules of potential jurors.

Sub-section (d): Q3 – Q4 2008: Marketing of Improved Regional Qualities

With good work in training farmers in fermentation and drying techniques and improved infrastructure reaching farmers, some better quality cocoa should be seen during the coming 2008 season and more creative marketing efforts can begin with niche market chocolate companies. With the results of the best quality samples from around the country, the potential for segmentation of the crop and USP marketing will be available and interest and awareness heightened by the national Quality Program Competition.

Sub-section (e): Q1 – Q2 2009: Establishing Partnerships with Buyers

The work leading up to this point will help create both the interest and the environment to develop some progressive partnerships with existing and potential buyers. With better quality and potentially more interesting products through segmentation of the crop, both El CEIBO and CIAAB-REPSA should be in a better position to negotiate more in depth relationships with buyers. El Ceibo has some very good relationships that with ARCo's guidance and support could be leveraged to create some joint long term projects that help support production and prices to farmers rather than just providing El Ceibo with a ready market. The same is true for REPSA, as their customer and strategic partner, Pronatec, should be more interested in the quality coming out of Bolivia. New buyers will help provide the competition that will help existing clientele move to new agreements.

ARCo should work with El Ceibo, REPSA and buyers toward an agenda of economic transparency to make sure that the better export prices are being reflected in better prices to farmers as this is how and when the crop becomes more competitive. Measurement & Evaluation of these new business opportunities should focus on this.

Sub-section (f): Q2 – Q3 2009: 2nd Annual National Quality Program Contest

With planning and scheduling begun during Q1 of 2009, the second year of the National Quality Program Contest should follow along a similar schedule as the previous year with samples from all Cooperatives and Associations coming in during the peak, or early part of the main crop in April – may June. For this second year, we may want to look at going a step further and emulating more closely the 'Cup of Excellence', where

some samples represent actual export lots that can be purchased via an auction system. This has never been done in cocoa and would make significant news and impact in the market place.

Sub-section (g): Q3 – Q4 2009: Consolidating Partnerships

With continued improvement in quality and prices that should help drive improved productivity, partnerships with buyers should be expanded and consolidated around improved production. Public – Private Partnerships should be sought to bring new investment in production and technology to the sector.

SECTION 5 – Potential Markets and Buyers for Bolivian Specialty Cocoa

Sub-section (a): U.S. Market

Super Premium and premium Chocolate Companies

Guittard Chocolate

<http://www.guittard.com>

10 Guittard Road

Burlingame, CA 94010

Tel: (650) 697-4427

Fax: (650) 692-2761

Principal: Gary Guittard gary@guittard.com

Buyer: Gerry Allen gerry@guittard.com

Background: Guittard is a 5th generation chocolate company established in San Francisco in 1868. Guittard is a medium sized chocolate company, producing industrial chocolate for third parties and large overall compared to the artisanal chocolate companies listed below. With the opening of ScharffenBerger Chocolate in 1996, Guittard Chocolate began an important shift to create a premium line under the name “E. Guittard” after founder Etienne Guittard. With the E. Guittard line, Guittard has been an important contributor to research in flavor development in cocoa.

Buying Characteristics: While Gerry Allen is the buyer, specialty cocoa for the E. Guittard line is handled by current president Gary Guittard.

ScharffenBerger Chocolate Maker

<http://www.artisanconfection.com>

914 Heinz Avenue

Berkeley, CA 94710

Tel: (510) 981-4058

Fax: (717) 981-4051

Buyer: Ray Major: rmajor@Hersheys.com

Background: Scharffenberger was founded in 1996 and sold to Hershey's in 2005, during that time; they established the first chocolate company to open in the United States in 50 years and ignited the premium chocolate explosion in the United States by making truly wonderful chocolate. With the Purchase of ScharffenBerger and local San Francisco confectioner, Joseph Schmidt, and one year later, Dagoba, Hershey's created a new division under the name 'Artisan Confections'.

Buying Characteristics: All buying is now handled by Artisan Confections/ Hershey's based at ScharffenBerger in Berkeley. ScharffenBerger has a fruity 'signature' note of that comes from a base of Ghana and heavy use of fine flavor cocoa beans from Venezuela, Trinidad, Jamaica, Madagascar and some select beans from the Dominican Republic, which is not known as a fine flavor grade. Purchasing decisions are made strictly on flavor characteristics of representative samples of each container offered. Since purchase by Hershey, product quality has not diminished.

AMANO

<http://www.AmanoChocolate.com>

1051 East Fir Ave

Provo UT 84604

Tel: (801) 655-1996

Buyer / Founder: Art Pollard art@amanochocolate.com

Background: AMANO is the newest member of the fast growing premium US Chocolate market and is located in a small industrial warehouse space outside Salt Lake City. AMANO launched their brand at the beginning of 2007 with three single origin offerings hitting the top of the markets price range.

Buying Characteristics: Founder Art pollard purchases cocoa beans directly. As AMANO is new and very small, only limited initial purchases have been made from the origins mentioned.

Organic Market & Fair Trade Markets

Theo Chocolate

www.theochocolate.com

3400 Phinney Ave., North

Seattle, WA 98103

Tel: (206) 632-5100

Fax: (206) 632-0413

Buyer / founder: Joe Whinney: jwhinney@theochocolate.com

Background: Theo Chocolate is two years on the market and is achieving great reviews and fantastic growth by hitting the ‘trifecta’ of bringing together premium quality with organic and fair trade, something other chocolate companies have not done. Theo Chocolate has two lines 3 oz. “Theo” Bars selling for \$6 each that feature Single Origin offerings from Venezuela, Madagascar, Ivory Coast * and Ghana as well as a ‘meritage’ blend of Ghana, Ecuador and Panama*. (asterisk indicate Fair Trade Certified Products) Theo Chocolate’s second line is named for its address “3400 Phinney”, selling for \$3.25 each, all Organic Certified and Fair Trade Certified and is a collection of 2 oz flavored and more ‘fun’ creative bars including Vanilla Milk Chocolate, Coconut Curry, Chai Tea, Coffee, and ‘Bread and Chocolate’ which features dark chocolate with organic buttered toasted French bread crumbs in the chocolate.

Buying Characteristics: Founder Joe Whinney handles all cacao purchases directly. Purchases are based first on quality of flavor characteristics and then must comply with organic and fair trade standards. If the cocoa is very special but not certified, it will have to have the potential for certification.

Dagoba Organic Chocolate

<http://www.dagobachocolate.com>

1105 Benson Way

Ashland, OR 97520

Tel: (541) 482-2001

Fax: (541) 482-5661

Buyer / Founder: Frederick Schilling: alchemist@dagobachocolate.com

Background: Dagoba was founded by Frederick Schilling and family members in 2001 and was sold to Hershey's in 2006. Dagoba was the first company in the United States to make high quality organic chocolate as well as developing a very creative line of infused flavors such as Lavender, Lemon-Ginger, and Chai Tea. Dagoba launched a Single Origin line starting in 2004 that now includes Ecuador 'Los Rios', Peru 'Los Milagros', Costa Rica 'Pacuare' and Madagascar 'Sambirano'. Some of Dagoba's chocolate is also Fair Trade Certified.

Buying Characteristics: Dagoba chocolate is made for them by third parties. Nonetheless, founder Frederick Schilling is involved directly in purchase of cocoa liquor that is used to make Dagoba Chocolate, as well as the purchase of cocoa powders, nibs and butter. All contracts are managed by Artisan Confections. Minimum purchases are full container loads.

TCHO

www.tchoventures.com

Pier 17

San Francisco, CA 94111

Tel/Fax: (415) 981-0189

Buyer / Founder; Timothy Childs: timothy@tcho.com

Background: In January 2008, TCHO will be the next chocolate maker to hit the market in the US with a factory in a very unique location on the waterfront in downtown San Francisco beginning processing from cocoa liquor. TCHO will be focusing on the premium market with much of their selection also Organic and Fair Trade Certified.

Buying Characteristics: TCHO will be starting their processing from cocoa liquor and founder Timothy Childs is working directly with cooperatives and growers to select the highest quality cocoa beans and working with processing plants to supervise roasting and grinding to liquor. TCHO will have an interesting installed capacity, but first purchases are now being made of maximum one full container load of cocoa liquor from select origins.

Debelis

<http://www.debelis.org>

5000 70th Avenue

Kenosha, Wisconsin 53144-1762

Tel: (800) 472-7462

Fax: (262) 656-8326

Buyer: Armando Holguin: aholguin@debelis.net

Background: Debelis is part of the Belgian multinational 'Puratos' and their chocolate division Belcolade.

Neither Belcolade or Debelis roast and grind cocoa beans, rather making chocolate from liquor to specific formulas for third parties, either industrial clients or others that mold and brand under their own names.

Debelis is a much bigger chocolate maker than the artisanal chocolate makers listed above and has an organic line that they began in 2002 that makes chocolate for a number of smaller marketers.

Buying Characteristics: Debelis does not make particularly high quality chocolate and buys fairly significant amounts of organic and fair trade cocoa liquor made from Dominican Republic beans. Debelis also buys organic licor from a number of other origins including Peru and Costa Rica.

Sub-section: European Market

Premium and Super Premium Markets

Amedei

<http://http://www.amedei.com>

Via San Gervasio, 29

56020 La Rotta di Pontedera,

Pisa, Italy

Tel: +39 (587) 484-849

Fax: +39 (0587) 483-208

Buyer/Founder: Alessio Tessieri: a.tessieri@amedei.it

Background: Amedei was founded in 1998 by a young Alessio Tessieri and his sister Cecelia in Tuscany, Italy from the background and strength of a family business as distributors of gourmet foods and ingredients. Alessio set out right away to source directly the best beans in the world in Venezuela, Trinidad, Jamaica and

Ecuador. In Venezuela, Alessio hired a technician to maintain relationships with farmers and develop quality, eventually leading to an exclusive relationship with the cooperative in the Valley of Chuao, Venezuela, one of the most renowned and famous cocoas in the world. The Chuao relationship and the exquisite chocolate Amedei has made with this bean has been a flagship for the company.

Buying Characteristics: Founder Alessio Tessieri handles all sourcing directly in the origins above. Amedei only buys extremely high quality cocoa and in relatively limited quantities.

Domori

<http://www.domori.com>

Via Pinerolo 72/74

10060 NONE (TO) - Italy

Tel +39 011 98.63.465

Fax: +39 011 99.04.601

Buyer: Gianluca Franzoni's: trade@domori.com

Background: Domori was founded in the early nineties by Gianluca Franzoni's along with other investors; in 2006 it was purchased by Illy Café, allowing for continued growth, investment and distribution. Domori, like Amedei, has done an incredible job seeking out only excellent cocoa.

Buying Characteristics: Domori invested in a plantation in Venezuela with a very knowledgeable cocoa family that date back five generations. Through their investment in "Hacienda San Jose", Domori has had exclusive access to very unique cocoa and brought their knowledge of cocoa and their chocolate to another level.

Pralus

<http://www.chocolats-pralus.com>

8, rue Charles de Gaulle

42300 Roanne, France

Tel : +33 477 689 936

Fax : +33 477 675 634

Buyer / Principal: François Pralus

Background: (From Palus website) "François Pralus now has his own cacao plantation in Madagascar on the island of Nosy Be, also known as the "isle of perfumes". From Sao Tome by the way of Brazil and

Venezuela, Monsieur Pralus has personally selected cacao for the plantation from the finest origins in the world. The beans are grown, harvested and fermented with care and then roasted and transformed into a delightful chocolate in his Roanne facility.

Buying Characteristics: List of Single Origin Chocolates: Brazil, Venezuela, Tanzania, Colombia, Trinidad, Madagascar, Vanuatu, Djakarta, Sao Tome, Jamaica Ecuador, Cuba.

Valrhona

Valrhona, Z.A. des lots,

26600 Tain l'Hermitage, France

Tel: +0334 75 07 88 57

Fax: +334 75 07 10 49

Buyer: David Roger david.roger@valrohna.com

Background: Valrhona was founded in 1924, now a part of larger French conglomerate and is a medium sized chocolate maker, but much larger than the more artisanal chocolate makers listed above. Valrhona has been an industry standard for pastry chefs in the finest hotels and restaurants and among the best confectioners for many years. Only in the last 10 years has Valrhona expanded to include retail brand development. Valrhona was one of the first chocolate makers to invest directly in fine cocoa production, establishing a criollo cocoa plantation in Venezuela in the mid-nineties and purchasing a second. In 2005 Valrhona introduced an organic milk and organic dark chocolate; however, these remain a very small part of their line.

Buying Characteristics: Valrhona purchases considerable quantities of the best cocoa in the World from countries such as Venezuela, Jamaica, Madagascar, Tanzania and. However, as Valrhona also offers mid-range priced chocolates for confectioners, they also buy cocoa in other countries such as Ghana, Mexico and Ecuador.

Michelle Cluizel

<http://www.cluizel.com/>

Avenue de conches

27240 Damville – France

Tel : +33 02 32 35 60 00

Background: (From website) Since 1948, Michel Cluizel is one of the rare chocolate manufacturers to process cocoa beans. Assisted by his four children, he elaborates exceptional chocolates in his Normandy workshops employing 200 people. Today, more than 6000 professionals in pastry, catering and candy making use or resell Michel Cluizel chocolates all around the world.

Buying Characteristics (from Website) Since 1997, Michel Cluizel is searching for the remarkable plantations in the renowned cocoa-producing countries. This approach allowed him to find the best cocoa beans in the world, to establish, fair and long term relations with the planters, to ensure the best traceability and achieve an unsurpassed quality. From these criteria were born the "Iers Crus de Plantation" chocolates to be enjoyed and compared like fines wines. La Concepcion - Venezuela, Los Arcones - Dominican Republic, Mangaro – Madagascar, Maralumi - Papua New Guinea, Vila Graccinda – Sao Tome

Barry Callebaut

<http://www.callebaut.com/en/>

Barry Callebaut USA

600 West Chicago Avenue

Suite 860

Chicago, IL 60610

Phone: + 312 496 7330

Fax: + 312 496 7399

Background: Barry Callebaut is one of the largest chocolate companies in the world, created from the merger of French sourcing giant, Cacao Barry and Belgian Chocolate maker Callebaut. Together they have built an extremely professional global enterprise that provides chocolate worldwide for professional use. Barry has worked closely with Conacado in the Dominican Republic and even highlighted their DR Organic quality improvement program in the 2004 annual report.

(From website) “Savor Callebaut’s Origin chocolate and you’ll explore the origins of extremely rare, precious cocoa. From Grenada to Papua, Callebaut has sourced the best beans and captured their most subtle aromas in exceptional chocolates. Every Origin chocolate is made with an aromatic cocoa bean variety from one single country or region around the equator. It emits the flavors and aromas of tropical fruits, flowers, herbs and spices, typical for the soil, climate and environment where the cocoa was grown. Incorporated in pastries, dessert and bars, tablets, pralines or other confectionery items, Origin will definitely add a whole new dimension to the chocolate experience.”

“Callebaut Organic FairTrade chocolates offer pure goodness and authenticity in every sense: fair trade & organic certified. These chocolates have been produced with FairTrade cocoa and sugar, bought directly from farmers in the South at common market prices. These farmers receive a supplementary premium for their crops, allowing them to grow a sustainable business, invest in equipment and so on. Callebaut’s FairTrade chocolates are manufactured according to the same high standards and in the same way as our traditional range and are becoming increasingly appreciated by a rapidly growing number of consumers.”

Sub-section: Japanese / Asian Markets

Japan has been a relatively small but important buyer of premium cocoa from Venezuela, Ecuador, Trinidad and Jamaica. The main Japanese Chocolate companies all use small amounts of this cocoa; they are principally, Lotte Confectionary, Molinaga and Meji. The Japanese chocolate makers only purchase / import through the Japanese trade houses such as:

Mitsubishi International Corporation

655 Third Avenue

New York, NY 10017

Tel: (212) 605-2552

Fax: (212) 605-2026

Buyer: Fernando Puliti fernando.puliti@mitsubishicorp.com

Toshoku Americas

2 Executive Drive, Suite 760

Fort Lee, NJ 07024

Tel: (201) 363-0720

Fax: (201) 363-0766

Buyer: Claudia Gaard Claudia_Gaard@toshoku.co

Appendix I: Farmer Field School Manual, Exercises 24 & 25

Ejercicio 24: Prácticas de post-cosecha: fermentación de cacao

Este ejercicio está diseñado para ser aplicados en ECAS donde existan prácticas de fermentación.

Descripción general

Lugar:	Fincas de cacao	Código:	ECAS-24-OB
Tiempo estimado:	1 hora 1 semana	No. de Sesiones	2
Objetivos: <ul style="list-style-type: none">Comprobar la eficacia de cada método de fermentación de cacao			
Materiales:	Marcadores de colores Papelógrafos Cuadernos Esferos Cuchillo filo 5 hojas de cartulina blanca Pega blanca, o cinta adhesiva Fundas plásticas	Insumos:	Formas para fermentar cacao (saquillos, tendales, cajones, etc.) Muestras de cacao fermentado por método (1 libra/0,5 kg. por cada uno) Balanza

PROCEDIMIENTO

1ra reunión: Organice a los agricultores en grupos pequeños, de 4-6 agricultores. Pídales que discutan sobre que métodos de fermentación conocen, y cuál método les parece el mejor. Solicite que los agricultores dibujen los “métodos de fermentación” en un papelógrafo y que escriban porque prefieren usar uno u otro, que ventajas o desventajas presenta cada uno de ellos, y cuanto es el tiempo mínimo y máximo para obtener buenos resultados.

Luego, pídale a cada grupo que fermente un poco de cacao usando alguno de los métodos descritos en la reunión. Si todos los agricultores prefieren un mismo método, pídale que varíen el tiempo de fermentación entre el mínimo y el máximo recomendados.

Pídales a los agricultores que anoten cuanto tiempo fermentaron el cacao, que cantidad de cacao fermentaron (pídales que usen una misma unidad, y que pesen el cacao en baba) y que clima estaba mientras estaban haciendo esta labor. Pídales que dibujen el sitio donde se fermentó el cacao, y que registren que labores hicieron y cuando las repitieron.

Pídales a los agricultores que, luego de fermentado y secado el cacao (si es posible bien seco), guarden 1 libra del cacao fermentado por cada método y lo traigan con ellos al lugar de reunión para la siguiente sesión.

2da reunión: Con los agricultores de cada grupo, seleccionen al azar 100 pepas de cada muestra. Cuenten cuantos granos negros (cacao prieto) hay en la muestra y anoten este número en un cuaderno. Descarte el

cacao prieto, y reemplacen estas pepas por otras de cacao normal. Luego, corte las pepas en la mitad y discuta con los agricultores que grado de fermentación tienen las pepas. Clasifíquelas de acuerdo al grado de fermentación de la almendra. Puede clasificarlas en bien fermentadas, medianamente fermentadas y no fermentadas.

Los agricultores de cada grupo pequeño deberán contar cuantas pepas de cada tipo hay y posteriormente pegar las pepas en la cartulina blanca con pega blanca o con cinta adhesiva. ¡Deje que la pega blanca se seque bien!

Usando papelógrafos y las cartulinas con las pepas, pida a cada grupo que presente sus resultados: cual la fracción de pepas bien fermentadas, medianamente fermentadas y bien fermentadas usando que método de fermentación. Observen si hay o no alguna correlación entre el número de pepas de cacao prieto en cada muestra y los resultados de la fermentación. Discutan si el tiempo de fermentación y la cantidad de cacao fermentado tuvieron alguna incidencia en cuanto a los resultados.

PREGUNTAS DE GUIA PARA EL ANALISIS

1. ¿Cuál es la diferencia entre distintos métodos de fermentación? ¿Cuál parece ser el mejor método para la zona para tener la mayor cantidad de pepas fermentadas? ¿Cuál parece ser el mejor método desde el punto de vista del agricultor (menos inversión en tiempo y mano de obra versus mejores resultados de fermentación)?
2. ¿Creen los agricultores que algún otro método de fermentación pueda producir mejores resultados que los probados? Si sí, ¿porque no se practica esto?
3. ¿Creen los agricultores que el grado de fermentación es importante para vender su cacao? ¿Creen que es importante para obtener un mejor precio a nivel local? ¿Y a nivel de los exportadores?

Ejercicio 25: Prácticas de post-cosecha: conversión cacao fresco a cacao seco

Este ejercicio está diseñado para ser aplicado en ECAS donde exista la costumbre de vender cacao fresco (cacao en baba).

Descripción general

Lugar:	Fincas de cacao		Código:	ECAS-25-OB
Tiempo estimado:	1 hora 1 semana	No. de Sesiones	2	
Objetivos:				
<ul style="list-style-type: none"> • Determinar el factor de conversión entre cacao fresco y seco 				
Materiales:	Marcadores de colores Papelógrafos Cuadernos Esferos	Insumos:	Cacao fresco (1 quintal) Tendales, marquesinas o otros medios de secar el cacao Balanza (100 lbs) Medidor de humedad de cacao (si es disponible)	

En algunos lugares existe la práctica de vender cacao fresco (en baba) en lugar de secarlo. Este ejercicio permite a los agricultores determinar cual es el factor de conversión entre cacao fresco y seco y les brinda una herramienta de negociación con los compradores.

PROCEDIMIENTO

En la reunión: Organice a los agricultores en grupos pequeños, de 4-6 agricultores. Si existe la costumbre de vender cacao fresco, pídale que discutan el porque de esta práctica, y que discutan sobre que factor de conversión manejan los compradores (cual fue el precio por unidad de peso (quintal) de cacao fresco y cual era el precio por unidad de cacao seco en esa misma época). Que es mejor, ¿vender cacao fresco o cacao seco? ¿Que tan difícil es secar el cacao en la zona? ¿Por qué?

Pida a los agricultores que durante las dos siguientes semanas, registren cual fue la cantidad de cacao fresco que se vendió y a que precio. También, que anoten cual era el precio por unidad de cacao seco.

Antes de comenzar el experimento de conversión, deben determinar que tipo de tratamiento post cosecha se va a aplicar. ¿Se va a fermentar el cacao? ¿Sí o no? ¿Qué método se va a usar (saquillo, tendal, cajón, etc.)? ¿Cuánto tiempo se va a fermentar? Una vez que se llegue a un consenso sobre el tratamiento, explique los pasos a seguir para el experimento de conversión.

Experimento 1:

Cada grupo debe cosechar un quintal de cacao fresco (100 libras, bien pesadas). Deben registrar el sitio, el grado de madurez de las mazorcas, el número de mazorcas y la cantidad de mazorcas de prieto que se incluye en esa muestra, que tipo de cacao hay en la finca. Si en las fincas hay mas de una variedad, pídale a los productores que registren cual es el porcentaje de cada variedad que se incluyó en la muestra. Si es posible, es mejor hacer el experimento con una sola variedad de cacao.

Luego de cosechado el quintal y comprobado el peso, cada grupo debe aplicar el tratamiento post cosecha que se determinó en la reunión. Puesto que puede haber dificultades para secar localmente el cacao, puede ser que los agricultores deban organizarse para movilizar las muestras a un lugar donde existan facilidades de secado. Los agricultores deben manejar cada muestra por separado y procurar que no se mezcle con otros cacaos.

Una vez en el sitio de secado, hay que secar el quintal de cacao hasta que este seco (7% de humedad relativa o que las pepas no se peguen en la mano al sacar un puñado del quintal). ¿Cuánto tiempo se demoró en secar la muestra? Cuando la muestra este seca, los agricultores deben pesar y registrar cual fue el peso final de la muestra. Si es posible, pueden vender la muestra seca y registrar el precio por unidad que recibieron y cual fue el porcentaje de “castigo” que puso el comprador.

Experimento 2:

Cada grupo debe decidir donde y cuando hacer la cosecha de prueba. Deben registrar el sitio, el grado de madurez de las mazorcas, el número de mazorcas y la cantidad de mazorcas de prieto que se incluye en esa muestra, que tipo de cacao hay en la finca, y pesar el cacao fresco que sale de la cosecha. Si en las fincas hay mas de una variedad, pídale a los productores que registren cual es el porcentaje de cada variedad que se incluyó en la muestra. Si es posible, es mejor hacer el experimento con una sola variedad de cacao.

Luego de hecha la cosecha y comprobado el peso, cada grupo debe aplicar el tratamiento post cosecha que se determinó en la reunión. Puesto que puede haber dificultades para secar localmente el cacao, puede ser que

los agricultores deban organizarse para movilizar las muestras a un lugar donde existan facilidades de secado. Los agricultores deben manejar cada muestra por separado y procurar que no se mezcle con otros cacaos.

Una vez en el sitio de secado, hay que secar la muestra de cacao hasta que este seco (7% de humedad relativa o que las pepas no se peguen en la mano al sacar un puñado del quintal). ¿Cuánto tiempo se demoró en secar la muestra? Cuando la muestra este seca, los agricultores deben pesar y registrar cual fue el peso final de la muestra. Si es posible, pueden vender la muestra seca y registrar el precio por unidad que recibieron y cual fue el porcentaje de “castigo” que puso el comprador.

En la reunión: En la plenaria, pida a los agricultores que ilustren sus experiencias en un papelógrafo. Si se siguió el experimento 1, ¿del quintal de cacao fresco cuantas libras de cacao seco se obtuvieron al final? Si se siguió el experimento 2, ¿cuál fue el peso inicial de la cosecha y cuál fue el peso final? Pídales que incluyan el tiempo, y los recursos que necesitaron para secar el cacao. Pueden elaborar una tabla para los tipos de cacao, madurez de las mazorcas, tiempo de secado y peso final del cacao seco (el cacao que se obtiene de mazorcas bien maduras pierde menos peso al secarlo, porque tiene un contenido menor de humedad).

PREGUNTAS PARA EL ANÁLISIS

1. ¿Cuales eran las características del cacao húmedo? ¿Estaban las mazorcas bien maduras, o no tanto? ¿Cuanto se demoraron en secar el cacao? ¿Cuanto costo? ¿Cuál fue el precio de venta del cacao seco? ¿Cuál fue el precio de cacao húmedo en esa temporada?
2. Sin contar con las dificultades de secado, ¿que es mejor para el agricultor? ¿Que formas hay de secar cacao? ¿Cuales son las desventajas y ventajas de cada sistema? ¿Creen los agricultores que pueden tener acceso a alguno de estos sistemas, y que pasos deberían seguir?

Appendix II: Farmer Field School Manual (ARD – ProNorte –Ecuador)



LA IMPORTANCIA DE LA CALIDAD EN LA PRODUCCIÓN Y COMERCIALIZACIÓN DEL CACAO

LA CALIDAD

La calidad es el resultado de un minucioso y continuo examen que evalúa, sigue y corrige cualquier desviación del procedimiento que va desde el suelo cuando se siembra la planta hasta el momento de colocarle una etiqueta comercial al producto final que puede derivarse de varias materias primas.

La calidad del cacao es un aspecto que debe analizarse de manera integral tomando en consideración que:

La calidad del manejo del producto, relacionada con el concepto de seguridad alimentaria, exige que un determinado producto sea manejado de manera apropiada siguiendo estándares internacionales para evitar la contaminación del producto con agentes de diferente índole.

La calidad del cacao además, está relacionada estrechamente con los estándares exigidos por el comprador o industrial quien dependiendo de sus necesidades requiere de una materia prima específica que puede tener un mayor o menor grado de fermentación o impurezas.

El concepto de la calidad está basado en el análisis de varios parámetros

Análisis químicos: grasa cruda, proteínas totales, carbohidratos totales, cenizas, almidón, fibra cruda y determinaciones de metales pesados;

Análisis físicos: Ph, humedad, prueba de corte (granos mohosos, partidos, negros, germinados, múltiples, insuficientemente fermentados, bien fermentados),

- peso (g) de 100 granos de cacao,
- número de granos/ 100 gramos
- Materias extrañas (larvas o fragmentos de insectos, pelos de roedores o humanos).

La calidad es un aspecto importantísimo de la comercialización, pero la calidad comprende algunos aspectos; en primer lugar la calidad del producto la cual logramos haciendo un adecuado tratamiento poscosecha y

controlando la mezcla de variedades y monilla en la compra; este tema esta desarrollado ampliamente en el Manual N° 3 de esta serie.

Para asegurar la calidad, debemos considerar que es muy importante :

- Identificar y separar las calidades desde el origen, es decir desde la finca o comunidad.
- Identificar y separar las calidades en el centro de acopio y en la bodega de almacenaje
- Igualar las calidades en base a la humedad, es decir que si hay lotes de cacao de diferente humedad, se deben comercializar por separado, nunca se debe mezclar ya que el cacao húmedo baja la calidad del cacao seco.
- Nunca, bajo ninguna circunstancia se debe mezclar cacao bueno con cacao malo, monilloso o picado, esto baja el precio de todo el lote.
- Jamás se debe mezclar variedades diferentes de cacao, en particular cacao nacional con CCN51
- Finalmente la sugerencia principal, es que hay que seguir todas las recomendaciones técnicas para manejar el cacao esto nos garantiza la calidad del producto; pero además, queremos conversar sobre otros aspectos en los que la calidad también es importante.
- En primer lugar la calidad en el servicio que se debe entregar a los socios y socias de la organización, esto es una atención amable, con una sonrisa, cumpliendo los compromisos que hemos adquirido.
- Calidad en el servicio que damos a nuestros compradores, esto quiere decir sobre todo cumplir a tiempo con los compromisos de cantidad y de calidad de cacao, en particular cuando se envían muestras.
- Calidad en las comunicaciones, dando respuestas oportunas a los requerimientos de los y las socias transmitiendo informaciones reales, claras y precisas, de igual manera con los clientes (a quienes vendemos el cacao), las respuestas deben ser ágiles y rápidas para no perder oportunidades de mercado

Debemos recordar que:

- Que los compradores son clientes de largo plazo, es importante construir una relación de confianza con reglas claras y buena voluntad de las dos partes.
- Debemos ser flexibles a los cambios y circunstancias del mercado.
- Los precios son muy variables y no podemos hacer nada para controlarlos, estos se fijan en la Bolsa de Valores de New York y Londres.
- Cuando presionamos mucho por el precio, para conseguir un precio más alto que el vigente en el mercado, se puede interpretar que no queremos vender el producto por que está comprometido con otro cliente.

CONDICIONES DE VENTA

Cuando vamos a negociar un lote de cacao es muy importante hacer una buena negociación, lo que consiste

básicamente en obtener condiciones de venta favorables a nuestros intereses; esto requiere que las dos partes, vendedores y compradores, sean serios y que cumplan los términos y condiciones que se establezcan en la negociación.

Al inicio cuando estamos haciendo las primeras ventas es mejor hacer las negociaciones personalmente, luego cuando la relación se ha fortalecido y existe confianza en las dos partes, se puede utilizar el teléfono para cerrar un negocio.

A continuación detallamos una lista de recomendaciones y / o pasos para tomar en cuenta al momento de iniciar una negociación.

Debemos comenzar ubicando a un comprador en base a un sondeo de mercado, para esto es muy útil recurrir a la lista de exportadores afiliados a ANECACAO que son los compradores potenciales, para seleccionar 2 o 3 opciones es muy recomendable separar un lote en varios lotes pequeños de manera que se ofrece este cacao a 2 o 3 exportadores y tendremos datos como el peso, la calificación, precio, etc, en definitiva si los lotes son idénticos y el precio es el mismo en todos los exportadores, comparando los cheques que hemos recibido por esta venta sabremos quien nos da las mejores ventajas o condiciones de venta.

Una vez ubicada un opción que cumpla con nuestras aspiraciones debemos establecer un contacto semanal para obtener información de precios.

En la negociación se debe fijar claramente:

- La calidad
- El precio para esa calidad
- Fecha de entrega del producto
- La forma de pago, si el pago no es de contado, debe quedar establecido la fecha en que se efectivizará dicho pago.
- La validez de la oferta, esto quiere decir que se fija un plazo en el cual el precio y las condiciones son validas, en este periodo si el precio baja se debe mantener el precio que se fijo en la negociación; sin embargo si el precio sube, debe estar estipulado en el acuerdo, el precio del lote debe subir también.

“ESTAS CONDICIONES DEBEN ESTAR BIEN CLARAS PARA AMBAS PARTES.”

Es importante enviar una muestra del cacao al comprador, esta buena práctica evita que se presenten malos entendidos en cuanto a la calidad del producto, por otra parte, el tener una muestra da confianza al comprador.

Bajo ninguna circunstancia se debe enviar una muestra acomodada o preparada, maquillando el producto de manera que parezca que es mejor de lo que en realidad es.

Normalmente cuando los precios suben, la exigencia de la calidad baja y viceversa, esto porque los compradores querrán aprovechar el momento y necesitan acopiar la mayor cantidad de producto.

El cacao de inferior calidad; picado, con monilla o muy sucio, no se puede vender o se obtienen precios bajos con castigos altos (descuentos de 50% o más)

Es muy importante lograr y mantener una buena calidad ya que esto nos asegura obtener buenos precios.

**“DEBEMOS LOGRAR SER RECONOCIDOS EN EL MERCADO COMO
PROVEEDORES DE CACAO DE EXCELENTE CALIDAD.”**

ESTRATEGIAS

La comercialización requiere también tener estrategias que nos permitan fortalecer la actividad creando bases sólidas que nos aseguren una permanencia en el tiempo cubriendo principalmente las aspiraciones y expectativas de los socios y socias de la organización.

A continuación detallamos una lista de estrategias que se pueden aplicar, es necesario recordar que no existen recetas que aseguren el éxito y que las realidades de cada organización o zona son diferentes por lo que la lista es un referente que puede aportar muy bien cuando estamos diseñando las estrategias de comercialización de nuestra organización.

- Pagar siempre de contado, para dar seguridad a los socios y socias.
- Diferenciar el precio entre el socio y los no socios
- Pagar un precio más alto cuando el cacao es de calidad
- Marginar una cantidad x por cada quintal de cacao comercializado o un % de la utilidad, con el fin de fortalecer la organización para que en el futuro ésta pueda ofrecer otros servicios a sus afiliados.
- Pagar un precio más alto con respecto a los intermediarios, puede ser 1 o 2 centavos más por libra.
- Establecer y mantener un programa de control de calidad, las organizaciones tienen la posibilidad de mejorar la calidad del cacao.
- Motivar a productores y productoras a tomar conciencia y cumplir con los compromisos que se adquieren dentro de la organización, por otra parte, la organización debe ser seria y cumplir sus compromisos con los socios y socias, así como con las organizaciones de apoyo y clientes.
- Mantener un flujo permanente de cacao, compra – venta, es decir no suspender la compra en ningún momento.
- Tener varias opciones de venta, en otras palabras no casarnos con un solo comprador sino que debemos buscar nuevos mercados de forma permanente.
- Rotar el inventario por lo menos 1 vez cada 8 días, esto quiere decir que tenemos que vender el cacao en cuanto este bien fermentado, limpio y seco, para tener dinero y seguir comprando, además así nos protegemos de una caída de precios.
- Manejar la poscosecha para obtener cacao de excelente calidad, y buscar mercados que reconozcan la calidad.
- Llevar un control estricto y permanente del dinero, así como del cacao en el tendal y bodega.
- Cumplir con los compromisos que se hagan, demostrando seriedad en cada negociación.

NICHOS DE MERCADO (CANALES DE COMERCIALIZACIÓN)

Un nicho de mercado es una parte del mercado que se ha especializado en una variedad o tipo particular de cacao.

El mercado de cacao en general es uno sólo; sin embargo, existen cacaos muy particulares y existen también mercados particulares que quieren justamente esos cacaos especiales.

Entonces este gran mercado se divide o contiene varios mercados pequeños y específicos para una variedad o tipo particular de cacao, o que son producidos bajo normas específicas.

Por ejemplo, hay un nicho muy importante que es el del Comercio Justo y/o Equitativo y Solidario, este nicho es para productos y cacao que se produce y comercializa respetando las normas y criterios que establece esta opción. Para acceder a este nicho es necesario cumplir con las normas y obtener un certificado que acredita que cumplimos con estas normas.

Existen nichos de mercado para el Cacao Orgánico Certificado, para acceder a este nicho es necesario tener una certificación de que producimos cacao bajo sistemas producción orgánica, el manual N° 5 de esta serie se refiere justamente a la certificación, cuales son los requisitos y normas que se debe cumplir y que beneficios tiene la certificación.

Existe también un mercado para el cacao certificado bajo el Programa de Certificación SocioAmbiental Rainforest Alliance; los consumidores en este caso buscan productos que sean cultivados bajo criterios de protección ambiental y social, disminuyendo al máximo los impactos negativos en la unidad de producción y su entorno.

Existen nichos de mercado para cacao con Denominación de Origen, es decir para cacaos que se producen en una región muy particular, lo que les da una categoría de únicos en el mundo, por ejemplo, tenemos la denominación ARRIBA que caracteriza al cacao ecuatoriano, pero se puede buscar la Denominación Esmeraldas, Chone, Vinces, etc.

Es necesario anotar que un cacao puede posicionarse con varios criterios al mismo tiempo, por ejemplo, podemos hablar del

Cacao Orgánico Certificado de la Provincia de Esmeraldas y producido bajo las normas del Comercio Equitativo y Solidario, entonces debemos buscar un cliente o comprador que quiera el cacao que cumple con estos requisitos.

La ventaja de atender un nicho de mercado es que se puede obtener un mejor precio por lo que podríamos hablar de que estas certificaciones del Comercio Justo, Origen y Orgánico son valores agregados que le damos a nuestro producto; además

- Se establecen contactos directos con el cliente, no hay intermediarios.
- Normalmente no se cotiza en la bolsa

- Hay una identificación de los productores con el producto final
- Eventualmente se puede lograr que el cliente haga inversiones en la organización
- Provoca una producción sostenible para el futuro de las fincas.
- Normalmente requiere de un manejo un tanto especializado para obtener un cacao con una calidad determinada.

Por otra parte, para acceder a estos nichos necesitamos observar:

- Se requiere de organizaciones de primer o segundo grado
- Se necesita establecer un sistema de control interno y de documentación
- Se necesita de un exportador para concretar los envíos
- Requerimos de una persona preparada que hable inglés y tener acceso a internet y correo electrónico.
- Los centros de acopio y almacenaje deben estar adaptados para manejar un cacao especial
- Los gastos de certificación y mantenimiento son altos y hay que renovarlos cada año.

DESCRIPCIÓN GENERAL DE LOS PRINCIPALES PROGRAMAS DE
CERTIFICACIÓN PARA EL CULTIVO DE CACAO

Categoría	Programa de Certificación SocioAmbiental Rainforest Alliance Certified	Fair Trade Labelling Org. (Fair Trade / Trato Justo)	IFOAM (Programa de certificación Orgánica)
Principios, Valores y Filosofía Básicos	<p>La misión de la SAN (Sustainable Agriculture Network) es la de transformar social y ambientalmente las condiciones de la agricultura tropical a través de la certificación conservacionista</p> <ul style="list-style-type: none"> • Protección de ecosistemas naturales • Conservar la vida silvestre • Conservar los recursos hídricos • Conservar la productividad de los suelos • Mínimo y estricto uso de agroquímicos • Manejo integrado de desechos • Trato justo y buenas condiciones a los trabajadores • Mantener buenas relaciones con la comunidad • Planificación y monitoreo ambiental 	<p>Contribuir a cambiar las relaciones de comercio internacional de tal manera que los productores en desventaja puedan incrementar el control sobre su propio futuro. Tener un justo y adecuado reconocimiento por su trabajo, continuidad en sus ingresos y condiciones de trabajo y de vida decentes a través del desarrollo sustentable.</p>	<p>Más allá de que la agricultura orgánica constituya un sistema ecológico, ambiental y social, es también un sistema sustentable para el manejo de cultivos; asegurar de comida de alta calidad en cantidades suficientes para alimentar a toda la gente, mientras de protegen los suelos y se asegura su fertilidad, al mismo tiempo que se minimiza la polución medio ambiental y el uso de recursos naturales no renovables.</p> <p>Representar el movimiento mundial de la agricultura orgánica y proveer una plataforma para intercambios y cooperación global. Comprometerse a un acercamiento holístico al desarrollo de sistemas de cultivo orgánico incluyendo el mantenimiento del medio ambiente sustentable y respetar las necesidades de la humanidad.</p>
Principales Objetivos	<p>La meta es la reducir los impactos ambientales e incrementar los beneficios sociales a la agricultura tropical estableciendo estándares para un manejo progresivo de las fincas y apoyar</p>	<p>FLO internacional: Promover la venta de productos vendidos a través de condiciones de trato justo; observar la consistencia y la práctica del Trato Justo y sus proyecciones</p>	<p>IFOAM: Intercambiar conocimientos y experiencias entre nuestros miembros e informar al público acerca de la agricultura orgánica. Representar internacionalmente el movimiento orgánico</p>

	procedimientos para alcanzar esos estándares.	para el futuro; apoyar programas que entiendan los principios de FLO y la organización de los productores; asegurar que los usuarios de la etiqueta Trato Justo cumplan con sus obligaciones. Iniciativas nacionales y responsabilidad para realizar el marketing doméstico, nuevos productores y campañas de publicidad para levantar preocupación.	parlamentariamente, administrativamente y en política realizando foros; Establecer y regularmente revisar los “Estándares Básicos” Internacionales; Hacer de la garantía internacional de calidad orgánica una realidad.
Beneficiarios	Dentro de los beneficiarios se incluyen tanto a los pequeños como a los grandes productores de agricultura tropical.	Beneficiarios son: trabajadores de organizaciones estructuralmente dependientes de labores contratadas y miembros de organizaciones colectivas dependientes de las labores de las familias. La clave es que los beneficiarios son productores marginados y en desventaja. Las iniciativas de etiquetado para el consumidor final es dejarle saber a este que el producto ha sido negociado justamente.	Todos los actores envueltos en la producción orgánica a sistemas de consumo pero con énfasis en productores y consumidores certificadores acreditados IFOAM tienen criterios especiales para Certificación indirecta para grupos de productores.
Focos sociales y medio – ambientales	El principal foco de atención es lo ambiental a través de lo social (7 de 9 criterios están relacionados al aspecto ambiental.	El principal foco de atención es lo social a través de estrictos criterios ambientales que están contenidos en los estándares para productos agrícolas.	Enfocado principalmente al medio ambiente aunque varios estándares sociales han sido introducidos; Los sistemas orgánicos son entendidos al ser holísticos incluyendo los dos: justicia social y protección de elementos ecológicos.

<p>Historia de La iniciativa</p>	<p>El programa Rainforest Alliance Certified comenzó en 1991 con la SAN. La SAN es una red de trabajo conformada por organizaciones independientes sin fines de lucro. El proyecto comenzó alterando la naturaleza de las haciendas en Costa Rica y muy pronto se expandió a otros países de Centro y Sur América.</p>	<p>Fundada en Abril de 1997 para armonizar y estandarizar las iniciativas de una etiqueta de Trato Justo (nombrándolos: Max Havellar, Transfair International Y Fair Trademark). La historia de Trato Justo se remonta muchos años atrás a la primera Iniciativa Nacional de Etiquetado que fue iniciativa de Max Havellar Holanda 1988, seguido por Bélgica en 1990 y por Suiza en 1992. La Fundación Trato Justo Lanzo CaféDirect en 1993 para el Reino Unido, Alemania empezó con Transfair bajo el paraguas de Transfair Internacional. De ahí en adelante un sin número de iniciativas se han dado alrededor del mundo como son: Austria, Luxemburgo, Japón, Italia, Canada. En 1994 MaxHavellar Dinamarca fue fundado y Max Havelaar Francia en 1996. Transfair USA esta finalmente operando ahora desde 1998.</p>	<p>Fundada en 1972 como una federación sin fines de lucro ligada a diversos grupos con un interés en agricultura orgánica. En 1980 el IFOAM y sus estándares básicos para agricultura orgánica i procesamiento de comida fue publicada y se encuentra en continua revisión. Seguido de esto hubo un sentimiento de la no necesidad de un cuerpo independiente para asesorar el conjunto de organizaciones que reclamaban adherirse a los estándares básicos. En 1990 la Asamblea General autoriza la creación de un programa de acreditación lanzado en 1992. En 1997 el Servicio Internacional de Acreditación Orgánica Inc. Fue registrado en los Estados Unidos de América</p>
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Fuente: Red de agricultura Sustentable (SAN)

Denominación de origen. Se entiende por Denominación de Origen a la figura de carácter mercantil legal que está reservada a un producto, traduciendo que el mismo es producido en una determinada región y que su procesamiento se ha realizado de una manera específica, dando como resultado una calidad característica que lo diferencia de otros similares.¹

El logro de la Denominación de Origen para el Cacao permitirá equipararnos a los esquemas de marketing internacional, obtener mayores primas de precio, impulsar la organización de productores para el monitoreo del mercado e incidir en la promoción de nuevas áreas de cultivo. La obtención de la Denominación de Origen requerirá cubrir la normativa subregional e internacional correspondiente y la instrumentación de un laboratorio de control.

Para que un producto pueda ostentar una Denominación de Origen tiene que haber logrado un reconocimiento de facto entre sus demandantes, una fama especial, un reconocimiento que diferencia al producto de otros iguales producidos en otra y aún en la misma región.

Las Denominaciones de Origen deben cumplir con una normativa legal nacional y tener la aceptación internacional, por supuesto, con especial preferencia de los espacios o países que son sus áreas naturales de penetración

En resumen, la Denominación de Origen garantiza:

Primero: Que un determinado producto es originario de una región o zona específica. Segundo: Que su cultivo o elaboración, o bien ambos elementos, se realiza con un tratamiento tradicional que traduce las cualidades que los usuarios le acreditan. Tercero: Que el producto tiene la calidad o atributos que los demandantes le confieren y dieron origen a su fama.

¹ Denominación de origen y control de calidad del cacao (*Theobroma cacao* L.) Dra. María de Mejía y Alfredo Alfonso. Fundacite-Sucre

**Appendix III: Cocoa Research Unit (CRU), University of the West Indies, Trinidad
Sensory Assessment of Cocoa Liquor, Darin A. Sukha 2004**

Sensory Assessment of Cocoa Liquors

Name:..... Date:.....

Session:..... Sample Code:.....

Taste sample and mark off the point on the line that corresponds to the intensity of each attribute.

	Absent		Extreme
Cocoa flavour	0	_____	10
Acidity		_____	
Astringency		_____	
Bitterness		_____	
Fruity flavour		_____	
Floral flavour		_____	
Nutty flavour		_____	
Raw/beany/green		_____	
Other flavours	0	_____	10

Comments:.....
.....
.....

SENSORY GLOSSARY OF COCOA LIQUOR

COCOA FLAVOUR: Describes the typical flavour of cocoa beans well fermented, roasted and free of defects.

Reference: Chocolate bars, Cocoa tea, fermented/roasted cocoa,

Calibration: Low intensity = 2, e.g.: Unfermented cocoa
Medium intensity = 4/5/6, e.g.: Fully Fermented Indonesia, PNG, and Arriba
Strong intensity = 8, e.g.: West Africa (Ghana)

BASIC TASTES

ACIDITY: Describes liquors with a strong acidic taste, due to the presence of volatile and non volatile acids; perceived on the side of the tongue.

Reference: Citrus, vinegar...

Calibration: Low intensity = 2, e.g.: Arriba
Medium low = 3/4, e.g.: WA
Medium strong = 6, e.g.: PNG
Strong intensity = 8, e.g.: Malaysia

BITTERNESS: Describes liquors with a strong bitter taste, usually due to a lack of fermentation; perceived on the rear of the tongue/throat.

Reference: Coffee, beer, grapefruit...

Calibration: Low intensity = 3, e.g.: WA
Strong intensity = 8, e.g.: Unfermented cocoa

*For all attributes, the calibration is based on a 0 to 10 point scale
And related to specific liquor references.*

SENSORY GLOSSARY OF COCOA LIQUOR

ASTRINGENCY:	Describes liquors with a strong astringent taste, usually due to a lack of fermentation; mouth drying effect which boosts the production of saliva; perceived between tongue and palate or at the back of the front teeth.
Reference:	Banana skins, cashew fruit, wine...
Calibration:	<u>Low intensity = 3</u> , e.g.: WA <u>Medium intensity = 5</u> , e.g.: Arriba <u>Strong intensity = 8</u> , e.g.: Unfermented cocoa

SPECIFIC FLAVOURS

FRUITY FLAVOUR:	Characterises liquors with a ripe fruit flavour, usually described as a round sweet aroma note AND/OR dried brown fruits
Reference:	Any fresh fruit (Banana, citrus, cherry etc.) OR Dried fruit (Raisin, currants etc.)
Calibration:	<u>Low intensity = 3</u> , e.g.: WA <u>Medium intensity = 4/5/6</u> e.g.: Fully Fermented Indonesia, <u>Strong intensity = 7</u> , e.g.: PNG, TSH

FLORAL FLAVOUR:	Characterises liquors with a flavour of flowers, almost perfume. Maybe perceived as chemical.
Reference:	Lilac, violet, and orange/elder flower water
Calibration:	<u>Low intensity = 0</u> , e.g.: WA <u>Strong intensity = 7/8</u> , e.g.: Arriba, TSH, SCA 6

*For all attributes, the calibration is based on a 0 to 10 point scale
And related to specific liquor references.*

DAS/02/04/04

SENSORY GLOSSARY OF COCOA LIQUOR

NUTTY FLAVOUR: Characterises liquor with a specific flavour of dried nuts

Reference: Dried walnuts, hazel nuts etc.

OFF FLAVOURS

SMOKY FLAVOUR: Describes liquors contaminated by wood smoke, usually due to artificial drying.

Reference: Wood smoke, phenolic note, smoked ham...

Calibration: Low intensity = 0, e.g.: Any well sun dried beans
Strong intensity = 8, e.g.: Smoky liquor reference

MOULDY FLAVOUR: Describes liquors with a mouldy flavour, usually due to prolonged and improper drying.

Reference: Mould flavour, moss, and forest flavour

Calibration: Low intensity = 0, e.g.: Any well dried beans

RAW/BEANY/GREEN FLAVOUR: Describes liquors with a green aroma, usually due to a lack of fermentation or roasting.

Reference: Raw green peas or beans, unroasted fresh peanuts

Calibration: Low intensity = 0, e.g.: Any well fermented/roasted cocoa
Medium intensity = 4, e.g.: Unfermented cocoa

*For all attributes, the calibration is based on a 0 to 10 point scale
And related to specific liquor references.*

SENSORY GLOSSARY OF COCOA LIQUOR

OTHER OFF FLAVOURS: Characterises liquors with any other defects like putrid, hammy, diesel, chemical, sacky, earthy, etc.

Putrid and hammy flavors are the result of an overfermentation.

Sacky flavour is due to a contamination by cocoa sacks.

Calibration: Usually just as a note (2/3) or very intense (8); there is not really a range of scores.

OTHER FLAVOURS: Characterises liquors with any other specific flavour attribute such as spicy or fragrant etc.

Calibration: Usually just as a note (2/3) or very intense (8); there is not really a range of scores.

*For all attributes, the calibration is based on a 0 to 10 point scale
And related to specific liquor references.*

DAS/02/04/04