

Diversification in international cacao markets: opportunities and challenges for smallholder cacao enterprises in Central America

A consultancy report prepared for RUTA

by

Jason Donovan¹

August 2006

1 Introduction

At the international level, demand for specialty cacao-based products², such as fine flavor/single origin, organic and fair trade chocolate, has risen sharply as compared to conventional cacao-based markets. For example, quantities of organic chocolate sold in the United States rose at an estimated 25 percent annually between 2002 and 2005, and sales of fair trade cacao beans grew at an average annual rate of nearly 15 percent between 1997 and 2005. For suppliers able to deliver consistent qualities and sufficient volumes of specialty cacao, these markets offer price substantial premiums (ranging from 10-100 percent) over conventional prices. In addition, strong competition among chocolate marketers and manufacturers Europe and the United States, has increased the willingness by these businesses to seek out and invest in strategic alliances with cacao suppliers in tropical countries for more secure access to specialty cacao beans and related products. The organization of smallholder cacao enterprises (SCE) is a necessary condition for participation of small producers in these markets, allowing them to achieve economies of scale, to gain access to specific technical, business development and financial services, and to establish and maintain direct relations with buyers (including alternative trade organizations) and processors. Persistent excess demand in specialty cacao markets has made the development of smallholder cacao enterprises (SCEs) a promising option for rural poverty reduction in Central America.

In this context, The Ministry of Agriculture, Fisheries and Cooperatives (MAFC) of Belize has identified international markets for specialty cacao products, namely certified organic and fair trade cacao, as an important opportunity to promote rural development through SCEs in the Toledo District, one of the most impoverished regions of the country. Currently, approximately 900 small-scale cacao growers are members of the Toledo Cocoa Growers Association (TCGA), a SCE that organizes the production, certification and marketing of organic and Fair Trade cacao beans. TCGA's main buyer, Green and Black's (the largest organic chocolate marketer in the

¹ Rural Enterprise Development Specialist, CATIE, Turrialba, Costa Rica, Tel.: (+506) 558-2217, E-mail: jdonovan@catie.ac.cr

² In this report we distinguish between two general types of cacao: specialty and conventional. Specialty cacao is has unique product, process and/or social attributes are able to a command prices premium over conventional cacao while conventional cacao is priced according on the basis on the New York or London commodity exchanges. We will focus on three types on the three most traded types of specialty chocolate: fine flavour/single source origin, organic, and Fair Trade.

United Kingdom), is providing technical assistance in expanding TCGA's production and processing capacities are expected to yield significant increases in production levels and number of certified organic producers in the next few years. Expansion and intensification of the specialty cacao sector in Toledo also offers the potential for promoting poverty reduction among largely indigenous cacao producers and increased export earnings. However, the ability of TCGA and its members to fully take advantage of market opportunities in specialty cacao markets over the long-run will depend, in large part, on their ability to strengthen their production and business management capacities. Towards this end, MAFC, working in conjunction with Cocoa Task Force³ and TCGA, approached the Regional Unit for Technical Assistance (RUTA) for developing a national strategy in regards to the cacao production and commercialization, which would include an assessment of existing cocoa production and marketing systems in Belize and a feasibility study for the continued development of the sector. In turn, RUTA has contracted CATIE, to assess the human, social, natural, physical and financial assets for cacao production and SCE development and identify key elements of a national strategic plan for cacao sector development.

The report presents a review of international cacao markets with the objectives of:

- Identifying the salient trends in the consumption and production of conventional and specialty cacao
- Assessing the limitation and opportunities for generating increased value adding by SCEs
- Identifying key elements of a strategy for promoting SCE in Central America in international specialty cacao markets.

In the following section, we summarize the general tendencies in cacao markets in major consuming and producing countries. In section 3, we focus on the different actors along the cacao supply chains and their interrelations. Sections 4 and 5 summarize opportunities for generating increased value adding by SCE and key elements of a strategy for generating increased value adding by SCEs in Central America, respectively.

2 Trends in Cacao Consumption, Production and Prices

In recent years, cacao markets have become increasingly diversified in response to structural changes in consumer demand in major consuming countries (mainly the Europe and the United States), generally related to consumers' concerns over health, environmental conservation and the social-economic welfare of small producers in producing countries. In addition to the conventional, mass market segment, market segments have emerged related to fine flavor and single source, organic, and fair trade. These specialty segments represent the fast growing segments of the cacao industry. This section discusses the general trends in the consumption and production of conventional, and specialty cacao (fine flavor/single origin, organic and Fair Trade). While our overall focus in this review is on specialty cacao markets, as they offer the most promising opportunity to reconcile the twin development goals of poverty reduction and sustainable natural resource management, here and throughout the document, we address

³ The Cocoa Task Force is formed by MAFC, IICA, TCGA (both producers and Green & Black's), BAHA, OIRSA and RUTA.

tendencies in mass market, or conventional, cacao markets, as the market conditions for conventional cacao have considerable influence on the supply and demand for specialty cacao.⁴

2.1 Global Cacao Consumption

Global consumption over the past 10 years, as measured in terms of grindings of cocoa beans, has increased nearly 25 percent, from roughly 2.5 million MT in 1994/95 to 3.1 million MT in 2004/05 (ICCO 2005). Between 2001/02 and 2004/05, cacao grinding increased on average nearly 6 percent per year, reaching an all time high of in the 1994/95 cacao year. Traditionally, cocoa is cultivated in producing countries and sold for export in the form of dried beans. Importing countries, mainly in Europe and the United States, then process the beans, transforming the raw goods into finished or semi-finished products (cocoa butter, cocoa liqueur, cocoa powder, etc.).⁵ Europe remained the largest cocoa-processing region, although its share in world grindings declined somewhat, from 45% in 1999/00 to 43% in 2003/04 (Table 1). North and South America's share declined from 29% in 1999/00 to 26% in 2003/04. Grindings in Asia and Oceania recorded the largest share increase, resulting in a gain from 13% to 17% over the same period. The share of the African region increased moderately, from 12% to 14%.

Table 1 – Consumption of cacao, measured in grindings of cacao beans, 1999/00-2003/04

	1999/00 (MT)	% of world total	2001/02 (MT)	% of world total	2003/04 (MT)	% of world total
Europe	1,336	45.1	1,282	44.6	1,360	42.8
Netherlands	436		418		445	
Germany	215		195		225	
Others	685		669		690	
Africa	368	12.4	422	14.7	445	14.3
Ivory Coast	235		290		305	
Others	133		132		150	
North and South America	852	28.8	758	26.3	822	25.9
United States	448		403		410	
Brazil	202		173		202	
Others	202		182		210	
Asia	404	13.7	413	14.4	540	17.0

⁴ With the price of conventional cocoa trends downward, marketers of specialty cacao in Europe and the United States face increased competition from their competitors in the conventional cacao sector. When the price of conventional cacao trends upwards, smallholder cacao enterprises in producing regions may face challenges to collect sufficient production volumes, as producers may sell certified products to outside buyers of conventional cacao.

⁵ Some producer countries in Latin America, such as the Brazil (e.g., Chocolates Garoto, S.A.) and Bolivia (El Ceibo, R.L, a organic and Fair Trade certified second-tier CEF), have developed their own facilities for grinding beans and processing and marketing chocolate products. In cases such as Nicaragua, as much as 50% of cacao production is consumed in locally in information markets for beverages and candies. See Annex 1 for list of web sites of Latin American-based chocolate processors.

Malaysia	115		105		180	
Indonesia	92		105		120	
Others	197		203		240	
Total	2,960		2,875		3,177	

Source: ICCO, *Quarterly Bulletin of Cacao Statistics, Vol. XXX, No. 4, cacao year 2003-04*

Cacao is consumed mainly in the form of chocolate. The chocolate segment makes up approximately 90 percent of the total chocolate market, with chocolate candy bars making up one quarter of chocolate candy sold. The other 10% of cocoa is used in the production of flavorings, beverages, and cosmetics. These products include baking cocoa, hot cocoa mix, baking mixes, packaged foods, and cocoa-butter based body care products. Preferences for chocolate vary markedly among and within the major cacao consuming regions:

Europe: European countries are the largest consumers of cocoa and chocolate. Each country has its own preferences and style of chocolate, the popularity of different products varying according to national taste. On average, the Swiss consume approximately 10.55 kg of chocolate per person per year. Great Britain consumes more than 500,000 MT of chocolate per year. In France, the average consumption per person is 6.8 kg per year, with the New Year and Easter celebrations being the most important occasions for tasting and offering chocolate gifts. Eastern European countries are considered an important emerging new market and should remain so for the foreseeable future.

United States: Chocolate is the preferred cacao-based product sold in the United States, the largest consumer in North America (Table 2). According to one study conducted in the United States, 52% of Americans considered chocolate their favorite flavor for desserts and confections (Petchers 2003). Historically, U.S. consumers have demonstrated a clear preference for milk chocolate, although appreciation for dark chocolate appears to be increasing (Menter 2005). First, recent nutritional studies have highlighted the health benefits of dark chocolate. Second, the future of the chocolate has been likened to that of wine or coffee, with people starting demand a higher quality product (dark chocolate is generally considered to be of higher quality) with specific specialty attributes.

Table 2 – U.S. Retail Sales of Chocolate, 1996-2002

	Sales 1996 (millions US\$)	Sales 2000 (millions US\$)	Average annual growth rate
All Chocolate	11,500	13,700	5.3%
Chocolate Candy	10,500	12,500	4.8%
Chocolate Chips/Baking Chocolate	399	444	2.8%
Chocolate Syrup/Dessert Toppings	227	262	3.9%

Source: Petchers 2003

Japan

Japan has experienced a significant increase in chocolate consumption during the past decade. Cocoa is imported mainly as cocoa beans (64,000 MT in 2003), but also in the forms of cocoa butter (roughly 20,000 MT in 2002) and cocoa powder and cake (roughly 11,000 MT in 2002). Japan also imports chocolate products, although it produces more domestically (for example, 138,000 MT imported and 213,000 MT domestically produced in 2002). In the last 20 years, the import of cocoa beans peaked in 1991 and 1996, reaching nearly 50,000 MT (Figure 1). Most recently, it is notable that the imported amount rose to nearly 64,000 MT in 2003 after a few years of stagnation at around 50,000 MT.

The Rest of the World: Since the start of the 1990s, Asia has developed into an increasingly important chocolate market. Demand in China increased to 9,000 MT in 2000, an increase of more than 90% from the previous year. Among cocoa producing countries, Brazil has seen an increase of 10% in its annual consumption per person since 1993.

2.1.1 Fine flavor/single source cacao consumption

During the 2000s, an increasing number of fine flavor, or gourmet, chocolate⁶ marketers have launched chocolate products with cocoa from a single country of origin. Some industry analysts and chocolate marketers see this trend continuing, particularly among a growing number of small marketers who are looking for ways to differentiate their products from those of larger, more well-established companies (Petchers 2003). High-end manufacturers market fine flavor, single source chocolate much in the same way wine is marketed. They emphasize characteristics such as

Box 1 – Descriptions of chocolate based on country of origin by “Valrhona”

Guanaja

70% cocoa South American Grand Cru. The most intense chocolate available today, a legendary, long-lasting taste (a reference since its creation in 1986). A taste further enhanced by a low sugar content.

Pur Caraibe

66% cocoa Caribbean Grand Cru, Pure Trinitario. A fruity and harmonious couverture with a round and full bodied taste.

Manjari

64% cocoa Indian Ocean Grand Cru. The unique and refreshing flavour of Criollos, reminiscent of flowers and red berries on a background of sweet almonds. All in the originality of a rare cocoa variety.

Guanaja Lactee

41% cocoa. A sophisticated couverture whose high fine cocoas content is matched by a very low sugar proportion.

Jivara Lactee

40% cocoa. A unique and genuine taste, based on fine cocoas and a touch of natural vanilla, wholesome brown sugar and malt.

Equatoriale Lactee

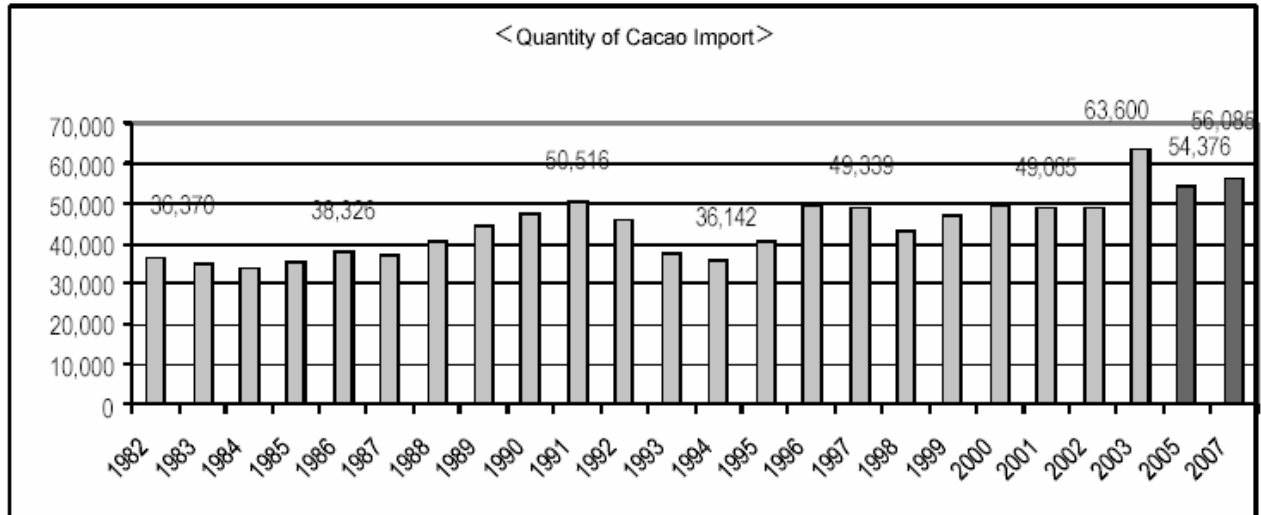
35% cocoa. A clear and milky couverture very versatile and easy to use.

Source: Valrhona: <http://www.valrhona.com/>

⁶ Industry exports from the gourmet segment of the chocolate market identified fine flavor cocoa to be directly related to the variety of the cacao bean: the varieties *criollo*, *trinitario*, and the Ecuadorian grown *nacional* sub-species of *forastero* beans as fine flavor (Petchers 2003). Ordinary *forastero* beans are not considered fine flavor (chocophile.com, 2004). While fine flavor beans are typically perceived to have a more intense flavor and aroma than ordinary *forastero* beans, the value placed on fine flavor depends as much on the quality of the individual beans as on their species.

color, flavor and depth. Box 1 provides an example of the fine flavor, single origin chocolate description by the on-line retailer “Valrhona”.

Figure 1 –Cacao bean imports by Japan, 1982-2004, with projections for 2005 and 2007



Source: Chocolate and Cacao Association of Japan

2.1.2 Organic and Fair Trade consumption

Throughout the 1990s, considerable interest was generated and many initiatives were taken in the context of promoting environmentally-sound production processes (mainly organic) and socially-responsible trade practices (Fair Trade) within the cocoa sector. Figures for the production and consumption for organic and Fair Trade chocolate are very scarce. However, there is general consensus that the market has been experiencing the same high growth rates as the organic and Fair Trade sectors as a whole. The Swiss Import Promotion Programme (SIPPO) estimated that the world market for organic chocolate grew by 10-15% per year from 2000-2003. The European Union is the largest consumer of organic and Fair Trade chocolate, with consumption estimates ranging from 11,000-14,000 MT in 2000 (Table 3). However, the US market for organic chocolate, while smaller than the European market, is growing at a rate equal to or greater than the European market growth rate. According to estimates, the gourmet segment of the chocolate candy market, which includes organic and Fair Trade, comprised approximately 7.5 percent of the total market (The Chocolate Market 2001, cited in Petchers 2003).

Organic Cocoa

In recent years organic chocolate markets have evolved from a niche, with products sold primarily in health food stores or specialty shops, to the main stream. Most supermarkets in the EU now also sell these specialized products, although production is still dominated by relatively small and medium-sized chocolate manufacturers with unique brands (SIPPO 2003). Some of them have added other labels to their products as they comply with other sustainability criteria – e.g. Fair Trade. Interest of the large supermarkets in organic chocolate is also set to increase, significant sales growth is also likely in the future by 5–10% annually (SIPPO 2003). The North American retail market for certified organic chocolate is not quite as big as the European but

growing fast (ibid). Some of the certified organic cocoa beans processed in Europe end up with chocolate manufacturers in North America. As of April 2004, nine fair trade certified chocolate bars are currently being marketed in the US: Divine, Marche du Monde, Cocoa Camino, Dagoba, Equal Exchange, Shaman Chocolates, Omanhene Chocolate, Art Bars, and Green & Blacks (Petchers 2003). Large chocolate manufactures, such as Mars and Hershey's, have yet to enter into this market segment.

At present, Japan imports organic cocoa, not as beans however, but in its semi-processed form (liquor, butter, cake and powder). It is used to manufacture bitter chocolate products, but the distribution routes are extremely limited. The fact that Organic JAS certification does not exist for milk is an obstacle to the making of chocolates with organic milk (IFOAM 2004). Therefore, very few processed organic cocoa products are made in Japan, which makes it difficult to evaluate the size or the trend of this market. It is estimated roughly that, at maximum, 20 to 30 MT of such products are currently distributed in Japan (ibid.). Thus, the market for organic or other certified types of cocoa beans is extremely small in size, and no consensus exists among interested parties in the market with regard to its future. However, this market may grow, especially if certain conditions, such as below, are realized.

Table 3 – EU Imports of Certified Organic and Fair Trade Cacao Beans, 2000

Country	Number of importers and or dealers	Imports (MT/year)	Comments
Germany	3	3,600-4675	Some re-export
Netherlands	2	3,100-4,100	80% is re-exported to EU countries
Switzerland	4	2,200	
Italy	2	850-870	Some import from Germany
Belium	3	Limited direct import, in any	
United Kingdom	1	Limited direct import, in any	Most beans bought elsewhere in EU
France	2-3	1,200	
Spain	1	200	Some import from Switzerland
Total		11,000-14,000	

Sources: FLO-International, ITC, FiBL, cited in SIPPO 2003

Fair Trade cacao

The Fair Trade relates to the contractual agreements between buyers and sellers, usually represented by grower-owned cooperatives and associations. Fair Trade prices are set by the Fairtrade Labeling Organizations (FLO), and include a minimum price and a premium price. The minimum price guarantees the producers a 'fair living wage' and the premium allows for further social and economic development. The minimum price is only in effect, if the international price of a commodity is less than the set minimum price. In Europe, the most frequently seen Fair

Trade labels are those of Max Havelaar and Transfair. In the United States, TransFair USA is the only Fair Trade labeler (<http://www.transfairusa.org/>). In 2000, the Fair Trade sale of cocoa products in Europe was approximately 1,400 MT. The market growth of Fair Trade chocolate in the last three years was also between 10 and 15%.

Europe and the United States are the two largest importers of Fair Trade cacao. The main European importers are the United Kingdom, Italy, Germany, Switzerland and France. Together they imported over 2,500 MT. Fair trade cacao imports increased in sales between 2001 and 2003 over 30 percent in total Europe (FLO, cited in Ecomercados 2005) Fair Trade cacao imports from the United States are relatively small in comparison with European import levels; however, US imports have been increasing rapidly in recent years, from 6,400 pounds to 2002 to 814,500 in 2005 (Table 4).

Table 4 – US imports of certified fair trade cacao, 2002-2005

Year	Cacao exports (1,000 lbs)	% annual increase
2002	6.4	
2003	81.4	11.9
2004	255.9	2.14
2005	470.9	.84
Total	814.5	.72

Source: *TransFair USA 2005*

2.1.3 Summary

- Global consumption in has been increasing, reaching an all time high of 3.2 million MT in the 2003/2004 cacao year
- Cacao markets have become increasingly diversified in response to structural changes in consumer demand in major consuming countries (Europe and the United States), mainly related to consumers' concerns over health, environmental conservation and the social-economic welfare of small producers in producing countries
- There is an increasing number of fine flavor/single chocolate products; however, participation in these markets by SCEs will require most likely require significant investments in upgrading and expanding production operations
- Organic and Fair Trade are expanding markets in Europe and the United States, offering incentives for environmentally sound production and socially responsible trade.

2.2 Cacao Production

Cocoa is among the more important commodities produced and exported by developing countries, with a world total of about \$2.5 billion in recent years. Since its raise as a major export crop, Africa has been the major producer of cacao, followed by Asia and Latin America (Table 5). West Africa supplies 68% of global output and is the most important cocoa production region in the world in terms of volume. The principal cacao producing countries are in West Africa, and include the Ivory Coast, Ghana, Nigeria, and Cameroon. These four countries account for about two-thirds of world production and three-quarters of world exports of cocoa beans. For countries

such as Ivory Coast and Ghana, cacao exports account more than 30 percent and 25 percent of the total export earnings, respectively. Among non-African countries producing significant amounts of cocoa are Indonesia, and Malaysia (Asia), and Brazil, Colombia, Ecuador, and the Dominican Republic (Latin America and the Caribbean).

Table 5 – World cacao production, average 1995/1996-1999/2000 and 2000/2001-2002-2003

Region	Production (1,000 MT)*			
	Average 1995/1996-1999/2000	2000/2001	2001/2002	20002/2003
Africa	1,919 (67.6%)	1,947 (68.3%)	1,951 (68.2%)	2,158 (69.6%)
Latin America & Caribbean	435 (15.3%)	418 (13.0%)	371 (13.3%)	416 (13.4%)
Asia	486 (17.1%)	488 (18.8%)	539 (18.8%)	528 (17.0%)
Total	2,840 (100%)	2,853 (100%)	2,861 (100%)	3,102 (100%)

* Rounded to the nearest thousand MT

Source: ICCO 2004

The organization of cacao production and marketing differs markedly among producing countries and regions. While production in West Africa is heavily concentrated in very small farms (2-10 hectares), cocoa farms in Brazil tend to be bigger (ranging between 10 to 100 hectares), while Malaysia has mostly large estates. Indonesia contains both large plantations (some privately owned, some owned by the state) and smallholder producers, though the share of the former has declined from some 80 percent to about 20 percent of the output in the last two decades (Bedford et al. 2001, cited in Haque 2004).

Production in Africa

Total production reached 2.1 million MT in the 2002/2003 cacao year. Major producing countries include the Ivory Coast, with over 60% of total production in Africa (Table 6). Ghana is the second most important producer, with nearly 25% of the total production. This production is particularly significant in national economic terms because local demand for cocoa is relatively weak and therefore almost all production is for export. In Africa, cocoa beans are generally harvested in September and October, although the season can continue until January or March.

Table 6 – Cacao production in Africa, average 1995/1996-1999/2000 and 2000/2001-2002-2003

Country	Production (1,000 MT)*			
	Average 1995/1996-1999/2000	2000/2001	2001/2002	2002/2003
Ivory Coast	1,198	1,212	1,265	1,320
Ghana	394	395	341	497
Nigeria	169	177	185	165
Cameroon	123	133	131	140
Others**	35	30	29	36
Total	1,919	1,947	1,951	2,158

* Rounded to the *nearest* thousand MT

** Countries *which* individually produce less than 10,000 MT per year

Source: ICCO 2004

Production in Latin America and the Caribbean

Cacao production originated in Latin America, but has diminished greatly in the region mostly due to fungal diseases, in particular Moniliasis (*Moniliophthora roreri*), accounting for average yield losses of 30%, whose repercussions are aggravated through improper disease and pest management techniques. Production in the region is dominated by a few countries, namely Brazil and Ecuador, which combined accounted for 64% of the region's total production volume in 2005 (Table 7). Production has increased on average 4 percent per year between 2000 and 2005, with Ecuador and Mexico posting relatively large increases in production. Other important producers in this region, including Colombia and Mexico, produce a total of approximately 103,000 MT. Production levels are quite vulnerable to climate changes and parasites which can damage the fruit or in some instances destroy the entire tree. Within the Caribbean, the Dominican Republic represents approximately 6% of Latin American production. Other producers include Haiti, Jamaica, Cuba, Trinidad and Tobago and Grenada.

Table 7 – Cacao production in Latin America, average 1995/1996-1999/2000 and 2000/2001-2002-2003

Country	Production (1,000 MT)			
	Average 1995/1996-1999/2000	2000/2001	2001/2002	20002/2003
Brazil	169	163	124	163
Ecuador	81	89	81	85
Dominican Republic	48	45	45	45
Colombia	40	37	38	38
Mexico	39	34	35	35
Venezuela	16	14	15	15
Peru	20	17	14	14
Others*	22	19	19	21
Total	435	418	371	416

* Countries which individually produce less than 10,000 MT per year

Source: ICCO 2004

Production in Asia

Beginning in the mid 1980s, Malaysia emerged as one of the principal sources of cocoa, providing 450,000 hectares of production by 1989. During the 1990s, Malaysia was overtaken by Indonesia, which gained 17% of total world production in 2001-2002 (Table 8). While Malaysia has been pursuing a policy to diversify its agricultural output, Indonesia has been keenly focused on expanding cocoa production. As in the case of Brazil in Latin America, most Asian production occurs on larger, more industrialized farms.

Table 8 – Cacao production in Asia, average 1995/1996-1999/2000 and 2000/2001-2002-2003

Country	Production (1,000 MT)*			
	Average 1995/1996-1999/2000	2000/2001	2001/2002	20002/2003
Indonesia	351	392	455	425
Malaysia	80	35	25	40
Total	486	488	539	528

* Rounded to the nearest thousand MT

Source: ICCO 2004

2.2.2 Production of specialty cacao: fine flavor/single source, organic and Fair Trade

Fine flavor/single source

According to industry experts, one of the most promising opportunity for value adding in cacao markets are fine flavor and single source of origin chocolates (Petchers 2003). There is scant information available regarding production of fine flavor/single source cacao. As shown in Table 9, based on different information sources compiled by Petchers (2003), total volumes reached were estimated at 90,000 MT in 1998/99. The majority (nearly 60%) originated from South America, mostly Ecuador, with some supplies from Venezuela. Asia and the Pacific (Papua New Guinea, Indonesia, and Sri Lanka), Africa (Madagascar and Sao Tome) and Central America (Dominica, Trinidad and Tobago, Jamaica, Grenada, Costa Rica and Panama) each supplied roughly 10% of the total supply.

The selection of sources of raw material for fine flavor/single source cacao requires that buyers identify a flavor profile that is not only unique but is also able to stand alone (i.e., not blended with other origins) in chocolate with 70 percent cocoa content. In a typical gourmet chocolate bar, beans from two or more origins are mixed to create a complex flavor. Asked about single origin chocolates, representatives from two well-known manufacturers expressed their opinion that the complexity of single origin chocolates could not match those of blends (Petchers 2003). On the other hand, some in the chocolate industry regard the flavor profiles of some origins, including many Central American countries, as too harsh. Where a mild bean from Sao Tome can work well in a 70 percent cocoa chocolate, a more acidic bean from countries like Costa Rica could be too bitter for most palates (ibid.).

From the perspective of some of the buyers in gourmet chocolate industry, ensuring minimum quality standards and consistency of supply are the two biggest limitations for SCEs in Central America looking to enter the fine flavor/single source market, given their small production volumes, overall low productivity attributed to fungal diseases (Moniliasis), and quality control problems (mainly related to improper on-farm fermentation techniques and storage facilities). Manufacturers and marketers who incorporate single origin chocolates into their product range risk the inability to deliver product should the supply of quality beans from a single origin run short. For that reason, manufacturers or marketers must carefully evaluate the supply and quality consistency of beans from a particular origin before launching a product made with beans solely from that origin. From the perspective of SCEs, this means a burden of proof to show the ability to deliver high-quality cocoa in sizeable and consistent quantities over multiple seasons. For SCEs in Central America, this will require substantial investments in upgrading production and processing capacities.

Organic and fair trade production

As was the case for fine flavor/single source chocolate markets, there is scant information available on the production of organic and Fair Trade cacao. Production in 1999/2000 was estimated at nearly 12,000 MT (Table 9). This estimate was based on information gathered from producing countries, cocoa importers, certifiers, consultants, articles in magazines and various sources traced on the Internet. Central America and the Caribbean (Dominican Republic) are the dominate suppliers of organic and Fair Trade cocoa. In terms of volume, the region was estimated to produce approximately 42% of the total Fair Trade volume in 2001 (Petchers 2003). The key producer of organic and Fair Trade cacao in the region is CONACADO (Dominican Republic),

with membership over 15,000 and accounting for nearly half of the region's production. West Africa supplies only a very small portion of the world's organic or gourmet cocoa beans, due mainly to quality problems and the lack of well established trade links with specialty cocoa buyers in Europe and the United States (Petchers 2003). About 50 percent of the beans exported on fair trade terms are also organic certified, which suggests that the quality issues facing organic production also affect at least some of the fair trade producers (ibid.).

Relative to other regions of the world, Latin America has a comparative advantage in the production of organic cacao. The region's dominance of the organic cacao supply is a result of 2 inter-related factors (Menter 2005):

- Central America and the Caribbean have a long-standing tradition of organic agriculture. The region has approximately 6.1 million hectares under organic management (IFOAM 2006), slightly less than Europe (6.2 million hectares). It has the largest number of certified organic farms, at 161,299, or 34% of the world's total. Major organic products from the region include: coffee (Mexico, Peru, Guatemala, Costa Rica and Colombia), Sugar (Paraguay, Ecuador, Argentina and Brazil), and cacao (Dominican Republic, Panama Costa Rica, Nicaragua, Honduras and Belize), among other products.
- Small-scale production is important for ensuring quality organic agricultural producers, and is a prerequisite for Fair Trade certification. Most cacao production outside of Brazil occurs on small farms by farmers organized into smallholder enterprises. Ironically, this is the principal reason why most Latin American and Caribbean countries have difficulty to effectively compete in the conventional cacao trade, is the same reason they have taken the lead in the organic and Fair Trade markets.

Table 9 – Production and Export of specialty cacao (fine flavor, organic and Fair Trade)

	Fine Flavor Cocoa Production, 1998/1999 (000's tons)	Percentage of Total Fine Flavor Production 1998/1999	Annual Production Organic Certified Cocoa 1999/2000 (tons)	Percentage of Total Organic Production 1999/2000	Percentage of Total Fair Trade Exports 2001
<i>Africa</i>	6,000	6.6%	2,800	24.0%	28.0%
Cameroon					*
Ghana					*
Madagascar	3,200	3.5%	1,200	10.3%	
Sao Tome	2,800	3.1%			
Tanzania			1,000	8.6%	
Uganda			600	5.1%	
<i>Mexico/Central America/ Caribbean</i>	8,400	9.3%	7,330	62.8%	42.0%
Belize			30	0.3%	*
Costa Rica	1,000	1.1%	200	1.7%	*
Dominica	2,000	2.2%			
Dominican Republic			6,000	51.4%	*
Grenada	1,100	1.2%			
Jamaica	1,500	1.7%			
Mexico			300	2.6%	
Nicaragua			300	2.6%	*
Panama	1,000	1.1%	500	4.3%	
Trinidad and Tabago	1,800	2.0%			
<i>South America</i>	51,400	56.9%	700	6.0%	30.0%
Bolivia			600	5.1%	*
Ecuador	49,800	55.1%			*
Peru			100	0.9%	
Venezuela	1,600	1.8%			
<i>Asia and Oceania</i>	9,900	11.0%	550	4.7%	0.0%
Fiji			50(est)	0.4%	
Indonesia	2,000	2.2%			
Papua New Guinea	6,300	7.0%			
Sri Lanka	1,600	1.8%			
Vanuatu			500(est)	4.3%	-
Total	90,300+	100.0%	11,680(est)	100.0%	100.0%

+Includes 200,000 tons from miscellaneous countries not listed

*Country exports of fair trade not listed to protect confidentiality of the marketing cooperatives

Note: categories are not mutually exclusive

Source: Petchers 2003

Table 10 – Organic and/or Fair Trade SCEs in Latin America and the Caribbean and Africa

Country	Approximate annual production cocoa (MT)	SCEs
Dominican Republic	6,000	CONACADO** 15,000 affiliated members (http://www.lasiembra.com/conacado.htm)
Bolivia	600	El Ceibo** 700 affiliated producers + 2,000 non-affiliated producers
Panama	750	COCABO** (http://www.acicafoc.net/pymescomunitarias/cocabo.php)
Mexico	300	INCAPRECH Cooperativa Agropecuaria La Forestal La Alianza S.C.
Nicaragua	1,500	CACAONICA 500 affiliated members, 500 ha
Honduras	1140	APROCACHO
Guatemala	1800	APROCA
Costa Rica	1,000	APPTA a (http://www.appta.org/)
Peru		CACVRA (http://www.cacvra.com/) ACOPAGRO
Belize	100	TCGA (http://www.acicafoc.net/pymescomunitarias/tcga.php)
Ghana	***	Kuapa Kokoo
Cameroon	***	MACEFCCP

* Organic and Fair Trade Certified

Sources: SIPPO (2003), FLO 2006

The continued dominance of Central America and the Caribbean over the supply of organic and Fair Trade cacao in international markets will require increased investment in the sector. Certain chocolate industry exports have reported disappointment in the quality of organic beans. Industry sources have expressed concern that the majority of organic beans are being produced in countries that have lost their reputations for high quality production, in particular the Dominican Republic (Petchers 2002). In addition to quality control, another challenge affecting small-scale production in Central America is the fungal disease Moniliasis. For certified organic farms the only options available for combating this disease is biological control and effective pruning. However, during years of normal or above-normal production levels, small-scale production has shown to be viable with the presence of the disease (Krauss *et al.* 2003). Moreover, some industry experts believe that Central American and Caribbean organic growers could face serious competition if West African countries develop organic production of high quality beans that would have an inherently less acidic flavor profile because of where they are grown (Petchers 2003). There has been some discussion that organic conversion is under way in Brazil, Cameroon, Ivory Coast, Cuba, Ecuador, Ghana, Guyana, Haiti, Indonesia, Peru, the Philippines, and Sao Tome and Togo (Sippo 2004). However, it remains unclear if and when these countries will become significant sources of organic cocoa in the future.

2.2.3 Summary

- Africa supplies 68% of global output and is the most important cocoa production region in the world in terms of volume, with the Ivory Coast, Ghana, Nigeria, and Cameroon accounting for about three-quarters of world exports of cocoa beans
- Production in the region is dominated by a few countries, namely Brazil and Ecuador, which combined accounted for 64% of the region's total production volume in 2005
- Production in Latin America has increased on average 4 percent per year between 2000 and 2005, with Ecuador and Mexico posting relatively large increases in production
- Indonesia and Malaysia are major producers in Asia, with most production occurring on larger, more industrialized farms.
- The majority of fine flavor and single source chocolate production takes place in South America, mostly Ecuador, with some supplies from Venezuela. Participation in this segment requires that SCEs meet strict production and quality standards.
- Latin America and the Caribbean is the dominant supplier of organic and Fair Trade cocoa. Relative to other regions of the world, Latin America has a comparative advantage in the production of organic cacao.

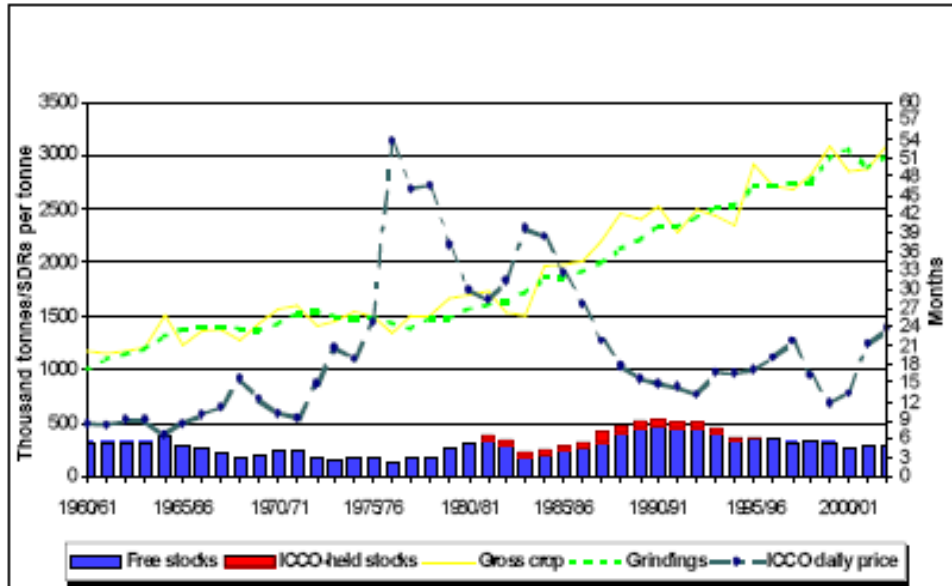
2.4 Tendencies in prices for cacao

2.4.1 Conventional cacao prices

Conventional prices are determined largely on the commodity exchanges in London (LIFFE) and New York (NYBOT). These futures markets have been used extensively by international corporations, who buy and sell commodities at different points in time and space under conditions of highly volatile prices. Since cocoa supplies are difficult to increase in times of scarcity (trees take a long time to mature) and slow to reduce in periods of abundance (smallholders do not readily shift to other occupations), cocoa prices are known for their sharp peaks and long, flat bottoms. Figure 2 presents data collected by the International Cacao Organization (ICCO) on prices, production, consumption (grinding), and stocks of cacao from 1960/61 to 2000/01. It demonstrates that high volatility of cacao prices. The data also indicate that the price volatility tends to rise in periods of high global inflation, i.e., the 1970s and the 1980s, even though inflation as such seems to have little influence on the volatility of individual prices. In the early 2000s production was not able to keep up with demand, in large part due to conflicts in the Ivory Coast, prices reached relatively high levels. In the face of these volatile world prices, national governments (Africa) and the ICCO have attempted stabilization. These efforts have generally been regarded as a failure, doing little to stabilize prices, and the ICCO abandoned its stock holding to support prices in the early 1990s (Abbott 2003, Haque 2004).

Taking the 1960-2000 period as a whole, there is a fairly robust relationship between the cocoa price and the stock-to-grinding ratio, though there is also a statistically significant long term declining trend in the price of 2 per cent a year (Haque 2004). In other words, stock levels have an impact on cocoa prices in addition to an underlying long-term declining trend. On an average, each percentage point increase in the stock ratio is associated with a price decline of 3 percent. The time trend and the stock ratio together explain some 75 per cent of the variation in price over the entire period (ibid.).

Figure 2 – World cacao bean production, consumption (grindings), sticks and prices, 1960/61 – 2002/2003



Source: ICCO 2003

The 1990s, however, mark a sharp break with the past in that the explanatory power of the two independent variables is greatly diminished. Neither the stock ratio nor the time trend has a coefficient that is significant at 95 per cent level of confidence. This suggests that the depressed prices of recent years call for an explanation that goes beyond the factors that were seen to be historically important. Haque (2004) discusses four developments that have had a significant influence on the functioning of the conventional cocoa market in recent years:

1. *Industry concentration*: A few large transnational corporations have now come to dominate the cocoa trade (as in other commodities), having taken over, replaced, or merged with the smaller companies engaged in trading cocoa beans. This development has benefited from the dramatic improvements in communications, which enable individual companies to develop efficient market intelligence and facilitate the management of large-scale transnational operations.
2. *Vertical integration*: The distinction between trading and processing companies has become blurred, with most large trading companies also engaged in processing and sourcing beans directly from exporting countries to take advantage of the scale economies in transport, storage, and processing. This occurred because the large chocolate manufacturers decided to divest the less profitable processing of cocoa into intermediate products (cocoa liquor, cocoa butter, and cocoa powder) from their core activities. However, at the high-end, chocolate manufacturers continue to do their own processing to ensure quality.
3. *Disappearance of the parastatal marketing boards*: Large transnational companies have, to a considerable extent, taken over also the exporting functions in the producing countries, especially in Africa. According to a recent ICCO report (ICCO, 2001), some 90 per cent of

cocoa exports from Ivory Coast are now handled by companies that are subsidiaries or have close links with the international companies engaged in cocoa trade. Similarly, in Indonesia there were some 60 national traders engaged in cocoa exports as recently as 1998; by the year 2000, only two were left, the rest having been taken over by foreign companies (Humphrey 2002, cited in Haque 2004). This process of corporate integration and concentration has also been driven by changes in transportation that have resulted in economies of scale. Cocoa is no longer being shipped in bags, but in large containers directly to end-users, which has considerably reduced handling costs at both ends of the shipment.

4. *Increased concentration in the chocolate manufacturing industry:* Following some 200 takeovers in the chocolate industry during 1970-1990, only 17 firms have come to control about half of the world market in chocolate, with five firms: Nestlé, Mars, Hershey, Kraft, and Cadbury-Schweppes, enjoying a dominating position (Fold 2001, cited in Haque 2004).

The overall result of these developments has been that conventional cocoa producers face a situation where there are only a few buyers. The consequence of the increased concentration along the supply chain trade, processing, and manufacture of chocolate is that the procurement and provision of intermediate products is not governed wholly by short-term, spot arrangements, but by long-term inter-corporate agreements, contracts or understandings. This has important implications for both the need for carrying stocks and price formation.

There have been two parallel developments that have reduced the need for stocks (Haque 2004):

1. *Fewer firms at each link in the value chain:* the need for stocks to carry on normal business activity has considerably declined. This results from the fact that, in relation to their turnover, larger firms tend to carry stocks at a lower level than do smaller firms. At the same time, traders and processors now face a relatively stable and reliable demand from their partners and associates in business, which also reduces the level of stocks to be held.
2. *Advancements in supply chain management:* As in other manufacturing activity, chocolate manufacturers have started to rely on modern management techniques and practices to reduce their costs, in particular, the adoption of the just-in-time inventory management practice, where supplies of inputs are obtained as required in manufacturing. The decline in the requirements for stocks by itself could be an adequate explanation for the generally depressed prices in recent years. Throughout the 1990s, the stocks-to-grinding ratio remained in excess of 55 percent, compared to the long-term average of roughly 40 per cent for the four decades, 1960-2000. The ratio declined during the 1995-2000, but it did not fall much below 50 percent. Thus, there appear to be two factors at play in keeping the cocoa price low: the stocks have been at historically a very high level in recent years, while the *need* for stocks for carrying on business has also declined quite substantially. The result is that there is a large overhang of unwanted stocks that has continued to keep cocoa prices depressed.

In general terms, stock levels have not been able to adjust downwards in the face of low prices (Haque 2004). However, the key is the behavior of individual producers, which has been sharply dissimilar. Overall, production from the seven major cocoa producers rose by less than 15 per cent between 1990 and 2000. However, two countries dominated the expansion: Ivory Coast and Indonesia together accounted for virtually the entire increase (63 per cent and 35 per cent, respectively), while the relatively modest increases in Ghana and Nigeria just about offset the declines in Brazil and Malaysia. In short, there continued to be producers who were willing to

supply cocoa at the low price. The increased productivity could partly be the reason, but, as seen earlier, rising yields and improved productivity did not occur everywhere in the cocoa producing areas. A major reason must have been that smallholder farmers accepted a sharp decline in their incomes rather than moving out of cocoa production.

2.4.2 Fine flavor/single source prices

The fine flavor/single source market segment offers an opportunity for significant premiums above commodity pricing. While premiums for fine flavor cocoa vary widely, the FOB price for some beans can reach up to \$800 per MT more than the New York or London exchange prices in the most extreme cases (Petchers 2003). The premiums paid for fine flavor beans are supported through price premiums paid for gourmet chocolate and cocoa in the consumer goods market. As Table 11 illustrates, gourmet chocolate bars (typically made with fine flavor beans) retail at prices significantly higher than mass market bars (made from ordinary beans).

Table 11 – Prices of fine flavor chocolate versus mass market (Hershey’s)

Brand	Equivalent per/pound price (US\$)	% price premium over mass market brand
<i>Mass market brand</i>		
Hershey’s Milk Chocolate	3.69	
<i>Fine Flavor brands</i>		
Terra Nostra Chocolate	7.73	109
Valrhona Chocolate	11.84	221
Scharffen Berger	15.95	332
Michel Cluizel Dark Chocolate	20.80	464

Source: adapted from Petchers 2003

2.4.3 Organic and Fair Trade cacao prices

The price absolute and relative price premiums for organic and Fair Trade cacao are determined in large part by the conventional cacao market (Hinojosa *et al.* 2003). Organic premiums fell sharply in the mid 1990s to 8-14 percent over conventional prices (Table 12). This was in line with general downward trend in conventional prices. Organic prices increased markedly in the early 2000s, in large part due to increased demand for conventional cacao caused by civil unrest in the Ivory Coast.

The Fair Trade cocoa prices are calculated on the basis of world market prices plus Fair Trade premiums. The Fair Trade premium is US\$ 150 per MT. The minimum price for Fair Trade standard quality cocoa, including premium, is US\$ 1,750 per MT. If the world market price of the standard qualities rises above US\$ 1,600 per MT, the Fair Trade price will be the world market price + US\$ 150 per MT. For Fair Trade cocoa which is also certified organic, there is an additional organic premium of US\$ 200 per MT. Fair Trade organic cocoa beans cost a minimum of US\$ 1,950 per MT. The organic premium of US\$ 200 per MT on top of US\$ 1,600 corresponds to an additional 12–13%. However, if the product is not part of a Fair Trade arrangement, there is no secured premium or bonus for certified organic alone. In this case, the

price would fluctuate according to market conditions. Prices for certified organic cocoa fluctuated in 2001 between 1,300 and 1,500 US\$ per MT (FOB).

Throughout much of the late 1990s and early 2000s, Fair Trade prices for conventional cacao were stable at the minimum price of US\$ 1,750 per MT, offering premiums of between roughly 10 and 100 percent over conventional prices. During this same period, prices for Fair Trade organic cacao fluctuated were around \$2,000 per MT, offering premiums of between 40 and 120 percent over conventional prices. Average price premiums for organic and Fair Trade cacao between 1992 and 2002 over conventional cacao prices were:

- Organic cacao: 70 percent
- Fair Trade (conventional): 63 percent
- Fair Trade (organic): 108 percent.

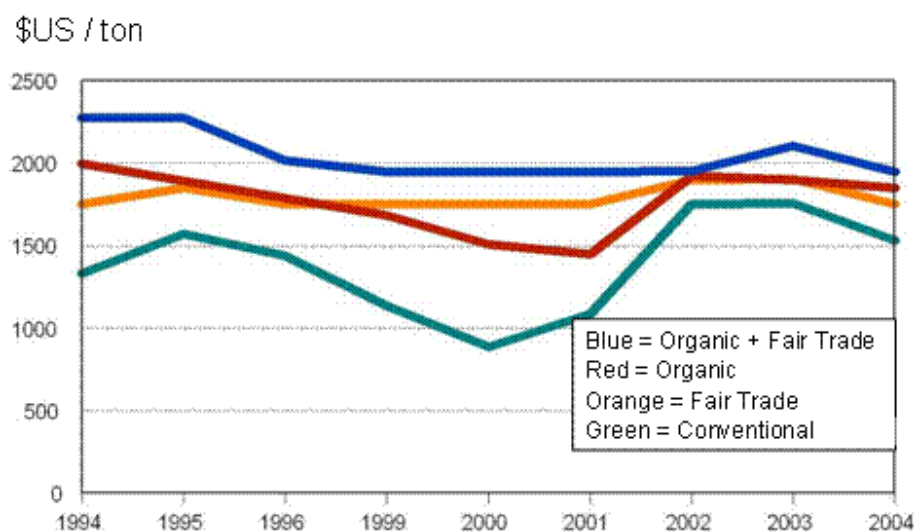
Figure 2 shows a general downward trend in the price premiums for organic and fair trade cacao; however, they remain a promising alternative to conventional markets. This downward trend in prices reflects, in part, increased competition in Latin America and the Caribbean. During periods of especially high conventional cacao prices, such as 2002-2003, the relative benefits from specialty cacao production decreased significantly (as shown in the near convergence of price in Figure 3), and in some cases leading to reduced investments in quality and productivity. During these periods, SCEs tend to suffer production shortfalls, as members may sell their cacao beans to local intermediaries (offering immediate payment and transport of beans to market), who in turn sell to national-level processors. SCEs have the potential to increase their purchases from members by offering higher prices for specialty cacao, either through new/better contractual arrangements, reduced costs, and/or innovative financial mechanisms, but generally lack the capacities to respond accordingly.

Table 12 – Comparison of conventional, organic and Fair Trade cacao prices, 1992-2005

Year	Conventional cacao			Organic cacao			
	Conventional price	Fair Trade price	Premium (%)	Organic price	Premium (%)	Fair Trade price	Premium (%)
1992	950	2,100	121	2,650	179	3,097	226
1993	1,110	1,800	63	2,275	105	3,030	173
1994	1,330	1,750	32	1,995	50	2,274	71
1995	1,570	1,850	18	n.d.	n.d.	2,276	45
1996	1,440	1,750	22	n.d.	n.d.	2,016	40
1997	1,619	1,750	8	n.d.	n.d.	n.d.	n.d.
1998	1,676	1,826	9	n.d.	n.d.	n.d.	n.d.
1999	1,138	1,750	54	1,685	48	1,950	71
2000	886	1,750	98	1,510	70	1,950	120
2001	1,086	1,750	61	1,449	33	1,950	79
2002	1,753	1,903	8	1,924	9	1,950	11
2003	1,755	1,905	9	1,900	8	1,950	11
2004	1,549	1,750	13	1,875	21	1,950	26
2005	1,538	1,750	14	n.d.	n.d.	n.d.	n.d.

Sources: Hinojosa et al. 2003 & ICCO 2005

Figure 3 – Tendencies in the prices of conventional, organic, and organic/Fair Trade cacao, 1992-2004



Source: Hinojosa et al. (2003) & ICCO (2005)

2.4.4 Summary

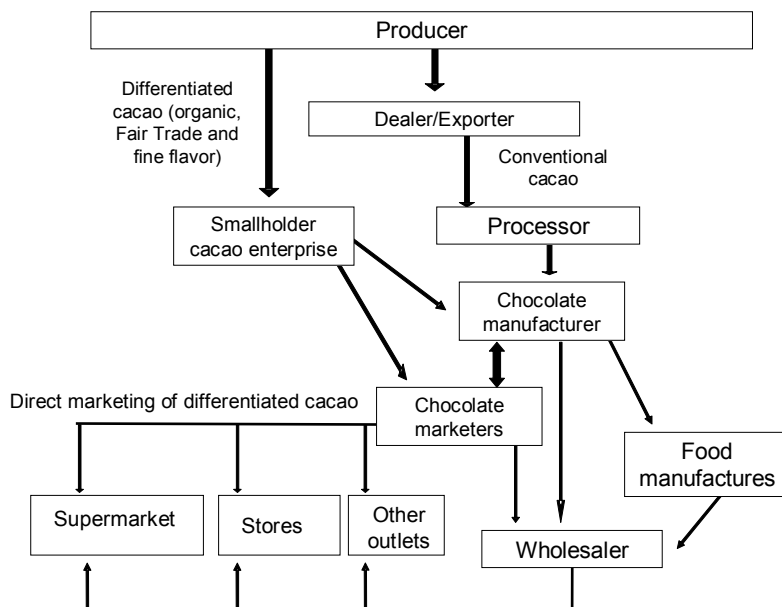
- Recent upwards trend in prices in conventional cacao are due to global supply insecurities, but overall long term trend is downwards, and since 2004 the downward trend has been due, in part, to reduced demand for cacao stocks related to advances in supply chain management and industry concentration
- High levels of competition in international markets for conventional cacao beans, especially from suppliers in Asia and Africa
- Stock levels have not been able to adjust downwards in the face of low prices: production from the seven major cocoa producers rose by roughly 15 percent between 1990 and 2000
- Promising opportunities for differentiation with the most market potential include high quality, single origin and single estate branding, organic and fair trade certification
- The fine flavor/single source market segment offers an opportunity for significant premiums above conventional cacao prices, but to date this market segment has been dominated by Ecuador and Venezuela
- Markets for organic and Fair Trade cacao offer substantial price premiums (both absolute and relative) over conventional prices and relatively good outlook for growth (less volatility)
- Throughout much of the late 1990s and early 2000s, prices for Fair Trade *conventional* cacao were stable at the minimum price of US\$ 1,750 per MT, offering premiums of between roughly 10 and 100 percent over conventional prices
- During this same period, prices for Fair Trade organic cacao fluctuated around \$2,000 per MT, offering premiums of between 40 and 120 percent over conventional prices

- Suppliers from Latin America and Caribbean may have a potential competitive advantage in the organic and Fair Trade markets, but despite overall increased demand for organic cacao, production levels in Central America have remained rather consistent, due in large part to production problems related to the fungal disease Moniliasis
- Organic and Fair Trade markets have shown large potential for primary and semi-processed products, future opportunities for SCEs in Central America are likely related to sales of high-quality finished products
- As competition increases, capacity to comply with buyers' requirements for quality, on – time-delivery and minimum volumes will be key factors for the positions of smallholder cacao enterprise in international markets.

3 The cacao supply chain and opportunities for increased value adding

Most efforts to produce and market specialty cocoa-based products will likely involve a number of actors at different levels of the supply chain. As such, an understanding of the different roles of actors in the organization of the production, certification and marketing of cacao is crucial. Figure 4 reveals the different branches of the supply chain. Conventional cacao production is typically organized by dealers and sold to processors in Europe and the United States. In the case of specialty cacao, smallholder cacao producers generally organize themselves into SCEs that are charged with the role of organizing production, facilitating certification and establishing and maintaining business relations with international processors and manufacturers. In the following sections, we discuss the activities of key actors along the chain and importance in determining the opportunities for increased value adding my small cacao producers and their enterprises.

Figure 4 – Stylized cacao supply chain



3.1 Inter-business relations along the value chain for cacao

Smallholder producers and SCEs in Central America

There are an estimated 16,400 cacao-producing households in Central America, mostly small scale and indigenous, cultivating 22,000 ha of cacao. Among these producers, 4,100 are organized into six smallholder cacao enterprises (SCEs), with total sales amounting to nearly US\$ 10 million in 2005 (Table 13). In most cases, cacao represents a major source of cash income for producing households, varying from US\$ 400 to US\$ 1,200 per year.

Table 13 – Salient features of cacao production and commercialization in Central America

Country	Smallholder cacao enterprise, including # of members *	# member households	Certifications**	Gross income ('000 US\$/yr)**
Nicaragua	CACAONICA	700	Organic	2,700
Honduras	APROCACAHO	500	In process	1,753
Guatemala	APROCA	250	In process	2,768
Panama	CACABO	750	Organic	2,160
Costa Rica	APPTA	1,000	Organic, Fair Trade	293
Belize	TCGA	900	Organic, Fair Trade	195
Total		4,100		9,869

* COCABO = Cooperativa de Servicios Múltiples de Cacao Bocatoreña; APPTA = Asociación de Pequeños Productores de Talamanca; CACAONICA = Cooperativa Agroforestal y de Comercialización de Cacao Orgánico de Nicaragua; APROCACAHO = Asociación de Productores de Cacao de Honduras; APROCA = Asociación Regional de Productores de Cacao de la Costa Sur de Guatemala, TCGA = Toledo Cocoa Growers Association

** Assuming US\$1,600 per MT as floor price for fair trade cacao and price premiums for organic and fair trade cacao of US\$200/MT and US\$150/MT, respectively

Most small producers and SCEs in Central America face considerable challenges to increase benefits from cacao production and trade. At the farm level, small producer cacao groves suffer from low productivity attributed to fungal diseases, in particular Moniliasis, accounting for average yield losses of 30%, whose repercussions are aggravated through improper disease and pest management techniques. At the enterprise level, most SCEs are in the initial phases of enterprise development and therefore tend to exhibit low levels of output, productivity and profit. They are generally undercapitalized in terms of the human, social and financial assets required for effective, long-run SCE development. In addition, they are highly vulnerable to fluctuations of the changes in contractual relations with buyers and prices in the conventional cacao market⁷.

⁷ During periods of high conventional cacao prices, such as 2002, the relative benefits from specialty cacao production decrease, often leading to reduced investments in quality and productivity. In these periods, SCEs usually suffer production shortfalls, as members may sell their cacao beans to local intermediaries. SCEs have the potential to increase their purchases from members by offering higher prices for specialty cacao, either through new/better

Strategies employed by government agencies and NGOs for cacao sector development have had a limited impact on SCE development or poverty reduction, as they have tended to apply production-oriented approaches, rather than providing a combination of technical, business development and financial services to promote cacao business and value chain development. At the policy level, current laws and policies provide little scope or incentives for land tenure clarification, business formation, or export promotion, and cumbersome bureaucratic requirements impose high transaction costs for the trade and processing of cacao-based products.

Dealers

In the most transactions, cocoa dealers are the first intermediaries to take possession of cocoa from the exporting agent. Few dealers are involved with the processing of cocoa beans or the manufacture of fine flavor or organic, cocoa based ingredients, or finished consumer products. The vast majority of cocoa beans purchased by dealers are for use in conventional, mass market ingredients and consumer products. Such transactions most often involve non-specialty cocoa and thus any efforts to include value adding through differentiation of cocoa beans will be of little importance. Most dealers are not concerned with differentiation based on quality or other factors above and beyond their customers' requirements (Petchers 2003). This does not suggest that dealers do not contract and sample for quality or proof of origin or certification. However, it is the manufacturers and marketers who are the drivers of the market for specialty cocoa and who should be the target audiences of differentiation strategies.

Processors

Cocoa processors typically roast beans and convert them into nibs, liquor, butter, cake and powder. A few of major cocoa processors also manufacture chocolate. Of the companies that serve both functions, very few manufacture consumer products in the United States. Some processors do manufacture cocoa powder in finished form, yet as is the case with chocolate, few processors market consumer cocoa powder products. Two-thirds of all cocoa ground is processed in the Northern hemisphere, the largest processors being the Netherlands (15.2% of world supply) and the United States (15%). Others include Germany (7%), UK (5.9%), and France (4.2%). The rest of cocoa is ground in key cocoa producing countries, mostly in facilities owned by a multinational processor. The leading country is Ivory Coast (8%), others being Brazil (6.9%) and Malaysia (3.5%).

There is considerable concentration of market power in the processing sector. Four cacao processors (ADM, Barry Callebaut, Cargill, and the Hosta Group) account for 40% of processed cacao products worldwide (Abbott 2004). The extent of market power exercised by multinational cacao processors is the subject of much speculation, but little hard evidence exists to verify or refute the importance of this market power (Fold 2002, cited in Abbott 2004). All of these companies are involved in the trading, processing, and transportation of cocoa. Some, especially Barry Callebaut, are also involved in chocolate manufacturing as well (Menter 2005).

There are no certified processors of organic or fair trade cocoa in the United States (Menter 2005). For now, the vast majority of organic and fair trade product is processed in Europe with some processing occurring in producer countries. The major European companies involved in the processing of fair trade cocoa are:

contractual arrangements, reduced costs, and/or innovative financial mechanisms, but generally lack the capacities to respond accordingly.

- Daarnhouwer & Co. BV, The Netherlands (<http://www.daarnhouwer.com/>): They handle 70-80% of all Fair Trade cocoa imported to Western Europe (according to an estimate from 2000).
- Dutch Cocoa BV, The Netherlands (<http://www.dutchcocoa.com/>): They have compact and flexible processing capabilities that allow them to run small batches of specialty product. The company is estimated to process over 70% of all Fair Trade cocoa (2000 estimate). They remain an independent company.

The processing of cocoa in producer countries by grower-owned small and medium enterprises provides an opportunity for small producers to increase the value added to primary production. El Ceibo (Bolivia), CONACADO (Dominican Republic) and La Cooperativa Naranjillo (Peru) are some examples of successful attempts by SCEs to increase value added through processing. Product lines include cacao powder and chocolates for national and international consumption. However, many chocolate manufacturers have pointed out that cocoa processed in producer countries often lacks quality and consistency, creating a frustrating sourcing relationship and an unusable product (Menter 2005). In general, Latin America and Asia locally process a larger percentage of their cocoa crops than Africa. The main reason for this is that African processing capability is generally regarded as low-quality compared to that of North America, Europe, or other cocoa producing regions that process domestically.

Two Central American-based manufactures of organic and Fair Trade chocolate are:

- Costa Rica Cacao Products Company, S.A., Costa Rica (<http://www.cocoa.co.cr/>): founded in 1952 in Heredia, Costa Rica, produces semi-processed and finished organic chocolate products for regional and international markets
- APROCACAO, Honduras (aprocaho@hotmail.com): based in San Pedro Sula, this SCE has 8 years experience processing certified organic cacao beans into cacao liquor for export markets in Europe and US. In 2004, their entire production of organic cacao was sold to Kraft Foods.

Chocolate Manufacturers

Most chocolate manufacturers purchase cocoa liquor and butter from cocoa processors, **and it is as this stage where critical decisions are often made regarding quality and origin**. Cacao liquor and butter are combined to create specific chocolate flavor profiles. Typically, manufacturers will create recipes that incorporate cacao from multiple origins. However, gourmet manufacturers are responding to the growing trend for single-country of origin and even single-estate chocolate.

There is also considerable concentration of market power in chocolate manufacturing. Five manufactures (Hershey's, Mars, Kraft, Ferrero, and Cadbury) account for 50% of cacao product use worldwide (Abbott 2004).

In the case of organic chocolate, two processors that are also involved in the manufacturing of chocolate for wholesale are:

- Barry Callebaut, Switzerland (<http://www.barry-callebaut.com/>): the major manufacturer of organic chocolate in the world. They sell bulk chocolate products to food service users or manufacturers.

- Debelis, Belgium and U.S. (http://www.debelis.org/about_us/Debelis_Corp/default.asp): produces organic chocolate for wholesale and foodservice use.

Two prominent European-based companies that manufacture (not process) fair trade and organic chocolate are:

- Chocolat Bernrain, Switzerland (http://www.bernrain.ch/_html/fs_start.html): This company is a chocolate manufacturer that produces conventional, organic, and fair trade chocolate. They produce the “Mascao” brand of fair trade chocolate, but specialize in private label products. Their involvement in fair trade cocoa predates a standardized labelling system and they have been certified to produce organic chocolate since 1999. They produce over 200 MT of fair-trade chocolate each year.
- Weinrich & Co. GMBH, Germany (<http://www.weinrich-schokolade.de/>): A chocolate manufacturer producing both organic and fair trade products. Produces “Vivani” brand organic chocolate.

A Central American-based manufacture of fair trade and organic chocolate is:

- Costa Rica Cacao Products Company, S.A. (<http://www.cocoa.co.cr/>): founded in 1952, produces semi-processed and finished organic chocolate products for regional and international markets.

Chocolate Marketers

Much of the chocolate sold in the United States is marketed by companies that either purchase finished products (e.g., chocolate bars or drops) from manufacturers or purchase bulk chocolate in solid or liquid form and then mold and package it themselves. In either case, marketers often choose the chocolate for their products from a selection of “standard” chocolate recipes regularly produced by chocolate manufacturers. Because these chocolates are produced in large quantities, marketers may benefit from volume discounts and do not face minimum-run requirements. Should a marketer choose to have chocolate manufactured to unique specifications, they must meet minimum run requirements and pay for the costs associated with cleaning equipment. It is for this reason that most small chocolate marketers often have little control over the specific origin and quality of the cocoa used in their products. They do, however, control their own brands and positioning strategies and can thus incorporate the attributes of the cocoa into packaging and advertising to the extent that they are aware of its origin.

Large private-label manufacturers in Europe produce most other brands of organic and Fair Trade chocolate products. Specifics on the fair trade market, such as lack of scale and certification requirements, require higher incremental costs. These extra costs substantially decrease profit margins.⁸ One example in the organic and Fair Trade segment is “Art Bars”, sold by Ithaca Fine Chocolates (<http://www.ithacafinechocolates.com/>). These chocolate candy bars are manufactured and packaged by Bernrain in Switzerland (Box 2). Organic and Fair Trade marketers who have managed to successfully add value to their chocolate products via the

⁸ This situation is quite similar to the one found in European markets for Fair Trade coffee (see Mendoza & Bastiaensen 2003).

marketing of process and social attributes of the cocoa used in their products include (in alphabetical order):

- Dagoba Organic Chocolate, U.S. (<http://www.dagobachocolate.com/>)
- The Day Chocolate Company, U.K. (<http://www.divinechocolate.com/>)
- Endangered Species Chocolate Company (<http://www.chocolatebar.com/>)
- Green & Black's, U.K.⁹ (<http://www.greenandblacks.com/>)
- Ithaca Fine Chocolates, U.S. (<http://www.ithacafinechocolates.com/>)
- Newman's Own Organics, U.S. (<http://www.newmansownorganics.com/%20>)
- Thompson Organics, U.S. (<http://thompsoncandy.com/thompsonorganics/>)

Box 2 – Promotion of the Swiss-made “Art Bars” on the website of US-Based marketer “Ithaca Fine Chocolate”



Art Bars

Inspired enjoyment from the first Fair Trade Certified chocolate company in the US! Art Bars are certified organic, Fair Trade Certified, exquisite Swiss chocolate bars that feature an art reproduction on a collectible card inside the wrapper. 10% of profits support art education.

Fuente: <http://www.ithacafinechocolates.com/>

Cocoa Ingredients Distributors

Many small and medium-sized food manufacturers purchase small quantities of cocoa-based products from cacao ingredients distributors. Large-scale distributors typically buy ingredients from processors and chocolate manufacturers in container loads and often break up or repack them for resale. They may have some amount of control over the origins of the cocoa used in their ingredients, given the large volumes purchased. Smaller distributors often buy in pallet-sized quantities, which are broken up and sold to small-scale food manufactures. These small-scale distributors have much less market power and considerably less influence on the source of the cocoa used in their products.

⁹ Green & Black's is the U.K.'s largest producers of organic chocolate market. The company was purchased by Cadbury Schweppes in 2005. According to William Kendall, Cadbury Schweppes CEO, "the premium quality chocolate market is growing fast globally and Green & Black's taste, combined with its organic and ethical integrity, puts it in a pole position to benefit from this" (cited in Vreeland 2005). According to Neil Turpin, Director of sales for Cadbury Schweppes, "the acquisition gives Green & Black's the financial capacity to invest more in its brands. Cadbury has no input into brand direction or the execution of marketing plans" (cited in Vreeland 2005).

Food Manufacturers

Like chocolate marketers, manufacturers of food products like ice cream, cookies, and chocolate milk are dependent on other companies for the chocolate and cocoa ingredients they use in their products. To minimize costs, food manufacturers typically choose chocolate and cocoa ingredients manufactured to a standard set of specifications rather than to unique specifications. As noted by Petchers (2003), some buyers, particularly those interested in certain quality or social aspects related to cacao production, are unenthusiastic about buying chocolate ingredients made to standard specifications. This is because it is nearly impossible to choose the source of the cocoa beans used in the manufacturing. Given recent issues about forced child labor in cocoa production have recently been raised (e.g., ILO 2005), some companies have expressed interest in sourcing fair trade certified ingredients if the quality is comparable to other products and the ingredients are available through typical suppliers (Petchers 2003).

3.2 Challenges for increased value adding along the cacao supply chains

- Cacao supply chain always involves a relatively large number of companies and transformation stages to transform cocoa beans into consumer products.
- Opportunities for differentiation of conventional cacao based on product or process attributes is highly limited given the importance placed on low cost, uniform cacao products, especially by processors and manufacturers.¹⁰
- Companies most likely to be interested in using specialty cocoa are small companies looking to differentiate their own products in a market dominated by larger players. Given their limited individual buying power, however, small-scale processors and manufacturers find it difficult to choose the source of the cocoa used in their products.
- Minimum run requirements of cacao processors and manufacturers play a key role in determining the opportunities for value adding by small and medium enterprises in the chain. In order to specify a process or manufacture a certain volume of specialty cocoa, processors and manufacturers generally require minimum runs of at least one container (i.e., 12.5 MT or approximately 27,500 lbs). For a chocolate manufacturer or marketer, this translates into roughly 17,500 kg (38,500 lbs) of dark chocolate or 27,000 kg (60,000 lbs) of milk chocolate. While these quantities may be insignificant for a large chocolate marketer, small and medium enterprises wishing to maintain a diverse product range would have difficulty meeting these minimum requirements.
- In addition, marketers face minimum run requirements from manufacturers. According to Petchers (2003), it is technically feasible to process chocolate from a unique source with a minimum of 6,000 lbs of cacao beans. This amount would be a considerably more manageable amount for a small marketer than the chocolate produced from a full container of beans. However, the manufacturer's costs for cleaning machinery and switching to a unique cocoa source could make such small production runs economically infeasible.

¹⁰ This situation contrasts starkly with that of the specialty coffee market, where differentiation (organic, fair trade, country of origin, bird friendly, etc.) has emerged as a key element in the marketing strategies of producer cooperatives and buyers (mainly small and large-scale roasters, e.g., Starbucks) in the major importing markets (United States and Europe).

- Coordination and communication along value chains for cacao is costly and often results in missed opportunities for increased value adding by marketers and SCEs in supply chains for specialty cacao. Problems with coordination along the supply chain often related to: limited access to market information, both in the Southern and Northern segments of the chain; high transaction costs for monitoring and obtaining information; and a lack of technical, business and financial capacities of SCEs.
- From the perspective of marketers in importing countries, major limitations to generating increased value added are:
 - Insufficient quality often related to post harvest treatment: harvest processing as an area that they perceive to be responsible for reducing the quality of beans. As one industry expert suggests, it is difficult to evaluate the inherent quality of beans until the processing is done correctly. In addition to mold problems caused by inadequate drying, fine flavor buyers cite inadequate fermentation as a typical problem. Compounding the issue of improper fermentation, suggests one buyer, is misinformation about fermentation that some farmers receive from technical advisors.
 - High costs to identify suppliers who can provide specialty cocoa that meets specified criteria and establish long-term alliances
 - High costs to monitor and control quality and ensure minimum volumes
- From the perspective of the producers, this makes it difficult to: 1) Identify and respond to opportunities for generating increased value added, there is general uncertainty regarding requirements to how to approach buyers with unique value propositions and 2) diversify market contacts.
- Major challenges to of SCEs to respond to the opportunities in mentioned above include:
 - High production and processing costs
 - Insufficient volumes
 - CFE in initial stages of enterprise development, thus lacking technical, business and financial capacities
 - Insufficient and inconsistent product quality
- Major challenges for marketers and other buyers of specialty cacao include:
 - Highly competitive market environment, which prevail in this sector dominated by large corporations with pre-eminent brands built on decades of expensive advertising
 - High transaction and monitoring costs to work with SCEs
 - Large costs and risk associated with brining single source cacao to market.

3.3 Opportunities for increased value adding by CFE in Central America

The relatively favorable market conditions for specialty cacao (prolonged excess demand for specialty cacao and cacao-based products) described in this report provide SCEs and their members with various opportunities for generating increased value added to the production of cacao beans. On the other hand, effectively responding to these opportunities will require significant upgrading in the capacities of SCEs to meet quality and volume demands of traders and processors, as well as those related to certification and the forging of strategic business alliances. The formulation of value-adding strategies by SCEs should take into account possible

investments in upgrading their technical, business and financial capabilities. This section briefly describes the most promising opportunities for increased value adding by SCEs in Central America.

New institutional arrangements with traders and processors

As CFEs increase their technical, business and financial capacities, they may be able to negotiate more favourable institutional arrangements with existing buyers and processors in Europe and the United States. Opportunities may include systemic quality management, including product development, branding and joint marketing campaigns; benefit-risk sharing mechanisms; and improved certification design, including traceability issues. Another option for CFEs with access to relatively high-quality cacao is to identify buyers willing to pay ‘quality premiums’ in addition to the organic and Fair Trade price premiums. An important tool for identifying new buyers/suppliers is increased information in Spanish and English regarding traders and processors in Europe and the United States, as well as more information on SCE in Central America.

Increased processing for international markets

Selling semi-processed products, such as cacao butter and/or powder, and elaborated products, such as chocolate represents a viable value adding option for SCEs in more advanced stage of business development, with relatively high levels of human, social, and financial capital). El Ceibo (Bolivia), CONACADO (Dominican Republic), and La Cooperativa Naranjillo (Peru) are some examples of successful attempts by SCEs to increase value added through on-site processing of raw cacao. Processing can also be done off-site by contracted third parties, as in the case of APPTA (Costa Rica). Product lines include cacao power and chocolates for national and international consumption.

Image building and labeling

Successful marketing in export markets or high-end national-level markets for semi-processed or finished cacao-based products requires market-savvy SCEs able to identify potentially interested buyers, and adapting the product to meet their individual needs. Investments by SCEs in image building (marketing campaigns based on cultural, social and organoleptic aspects of cacao beans) and labelling (“optimal certification mix”) have the potential to increase the information available to traders, processors and consumers regarding unique quality and/or social characteristics of cacao from Central America. As described in IFOAM (2004) in relation to the Japanese cacao market: “The fact that the *criollo* variety originates from Central America and that it was appreciated as ‘food for God’ by the Mayas may prove to offer attractive images for Japanese consumers who prefer authentic products. If such factors are combined with some type of certification (e.g. Rainforest Alliance for environmental preservation and social welfare), Central American chocolate could be marketed as ‘authentic chocolate made with fragrant *criollo* beans that are certified by the Rainforest Alliance.”

Expansion into national markets

There is also increased potential for specialty chocolate products in the Central American market. This is especially true for Central America, where there is a general trend towards consumption of high-quality food products, driven largely by rising incomes, increased availability (emergence of supermarkets), and a growing tourism sector. El Ceibo, in Bolivia, shows what can be achieved in national markets. Facilitated by a CATIE-run project on organic cacao, the sales managers of El Ceibo developed a marketing strategy based on a consumer survey in the country's four principal cities, product development according to the preferences of the principal

consumer segments, advertising and campaigning, and the opening up of new distribution channels and sales points. From 2002 to 2005, El Ceibo's share in the Bolivian market of chocolate products thus rose from less than 1 to about 5 percent. Given the high levels of tourism in Costa Rica, Guatemala and Belize, and the emerging tourism markets in Honduras and Nicaragua, opportunities exist for new market outlets for specialty chocolate in hotels, restaurants and other tourist destinations – a virtually untapped market niche.

Improved quality and efficiency

General speaking, production, processing and marketing activity can be made more efficient and higher-value, by reducing raw material costs (improving productivity or product quality), adapting the product to meet particular consumer preferences or increases the reliability of supply. This will often involve improved production and marketing technology, development of quality standards, finding ways to reduce unit costs, for example through reduced transport and transaction costs, and bulk purchase of inputs. There is general consensus among chocolate industry experts that the market for Fair Trade and organic cocoa will be increasingly restricted to producers of high quality cocoa (Petchers 2003). The companies that manufacture and market fair trade and organic products for sale in Europe and the United States typically position their products as high quality offerings, with certification as a way to add additional value to high quality cocoa, not as a substitute for quality (ibid). Of all the opportunities for value addition, high quality was the differentiator that buyers and industry experts valued most (Petchers 2003). However, buyers have expressed concern that that much of the *criollo* and *trinitario* crop being grown around the world does not meet the standards that they use to identify cocoa sources. Cacao enterprises able to supply high quality *criollo* and *trinitario* beans will be at an advantage in finding international buyers willing to pay premium prices.

Horizontal integration

SCEs may use horizontal integration (or cooperation among SCEs) to enhance returns through increased economies of scale in production, processing and/or marketing.

Single Origin Branding

To some degree, the ability of SCEs to access the market for single source of origin of cocoa is limited by a country's or region's reputation for the quality. In cases where a country or region is not known for quality, industry associations, NGOs/projects and/or governments could play a key role in implementing and publicizing quality improvement initiatives or marketing campaigns to reposition perceptions of the country's cocoa. Independent on a country or region's reputation for quality, individual SCEs that are able to ensure consistency of their own high quality cocoa supply may enter this market niche. Individual manufacturers and marketers who are able to identify cooperatives that can deliver unique cocoa consistently may be willing to launch single origin products despite perceptions of the rest of the country's supply. SCEs able to produce cocoa with a unique flavor profile may be able to access the small but growing market for single estate chocolate (Petchers 2003). In this case, SCEs must work in close collaboration with marketers to create a brand identity based on quality, in association with other attributes such as ecological growing practices or culture (e.g., indigenous communities).

4 Conclusions and Recommendations

Smallholder cacao producers in Central America, in general, and Belize, in particular, are well positioned to take advantage of the strong demand for organic and fair trade cacao. Relative to SCE in South America and Africa, they have advantages in these markets based on their use of traditional, low input production techniques, achievements in the organization and development of SCEs, and existing certifications for organic and Fair Trade, among other factors. However, considerable work remains for smallholder cacao producers and their SCEs to fully benefit from the expanding value-adding opportunities in specialty cacao markets. On the technical side, production volumes must be increased, quality control mechanisms established, and modern disease prevention and treatment techniques implemented. On the business side, SCEs must increase the efficiency of their operations and their administrative and marketing capacities. There are reasons to act now: 1) rapid advance of the agricultural frontier and need to provide economic incentives for cacao-based agroforestry systems that help conserve biodiversity and 2) increased competition in national markets from CAFTA, the recently signed free trade agreement that will significantly reduce import tariffs in Central America for chocolate-based products.

Strategies for the development of the full potential of SCEs in Central America will need to take into account the following three elements:

- *Assets for business development*: SCEs increase their human, social, physical and financial assets, leading to increased efficiency, more beneficial business relationships, and, above all, higher incomes for poor producer households.
- *Added value*: SCEs increase value adding through quality enhancement, reduced costs, innovative marketing strategies, and development of semi-elaborated (cacao liquor, butter, and powder) and elaborated quality products (e.g., chocolates, confects).
- *Alliances*: through enhanced coordination, cooperation and information flows, SCEs enter into new and strengthen existing alliances with input and service providers, as well as processors and buyers, to ensure product quality along the chain, identify new market opportunities, develop related products and launch joint marketing campaigns for innovative specialty cacao-based products for national and international markets, leading to increased benefits along the chain.

The implementation of this strategy will require the leverage of resources and capacities at different levels:

- *Farm level*: Producer households will need to upgrade the volumes and quality of their cacao production through the application of sound practices for plantation management. Fermentation and storage are carried out on-site with inappropriate infrastructure and techniques.
- *SCE level*: SCEs will need to increase investments in strengthening their technical, administrative and financial capacities. They will also be required to diversify contacts with input and service providers, and to strengthen their alliances with other SCEs in Central America (horizontal alliances for cooperation in technology development, processing, joint market strategies, etc.) and with traders and processors.
- *Chain level*: Actors along the chain will benefit from the development of new institutional arrangements that increase information flows, provide increased opportunities for value

adding by CCEs, and facilitate coordination and communication for joint marketing and product development.

- *Service level*: Providers of technical, business and financial services will need to broaden their production-oriented approaches to rural sector development, in general, and cacao sector development, in particular, to include services that effectively promote SCE development and value chain integration in national and international markets.

Facilitate the strengthening of human resources for the production and processing and commercialization of specialty cacao by small producers and SCEs.

- *Meso level*: Increase invests in infrastructure and facilities for reducing the costs of transporting, manufacturing and growing cacao, with emphasis on:
 - Road networks in rural production areas
 - Access to communications (internet)
 - Expansion of the electricity grid.
- *Macro level*: Strengthen the political-legal and institutional framework for the production and commercialization of organic and Fair Trade cacao by SCEs, with emphasis on:
 - Harmonization of environmental and laws for the strengthening of businesses and commerce
 - Incentives for the production of organic cacao: technical assistance for the conversion to organic production, adjustments in the tax regimes and policies that strengthen the export of organic cacao
 - Land title security: the majority of organic certification systems require property titles, which in many some cases in Belize, and other parts of Central America, have yet to be fully resolved
 - Simplification of the bureaucratic procedures for the organization and administration of SCEs.

References

- Abbott, P. 2003. Towards More Socially Responsible Cacao Trade. Working Paper #03-3, International Agricultural Trade Research Consortium, presented at IATRC Annual Meeting, December 15-17, 2002, Monterey, California.
- Bacon, C. 2004. Confronting the Coffee Crisis: Can Fair Trade, Organic, and Specialty Coffees Reduce Small-Scale Farmer Vulnerability in Northern Nicaragua. *World Development* 33 (3): 497-511.
- Ecomercados 2005. Mercado Europeo de Cacao Orgánico y Comercio Justo.
- Haque, I. 2004. Commodities under Neoliberalism: The Case of Cacao. G-24 Discussion Paper Series #25, UNCTAD, Geneva.
- Hinojosa, V. 2002. Comercialización y Certificación de Cacao (*Theobroma cacao* Linn) y Banano (*Musa AAA*) Orgánico de las Comunidades Indígenas de Talamanca, Costa Rica. Masters Thesis, CATIE, Turriabla, Costa Rica.

- Hinojosa, V., D. Stoian & E. Somarriba. 2003. Los Volúmenes de Negocios y las Tendencias de Precios en los Mercados Internacionales de Cacao (*Theobroma cacao*) y Banano Orgánico (*Musa AAA*). *Agroforestría en las Américas* 10 (37-38): 1-6.
- IFOAM. 2004. The Japanese Market for Environmentally and Socially Certified Agricultural Products from Central America. IFAOM-RUTA.
- International Cocoa Organization (ICCO). 2005. ICCO Annual Report 2003/2004, London
- Krauss, U., M. Ten Hoopen, E. Hidalgo, A. Martínez, C. Arroyo, J. García, A. Portuéguez & V. Sánchez. Manejo Integrado de la Moniliasis (*Moniliophthora roreri*) del Cacao (*Theobroma cacao*) en Talamanca, Costa Rica. *Agroforestería en la Américas* 10 (37-38): 52-62. *et al.* (2003)
- Lewin, B., D. Giovannucci & P. Varangis. 2004. Coffee Markets New Paradigms in Global Supply & Demand. Agriculture & Rural Development Internal Report, The World Bank Group, Washington, D.C.
- Mendoza, R. & J. Bastiaensen. 2003. Fair Trade and the Coffee Crisis in Nicaraguan Segovias. *Small Enterprise Development* 14 (2): 36-46.
- Menter, L. 2005. The Sustainable Cacao Trade: an Analysis of US Market and Latin American Trade Prospects. Centro de Inteligencia sobre mercados sostenibles (CIMS), INCAE, Heredia, Costa Rica.
- Petchers, S. 2003. The Market for Specialty cacao: A Market Opportunity Assessment for Small Cacao Grower Organizations.
- SIPPO (Swiss Import Promotion Programme). 2002. Organic Coffee, Cocoa and Tea: Market, Certification and Production Information for Producers and International Trading Companies. SIPPO, FIBL and Naturland, Zürich/Frick.

Annex 1: Web links to chocolate processors in Latin America

Bolivia

El Ceibo RL

Brazil

Barry Callebaut Brasil

Cargill Cacau Ltda

Chocolates Finos Serrazul Ltda

Chocolates Garoto SA

Chocolates Copenhagen SA

Doce Aroma Comercial Ltda

Industria Brasileira De Cacau

Industria e Comercio de Cacau Ltda INDECA

Costa Rica

Compania Nestlé Costa Rica SA

Costa Rican Cocoa Products

Ecuador

Confites Ecuatorianos CA - Confiteca

Ecuacocoa

Ferrero del Ecuador SA

Nestlé Ecuador SA

Mexico

Barry Callebaut Mexico SA de CV

Chocolate Ibarra

Bell Flavors and Fragrances de Mexico S de RL de CV

Venezuela

Chocolates el Rey CA

Nestlé Venezuela SA