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Can the Private Sector be Competitive and Contribute to Development through Sustainable Agricultural Business? A Case Study of Coffee in Latin America

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Abstract

Latin America's coffee market continues in economic crisis. Sustainable coffee production and certification is one option for economic recuperation and social and environmental sustainability for the region's coffee producers. This paper explores four viable certification processes (Organic, Fair Trade, Rainforest Alliance, and Utz Kapeh) by first defining their requirements. Then, an assessment of microeconomic impacts is given, where the production processes of sustainable and conventional coffee are evaluated and compared. Finally, the paper presents their future relevance and entrepreneurial potential by considering long-term market perspectives. Information about sustainable production in Latin America was gathered through primary sources in interviews and markets analyses conducted by the CIMS Foundation.

Keywords: sustainable coffee, certification, economics, Central America

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Introduction

Many farmers, and with them Latin American economies, have suffered greatly from the current coffee crisis. The abandonment of coffee quotas regulated by the International Coffee Agreement in 1989 led to a worldwide drastic fall of producer prices for coffee. While in the mid-nineties the price for coffee recovered for some time – due to high yield losses caused by drought and frost in Brazil – at the end of the nineties, coffee prices decreased drastically and were going to be the lowest for the first time in more than a century (see Figure 1). However, the current price crisis is not only caused by the abandonment of coffee quotas, but also by the subsidized entry of new producers in South East Asia, as well as a substantial increase in production in traditional Latin American producing countries like Brazil.

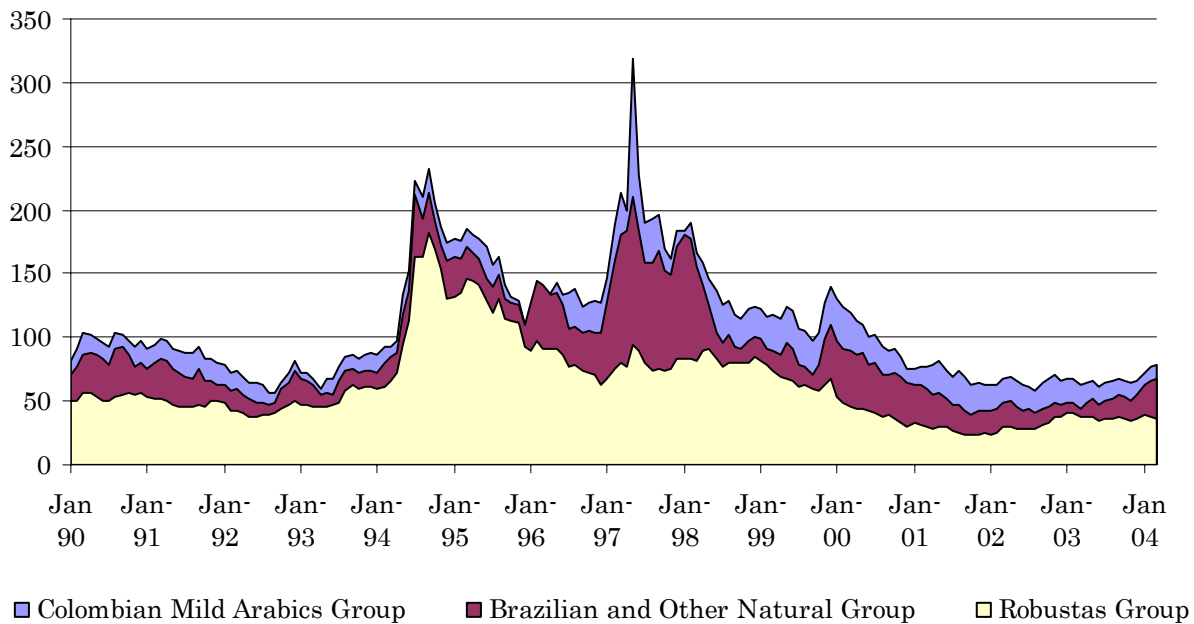


Figure 1: World Prices for Green Coffee

Source: ICO 2004

The crisis especially affected the Central American countries, due to their higher production costs and subsequent lower competitiveness in relation to Brazil and Vietnam. Large numbers of Central American farmers, in order to overcome the crisis, have been forced to differentiate their product and supply a higher-value product or exit the market.

To address this problem, the Sustainable Markets Intelligence Center (CIMS) conducted market research to identify all sustainably-produced coffee in Latin

America and, further, to estimate the macro-economic impact of sustainable coffee production in the region. The results of this research will be presented in the first part of this study, along with definitions for sustainable production. In the second part, a microeconomic assessment will be presented, to examine to what extent the different investigated schemes are able to help farmers reduce the economic effects of the current coffee crisis. This economic assessment will be followed by an analysis of future market perspectives for sustainably-produced coffee in Latin America.

Market Background

In searching for a solution out of this crisis, a movement has been observed to add value to the product through sustainable production¹. This observation is based on the fact that markets for sustainable products are growing rapidly worldwide and are providing a real opportunity for more actors to participate in this new market niche. For example, according to the ITC (ITC 2003a and 2003b) markets for organic products have been growing steadily in recent years, with an annual growth rate of more than 10%. Currently, the United States is the most important market for organic products, with a total sales volume of approximately \$11-13 billion. The European Union follows, with a sales volume of about \$10-11 billion (see Table 1).

Table 1: Overview of World Markets for Organic Food and Beverages

Markets	Retail Sales 2000 (million US\$)	Retail Sales 2003 (million US\$/€)	% of total in 2003 food sales - ca.	Growth in %/a 2003-2005	Retail Sales 2005 (million US\$/€)
Total Europe	7,000-7,500	10,000-11,000	-	-	-
Germany	2,100-2,200	2,800-3,100	1.7-2.2	5 - 10	-
U.K.	1,100-1,200	1,550-1,750	1.5-2.0	10 - 15	-
Italy	1,000-1,050	1,250-1,400	1.0-1.5	5 - 15	-
France	800-850	1,200-1,300	1.0-1.5	5 - 10	-
Switzerland	450-475	725-775	3.2-3.7	5 - 15	-
U.S.A.	7,500-8,000	11,000-13,000	2.0-2.5	15-20	-
Canada		850-1,000	1.5-2.0	10 - 20	-
Japan	2,000-2,500	350-450	<0.5	-	-
Oceania		75-100	<0.5	-	-
Total	17,500	23,000-25,000	-	-	29,000-31,000

Source: ITC 2002a and 2002b

Specifically, this sustainable and global market expansion applies to the case of coffee. Sustainable coffee production is rapidly growing within the coffee industry; its annual growth rate of between 10% and 20% exceeds the increase recorded for general worldwide consumption, which in the last 20 years has been 1.2% annually

¹ Sustainable products or services are those that have been produced or delivered in an environmentally-friendly, economically-lasting and socially-responsible manner.

(CCI, 2002). It even exceeds “special coffee”² consumption, estimated at between 5% and 10% per year (Specialty Coffee Association, 2000). The main driving factor for this development has been growing consumer awareness of health concerns from agricultural chemical usage and environmental and social production aspects. This awareness has been accompanied by the introduction of several new, value-adding sustainable concepts and schemes, particularly in the case of coffee.

The creation of so many different sustainable production schemes and certifications, however, raises the question, which certification most fulfils the farmers’ needs, helps them to improve their economic situation and alleviates the impacts of the current crisis? Furthermore, the absence of any official statistics about planted acreage and producer prices for the wide range of certifications makes it difficult for most market participants to know the existing supply. This leads to uncertainties and a lack of market transparency, which further incites negative impacts for the producers and consumers by allowing information asymmetries to continue.

Empirical Approach and Methodology for Economic Evaluation

The sustainable products market is characterized by an absence of official trade and market statistics. While there are some estimations available regarding sustainable markets in North America, as well as in Europe, data availability for Latin America is practically not existent. Considering the growing importance of sustainable food markets all around the world and the role of Latin America as a main supplier, the Sustainable Market Intelligence Center (CIMS) has dedicated its research to offer market intelligence in this significant, growing sector.

CIMS began its research by identifying sustainable coffee supplies in all of Latin America; this information is the basis for the data presented in the first sections of this article. The supply study conducted by CIMS is based on information collected directly from producers and their associations, marketers, and exporters of sustainable coffee located in Latin America. For the purpose of the study, the definition of “sustainable” has been limited to Organic, Fairtrade, Rainforest Alliance, and Utz Kapeh certifications. These types of certifications were chosen for their reputation and because their marketing volumes are the most representative worldwide. It bears mentioning, however, that other, more recent types of certifications seeking environmental and social improvements in coffee production exist; Bird friendly® and Coffee Kids are two examples.

By using Internet searches and direct contact with certification agencies, export promotion agencies, associations, cooperatives, and governmental institutions,

² A Special Coffee is defined as follows: the coffee may have no defect in its flavor; the coffee has minimal visible defects (this means that for a 350-gram sample, a maximum of category 2 defects is allowed); in a tasting session, the coffee will receive a minimum of 80 points for cup value.

CIMS compiled lists of producing and processing companies for each country under each certification. CIMS identified some 463 organizations possessing at least one of the four certification types from Brazil to Mexico (CIMS 2003). CIMS estimates that these 463 organizations represent approximately 90% of all coffee exported under the four seals. The main characteristics and requirements for each of the different certification concepts follow later in the article.

The price analysis presented in this study is based on an intensive survey carried out at the beginning of 2004, which included all major sustainable coffee producers and exporters in Latin America (CIMS 2004). CIMS surveyed a total of approximately 100 companies, which represents a majority of total market participants. CIMS encountered some difficulty in acquiring the information since the traders and exporters surveyed considered price and traded-volume data highly confidential in this comparatively small market and feared sharing it would encourage competitive advantages. The data presented is more valuable due to the fact that the prices for sustainable coffee (which is often grouped with specialty coffee) usually are quoted in the following way: market price "C" plus the differential. The "C" represents the current market price in the New York Board of Trade (NYBOT) for standard quality coffee, which serves as a reference price. In case the coffee price changes, the new price can be derived easily by simply adding the differential to the new, quoted price "C" in New York.

The final economic assessment on Costa Rica's sustainable coffee production is based on the work of two master theses carried out at the University of Costa Rica (Araya 2000 and Obando 2000). To guarantee a certain level of representativeness, farms located in different regions of the country were chosen by the authors and in close cooperation with Costa Rica's national coffee association, Icafé. In the case of other Central American countries like El Salvador, Guatemala and Honduras, economic data is based on the research activities of individual national coffee associations, which are the experts for organic coffee production in their respective countries.

Sustainable Production Concepts for Coffee

The following section further explains the different sustainable certification concepts selected in this study to identify the major similarities and differences between them. To facilitate understanding and comparison of the different concepts an overview of the main principles and requirements is added at the end of this chapter in Table 2.

Organic Coffee Production

The primary objective of organic agriculture is to perfect the quality of all aspects of agriculture and the environment, respecting the natural capacity of plants, animals,

and the landscape. Organic agriculture aims to reduce the application of external materials and the use of synthetic chemical fertilizers, pesticides, pharmaceuticals or other products. Instead, it relies on biodiversity to increase agricultural yields and to resist diseases (IFOAM 2004).

Organic practices demand that producers consider their property as an active ecosystem, where techniques such as composting, terrace building, and biological control are required. Organic coffee is produced in soils where prohibited substances (synthetic fertilizers, herbicides, pesticides, growth regulators, DDT, fungicides, etc.) have not been applied for a period of at least three years prior to obtaining certification. In addition, producers acknowledge that they will continue their disuse. Both producers and processors must keep detailed records of the methods and materials used in producing and processing organic food, as well as plans for the practices employed. Organic coffee may be produced in the shade, but it is not an indispensable condition. In addition, both private and public organic standards (through legislation) include a series of social considerations.

To be marketed as organic, an external certification organization inspects the methods and materials used during production and/or processing on an annual basis. The certification agencies must be properly registered and accredited by the government of the country where they operate. The International Federation for Organic Agriculture Movements (IFOAM) is the primary organization supporting the organic movement by representing the worldwide interest in organic agriculture and providing a platform for global exchange and cooperation. From private companies to non-profit organizations and programs sponsored by governments, there are more than one hundred organizations participating in developing organic agriculture worldwide.

Fairtrade Coffee

The concept of “Fairtrade” has existed since the early 1960s. It was founded by a society of importers and non-profit retailers in the wealthy, northern European countries and small-scale producers in developing countries, who, while fighting against low market prices and high dependence on brokers, were seeking a more direct type of trade with the European market. The system of labeling products as Fairtrade began in the Netherlands in 1989; coffee was the first product with that label. That Dutch brand is known as “Max Havelaar,” named after a best-selling book in the 19th Century about coffee plantation workers in Java being exploited by Dutch colonial businessmen (FLO 2004; Fairtrade Coffee 2003).

The Fairtrade Labeling Organization (FLO), created in 1997, is an organization grouping together the seventeen Fairtrade initiatives that operate worldwide. The point of reference for FLO certification is the international Fairtrade standards applicable to more than twelve products, including coffee. When producers fulfill the

minimum requirements, the FLO ensures a “fair” price for their products. The producers, in turn, must invest a part of the price received in economic, environmental, and social development.

To receive FLO certification all producers, merchants, processors, wholesalers and retailers must adhere to the determined standards. There are two types of generic standards: one for small producers, and another for workers on plantations and in factories. The first type applies to small property owners organized into cooperatives or other types of organizations with a democratic and participatory structure. The second applies to organized workers whose employers pay decent salaries, guarantee them the right to join unions, and provide lodging when relevant. The plantations and factories must comply with minimum health, safety, and environmental standards, without using child or forced labor.

Since Fairtrade deals with development, the established norms distinguish between “minimum requirements,” which must be met to obtain Fairtrade certification, and “progress requirements” that encourage producers to constantly improve labor conditions and product quality, foster environmentally-friendly practices and invest in the organization and its associates. Business standards stipulate that merchants must:

- Pay a price to producers that covers the costs of sustainable production and housing
- Pay a premium that producers can invest in development
- Make a partial pre-payment when producers ask for it
- Sign long-term contracts that enable better planning and encourage sustainable production practices

Additionally, some standards apply to specific products and determine minimum prices and quality, as well as processing requirements.

Rainforest Alliance Coffee

A decade ago, the Rainforest Alliance and its partner groups in the Sustainable Agriculture Network (SAN) demonstrated that coffee properties traditionally associated with the forest could be refuge for wildlife. They then held consultations with a number of social and environmental groups, industry and governmental representatives and other interest groups about developing parameters for tropical agriculture. These parameters included procedures for sustainable coffee production, as well as for a number of other crops (Rainforest Alliance 2003). This certification is a comprehensive process that promotes and ensures improvements in agricultural practices to the benefit of local communities, workers on the properties, farmers, consumers and wildlife. The certification standards

cover all aspects of production, including environmental protection, human well-being, and economic vitality.

The Rainforest Alliance certifies coffee properties with environmental and social standards. The certification standards guide farmers and provide auditors with a parameter to use to measure improvements. The properties that comply with the standards receive the Certified by the Rainforest Alliance® seal of approval and may use it to market their agricultural products. This program includes social and environmental standards and is characterized by being administered by a coalition of local groups that understand their culture, ecology, agricultural traditions and governments.

The Rainforest Alliance certification allows certain limited, strictly controlled use of agro-chemicals and focuses on two critical sectors: wildlife conservation and worker well-being. The SAN standards are based on a comprehensive model for managing infestations (MIP) that is internationally recognized. The Rainforest Alliance certification was developed to deal with agriculture in its totality, promoting a realistic and effective means so properties of all sizes can move toward independence from the use of agro-chemicals.

The certification process benefits farmers by increasing efficiency, reducing costly supplies and improving property administration. The agricultural workers also receive benefits since they have a cleaner, safer and more suitable work place where their rights are respected. Certified farmers have better access to specialty buyers, contract stability, favorable credit options, publicity, technical assistance and specialized (premium) markets. The members of the Rainforest Alliance and SAN are not directly involved in negotiations between the farmers and those who purchase their products; however, most farmers are able to use their certification to receive a preferential (higher) price.

Utz Kapeh

The work of Utz Kapeh started in 1999 when some Guatemalan coffee producers, in collaboration with the Dutch roaster “Ahold coffee company,” established a program to guarantee responsibly-grown mainstream coffee. With this program they intended to improve the social, environmental and cultural conditions of Guatemalan coffee producers. After developing this program together, the participants decided to create an independent foundation in order to adapt the program worldwide, independent of the former founders. Due to the high commitment of the Ahold consortium to the EUREPGAP standards, Utz Kapeh’s code of conduct is based on this principle and serves now as the reference protocol for EUREPGAP certified coffee (Utz Kapeh 2004).

Table 2: Principles and Requirements for a Sustainable Production According to the Different Concepts

Organic	Fairtrade	Rainforest Alliance	Utz Kapeh
<p>1. Environmental</p> <ul style="list-style-type: none"> - Compatibility with natural cycles and living systems. - Recognition of the wider social and ecological impact of and within the organic production and processing system. - Maintenance and increase of long-term fertility and biological activity of soils. - To maintain biodiversity and conserve genetic diversity. - Promotion of the responsible use and conservation of water. - The use, as far as possible, of renewable resources and avoid pollution and waste. - To foster local and regional production and distribution. - Utilization of biodegradable and recyclable packaging materials. <p>2. Social and Economic</p> <ul style="list-style-type: none"> - Provision of everyone involved in organic farming and processing with adequate quality of life - Support of the establishment of an entire production, processing and distribution chain which is both socially just and ecologically responsible. - Recognition of the importance of indigenous knowledge and traditional farming systems. 	<p>1. Environmental</p> <ul style="list-style-type: none"> - Environment protection: Producers are expected to protect the natural environment through implementation of an Integrated Crop Management (ICM) system. <p>2. Social</p> <ul style="list-style-type: none"> - Fairtrade adds Development Potential: Fairtrade should make a difference in development for certified producers. - Members need to be Small Producers - Promotion of Democracy, Participation and Transparency. - Abolishment of Discrimination. <p>3. Economic</p> <ul style="list-style-type: none"> - Guarantee of a Fairtrade Premium - The producers must have access to the logistical, administrative and technical means to bring a quality product to the market. <p>- Economic Strengthening of the Organisation</p> <p>4. Standards on Labour Conditions</p> <ul style="list-style-type: none"> - Abolishment of Forced Labour and Child Labour. - Freedom of Association and Collective Bargaining - All employees must work under fair conditions of employment. - Prevention of accidents through applying ILO Convention 155. 	<p>1. Environmental</p> <ul style="list-style-type: none"> - Ecosystem conservation :Farmers promote the conservation and recuperation of ecosystems - Wildlife conservation: Concrete and constant measures are taken to protect biodiversity. - Integrated crop management: Farmers must employ Integrated Pest Management and strictly control the use of any agrochemicals. - Complete, integrated management of wastes - Conservation of water resources: All pollution and contamination must be controlled; waterways must be protected with vegetative barriers. - Soil conservation: Erosion must be controlled, and soil health and fertility should be maintained. <p>2. Social and Economic</p> <ul style="list-style-type: none"> - Fair treatment and good conditions for workers: Agriculture should improve the well-being and standard of living for farmers, workers and families. - Community relations: Farms must be “good neighbours” to nearby communities. - Planning and monitoring: Agriculture activities should be planned, monitored and evaluated, considering economic, social and environmental aspects 	<p>1. Environmental</p> <ul style="list-style-type: none"> - Responsible use and record keeping of applications of agrochemicals like pesticides and fertilizers - Minimization of water pollution, erosion, use of energy and waste <p>2. Social and cultural</p> <ul style="list-style-type: none"> - Workers are paid and protected according to national laws. - Training about safe handling of chemicals in the workers’ own language - Health care for the workers and their families - Education for the children - Clean drinking water for everyone - Decent housing, showers and latrines - Appropriate work clothing <p>3. Economic</p> <ul style="list-style-type: none"> - Business processes are monitored and managed as efficiently and effectively as possible - Employees are schooled and trained properly - Hygiene rules and practices are implemented and respected

Source: IFOAM 2004, FLO 2004; Rainforest Alliance 2004 and Utz Kapeh 2004, shorted and adapted

The main focus of the Utz Kapeh protocol considers the following aspects:

- Social and cultural situations
- Environmental situation
- Managerial situation
- Economic situation

In the social and cultural parts, the protocol mainly addresses the workers' training, education and health and assures that labor conditions are according to national laws. According to the environmental situation, Utz Kapeh cares mainly about the responsible use of agrochemicals and the proper documentation of their use. However, in this aspect there are very few constraints, as long as the use is within the given legal requirements. Additionally, the standards seek to minimize erosion, energy input, soil pollution and waste. Through an extended monitoring system, the protocol aims to improve farm management and, as a result, the economic situation of the farm.

Even more than the other mentioned sustainable production schemes, Utz Kapeh's principle, according to possible price premiums, is to help coffee farmers in a market that keeps the end product at a competitive price for the consumer. The ambitious objective of the Utz Kapeh Foundation is to become the world's leading program for mainstream, certified and sustainable coffee.

Latin American Sustainable Coffee Supply

Development and Current State of Sustainable Coffee Production in Latin America³

Organic certified coffee was already being produced in the early nineties, but only at a level of about 30,000 hectares (ha) over all of Latin America. The first boom of organic coffee production occurred in 1995 and can be interpreted as a consequence of the price depression in the early nineties. Due to the required transition period of three years in which farmers are not allowed to sell their products as organic, the response to this price depression lagged. Since then, organic production has grown at a constant rate to a total area of about 150,000 ha in 2002 (see Figure 2).

In the 2002/03 harvest the world's cultivated area for coffee production was estimated at 10.8 million ha, with some 5.9 million ha in Latin America and the Caribbean which accounted for about 55% of the total cultivated area (FAO 2003). Out of this, the total area with sustainable coffee production in Latin America can be estimated at approximately 244,000 ha, or 4% of the total area cultivated with coffee. Within the sector of sustainably-produced coffee, coffee with organic certification amounts for the largest area (approximately 150,000 ha), followed by Fairtrade (about 63,000 ha) (see Table 3). Nevertheless, it is important to mention that about 45% of the Fairtrade certified area was, at the same time, also certified as organic production; many farmers

³ The following results, if not marked separately, are based on the CIMS research study, CIMS 2003.

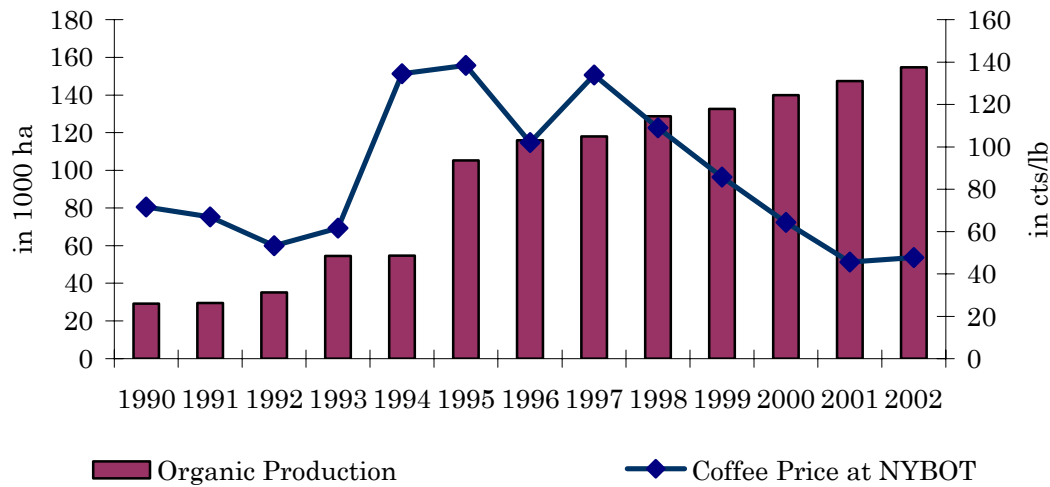


Figure 2: Evolution of Certified Organic Coffee Production Area in Latin America

Source: CIMS 2003 and ICO 2004

apply for several certifications to increase their position in the market. Additionally, the Fairtrade organization pays an added premium for organic coffee.

In comparison to these rather “old” forms of sustainable production, Utz Kapeh coffee gained a considerable share in the sustainable market in a rather short amount of time, and it is expected to continue to grow rapidly, due to its more mainstream orientation. Rainforest Alliance certified coffee accounts in this study only for about 7,500 ha, but rapid further growth is expected, in part due to the very recent commitment of Proctor and Gamble and its launch of it’s a new Rainforest Alliance Certified Signature Roast line (Rainforest Alliance 2003).

With respect to the cultivated area of sustainable coffee, Mexico is the leading country by far with already more than 80,000 ha of organic coffee. It is followed by Peru, which has 33,000 ha of organic certified coffee, but also has more than 12,000 ha of Utz Kapeh certified coffee. On the other hand, Brazil, as the overall dominating country in coffee production, has, in relative terms, one of the smallest areas of sustainable coffee production in Latin America (only about 0.5%). One of the main reasons for this distribution can be seen in natural conditions and infrastructure. While in countries like Mexico and Peru there still exist considerable areas which never have seen any chemical inputs, Brazil is one of the most technically-advanced and efficient producers worldwide. Therefore, costs of transferring existing production to a sustainable one, especially in the case of organic, are much lower in Mexico and Peru than in Brazil.

Although Rainforest Alliance certified coffee began in El Salvador, the country only has approximately 3,000 ha. El Salvador is followed closely by Guatemala, with some 2,600 ha. Despite the fact that Utz Kapeh was founded in Guatemala, currently Peru, with more than 12,000 ha, and Brazil, with about 5,000 ha, are the main countries with certified production.

Table 3: Certified Area of the Different Certification Concepts in Latin America in 2002/2003⁴

Country	Total production (in ha)	Organic (in ha)	Fairtrade (in ha)	Rainforest Alliance (in ha)	Utz Kapeh (in ha)
Bolivia	25,301	4,206	3,800		160
Brazil	2,367,510	6,316			5,333
Colombia	805,000	7,531	6,700		97
Costa Rica	100,000	1,234	1,100	943	1,358
Dominican Republic	133,342	1,273			
Ecuador	299,020	2,321			
El Salvador	160,945	2,193	2,187	2,978	
Guatemala	245,000	6,854	3,121	2,608	1,812
Honduras	215,000	1,823	866		2,046
Mexico	752,485	82,855	30,825	267	
Nicaragua	115,200	4,752	2,602	526	
Panama	23,000			184	
Peru	235,000	33,300	11,968		12,279
Total of selected	5,476,803	154,658	63,169	7,506	23,085

Source: CIMS 2003, FAO 2003 and Utz Kapeh 2003; adapted
Trade volumes of sustainable coffee

Latin America is one of the primary sustainable coffee producing and exporting regions in the world, for both specialty and generic sustainable coffee. For the 2002/03 harvest, its exports reached approximately 90,000 tons of green coffee, equivalent to 2.5% of the total coffee exports from Latin America and 1.3% of total coffee exports worldwide. Certified organic coffee leads the share in the sustainable coffee segment with 50% of exports. Mexico is the leading country by sales volume for sustainable--and especially organic--coffee with about 17,000 tons. Fairtrade coffee occupies second place in exports, with 13%. Peru, Mexico, and Guatemala are the primary exporters of Fairtrade coffee. In 2002 Mexico benefited the most from the Fairtrade program, exporting a little more than 7,000 tons; however Colombia and Guatemala also export high volumes of Fairtrade coffee (see Table 4). Faced with the severe coffee crisis, there is a trend for producers to obtain more than one type of certification to ensure better market access and higher prices. Thus, coffee with both the Organic and Fairtrade seals occupies third place among the exports (10%).

Rainforest Alliance coffee is located in fourth place in the sustainable coffee export table, with a 6% share. Since this coffee takes into consideration both environmental and social issues, its producers usually do not associate with other certification programs. The exports are dominated by El Salvador, with approximately 2,700 tons in 2002, and Guatemala, with some 1,600 tons.

The trade volumes of Utz Kapeh certified coffee from Latin America is estimated at 24,000 tons in 2002, equivalent to 20% of the total sustainable trade volume. Around half of this comes from Peru with approximately 8,500 tons, and a fourth of it from Brazil, with nearly 4,000 tons.

⁴ Only includes Latin-American countries in which a sustainable production could be identified

A final comment should be dedicated to the local organic coffee market in Latin America, which is very small. In the producing countries, the focus is on exports for payment received through the price differential and the growth in volume for this type of coffee. Even so, in countries such as Brazil and Mexico there exists a local organic market in full development, where companies are making a great effort to advertise and raise consumer consciousness. These countries have a large number of companies that roast and grind coffee locally. Most companies have penetrated this niche due to pressure by consumers, who are demanding more-sustainable products. Other countries where certified organic coffee is sold are Costa Rica and Colombia.

Table 4: Export Quantities of Sustainable Coffee from Latin America in 2002

Country	Total Production in t/y	Export in Tons Per Year					
		Total Sustainable	Organic	Fair-Trade (Organic)	Fair-Trade (Others)	Rainforest Alliance	Utz Kapeh ⁵
Bolivia	10800	2164	876	1073	103		112
Brazil	2835900	8490	4200	0	6		4284
Colombia	675000	5825	2857	275	2617		76
Costa Rica	127740	4914	946	89	1566	558	1755
Dominican Republic	39000	441	441		86		
Ecuador	52560	331	312	19	0		
El Salvador	80520	3419	276	227	245	2671	
Guatemala	188580	9568	2762	1202	2127	1636	1841
Haiti	25500	143		13	143		
Honduras	150000	3232	1449	61	384		1338
Mexico	240000	24450	17401	4140	2794	115	
Nicaragua	49020	3736	2313	538	655	230	
Panama	9000	173	0			173	
Peru	165000	21479	10605	1593	686		8595
Venezuela	64200	12	0	0	12		
Total	4751820	88465	44439	9229	11425	5383	18001

Source: CIMS 2003 and own investigations

Microeconomic Assessment of the Different Sustainability Concepts

All of the above-mentioned concepts for sustainable production serve the same objective: to seek more environmentally-friendly and economically- and socially-equitable production to avoid external costs. However, their approaches differ significantly. For example, Fairtrade--but also organic--production schemes explicitly want the final consumer participating in the cost of avoiding external effects; therefore, they ask for a price premium. Currently, Rainforest Alliance does not promise any price premium to the producer. Nevertheless, most are able to receive higher prices in comparison to coffee without any certification. Utz Kapeh has the strongest appeal to the "polluter pays" principle, with a main objective to offer sustainable mainstream coffee at a competitive price, referring to non-certified coffee. But to assess the entire economic benefit of a

⁵ Estimated for 2003.

sustainable coffee production for the producer, the impacts on production costs must be regarded alongside price premiums.

Price Premiums for Sustainable Coffee

To get a deeper understanding of how certification influences producer price, CIMS (2004) carried out a detail price analysis for sustainable coffee. The study determined price premiums for different sustainable certifications in various Latin American countries. A major finding of this study has been that, for coffee, certification alone does not generate price differentials (with the notable exception of organic coffee sold in Europe). The price is always a product of both quality and certification, where quality can be seen as a more basic prerequisite for a price premium and the certification as a tool to differentiate and to underline the outstanding performance of the product.

According to the study, the highest price premiums of up to 150 US cents/lb (on FOB level) have been paid for organic certified coffee, followed by price premiums for Fairtrade certified coffee at 106 US cents/lb (see Table 5). Maximum price premiums for Rainforest Alliance coffee have been much lower, at approximately 25 US cents/lb. Looking at average price premiums, the situation is somewhat different. In spite of the high maximum price premium for organic certified coffee, the average identified premium is only about 20 US cents/lb, only slightly higher than the premium for Rainforest Alliance (around 15 US cents/lb). This was surprising since the restrictions on the production process for Rainforest Alliance certification are less limiting (chemical inputs are not completely prohibited) and, in general, yield and quality maintenance is easier. The lowest price premiums have been observed for coffee certified by Utz Kapeh, with an average of 7 cents/lb. The difference between the maximum and minimum price premiums--approximately 5 cents/lb--is comparatively small.

Table 5: Price Premiums for Green Coffee of Different Certifications, FOB (US cents/lb)

Premium	Organic	Fairtrade	Rainforest Alliance	Utz Kapeh
Maximum	150	106	25	10
Average	15-25	62	15	7
Minimum	5	56	8	5

Source: CIMS, 2004

As mentioned before, quality is an elementary precondition for price premiums; and farmers do not always achieve the required quality. In fact, many organic farmers rarely receive price premiums; and some do not receive any. The reasons for this are manifold; however, two are dominating. The first reason is that in some cases former, practically-abandoned farms have been simply certified and then labeled organic without major changes and adaptations in the production processes. The second reason is more general in nature in that under organic management farmers face a harder challenge to yield high qualities.

In the case of Fairtrade, the comparatively high minimum price premium is inherent to the Fairtrade concept; farmers, once they find a buyer, always get a minimum price.

Since prices in 2002 and 2003 were relatively low, the price premium was comparatively high, but will be reduced down to 5 cents/lb for conventional and 15 cents/lb for organic coffee in the case in which coffee prices pass the Fairtrade minimum price. The mentioned minimum price premium of 56 US cents/lb in Table 5 results from the difference between the regular market price of around 80 US cents/lb and the Fairtrade minimum price for Arabica coffee of around 140 cents/lb (see Table 6).

Table 6: FOB Prices for Fairtrade Certified Coffee, 2003 (US cents / lb)

Type of coffee	Regular		Certified Organic	
	Central America, México, Africa, Asia	South America, Caribbean	Central America, México, Africa, Asia	South America, Caribbean
Arábica washed	126	124	141	139
Arábica non washed	120	120	135	135
Robusta washed	110	110	125	125
Robusta non washed	106	106	121	121

Source: FLO, 2004

The price premiums mentioned in Table 5 for certified organic coffee, however, are not identical all over Latin America. Organic certified coffee is the most widespread certification in Latin America, and for that reason, a comparison has been carried out to identify the different price premiums in several countries for organic certified coffee (see Figure 3).

Several price premiums are especially high, with Brazil, Colombia, Costa Rica and Guatemala having averages of more than 40 cents/lb. In Costa Rica, the average price premium is over 60 cents/lb. While countries like Colombia, Costa Rica and Guatemala are well-known for producing high quality coffee and consequently receive a higher price for their coffee, Brazil--known as a low coffee price country--also receives an above-average premium for organic coffee. An explanation for this lies in the fact that Brazil is one of the few Latin American countries that also has an important local market for its organic coffee. In most other Latin American countries organic coffee is designated for export.

At the low end are countries like Bolivia, Ecuador and Peru, where farmers receive a price premium for their organic coffee of less than 20 cents/lb. In Bolivia and Peru the average is even less than 10 cents/lb.

However, considering price premiums alone does not answer the question properly of if sustainable certification helps producers reach their final objective of ensuring a better economic situation. The conclusion that a higher price premium automatically means an improved economic situation is not necessarily true since sustainable management

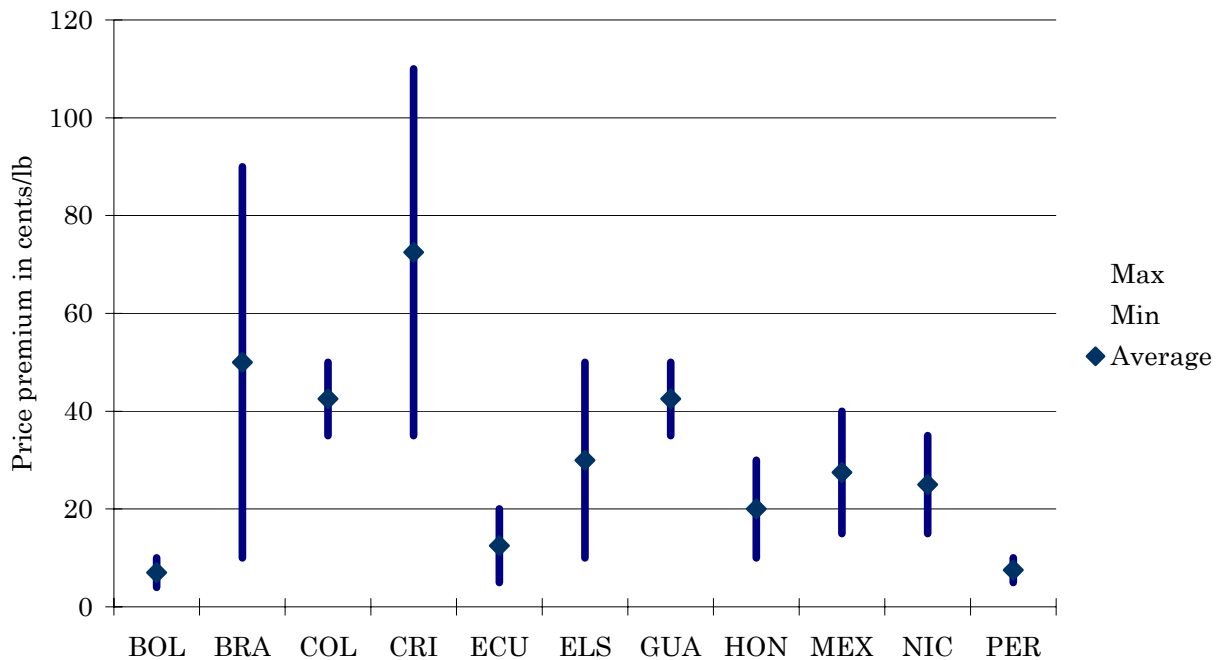


Figure 3: Price Premiums for Organic Certified Coffee in Latin America, Harvest 2022/03

Source: CIMS 2004

influences production processes, as well as yields. In seeking to answer the main question, information about organic certified coffee production costs has been collected, evaluated and compared to conventional farming systems. An appropriate assessment of whether paid price premiums are leading to an economic improvement can be conducted once sustainable and conventional farming system production costs are known.

Costs Comparison between Organic Certified and Conventional Coffee Farms in Costa Rica

Reliable microeconomic data for sustainable coffee farm management is scarce; nevertheless, some individual studies have been identified. Due to the different origins, it was necessary to harmonize economic methodology, estimating missing cost items and converting them into US dollars. In the first part of this cost analysis, costs of organic farms are compared to conventional farming systems with respect to net income and cost structure, and in the second part, organic farming systems from different Central American countries are assessed and compared.

In 2000 two masters theses were carried out in Costa Rica to identify organic and conventional farms' costs. To conduct this investigation in the case of conventional farms, data from a real, existing farm--"Farm 4"--and the standard farm model of Costa Rica's national coffee institute--"Farm 5"-- have been used (see Table 7). An important point to mention in this case is that organic coffee farming does not signify just the absence of

chemical inputs, rather it means further farming system changes and adaptations are required.

The three farms presented in the case show very different records according to sales revenue, starting at \$1,300 /ha and going up to more than \$3,000/ha. These differences are due to changes in yield of about 250%. The same costs for harvesting and grain transport per yielded pound were applied. Many of these effects were not just site effects, but rather management-related effects, as seen in the comparison between “Farm 2” (Tilarán 1) and “Farm 3” (Tilarán 2), which are located at the same site, yet show yield differences. These yield differences coincide with production cost differences. “Farm 3” has, by far, the highest total cost per hectare, especially when considering input costs. Despite the high total costs, “Farm 3” is the only organic farm in this comparison that is able to reach a positive net income, with close to \$800/ha. “Farm 1” and “Farm 2”, however, are not able to cover total costs and have a loss of around \$200/ha.

Comparing these results with conventional farms in Costa Rica shows that sales revenues are about the same on organic and conventional farms. While the actual prices are about 70 cents/lb lower for conventional coffee, yields can be significantly higher (reaching in very well-managed conventional farms 2,250 kg/ha). Even if sales revenues in conventional farms are not significantly different, due to lower total costs, all conventional farms in this case have a positive net income. “Farm 4” is especially well-managed. Despite the fact that this farm receives the lowest prices for its coffee and faces higher production costs than conventional “Farm 5,” net profit is notably higher due to the exceptional yield. “Farm 4” did manage to reach a net income of about \$400/ha, but that is still only about half of the net income of the best-managed organic farm.

Table 7: Production Costs of Organic and Conventional Farms in Costa Rica

<i>Farm</i>		1	2	3	4	5
<i>Place</i>		Aserri	Tilarán 1	Tilarán 2	Montes de Oro	ICafé ⁶
<i>Farm Management</i>	unit	Organic	Organic	Organic	Conventional	Conventional
Yield	kg/ha	450	644	1125	2250	1530
Gross price	\$/lb	1.40	1.33	1.33	0.60	0.66
- Harvesting	\$/lb	0.19	0.19	0.19	0.19	0.19
- Transportation	\$/lb	0.04	0.04	0.04	0.04	0.04
Net price	\$/lb	1.18	1.10	1.10	0.37	0.43
Sales revenues	\$/ha	1312	1752	3064	2077	1628
Variable costs	\$/ha	840	1352	1444	1101	992
Labor costs	\$/ha	342	752	615	441	461
Input in \$/ha	\$/ha	498	600	829	660	531
Fixed costs in \$/ha	\$/ha	664	618	842	587	623
Total costs in \$/ha	\$/ha	1504	1970	2286	1688	1615
Net income	\$/ha	-192	-218	778	389	13
Yield of equilibrium	kg/ha	648	864	981		1881

Source: Araya 2000, Obando 2000, adapted.

⁶ Data based on a model farm.

A final investigation done with this data was to find out the yield organic farms would need to reach to have the same income as the best-managed conventional farm. Due to the high price premiums received in these farms, a yield of about 900 kg/ha would be sufficient to achieve same or higher net incomes. “Farm 3,” with 1,125 kg/ha, shows that even more is possible.

Furthermore, a closer look has been taken at cost structures. As mentioned, organic farming does not necessarily lead to higher production costs, not only per unit of yield but also per hectare, than conventional coffee production. However, special attention was given to identify the origin of the higher costs presented in this case in organic production. Distributing the costs according to the different items in the production process—such as establishment, fertilizing, plant control, maintenance and overhead—shows in which part of the production process cost differences occur (see Figure 4). In general, most of the cost items tend to be similar, like establishment, plant control and maintenance, however, with the difference that in organic farms labor input per item is usually higher due to the replacement of chemical inputs by labor.

As shown in Figure 4 only the cost of fertilizing and the overhead costs in organic coffee farms show a more important difference. In the case of fertilizing, the investigated organic farms spent on average \$730, \$200/ha more than conventional ones. However, only part of these costs is for the fertilizer itself; the rest is needed to prepare the organic fertilizer, transport it and distribute in the field. Since fertilizer has a higher volume

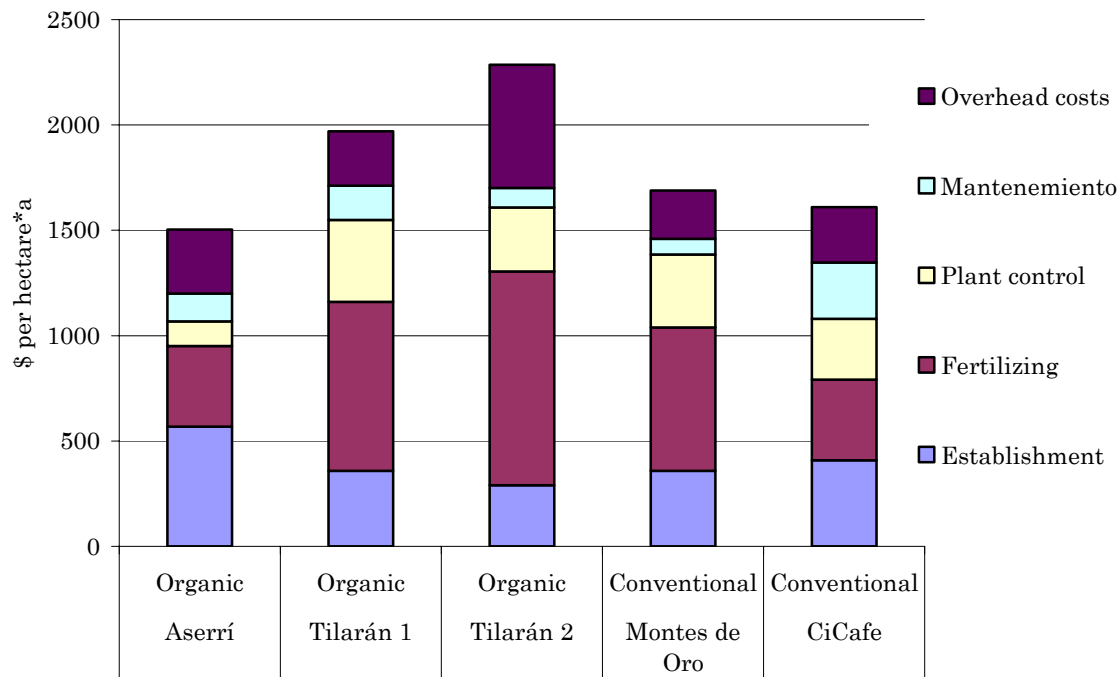


Figure 4: Cost Structure in Organic and Conventional Coffee Production in Costa Rica

Source: Araya 2000, Obando 2000, adapted.

(compost instead of chemical fertilizers), fertilizing is very time consuming, and therefore, expensive. The overhead costs are, in general, higher in certified farms than in conventional ones, on one hand simply due to additional certifying costs, and on the other hand, due to necessary investments in farm installations to fulfill certification requirements.

Comparison of Organic Farm Management Systems in Central America

To put the results for Costa Rica on a broader spectrum, organic farming costs also have been investigated in Guatemala, Honduras and El Salvador. Studies in these countries show that yield expectations are similar to Costa Rica (close to 900 kg/ha), with the exception of El Salvador, which has an average yield expectation of only about 643 kg/ha (see Table 8). Despite the similar yield expectations, the costs vary notably. Costa Rica has by far the highest total production costs (\$2,700/ha), followed by Guatemala with total costs of still more than \$2,000/ha. Much lower total production costs can be observed in Honduras and El Salvador with costs of even less than \$1,500/ha. An important reason for this is the different labor costs per country and the lower general price level in these countries. Costa Rica, as the most developed Central American country, has the highest price level for goods and suffers costs disadvantages in comparison to its neighbors. Therefore, an organic coffee farmer needs a higher price for his organic coffee in Costa Rica than in other Central American countries to cover production costs and living expenses. In Costa Rica a farmer needs a sales price of at least \$1.23/lb. In Guatemala the necessary price is only around \$1/ha and slightly less in El Salvador, with 0.91 cents/lb. An organic coffee farmer in Honduras only needs a minimum of \$0.66/lb to cover total production costs. Comparing these required minimum prices with prices obtained in 2002/03 shows that, in general, farmers have been able at least to cover their costs, with the exception of El Salvador. In El Salvador the received prices were about 10 cents/lb lower than the required minimum price.

The Fairtrade organization has fixed minimum prices constantly in all of Central America. The aim of Fairtrade prices is to ensure a sufficient farm income and enable farmers to provide further social services. At first glance, it can be noted that the Fairtrade prices are well above current market price for organic coffee in all Central American countries except Costa Rica, where both prices are practically identical. Furthermore, a theoretical required price per pound has been calculated so that a farmer with a medium-size farm (10 ha) can reach the national average GNP. Results in Table 8 show that in Honduras farmers receiving Fairtrade granted prices can perfectly participate in the national economy. In Guatemala there is already a significant gap of 40 cents/lb between Fairtrade prices and the needed price to reach the national average GNP. The biggest differences exist in El Salvador and in Costa Rica. In Costa Rica the Fairtrade price only allows farmers to cover production costs. In El Salvador the Fairtrade price is far above the production costs; however, due to having the most inefficient farm management systems in this comparison even Fairtrade prices are not sufficient to guarantee medium-sized farms a national average income.

Table 8: Economic Aspects of Organic Coffee Farming in Central America

<i>Country</i>	Costa Rica	Guatemala	Honduras	El Salvador
<i>Farm management</i>	Organic	Organic	Organic	Organic
Yield (kg/ha)	883	871	900	643
Costs for (in \$/ha)				
Harvesting	615	491	251	229
Establishment	317	254	147	170
Fertilizing	816	640	510	243
Plant control	315	115	76	285
Maintenance	157	284	48	116
Overhead costs	467	374	442	400
Total costs	2687	2157	1474	1443
Price of equilibrium (cents/lb)	1.23	1.00	0.66	0.91
In average received prices in 2002/03 ⁷	1.40	1.10	0.80	0.80
Fairtrade minimum price for organic coffee	1.41	1.41	1.41	1.41
Price for reaching average GNP	3.09	1.82	1.08	2.23

Source: Araya 2000, Obando 2000; Damiani 2002a; Hernández 2000; Pro Café 2003, adapted.

The conclusion can be drawn that, in general, Fairtrade ensures a sales price well above market prices, and as a result, offers an interesting alternative to “only” organic certified production. A severe disadvantage, however, is that there is no guarantee that the whole certified area will be sold under these conditions. For example, in 2002 only about 21,000 tons out of a total certified production of 63,000 tons could be sold under Fairtrade conditions. This leads to an uncertainty in farm management and could be frustrating for the farmer, who is expecting a significantly higher income.

Economic Impact Estimation for Rainforest Alliance and Utz Kapeh Certifications

The previous section has shown that organic and Fairtrade certifications receive the highest price premiums; however, the direct conclusion that an organic certification is the most convenient one—from the farmer’s point of view—cannot be justified. Higher costs, more demanding farm management and likely yield losses characteristics of organic production can lead to losses that can exceed the additional price premium income. An interesting option for these farms, however, could be the Rainforest Alliance and the Utz Kapeh certifications, which can be seen as a standard for Good Agricultural Practices and have less-strict regulations than organic.

To date, no detailed economic assessments for Rainforest Alliance and Utz Kapeh certified farms have been done. However, in a rough estimation, the additional price premium gains to cover additional costs could be estimated based on the data for the conventional farms previously presented (see Table 9).

⁷ Organic price is calculated as the sum of: average New York market price “C” + national differential due quality performance of the country + organic differential reached per country, as shown in Chart 3.

Table 9: Economic impacts of Utz Kapeh and Rainforest Alliance certification

<i>Farm Place</i>		Montes de Oro	Montes de Oro	Montes de Oro	ICafé	ICafé	ICafé
<i>Farm Management</i>	unit	Conventional	Utz Kapeh	Rainforest Alliance	Conventional	Utz Kapeh	Rainforest Alliance
Yield	kg/ha	2250	2250	2250	1530	1530	1530
Gross price	\$/lb	0.37	0.37	0.37	0.43	0.43	0.43
+ price premium	\$/lb	0.00	0.07	0.15	0.00	0.07	0.15
Net price	\$/lb	0.37	0.45	0.52	0.43	0.50	0.58
Increase in sales revenues	\$/ha		429	819		266	568
Total sales revenues	\$/ha	2077	2506	2896	1628	1894	2196
Conventional total costs	\$/ha	1688	1688	1688	1615	1615	1615
Potential costs due to certification ⁸	\$/ha		150	150		150	150
Estimated Net Margin	\$/ha	389	668	1058	13	129	431

Source: Obando 2000, CIMS 2004, adapted.

However, similar to the organic certification, higher overhead costs are inevitable in the case of Utz Kapeh and Rainforest Alliance certifications. Additionally, the costs of Rainforest Alliance certification are even higher than for Utz Kapeh because of the more-demanding regulations and obligations. For example, the Rainforest Alliance certification definitely requires other tree species on the coffee plantation, stronger soil conservation management and a more limited use of chemical inputs, while Utz Kapeh is much less specific in these areas. On the other hand and unlike the others, Utz Kapeh certification requires additional and intensive documentation.

Considering these aspects, one can assume that additional overhead costs for Rainforest Alliance and Utz Kapeh could be similar to organic certification, which have been ca. \$150/ha higher. In the case of both certifications, a net profit can be observed. Even assuming that Rainforest Alliance overhead costs are twice those of organic, net profits are still likely in both model cases (Montes de Oro y ICafé).

Other Comparisons between the Four Different Certification Concepts

In order to make a final decision on which of the presented certification concepts fits best for a specific farm, considering aspects beyond the production processes is important. For example, marketing and publicity activities should be examined. While organic and Fairtrade have a strong orientation toward the final client--Fairtrade even tries to avoid intermediaries--Rainforest Alliance and Utz Kapeh work more on the business-to-business level. While marketing promotion for the final client intends to differentiate the product for the consumer and fosters higher prices for smaller quantities, promotion on the business level tries to facilitate the trade of large quantities of coffee under favorable conditions. Therefore, Rainforest Alliance and Utz Kapeh can apply to estate coffee farms and not only to small producers. In Table 10 a more general evaluation is done to emphasize various aspects affected by each certification.

⁸ As observed in organic farms

Table 10: Impact Evaluation of the Different Sustainable Concepts

	Conventional	Organic	Fairtrade	Rainforest Alliance	Utz Kapeh
Production Process	-	+	-	0	-
Environmental Aspects	-	+	-	+	0
Social Aspects	-	0	+	+	+
Economic Aspects	-	+	+	0	0
Price Premiums	-	+	+	0	-
Credit Accessibility	-	0	+	0	0
Marketing B2B	-	-	-	+	+
Marketing to final client	-	+	+	0	-

+ = high impact through certification; 0 = medium impact through certification; - low impact through certification

Source: Own evaluations based on CIMS research

Another important point to the microeconomic evaluation is the accessibility that coffee farmers have to credit. This point is especially important during periods of low prices, for example during the coffee crisis, since farmers in rural areas generally suffer from a lack of credit access. Although the certifications state that they are facilitating and supporting access to financing, due to the current economic crisis, many farmers, in fact, find it difficult to obtain credit to cover the costs of switching to organic production.

On important point that surfaced during the research is that independent of the certification type, yielded prices depended strongly on quality; some organic coffee has not been sold due to its low quality. This indicates that production certification cannot solve farm management problems. Better prices for certified products can only be reached when environmental and social improvements are accompanied by quality enhancement.

Future Perspectives of the Sustainable Coffee Production

It is estimated that in the upcoming years there will be a surplus supply of organic coffee on the market. More than 150,000 hectares (370,500 acres) currently hold certification, and Mexico alone possesses more than 40,000 hectares (98,800 acres) in transition (CIMS 2003). It is very unlikely that international consumption of organic coffee will grow at the same rate as the supply is increasing. Mexico, Peru, Brazil, and Guatemala are the primary producers of organic coffee, but it is expected that Brazil will position itself as the second largest producing and exporting country in the medium term (CIMS 2003). The surplus supply of organic coffee is beginning to be felt. A large number of certified organic producers in diverse countries have been affected by the difficult financial situations, are compelled to seek other alternatives and are even abandoning certification.

The supply of Fairtrade coffee is not expected to grow during the upcoming years. Furthermore, the current surplus production in Latin America alone that is not able to be marketed under the FLO seal (close to 40,000 metric tons) could cover any possible future

increases in demand. Despite this situation, the advantage for anyone who is able to export with the FLO seal lies in the fixed price received for the coffee which exceeds US \$1.24/lb.

The Rainforest Alliance initiated a strong coffee promotion campaign that has resulted in an increase in demand. Currently El Salvador and Guatemala are the primary producing countries, but it is expected that there will be an aggressive future certification campaign in South America and in Brazil, as well as ongoing growth in the supply of coffee in Central America. In addition, the Rainforest Alliance standards meet up to 80% of the requirements established by the EUREPGAP Standard, thus facilitating certification and entrance into the European market. However, Rainforest Alliance coffee probably will compete with Utz Kapeh coffee. The latter could benefit significantly from the growing importance and demand for traceability and harmlessness of food, since these factors have been the driving force for this certification.

Conclusions and Discussion

The above-mentioned certification processes have brought several benefits to the region. Sustainable coffee has contributed to Latin American producers being better able to face the current crisis in the industry, primarily by allowing them to receive better prices for their coffee. Particularly, sustainable production has provided producers with an entrepreneurial opportunity to differentiate their products in a very competitive market. However, certification is no substitute for farm management quality.

Current existing sustainable concepts seem, at first glance, to be competing; nevertheless, they differ significantly in their approaches to encourage sustainable coffee production. Fairtrade, and to a lesser extent organic certifications, apply more to small farmers since they offer reasonable price premiums and are highly-demanding according to their environmental and social aspects. On the other hand, Rainforest Alliance, and to an even greater extent Utz Kapeh, are directed more toward larger-scale coffee production. Another importance difference is where the product will be marketed and sold. While organic certified coffee has a similar market potential in North America and in Europe, nearly two-thirds of Fairtrade coffee is going to Europe. Fairtrade coffee also faces strong growth in the USA currently. Rainforest Alliance certified is mainly sold to the USA; and Utz Kapeh, as a reference standard for EUREPGAP, is mainly directed to Europe.

Despite the publicity of sustainable production and products, these markets are still comparatively small, and although demand for them has grown during the last several years, the international market would not be able to absorb a strong upswing in supply in the short term. Competition in this field is increasingly stronger, so producers should concentrate on improving quality and seeking other operations with greater value added.

That being said, sustainable coffee production is an interesting opportunity for coffee farmers in the region to differentiate their products, increase their competitiveness and explore new market prospects. However, indispensable prerequisites for a successful participation in the sustainable coffee markets are advanced farm management and the

production of high quality coffee. Only in this case coffee farmers in Latin America will be able to face increasing competition and to position themselves successfully in the growing markets for sustainable coffee.

References

- Araya, F. 2000: Costos para la producción de café bajo la tecnología orgánica. Master thesis. Escuela de Economía Agrícola de la Universidad de Costa Rica. San José, Costa Rica.
- CCI (Centro de Comercio Internacional) 2002: Coffee: An Exporter's Guide. UNCTAD/WTO. Geneva, Switzerland.
- CIMS (Centro de Inteligencia sobre Mercados Sostenibles) 2003: An analysis of the Latin American supply of sustainable coffee. www.cims-la.com. Alajuela, Costa Rica.
- CIMS (Centro de Inteligencia sobre Mercados Sostenibles) 2004: Prices of sustainable coffee from Latin America. Alajuela, Costa Rica.
- Damiani, O. 2002a: Organic agriculture in Guatemala: A study of coffee producer association in the Cuchumatanes Highlands. International Fund for Agricultural Development. Rome, Italy.
- Damiani, O. 2002b: Small Farmers and Organic Agriculture: Lessons learned from Latin America and the Caribbean. International Fund for Agricultural Development. Rome, Italy.
- PRO CAFÉ 2003: El café orgánico, una alternativa para diferenciar el café de El Salvador. Presentation of the "Fundación salvadoreña para investigaciones del café". 14.05.03. San Salvador, El Salvador.
- FAO (Food and Agriculture Organization of the United Nations) 2003: FAOSTAT Agriculture data. <http://apps.fao.org/page/collections?subset=agriculture>, October 2003. Rom, Italy.
- Fairtrade 2003: <http://www.globalexchange.org/campaigns/fairtrade/coffee/>. October 2003. San Francisco, USA.
- FLO (Fairtrade Labeling Organization) 2004. Fairtrade Standards for Coffee. Version: June 2004. <http://www.fairtrade.net/pdf/sp/english/Coffee%20SP%20versionJune04.pdf>. September 2004, Bonn, Germany.
- Hernández, H. 2000: Costos de producción de café orgánico. Central de Cooperativas Cafetaleras de Honduras.

- ICO (International Coffee Organization) 2004: Coffee prices.
<http://www.ico.org/frameset/priset.htm>, January 2004. London, United Kingdom.
- IFOAM (International Federation of Organic Agriculture Movement) 2004: IFOAM Basic Standards for Organic Production and Processing.
<http://www.ifoam.org/standard/norms/ibs.pdf>; September 2004; Nuernberg, Germany.
- ITC (International Trade Center) 2002a: Overview World Markets for Organic Food and Beverages (estimates), <http://www.intracen.org/mds/sectors/organic/welcome.htm>, May 2003, Geneva, Switzerland.
- ITC (International Trade Center) 2002b: Overview World Markets for Organic Food and Beverages (forecast) <http://www.intracen.org/mds/sectors/organic/welcome.htm>, October 2003, Geneva, Switzerland.
- Lindsay, B. 2003: Grounds for Complaint? Understanding the “coffee crisis”. Cato Institute’s Center for Trade Policy Studies, Washington DC, USA.
- Obando, L.-D. 2000: Análisis de rentabilidad de experiencias productivas de café orgánico en Costa Rica, para tres pisos agroecológicos. Master thesis. Escuela de Economía Agrícola de la Universidad de Costa Rica. San José, Costa Rica.
- Rainforest Alliance 2003: Proctor and Gamble launched Rainforest Alliance coffee.
<http://www.rainforestalliance.com/marketplace/eco-ok/coffee-online.html>.
September 2003. New York, USA.
- Rainforest Alliance 2004: Sustainable Agriculture - Social and Environmental Criteria for Rainforest Alliance Agricultural Certification.
<http://www.rainforest-alliance.org/programs/agriculture/certified-crops/nine-principles.html>. September 2004. New York, USA.
- Specialty Coffee Association 2000: Estimates (T.Lingle). Annual Coffee Report 1998. Cited by Giovanucci, D. 2001. Sustainable Coffee Survey of the North American Specialty Coffee Industry. Conducted for: The Summit Foundation, The Nature Conservancy, North American Commission for Environmental Cooperation, Specialty Coffee Association of America, World Bank. Long Beach, California, USA.
- Utz Kapeh 2003: <http://www.utzkapeh.org/Utzkapeh/ukwebsite.nsf/portal?Openframeset>.
Oktober 2003. Delft, The Netherlands.
- Utz Kapeh 2004:
<http://www.utzkapeh.org/utzkapeh/ukenglishwebsite.nsf/home/index.html>.
September 2004. Delft, The Netherlands.