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### **Innovations towards product differentiation – farmers associations’ strategies to integrate into specialty coffee value chains.**

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#### **Introduction**

Volatility and decline of commodity prices cause insecurity of livelihoods of farmers in rural areas of developing countries, which are depending on exports of primary goods. This is the case for coffee, the worldwide second most valuable commodity after petroleum, heavily affected by repeated price slumps. As a consequence farmers are forced to abandon their plantations, withdraw children from schooling and migrate into urban centres or abroad (Oxfam 2002: 9, Lewin et al et al. 2004: 12, Clay 2004). Product or process differentiations are strategies to break out of the commodity treadmill. There is a tendency towards an increasing differentiation within the coffee sector: while the so-called sustainable coffees comply with environmental and social standards, the specialty or gourmet coffees are distinguished by good taste and a unique origin, demanding high organoleptic quality attributes. The specialty coffee industry claims high annual growth rates and expects further expansion<sup>1</sup>. However, the change from a volume oriented production model towards a model, which rewards good taste by higher prices needs significant changes and innovations.

This paper focuses on high quality differentiation of coffee production. Based on case studies in Colombia and Ecuador, it analyses the following key questions: (1) Which socio-organizational and technical changes at farm level as well as organizational levels are necessary in order to integrate into specialty coffee value chains? (2) Which are the necessary capacities and skills required by farmers and their leaders? (3) Is specialty coffee production compensated by higher price premiums?

#### **Methods**

The paper is based on four case studies of Colombian and Ecuadorian farmers’ associations, which are on their way of achieving and maintaining a position within specialty coffee value chains. Research was realized within the “Diversification Agriculture Project Alliance” of the International Centre of Tropical Agriculture (CIAT), financed by the German Federal Ministry for Economic Cooperation and Development (BMZ). Qualitative, semi-structured interviews with the associations’ leaders and members as well as with other stakeholders of the value chains have been conducted by the authors between 2005 and 2006. In addition,

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<sup>1</sup> The national coffee association of the US estimates a yearly growth rate of the specialty coffee market of 30% since 2002. The Specialty Coffee Association (SCAA) and the International Coffee Organization (ICO) expect further expansion as the demand for high quality coffees is still unsatisfied. (Lewin et al. 2004: 100)

existing documents and data have been analyzed and – when possible – a reflection process through group discussions and participatory workshops was facilitated. The results of the research will conclude in a doctoral thesis of both authors.

It must be stressed, that it was neither the attempt of this research to compare the selected case studies nor to produce generalized statements, but rather to generate new hypothesis and models for further discussion (Mayring 2002: 9-26; Flick, Kardorff von et al. 2005).

### Presentation of case studies

The key characteristics of the four farmers' associations studied are presented in table 1. All associations are located in tropical highlands at an altitude between 600 and 1,900 msl. While the three Colombian associations are 1<sup>st</sup> level associations with up to 200 members, the Ecuadorian one is an umbrella association, integrating four 1<sup>st</sup> level associations with totally more than 1000 members. Productivity rates are highest in the non-organic associations, while the organic certified associations show lower productivity rates with a high degree of variation. All associations are in various differentiation processes and have achieved different certifications or the certification process is still under progress. A major difference is the focus on markets: while the Colombian associations focus on high quality, using the certification schemes as an additional criteria of differentiation, most of the volume of the Ecuadorian association goes through certified market channels.

Key characteristics	San Roque	Asprotimaná	Orgánica	Fapecafés
Location	South-eastern highlands of Colombia, Dep. Huila	South-eastern highlands of Colombia, Dep. Huila	South-eastern highlands of Colombia, Dep. Cauca	Southern highlands of Ecuador, Dep. Loja, El Oro, Zamora-Chinchi
Altitude [MSL]	1,400 – 1,800	1,300 – 1,900	1,500 – 1,800	600 – 1,800
Organisational structure	Association, 1 <sup>st</sup> level	Association, 1 <sup>st</sup> level	Association, 1 <sup>st</sup> level	Regional federation, 2 <sup>nd</sup> level
Members	200 (decreasing)	70 (increasing)	127 (decreasing)	1.000 (increasing)
Estimated productivity rate [to/ha]	1.4 – 1.7	1.4 – 1.7	0.5 – 0.8	~ 0.26 – 0.92
Certifications	Fairtrade, Rainforest*	Rainforest*	Organic	Fairtrade, Organic
Markets	conventional, Fairtrade, high quality	high quality	organic, high quality	conventional, organic Fairtrade, high quality**

\* Certification process in progress. \*\* Only small part of volume.

Table 1: Key characteristics of farmers' associations. Source: Data of associations and own field research from 2006.

## Results and Discussion

### (1) Socio-organizational and socio-technical changes for specialty coffee production

The case studies suggest, that socio-organizational and socio-technical changes, rather than highly sophisticated technological solutions, are required in order to produce and maintain high quality. These changes are essential at farm level as well as at the level of institutions and are influenced by political and institutional frame conditions.

#### (a) At farm level

Colombian farmers mentioned that all processes from handpicking the red coffee cherries until the removal of the pulp, washing, drying and storing must be carried out carefully and accurately. The use of drying beds only for coffee instead of drying the beans on the ground or on plastic tarps prevents fermentation problems or an infection with smell from other crops or animals. Differentiation of qualities starts from selecting only the ripe cherries and requires to distinguish between different hillside situations and altitudes. Workers must be informed

and educated in order to understand the new quality paradigm. Good working and living conditions on farm favor a good quality harvest. Small farmers are more likely to produce high quality, as they are able to control the whole process and work with their family labor.

*(b) At institutional level*

The farmers' associations have to create an effective system of incentives and sanctions in order to improve and maintain the quality. A differentiated quality and price definition scheme is one way to stimulate farmers for high quality production. Competitions at local and regional level can enhance farmers' commitment and the development of innovations. Perhaps most challenging is the shift of the technical assistance from a volume orientation, which favored high yielding and input intensive varieties, towards a focus on quality, based on organoleptic quality attributes. This means the identification of positive characteristics, like taste, aroma and acidity instead of identifying only the number of defects and bean size.

*(c) Frame conditions for change*

However, the Ecuadorian case suggests, that not all farmers can easily switch from the conventional towards the high quality model. Farmers, who are still struggling with basic problems like lowest productivity rates, over-aged plantations and a lack of necessary infrastructure (e.g. irrigation in dry regions, processing facilities), will refuse these changes as they require investments of time. If volumes are very low and only a small portion of harvest is accepted as high quality, the costs of differentiation are higher than the benefits. Finally, frame conditions like access to financial resources, good transport and communication infrastructure as well as access to information about high quality production and commercialization can favor or inhibit the change process.

*(2) Capacities and skills required*

The Colombian cases demonstrate, that the integration into specialty coffee markets requires new and demanding capacities and skills by both – farmers and leaders. Those associations perform better, which have a good leadership and a good organizational structure.

*(a) Farmers*

Many Colombian farmers who produce constantly high quality coffee mentioned, that they like coffee and that they addict themselves with a lot of enthusiasm to the production and processing of coffee. Especially small farmers with less than 1-2 ha work with all family members on the coffee farm, while bigger farms (> 5 ha) have to coordinate the activities with their workers and loose direct control over the farm. Specialty coffee exporters and roasters talk about “special people” and refer to their commitment to their business. Hence, specialty coffee production, processing and marketing is a culture, which needs coffee enthusiasts.

*(b) Leaders*

In specialty coffee value chains direct trade relations emerge as a consequence of high information asymmetries and the need for coordination. Hence, leaders of farmers' associations face exporters and/or roasters as direct trade partners<sup>2</sup>. This is a very new situation for leaders, who are used to put their products on anony bulk markets. As quality premiums are not fixed, the ability to negotiate price premiums and long-term contracts based on common goals is required. Because specialty coffee prices are not de-linked from the New York Board of Trade (NYBOT), an understanding of price fixation mechanisms as well as risk management strategies is highly relevant. The Colombian cases showed, that leaders with a good education, English language skills, entrepreneurial capacities and dense professional networks are advantaged, while others without these skills have difficulties to overcome these

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<sup>2</sup> For more about changing governance structures in differentiated value chains see (Lewin et al. 2004: 98, Gereffi and Humphrey 2005, Gereffi, Humphrey et al. 2001).

barriers. As demonstrated elsewhere<sup>3</sup>, most farmers associations' leaders lack these skills. This unequal situation can cause power struggles, in which the weaker party is more likely to loose. Two Colombian case studies demonstrated a permanent struggle between leaders and their associations' members with the exporter, who coordinated the quality control as well as the transport and exportation processes.

*(3) Compensation by higher price premiums*

As stated above, price premiums for high quality coffees are not fixed, consequently they are a result of negotiations between farmers' associations and their trade partners. Table 2 shows, that the highest price premiums could be achieved in Asprotimaná, the association with a relatively highly skilled leader. F.O.B. prices of Colombian farmers' associations exceeded F.O.B. prices of Fair Trade and Fair Trade plus Organic certified products of Ecuadorian farmers in the same year. In each case the negotiated F.O.B. price for specialty or certified coffee is significantly higher than the national F.O.B. price for conventional coffee.

Hence, the case studies suggest, that specialty coffee production seems to be rewarded by higher price premiums than certified coffees and prices are significantly higher than those of conventional coffee. However, these figures don't allow any conclusion about the fairness of compensation, as data about a detailed quantification of additional costs for high quality production and processing are still unavailable. It must be considered, that all F.O.B. prices are not equal to prices at farm-gate, as export and organizational costs must be subtracted.

<b>Economic data<sup>1</sup></b>	<b>San Roque</b>	<b>Asprotimaná</b>	<b>Orgánica</b>	<b>Fapecafés</b>
Conventional coffee: national price F.O.B. [USD/lb] <sup>3</sup>	1.17 <sup>2</sup>	1.17 <sup>2</sup>	1.17 <sup>2</sup>	1.14 <sup>3</sup>
Specialty / certified coffee: negotiated Price F.O.B. [USD/lb]	1.35 – 1.40	1.45 – 1.55	1.44	1.22 (FT) 1.37 (FT-O)

<sup>1</sup> All data from 2006; FT = Fairtrade, FT-O = Fairtrade and Organic.

<sup>2</sup> Average price 2006, data from FNC.

<sup>3</sup> Average price NYBOT 2006 for other milds.

Table 2: Economic variables of the commercialization process 2006. Source: Own field research.

**Conclusions and Outlook**

This paper argues, that specialty coffee production and commercialization requires socio-organizational and institutional innovations, rather than new production techniques. New skills are needed especially by farmers associations' leaders, as direct trade relations emerge and negotiation takes place. A market orientation as well as entrepreneurial capacities are essential in order to maintain the associations' position with rapidly changing markets. Available data suggest, that high quality coffee is rewarded by higher prices and can exceed prices of certified coffees. However further research is necessary in order to assess the fairness of this compensation.

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<sup>3</sup> Berdegúe (2001) shows in his studies about chilean farmers' associations that only a fraction is able to compete in a sustainable way and to adapt to ever changing market conditions through diversification of their products and the development of innovations.

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