RESEARCH PROGRAM ON SUSTAINABILITY IN AGRICULTURE (REPOSA)

MARKETING OF COFFEE IN COSTA RICA
A STUDY IN GUANACASTE DISTRICT

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MINISTERIO DE AGRICULTURA Y GANADERIA DE COSTA RICA (MAG)
THE REPOSA PROJECT

The Research Program on Sustainability in Agriculture (REPOSA) is a cooperation between Wageningen Agricultural University (WAU), the Center for Research and Education in Tropical Agriculture (CATIE), and the Costa Rican Ministry of Agriculture and Livestock (MAG). In addition, REPOSA has signed memoranda of understanding with numerous academic, governmental, international and non-governmental organizations in Costa Rica.

The overall objective of REPOSA is the development of an interdisciplinary methodology for land use evaluation at various levels of aggregation. The methodology, based on a modular approach to the integration of different models and data bases, is denominated USTED (Uso Sostenible de Tierras En el Desarrollo; Sustainable Land Use in Development).

REPOSA provides research and practical training facilities for students from WAU as well as from other Dutch and regional educational institutions.

REPOSA's research results are actively disseminated through scientific publications, internal reports, students' thesis, and presentations at national and international conferences and symposia. Demonstrations are conducted regularly to familiarize interested researchers and organizations from both within and outside Costa Rica with the USTED methodology.

REPOSA is financed entirely by WAU under its Sustainable Land Use in the Tropics program, sub-program Sustainable Land Use in Central America. It operates mainly out of Guápiles where it is located on the experimental station Los Diamantes of MAG.

EL PROYECTO REPOSA

REPOSA (Research Program on Sustainability in Agriculture, o sea Programa de Investigación sobre la Sostenibilidad en la Agricultura) es una cooperación entre la Universidad Agrícola de Wageningen, Holanda (UAW), el Centro Agronómico Trópical de Investigación y Enseñanza (CATIE) y el Ministerio de Agricultura y Ganadería de Costa Rica (MAG). Además REPOSA ha firmado cartas de entendimiento con organizaciones académicas, gubernamentales, internacionales y no-gubernamentales en Costa Rica.

REPOSA ha desarrollado una metodología cuantitativa para el análisis del uso sostenible de la tierra para apoyar la toma de decisiones a nivel regional. Esta metodología, llamada USTED (Uso Sostenible de Tierras En el Desarrollo) involucra dimensiones económicas y ecológicas, incluyendo aspectos edafológicos y agronómicos.

REPOSA ofrece facilidades para investigaciones y enseñanza para estudiantes tanto de la UAW, como de otras instituciones educacionales holandesas y regionales.

REPOSA publica sus resultados en revistas científicas, tesis de grado, informes informales, y ponencias en conferencias y talleres. REPOSA regularmente organiza demostraciones para investigadores de Costa Rica y de otros países para familiarizarlos con la metodología USTED.

REPOSA es financiado por la UAW bajo su Programa del Uso Sostenible de la Tierra en los Areas Trópicos. La sede de REPOSA está ubicada en la Estación Experimental Los Diamantes del MAG en Guápiles.
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PREFACE

This report is the result of a research which I carried out during my practical period for my study Development Economics at the Wageningen Agricultural University. I have been in Costa Rica from July 1995 until November 1995 and I enjoyed my stay very much. As a practical period is supposed to be, it was very instructive to live for some time in another culture, to speak with farmers and meet Costa Rican people. The report describes only part of the things I learned. For me, the most important things I have learned were the practical aspects of doing a research. My stay was very pleasant thanks to all the Costa Rican people I have met and the people of the Atlantic Zone Program. I want to thank them all. In particular I would like to thank Don Mario, who drove us to all the places we needed to go. Also I would like to thank Isabel Sanchez for joining the interviews and giving a good company. Furthermore I would like to thank Donatus Jansen who helped me in Costa Rica whenever questions raised. Last but not least I would like to thank my supervisor Rob Schipper.
### ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAE</td>
<td>Consultoria Agro Economica</td>
</tr>
<tr>
<td>COOCAFE</td>
<td>Consorcio de Cooperativas de Guanacaste y Montes de Oro</td>
</tr>
<tr>
<td>COOPELDOS</td>
<td>Cooperativa de Caficultores y Servicios Multiples de El Dos de Tilaran</td>
</tr>
<tr>
<td>COOPEPILANGOSTA</td>
<td>Cooperativa de Caficultores de Pila Angosta</td>
</tr>
<tr>
<td>COOPETILA</td>
<td>Cooperativa de Caficultores de Tilaran</td>
</tr>
<tr>
<td>FONECAFE</td>
<td>Fondo Nacional de Estabilización Cafetalera</td>
</tr>
<tr>
<td>ICAFE</td>
<td>Instituto del Cafe</td>
</tr>
<tr>
<td>UPANACIONAL</td>
<td>la Unión Nacional de Pequeños y Medianos Productores Agropecuarios</td>
</tr>
</tbody>
</table>
1 INTRODUCTION

In the Atlantic Zone Programme in Costa Rica LUSTS\(^1\) are made for all kind of crops. To make these LUSTs a lot of data is needed. Together with Caroline de Korver, a student from agronomoy I have collected data of the cultivation aspects of coffee in Guanacaste. Before we could start with collecting these data and interviewing coffee producers we had to know what the coffee infrastructure looked like. We first held interviews at the cooperations of Guanacaste, to get basic information about the area and to get a list of farmers we could interview. Besides this orientation I have studied more specifically the marketing of coffee and the quality aspects of coffee. This paper deals with these subjects.

Coffee needs to be processed in a predefined way. Therefore the coffee chain has different channels from producer to the consumer. I have studied this coffee marketing chain by studying literature, visiting the national coffee institute of Costa Rica and interviewing directors of several coffee cooperations and interviewing independent traders.

This report is mainly about the processing and commercializing of coffee in Guanacaste. It starts with a short description of technical aspects of coffee. In chapter two the processing and marketing of coffee is described. In the last chapter the specific situation of the coffee production in Guanacaste is described. One interesting aspect of the coffee production in Guanacaste is that the coffee is partly commercialized as the so called Max Havelaar coffee.

\(^1\)LUST = Land Use System at a defined Technology: cropping systems and livestock systems are defined as a combination of a land unit with a land use type and include specific quantitative descriptions of the technology and corresponding input and output.
2 COFFEE PRODUCTION IN COSTA RICA

2.1 General

Coffee is the major genus of the family Rubiaceae. The section Eucoffea includes the economically most important species: C. arabica, C. canephora (robusta) and C. liberica. The coffee produced in Costa Rica is almost exclusively arabica coffee, except for a small amount of robusta coffee produced in the lowlands. Coffea arabica originates from Ethiopia. The fruits take 7 to 9 months to mature. In Costa Rica the following varieties exist: Typica, Bourbón, Mundo Novo (released in 1967), Caturra (released in 1960) and Catuai (released in 1976). The most used (arabica) coffee variety is the Caturra tree, which can be grown under planting densities of 3400 trees per hectare up to 7000 trees per ha.

Coffee arabica is an upland species and grows between 600-1500 m. The average annual temperature that is required lies between 18-25°C, with a minimum temperature of 10°C and a maximum temperature of 30°C. The rainfall should be 1500-2250 mm, well distributed over the year with a dry period of 3-5 months for the initiation of flower buds.

Coffee grows successfully without shade at higher altitudes. With intensive cultivation and optimum inputs, higher yields are obtained without shade. Most farmers have adopted a policy, in which they heavily cut back shade trees in years of high coffee prices, because then it pays to increase the rate of fertilization.

Concerning the soil types, medium loams are ideal for C. arabica. Coffee is grown on soils like Ferralsols, oxisols, acrisols or ultisols. The topography effects most of the field operations. Slopes should not be steeper than 25-30°. Unlike in Brazil, in Costa Rica the coffee areas are not suitable for mechanized harvesting.

Coffee shrubs bear fruits for 40 years or more, and are most productive between 5-15 years of age. The harvest of coffee Arabica covers about 4 months. Coffee is a labour intensive crop and labour costs take up about half of total costs. In areas where C.arabica is grown, maize, beans and dairy production are usually other important agricultural activities.

2.2 Production zones and characteristics of Costa Rica

Coffee is the major export product of Costa Rica, followed by bananas. Arabica coffee is grown mainly in the mountainous areas in the interior of the country with average annual temperatures between 10-22 C on an altitude between 600 and 1500 m. At higher altitudes the danger of frosts exists, and at lower altitudes the flowering is hampered.
Map 2.1 Coffee zones in Costa Rica

Coffee in Costa Rica is produced by about 33000 farmers. The most important coffee zone of Costa Rica is the Central Valley. Guanacaste is nationally of minor importance. (see table 2.1)

Table 2.1 Percentage of coffee produced in different zones in Costa Rica in two growing seasons

<table>
<thead>
<tr>
<th>Zone</th>
<th>93/94 (%)</th>
<th>94/95 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Valley</td>
<td>51.93</td>
<td>47.08</td>
</tr>
<tr>
<td>Turrialba-Juan Viñas-Orosi</td>
<td>10.32</td>
<td>8.32</td>
</tr>
<tr>
<td>San Carlos-Sarapiqui</td>
<td>1.66</td>
<td>0.80</td>
</tr>
<tr>
<td>Coto Brus</td>
<td>8.00</td>
<td>10.51</td>
</tr>
<tr>
<td>Atena-Palmichal-Puriscal</td>
<td>2.86</td>
<td>2.46</td>
</tr>
<tr>
<td>Los Santos</td>
<td>12.36</td>
<td>15.62</td>
</tr>
<tr>
<td>Guanacaste</td>
<td>2.00</td>
<td>1.71</td>
</tr>
<tr>
<td>El general</td>
<td>10.87</td>
<td>13.50</td>
</tr>
</tbody>
</table>

Source: Efdé (1997)
Costa Rica has one of the highest productivity-levels in the world. A rapid growth took place of 35,86 double hectolitres per hectare in ’60s towards 68,89 per hectare in 90/91. The mean area of the coffee farms in Costa Rica is 5,07 has., with a coffee-area of 3,37 has. 92% of the farms are less or equal to 5 ha. (Boyce, 1994)

The units in which coffee production is expressed are:
1 double hectolitre cherries = 23 kg green coffee
1 fanega = 258 kg cafe en fruta (unprocessed coffee) = 47 kg cafe oro (= green coffee)

Coffee in Costa Rica is classified by type of bean, depending on hardness, acidity and aroma. Climatological conditions found in the respective coffee areas determine these qualities.

Table 2.2 Classification of coffee beans

<table>
<thead>
<tr>
<th>Type of bean</th>
<th>Altitude (m)</th>
<th>Rain (mm)</th>
<th>Temp (°C)</th>
<th>Sun (hrs/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strictly hard (SHB)</td>
<td>1200-1600</td>
<td>2500</td>
<td>19</td>
<td>2150</td>
</tr>
<tr>
<td>Good hard (GHB)</td>
<td>1000-1200</td>
<td>2250</td>
<td>21.5</td>
<td>2200</td>
</tr>
<tr>
<td>Hard bean (HB)</td>
<td>800-1200</td>
<td>2500</td>
<td>22</td>
<td>2100</td>
</tr>
<tr>
<td>Medium hard (MHB)</td>
<td>600-1100</td>
<td>3500</td>
<td>22</td>
<td>1800</td>
</tr>
<tr>
<td>High grown Atlantic (HGA)</td>
<td>900-1200</td>
<td>2750</td>
<td>20.5</td>
<td>1700</td>
</tr>
<tr>
<td>Med. grown Atlantic (MGA)</td>
<td>600-800</td>
<td>2900</td>
<td>22</td>
<td>1750</td>
</tr>
<tr>
<td>Low grown Atlantic (LGA)</td>
<td>300-600</td>
<td>4000</td>
<td>24.5</td>
<td>1550</td>
</tr>
<tr>
<td>Pacific (P)</td>
<td>300-1000</td>
<td>2250</td>
<td>24</td>
<td></td>
</tr>
</tbody>
</table>

Source: Efdé (1997)

In Guanacaste coffee is grown in mainly two cantons, Tilaran and Hojancha. In Tilaran and its surrounding areas the P, LGA and MGA coffee bean types are grown. In the Hojancha area only the Pacific coffee beans are grown.
3 MARKETING AND PROCESSING OF COFFEE

3.1 General

Coffee is almost exclusively produced and exported by developing countries, which depend heavily on it for their foreign exchange. In contrary, the importing countries are mainly found in the Western world.

Table 3.1 reveals yearly amounts of exported coffee of some important exporting countries. The dominance of Brazil and Colombia - in 94/95 respectively 24 and 14% of the world market- makes the coffee market an oligopolistic one. Costa Rica occupied in that year the twelfth place with 2.9%.

<table>
<thead>
<tr>
<th></th>
<th>91/92</th>
<th>92/93</th>
<th>93/94</th>
<th>94/95</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>18,889</td>
<td>14,417</td>
<td>20,652</td>
<td>12,523</td>
</tr>
<tr>
<td>Colombia</td>
<td>16,822</td>
<td>12,523</td>
<td>9,885</td>
<td>11,000</td>
</tr>
<tr>
<td>Indonesia</td>
<td>7,214</td>
<td>4,250</td>
<td>5,383</td>
<td>3,793</td>
</tr>
<tr>
<td>Mexico</td>
<td>3,527</td>
<td>2,423</td>
<td>3,139</td>
<td>3,150</td>
</tr>
<tr>
<td>Uganda</td>
<td>2,013</td>
<td>2,085</td>
<td>1,820</td>
<td>3,420</td>
</tr>
<tr>
<td>Guatemala</td>
<td>3,196</td>
<td>4,018</td>
<td>3,226</td>
<td>2,690</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>2,384</td>
<td>2,624</td>
<td>1,884</td>
<td>2,208</td>
</tr>
<tr>
<td>Other</td>
<td>26,879</td>
<td>22,875</td>
<td>24,286</td>
<td>29,001</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>81,164</td>
<td>64,475</td>
<td>70,601</td>
<td>67,785</td>
</tr>
</tbody>
</table>

Source: ICAFE (1995)

As in nearly all producing countries, coffee in Costa Rica is predominantly an export product. In 1994/1995 73% of the exported coffee went to European destinations, of which West-Germany is the leading buyer. About 13% was shipped to the United States (ICAFE, 1995). This implies an importance of high quality coffee, because Europe and to a less extent the United States, have very severe quality demands.
In Costa Rica 9 to 11% is kept for domestic use. Every processing firm (*beneficio*) is forced by law to deliver a yearly fixed amount for national consumption. This coffee is sold through auctions either directly or indirectly through traders to 43 local roasting firms. This roasted coffee is sold through wholesalers and retailers to consumers. The price of this coffee is significantly lower than the exported coffee-price.

3.2 The coffee chain

After harvesting, the coffee cherries have to pass three different stages before they are ready for consumption, respectively processing, curing and roasting. In Costa Rica the first stage is the wet process, which results in a better flavour than the dry process.

In the first stage the harvested coffee cherries are pulped, fermented, washed and dried. During this stage different qualities are separated.

Pulping must take place within 36 hours after harvesting, to prevent early fermentation. Before this first process, coffee cherries weigh 6 times the weight of the dried parchment coffee, resulting in high transport costs. For these two reasons, factories for initial processing must be nearby.

The second phase is the curing of the dried parchment, which includes the hulling to remove the endocarp and testa (silver skin), and the polishing. After curing, green beans are obtained, which can be exported. The beans are graded according to the following criteria:

- size of beans; even-sized and larger beans are preferred.
- shape of beans; oval with one flat face
- colour of beans; blue or greyish blue is preferred
- imperfections
- absence of stinkers; beans with a bad taint

After grading, the green coffee beans are bagged, stored and prepared for export. These two stages, the wet process and the curing and preparing for export are called green coffee technology.

The third stage is the roast coffee technology, and generally takes place in the consuming countries. The green coffee beans are first cleaned, weighed and blended. Reasons for blending are to obtain a mixture with the right taste while not having to depend on one source of supply. Thereafter the green beans are roasted, ground and packed.
In Costa Rica all processing activities, from depulping, washing and drying to hulling, grading and bagging, are undertaken by 102 private or cooperatively owned *beneficios*. These sell the green coffee to about 25 exporters. This entails the organizational problems of a rapid collection and transport of the bulky cherry coffee. As mentioned before there is also the risk of declining quality, if the cherries are not processed within 36 hours after harvesting.

However, the set-up has also many positive features. Once the coffee cherry has reached the reception area of the factory, it passes all processing stages in one plant and is also prepared for export. Transport, bagging and physical losses are minimized, and quality control is facilitated.

The government is not directly involved in the production and processing of coffee, but plays a major regulatory role in the marketing and pricing of coffee. The most important
institution is ICAFE (Instituto del Café, formerly Oficina del Café). This institution formalizes the relations between producers, beneficios and exporters. The beneficios are subjected to detailed supervision by ICAFE. For example, they yearly fix the share of coffee destined for the domestic market and the minimum prices beneficios should pay to the farmers.

3.3 Quality

The world coffee market is not a homogeneous market. Two types of coffee exist: arabica and robusta. About one quarter of the world production is robusta coffee. Arabica has a lower caffeine content, but is preferred for its milder flavour. The following further classification can be made:

Robusta, usually unwashed (African and Asian countries)

Arabica
- unwashed (Brazil, Bolivia, Ethiopia, Paraguay)
- washed (mild) - Colombian milds (Colombia, Kenya, Tanzania)
  - Other milds (Centr. Am., Peru, India, Papua
  New Guinea and some African countries)

These four commercial types of coffee are partly substitutes and partly complements. The roasting firms in the consumer countries have their typical national blends with certain mixtures of the different types. The roasters try to maintain these blends. When, for example the coffee in Brazil has been damaged by frost, especially the price of the scarce unwashed arabica will be influenced. Thus this lower-quality coffee may fetch higher prices than mild coffees.

Normally the price of 'other milds' is the highest, followed by 'Colombian milds', 'unwashed arabica' and at last 'robusta'. In Costa Rica, as in many other Latin American countries, production falls in the category 'other milds'.

Costa Rican coffee is famous for its high quality. The obtained quality is influenced by climatic factors, processing technology of coffee and the technical assistance given to the farmers.

3.4 Prices

Price elasticity of supply is low, because coffee is a perennial crop, only bearing after a few years and fully productive after 5-6 years. In years of high prices, producers tend to improve plantations. In periods of low prices most producers keep on producing coffee especially smallholders who continue to pick when prices are low.

The demand of coffee is stagnant in many countries. Income elasticity and price elasticity of demand in the major consumer countries are low, around 0.3 and 0.2 at moderate prices. (de Graaff, 1986) Under such circumstances, small changes in supply result in large yearly fluctuations in price and in cyclical price movements.
The high concentration of coffee in Brazil and Colombia increases the chance of high supply variation. A well-known example is the occurrence of severe frosts in Brazil in 1976 resulting in substantial increases in coffee-prices.

Already before World War II, producing countries (including Costa Rica) have been working with international agreements in order to create a more stable situation. The current International Coffee Agreement (ICA) is an agreement between 102 producing and consuming countries. It consists of a mechanism of yearly quotas which tempt to adjust demand and supply within certain boundaries of prices in order to provide adequate coffee supplies to consuming countries and maintain a relatively stable world market for producers. Large stocks have to be kept by countries whose production continues to exceed their quota for some years. The security of stable prices may lead to a rise in production which ultimately may lead to the fall of the international coffee-prices.

In 1989 the ICA collapsed and the world prices almost halved in the course of one year time. As in other countries, the farmers in Costa Rica faced some difficult years especially because of the high input costs which made the coffee production hardly lucrative. However, prices have recovered since 1993.

Table 3.2 International retention plan for coffee arabica, March 1995

<table>
<thead>
<tr>
<th>FASE</th>
<th>INDICATIVE PRICE US $ Ctvos/Lb.</th>
<th>PERCENTAGE RETENTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase of retention</td>
<td>&lt;1.65</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>1.651-1.80</td>
<td>10</td>
</tr>
<tr>
<td>Neutral phase</td>
<td>1.801-1.90</td>
<td>0</td>
</tr>
<tr>
<td>Liberation</td>
<td>&gt;1.901</td>
<td>the retained stock is sold</td>
</tr>
</tbody>
</table>

Source: Icafe (1995)
4 GUANACASTE

4.1 general

Guanacaste is a western province of Costa Rica. It deals with high unemployment rates, high emigration rates and a relatively low income per capita. The main economic activity is breeding stocks. On these farms coffee is often a side-activity.

After sugar cane, coffee is the most important permanent crop in the province. in spite of the little area, which at around 1,500 Ha, occupies 2% of the national coffee-area.

This coffee is almost exclusively cultivated at small and medium farms (smaller than 20 has) with on average 1.8 ha coffee per farm. The employment created by the cultivation of coffee is estimated at 15% of the regional agricultural employment. (CAE 1992)

Coffee in Guanacaste is found in the canton of Tilarán, the higher parts of Abangares, Hojancha and Nandayure.

Map 4.1 Coffee areas within Guanacaste (Shaded areas)
The coffee farmers in Guanacaste have to deal with sub-optimal conditions, namely limited altitudes, strong winds and unfavorable distribution of yearly rainfall. Also the coffee cooperations had to deal with some problems like limited bookkeeping and inefficient functioning. That is why in 1988 the cooperations set up the Consorcio de Cooperativas de Guanacaste y Montes de Oro (COOCAFE), with the support of the Consultoria Agro Economica (CAE). COOCAFE unites eight cooperations in Guanacaste and Alajuela with in total 2500 small coffee-producers.

4.2 COOCAFE

The objectives of COOCAFE are to find integral solutions to the shared problems and to offer possibilities of development to the associated cooperatives. It's main function is to market the coffee. COOCAFE has been searching for alternative ways of commercialising coffee and to discover niches in the market in the U.S. and in Europe.

Since 1991, COOCAFE exports directly 'café solidario' to the U.S. (under the brand-name of 'Café Paz'). COOCAFE has sold coffee at alternative markets since the coffee harvest of '88-89.

Max Havelaar is no trading company itself, but distributes green-socio labels to trading companies that meet the standards of for instance higher prices for local farmers, improvement of social structure etc. Max Havelaar coffee is being processed by smaller coffee roasters.

![Diagram](image)

Figure 4.1 Marketing channels for COOCAFE's cooperations

COOCAFE negotiates at the alternative markets (since 1989), Fedecoop realises transport and the administration like certain permissions and documents. These costs surmount about $3/quintal. When Fedecoop also has to sell the coffee this margin will be much higher, because of the profit margin for taking this risks and for making negotiating costs. By negotiating at the alternative markets, COOCAFE saves at these costs and operates in a more direct way of commercialization.
The price guaranteed by fair trade is $126/qq. So when the price is below this one they will always get this minimum price. When the price is above the minimum price, the alternative markets pay a certain percentage above this price.

Besides the marketing of coffee COOCAFE carries out some different projects:
- organic fertilizers, made of the coffee pulp
- reforestation (café forestal)
- diversification (citrus, macadamia, yuca)

By Coocafe farmers are stimulated to use less chemicals. They are working by means of a gradual process because they think this is better then a sudden change into organic coffee.

4.3 individual coffee cooperations

In Guanacaste two independent beneficios operates and four cooperations. For getting the LUST data we have only interviewed farmers of the cooperations, because we did not expect differences in the way of producing by the farmers who deliver to the independent beneficios and the farmers who deliver to the cooperations. In this section the functioning of the cooperations will be discussed. The interviews that were hold at these cooperations is given in Annex 1

Map 4.2 Cooperations in and near Quanacaste
Table 4.1 General aspects of the 4 cooperations of Guanacaste

<table>
<thead>
<tr>
<th></th>
<th>COOPEL-DOS</th>
<th>COOPE-TILA</th>
<th>COOPE-CERRO- AZUL</th>
<th>COOPE- PILAN-GOSTA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>Quebrade Grande</td>
<td>Tilaran</td>
<td>Los Angeles</td>
<td>Hojancha</td>
</tr>
<tr>
<td>Altitude (m)</td>
<td>900-1200</td>
<td>400-1200</td>
<td>560-1000</td>
<td>500-850</td>
</tr>
<tr>
<td>temperature (*C)</td>
<td>22-25</td>
<td>23.5</td>
<td>27</td>
<td>26.5</td>
</tr>
<tr>
<td>Rainfall (mm)</td>
<td>2500-3000</td>
<td>2000-3500</td>
<td>1700-2600</td>
<td>2200</td>
</tr>
<tr>
<td>members(y/n ass.)</td>
<td>395</td>
<td>350</td>
<td>200</td>
<td>385</td>
</tr>
<tr>
<td>coffee delivered (Double Hectolitres 94/95)</td>
<td>27,403</td>
<td>18,761</td>
<td>23,845</td>
<td>12,001</td>
</tr>
</tbody>
</table>

In Costa Rica exists a classification of coffee based on climatic factors. The major part of the coffee in Guanacaste is classified as 'pacific'. Pacific coffee type grows in areas with strictly defined humid and dry seasons, with relatively little days of rainfall. The Pacific type is characterized by hard and little beans. The quality and taste is quite good, it has a rich and sharp aroma. Only in the zone of Coopetila besides pacific coffee, also medium and low grown Atlantic is produced. In this area the rains arm more prolonged. Also the meidum and low grown Atlantic coffee is known for it's good quality.
Table 4.2 Coffee delivered by the beneficiadores (1994-1995)
In double hectolitres (1 double hectolitre cherries = 23 kg green coffee)

<table>
<thead>
<tr>
<th>Cooperation</th>
<th>MADURO</th>
<th>VERDE</th>
<th>BELLOTE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>COOPETILA</td>
<td>18,761</td>
<td></td>
<td></td>
<td>18,761</td>
</tr>
<tr>
<td>COOPELDOS</td>
<td>27,403</td>
<td></td>
<td></td>
<td>27,403</td>
</tr>
<tr>
<td>COOP. DE CERRO AZUL</td>
<td>3,800</td>
<td>44</td>
<td></td>
<td>3,845</td>
</tr>
<tr>
<td>COOP. DE PILA ANGOSTA</td>
<td>12,001</td>
<td></td>
<td></td>
<td>12,001</td>
</tr>
</tbody>
</table>

indep. beneficios:

<table>
<thead>
<tr>
<th>Beneficio</th>
<th>MADURO</th>
<th>VERDE</th>
<th>BELLOTE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>BENEFICIO EL POR VENIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NANDAYURE S.A</td>
<td>13,425</td>
<td>2,625</td>
<td></td>
<td>16,050</td>
</tr>
<tr>
<td>BENEFICIO TURIN S.A.</td>
<td>5,428</td>
<td>132</td>
<td></td>
<td>5,560</td>
</tr>
</tbody>
</table>

Source: ICAFÉ (1995)

Coffee is bought in three different states. Café maduro, the red berries is preferred. As table 4.2 shows in Quanacaste almost only this café maduro is bought. Café verde is the immature green coffee. In Quanacaste nothing of this coffee is bought from the coffee producers. The standard that is used is a maximum percentage of 20 % green berries among the red berries. The coffee that farmers deliver is mainly controlled on this standard. Café Bellote is the coffee that has already fallen on the ground. As can be seen from table 4.2, only limited café bellote is sold, mainly by the independent traders.

Table 4.2 Quality in the harvest of '94/95 in percentages

<table>
<thead>
<tr>
<th></th>
<th>Coopeldos</th>
<th>Coopetila</th>
<th>Cerro Azul</th>
<th>Coopepil.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 First (export)</td>
<td>85</td>
<td>60</td>
<td>80</td>
<td>75</td>
</tr>
<tr>
<td>2 Second (export)</td>
<td>6</td>
<td>20</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>3 Cataduras (domestic)</td>
<td>5</td>
<td>10</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>4 bolsa (domestic)</td>
<td>4</td>
<td>10</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>% alternative market</td>
<td>78</td>
<td>60</td>
<td>70</td>
<td>75</td>
</tr>
<tr>
<td>type of coffee</td>
<td>100 P</td>
<td>46 MGA, 47 LGA, 7 P</td>
<td>100 P</td>
<td>100 P</td>
</tr>
</tbody>
</table>
The amount a cooperation can sell at the alternative market depends on two factors:
- the total amount that COOCAFE can sell
- the amount of coffee of the first quality

As can be seen from table 4.2, COOCAFE is able to sell almost all coffee of the first quality at the alternative market. Because coffee at the alternative market fetches a higher price it is extremely important for the cooperations to get as much as possible coffee of the first quality. However, most important factors that determine the quality of coffee are climatic and physical ones. COOPELDOS which has the highest percentage of first class coffee, is situated in the highest area (900-1200m) Other factors that stimulate the quality is the method of processing in the factory. Farmers are stimulated only by receiving technical assistance. No price differentiation exists with the coffee that farmers deliver. The only criteria is the maximum of 20 % green berries among the red berries. The quality of the producers shows little variance.

Besides buying and processing the coffee, the cooperations carry out several side activities. Some of these activities are:
- Reforestation project (since 1989, financed by the government)
- Breeding of seedlings
- Technical assistance (personally, demonstrations)
- Credit
- Hiring of transport vehicles
5 CONCLUDING REMARKS AND LEARNING EXPERIENCES

The coffee market is an interesting one. Especially in Guanacaste, with the existance of the alternative market. Coffee is a crop with an extreme high price elasticity. Therefore it is for the farmers and cooperatives very interesting to sell at the alternative market where a minimum price is guaranteed. To be able to deliver at this market it is important for the cooperatives to produce the best quality of coffee as possible.

It was interesting to research on how the coffee market operates. I had to talk with a lot of different persons. Already a lot of literature in Costa Rica about coffee is available, especially because coffee is such an important crop for Costa Rica's national economy. In the beginning I went interviewing people without having studied all this literature. The result was that I could not catch all the information that these people gave to me. Especially because the coffee market is a complicated subject, with a lot of different actors, agreements etc. Besides this there is also the problem of the Spanish language. If I had prepared myself better, I would have got more out of the interviews. Now my knowledge grew during the practical period.

I have enjoyed this practical period and I feel that I have learnt a lot. Especially learning the language, making appointments with (in the eyes of a student) important people, working together with other students, interviewing farmers, and of course living in a strange culture for such a period.
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ANNEX 1

Interview hold at the Cooperations

PREGUNTAS GENERALES

1) Cuantos productores entregan en este cooperativa?
2) De cual zona exactamente viven los productores?
3) En esta zona existen proyectos? Por ejemplo con café organico, reforestación, diversificación (macadamia) (COOCAFE), projectos de IDA o de MAG-FAO.
   -Donde?
   -Durante quantos años?

PREGUNTAS MERCADOS

1a) Qué café acepta la cooperativa (maduro/verde/bellote) y por qué?
b) Cómo controla la cooperativa la calidad del café entregado por los productores?
c) Reciben todos los productores el mismo precio?
d) Cómo se estimula a los productores a entregar café de una buena calidad? Como se funciona el fondo de agricultores?
e) En cuanto a calidad, qué distintos tipos de café aparecen después del procesado en la cooperativa? En qué porcentajes?
f) Hay muchas diferencias en estos porcentajes entre diferentes años? Quál es el efecto de:
   - el tiempo
   - enfermedades/plagas
   - los precios

Sobre la cosecha pasada:

2) Cuál fue la produccion total ?

3) El mercado domestico
a1) Cuánto café entregó usted al mercado domestico?
2) Cómo es el desarrollo del porcentaje del mercado domestico en los ultimos años?
(diminuiendo/crescendo/constante)

b1) Fue una parte de éste a la Planta Torrefactora en Cañas?
2) (si asi fuera) Cuánto y de cual calidad?
3) Cómo fue negociado? Por COOCAFE?
4) Quién lo transportó a Cañas?
5) Cómo se controló la calidad ? Por COOCAFE?
6) Cuál era el precio que se pagó por este café?

c1) Cuánto café fue vendido al resto del mercado domestic?
    2) Café de qué calidad?
    3) Cómo fue negociado?
    4) Quién lo transportó, a qué torrefactora?
    5) Cómo fue controlado la calidad? Por medio de COOCafe o por medio de una persona de la torrefacción?
    6) Cual era el precio que se pagó por este café?

4) El mercado de la exportación
   a1) Cuánto café entregó usted al mercado de la exportación?

   b1) Qué porcentaje fue al mercado alternativo?

   c1) Qué porcentaje a: Holanda/Alemania (Café Forestal)
       Estados Unidos (Café Paz)
       Otros

   2) Café de que calidad?
   3) Quien controla este calidad?
   4) Quien transporta este café? Adonde? (este café va a las torrefactoras de los países de la exportación, o a una torrefactora de COOCafe?)
   5) Cual fue el precio?

   d1) Que porcentaje fue al mercado de la exportación regular?
       2) Café de cual calidad?
       3) Quien controla esta calidad?
       4) Quien exporta este café esta, y adonde. (FEDECOOP)
       5) Cual era el precio?

   e1) Desde que año entrega usted café para el mercado alternativo?
   e2) De qué depende el porcentaje que ud. entrega al mercado alternativo?
       3) Cual es el porcentaje que ud. puede entregar al mercado alternativo en este año?

5) Es cierto que este año ha sido introducido una cuota sobre el café de exportación?
   Se efecta el porcentaje que usted puede entregar para el mercado de la exportación?

6) Como paga los productores? En que periodos?
PREGUNTAS TECNICAS

1) Cuantos meses dura el periodo seco?

2) En la zona donde la cooperativa actúa, existen proyectos dedicados al mejoramiento de la agricultura? (café organico, reforestación, diversificación (macadamia))
   (de COOCAFÉ) o proyectos de IDA o de MAG-FAO.
   - Donde?
   - Duración?
   - Objetivo

3) En la zona existen grandes diferencias en cuanto a:
   a) tipos del suelo (cual es hay)
   b) altura, temperatura
   c) tipo de empresas cafetales (tamaño, variedades, otros cultivos)
   d) técnica de sombreo

4a) Cuales son las malezas predominantes? Como se combate?
   b) plagas?
   c) enfermedades?
   d) Cuales son las deficiencias/toxicidades de elementos que aparecen en el cultivo? Y a que se deben?

5a) La cooperativa da asistencia tecnica? Como?
   b) Son muchos los productores que no siguen estos consejos? Con respecto a que?

6) La cooperativa tiene planes para cambiar el sistema de produccion?
   (Por ejemplo, minimizando el uso de productos químicos? Como en concreto?

7) Cuando empieza la cosecha de este año?

8a) Podria darnos nombres de productores que producen eficientemente. Por que piensa ud. que ellos le hacen bien?
   b) Podria darnos nombres de productores que producen en una manera peor. Por que piensa ud. eso?