Knowing what you grow: The story of Nicaragua's Coffee Quality Improvement Project

An independent project evaluation for Thanksgiving Coffee Company Inc.

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Table of Contents

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By Christopher Bacon February 2002

Executive summary

As coffee commodity prices fall to their lowest levels in the last hundred years (in real terms), coffee farmers around the world are unable to pay the costs of production. Many can no longer support their farms and families. At the same time, the gourmet coffee industry depends upon a high quality coffee bean to differentiate itself in a consolidating market.

The purpose of this evaluation is to share the ideas and experiences behind a project that helped nine Nicaraguan cooperatives build coffee quality assurance laboratories and train their farmers to assess the quality of their coffee. It is part of a larger process to connect the gourmet coffee industry and coffee farmers around issues of quality and sustainability.

The main idea

The major institution in the productive chain is the dry *beneficio*, where coffee is processed from wet to dry and prepared for export. Dry *beneficios* are largely in the hands of the agro industrialists who often buy the small-scale farmer's coffee. This leaves these farmers without access to their own coffee as a finished product--the *campesnino* has never tasted the fruits of his or her own labor. This leads to multiple blind spots, in which:

1. If you don't know what price was paid for your product you don't know how the market responded to your effort.
2. If you have never tasted your product you can't be expected to improve it.
3. There can be no pride in workmanship or motivation to grow and improve when you are producing an unknown product, for an unknown buyer, at an unknown price.

Value is created by flavor and direct access to international markets. The current economic model leaves most small-scale farmers dependent on the agro industrialists, this project is a non-confrontational plan to re-craft this model and invigorate the small producer segment of the coffee production economy.

The cupping labs

The focus is flavor identification and improvement. The labs bring coffee tasting and evaluation tools into the coffee growing regions to help growers develop their craft, compete for honors, be rewarded for their attention to detail, and to reap immeasurable rewards derived from pride and workmanship. They also serve as a reception area for international coffee buyers.

The implementation process

Paul Katzeff wrote the project. After Hurricane Mitch devastated northern Nicaragua, the United States Agency for International Development funded the Cooperative League of the United States of America (CLUSA) for a series of disaster relief and economic reactivation programs. CLUSA signed a fixed price contract with Thanksgiving Coffee Company CEO, Katzeff, to implement this project.

The cooperatives' pre-project organizational capacity and ability to appropriate this project for their own development was fundamental to successful laboratory construction and coffee taster (cupper)

training. Prior to the project, each cooperative pursued its own strategic plan. The cooperatives connected to Fair Trade and/or direct purchasing relationships were already beginning quality improvement programs, while other cooperatives searched for direction amidst the growing crisis. The nine cooperatives that participated collectively represent close to 6,000 small-scale coffee farmers, 20% of the coffee farmers in Nicaragua.

Three turning points during project implementation were the formation of an advisory council, the vision trip to the USA, and uniting around a common goal of integrated quality. The advisory council was the collaborative decision-making forum for project directors and cooperative leaders. Leaders from these usually isolated cooperatives used advisory council meetings to learn as much from each other as the project staff. Their common experiences cultivated camaraderie and a shared political agenda. The vision trip exposed cooperative leaders to the roaster and importer cupping labs that evaluate their coffee. After this trip to the US, the Nicaraguans returned to their cooperatives and raised over $100,000 in additional funds to build their own labs. As the project developed so did a vision of integrated quality: quality coffee, quality of life for the producers and environmental quality.

Assessing impact

How, and to what ends, did different cooperatives and farmers appropriate this project? Do preliminary results meet the goals stated in the original project? The national impact of this project must be understood within the context of lopsided land ownership and power relations in Nicaragua's coffee sector. The low conventional coffee prices and drought contributed to the severity of Nicaragua's coffee crisis. This larger context shadowed the project's immediate results, yet I found significant impact in the following areas:

1. *A rising reputation for Nicaraguan coffee:* Conversations with coffee buyers and commentary by Coffee Review's Kenneth Davids suggest Nicaragua's growing reputation for quality coffee. Katzeff's high profile and the enthusiasm generated by the idea of knowing your own coffee provoked quality coffee initiatives throughout Nicaragua. Before the project started, the PRODECOOP cooperative had already defined a well-known flavor profile in "Sabor de las Segovias" and CECOCAFEN is using their cupping labs to develop the "Wiwilí" origin.

2. *Smallholder cooperatives and national agendas:* Shared work and the discussion forum created within the project supported leaders as they began elaborating a national cooperative agenda. Leaders in the cooperatives used this project's momentum to form alliances between cooperatives and begin a national *movement* of small-scale coffee farmers' cooperatives.

3. *Cooperative based quality improvement programs:* Impacts on cooperatives and farming communities are contingent on the ways different existing structures used this project. They are difficult to measure and uneven. All cooperatives built cupping laboratories that are comparable to those used by US-based gourmet importers and roasters. These labs are the center of their quality improvement programs. The presence of professional cupping labs will change the coffee culture in each cooperative. Thirty-two children of coffee growers learned basic cupping skills. These are valuable skills necessary to train farmers and improve coffee quality and consistency.

4. *From the cupping lab to the farm:* A participatory baseline survey of 228 farmer beneficiaries revealed that only 9% of the surveyed farmers had cupped their own coffee by July 2001. Those who had tasted their coffee did so in a makeshift lab inspired by participation in this project. In the year prior to the project, the cooperatives did not pay price differentials for top quality coffee. The average farm gate price was $0.39/lb for conventional coffee and $0.84/lb for Fair Trade certified coffee. Currently certification and direct relationships with roasters are the key determinants for price differentials. Given the combined effects of low coffee prices, weak demand for certified coffees and the drought it is not surprising that 74% of the farmers said their overall quality of life declined during the last year. This survey was conducted before the labs were completed. In the project's final two months, thousands of farmers were increasingly excited about knowing and growing quality coffee.

Next steps

Lab construction, equipment installation and coffee cupper training are steps toward improving flavor, market access and price. Now that the "tools of the trade" are in the hands of some of the small-scale farmer cooperatives, what are the current challenges and possible interventions? The best way to find out is to speak directly with the Nicaraguan cooperatives' farmers, executive directors, and the cooperative's elected leaders. Given that they cannot all speak in this space, I have identified six areas that may play important roles in the future development of this initiative

1. Assistance in developing long-term commercial relationships around ideas of quality and sustainability will help sustain cooperatives and farmers by closing the feedback loop and selling more coffee at higher prices.
2. Support for continued education, research, training and technical assistance that will help farmers understand quality coffee and apply knowledge from the cupping lab to agro-ecological management practices on the farm.
3. Programs to assist farmers and institutions develop ecologically sound diversified farming systems that simultaneously provide food and fiber to households and soil and water conservation to the surrounding community will help reduce vulnerability to future external shocks.
4. Institutional strengthening will help cooperative administrative teams and farmers understand the changing markets and respond to new demands for quality and certification.
5. Follow-up monitoring and evaluation will disaggregate the impact and causal relationships between quality coffee, certification, higher prices, improved farmer livelihoods and environmental protection.
6. Assistance and coordination will help establish and market a series of regional coffee production zones (appellations) with defined flavor profiles.

The author, Christopher Bacon, is currently a doctoral student in the Department of Environmental Studies at the University of California, Santa Cruz. His research investigates the linkages between small-scale farmer livelihoods in northern Nicaragua and sustainable coffee markets in northern California. All content is solely his responsibility. If you have additional questions, or would like a copy of the full report, he can be contacted at cbacon@cats.ucsc.edu

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" To survive the coffee crisis we need to unite as farmers and produce quality coffee."
Noel Calero Pérez 2001
Small-scale organic coffee producer and member of PROCOSER cooperative
Nueva Segovia, northern Nicaragua

"Like a potter who needs very fine clay for fine pottery, we need very fine coffee to survive against the huge corporations."
Paul Katzeff 2001
CEO of a small-scale coffee company called Thanksgiving Coffee
Mendocino, northern California

1.0 Introduction

October 24, 2001, Jinotega, a small city nestled in the mountains that produce 60% of Nicaragua's coffee, inaugurated the region's first farmer owned coffee cupping laboratory. We arrived at SOPPEXCCA's headquarters late that morning. SOPPEXCCA is a regional association of cooperatives representing 450 small-scale coffee farmers. After speeches, tastefully punctuated by local artists' song and dance, SOPPEXCCA's president and executive director led representatives from other cooperatives, farmers, and donors on a tour through their well lit, mahogany paneled, coffee tasting (cupping) laboratory. The lab is equipped with all the tools necessary to measure coffee quality in the stages from the recently harvested wet bean to the processed and export ready café oro. The lab's equipment and layout are comparable to professional tasting rooms used by US-based specialty coffee importers and roasters.

After the ceremony, coffee quality improvement project director and CEO of Thanksgiving Coffee Company, Paul Katzeff, conducted a blind coffee tasting with SOPPEXCCA's young coffee tasters (cuppers). SOPPEXCCA's head cupper is the twenty-year-old son of a local coffee farmer. He roasted and precisely weighted the coffee samples, boiled the purified water, and added exact proportions of ground beans and water to each glass. The cooperative's cuppers in-training and project's field staff tasted the coffee and recorded scores for aroma, acidity, flavor, body, and aftertaste according to the Specialty Coffee Association of America's (SCAA) cupping score sheet. Katzeff totaled the scores on a chalkboard and revealed the group's consensus on the best and worst coffees. The SOPPEXCCA's samples were competitive with specialty coffees from Hawaii, Panama, and Mexico (see appendix A). Katzeff claims that the cupping lab will allow farmers and their cooperatives to discover and improve distinctive flavor profiles and attract foreign buyers. The combination of a consistently distinctive flavors and market access will lead to higher prices, better incomes, and improved livelihood security for coffee farmers.

The purpose of this evaluation is to share the ideas and experiences behind a project that helped nine Nicaraguan coops build cupping labs and train their own staff. The United States Agency for International Development (USAID) source book states "[an] evaluation focuses on why results are or are not achieved, on unintended consequences or issues of interpretation including effectiveness, efficiency, impact, or sustainability." In this evaluation, I assume the reader has a basic knowledge of the coffee industry and familiarity with international development.

2.0 Methods

I base my observations and analysis first on two years living and working with children, coffee farmers, and women's gardening groups when I served as Peace Corps Volunteer in Pueblo Nuevo,

Nicaragua. I have been a participant and observer in the coffee quality improvement project since June 2000. During this time I maintained on-going communication with all those directly involved in project design and execution. I conducted 25 interviews with the project team, leaders of the cooperatives, and farmers. I accompanied Katzeff and the project team on five work trips. Finally, I was the principal investigator for a participatory survey of 228 of this project's farmer-beneficiaries. This survey developed benchmarks for measuring project impact and assessed vulnerability to the coffee crisis. I supplemented this empirical research with internal documents from each of the cooperatives, project communication and reports, and relevant academic literature.

3.0 Antecedents to the project

Regardless of whether or not one supports the ideology and policies that the Sandinista government advocated in the 1980s, the experience of the revolution ushered in a new group of young leaders, some of whom worked to re-invent their country. This experience affected the coffee quality improvement project's leadership. In the early years of the new government, the cooperatives' current executive directors and elected presidents worked in literacy campaigns, fought in the mountains (either for or against the government), and provided technical assistance to incipient cooperatives. Byron Corrales, the project's field director, started organizing UNAG (the National Union of Farmers and Ranchers). Currently, UNAG is Nicaragua's largest farmers' association. Many of the farmers received their land as part of the government's agrarian reform program. Cooperatives were formed, collapsed, and formed again. People from around the world were drawn to Nicaragua.

Katzeff likes to tell a story about coming to Nicaragua for the first time with dollar signs in his eyes as he plotted to represent Nicaraguan coffee to the world. He talks of his pounding heart and fear when Daniel Nuñez sends a beautiful gun-toting messenger to meet him at the plane. She leads him away from the other passengers, across the tarmac to an empty room. Posters of Latin American revolutionaries send their intimidating gaze from the room's white walls. "This is it," he thinks, "this is where it all ends". Then Daniel Nuñez enters the room and says, "Paul, I know you're a humble man but here in Nicaragua we need you to be big." Daniel opens the far door into another room where a microphone filled podium and crowded press corps anxiously await Katzeff's first press conference. Katzeff didn't come just for the money; in fact, Daniel Nuñez invited him after learning of the third specialty coffee conference's theme—Coffee, Human Rights and Third World Economies (See project timeline pg 20-21). Since that first trip Katzeff has returned to Nicaragua on over fifty occasions. He returns for coffee and inspiration. Katzeff credits Nicaragua for helping him to break down the walls between producers and consumers, and for teaching him the lessons of sustainability and humanity that he shares with the specialty coffee industry.

In addition to individual experiences and ideas, the organizations involved in the project each have their own histories and missions. A typical mission statement for a cooperative is to improve the quality of life for their producer-owners through collective marketing, negotiation, and member services. Thanksgiving Coffee has been committed to sustainability issues for over twenty years. In April of 2000, Paul Katzeff assumed the presidency of the Specialty Coffee Association of America for the second time. For several months during the project, he spoke both as President of the world's largest coffee industry association and project director. The mission of the Specialty Coffee Association of America is "To be THE recognized authority of specialty coffee, providing a common forum for the development and promotion of coffee excellence and sustainability." (SCAA 2000). These similar missions contributed to a shared vision of integrated quality, which is quality coffee, quality of life for producers, and environmental quality.

The coffee quality improvement project was part of a package of projects addressing disaster relief, economic, and agricultural reactivation after Hurricane Mitch. These projects were funded by the United States agency for International Development's (USAID) Nicaraguan Mission, which contracted with the Cooperative League of the United States of America (CLUSA) for implementation. CLUSA's mission is to "develop advance and protect cooperative enterprise." (CLUSA, 2001) USAID's new administrator, Andrew S. Natsios stated the mission for this government agency, "As a great power, I believe America's foreign assistance both serves to accomplish our foreign policy objectives, and expresses the deep humanitarian instincts of the American people." An analysis of how all these organizations and missions played out and the role of this project in US foreign policy is well beyond the scope of this evaluation. The organizations and individuals involved in this project acted in a context created by current political interests and the historical development of coffee production and commercialization in Nicaragua.

4.0 Coffee environment and development

This projected is the latest chapter in Nicaragua's long history of coffee production and commercialization. Since German immigrants brought coffee to Nicaragua in the mid 1800s, it has played a significant role in Nicaragua's economy, environment, and culture. Nicaragua's economic base has changed slowly; in the late 1990s coffee annually contributed US $140 million to the national economy and provided 200,000 agricultural jobs (Allgood 2001). Coffee also sustains the 27,450 families that own and operate small farms, and it generates the hard currency that is the economic backbone for hundreds of rural communities. Ninety five percent of Nicaragua's coffee cultivation is broadly considered "shade grown" (Rice 1996). These shade-covered farms grow coffee under the canopy of native and exotic trees. These trees and the farmers' management practices help sustain ecosystem services such as biodiversity, soil, and water conservation. Coffee is also one of Nicaragua's most popular drinks and a part of the people's daily lives and traditions.

5.0 Structure of the Nicaraguan coffee economy

Although coffee brings valued currency into Nicaragua, many coffee producing regions are plagued by poverty. Reasons for persistent rural poverty are complex and historical, but one cause relates to who controls the export channels and captures the coffee dollars. In Nicaragua, similar to the cases of El Salvador and Guatemala, the agro-export companies and the large-scale estates control most coffee export channels (Page 1997). With the notable exceptions of four cooperatives that participated in this project, very few smallholder cooperatives export directly to roasters and importers. For reasons including low productivity, lack of cohesive organization, and purposeful political exclusion, small-scale producers are under-represented in national and international coffee policymaking forums (Corrales and Katzeff, personal communication). These forums include the Nicaraguan Specialty Coffee Association, government committees and the organizations that control the two national laboratories that certify coffee exports.

Control of coffee export channels developed out of historical land ownership patterns. Nicaragua's coffee sector remains highly concentrated, six percent of the largest coffee farms account for more than 75% of coffee production and own 42% of the coffee land. Table 5-1 combines information provides a brief summary of the Nicaraguan coffee industry. Some will be surprised by the low yields on small-scale farms. However, many small-scale farmers are achieving 7-11 kg/sacs/ha after converting from *passive* to *active* organic or low-input management. Furthermore, most small-scale farmers I surveyed harvest close to ½ of the food they eat from the farm, for these households yields also include corn, beans, bananas, oranges, mangos, firewood as well as coffee.

Table 5.1 Farm size and average estimated yields

Classification by total farm size	Producers		Area		Production		Yields. 60kg sacs/Ha
	Number of farmers	%	Hectares	%	Pounds of café oro	%	
Small-scale farms <14 hectares*	28,745	94.55	52,243	57.41	348,062	24.34	3.3 (7-11)
Medium producers 15-35 hectares	1,492	4.91	28,920	31.78	562,419	39.33	9.5
Large-scale farms > 36 hectares	163	0.54	9,378	10.81	519,519	36.33	26
Total	30,400	100.0	91,000	100.0	1,430,000	100.0	

Sources: Adopted from Bandaña and Allgood, 2001 data for 1997-98 Originally from Banco Central de Nicaragua, Ministry of Agriculture and Forestry and UNICAFE. *1 hectare = 1.4 Manzana = 2.2 acres.

6.0 International coffee markets and the crisis

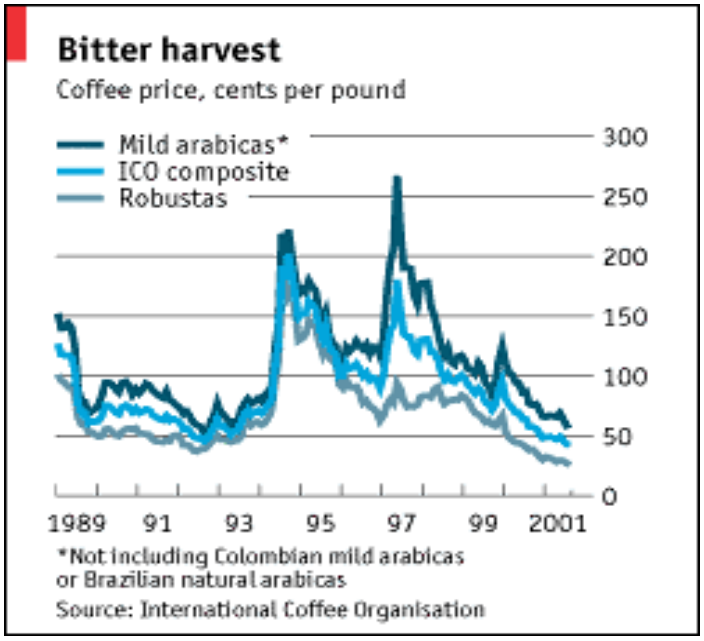
Katzeff first wrote the project in 1998, at a time when the world coffee prices were above $1.25 per pound (see timeline pg 20-21). He knew that the specialty coffee industry depended on growing and roasting quality coffee. He believed that Nicaragua had great coffee, but noted that few recognized, maintained, and paid for quality. Lacking recognition and compensation, quality declined in Nicaragua and throughout the coffee-producing world. While the global supply of quality coffee eroded, the North American specialty coffee market grew 10% per year, reaching an estimated 7.8 billion dollars by 2001 (Giovannucci 2001).

The international coffee price is set according to global supply and demand, and mediated by commodity futures trading. In the last four years low quality Vietnamese coffee exports have flooded the world market causing coffee prices to crash to their lowest levels in thirty years (Economist 2001). In real terms, these are some of the lowest prices producers have ever faced. Throughout the coffee producing world, low prices have provoked livelihood crisis for families, forced businesses failures, and weakened national economies. Nicaragua's economy is still largely dependent on agriculture, coffee accounts for an estimated 30% of the foreign currency generated from agricultural sales, 13% of the national workforce, and 5% of the GDP (Bandaña and Allgood, 2001). As the coffee prices continued to fall, three banks failed due to high investment and scandal in the coffee sector. People's vulnerability to the falling prices depends on their access to recourses such as land, credit and social support groups.

The farm worker families that live and labor on the country's largest 163 farms were severely affected by the crisis. Many of these large farms, sometimes referred to as haciendas or estates, have **monetary** estimated production costs of $0.79/lb-$0.89/lb of café[1]. This is due to dense cropping

[1] Sources: MARENA, CONCAFE. Costs of production are highly variable depending on farming practices. It is clear that large technified farms have higher dollar expenditures. Based on production technology and assumed yields the Ministry of Natural Resources (MARENA) and CONCAFE estimate production costs for a pound of exportable green coffee from $0.64/lb to $ 89/b. Many of the costs incurred on family labor farms do not show up in monetary values. The Fair Trade Labeling Organization considered costs of production including access to credit and livelihood issues such as education health, food, and shelter when they set minimum Fair Trade prices at US$ 1.26/lb for conventional coffee and $1.41/lb organics.

patterns, dependence on paid labor, and intensive chemical inputs. In 2001, the banks stopped offering credit for coffee and foreclosed on debt-ridden farms. In the mountains north of Matagalpa, banks and plantation owners stopped paying and later feeding their workers. Hungry and without work, hundreds of families abandoned the large plantations and marched down from the mountains. Families grouped together along roadsides and in public parks; here they lived in miserable conditions surviving on food donations. They demanded food and work; some marched to Managua and demanded their own land (Calero 2001, Gonzalez 2001).



The consequences of the coffee crisis were further exacerbated by the worst drought to hit Central America in decades (Gonzalez 2001). The failed crops directly affected subsistence farmers and increased food prices. Farmers, who owned their land, lived off mangos, bananas and other subsistence crops they cultivated with their coffee. Many large-scale plantations had eliminated these edible crops in favor of a denser and more profitable cropping pattern.

It is difficult the underestimate the effect of the deepening crises on the people and organizations involved in the project. One afternoon on in late July 2001 we drove down the streets in Matagalpa. Along the roadside farm-worker families were sleeping or milling about in the mud. Their temporary homes were a scrap of black plastic stretched a few feet above the bare ground. When we drove by, Maria, a Matagalpan native, who works in administration for the local cooperative, burst into tears. Children have died in these streets (Paul Rice 2001).

While some cooperatives were destabilized by low prices and debt, the cooperatives that commercialized to organic, Fair Trade, and/or directly to roasters provided higher prices to their farmers. Many of these cooperatives including SOPPEXCCA, Solidaridad and CECOCAFEN strengthened their organizations as farmers recognized the benefits of collective marketing. These cooperatives paid prices well above those offered by intermediaries and commercial houses that sell conventional coffee at market prices. The cupping labs offered farmers and their organizations tools and strategies to address coffee crisis. Before describing the project implementation process, I will review a summary of the original project.

7.0 Summary of the original "Proposal for cupping laboratories for small producer cooperatives" written and submitted by Paul Katzeff for Thanksgiving Coffee Co. to USAID.
Introduction

There are two distinct groups of "producers" in Nicaragua: (1). The small landholder and the cooperative he belongs to and (2) the large landowners and their *beneficio.* While large landowners are fully connected to international markets and organizations the small farmers have almost no access to markets and buyers. The major institution in the productive chain is the dry *beneficio*. Farmers bring their pre-processed coffee beans to the dry *beneficio* where the beans are then sorted, classified, dried, and prepared for export. Most dry *beneficios* are in the hands of the agro industrialists who

generally buy the *campesino* coffee. This leaves the small scale farmers without access to their own coffee as a finished product--the *campesino* has never tasted the fruits of his or her own labor. This leads to multiple blindness, in which:
1. If you don't know what price was paid for your product, you don't know how the market responded to your effort.
2. If you have never tasted your product, you can't be expected to improve it.
3. There can be no pride in workmanship or motivation to grow and improve when you are producing an unknown product, for an unknown buyer, at an unknown price.

Value is created by flavor and direct access to international markets. The current economic model leaves most small-scale farmers dependent on the agro industrialists, the quality improvement project is a non-confrontational plan to re-craft this model and invigorate the small producer segment of the coffee production economy.

The project's scope
Ideally, every cooperative in Nicaragua will have its own tasting lab and quality cupping room. The goal of this project is the construction of 10 coffee cupping labs. The cost is $290,000. In2002 a group of trained Nicaraguans could direct a future project to construct 40 additional labs, perhaps building to as many as a100 labs by 2003.

What the labs will do
The main focus will be flavor quality improvement; from this mission all else will follow. The labs will be an active cultural adjunct to the community. They will bring the tools of the craft into the coffee growing regions to help growers focus on their craft, compete for honors, be rewarded for their attention to detail, and to reap immeasurable rewards derived from pride and workmanship. They will also serve as a reception area for international coffee buyers.

Results and evaluation
The results of implementing this plan on a national level will be (a) improved reputation of Nicaraguan coffee (b) price increases of 5-15 cents per pound for quality. (c) easier access to foreign buyers, (d) a strengthening of the cooperative model, (e) increased national pride, (f) an opportunity to develop a appellation system modeled after the wine industry(g) a more balanced relationship between the wealthy agro-industrialists of today and the more sophisticated small producer of the future. The SCAA will evaluate for taste, CLUSA for price, and the coops will evaluate based on their sense of pride and impact in their community.

Paul's summary
Knowledge is power. . .
Power delivers cash. . .
Cash improves community. . .
Democracy is fortified under these conditions. . .

8.0 Getting started

Two months after Hurricane Mitch devastated northern Nicaragua, Thanksgiving Coffee submitted the first formal proposal to CLUSA and the USAID Mission in Nicaragua (see Timeline). USAID approved the project as part of a package of CLUSA-directed projects. Soon after approval,

CLUSA contracted a new consultant to direct their Coffee Quality Improvement Program. This consultant proposed a revision to the original project that called for three cupping labs, focused on a national cupping lab that would certify exports for gourmet markets. This same consultant sent Katzeff emails suggesting an initial event with Nicaraguan business leaders, agricultural entrepreneurs and donors in order to generate interest and more funding. The organizations and farmers that would build the laboratories were still undefined and the project could have gone in a very different direction. Katzeff marshaled all his rhetorical and political power to forcefully reject what he saw as an attempt to take over and centralize the project. He began building his own in-country project team. Later, the CLUSA director agreed that they would use the original project as the working document. Thanksgiving Coffee and CLUSA signed a fixed price contract to implement the project.

After a fiery beginning due to strong personalities in both organizations, the project moved ahead and effective working relationships developed. CLUSA stepped down from its original role as co-director and accepted a division of labor leaving the organization responsible for project oversight, reporting to USAID, coordinating visas and customs, strengthening the training program, and providing follow-up. However, tensions remained between Katzeff's dislike for supervision and CLUSA's needs for information and recognition. Katzeff believed that his own standards were higher than those required by the project. The fixed price contract and an evaluation based on deliverables and results provided an effective framework to work out these differences. The first funds were disbursed in June of 2000, which was, according to Katzeff, roughly eight months after the project was originally slated to begin.

9.0 Enrolling the cooperatives

The process of selecting the cooperatives to participate in this project was a series of political compromises that lasted throughout the first six months of the project. Originally, cooperatives were selected by the field coordinator and project director to represent all of Nicaragua's coffee producing zones. In the July of 1999, the operations director negotiated the participation of two of Nicaragua's largest and most effective small-scale farmer cooperatives. The stated criteria for cooperative selection included: potential to produce specialty coffee, fiscal responsibility, and a desire to participate in the project. The larger unions of cooperatives decided internally where to build their cupping lab(s). The field coordinator selected cooperatives in areas, such as San Juan de Rio Coco that were not regionally organized. In August 2000, when CLUSA realized that three of the proposed labs sites where in areas that could not receive project funding, these labs were asked to leave the project. By this time members of the advisory council were actively engaged and played an important role negotiating with the operations director and field coordinator the relocation of these labs.

The cooperatives pre-project organizational capacity and their ability to appropriate this project for their own development were fundamental to successful laboratory construction and cupper training. Prior to the project, each cooperative had pursued its own strategy. Some cooperatives, like CECOCAFEN and PRODECOOP, were already developing quality improvement programs, others, such as Gorrión in Yalí, seemed to be searching for direction amidst the growing crisis. The nine cooperatives that participated collectively represent close to 6,000 small-scale coffee farmers, including many of the country's best-organized and administratively capable cooperatives. Administrative capability refers to the ability to commercialize farmers' coffee to preferred markets for better prices, initiate, seek funding and implement development projects, manage paper work and inspectors for organic and Fair Trade certifications, as well as, provide their farmers with basic services including credit and technical assistance.

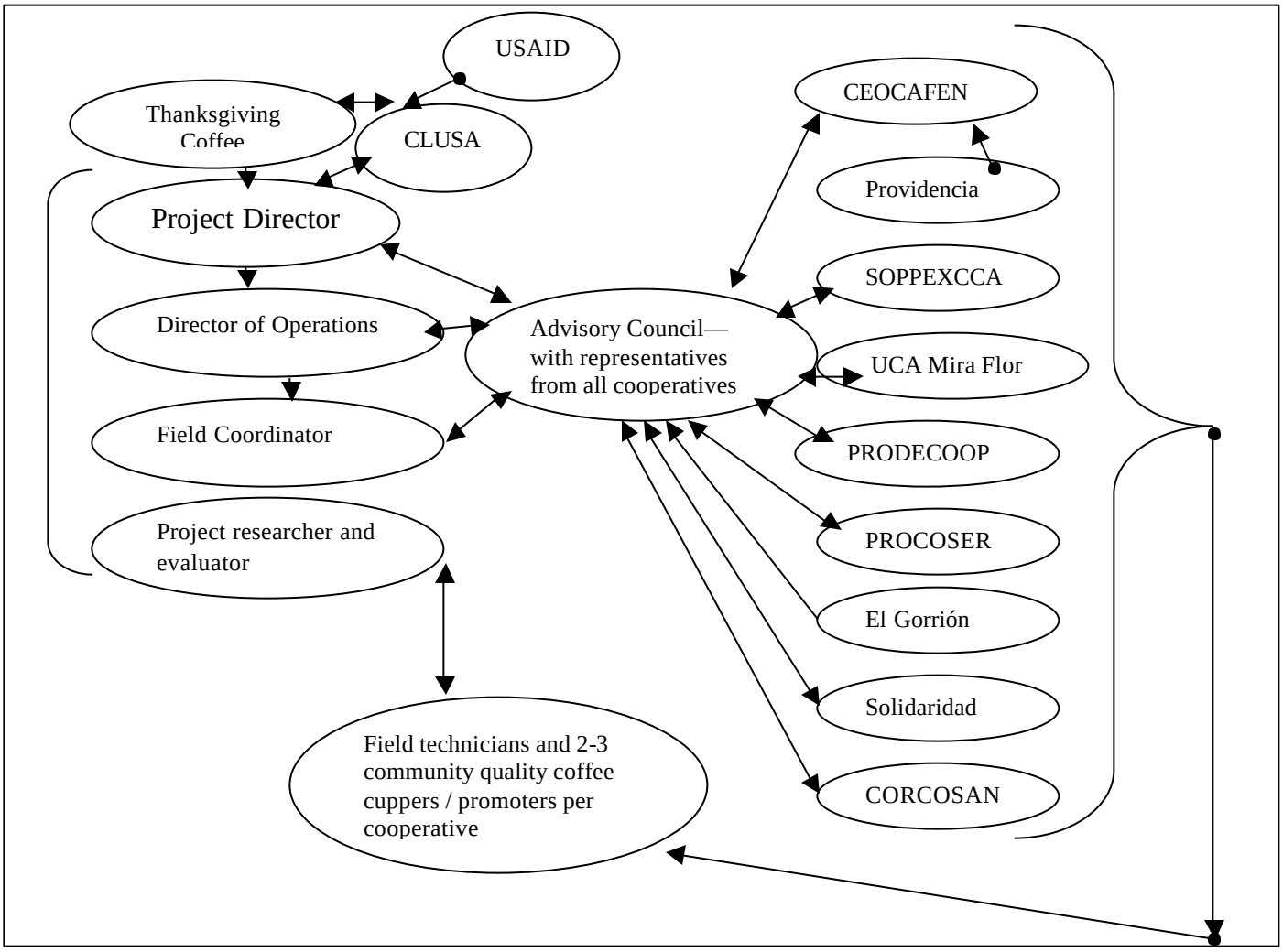
10.0 Project structure and the implementation process

The first nine sections of this report describe the context and pre-project politics before September 2000 (see Timeline pages 20-21), when project sponsored events started in Nicaragua. In this section, I describe the organizational structure that emerged to implement the project and reflect ideas of participatory development. After diagramming the key actors and briefly relating their activities, I summarize the events that shaped this project from May 2000 until the final inaugurations.

10.1 Project structure

The project structure combined organizations including the cooperatives, Thanksgiving Coffee, CLUSA, and USAID and defined new roles for those that directed, executed and evaluated. Figure 10.1 is a simplified diagram of these relationships. USAID provided funds to CLUSA, which signed a contract with Thanksgiving Coffee Company. Paul Katzeff was the project director; he hired the operations director, field coordinator, and evaluator, he promoted and "protected" the project, and delegated or made the decisions that shaped the outcomes. Nicholas Hoskins was the operations director; he managed the budget, coordinated Katzeff's field visits, participated in key decisions, and collaborated with the field director and advisory council members to successfully execute the project.

Diagram of the project structure Figure 10.1



Byron Corrales was the field coordinator; he collaborated with the operations director and advisory council to manage the daily tasks of project implementation, participated in key decisions, conducted multiple field visits to monitor and support lab construction, and organized the field technicians' training program. I was the evaluator and researcher; I participated in and observed decisions, conducted a baseline evaluation survey, provided Katzeff periodic monitoring reports, interviewed project leaders, and translated documents, meetings and speeches. The project director, operations director, field coordinator, and I shared four in-country visits and on-going communication. I have labeled this group the project team.

The advisory council was the forum for communication and collaborative decision-making. Originally formed in May 2000, the council consisted of leaders representing each participating cooperative. The operations director's participatory approach and the initiative of cooperative representatives made this forum a place for decisions, developing shared visions, and elaborating national agendas for small-scale farmers. The discussion developed during advisory council meetings consistently attracted all of the cooperatives' over committed directors and presidents. In these meetings the operations director gave each cooperative the $ 500 for the monthly salary of their field technician(s) and distributed lab equipment. These incentives helped guarantee attendance, although some key project decisions were made outside of this forum.

The cooperatives' coffee tasters and field technicians emerged as a group due to their shared work experiences, professional training, and participation in evaluation research. This group developed during travels to USA for the SCAA Conference in Miami and six cupper-training workshops. Their experience is captured in detail in the following sections. In the next sections, I describe the activities and events that shaped this project.

10.2 The vision trip

The vision trip was the advisory council's first activity together, and for many it was a transformative event (see September 2001 on the Timeline). This five-day learning experience brought leaders from each cooperative to cupping labs at the Specialty Coffee Institute's headquarters in Long Beach, Bay Area coffee importers, and Thanksgiving Coffee Company. The leaders returned to their cooperatives with the goal of designing their own version of the labs they had experienced in the US. A version that spoke the language of the international coffee tasting, but at the same time was adapted to their regions, communities, and accessible for farmer training.

The cooperatives demonstrated their enthusiasm and capacity after the vision trip. Eight of the nine cooperatives contributed significant funds to the $3000 dollars the project allocated to construct each lab. For example, Ernesto Caneles, president of the PROCOSER cooperative, spoke hardly a word during the trip, but returned to Nicaragua and built an $80,000 cupping lab, cooperative headquarters, and farmer training center in the town of El Jicaro, Nueva, Segovia. His cooperative used connections to the Danish government's development assistance program (PASA-DANIDA) and other donors to finance their project.

10.3 Advisory council meetings

The vision trip provided an experience that allowed cooperative leaders to build the relationships that became the foundation for a strong advisory council. The location of advisory council meetings rotated between the four centrally located cooperatives. This gave cooperatives a chance to host, while other leaders learned from their colleagues. An environment of friendly competition and social learning characterized the advisory council's meetings. A commitment to

quality coffee, competition, and a deep respect for Katzeff stimulated all the coops to build better labs and organize impressive inauguration ceremonies. Of course, there was also jealousy, and at times, a sense that the largest cooperatives had disproportionate power during the project negotiations. Some of the smaller cooperatives have only 50 members, while others are large cooperative associations representing close to 2000 small-scale farmers, they own a dry *beneficio* and export directly. Some had access to Fair Trade markets others did not.

The diversity in size and capability of the cooperatives led to different experiences in each lab. This mixture created an intense process of social learning as cooperative leaders were exposed to different models for organization, coffee production and processing, farmer services, and export strategies. (See Appendix B)

Internal conflicts aside, discussions between leaders led to a common agenda for the cooperatives and the future of Nicaraguan small and medium-scale coffee farmers. As early as the first meetings in May, advisory council members began defining goals of sustainability, organic certification, direct export relations, and establishing a relationship with the SCAA. By November 2000, they wrote the SCAA a letter asking to be integrated as a producing country member organization. In July and August of 2001, they began discussing by-laws to legalize their federation of cooperatives. In October of 2001, they organized a national event with 1500 farmers and presented the presidential candidates an agreement and set of recommendations to develop national policies and institutions to support Nicaraguan cooperatives.

10.4 Cupper training

Simultaneous to the advisory council's growth into a cohesive leadership group, the project facilitated the formation of a second cadre of coffee tasters and agricultural extension agents. By May of 2001, Byron Corrales, the project's field coordinator, recognized that the cooperative's field workers (cuppers funded by the project) needed additional training. The training offered in the April 2001 SCAA conference helped, but many still lacked basic cupping skills. Corrales enlisted CLUSA's quality coffee consultant to support a series of six cupper-training workshops. In addition to the head cupper, each cooperative selected young community members to learn the art and science of coffee tasting. The criteria for selecting these cuppers included youthful enthusiasm, education beyond 6th grade and, if possible, to be a child of one of the cooperative's coffee farmers. Cuppers were selected from cooperatives involved in this project and cooperatives that have formed alliances and/or contracted cupping service from the lab-owning cooperatives.

CLUSA's quality coffee consultant contracted professional cuppers from El Salvador, Guatemala, Costa Rica, and elsewhere. These trainers worked with CLUSA's two in-house cuppers to provide a series of workshops designed to develop basic cupping skills. The Danish development assistance program covered expenses for the young cuppers' travel, food, and lodging.

While the young cuppers developed their skills, from January to July of 2001, their cooperatives continued constructing the laboratories. Katzeff purchased sample roasters, duhullers, dehydrators, humidity meters, cupping glasses, coffee grinders, etc .for each lab. He used connections in the industry to find discount prices or purchase used equipment in order to send more complete sets of lab equipment. CLUSA continued to play its administrative role, approving all purchase contracts and coordinating with USAID to move the equipment through customs without taxes or long delays. The final two steps in the project implementation process were a participatory evaluation survey and inaugural ceremonies for each cupping lab.

10.5 Participatory research and evaluation

I collaborated with Corrales to coordinate the cooperatives' agricultural extension agents in a survey of 228 farmer-beneficiaries. The survey's purposes were to: 1. Develop on-farm benchmark data about quality coffee, quality of life, and environmental quality 2. Assess vulnerability to the coffee crisis 3. Share a participatory research experience with extension agents, farmers, and cooperative leaders. Sixteen cooperative representatives and extension agents attended a two-day methodological training, before they conducted interviews and farm surveys with randomly selected members of their cooperatives. I contracted GeOdigital, a data management group, to compile the data from the surveys and build a comprehensive database.

After completing the surveys and tabulating the data, we met with extension agents and cooperative leaders to discuss the study's preliminary results and plan for the information dissemination. During this final workshop, extension agents reflected on their experience. They expressed surprise at the hunger their member families were living through. A cooperative leader noted the risk that extension agents fail to communicate cupping skills and results to the farmers. Others talked about the need to address gender inequalities. After the workshop, each cooperative organized a results dissemination activity with the farmers who participated in the survey. During this activity, the farmers cupped coffee, many for the first time, and received certificates of participation.

10.6 Finishing the project and inaugurating the labs

The cooperatives finished building and installing cupping lab equipment by late September 2001. In the final phase, Katzeff and the project team spent a day at each cooperative to inaugurate the lab and conduct a final cupper training. Each cooperative invited their farmers, donor organizations, local musicians, and neighboring coffee farmers. They celebrated even as the coffee crisis deepened. In each lab a young cupper, like Jesus Maria from SOPPEXCCA, roasted the coffee samples, prepared the cupping and participated in a Katzeff led blind coffee tasting. Although the scale for assigning points was unfamiliar to many, the consistency in their scores and commentaries showed basic cupping skills and an increasingly sophisticated understanding of the relationships between market demands, flavor, and farm management practices (see Appendix A).

The day after the last inauguration, Katzeff met the executive directors of two cooperatives at their dry *benificio*. They sat around and tasted coffee together one more time. After the cupping, Thanksgiving Coffee purchased two containers for prices negotiated based on the costs of production and not the world market. The containers combined coffee from three cooperatives that worked in the project. After seeing the commitment to quality coffee in Nicaragua, Thanksgiving Coffee Company plans to double or triple the number of containers they buy, furthermore, Katzeff promises to spread his enthusiasm to the gourmet coffee industry.

The implementation process combined the flexibility one finds in grassroots development projects with the project participants' political analysis and the resources offered by CLUSA and USAID. The project team worked from offices provided by their respective jobs, used cooperatives' headquarters as mobile offices, and avoided overhead costs. The ideas and practice of project implementation often represented Katzeff's paradoxical nature: at times the businessman from the Bronx, but often the social worker from Northern California. Katzeff's combination of these attitudes and skills make him a successful leader of a socially responsible business. These skills are not unlike those required to direct a successful cooperative, one that must answer to, and serve, its members and manage the business of coffee processing and marketing.

11.0 Assessing impact

The preceding pages describe the project's context, structure, and process, now I turn to impact. Impact analysis is an assessment of the project according to its own the criteria, indicators designed by the cooperative leaders, and standard measurements of organizational performance in project execution. The first impact is the physical construction and equipment of nine of the best cupping labs anywhere in the production world. The second direct impact is the skills developed by young cuppers. The labs and training are based on the hypothesis that cupping labs will allow farmers and coops to discover and improve coffee quality and provide more direct communication and access to buyers. If these two premises are true, buyers will pay more for quality coffee and the higher prices will strengthen cooperatives and reduce poverty. This hypothetical sequence will unfold over time and space beyond the scope of this project, which officially ended in November 2001.

11.1 A rising reputation for Nicaraguan coffee?

Internationally, the goals of the labs are to help Nicaragua develop a reputation for quality coffee, attract foreign buyers, and to increase price differentials. While the final results of this will be unclear for the next 2-4 years, conversations with coffee buyers and commentary by gourmet coffee industry expert Ken Davids speak to Nicaragua's growing reputation for quality coffee (Davids 2000). Before the project started, PRODECOOP had already defined a well-known flavor profile in "Sabor de las Segovias". CECOCAFEN is using their cupping labs to launch "Wiwilí", a shade-grown, sun-dried gourmet coffee from Nicaragua's central mountains. Other cooperatives are also beginning to identify, define, and brand regional flavors. The labs are an important set of tools for developing a regional appellation model from the bottom up. Follow-up assistance, time, professional marketing, and regional coordination will be necessary to develop consistent, distinctive, and recognized flavor profiles.

The second goal is to help small-scale producers access gourmet coffee buyers. Although Katzeff brought none of the coffee buyer consultants mentioned in the original proposal, he plans to bring representatives of the SCAA and the Nation's largest importers for future visits. The vision trip and SCAA conferences also provided opportunities for cooperative leaders to build relationships with buyers. The labs' equipment and cupping procedures are part of a common coffee taster language that will facilitate more direct communication between farmers, cooperatives, and gourmet buyers. As the story of the cupping labs spreads, more buyers will arrive. The SCAA trade show in May 2002 will see two presentations referring to the Nicaraguan cupping labs, and a booth featuring small-scale farmer directed quality improvement programs.

11.2 Smallholder cooperatives and national agendas

The project's national goals include strengthening cooperative models and encouraging balanced relationships between small-scale producers and agro-industrialists. The degree to which this project helped strengthen cooperatives can be measured by the cooperatives' ability to pursue their own agendas. The advisory council's meetings and their exposure to different parts of the value chain helped cooperative leaders develop a shared vision. The vision is of higher prices paid for quality coffee and the linkages between a quality product, quality of life for the producers and environmental quality. This vision, and the identification of common interests, was the conceptual foundation that underpinned attempts to form a legal federation for the **"movement"** of sustainable coffee exporting cooperatives.

In addition to forming internal alliances and moving toward a united federation, representatives from these cooperatives elaborated a clear domestic agenda. The power of these cooperatives originates in their relationships with their members and their ability to pay farmers higher prices than the commercial houses, which are tied to conventional markets. As noted below, these higher prices appear primarily due to prior links to importers, and/or access to Fair Trade and organic markets and cannot be attributed to this project. The cooperatives also used Katzeff, who is recognized throughout Nicaragua as a leader in the coffee industry, to strengthen their position with their own farmers and in relationship to the agro-industrial elites. Low conventional coffee prices combined with high production costs, and conventional management practices further weakened large scale farmers and contributed to changing power relations (see sections 5-6).

11.3 Impacts for the cooperatives and their members

The long-term impacts on individual cooperatives, coffee growing communities, and farm families are uneven and difficult to measure. They vary according to the way the cooperative is organized and the communities' initial natural resource endowments. Natural resource endowments include microclimates, altitude, and soil quality. The following baseline assessment offers a snap-shop of current conditions for farmers affected by the project. I developed the analysis by conducting participatory surveys with 228 farmers, ten focus groups, and multiple visits to each coffee growing community and cupping laboratory. Below I will discuss impacts to quality, price, and farmer livelihoods.

The labs were intended to help create a culture of quality coffee as one step toward improving the consistency and quality of coffee exported from each cooperative and region. During multiple site visits, I always found the labs clean and well organized. The cuppers hold a deep respect for coffee, handling the beans with care, precisely weighting samples, matching the roast colors etc. Each action illustrates a growing culture of quality coffee. Except one lab located in the export *beneficio* and UCA Miraflor' mountain lab, all labs are located in the same building as the cooperatives' administrative offices (see appendix B). The presence of the labs and the practices of cupping will directly influence how the cooperatives' administrative staff thinks about quality coffee and relates to farmers and their product.

Katzeff noted that all of the thirty-two cuppers trained by the CLUSA-PASA-DANIDA-Thanksgiving collaboration had basic cupping skills and was impressed at their ability when they were tested in blind tastings. These young cuppers learned a valuable skill that could help them launch a new career. More than 15 of these cuppers are now employed in the cupping labs. While the 32 young cuppers developed new skills, only 9% of the surveyed farmers had tasted their own coffee. Most farmers that cupped their coffee did so at CECOCAFEN's dry *beneficio* SOLCAFÉ. Inspired by the project, SOLCAFÉ hired a professional cupper and set-up a temporary cupping lab in the back of their warehouse during the 2000-01 harvest season. In addition to providing detailed reports with basic cupping scores to all clients, CECOCAFEN also offered cupping sessions to farmers that solicited training.

The primary price differences reported at the farm gate are related to sales to certified markets and roasting company-cooperative purchasing contracts. The prices paid by buyers and the price structures internal to each cooperative determined the prices reported at the farm gate. All cooperatives that commercialize coffee penalize farmers for defects, but none that I observed provide clear incentives for top quality coffee.

Many cooperative general assemblies decide to use a portion of the higher prices offered by Fair Trade and organic markets to invest in infrastructure, pay past debts, provide credit, technical

assistance, support their administrative and certification costs, and to fund housing and education projects in farmer communities. These practices result in lower prices reported at the farm gate. Most farmers sell their coffee to multiple markets within the same cooperative.

Figure 11.1: Average prices reported at the farm gate for the 2000-01 harvest

Where did you sell the coffee?	Price paid per pound café oro	How long until you were fully paid?	How many farmers sold to each market?
Cooperative-direct to roaster	US $ 1.14/lb	32 days	11 farmers
Cooperative-Fair Trade[2]	US $ 0.84/lb	57 days	36 farmers
Cooperative-Organic	US $ 0.71/lb	73 days	61 farmers
Cooperative-conventional market	US $ 0.41/lb	46 days	84 farmers
Agro Export Company	US $ 0.39/lb	24 days	51 farmers
Intermediary	US $ 0.37/lb	9 days	72 farmers

Source: Participatory farmer survey conducted from July to August 2001. All farmers were members of cooperatives involved in the project.

Due to the weak demand and high quality standards for the preferred markets, many cooperatives sell close to 50% of their coffee through conventional markets. Thus, the average price received by the farmer may be significantly less then the amount paid for their top quality organic, fair trade, or roaster direct coffee. For example, the overall average price paid to the 11 farmers who belonged to the small cooperative linked directly to the roaster was $0.58/lb café oro, another 13 farmers who belonged to cooperative linked to organic and fair trade markets averaged $0.56/lb. Members of a cooperative selling only to conventional markets averaged $0.40/lb. Farm gate production costs (not including dry processing and export fees) may range from $0.64/lb-89llb of green coffee depending on assumptions.[3] These numbers provide a preliminary and conservative micro indication of the harsh economics behind the coffee crisis.

The prices in Figure 11.1 are average prices for each market reported by the farmer. These prices are received on the farm after deducting costs for dry processing and export, other costs including land, labor, and capital still must be deducted from these prices. The delay between depositing the wet coffee beans (pergamino) at the dry *beneficio* and final payment to the farmer can last months. This is because many farmers and clients own the inventory until the coffee is purchased. Farmers in this sample waited an average of 73 days before receiving all the money for their organic coffee. However, many cooperatives, especially those with long-term contracts, pay farmers for their coffee in stages, first as credit, then a percentage when they bring in wet pergamino, and finally the rest after the coffee sells. The immediate need for cash and potentially long delays are two reasons why farmers sell a small percentage of their coffee to low-paying intermediaries. Farmers and cooperatives share a disproportionate burden of the risk. If their coffee doesn't sell their a rarely, if ever, guarantees or insurance to cover the loss.

Although, it is clear that the current certified markets and direct relations are not a panacea, it is also evident that they have had significant affects on strengthening the cooperatives and supporting farmer livelihoods. In the survey, we asked 228 farmers "Is there a risk you will loose their farm this year? And If so why?" The results show that farmers who belong to cooperatives linked to alternative

[2] Although, some coffee was certified as both Fair Trade and organic, most farmers understood and thus reported that they were commercializing either Fair Trade, or organic, they did not given a single price for both certifications.

[3] Costs still based on estimates from CONCAFE AND MARENA. UNAG estimates that passively managed coffee may cost as little as $0.48/lb of café oro. Many farms are now organic simply because there are no funds to purchase inputs.

markets (fair trade, organic, direct relationships) are four times less likely to indicate a risk of loosing their farm.

In this project, the three cooperatives with the most advanced coffee quality improvement programs, CECOCAFEN, Solidaridad and PRODECOOP, have the best market access including direct export relations and/or Fair Trade, they also receive the highest prices. In each case, connections to these preferred commercial relations developed prior to, and now together with, quality improvement initiatives and organizational development.

Price is not the only indicator measuring the economic impact of quality coffee. Katzeff believes that quality coffee is sold quicker, has better yields when processed from pergamino to café oro, and brings return business. He also suggests that farmers who belong to cooperatives that don't export directly can use their labs to evaluate their own coffees' quality, processing yields, and defects, in this way they will know what the quality and yields for their coffee and can negotiate better contracts with the dry *beneficio*. If world prices continue at rock bottom levels, additional negotiating power may lead to little economic gain, unless the specialty coffee industry sets up transparent alternative trading practices to guarantee higher prices for specialty.

When I asked representatives from each cooperative to design project evaluation indicators they suggested I consider impacts on health, environment, education, and community development in addition to price and quality. Measuring quality of life is a difficult task. A small-scale farmer, from the SOPPEXCCA cooperative in Jinotega, said that, "Well being is to have health, food, education and tranquility in the family." In this, and other focus groups, farmers talked about how the low coffee prices had affected their quality of life. Their own words tell the story: a female coffee farmer from Jinotega, said "We can't buy our clothing, shoes . . . We are surviving off of bananas." Two other farmers added "[We give] insufficient management and attention to our coffee plantation." "Deterioration [of relationships] in the family." A farmer from the department of Madriz said "We have a little help, a little room to breath, with the 50% the coop buys as Fair Trade." In the survey, farmers were asked about changes to their quality of life during the last year, 74% responded that conditions were worse.

As of August 2001, this project has caused little impact on the way farmers make a living and how they make that living meaningful. This is to be expected given that the labs were still under construction during the baseline study, and the overwhelming consequences of the coffee crisis and drought. One model for potential project impact is the Solidaridad cooperative. In this small cooperative over 50% of the farmers have cupped their own coffee, they know the roaster who buys their coffee, and receive direct feedback on the quality of their coffee. These farmers are privileged with high altitude, powerful leaders, good land, and direct commercial relationships[4]. They are confident about the future and increasingly proud of the craft of coffee processing, as well as, the work of cultivating the bean. In their cupping lab they posted a copy of a letter the roaster sent praising their coffee. They know they produce quality coffee; they receive higher prices, and invest a portion of their profit in supporting the local school, health center, and environmental education.

The Solidaridad cooperative used the lab to enhance the relationships between quality coffee knowledge, production, and community development. However, Solidaridad and the community of

[4] Direct relationship is a problematic term. The ideal of a direct relationship in which the final consumer meets the farmer face to face, as people in the North America may experience at farmers' markets is almost unknown in the global coffee industry. There are some alternative trade organizations that have helped to organize direct relationships between producing and consuming communities, but the volume of coffee moved is very small compared other coffee networks. In this paper, direct relationships refer importers, roasters, and retailers forming personal and business relationships with farmer families, communities, and cooperatives.

Aranjuez benefits from high altitudes, good infrastructure, short travel distances, direct commercial relationships, and powerful leaders, who are committed to local development. Unlike the Solidaridad farmers, the majority of coffee farmers in this project don't know who buys their coffee. They have spent little time in the labs. They do not yet understand cupping. Although many farmers have more vision, hope, and pride in their work, 74% of all surveyed farmers indicated that their material conditions have deteriorated during the life of the project.

11.4 A brief sustainability analysis

Sustainable development refers to growth that satisfies the needs of the current generation without sacrificing the ability of future generations to meet their needs. In the following section, I ask a few questions to assess the project's sustainability. Will the labs continue operating after the project stops? Does the project promote environmental conservation and social development in communities where the farmers live and work? How did this project affect issues of equity and gender relations?

As of project completion, it appears that all cooperatives will continue operating their cupping labs. The cooperatives' investments in time, resources, and quality suggest that, although the funding for $500/month cupper/fieldworker salaries was terminated in October 2001, the cuppers will continue working. Many farmers are now aware of their labs, they want to know the quality of their coffee, buyers are also interested; the labs will function, even if the cuppers suffer dramatic pay cuts. The most vulnerable cooperatives are those with high debt and without certifications and direct export relationships. Further risks include funding repairs to the lab equipment, which is manufactured outside Nicaragua. However, this project leaves coops with physical tools, human skills, and no new debt. All cooperatives that participated have strengthened their organization and prospects for future growth.

In addition to conserving the natural resources that support human life, sustainable development refers to equity with future generations, and within current generations. This project strengthened the cooperatives that represent small-scale producers and in this way addressed current inequities between large and small-scale Nicaraguan coffee producers. Many of these cooperatives have programs to conserve natural resources, support local health clinics, schools, and community development. The primary impact on sustainability depends on the degree to which this project strengthened the cooperatives that direct their own sustainable development activities (see Appendix B page 2).

This project will have an important impact on the environment. As the growing agricultural frontier and illegal logging continue eliminating Nicaragua's remaining forests, coffee agroforestry systems become increasingly important for their ecosystem services. Many small-scale farmers grow coffee under the existing tree canopy. Their farms are coffee agroecosystems that resemble the native forests' ecological structure, diversity, and ecosystem function. These coffee farms provide environmental services, including soil, water and biodiversity conservation. For example, the farmers of UCA Miraflor have diverse shade trees over their coffee. These trees help conserve drinking water sources for nearby cities and provide habitat for over a 100 orchid species. Lacking a formal mechanism to compensate farmers for these services, the farmers' only payments are the food, fodder, and the prices paid for their coffee. As coffee prices fall, farmers are increasingly tempted to cut their shade trees for quick cash. Coffee buyers, even for the "sustainable coffees" segment, are primarily concerned with quality (Giovannucci 2001). Thus, to the extent that this project improves quality, and the coffee prices increase, it supports the conservation efforts of thousands of farmers.

Development interventions, especially those that empower new actors, inevitably affect gender relations. The coffee industry in both the USA and Nicaragua has historically been dominated by

masculine culture. The project team was sensitive to gender issues, trying to promote leadership roles for women and reflecting on male gender roles. The project's on-going impact on gender relations will depend on the pre-existing conditions and future programs of the cooperatives that participated. Two of the most influential representatives on the advisory council were women. These and other cooperatives have initiatives to increase female membership and create separate programs supporting gender education and women's economic development opportunities. As this project strengthened these cooperatives, it indirectly supported initiatives for more balanced gender relations. Other cooperatives, which were also strengthened by this project, appear to continue reproducing uneven gender relationships.

12.0 Thanksgiving Coffee Company as an international development contactor

In this section I assess Thanksgiving Coffee Company as a sub-contractor that directed the coffee quality improvement project. I consider the company's commitment to social responsibility, their administrative capacity, and economic efficiency. Thanksgiving Coffee's long-term commitment to sustainability includes direct relationships with coffee growing communities in Nicaragua and Mexico, organic and Fair Trade certifications, and a host of practices at their own plant in Fort Bragg, California. This history gives the organization experience and credibility.

Thanksgiving's proved itself a capable project sub-contractor. Their staff coordinated Nicaraguan experiences in the USA and multiple trips to Nicaragua. They managed the paperwork, project negotiation, and hired the in-country consultants to add the expertise necessary for project implementation. This effort was greatly enhanced by April Pojman, who is Thanksgiving's director of social and environmental policy. She handled many communications, translations, visited the labs, and edited the cuppers' manifesto. The cuppers' manifesto is a 60-page field manual that was distributed, at Thanksgiving Coffee's expense, to the 5,800 farmers that participated in the project.

I have yet to review the final budget, and thus cannot precisely assess economic efficiency. The total project cost was close to US$ 280,000. Expenses break down roughly as follows: $100,000 for equipment and building ($29,700 paid directly to cooperatives for the laboratory remodels and $70,000 in equipment). Of the other $180,000, about $30,000 was spent on Katzeff and the project team's travels, $15,000 on the advisory boards travels to the U.S, and the rest was spent in Nicaragua on salaries and expenses. Katzeff expects to retain about $10,000 to compensate Thanksgiving for his time on the project. The cooperatives and project team also used this project to leverage over $100,000 in additional funds to support laboratory remodels and training programs.

13.0 Conclusions, follow-up and future recommendations

13.1 Project Summary

This project worked with nine cooperatives to build professional cupping labs and train 32 young Nicaraguans in basic cupping skills. The cuppers' skills and the quality of the labs are the best indicators for direct project impact. The project strengthened or initiated internal quality improvement processes in each cooperative. These processes aim to train farmers in cupping their own coffee, improve flavor profiles, form direct relationships with buyers, and generate higher prices. The national impact of this project must be understood within the context of the historical development of lopsided land ownership and power relations in Nicaragua's coffee sector. Cooperatives and the project team worked during a time when a deepening coffee crisis and the rise of organic and Fair Trade markets further tested historic power relationships. These conditions and the forum created within the project helped support cooperative leaders as they began elaborating a national cooperative agenda. How the

Nicaraguan leaders use this project's momentum for the small-scale coffee farmers' cooperative *movement* remains to be seen.

In addition to describing and evaluating the project, I show the principal actors and their activities so that others working with cooperatives and coffee might learn from this experience. I believe this is neither a recipe for replication nor an isolated unique experience. Rather it is the story of a process full of paradox. The original ideas behind the project followed few of the conventional ideas of international development. Born from an industry insider and "socially responsible" CEO's vision, the project started top-down, but through implementation and the cooperatives' leadership, the process became participatory. Non-governmental agencies and government funding supported this industry-led initiative for supply side management. For cooperatives it fit with their agendas for higher prices and improved market access. In addition individuals' business interests, the project leaders shared a deep and binding commitment to social change.

This project united a founder of the SCAA, Paul Katzeff, with Byron Corrales, a founder of UNAG, Nicaragua's largest farmer's association. Unlike some non-governmental organizations that confuse their donors for their clients, the project directors and the cooperative leaders had a clear responsibility to the constituents that they were serving. It involved Nick Hoskyns, the operations director, who combined experience in activism, grassroots community development, and work as a development consultant. Hoskyns' notable cross-cultural skills and my own experience combined with sincerity from the cooperative leadership and Katzeff's direct approach created a relaxed and honest environment. In the end, the cooperatives' teamwork, effective project implementation, and leadership made those involved feel that the project exceeded all expectations.

13.2 Recommendations for follow-up and the future

Lab construction, equipment installation, and coffee cupper training are the steps toward promoting cooperative-led sustainable rural development. Now that the "tools of the trade" are in the hands of the small-scale farmers, what challenges and what kinds of interventions remain as the cooperatives work toward a vision of integrated quality? The best way to find out is to speak directly with the Nicaraguan cooperatives' farmers, executive directors, and elected leaders. Ask for a meeting with the Advisory Council. Given that they cannot all speak in this space, I have identified six areas that will likely play key roles in the future development of this initiative.

First, the cooperatives elaborated and presented an agenda for their future development to the national presidential candidates. Their goals included a domestic institute to support cooperative development, incorporating cooperative curricula at all levels of education, a national cooperative training center, reformed laws to promote cooperatives as engines of economic development, new savings and loans regulations, and more small-scale farmer representation on national decision-making councils.

Second, the cooperatives need assistance in developing the commercial relationships based around issues of quality and sustainability, through these channels cooperatives will sell more coffee at higher prices. Demand and access to Fair Trade and organic networks is not large enough to support the growing supply. Direct marketing, long-term relationships with importers and roasters, and participation in certified export channels will help earning higher prices and closing the feedback loop to improve quality. Interventions here could range from activities to grow certified coffee's demand in the US, bringing cooperative representatives to meet buyers at the specialty coffee conferences, and support for buyer trips to Nicaragua.

Third, continued education, research, training, and technical assistance are necessary to ensure that farmers understand quality coffee, and how to apply knowledge from the lab to management

practices on the farm. There are thousands of experiments that scientists and farmers can conduct to link agro-ecological farm management practices to coffee flavor and quality. Further research can investigate the role of shade coffee in the landscape and develop methods to compensate farmers for water, soil and biodiversity conservation. Programs to assist farmers and institutions develop ecologically sound diversified farming systems will help reduce vulnerability to future external shocks. Many cooperatives already have innovative programs that could use additional development and funding. Farmer-to-farmer exchanges within and between cooperatives are a powerful methodology for spreading this knowledge. The original project envisioned 100s of cupping labs around Nicaragua. Currently there are only nine professional cupping labs for Nicaragua's 28,000 small-scale farmers.

Fourth, institutional strengthening will help cooperative administrative teams and farmers develop the skills, knowledge, and programs to understand the changing market and respond to new demands for quality and certification. Although administrative capacity building will be a key component of any institutional strengthening program, it is also important to support member education programs. In a time when executive directors fly around the world and meet with CEOs of coffee companies, while coffee growers in the same union of cooperatives commute by mule and live in houses with dirt floors, it becomes increasingly important that farmers understand the basics of the global coffee market. If the cooperative general assemblies don't understand the essential components of credit, certification, and the export process they run the risk of loosing control of the administration of their own cooperative.

Fifth, follow-up monitoring and research is necessary to disaggregate the causal relationships between quality coffee, certification, improved livelihoods, and environmental protection. This research can help identify the multiple alternative coffee networks and export models that support the cooperatives' vision for integrated quality. It will also provide the coffee industry and consumers with systematic information showing the impact of purchasing coffee traded through different channels.

Sixth, the national coffee growers union (UNICAFE) and many of the coffee cooperatives are also implementing plans to develop regional flavor profiles and marketing plans for the ten or more coffee regions around the country. This initiative will require research, regional and international coordination, and government policy.

All of these tasks require a tremendous amount of work, understanding, and commitment, especially as they will occur during difficult times. Nicaraguans are an amazingly resilient people, and the cooperative members and leadership are organizing around a common vision for their future development. Quality, knowledge, and market access are powerful tools for this journey.

Time line

Date	Key Events and Activities
April 1985	Katzeff elected third president of the SCAA. Declares "Human Rights and Third World Economies" the theme for the third Specialty Coffee Conference. Daniel Nuñez invites Katzeff to Nicaragua. Katzeff begins 16+year relationship with the Nicaraguan people and coffee growers. Nicaraguan government promotes land reform and cooperatives. *World Coffee Price $ 1.47/lb.*[5]
June 1998	CLUSA sponsored Organic Coffee Conference in Nicaragua—invites Katzeff, who makes speech about coffee quality and sustainability. He writes project at the invitation of USAID officials. *World Coffee Price $1.25/lb.*
October 25-30, 1998	Hurricane Mitch blasts northern Nicaragua—10,000 people die in Central America, the US Congress and Clinton administration promise one billion dollars in assistance
December 20, 1998	First recorded formal copy of project calling for 10 cupping labs and asking for US$290,000 (math later revised to $314,000) from Thanksgiving to USAID Nicaragua
May 31 1999	Thanksgiving subcontracted by CLUSA, who submits proposal to USAID seeking Mitch restoration and economic reactivation funds *World Coffee Price $1.11/lb.*
May 31, 1999 Oct--May 2000	Ideas circulated that would centralize project into three cupping labs. Katzeff fiercely refutes these initiatives. Final contract is close to original project. Katzeff begins building his team--Nick Hoskyns as operations director and Byron Corrales as field coordinator. Nick includes PRODECOOP and CECOCAFEN and begins critical role as liaison between Byron's local knowledge and Paul's vision.
May 2000	Katzeff assumes presidency of the Specialty Coffee Association of America. The Advisory Council forms with leaders from all of the cooperatives participating in the project—Labs originally sited for all Nicaragua's major coffee producing zones. *World Coffee Price $0.94/lb.*
June 2000	Final contracts are signed; project begins with initial funds transferred to Thanksgiving Coffee. Project team hired—evaluator/researcher brought on board.
August 2000	CLUSA in-term director says that three labs in Boaco, Carrazo, and Ometepe, are in zones not affected by Mitch, and cannot be supported with project funds.
September 2000 September 13, 2000	Sept 3: Celebrate first steps of the project in Tuma - La Dalia at Cooperative Bernardino Ochoa Diaz. Agreement signed between cooperatives and Thanksgiving Coffee. **Vision Trip:** The ten representatives of the Advisory Council visit SCAA headquarters, cupping labs at importers, and roasting companies. Increasing solidarity and camaraderie between coop leaders—singing songs in van and playing baseball. Sharing landscapes and hometowns. Turning point for many as coops see how their coffee is evaluated by buyers—stakeholder buy in.

[5] Coffee prices are for arabicas and other milds for 1985 data from World Bank using constant 1994 dollars. All other prices are also in real terms from the International Coffee Organization. Prices are for one pound of export quality coffee.

October 2000	Coops designate agricultural field workers that will be chief promoters of the labs. Plan to train field workers as cuppers. Memorandum of Understanding signed between USAID and Specialty Coffee Institute to promote quality improvement and sustainability with smallholders.
November 2000	The advisory council writes a letter to SCAA speaking as the National Council of Cooperatives, Producers and Exporters of Nicaraguan Specialty Coffee they ask that their *"movement"* be integrated into the SCAA as a producing country member. Ongoing internal positioning as leaders form a legal federation for small-scale producer coops. Articulate shared vision of integrated quality.
November – December 2000	Leaders of the cooperatives design physical construction of cupping labs combining US "vision" trip with local needs. *World Coffee Price $ 0.65/lb*
January 2001	First large progress report written—Katzeff identifies purposeful lack of follow-up training and continued salaries for cuppers/fieldworkers. "If coops are sustainable, they will fill these needs". He suggests a marketing campaign around craftsmanship, tradition, and quality.
January – July 2001	Coops construction and remodel cupping labs—Katzeff purchases and ships equipment.
April 2001	SCAA Conference in Miami—decide not to build 10th lab and pay for fieldworker / cuppers attendance to SCAA conference. NGOs pay for representatives from Fair Trade cooperatives. Katzeff's SCAA presidency ends. CLUSA's appoints third director during life of project. *World Coffee Price $ 0.66/lb*
May - October 2001	Series of six cupper trainings for fieldworker/cuppers and three quality coffee promoters from each community. Workshops organized by Byron Corrales, with CLUSA contracted trainers and financial support from PASA-DANIDA. Hoskyns maintains close relationships with co-op leaders, administers funds, and facilitates alliances with other coops.
July – August 2001	Chris Bacon directs participatory evaluation survey with fieldworkers. They survey and interview 228 farmers; to generate benchmarks for understanding relationships between coffee quality, quality of life, and environmental quality, and assess vulnerability of farmers to the coffee crisis. *Coffee crisis deepens; Farm workers migrate from Tuma yLa Dalia and large plantations to cities,to beg for food and land. Central American drought increase: drought + coffee crisis = more hunger. World Coffee Price $0. 43/lb*
September – October 2001	Lab inaugurations and final trainings. Evaluation completed, follow-up plans for internet auction and continued assistance. Publish and distribute 6000 copies of cuppers manifesto to coops and farmers. All cooperatives have some coffee that could be considered specialty according to SCAA's new standards. *Coffee reaches lowest prices in last 50 years close to US $0.47/lb.*

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Appendix A. Pages 1-3

CUPPING SCORES RECORDED DURING BLIND TASTINGS AT EACH LABORATORY.

Notes: Scores are based on the following scale 9.0-10 (outstanding) 8.0-8.9 (excellent-8.0 is the minimum for specialty coffee) 7.9-7.0 (comercial grade)
6.9-6.0 (off-grade, there is some kind of error) 5.9 and below (not acceptable)
All workshops began with a score sheet (included in the cuppers manifesto) and a description of each category (aroma, acidity, floavor, body, aftertaste, balance).
We then obscured the identity of the coffees, thus creating a blind cupping. Final scores were tallied, Katzeff was the head judge, hedropped scores he deamed extreme, then rankings were caculated and the iden

Participants in the cupping included young cuppers trained by the project, the project team (Chris, Paul, Nick, Byron) and others
First time cuppers and those not trained by the project are noted with a *.

Cupping at la Gorrion cooperative in Yali, Jinotega. September 25, 2001

	Peru	Yali	Aranjuez	Procoser	Colombia	El Salvador	Costa Rica	Guate (mayan)	Soppexcca	Miraflor
Paul		9	8.5	9.2	8.5	8.1	7.7	7.9	7.8	7.8
Nick	8.8	8.5	7.9	7.9	8.9	7.9	8.4	7.9	8	6.7
Chris	9.4	8.8	8.2	8.1	6	8.1	8.7	8.3	7.4	8.8
Byron	8.2	9	8.7	8	9.3	7.9	8.1	7.3	8.5	8.2
Otoniel	7.7	9.4	8.6	8.2	8.3	8	8.2	7.7	8	8.2
Edwin Jesus	8	9.1	8	7.6	7.3	7.4		7.9	7.4	7.6
Jesus maria	8.2	9.2	8.6	8.8	8.4	8.7	9	6.3	8.4	9
Edwin Jesus	7.8	9	9	7.8	8.6	7.7	7.6	7.4	7.7	7.7
Greg *	8		8.5	8.8		8.5	8.1	6.1	8.1	
Average	8.3	9.0	8.4	8.3	8.2	8.0	8.2	7.4	7.9	8.0
primero lugar	1	5	1	1	2					
café especial	6	8	8	6	6	5	6	2	5	4
lugar sobre todo	5	1	2	3	4	8	6	10	8	7

The farmer that produced the top coffee notes that they harvested the coffee carefully, they sold their coffee for C$ 500 (about $0.37/lb).

Cupping at CECOCAFEN'S Dry Beneficio SOL-CAFÉ Matagalpa, Matagalpa September 26, 2001

	Dipilto	Yali	Guatemala	El Salvador	Wiwili	San Ramon	Canto Gallo-Nica	Colombia	Dalia	Wiwili-gourmet
Paul	8.7	9.3	8.2		8.8	7.4	7.6	7.7	8.7	8.6
Nick	6.5	8.7	7.8	8	8.1	7.8	8.7	9	8.1	8.7
Byron	8.2	8.6	8.3	8.2	8.1	8.1	8.2	8.9	7.8	7.9
Chris	9.3	8.4	8.3	8.4	8.4	8.2	8.6		8.8	8.3
Carmen	7.8	8.5	7.2	7.2	7.8	8.3	9	9	7.7	9.5
Edwin Jesus	7.5	8.2	8.4	7.5	7.9		8.7	9.2	8.4	8.9
Yubrank		7.6	7.2	6.9	6.8	7.2		7.5	7.1	7.9
Anita*	7.7	7.3	8.1	7	9.1	7.7	7.7	6.7	8.5	7.4
Jesus Maria	8.5	8.8	8.6	8	8.2	7.8	8	8.8	8	9.4
Jose Cronejo	6.9	8	7.4	7.6	8	7.3	8	8.1	7.8	7.7

Armando*	7.8	9.3	7.9	7.4	7.5	7.2	7.9	6.8	7.4	8.8
Eduardo	7.2	8.2	7.1	7.7	7.4	7.6	8.1	7.4	7.3	8.4
Average	7.8	8.4	7.9	7.6	8.0	7.7	8.2	8.1	8.0	8.5
primero lugar	1	2	0	0	1	0	0	4	0	4
café especial	4	10	6	4	7	3	8	6	6	8
lugares		2					3	3		1

Cupping at CORCOSAN cooperative, San Juan de Rio Coco, Madriz September 27, 2001

	Dipilto	**Colombia**	**Guatemala**	**San Juan-Catuai**	**Costa Rica**	**El Salvador**	**San Juan-mara**	**Yali**	**??**	**Wiwili**
Paul	8.3	6.4	8.1	8.1	8.7	7.6	6	9.4	8.7	8.9
Nick	8.6	9.4	7.8	8.3	8.4	8.6	6.9	8.2	9	9.2
Chris	8.7	7.4	8.2	7.7	8.2	8.3		7.3	8.9	8.4
Byron	8.1	8.3	8.4	7.9	8.3	8	6.8	8.7	8.2	8.7
Hermes	7	7.5	7.5	7.8	7.8	8	6	8	8	8
Jorge	7.2	7.4	8	7.8	7.6	8.4	7.6	7.8	8.2	8
Eduardo	8.1	8.6	7.6	8	8.9	7.7	7.6	8.3	8.9	8.7
Edwin Jesus	8	8.1	8.1	7.9	8.1	7.8		8.5	8.2	8.3
	8.0	7.9	8.0	7.9	8.3	8.1	6.8	8.3	8.5	8.5
Average										
primero lugar		1				1		2	2	1
café especial	6	4	5	3	6	5		6	8	8
lugares totales	5	5	5	5	4	5		3	1	2

Cupping at PROCOSER cooperative, Jicaro, Nueva Segovia October 23, 2001

	Mexico	**Colombia**	**Hawaii**	**Procoser**	**Panama**	**Procoser**	**Ethopia**	**Bolivia**	**Columbian-AA**
Paul		7.4	8.4	8.1	9	8.3	9.6	8.7	6.4
Nick	6.5	8.9	7.9	8.3	8.7	8.7	9.4	7.9	6.1
Chris	7	8.8	8.4	7.5	8.7	8.6	9.2	8.7	6.1
Byron	7.5	8.6	7.3	8.6	7.9	8	8.9	8.2	6.3
Marlon	7.5	8	7.2	7.6	7	7.4		7.6	7.4
Arlen	7.9	8.3	7.9	8.9	7.3	8.6	8.8	8.4	7.5
Marbeli	6.5	7	7.2	7.8	8.3	8.2	9.5	8.8	6
Lesbia	7.5	7	6.9	7.1	7	8.5	8.4	7.4	6.6
Manuel	7.3	8.4	8.4	8.2	8.5	7.5	9.8	8.9	7.5
Jorge	7	8.4	7.6	8.8	8	8.4	7.4	7.6	7.2
Donaldo*	4.9	7.2	7.3	7	7.4	6.6	8.6	7	4.2
Luciano	5.1	7.2	7.4	7	7.4	7	8.3	7.8	4
Wilmer	5.9	6.8	6.9	7	6.6	6.7	8	7	3.9
Efrian *	5.6	6.7	7.1	7.9	8.7	6.5	7.9	7.9	6.6
Victor	6.8	8.1	8	7.8	7.6	7	8.2	7.6	6
Average	6.6	7.8	7.6	7.8	7.9	7.7	8.7	8.0	6.1
segundo lugar				San Fernando		Suscayan			

Cupping at Soppexcca Cooperative, Jinotega, Jinotega October 24, 2001

Soppexcca	**Soppexcca**	**Costa Rica**	**Ethopia**	**Mexico**	**Colombia**	**Panama**	**Hawaii**	**defective coffee**

Paul	8.8	7.5	5	9.3	8.2	8.2	8.7	7.5	7.2
Chris	8.5	8.6	6.1	9.5	7.6	8.3	8.7	7.3	
Nick	8.4	8.6	6.9	9.2	7.7	8.1	8.6	8.8	7.4
Jonah*		7.6		9.1		7.7	7.7	7.7	7.4
Jicus maria	9	8.4	6.5	8.7	8.6	7.5	8.9	8.9	7.2
Marbely	8	7.9	6	9.4	7	8.1	8.2	8.7	7.5
Yubrank	9.1		6.7	8.4	7.2	8.4	8.7	8.4	7.8
Joan*	7.9	8		8.4	8.5	8	7.3	7.1	7
Lesbia	7	7	5.6	7	7.8	7	4.8	7.7	6.1
Ramona*	8	6.7	6.7	6.3	7.8	7	8	7.5	7
Jasmina*	7.8	7.7	7.5	8.7			6.4	7.2	6.8
Francisco	8.4	7.6	7.2	8.2	8.1	8.2	8.7	7.6	7.3
Average	8.3	7.8	6.4	8.5	7.9	7.9	7.9	7.9	7.2
segundo lugar									
prmero lugar	2	1	2	5	1		2		
café especial	8	5	2	10	5	7	8	4	
lugares totales	2			1	6	4	3	5	

Cupping at Solidaridad Cooperative, Aranjuez, Matagalpa October 25, 2001

	Aranjuez-nica	**Aranjuez**	**Aranjuez**	**Susucayan-nica**	**San Fernando**	**Hawaii**	**Panama**	**Costa Rica**
Byron	8.4	8	7.9	8	8.2	7.6	8.3	8.1
Paul	8.1	8	7.1	8.6	8.3	8.3	8.6	8.7
Chris	9.3	8.1	6.3	8.3	8.7	7.1	8.5	8.9
Nick	9.1	8.2	8.1	8	8.2	7.2	9.1	7.9
Lesbia	7.8	7.7	7.5	7.7	7.5	8.5	8.5	8.6
Marbely	8.8	7.9	8.2	8	8.1	8.2	8.3	8
Jonah*	7.9	7.4	8.3	8	8	7.3		8.4
Joan*	8.7	8.3	8.3	8.1	7.5	8.1	8.3	8.1
Chino	8.2	9	6.2	8.4		8.2	9	9.1
Fernando		8.8	7.6	8.6	7.6	8	8.7	8
Jesus Maria	8.6	9.1	7.3	8.7	8.6	8.6	8.7	9
Yubrank	8.9	8.4	7	8.3	7.7	7.6	8.9	9
Javier	8.6	7.3	7.2	8.1	8.1	7.3	8.5	8.6
Average	8.5	8.2	7.5	8.2	8.0	7.8	8.6	8.5
segundo lugar								
prmero lugar	6	2					1	6
café especial	10	9	4	12	8	7	12	12
lugares totales	1	5	8	4	6	7	3	1

Appendix B: Characterization of cooperatives and cupping laboratories. Pages 1-2

Name of cooperative or Union of cooperatives	Municipalities and departments	Total members	Production 100 lb sacs	Type of Coffee commercialized	Coop capacity and international reputation	Lab description
PRODECOOP Union of 45 member cooperatives Effective business owned by only small-scale producers	Departments of : Estelí, Madriz, Nueva Segovia	1856	32139	Fair trade, Organic Specialty, Conventional. Owns dry beneficio. exports direct	Many direct export relationships, effective admin and technical teams, international reputation for Quality and Sustainability	**Dry Benefico Lab:** quality control for exports, will hire professional cupper for 2001-2002—training beneficio manager as cupper.
CECOCAFEN Commercialization cooperative owned by 10 cooperative unions. Most small-scale farmers and a few medium sized	Departments of: Matagalpa, Jinotega	1960	30000	Fair trade, Organic Specialty, Conventional. Owns dry beneficio, exports direct	Many direct export relationships, effective admin and technical teams, growing reputation for Quality and Sustainability	**Dry Benefico Lab:** .quality control for exports and training. Contracted professional cupper for 2000-01 cycle—held some farmer trainings plans more. Provided written feedback and imperfect beans to farmers
CORCOSAN medium and small scale producers	Río San Juan, Nueva Segovia Ave altitude: 1021m*	62	14000	Conventional and specialty coffee	Sells coffee to benifico for export, some admin, building centralized wet beneficio	**Municipality Lab** production oriented, may serve other coops in municipality, extension agents as cuppers
SOPPEXCCA Association of 12 small Farmer cooperatives	Jinotega, Jinotega Ave altitude 1186m*	450	14700	Conventional, organic, fair trade and specialty coffees some direct export relations	Some direct export relationships and contracts, lacks dry benficio	**Municipality Lab** both production and export—coops staff and youth as cuppers. Remodeled offices and lab.
PROCOSER Cooperativa Small-scale producers	San Fernando* El Jícaro, Murra, Nueva Segovia Ave altitude: 1040m*	300	5420	Organic and conventional	New coop rapidly developing admin capacity, few commercial relations, good tech assist.	**Municipality Lab** Cupping lab as learning center for production. Built new training center and offices w/ lab. Extension agent and youth as cuppers.
El Gorrión Medium and small Producers	Yalí, Jinotega Ave altitude 1093m*	426	11550	Conventional and some specialty	No direct export relationships,limited admin capacity and resources, centralized wet beneficio	**Municipality Lab**. Production oriented, Cooperative leaders and staff as cuppers-can serve municipality
Solidaridad Community base cooperative	Aranjuez, Matagalpa Ave altitude 1377m*	36	1600	Songbird coffee roaster buys direct	Strong tech staff, direct export relations, effective administration	**Mountain Lab**—farmer training and quality consistency Extension agent and youth as cuppers
UCA Mira Flor Union of Cooperatives	Mira flores, Estelí Ave altitude: 1182m*	515	2640	Organic and conventional	Strong tech assistance and admin capacity—support from NGOs, emerging coffee export relations	**Mountain Lab**—focus on farmer training and quality consistency—children of coffee growers as cuppers. May have problems with electricity for lab.
La Providencia Cooperativa	Wiwilí Ave altitude 1080m	94	2500	Organic, conventional and specialty export relations through CECOCAFEN	Member of CECOCAFEN, which develops local capacity.	**Municipality Lab**. Production oriented, Cooperative leaders and staff as cuppers-remodeled offices and new building with lab.
Totales 9 cooperativas		5699	23, 710 qq oro			

Appendix B: Characterization of cooperatives and cupping laboratories. Pages 1-2

Name of cooperative or Union of cooperatives	Coffee commercialized	Number of People trained as cuppers	Estimated % of farmers that have cupped their own coffee*	Total cost of the cupping lab	Percentage of total cost paid for by funds provided by the cooperative	Cooperative projects and services in support of rural development for their members**
PRODECOOP 45 community base cooperatives	Fair trade, Organic Specialty, Conventional Owns dry beneficio exports direct	1	7%			Credit, wet beneficio and infrastructure development, housing, drought assistance, technical assistance and natural resources, organic certification , women's groups . etc. . ..
CECOCAFEN 10 unions of cooperatives	Fair trade, Organic Specialty, Conventional Owns dry beneficio exports direct	1	15%			Credit, wet beneficio and infrastructure development, housing, drought assistance, technical assistance and natural resources, women's groups, education scholarship initiative etc. . .
CORCOSAN Medium and small producers	Conventional and specialty coffee	2	0%			Credit, technical assistance and natural resource management, transition to organic
SOPPEXCCA Association of 12 small Farmer cooperatives	Conventional, organic, fair trade and specialty coffees some direct export relations	3	0%			Credit, technical assistance and natural resource management, women's' groups, transition to organic, education projects
PROCOSER Cooperativa small-scale producers	Organic and conventional	3	0%			Credit, technical assistance and natural resource management, organic certification, farmer training center
El Gorrión Medium and small producers	Conventional and some specialty	3	0%			Credit, technical assistance, centralized wet beneficio
Solidaridad Community base cooperative	Songbird coffee roaster buys direct	2	55%			Credit, technical assistance and natural resource management, supports local school and health center
UCA M ira Flor Union of Cooperatives	Organic and conventional	5	43%			Credit, technical assistance natural resource management, environmental education, youth development, women's groups organic certification, wet beneficios and etc. .
La Providencia Cooperativa	Organic, conventional and specialty	1	0%			Credit, wet beneficio and infrastructure development, housing, technical assistance and natural resources, organic certification and other projects
Cuppers trained in coops that will contract labs for services or may form future relations unions w/ project coops:		12 Total 32				

*These results represent data from the survey. In each cooperative from 14-25 farmers were randomly sampled. Samples are representative for the smaller cooperatives. The survey was conducted from July-August 2001 at a time when the cupping labs were still under construction.

**Projects noted here are based on data presented in internal working documents and strategic plans for each individual cooperatives as well as interviews and personal observation.

Appendix C. Nicaraguan map and approximate cupping lab locations

Legend to identify the cooperatives:

- CECOCAFEN
- Solideridad
- La Provedencia
- SOPPEXCCA
- Gorrion
- UCA Mira Flor
- PRODECOOP
- CORCOSAN
- PROCOSER