

# **The Case of Café Ambiental, SPC: A New Business Model for a Nicaraguan Fair Trade Cooperative**

Quan Le<sup>\*</sup>, Braden Wild, Susan Jackels  
Seattle University

---

\* Corresponding author: Quan Le, Department of Economics, Albers School of Business and Economics, Seattle University, 901 12<sup>th</sup> Ave, Seattle, WA 98122, Tel.: 206-296-5737, Email: lequ@seattleu.edu.

## **Abstract**

The global coffee crisis in the early 2000's had a devastating effect on Nicaraguan coffee producers. In response, cooperatives were formed with the purpose of supporting the communities as they survived the crisis and moved toward coffee quality improvement for access to global specialty markets. Usually, humanitarian support agencies work with existing cooperatives, but in this case Catholic Relief Services embarked on a project to support over 300 of the poorest coffee producers in the Matagalpa in their initiation of CECOSEM MAC cooperative. This report describes how the process of forming a social enterprise introduced the Seattle University students to CECOSEM MAC and revealed inadequacies in the fair trade and organic coffee export model. The innovative solution to this problem is to offer the producers a premium above fair trade and organic price and pay them up front. In addition, the supply chain was simplified and shortened that enabled the business to return another 12 % of the sale price directly to the producers and 27% to an educational fund to support the children. This unique combination of educational focus, fulfilling community needs, and the empowerment of students has created a successful model that has transferrable potential to other educational institutions.

The global coffee crisis in 2002-2003 had a significant devastation on coffee growers in Nicaragua. As the international price of coffee beans collapsed and dramatically dropped, many farmers had to abandon their farms. In response to the coffee crisis, Catholic Relief Services (CRS) in Nicaragua distributed food to families dependent on coffee production. This emergency relief response evolved into a longer-term ongoing CRS development project focused on helping Nicaraguan farmers escape the coffee crisis. This was to be accomplished through creating a cooperative, diversifying small-scale farming, improving and maintaining coffee quality standards, supporting farmers in obtaining organic and fair trade certifications, and developing access and linkages to specialty coffee markets in the United States.

In 2003, CRS initiated a Fair Trade Campaign in the United States aimed at creating a market for an “alternative system of international trade rooted in right relationships – relationships that respect human dignity, promote economic justice and cultivate global solidarity” (CRS, 2009). To help the poorest farmers connect with the new market, CRS worked with local Nicaraguan partners, funded by USAID, to help the farmers create a new cooperative, CECOSEMAC (Central de Cooperativas de Servicios Múltiples Aroma del Café, translated Aroma of Coffee Multiple Services Central Cooperative), a second-tier cooperative comprised of six local cooperatives and over 300 farms. This was a significant effort since the coffee producers had not previously organized and had no managerial experience. They also farmed by subsistence methods to yield quantity for the commodity market and had no experience improving quality for the fair trade specialty market. After eight years and nearly two million dollars in support from CRS, USAID and Caritas Matagalpa, CECOSEMAC is a strong, independent second-tier cooperative with over 368 members, many of whom have made it through the trials of fair trade and organic certification. At present, thirteen years later after much development effort and

many projects, CECOSEM MAC's coffee quality has improved from commodity (70's) to specialty coffee, 82-84 on a one hundred point scale (SCA). But, despite of all the effort, certifications, quality improvement, organization, and access to markets, CECOSEM MAC producers sell only a small fraction of approximately 20% of their product on the fair trade Market and must sell the rest at the conventional or local markets.

For nearly a decade and a half, Seattle University students and faculty have partnered with the Universidad Centroamericana in Managua (UCA Managua) to work with the more than 300 smallholder farmers who eventually became CECOSEM MAC. This case report describes the journey in which faculty and students have accompanied the farmers to hear their questions and make them their own and, in response to the needs of the producers, apply their expertise to develop projects related to the optimization of the fermentation of coffee and improving quality in the coffee, the design of a treatment plant for coffee wastewater, and the creation of a business plan to access the US specialty coffee markets.

Seattle University and Susan Jackels' involvement in the Nicaraguan coffee crisis came about through the 2001 and 2002 meetings of an international academic association of chemists from Jesuit universities called ISJACHEM, the International Jesuit Association of Chemistry and Chemical Engineering Universities and Schools. For the past thirteen years her research has focused on questions of interest to economically disadvantaged coffee producers of Nicaragua. Jackels and her many collaborators, including Charles Jackels of the University of Washington Bothell, Carlos Vallejos of UCA Managua, Michael Marsolek of the Civil and Environmental Engineering Department, Seattle University, CRS and many Nicaraguan coffee farmer cooperative partners, and not least, over thirty American and Nicaraguan students have put their scientific expertise in service to answer questions and develop methods for the Nicaraguan

coffee producers. Projects have featured basic science studies of coffee fermentation (Jackels and Jackels, 2005), controlled fermentation studies (Jackels, et al, 2006), development of a kit to assist farmers in optimal fermentation (Jackels and Jackels, 2006), and designed and built coffee wastewater treatment facilities designed for small farms (Marsolek, et al, 2012). Over the same period, CECOSEM MAC was formed and the relationship between the Jackels and their students and collaborators at the UCA Managua and CECOSEM MAC strengthened (Jackels, et al, 2010). The most exciting aspect of the journey with the farmers of CECOSEM MAC is that over the last 13 years their coffee has improved from commodity level to specialty grade coffee. While we do not take any credit for this improvement, the farmers do acknowledge that our belief in their capability and our encouragement has made a difference for them.

As the quality of coffee continued to improve, Susan Jackels collaborated with Quan Le, a development economist in the Albers School of Business and Economics of Seattle University to develop a business and marketing plan to import coffee from CECOSEM MAC for sale at Seattle University and in the community. Quan Le and the Global Business Club successfully ran a Fair Trade Universities and Colleges Campaign and Seattle University was designated as the first Fair Trade University in the Pacific Northwest in 2014. Followed by a successful campaign, Café Ambiental, SPC (Environmental Coffee) was established. It is the first student created and run social enterprise at Seattle University led by Braden Wild, an economics and international business student. Susan Jackels, Quan Le and Braden Wild travelled with students to Matagalpa in 2015 and 2017 to join with faculty and students of UCA Managua to conduct two impact evaluations on the fair trade coffee sector in Nicaragua as experienced by the coffee producers of CECOSEM MAC and to work directly with the cooperatives to learn about the challenges that farmers face and support them to find the ways to solve the problems. We first give the

background about the fair trade coffee industry in Nicaragua and then the results of our investigations and solutions to improve the coffee marketing and sales and, ultimately, the livelihoods of the coffee farm families.

The coffee industry in Nicaragua employs about 332,000 persons organized into 44 thousand coffee producers, equivalent to 15% of the labor force and 54% of the agricultural sector (USDA Foreign Agricultural Service, 2015). About 97% of the coffee producers are small-scale farmers and is mostly concentrated in the North Central Region in Jinotega, Matagalpa and Nueva Segovia with total cultivated area of about 126 thousand hectares. Nicaragua has the lowest average yields in Central America, averaging to about 11 bags (or 660 kg) per hectare (USDA Foreign Agricultural Service, 2015). Nicaragua's total coffee production was 1,941,000 (60 kg bags), of which coffee exports accounted for 1,732,000 bags in 2013-14 (International Coffee Organization, 2015). In 2014, there were 33 producer organizations with fair trade certification in Nicaragua (Fairtrade International, 2015, p.159). The country ranked number 4 in the top 10 countries fair trade production capacity in the world, producing 32,000 MT of FT coffee (ibid, p.79), or about 27.5% of total coffee production. Of all the fair trade certified coffee producers in Latin America, Nicaragua is the poorest country with real GDP per capita in 2014 of \$1,782 (World Bank). Nicaragua confronts many challenges in dealing with the efficiency of redistribution of wealth through fair trade certification from bean to cup. Nicaragua ranked number 4 in top 10 countries in Latin America and the Caribbean with 28,200 fair trade farmers and workers or 9% of total in the region (Fairtrade International, 2015, p.157). Nicaragua also ranked number 7 in top 10 fair trade premium receiving countries in Latin America and the Caribbean in 2013-14 with €3,265,400 (ibid, p. 158), or equivalent to \$4,375,755 using the

exchange rate in 2014. In other words, each fair trade farmer or worker received on average about \$155.17 in premium annually, a relatively small amount to help improve their livelihoods.

Although fair trade certification does not require farmers to produce organic coffee, Fairtrade Labelling Organizations International (FLO) and other organizations encourage farmers to work towards this practice because it has multiple potentially environmental benefits. Organic coffee in Nicaragua represents only 4-5% of its exports (Valkila, 2009), or between 69,280-86,600 bags of organic coffee in 2013-14. Organic yields for small-scale farmers were on average 329 kg/ha reported in Valkila's study, about half of the average coffee yields in Nicaragua reported by USDA mentioned above. For every 300 kg/ha of organic coffee produced, low-intensity farmers received \$172/ha in 2005 and \$60/ha more in 2008 compared to conventional coffee prices (Valkila, 2009). The author concluded that this additional money is not enough to support farmers to intensify or expand their organic coffee production given that conventional farming has better yields than organic coffee. In addition, during the transition period from conventional to organic farmers do not receive organic price premiums. Another challenge is that selling coffee in the conventional markets farmers immediately receive their payments, while in the fair trade organic markets farmers get their payments in stages with final payments received several months after the finalization of the coffee sale. In order to pay for the hired workers and for household expenses after harvesting season, farmers have to take out loans from their cooperatives at the interest rates of 18-22%/year, compared to the annual interest of 11% financed by export companies in the conventional markets (Valkila, 2009). Because of this delay in payments and high interest rates many fair trade and organic certified farmers sell their coffee in the conventional markets. Fairtrade International reported that only 35% of certified coffee was sold in the fair trade markets (2013, p. 46).

Working closely with small-scale farmers, we discovered similar challenges facing of CECOSEM MAC. Café Ambiental, SPC is determined to support the farmers' entry into the specialty coffee markets. CECOSEM MAC received its fair trade and organic certification in 2006. Currently, the farmers in the cooperatives produce 80% conventional coffee and 20% fair trade organic coffee. On average, organic coffee yields 7 bags/ha compared to conventional coffee yields of 12 bags/ha. In 2015, we learned from our fieldwork that only 25 producers were in the process of transitioning from conventional to organic coffee due to high cost of investment and lower yield. In addition, CECOSEM MAC farmers are not paid up front for the portion of coffee they manage to sell on the fair trade organic markets, and are often paid below a livable wage and this gives little to no room to improve quality through capital investment. As a result, in the 2017 harvesting season they had to take out a loan at an interest rate of 24%/year to pay for living expenses and workers.

Twenty percent of CECOSEM MAC's coffee beans are above 82 points, yet the average farmer we interviewed receives only \$0.67 per pound for specialty fair trade certified organic coffee that after roasting would sell for \$14-\$17 per pound in the Seattle area. Confronting with this inequality between the producers and the consumers, Braden Wild and a group of students started a social enterprise to create a new model for doing business with coffee producers in Nicaragua, particularly with CECOSEM MAC. Café Ambiental is a coffee wholesaler that sells fair trade organic coffee directly from CECOSEM MAC and returns all profits minus needed working capital back to the farmers. For every 12 ounces bag sold for \$12.95, Café Ambiental returns \$1.60 directly back to the farmers and \$3.50 go to a scholarship fund to support the children of the coffee farmers.

This business model centers on the economic empowerment of the farmers, providing 65% of revenues generated from selling wholesale coffee directly back to the farmers it works with. To date we have generated over \$10,000 in annual sales on campus with plans to expand into regional colleges and universities. The company has employed four paid interns working on the project with over 15-20 students actively contributing to the project at any one time across class projects, marketing and social media campaigns, educational efforts and school outreach. We have successfully started selling to some of the biggest retailers in wholesale Bon Appétit Management Company and Follett Corporation, and partnered with titans of the coffee industry such as Zev Siegl and Jim Reynolds, two of the original founders of Starbucks Corporation. The project was recognized by the Association to Advance Collegiate Schools of Business for most innovative project in a local context (AACSB).

As a social enterprise, our central mission focused on furthering our educational mission for both the children of the farmers and the students involved in the project. We have established a scholarship fund for this special endeavor in support of CECOSEMAC children. Each time we return to Nicaragua to conduct an impact evaluation we reassess where the educational funding should be used and have the most impact based on feedback directly from the children and wives of the farmers we interviewed, centering their needs and subscribing to subsidiarity in our practices. We have funded 100 children the school supplies they needed to stay in school in academic year 2015-16, and in academic year 2016-17 funded 5,200 bus trips to get 70 students to the centralized middle school for the region that otherwise was too expensive and inaccessible to these secondary students walking 2+ hours in each direction.

Our business model goes against the traditional practices of the coffee industry, we buy directly from farmers at the price expressed as needed for a living wage and not paying just one

or two farmers that produce exceptional coffee but from across the cooperatives. This is because our coffee is a mix from different farms and cooperatives. Our supply chain is drastically collapsed with 3 intermediary steps (CECOCEMAC, importer and roaster) compared to traditional models using 7 intermediaries between the coffee growers and consumers (CRS, 2009) passing on saving of fewer middlemen directly to the farmers and the consumers. This is achieved by leveraging partial freight shipping, centralized contract storage and roasting and distribution using third party logistics managers to make the process simple, streamlined and able to expand and grow. Another critical component to our success is the decision to incorporate as a registered business entity in Washington State that many student groups have failed to do or give students enough autonomy to function independently on their own campus. This unique combination of educational focus, fulfilling a community need through partnership with the farmers in Nicaragua, and the empowerment of students to start a business, which has allowed us to be a successful model that has a transferable potential to other colleges and universities utilizing similar structure and objective.

In conclusion, this case report describes how the thirteen year relationship between Nicaraguan coffee farmer producers and Seattle University/UCA Managua has responded to the questions and needs of the farmer/producers as they organized to form CECOSEM, improved their coffee and worked toward entry into the fair trade organic specialty market. While much needs to be done in order for CECOSEM farms to realize the benefits of fair trade organic coffee production, the social enterprise started by Seattle University students presents a business model that has great potential and is demonstrating that it can take significant steps toward fulfilling needs that improve lives of CECOSEM farm families.

## References

- Association to Advance Collegiate Schools of Business (AACSB). Retrieved from <[http://www.aacsb.edu/blog/2016/april/business-schools-driving-impact-through-local-context?utm\\_source=HighRoads%20Solutions&utm\\_medium=Email&utm\\_campaign=HighRoads%20All%20Emails](http://www.aacsb.edu/blog/2016/april/business-schools-driving-impact-through-local-context?utm_source=HighRoads%20Solutions&utm_medium=Email&utm_campaign=HighRoads%20All%20Emails)> Accessed on 4 April 2017.
- Catholic Relief Services. (2009). *Fair trade fund support of Nicaraguan coffee farmers: A case study*. Baltimore, MD.
- Fairtrade International. (2013). *Monitoring the Scope and Benefits of Fair Trade, Fifth Edition*. Retrieved from <[https://www.fairtrade.net/fileadmin/user\\_upload/content/2009/resources/2013-Fairtrade-Monitoring-Scope-Benefits\\_web.pdf](https://www.fairtrade.net/fileadmin/user_upload/content/2009/resources/2013-Fairtrade-Monitoring-Scope-Benefits_web.pdf)> Accessed on 4 April 2017.
- Fairtrade International. (2015). *Monitoring the Scope and Benefits of Fair Trade, Seventh Edition*. Retrieved from: <[https://www.fairtrade.net/fileadmin/user\\_upload/content/2009/resources/2015-Monitoring\\_and\\_Impact\\_Report\\_web.pdf](https://www.fairtrade.net/fileadmin/user_upload/content/2009/resources/2015-Monitoring_and_Impact_Report_web.pdf)> Accessed on 4 April 2017.
- International Coffee Organization. (2015). *Coffee Trade Statistics*.
- Jackels, C., & Jackels, S. (2006). Coffee fermentation kit and method. *U.S. Patent Application No. US20060204620, published September 14, 2006*. Washington, DC.: U.S. Patent and Trademark Office.
- Jackels, S. C., & Jackels, C. F. (2005). Characterization of the coffee mucilage fermentation process using chemical indicators: A field study in Nicaragua. *Journal of Food Science, 70*, C321-C325.
- Jackels, S., Jackels, C., Vallejos, C., Kleven, S., Rivas, R., & Fraser-Dauphinee, S. (2006). Control of the coffee fermentation process and quality of resulting roasted coffee: Studies in the field laboratory and on small farms in Nicaragua during the 2005-06 harvest. *Proceedings of the 21<sup>st</sup> meeting of the International Association of Coffee Science*, Montpellier, France.
- Jackels, S., Lopez, C., Jackels, C., Rivas, R., Kleven, S., Fraser-Dauphinee, S., & Vallejos, C. (2010). Successful experiences in research between the University of Central America Managua, Seattle University, and coffee farmers of Matagalpa, Nicaragua. In Aleman, F., Medrano, H., Norgren, A., Reyes, A., & Scheinberg, S. (Eds.), *Innovations in Nicaraguan Universities*. Managua, Nicaragua: Consejo Nacional De Universidades.
- Marsolek, M. D., Cummings, P., Alcantara, J. T., Wynne, M., Quintero, L., Vallejos, C., ... Jackels, S. C. (2012). Wastewater treatment for a coffee processing mill in Nicaragua: A service-learning design project. *International Journal of Service Learning in Engineering, 7*(1), 67-92.
- Specialty Coffee Association of America (SCA). Specialty Coffee Score. Retrieved from <<http://www.scaa.org/?page=resources&d=cupping-protocols>> Accessed on 4 April 2017.
- USDA Foreign Agricultural Service. (2015). *Nicaragua Annual Coffee Report* prepared by Jimmy Bolaños. Global Agricultural Information Network.
- Valkila, J. (2009). Fair trade organic coffee production in Nicaragua – sustainable development or a poverty trap? *Ecological Economics, 68*(12), 3018-3025.
- World Bank. World Development Indicators. Retrieved from <<http://databank.worldbank.org>> Accessed on 4 April 2017.