

#### Introduction

The story of the SCA white papers begins with the Millennium Development Goals (MDGs) ratified by the United Nations in the year 2000. These eight goals were designed to serve as a global, collective agenda for sustainability, and they were simultaneously ambitious and broad – for example, "Eradicate Extreme Poverty and Hunger" was number one. The Specialty Coffee Association of America became an official signatory of the MDGs in 2005 and the organization enlisted the support of the volunteer leaders in its Sustainability Committee, which later became the Sustainability Council, to realize the potential of its commitment. In 2012, the Council embarked upon a project to write a series of papers on these global sustainability themes directed at the membership of the association and the broader coffee community. Each of these critical issue briefs, or white papers, would frame an issue, explain the relevance of the issue to coffee, and offer case studies and recommendations on the role of industry actors ranging from coffee producers to baristas, and even coffee drinkers.

Between 2012 and 2016, volunteers collaborated to write papers on five themes: food security, gender equality, farmworker inclusion, water security, and climate change. The SCAA published each paper upon its completion and they have been available as free, downloadable resources ever since, so it's not surprising to find references to them across the specialty coffee industry – from articles to lectures at events. The launch of the Sustainability Center within the unified Specialty Coffee Association in 2017 presented an opportunity to share the knowledge contained within these papers with a larger and more diverse audience, so in 2018 we are republishing the papers. The second edition of each paper will correct errors to the first and, where relevant, reflect changes in nomenclature (e.g., the name of a company or a place, or the title of an individual). Here in the introduction, we will comment on the evolution of the coffee industry's thinking and actions on the issue discussed in the paper.

A Blueprint to End Hunger in the Coffeelands was the first of the white papers to be completed and the only one published before the eight MDGs adopted by the United Nations in 2000 were replaced by 17 Sustainable Development Goals (SDGs) in 2015. The now-familiar structure for the papers – framing the issue, explaining its relevance to coffee, offering recommendations, and presenting case studies – was established by this food security white paper, and at times the language and tone feel rough compared to the papers that followed. The case studies and recommendations, on the other hand, are just as compelling as they were upon its original publication in 2013 because of the state of the commodity futures price for coffee, which dropped below US\$1.00 in August 2018 for the first time since 2006. Coffee farmers and farmer organizations are using every communication platform available to them to repeat what they have been telling industry, governments, and civil society for years: that when farmers don't profit from coffee production, they are forced to spend their meager earnings satisfying the basic needs of their households. After buying food, they may have nothing left to invest in maintaining their farms, much less in growing more, better-tasting coffee. We hear this message from around the world, but the abandonment of coffee farms and the hollowing-out of communities of coffee growers is occurring fastest in Mesoamerica, among the very families whose experiences form the foundation for this paper on food security.

The connection between the effects of the commodity futures price for coffee on farm profitability and household food security might not be immediately obvious, but these two issues are inextricably linked in the pursuit of coffee sector sustainability.

In recent years, industry has responded to reports that coffee farming isn't profitable by investing in trainings to increase production efficiency and yields per hectare. While this strategy is effective for some farms and its benefit to industry – in the form of more coffee – is tangible and immediate, higher volumes often come with higher production costs. A high-efficiency strategy may also increase a producer's dependence on coffee production for their income without offering any protection from the volatility of the global futures market. Resilient coffee supply chains will depend on our being able to offer stable alternatives, including alternative sources of income.

The recommendations in this paper and the supporting case studies all prioritize long-term resilience, but they have also delivered short-term returns: since the first edition of the paper, Pueblo a Pueblo's organic school gardens program has continued to grow – the gardens yielded 4337 pounds of produce last year and the organization has added an additional youth empowerment component that trains young people in garden management and planning. The Café y Miel network founded by Food 4 Farmers is flourishing with the support of not only coffee industry partners but also Glory Bee, a honey and natural products company which trained 25 farmers in beekeeping in 2017. After the Harvest, the film Green Mountain Coffee Roasters (now Keurig Dr Pepper) supported, inspired a group of coffee roasters and the SCA to found the Coalition for Coffee Communities, which began its collective work funding a food security project in Jinotega, Nicaragua and subsequently invested in a landscape assessment in the region to better understand the challenges facing coffee farmers and industry's role in addressing them. The Roya Recovery Project concluded, but some of the companies that came together to fund the initiative in 2013 are sustaining partners for World Coffee Research, which published a manual for leaf rust prevention in 2016 and continues to fund research on different strategies to prevent and control rust, as well as to develop coffee varieties resistant to the fungus. Each of these initiatives has been a success in its own right, and with market prices languishing at their current levels, anyone with a stake in coffee's future would be wise to evaluate the relative urgency of productivity increases and income stabilization.

The UN replaced its eight Millennium Development Goals with 17 Sustainable Development Goals (SDGs) in 2015. The SDGs are more specific than the previous set of goals, but progress is predicated on recognizing their interdependence. We cannot hope to advance in food security without understanding the economic, social, and environmental obstacles facing households of coffee producers, nor can we address any community, anywhere in the world, in isolation. In our events, our education, and our research, the Specialty Coffee Association will continue to support and promote work being done by industry stakeholders to advance food security and we will continue to share our own progress.

Thank you for downloading this paper, pursuing food security in specialty coffee wherever you are, and for supporting the SCA's commitment to make coffee better.

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**Specialty Coffee Association** 



#### Summary

Hunger takes an enormous toll on the world's coffee growers. Food insecurity in coffee-producing communities is inconsistent with the specialty coffee industry's commitment to sustainable livelihoods and threatens the viability of the specialty coffee industry for the future. While hunger and food insecurity are complicated issues, there are immediate opportunities for all stakeholders in the specialty coffee industry to get involved and take action to help end hunger in the coffeelands.

This paper, developed by volunteers for the SCA Sustainability Center, provides an overview of hunger and food insecurity in the specialty coffee industry and outlines recommendations for solving the problem with the participation of all industry partners.



#### **Understanding the Problem**

#### Hunger & Food Insecurity: A Global Problem

Hunger and food insecurity constitute a complex global development dilemma, as it is estimated that 842 million people suffer from chronic hunger worldwide (FAO, 2013). While food security has numerous definitions, in the context of this paper it can be understood as the dilemma that households face when they lack access to a diet that is nutritious in terms of both quality and quantity of food. While it is widely believed that hunger is a result of a globally insufficient food supply, the problem is actually a product of poverty and inequality. As studies have noted, the world produces ample food to feed everyone a sufficient diet (Caswell, 2012; Kremen et al., 2012).

The existing empirical studies that examine hunger and food security specifically among coffee growers are heavily concentrated in Latin America, although it is undoubtedly an issue among growers in Africa and Asia, as well. For example, Sub-Saharan Africa suffers the highest rates of hunger in the world with roughly one quarter of the population suffering from malnutrition (FAO, 2013). Studies of coffee growers in Central America have revealed that a significant percentage of farmers experience food insecurity at some point during the harvest cycle each year.

## How Coffee Growing Households Experience Hunger

Hunger and malnutrition in coffee growing regions are seasonal crises that typically occur during the rainy season, the food planting season, or the early months of the harvest season (Caswell, 2012). Since most coffee growing households receive only one annual paycheck for their crop, they face the difficulty of distributing that lump sum throughout the following year to meet all of their household needs until the next harvest. The income that farmers earn from coffee is often less than their annual spending needs, and unfortunately, this is true even among farmers who receive price premiums for fair trade or organic certifications (Bacon, 2008; Méndez, 2010; Beauchelt, 2011; Beauchelt, 2012).

Farmers are often pressured to make difficult decisions about how to allocate their coffee income between shelter, food, and the farm investments required for the next year's harvest. Additionally, they may have debt, education and healthcare expenses. In the face of such income scarcity, spending on food is often compromised, and farmers annually confront a situation where they can no longer afford to feed their families regular, healthy meals. In extreme situations, coffee producing families run out of savings & are forced to choose between food and shelter. In Latin America, some rural dwellers have termed these periods of food scarcity "los meses flacos," which translates to "the thin months." It is challenging to identify a single cause of hunger among coffee growing communities since farmers are vulnerable in a variety of ways: in addition to their scarce, seasonal income, price fluctuations in the

commodity futures market for coffee are beyond their control but impact their livelihoods enormously. Like all farmers, coffee producers also face other substantial challenges, including unfavorable weather conditions, pests, and disease outbreaks.

Given the risks of relying solely on coffee to provide income for the entire household, smallholder farmers often grow other crops for household consumption that complement their coffee production. However, the additional food production is often not sufficient to hedge against the risks to their coffee income and it is rarely enough to support families through "the thin months," even when coffee yields and prices are favorable (Bacon et al., 2008; Morris et al., 2013).

The vulnerabilities affecting coffee farmers also extend beyond the economic and agricultural risks outlined above - most coffee producing countries suffer from "institutional voids," or gaps in market ecosystems that prevent businesses from thriving. These voids often include weak infrastructure, legislative systems, and governance, poor access to and/or quality of education, and restricted access to finance, and all of these factors play a fundamental role in preventing rural smallholders from advancing out of poverty.

## This Problem Impacts the Whole Specialty Coffee Industry

Malnutrition is one of the leading causes of death and disease among children worldwide (Pelletier, 1994) and is responsible for compromising both physical and cognitive development among affected individuals. Achieving adequate nutrition is especially critical during early childhood, as children who do not receive enough calories or sufficient nutrients experience growth stunting, a condition that prevents them from ever reaching their full height potential as adults. Malnourished children also grow up with lowered reasoning ability and perceptualspatial functioning skills (Whaley, et. al., 2003; Grantham-McGregor, 1995). They also tend to have poorer school grades than their well-nourished peers and be less attentive, and they may even be unresponsive to play behavior.

The negative impact of malnutrition does not stop with the individual - it also takes a devastating toll on community welfare. High rates of malnutrition translate into educational losses in learning and school performance, lowered work productivity, and higher health costs (The World Bank, 2006). This means that in coffee growing communities, farmers, pickers, and their children miss out on reaching their full education potential, a recipe for entrenching farm families in generational poverty. It also means that smallholders and laborers regularly suffer nutrition-related illnesses, which leads to lowered productivity in the fields and higher household expenditure on personal healthcare.

Given that coffee production is a physically demanding endeavor, it is not difficult to imagine the setbacks that result from a chronically malnourished workforce. In addition, the effects of climate change disrupt both coffee harvests and subsistence agriculture, which exacerbates food insecurity.



#### **Framing Solutions**

Food insecurity in coffee-growing regions is a complicated issue that requires integrated, multi-stakeholder solutions creating structural change (Caswell et al., 2012). Achieving this change will require additional empirical research to develop an enhanced understanding of the problem, particularly in African and Asian coffee growing communities where less research has occurred. Industry awareness of poor food security among coffee farmers has steadily increased in visibility over recent years in Latin America, in large part thanks to research funded by Green Mountain Coffee Roasters and executed by a consortium including the University of Vermont and the Center for Tropical Agriculture. In response to compelling evidence of widespread food insecurity, multiple organizations have risen to the challenge of fighting hunger by launching projects that not only address various components of the issue, but also provide channels for coffee professionals to get involved in driving positive outcomes. These include CoffeeKids, Catholic Relief Services, Food 4 Farmers, and Pueblo a Pueblo among others. The existing hungerrelated research promotes solutions to ending hunger in the coffeelands based on improved trade relationships, increased investment, and creative community development projects (Bacon, 2008). In terms of relationships, fair trade and direct trade models have generated several important benefits, however they have not yet proven to be capable of eliminating poverty and hunger from affecting coffee growers (Bacon, 2008; Méndez, 2010;

Beauchelt, 2011; Beauchelt, 2012). For community development, a wide variety of stakeholders have become engaged in supporting livelihoods diversification projects, which most often include the provision of technical assistance for subsistence cropping and food storage, as well as finding income generating market opportunities for new products. Some of the non-governmental organizations (NGOs) that implement food security projects include Coffee Kids, Save the Children, Catholic Relief Services, Food 4 Farmers, Heifer International, Mercy Corps, CII-ASDENIC, the Community Agroecology Network (CAN), Pueblo a Pueblo, and the Coffee Trust.

While eliminating hunger from coffee regions will require long term work and significant changes, (Caswell, 2012), the following recommendations provide immediate and actionable steps appropriate for all industry stakeholders to get involved in taking a stand against hunger. The recommendations are taken from the publication, "Food Security and Smallholder Coffee Production: Current Issues and Future Directions," which were documented by Caswell, et al., 2012. Each of the following recommendations includes a case example to illustrate its effectiveness in practice.

## Providing Farmers with Adequate Support and Technical Assistance to Maximize Food Production Potential and Attain Balanced Nutrition

Organizations that have launched projects targeting alternative livelihood strategies have focused on helping small-scale farmers diversify their farming to grow additional food for family consumption. In Central America, most coffee farmers already reserve land for subsistence agriculture and produce close to half of the food consumed in the household (Bacon, 2008). These farmers tend to produce only staple beans and maize, which is not enough to feed the household throughout the year. Two themes are important here. First, technical assistance and access to sustainable inputs is important to reduce the risk of crop loss and increase yields of the substance crops. Second, when farmers plant more fruit trees (Bacon et al., forthcoming) or diversify their subsistence cropping through growing vegetables in addition to beans and corn, they are likely to be less sensitive to the thin months and enjoy a more nutritionally balanced diet throughout the year. (Morris, 2013) In addition to diversifying crops, farming households can significantly benefit from technical improvements in food storage techniques. Post-harvest crop loss is a significant challenge, but it can be addressed through modest investments in storage infrastructure.

#### Community development initiatives that exemplify this recommendation:

**Construct** silos to protect staple grains from spoiling due to moisture or rodents.

**Plant** fruit trees that provide a harvest during the lean months and offer an alternate source of income.

**Introduce** new crops to farm plots and train farmers on how to prepare them in meals.

**Provide** farmers with animals which provide additional sources of protein, other food products, and manure to enrich compost.

# Pueblo a Pueblo's Organic School Garden Impacts Rural Coffee-Growing Communities in Guatemala

Pueblo a Pueblo is one of many NGOs implementing rural food security solutions within the specialty coffee industry, with its geographic focus in Latin America generally and specifically in coffee-growing mountain regions of Guatemala.

As recently as 2011, many of the children who attended schools in rural villages near Santiago Atitlan were surviving on one meal a day. Their parents, many of whom worked on coffee farms, were not growing any of their own food.

As a response Pueblo a Pueblo used industry funding to initiate its first pilot garden in the rural community of Panabaj. Using land donated by the Cole Family Foundation, Pueblo a Pueblo coordinated clearing the area, hiring a project technician, installing irrigation, and introducing the first group of students to the garden for a hands-on learning experience.

The organic school garden quickly expanded to multiple schools and became a tool for enriching the curriculum and life of the school community. Parents participated by clearing rocks, trees, and brush to place vegetable beds, composting bins, and rainwater and trash collection bins in each school.

In 2013, students used more than 58 pounds of organically grown produce in their school lunches.

The garden curriculum is fully integrated into the school day and teaches students how their choices about food affect their health, the environment, and their communities. In addition to a vacation garden camp program for students, the Organic School Gardens hosts a teacher training program for educators from municipal schools around the area who want to begin or further develop food security and garden education programs in their schools.

Today, the school gardens are thriving in 6 schools and growing more than 38 varieties of seasonal vegetables, herbs, flowers, and fruit trees. A robust corps of parent volunteers generously supports the project, which has reached more than 1,000 primary school students, who often tell their teachers that what they like most about school is the time they spend in the school gardens.

**To Get Involved, Visit:** bit.ly/PuebloaPuebloGardens

Supporting Livelihood Diversification So That Coffee Growers Have Multiple Sources of Income and Food Other Than Coffee

The term livelihoods "comprises people, their capabilities, and their means of living, including food, income, and assets" (Chambers and Conway, 1991). Diversifying subsistence food production for household consumption, as highlighted in Recommendation #1, is one important strategy for supporting coffee farmer livelihoods, and strengthening alternative sources of income is another. This typically takes the form of finding or creating market opportunities for non-coffee products for example, selling excess food staples or vegetable produce to local farmers' markets or establishing new markets. Many livelihoods diversification projects focus on training coffee growers in beekeeping and animal husbandry activities, the high-value products from which farmers can then sell to local markets.

## Food 4 Farmers Promotes Beekeeping Among Coffee Communities in Latin America

By affording an additional income opportunity for coffee-growing families, beekeeping represents a promising alternative livelihood strategy to survive through "the thin months" of seasonal hunger. The NGO, Food 4 Farmers provides useful information to prospective beekeepers through its community of practice – Cafe y Miel – to directly support coffee cooperatives and other growers' organizations in Latin America with information, connections, resources, and real-time support to help them launch commercial beekeeping operations.

Honeybees thrive in coffee-growing regions where farms contain an extensive variety of plants, which offer excellent habitat and pollination opportunities. Coffee flowers produce sugary, high quality nectar, and bees actually improve coffee berry ripening, size and uniformity with their cross-pollination. Unlike rearing typical farm animals, beekeeping does not require much land or land ownership, making the trade a more versatile income.

**To Get Involved, Visit:** bit.ly/food4farmers

## Increasing Industry Awareness and Action to Address Food Insecurity in Coffee Regions

Efforts to raise awareness about food security in the coffeelands have made progress over the last decade, but the momentum must continue if the industry is to contribute meaningfully to progress toward food security.

To date, coffee industry actors have primarily taken initiative through corporate social responsibility projects and investments in suppliers, by creating more direct and supportive trade relationships between suppliers and buyers, and by funding NGOs to implement producer-capacity-strengthening projects. Recognizing and evaluating the effectiveness of these approaches is critical to achieving greater impact in the future.

## After the Harvest Film Draws Industry Attention to "The Thin Months"

After the Harvest: Fighting Hunger in the Coffeelands is a short film created to educate the coffee industry on the issue of hunger and food security within the coffee supply chain. The film was provoked by a study published by the Center for Tropical Agriculture (CIAT) in 2007, which highlighted the severity of the food security problem during "the thin months." In response, Optic Nerve Productions took up the filmmaking project with funding help of The Coffee Trust, and traveled from Mexico to Nicaragua interviewing smallholders throughout the journey. The film brings the day-to-day challenges of the thin months to life in the voices of coffee farmers, and shares the successes of creative projects that have been established to eliminate this annual period of food insecurity. After the Harvest premiered in 2011 and is publicly available for online viewing.

To Watch the Film or Learn More
About After the Harvest, Visit:
bit.ly/aftertheharvest

#### Developing Multi-Stakeholder, Long-Term Initiatives

Creating long-term, sustainable solutions to the food security dilemma will require all industry stakeholders. This includes, first and foremost, coffee growers, laborers, and producer organizations (cooperative groups), but interventions must also include active participation from coffee actors on the demand side of the value chain, who are highly influential due to their power in the trade relationship. Finally, local, national, and international governments and NGOs, plus other relevant community groups and civil society, have critical roles in driving positive outcomes.

The Roya Recovery Project Mobilizes Multiple Stakeholders to Combat Roya & Protect Coffee Yields and Livelihoods

Coffee leaf rust, or roya, is a notorious fungus in the coffee industry that had a devastating impact on Mesoamerican coffee farms between 2012 and 2014, threatening the livelihoods and food security of smallholder farmers who were already economically vulnerable.

In response, Sustainable Harvest Coffee Importers launched a multi-stakeholder disaster relief effort, developing tools and training material to bring best practices to the rural coffee sector to better manage the disease. Sustainable Harvest built a website, royarecoveryproject.org, to provide pertinent information, tools, and discussion to coffee producers and other supply chain actors, and they hosted two rust-focused events in Central America in 2013 to accelerate discussion, disseminate training, and build solutions among multiple stakeholders.

Early donors to the Roya Recovery Project included Café Moto, Café Mystique, Green Mountain Coffee Roasters, and Progreso. The toolkit to assist farmers in combatting coffee leaf rust includes the input from expert groups including Anacafe, Cenicafe, Comsa, El Valle, IHCAFE and FNC.

To Learn More About The Roya
Recovery Project or To Get
Involved, Visit:
royarecoveryproject.org

## Encouraging and Supporting Research That Contributes Timely Empirical Evidence

The availability of robust and reliable data covering the dynamics of hunger among coffee growers is critical to ensuring the effectiveness and credibility of food security interventions. The current research, which focuses on smallholders in Mesoamerica, provides a good basis for understanding the problem. However, additional research is needed: in other coffee-growing regions, across a long time horizon, and in the context of coffee price and production changes.

Organizations leading food security projects within coffee communities should develop systems for measuring baseline data (meaning the food security situation prior to intervention) along with the impact of their intervention (meaning quantifying project outputs over time). It is especially helpful if these evaluative measures include comparison groups that are unaffected by the intervention. Independent university research that is eventually published in peer-reviewed journals offers the highest standard, and while such research requires significant investment, the payoff from ensuring that the implemented solutions are effective in creating change is worthwhile.

#### Summary of Studies that have Generated Empirical Data on Food Insecurity in Coffee Regions

Region Studied	Number of Households	Study Type / Research Date	% Experiencing Food Insecurity During the Year	Reference
Nicaragua, Mexico, Guatemala, El Salvador	469	Stratified survey 2004/05	63%	Méndez, VE et al, 2010
Northern Nicaragua	177	Participatory Action Research (focus groups, surveys, and long-term case study), 2006	69%	Bacon, CM et al, 2008
Mexico, Nicaragua, Guatemala	179	Household level surveys & interviews (unpublished), 2006-07	Mexico: 31%, Nicaragua: 44%, Guatemala: 61%	Fujisaka, S (CIAT), 2007
Western El Salvador	29	Semi-structured interviews, 2008	97%	Morris, K, 2013
Northern Nicaragua	256	Stratified survey and household interviews, focus groups, anthropometric measures (unpublished), 2009/10	82%	Bacon, CM et al; unpublished
Northern Nicaragua	87	Household surveys and interviews stratified by participation in a food security initiative, 2009	100%	Pino, M, unpublished
Pico Duarte Region, Dominican Republic	41	Participatory Action Research, 2011	82.9%	Gross, L., 2011

The aforementioned studies represent the body of research that has been collected to date on food insecurity among coffee growers. These studies have demonstrated that hunger is a pressing issue for a majority

of coffee growers in Mesoamerica and have played a key role in informing food security interventions. To learn more, please see the recommended reading and works cited at the end of this document.

### Final Remarks on Ending Hunger

The Specialty Coffee Industry is uniquely placed to take a stance against hunger and food insecurity among coffee-growing households.

#### Coffee Importers, Exporters & Roasters

- Negotiate contracts with farmers that hedge against extreme price fluctuations
- Provide financing for coffee-grower-led food security initiatives
- Invest in further research and experimentation to innovate solutions

#### Coffee Retailers & Baristas

- Convene customers, suppliers, and experts for a deeper conversation about sustainability challenges facing coffee-growing communities
- Highlight organizations implementing projects to end hunger

#### Recommended Reading

Coffee Farmer Welfare in Nicaragua, Mexico, and Guatemala Author: S. Fujisaka. Publisher/research sponsor: CIAT. Year: 2007. slideshare.net/AfterTheHarvestorg/ciat-07-final-project-report-7206907

A Brief Understanding of Hunger and its Resolution Author: D. Giovannucci. Publisher: COSA. Year: 2009 papers.ssrn.com/sol3/papers.cfm?abstract\_id=1549043

Will "We" Achieve the Millennium Development Goals with Small-Scale Coffee Growers and Their Cooperatives? A Case Study Evaluating Fair Trade and Organic Coffee Networks in Northern Nicaragua

Authors: C. Bacon, V. E. Mendez, M. Flores, and M. Brown. Publisher: Center for Agroecology and Sustainable Food Systems. Year: 2008.

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Colombia Coffee Sector Study

Author: D. Giovannucci et al. Publisher/research sponsor: World Bank. Year: 2002 papers.ssrn.com/sol3/papers.cfm?abstract\_id=996138

Effects of Fair Trade and Organic Certifications on Small-scale Coffee Farmer Households in Central America and Mexico

Authors: V.E. Mendez et al. Publisher: Renewable Agriculture and Food Systems (volume 25, issue 3). Year: 2010.

uvm.edu/~agroecol/MendezVEEtAl\_EffectsFT&OrganicCoffeeHouseholdsMesoamerica\_10.pdf

Food Security and Smallholder Coffee Production: Current Issues and Future Directions Authors: M. Caswell, V.E. Méndez and C. Bacon. Publisher: Agroecology and Rural Livelihoods Group,

University of Vermont. Year: 2012.

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