

From the Farmer Series

Honduras – The Great Coffee Comeback



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When thinking about the most impactful coffee producing countries of the world, the coffee giants, such as Brazil and Vietnam, are usually the first to come to mind. Honduras, however, is often forgotten or underestimated. However, Honduras ranks first in Central America, third in Latin America, and sixth globally in coffee exports by volume, according to the USDA, with production levels steadily increasing since the outbreak of roya, the coffee leaf rust disease, in 2012-2013. In addition to the impressive export and production levels, it is the country's remarkable productivity that set it apart from most other producing countries in the world.

Fruitful Fields

Honduras has the highest coffee production per capita in the world, according to data compiled by the Honduras Association of Coffee Exporters (ADECAFEH). Over the past 15 years, yields have increased from 10 bags per hectare to 18.8 bags per hectare.

The reasons for Honduras' productivity are multifaceted. Nelson Omar Fúnez, Technical Manager of the Honduran Coffee Institute (IHCAFE), credits farms, fertilization and management." He measures productivity in a unit called a "manzana," which is approximately 7,000 square meters. According to Fúnez, the average productivity in Honduras is 19 bags of 46 kg / manzana. "We have around 400,000 manzanas of coffee planted throughout the country, so we have the potential to improve our productivity to 40 bags/Maz and be able to produce more than 15 million bags." In the next 10-20 years, he estimates that,

Country	Bags per capita
Honduras	0.62
Brazil	0.27
Vietnam	0.30
Colombia	0.26
Indonesia	0.03

without increasing coffee area, Honduras can produce up to 16 million bags with exports totaling around 14 million bags.

An interview was conducted at coffee producer Tomas Sosa Calderón's home in Aradas, San Jerónimo, Comayagua, Honduras. Calderón owns 23.5 coffee hectares at an altitude between 1100 and 1650

meters above sea level, distributed as: El aguacate (5.6 hectares), Quebrada de Leche (3.5 Hectares), Buenos Aires (4.8 Hectares), El Sinaí (5.6 Hectares), La Labranza (2 Hectares) and El Nance (2 Hectares). Production during the 2015-2016 harvest was an approximated 500 bags of green coffee and estimates are that for the 2016-2017 harvest, production will rise to 700 bags of green coffee. At this time his productivity is at 21.5 bags of green coffee/hectare.

PRODUCTION AND YIELD
2000 - 2015



source: ADECAFEH



He noted that productivity has been so successful in Honduras because coffee has the ability to grow in the majority of the country's land; there is also ample technical support from institutions involved in coffee cultivation.

Oscar Daniel Ramirez owns a 14-hectare farm in El Paraíso, southeast of the capital Tegucigalpa. He expects to produce 138 69-kg bags for the 2016-2017 crop, with productivity around 13.8 bags/hectare. "The increase in production per capita is due to the high density of coffee trees on my farm," says Ramirez.

In a poll of ten other coffee producers throughout Honduras, with farms ranging in size from 1.4 to 35 hectares, all are expected to see production increases for the current crop.

"Productivity is so high because we produce coffee all over Honduras," says Valentin Turcios Yanes, owner of La Escondida farm in La Paz. "It's the best product we can produce in Honduras, it's the best source of revenue, it creates jobs and currency influx. It's not like it is profitable, but it helps surviving." Jose Samuel Ramos

Sosa, owner of El Pacayal farm, also in La Paz, attributes high productivity to the recommended application of fertilizers after soil analysis and the cultivation of new varieties.

"It's the relation between productivity and the population index," says José Anael Guevara Ramirez, owner of Las Barreras farm in Lempira.

Roya Recovery

While the outbreak of the disease, at one time, had decimated the country's coffee crop, the astounding recovery has solidified Honduras' place as a major coffee producer.

High market prices in the years before the outbreak triggered new plantings as farmers looked for ways to increase profits. Production was growing at a pace of around 15% before the outbreak and, in 2011-2012, Honduras achieved a record crop, leaving plants tired and strained. The condition of the trees going into the next cycle was compounded with hot and humid weather conditions, leaving the perfect conditions for roya growth.

The disease spread over 80,000 hectares, killing at least 36,000 hectares of the country's 274,000 hectares of total coffee area. While the impact was, in fact, devastating, it could have been much worse had the rust-resistant varieties of IHCAFE 90, Lempira, and Parainema not have been present in around 29% of coffee farms when the disease hit Honduras, which limited loss to around 13%.

Mr. Tomas Sosa's farms were affected by the coffee leaf rust as the coffee varieties in his plantations were once not resistant to the disease. As a control measure, he decided to renovate them with rust resistant varieties, with the renovation taking between one and three years, so most of the trees have not yet reached their highest production level, the reason why he expects his production per hectare to rise.

Oscar Daniel Ramirez's farm in El Paraíso was also affected by leaf rust, as he had planted the yellow catuaia variety of coffee trees, which were not resistant to the

disease. After the outbreak, it was necessary for him to replant with a different variety. Now, most of his trees are around 4 years old, and still in the development period. “In two years, I hope to have a record harvest,” he says.

The renewal of farms came as a result of the outbreak, with the new trees just now being harvested for the first time. “The re-planting of trees to replace the old ones; and new areas planted began three years ago,” according to the USDA. “Those trees are starting to produce; and are part of the coffee harvest in the forecast year. The numbers of bearing trees will grow due to the process of renovation of plantations and new coffee areas. The non-bearing trees will have the opportunity to grow if good agricultural practices are implemented; and weather conditions are favorable.” New trees meant more resistant varieties of coffee being planted, currently almost 70% of the coffee trees in Honduras are now resistant. Additionally, 65% of plantations are less than 9 years old.

Roya was very regional for Honduras, with some areas completely destroyed while others remained unaffected. Below is a survey of 10 producers throughout Honduras and their experience with the disease.

Producer's name	Farm	Location	Size in ha	Was your farm ever damaged by roya?	Farm renovation data
José Anael Guevara Ramírez	Las Barreras	Azacualpa, San Marcos de Caiquin, Lempira, Honduras.	6.3	The whole farm was damaged. I fought by alternating cultures, by applying etological control, and using chemicals with fungicides.	Renovated a small part of the farm. The rest was managed through shade management. The new trees are 2 years old. They have not reached maximum yield yet.
José Asunción Rivera Pérez	Fuente de Agua Viva	San Cristobal, La Campa, Lempira, Honduras.	1.4	No problem of Roya	The variety was resistant
Manix Jose Galvez Lemus	San Jose	Los Ranchos, Santa Rita, Copan	28	50 hectares damaged.	I planted new trees 3.5 years ago, which haven't reached yet their full capacity
Noe Edgardo Rosa Alvarenga	L a Victoria	Londres, Copan	35	21 hectares damaged.	I planted new trees of the lempira variety. The trees are 3 years old and produce at maximum capacity
Salomon Hernandez Ayala	San Isidro	Los Ranchos, Santa Rita, Copan	35	25 hectares damaged.	I replanted everything 4 years ago
Priscila Amador	Jaquelinne	Los Planes, Trojes, El Paraíso	7.7	1.4 hectares of catuai varietal was damaged. I applied fungicides but couldn't control the disease. In the end, it did not produce anymore coffee.	Yes this 1.4 ha is renovated. Trees are about 3 years-old and maybe could produce more



Producer's name	Farm	Location	Size in ha	Was your farm ever damaged by roya?	Farm renovation data
Marlon Esteban Molina	Las Nuves	San Agustin, Trojes, El Paraiso	23.1	5.6 hectares of Catuai and Pacas damaged. I applied fungicides but couldn't control the disease	All trees were renovated. Trees are about 3 years-old and produce good amount of fruit
Florentino Mendoza Argueta	Vista Hermosa	San Isidro, Santa Ana, La Paz	10.15	4 hectares were damaged. I fought with fitosanitary products, and agriculture controls like pruning, shade management, applying recommendations of fertilizers, applying organic matters and white washing	No renovation. I planted a new 3 hectares in 2015, and am thinking about planting 3 more this year
Valentin Turcios Yanes	La Escondida	Guanizales, Marcarla, La Paz	2.45	1.5 hectares damaged. I controlled through fumigation and good agricultural practice: pruning and fumigation, fertilizing granules and foliar, organic matter, and cleaning the soil	In 2014, about 0.3 hectares were renovated. Not yet at full productivity
Jose Samuel Ramos Sosa	El Pacayal	Planes, Cabañas, La Paz	2.1	0.3 hectares were damaged. I pruned, fumigated with Amistar Xtra, Alto 10SL, and more fertilizers. I couldn't eradicate it, but could control it at least	I renovated, but didn't do total pruning / cutting the whole tree out. Not really producing totally

Producers in Honduras bounced back quickly; many even replanted more trees than they had lost as a result of the outbreak. A rally in coffee prices in February 2014 just further fueled incentive. These new trees were higher yielding, and producers were now getting more coffee from each tree; a major factor in the improvement of productivity country-wide.

Money Talks

Profits to the producer vary greatly from year to year. While some years producers can be profitable, other years their costs of production rise greatly, minimizing

their income. ADECAFEH studies show that over the past 10 years the average producer has made \$2665 per year in farm labor, \$3300 per year in "profits," and \$5965 per year total income. This would not be enough to cover the cost of replanting and proper agricultural practices and prevention management. Fortunately, Honduras has been the focus of numerous programs and the recipient of significant investments that have allowed the coffee industry to rebuild.



The United States Department of Agriculture (USDA) has the largest coffee project in Honduras, which is implemented by TechnoServe (2012-2017). The USDA describes the project as focusing on “all aspects of the coffee value chain: production, processing, post-harvest and marketing of coffee in five departments which represent about 60 percent of total coffee production in the country.” According to TechnoServe, after four crop cycles, bean farmers increased their productivity by an average of 24.3 percent, which has enabled them to substantially increase their income. In addition, 80 agreements of commercialization were signed by government entities and producers, benefiting more than 1,000 bean farmers. Coffee growers have seen an average productivity increase of 30 percent and have increased their coffee revenues by approximately 60 percent as a result of market linkages facilitated by the project. In the 2015-2016 season, coffee producer organizations signed marketing agreements with two major exporters, and coffee sale volumes more than tripled to reach 5 million kilograms, directly benefitting more than 6,000 small-scale producers.

Numerous other projects, including aid from private institutions, have resulted in a total investment of around USD \$250 million for the coffee sector over the last 10 years. Most recently, the Central American Bank for Economic Integration (CABEI) and the Government of the Republic of China (Taiwan) signed a US\$3.5 million cooperation agreement in the framework of the “Pilot Program to Attend Economically-Challenged Central Americans Affected by Coffee Pests and to Promote Sustainable Coffee Production Practices in the Region.” The agreement was signed by Taiwanese Ambassador to Honduras, Mr. Joseph Kuo, on behalf of the Ministry of Foreign Affairs of Taiwan (Republic of China) and CABEI Executive President Dr. Nick Rischbieth. The pilot program was created to deal with damage caused on coffee plantations by coffee pests and drought, which are both products of climate change. The pilot program aims to reactivate the productive capacity of low-income families who depend directly on coffee production. The program has available funds of up to US\$86.0 million with \$80.0 million allocated to financing and \$6.0 million to technical assistance.

Aside from funding, Honduras is finding internal ways to bring more value to the coffee sector. Producing “Specialty coffee” allows producers to receive a premium above international market prices. Specialty coffee must be grown at 1,000 meters above sea level or higher. The latest USDA data shows that 61% of Honduran coffee production is located in the mountains between 3,900 and 5,200 feet above sea level, with 23% in areas from 2,900 to 3,900 feet above sea level, and 16% in areas 1,600 to 2,900 feet above sea level. This means large areas of coffee plantations can produce coffee under programs and certifications such as Fairtrade, 4C Association, UTZ

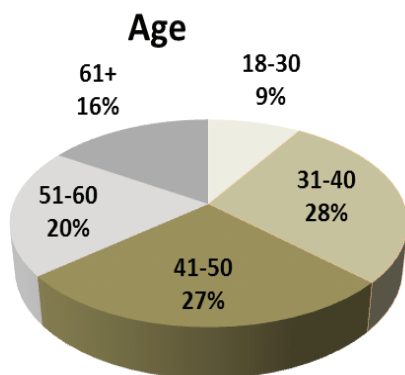


Certified and Rainforest Alliance, among others. While these premiums have helped pump new cash flow into the coffee sector, it has brought about its own set of challenges, as the types of specialty coffee varieties are not resistant to coffee rust, so producers must rely on only good agricultural practices.

Tomas Sosa participated in the 2007 Cup of Excellence program, where his coffee from El Aguacate earned a spot as one of the 10 best. Through the program, he found an international buyer with whom, as of today, he sells a microlot of 34 bags of green coffee at \$3.0 per pound with a production cost of \$0.85 per pound. He notes that he sells organic coffee from his Buenos Aires farm through a cooperative in the Western part of Honduras at an average price of \$1.11 per pound, with a production cost of \$0.75/pound.

Labor of Love

“A new generation of producers has brought energy into production,” says ADECAFEH, as the elder coffee farmer pass along their farms to the younger generation. “This generational change has made producers more open to change.” The average age of the Honduran coffee farmer is currently 46, but that has gone down from the age of 56 in the last 10 years.



source: ADECAFEH

“Honduras Coffee farmers are small, the 95% produce less than 50 bags of 46 kg by years,” says Fúnez. IHCAFEH’s records show that in 2014-2015 (Oct-Sept), 94% of all coffee’s production in Honduras was registered by 95,912 small producers. Small producers are family-owned

and easier to manage than larger farms. As a result, it is estimated that 95% of producers pick coffee with their own family, eliminating some of the need to source labor elsewhere. For Honduras, sufficient and reliable coffee pickers means the beans could be picked as soon as they are ready, with no delays and lesser chance of over-ripening, improving both productivity and quality.

Tomas Sosa has his family involved in the transportation to the wet mill. The remaining work is done with 10 outside permanent workers for weed control, tree maintenance, fertilization and the picking is done by 30 other employees at harvest time, with an average age of 30. However, he has “no difficulty finding workers as they visit the farm voluntarily at harvest time,” he says.

On Ramirez’s farm, El Paraiso, the average worker is between 25 to 35 years old. “There is no challenge with finding workers, as there are plenty of people who need work in my village.”

In the poll of 10 coffee farm owners, the average age of a coffee farm worker is 28.5 years old. José Asunción Rivera Pérez and José Anael Guevara Ramirez both have farms in Lempira and both only employ people during certain phases of the crop and use family members for the other times. “While there is a scarcity of labor in the zone,” says Pérez, “I just need to transport them from other places.”

At Marlon Esteban Molina’s farm, Las Nubes, in El Paraiso, the tight-knit community is a major factor. “In the area, producers help each other out to carry out work,” he says. “During the crop, it’s more difficult to find workers. I always use recommendations of my workers to recruit others.”



A Bright Future

Honduras had made tremendous strides towards a recovery in production and a sustainable plan for the future of coffee farming, but the country has only begun to tap into its potential. Honduras is a country of 112,000 square kilometers, of which 3,000 square kilometers are currently cultivated with coffee. However, the country has another approximate 55,000 square kilometers of land suitable for coffee cultivation (above 1,000 meters above sea level). ADECAFEH emphasizes that there are “no major conflicts with population centers and Honduras does not have a land limitation for coffee planting.”

The latest USDA data shows planted area planted in 2016-2017 is expected to rise to 325,000 hectares, up from 310,000 hectares in 2015-2016 and 293,000 hectares in 2014-2015.

The possibility of land expansion could mean major production increases for the future. If international coffee prices rise back up to attractive levels, incentive to plant more coffee also rises. Overall, a production of 8 million bags in the next five years “seems feasible,” says ADECAFEH. Current production for the 2016-2017 crop is estimated at 6.1 million bags.

The future for Honduras looks bright, with immense land development potential, new, strong and resistant trees and an invigorated positivity from producers. In a country dominated by small coffee farmers, producer income is the key factor to ensuring prolonged growth. Properly poised for record production in the coming years, Honduras should be on the radar as playing a significant role in global coffee supply.

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