

## EVALUATING THE RESULTS OF OUR WORK

# Rainforest Alliance Certification on Cocoa Farms in Côte d'Ivoire

### Introduction

Over 120,000 cocoa farms in 11 countries have achieved Rainforest Alliance certification, covering an area of nearly 500,000 hectares (1.24 million acres), and with recent commitments by Unilever, Mars, Kraft and others to source Rainforest Alliance Certified™ cocoa, these numbers are almost certain to increase. The program's exponential growth has prompted the Rainforest Alliance to take a step back and examine how certification has affected farmers' livelihoods, families, communities and environments. To determine these impacts, we commissioned the Committee on Sustainability Assessment (COSA) to conduct research on cocoa farms in Côte D'Ivoire. In 2009, and again in 2011, COSA scientists collected data at certified and carefully selected non-certified control farms, representing a total of 452 farm visits. The preliminary results presented here are statistically significant with 95 percent confidence.

### Certified Cocoa Farms Produced More Cocoa Per Hectare

In 2011, certified farms produced 576 kg (1,270 lbs.) of cocoa per hectare, compared with 334 kg (736 lbs.) per hectare on non-certified farms. Interestingly, higher productivity was not associated with higher costs; researchers found that the costs of inputs such as labor, biocides and processing were roughly the same on certified and non-certified farms. We suspect that the increased productivity is related to efficiency gains from applying improved techniques. Certified farmers reported receiving an average of 21 hours of training during the previous year (on topics such as farm operations, environmental issues and marketing support), compared with 3.6 hours of training for non-certified farmers.

The data also reveal that the productivity differences between certified and non-certified farms were even larger in 2009, indicating that non-certified farms are slowly "catching up" to certified farms. This finding may be attributable to knowledge spillover – whereby certified farmers share information on best management practices (BMPs) with their non-certified neighbors. Additionally, productivity is known to decrease in the first one to three years after a cocoa farm has been replanted or rejuvenated because new plants require time to

mature. COSA found that nearly two-thirds of certified farmers had replanted or renewed their cocoa farms in 2011, compared with only 27 percent of non-certified farms. Finally, Côte d'Ivoire's recent political crisis could have affected certified farmers' access to technical assistance and, ultimately, their productivity. Future research will explore these and other possible explanations to determine which ones have merit.

### Certified Farmers Earned Higher Net Income

Net income – defined as a farm's revenue from cocoa sales minus the costs of inputs – was significantly higher on certified cocoa farms than non-certified: \$403 and \$113 USD per hectare, respectively. Not surprisingly, over two-thirds of certified farmers felt that their economic situation had improved over the previous year, compared with one-quarter of non-certified farmers.

Researchers found that the difference in net income was primarily due to higher productivity on certified farms, not a price premium for certified cocoa beans. During the period of civil unrest, many established trade relationships were disrupted, which may have led to a halt in price premiums and broken commercial agreements. Future research will further examine this and other related questions, such as the consistency of farmer training over time.

### Comparing the Environmental Impacts

Rainforest Alliance certification requires that cocoa farmers prevent soil erosion and water contamination by protecting shade trees, planting native tree species and reducing their reliance on pesticides through integrated pest management, to name just a few of the program's mandated practices. The COSA methodology examined the relationship between farming and the environment by asking farmers to report on their rate of implementation of certain BMPs. What the research found was that 80 percent of certified farms implemented at least one water-protection measure, compared with 17 percent of non-certified farms. Certified farms also implemented more soil-conservation practices, with 43 percent instituting one or more of these measures, compared with 5 percent of non-certified farms.

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The Committee on Sustainability Assessment (COSA) is a nonprofit global consortium of institutions that uses an independent monitoring tool to analyze the social, environmental and economic impacts of agricultural practices.

The Rainforest Alliance works to conserve biodiversity and ensure sustainable livelihoods by transforming land-use practices, business practices and consumer behavior.  
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**Left**  
An Ivorian farmer  
prepares a young  
cocoa seedling  
for planting.

*photo by  
Noah Jackson*

**Right**  
Cocoa trees  
(foreground)  
grow amid  
native forest.

*photo by  
Noah Jackson*



There are signs that these higher implementation rates of soil- and water-conservation practices are having an impact. After examining streams for signs of erosion – such as gullies and downstream soil accumulation – researchers gave each farm a score between zero (no erosion) and three (obvious signs of erosion). Certified farms earned better scores, receiving an average of 0.21, compared with 0.97 on non-certified farms.

Over 65 percent of certified farmers reported that their care of the environment had improved over the previous year, compared with only 13 percent of non-certified farmers. Despite this difference, we feel that both groups still have much room for improvement. Future research will focus on how to increase implementation rates of environmental BMPs on certified cocoa farms.

### Cocoa Farmers, Their Families and Communities

On Rainforest Alliance Certified farms, the teenage children of cocoa farmers and workers are only allowed to help in the fields under carefully defined circumstances – and this help cannot interfere with their schooling. Researchers found that just over half of the children on certified farms have reached their age-appropriate grade level, compared with 13 percent of the children on non-certified farms. While this large difference indicates that certification is likely improving the educational achievement of many children, our aim is to have 100 percent of children on certified farms reach an age-appropriate grade level. Toward this end, we are planning addi-

tional research to determine whether any disruptions in schooling were due to excessive time spent helping their families on the farm, a lack of funds for school fees, the country's civil unrest or something else altogether.

The research also found that certified farmers appear to be somewhat more community-minded than their non-certified counterparts, demonstrating a higher rate of participation in community projects, such as building community agricultural facilities, roads or schools. On average, certified farmers participated in 0.67 infrastructure projects during the previous year, compared with 0.06 projects among non-certified farmers.

### Looking Ahead to Further Research

While COSA's research demonstrates that Rainforest Alliance certification has improved the livelihoods, communities and environments of cocoa farmers, it has also raised new questions. Follow-up research will allow us to discuss these results with stakeholders, collect new data on selected topics and deepen our understanding of the impacts of sustainable cocoa production. We are grateful to the COSA team for their outstanding work and the Global Environment Facility (GEF) for financial support of this study, which was also funded by the Bill & Melinda Gates Foundation. The findings and conclusions presented are those of the Rainforest Alliance and do not necessarily reflect positions or policies of the Bill & Melinda Gates Foundation.

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