

# Evaluating Certified Coffee Programs<sup>1</sup>

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## Introduction

Coffee is one of the world's most important commodities. It is produced by nearly 50 tropical nations around the world. Coffee is a primary cash crop in several countries and critical for their economies. In recent years, there has been a growing interest among consumers to buy products that follow strict standards in their production process and that also are healthy and safe. In the case of coffee, people in the United States are not only interested in the quality and origin of coffee, but many are also concerned about the social, economic, and environmental aspects of coffee production (Giovannucci et al. 2008). These interests and concerns have created a new market that offers products that have undergone various certifications. Although several products are currently certified, coffee is taking the lead in developing standards to address socio-economic and environmental concerns of consumers (Giovannucci and Ponte 2005). These certifications are quite variable and consumers may not understand exactly what each one of them requires. The purpose of this article is to explain the certification process and describe the various certification programs and what they mean.

## What is certified coffee?

Certified coffees are commonly defined as those that take into account one or more aspects of sustainability: economic, environmental, and social. The concept of sustainability in agriculture refers to aspects that are variously referred to as economic viability for farmers, environmental

conservation, and social responsibility (Giovannucci and Ponte 2005). Coffee that has been certified has been produced under specific guidelines adopted by coffee growers and set and verified by an independent third-party certification organization.



Figure 1. Rainforest Alliance-Certified coffee farm in Santander, Colombia.

Credits: Jorge E. Botero

## The Certification Process

When a coffee is certified, approval is given by an independent organization that ensures that the coffee is produced following guidelines set by the certification agency. In general, certified farmers receive economic benefits through premiums paid when they sell their coffee. The bags of certified coffee usually have a seal marking that the coffee was grown under a specific set of criteria.

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Coffee certification programs aim to promote a responsible production following one or more of the following aspects (Guhl 2009):

- **Social:** to improve the quality of life of workers and farmers.
- **Environmental:** to have environmentally friendly production that reduces impacts on biodiversity and environment.
- **Economic:** to gain adequate market access and fair prices for farmers.
- **Quality:** to set a minimum quality standard for the coffee beans.

Currently, there are several types of certification programs that have different characteristics depending on their objectives. But, in general, all certification programs share four features:

1. The certification gives economic incentives to the farmers because distributors pay premiums for certified coffee and the farmers receive more income for their product.
2. What is certified is the way the coffee was produced. Every certification program creates clear processes for farmers to follow in order to satisfy certification criteria. If these criteria are satisfied during the production process, the coffee can be sold as certified.
3. The fulfillment of the certification criteria has to be verified by an inspector from an independent certification agency. The farmer (or in some cases an association of farmers) pays for an inspection visit. During this visit, the inspector reviews that the farm is following the certification requirements and the certification seal can be used.
4. The certification is a voluntary process, and farmers decide if they want to participate in the process.

## International Certification Programs for Coffee

The most common certified coffees include Organic, Fairtrade, Rainforest Alliance, Bird Friendly, UTZ certified, Starbucks C.A.F.E. Practices, and 4C Certification. Below we present a general review of these certification programs and a summary table of their certification criteria (Table 1).

### Organic Certification

Aims to promote and enhance natural soil activity and cycling of resources, which helps to create a rich and fertile

substrate for the crop and maintain ecological balance by prohibiting use of artificially produced (synthetic) agrochemicals. Growers must develop procedures to ensure only coffee from certified plantations is harvested, and because most coffee is harvested by hand, containers or bags used during harvest must be clean: they cannot previously have contained or been treated with prohibited substances. Certification agencies not only monitor organic standards during production but also during processing and handling to avoid contaminants coming from sanitizers or chemical products. Although it is not a certification criteria, organic coffee is usually grown with some sort of shade because farmers need the organic matter from fallen leaves from shade trees to fertilize the coffee plots. Organic sun coffee (where coffee bushes are exposed to direct sunlight and no shade trees are used) can be grown, but it is very expensive for farmers to buy the organic matter needed when it cannot be produced on the farm.



Figure 2.  
Credits: USDA

### Fairtrade Certification

Fairtrade is defined as “an alternative approach to conventional trade that aims to improve the livelihoods and well-being of small producers by improving their market access, strengthening their organizations, paying them a fair price with a fixed minimum, and providing continuity in trading relationships” (Giovannucci and Koekoek, 2003). Fairtrade certification is granted to farmers’ cooperatives or associations and not to individual farmers, and premiums are usually invested in projects that benefit the entire community, such as improved schools, clinics, and roads,

as well as environmental projects (Fairtrade 2010). This certification does not require a specific farming production type, and coffee can be certified Fairtrade whether it is organic or not, whether it is sun coffee or grown under the shade of trees. This certification program does encourage shade and sun coffee farmers to use more environmentally friendly integrated pest management and other sustainable practices like growing tree fences and herbaceous plants to prevent soil erosion or reduce water contamination from coffee processes. For both sun- and shade-grown coffee, the use of harmful agrochemicals is prohibited.



Figure 3.  
Credits: Fair Trade USA®

### Rainforest Alliance Certification

With this program, coffee is grown on farms where forests, rivers, soils, and wildlife are conserved and workers are treated with respect, paid decent wages, have proper and safe equipment, and are given access to education and medical care (Rainforest Alliance 2010). This certification requires that coffee is grown under the shade of trees, but it does not require organic certification. However, it does promote an integrated pest management approach of using smaller amounts of less-toxic synthetic agrochemicals (Rice 2008). The criterion for shade is fairly strict in this certification program: it requires at least 12 different native species of shade trees per hectare (or 2.47 acres), and the foliage cover must be at least 40 percent and form two layers to better mimic the differing canopy layers formed by natural forest trees (Rice 2008).



Figure 4.  
Credits: Rainforest Alliance

### Bird-Friendly Certification

The Smithsonian Migratory Bird Center (SMBC) gives this certification to farmers in order to promote shade-grown organic coffee plantations that can play a key role in the conservation of our global environment and of migratory birds that find sanctuary in these forest-like plantations (SMBC 2010). Bird-friendly certification was one of the early environmentally oriented certification schemes for coffee and helped to establish the environmental standards now used by other certifications. It emerged as a response to the studies showing dramatic declines in North American migratory bird species, which were correlated to the shrinking wintering habitats for these species in the tropics (Rice 2008). These studies showed that shade-grown coffee plantations in Central and South America were important refuges for migratory birds (Wunderle & Latta 1994; Perfecto et al. 1996). The criteria for shade in this certification program are more detailed than those of the Rainforest Alliance program. Bird-friendly certification requires at least 11 species of canopy trees per hectare and the main canopy must be at least 40 feet tall. Additionally, the production area must have at least a 40 percent foliage cover that forms three forest layers, and the coffee must be organic certified (check detailed certification criteria at <https://nationalzoo.si.edu/migratory-birds/bird-friendly-farm-criteria>).





## PROUDLY SERVING BIODIVERSITY.

Figure 5.  
Credits: Smithsonian's National Zoo & Conservation Biology Institute

### UTZ Certified

UTZ means “good” in a Mayan language. This certification program requires farmers to grow their coffee professionally and with care for their local communities and the environment (UTZ 2010). A goal for the program is to empower farmers with knowledge concerning good agricultural practices and the global coffee market. UTZ requires certified producers to train their employees on health and safety procedures and the correct use of pesticides. Regarding the environmental aspect, UTZ farms strive to minimize the use of water, energy, and pesticides, and reduce soil erosion. A farm must also avoid deforestation for two years before it can be registered in the program. UTZ does not require shade trees or organic production of coffee. Overall, the certification process is less strict and allows many growers to be certified who might not otherwise qualify for other certifications (Rice 2008). The most important aspect of the UTZ certification program is traceability, which means that consumers can know exactly where their coffee comes from and how it was produced. Their Chain of Custody criteria assure that UTZ certified coffee is not mixed with non-certified coffee. Currently, this certified coffee is not widely seen in the U.S. Note that UTZ is now part of Rainforest Alliance.



Figure 6.  
Credits: Rainforest Alliance

### Starbucks C.A.F.E. Practices

C.A.F.E. (which stands for Coffee and Farmer Equity) evaluates the economic, social, and environmental aspects of coffee production in order to ensure that Starbucks's sources of coffee are sustainably grown (Scientific Certification Systems 2010). Starbucks collaborated with Scientific Certification Systems (SCS), a third-party evaluation and certification firm, to develop the guidelines for the program. C.A.F.E. guidelines focus on four areas: (1) high quality; (2) economic accountability, which means that Starbucks suppliers must submit evidence of how much of the final price paid by Starbucks gets to the farmer; (3) social responsibility that guarantees safe, fair, and humane working conditions; and (4) environmental stewardship, which means that farmers manage waste, protect water quality, conserve water and energy, preserve biodiversity, and reduce agrochemical use. C.A.F.E. insists on extremely high-quality standards, both for beans and for the finished, brewed coffee (SCS 2007). Although this certification prefers shade-grown coffee farms, sun coffee farms are allowed when environmental conditions are not appropriate for shade-grown coffee. Standards for shade in this certification are not as strict as the Rainforest and Bird-friendly programs. For example, for farms that have shade trees, this certification requires that at least 40% of the coffee production area of the farm have shade trees, and that at least 75% of these trees must be native.



Figure 7.  
Credits: Starbucks

## 4C Certification

Established in 2008, the Common Code for the Coffee Community or 4C Code of Conduct includes baseline requirements for the sustainable production, processing, and trading of coffee, and eliminates unacceptable practices. This certification program was originated as a response to confusion in the various certification criteria, and it was hoped it would unify them. One of the main aspects of the 4C code is its vision of the coffee business as a whole. It covers many social, environmental, and economic principles for everyone in the coffee supply chain, from farmers, producer organizations, and mills, to exporters and traders. Unacceptable practices include forced labor, trafficking of persons, failure to provide potable water to all workers, cutting of primary forest or destruction of other forms of natural resources, and immoral transactions in business relations according to international laws and practices. Currently, 4C-certified coffee is mainly found in Europe, but it is rapidly expanding into markets in the United States. The 4C Association does not use a product label, and consumers might merely read on the coffee container that the roaster supports the 4C approach. With regards to the environment, the 4C code does not force a particular farm production method (e.g., sun- or shade-grown) but instead promotes implementation of a program to conserve and enhance wildlife and native flora, to protect soils from erosion, to conserve water, and to use cultural and biological methods for pest control, where pesticides and chemicals are minimized (check detailed 4C criteria at <http://www.4c-coffeeassociation.org/en/index.php?id=5>) [November 2011].



Figure 8.  
Credits: 4C Association

## Choosing a Coffee

With so many options in the market, consumers can get confused. It is important for consumers to set priorities and the price they are willing to pay for certified coffee. If the priority concern for a consumer is the protection of habitats and wildlife, Bird-friendly and Rainforest Alliance coffees are good choices. On the other hand, if social issues and reducing poverty in developing countries are of great concern, a consumer might go with Fairtrade coffee.

Certification programs assume that consumers are willing to pay a higher price for coffee produced under certain criteria, and this means that certification is a strategy that depends on demand for this kind of coffee and not on the supply. If in a given year, consumers are buying large amounts of certified coffee, the increased demand means higher premiums for farmers. On the other hand, if demand for certified coffee decreases, then coffee traders do not pay much more for certified coffee, and premiums decrease. For example, premiums for Colombian farmers certified with Rainforest Alliance certification were US \$0.19 per kilo in 2007, US \$0.21 per kilo in 2008, but only half of that in 2009 (Rodrigo Calderón, personal communication). When consumer preferences or consumer buying power change, paying farmers more for producing sustainable coffees may not always be viable, especially in times of economic hardship. Sustainable coffee production is costly and is reflected in the final price that consumers pay. If the price consumers are willing to pay does not pay for the certification costs, it becomes more difficult for a farmer to justify enrolling or remaining in a certification program (Giovannucci et al. 2008).

More research is needed to evaluate the environmental, social, and economic benefits of certification. Certification programs have the potential to make significant impacts, especially on the social and environmental factors of coffee production (Raynolds et al. 2007). In the case of social certifications, these programs are raising the bar and helping to empower coffee producers and communities. In the case of environmental certifications, these programs are improving environmental conditions and helping to conserve biodiversity in and around coffee farms (Raynolds et al. 2007).

Table 1. General criteria of common certification programs for coffee.

Certification Seal	Environmental Criteria	Social Criteria	Economic Criteria	Quality Standards
Organic	v			
Fairtrade		vv	v	
Rainforest Alliance	vv	v		
Bird-friendly	vv			
UTZ Certified	v	v	v	
Starbucks C.A.F.E.	v	v	v	vv
4C	v	vv	v	v
v: Moderate criteria — vv: Very Strong criteria				

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Smithsonian Migratory Bird Center (SMBC) 2010. <https://nationalzoo.si.edu/migratory-birds>

UTZ 2010. <https://www.rainforest-alliance.org/utz/>

### Additional Resources

Coffee and conservation. Are your beans for the birds? <http://www.coffeehabitat.com/>

USDA organic certification: <https://www.ams.usda.gov/services/organic-certification>