



# drinking GREEN

A PRIMER ON CHOOSING COFFEE THAT SUPPORTS  
SUSTAINABLE PRACTICES

by **Robert A. Rice**

With the first rays of the morning sun slanting through the trees, I made my way through the coffee farm of a small landowner in Chanchamayo, Peru's central coffee-growing region. At 4,300 feet on the eastern slopes of that rugged backbone of South America known as the Andes, the morning was still

and somewhat foggy. The dawn chorus of the local birds—both resident and migratory—was at full volume, accompanied only by the sound of my own breathing and the rustle of my steps on the thick leaf layer on the ground. As always, I marveled at how a shade-coffee farm had all the earmarks of a forest.



What look like forested mountains in Latin America are often actually a canopy of trees above shade-coffee farms.

But coffee farm it was—an agroforestry system with an organic certification. The shade-tree canopy over the coffee bushes created a green cathedral-like setting.

Spiderwebs stretching between the bushes spoke of the abundant insect life, which provides food for birds and an array of other animals. Bromeliads adorned overhead limbs, adding to the overall plant diversity of the farm.

A flash of faded red from a summer tanager (*Piranga rubra*) undergoing its annual molt caught my eye. This bird had made its way here from somewhere in North America, and settled on the small Peruvian coffee farm for its seven- to eight-month stay in the tropics. Farther along, a black-and-white warbler (*Mniotilta varia*) ran up and down, over and under the trunk and branches of a towering tree, one of many that the farmer manages to shade this crop. This same warbler might have bred a few months earlier in the upper reaches of the eastern United States or Canada, or perhaps in the cool cove forests of Appalachia—where high elevation

creates conditions that mimic the higher latitudes where most of these warblers probably go to breed.

Farms like this one have jumped head first into the flood of sustainably grown coffees now in the marketplace. Many are certified in some way to bolster their appeal to niche consumers. Some are certified organic. Some are certified as creating good habitat for birds. Others make claims to fair trade, a social certification that benefits small, historically marginalized growers. It is within this roiling mix that some Smithsonian National Zoo scientists currently find themselves—not merely because their research interests are geared toward conserving birds on managed lands, but because they have created a certification mark directly linking their research, the marketplace, and conservation.

How did the scientists at the National Zoo get involved in the coffee business? In

fact, the work of Smithsonian Migratory Bird Center (SMBC) staff researchers led us into coffee farms quite literally. In the late 1980s and early 1990s, Smithsonian ornithologist and SMBC Director Russell Greenberg was studying the distribution of Neotropical migratory birds in their Mexican wintering grounds when it clicked: He realized that many apparently forested mountainsides in Mexico's southern state of Chiapas were actually landscapes blanketed with farms of coffee grown under a shade canopy of taller trees—the traditional way this shade-loving plant is grown.

Surprisingly, these agricultural lands—areas ignored historically by conservation biologists—revealed great potential for acting as refuges for biodiversity, especially given that so much natural habitat was disappearing. Studies there and elsewhere in Latin America bore out one of the principal findings from Chiapas: Coffee farms managed in certain ways that include a shade cover resembling forest cover—a coffee agroforest—can provide relatively good habitat for birds and other creatures. And they certainly offer better wildlife habitat

## Seals of Approval

Apart from the Smithsonian's Bird Friendly seal of approval, the major environmental seals consumers see on coffee are USDA Certified Organic and Rainforest Alliance Certified. Other seals primarily address the social and economic aspects of coffee production or trade, such as guaranteeing that farm workers are not exploited and that no child laborers are used, but some also consider environmental concerns. Among these are the Fair Trade certification and Utz Certified (formerly Utz Kapeh). Starbucks has its own set of criteria—the C.A.F.E. Practices—for purchasing coffee that include both social and environmental check offs. These initiatives overlap to varying degrees in the criteria they use for certification and some coffee farms have multiple certifications. For instance, many Bird Friendly-certified farms are also Fair Trade-certified.

The certification process for any of these seals is roughly the same. Coffee producers must implement or maintain practices and policies that meet the specified criteria, submit their farms to an initial certification inspection, and agree to regular inspections to maintain their certification. They pay a price for all of this, but they also stand to receive price premiums from buyers because of the certifications.

than the alternative—plantations of “sun coffee,” varieties that grow without shade but that also require substantially more inputs of fertilizers and pesticides.

To promote shade-grown coffee, and to discourage conversion of shaded coffee farms to sun-coffee farms, the SMBC examined the specialty coffee sector and developed its Bird-Friendly certification program.

## Certified Organic



In 2005, the U.S. Department of Agriculture established a set of regulations for labeling agricultural products as “organic.” Most consumers are now familiar with the green USDA Certified Organic seal, which is found on coffee as well as other packaged foodstuffs and on cosmetics and the like. But the organic community existed long before the government became involved, and coffee is no exception. Certified-organic coffee began making in-

roads into the U.S. market in the late 1980s and early 1990s, when a San Diego importer named Karen Cebrenros introduced organic coffee from northern Peru to U.S. roasters. At first, it was considered an inferior-tasting coffee that managed to survive in the marketplace only thanks to eco-minded consumers' solidarity with organic producers. The taste issue, a result of small producers having trouble with quality control, has since been successfully addressed. Certified-organic coffee has emerged as the fastest-growing part of the specialty coffee industry today.

The standards for certifying coffee—or any crop—as organic are based on the health of the soil. Use of synthetic agrochemicals is verboten, but the main thrust is to maintain ecologically active soil. Guidelines for soil amendments, erosion-control techniques, and the enhancement of soil micro- and macrofauna all aim to create a rich and fertile substrate for the crop. This program encourages farmers to grow coffee under shade in the traditional fashion, and further specifies that 80 percent or more of the shade trees must be

native to the growing area and provide 40 percent foliage cover.

Geographically, certified-organic coffee is produced in all three of the major coffee-growing regions—Africa, Asia, and Latin America—with Latin America producing the lion's share. Mexico and Peru stand out as the top producers in this hemisphere. In 2006, thousands of farms, collectively covering about 800,000 acres of land—an area roughly equivalent to that covered by Yosemite National Park—produced about 113,000 metric tons (nearly 125,000 English tons) of organic coffee.

Coffee growers who obtain organic certification reap substantial rewards in the price they receive for processed beans. Depending upon the origin of the coffee, a price premium can range from \$0.15 to \$0.45 per pound. Of course, the cost of the certification must be accounted for as well, which normally hovers around a penny or two per pound. So, from a strict money-in, money-out standpoint, going organic pays for itself.

## Rainforest Alliance



Rainforest Alliance Certified (RAC) is a program managed by the New York-based international environmental group Rainforest Alliance. Formed in the 1980s, this group has had a significant impact on agricultural production attitudes related to an array of crops, ranging from coffee, tea, and cacao (cocoa) to bananas, citrus, ferns, and cut flowers. As a non-governmental organization, it has forged relationships with local environmental groups throughout Latin America and other regions, creating what it calls a “Sustainable Agricultural Network.”

For coffee, RAC criteria encompass both social and ecological concerns. While not insisting on organic certification as one of its production-level criteria, it does promote an integrated pest management approach of using smaller amounts of less-toxic synthetic agrochemicals than is typical of coffee farms. RAC’s habitat-related criteria for coffee farms are more stringent than those of the USDA program. For instance, there must be 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.

However, just as it need not be organic, a bag of coffee marketed as RAC may contain only 30 percent certified coffee, a strategy that expands RAC’s reach and market exposure. In fact, the last year or two have seen tremendous growth in this certification. In 2006, some 210 RAC farms produced 115,000 metric tons of coffee on about 405,000 acres of land. The bulk of RAC coffee hails from Latin America, where Brazil and Colombia dominate, but farms in Indonesia, Ethiopia, and Tanzania have also earned the RAC seal.



## Fair Trade



Fair Trade certification is primarily concerned with social justice and targets mostly groups of small farms organized into democratically run organizations. This program’s certification criteria promote empowering small farmers to compete in the global marketplace and improving the lives of farmers, farm workers, and their communities, which includes protecting the environment. In addition to coffee, Fair Trade certifies tea and herbs, cocoa and chocolate, fresh fruit, sugar, rice, flowers, honey, and vanilla. Producer groups receive a guaranteed floor price of \$1.26 per pound of coffee, and more if it is certified organic. Growers receive payment, and a portion of the income goes into projects that benefit the entire community—such as improved schools, clinics, and roads.

Fair Trade certification requires no particular type or pattern of vegetation on coffee farms to make them good wildlife habitat, but most Fair Trade coffee is shade-grown (as is most coffee grown by small farmers). Like RAC coffee, Fair Trade coffee is not necessarily organic, but certification requires farmers to use more environmentally friendly integrated pest management and implement other sustainable practices. Any package of coffee labeled Fair Trade is 100 percent Fair Trade—just as any package labeled organic must be 100 percent organic.

Fair Trade certification is also growing rapidly among farmers and in the marketplace. For coffee alone in 2006, about 230 Fair Trade farms on more than one million acres (417,000 hectares) produced 34,000 metric tons, a fairly low yield that is typical of small farms.

**Sweet-smelling blossoms produce the coffee plant’s flavorful seeds.**



# Getting Easier to be Green?

**Labels indicating that products meet certain standards for quality and safety, such as USDA inspected stickers on meat, have a long history.**

More recent is the proliferation of labels and logos promising how this or that product contributes to the social good—be it human health, humane treatment of farm animals, protecting wildlife, or doing less harm to the environment. No longer can careful shoppers simply compare trusted brand names and try to get the best value for their bucks, at least not if they want to match their consumption to their conscience. But do eco-labels make it easier to be green? Yes and no.

Unfortunately, not all labels are created equal. A few, such as USDA Certified Organic and the U.S. Environmental Protection Agency’s Energy Star label, are both highly regarded as meaningful and trustworthy and are well known to consumers. According to a recent survey, 70 percent of U.S. households are aware that the Energy Star label indicates that a product is more or less energy-efficient.

But what about all of the other eco-labels? Do they really stand behind what

they seem to represent? Is the label backed by independent organizations or is it merely an industry marketing device? To help conscientious consumers sort this out, the Consumers Union’s Consumer Reports Greener Choices website ([www.greenerchoices.org/eco-labels](http://www.greenerchoices.org/eco-labels)) describes and rates more than 100 eco-labels based on seven criteria such as meaningfulness, verifiability, consistency, and transparency.

Bird Friendly for coffee and Fair Trade and Rainforest Alliance for a variety of foods all get high marks across the board. So does Certified Humane, which is found on eggs and meat and addresses the welfare of farm animals. In contrast, the Cruelty Free label found on cleaning products and personal hygiene products gets a failing mark from Consumer Reports. A Cruelty Free sticker would suggest that a product was not tested on animals, but Consumer Reports notes that this rating is “not meaningful and is potentially misleading to con-

sumers.” Certified Vegan and Marine Stewardship Council certification of sustainable seafood get mixed but generally positive reviews. In the arena of sustainable forestry for wood and paper, Green Seal certification is rated highly favorably, Forest Stewardship Council (FSC) certification slightly less so. (Full disclosure: The paper *ZooGoer* is printed on is FSC-certified.)

Not included in the Consumer Reports roster are eco-labels and certifications now being attached to various sectors of the tourism industry to promote responsible ecotourism and eco-friendly hotels, as well as to real estate brokers, house-cleaning services, and more.

Even if these programs aren’t perfect—even if they are no more than clever marketing—their growth is a hopeful sign that people increasingly care about protecting the planet. Putting that care into action by choosing products based on their eco-labels is tricky. If a label is not backed by reputable organizations and doesn’t meet standards such as those used by the Consumers Union, it’s probably wise to follow the old adage, caveat emptor—let the buyer beware.

—Susan Lumpkin

## Utz Certified



The Utz-Good Inside coffee-certification program, based in the Netherlands, was founded by Guatemalan coffee producers and a Dutch coffee-roasting company. Some industry analysts view the Utz program as a response by large growers and their business allies to the Fair Trade movement's growth trajectory and success. Its criteria address good agricultural and business practices as well as social and environmental concerns, including a major requirement that prevents deforestation in the two years before a farm can be registered. But overall the certification process is less stringent and allows many growers to be certified who might not otherwise qualify for other certifications. The purity standard for the Utz certification demands that at least 90 percent of the label's coffee be certified. Regardless of its motivational underpinnings and somewhat weaker standards, Utz-Good Inside is, like other initiatives, getting consumers involved in thinking about how their food is produced. This seal, however, is not yet widely seen in the United States.



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



Starbucks' C.A.F.E. Practices—a set of criteria for how the coffee giant purchases coffee—is not a certification program, but it has similar goals. The acronym stands for “coffee and farmer equity.” The program seeks to purchase coffee produced according to a set of guidelines that Starbucks developed to address coffee quality, financial transparency, working conditions, and environmental issues. The guidelines specifically address coffee farms as wildlife habitat, calling for 75 percent local species, at least two of which have been shown to contribute to conservation, 40 percent foliage cover as an ideal, and two shade-canopy layers where possible.

The growth of Starbucks over the last decade has been nothing if not spectacular, witnessed by its voracious purchasing of coffee throughout the world. Its total coffee purchases topped 160 million metric tons in 2006, with about six percent being Fair Trade coffee. Its C.A.F.E. Practices program alone grew 430 percent between 2004 and 2007, accounting for around 65 percent of the latest year's supplies, most from Central and South America, and especially Costa Rica. More recently, Starbucks has moved the sustainable coffee program into Ethiopia. You can't tell whether or not a given bag is filled with coffee from the farms in the C.A.F.E. Practices program, or is mixed with other coffee, but if it is organic, Free Trade, or both, the label will show it.

## Smithsonian's Bird Friendly



The Bird Friendly (BF) certification mark, developed by SMBC, hinges on the concept of “shade-coffee-as-habitat,” focusing on the biophysical aspects of the production area. What also sets it apart from the other programs or certifications is that it grew directly out of scientific field work. From the years of work on the shade-coffee issue, the SMBC staff developed a set of criteria that define what a good shade-coffee farm is from a bird's eye view.

Some refer to the BF criteria as the “gold standard” for shade-grown coffee. The criteria are more detailed and stringent than those of other programs. For instance, they specify that there must be at least 11 species of canopy trees and that 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. The coffee also must be certified organic. Farms displaying these characteristics provide habitat for migrants such as the Blackburnian warbler (*Dendroica fusca*) and the Baltimore oriole (*Icterus galbula*), as well as resident species such as the blue-crowned motmot (*Momotus momota*) and the masked tityra (*Tityra semifasciata*).

SMBC's realization that coffee farms could provide quality habitat for many birds made its way to the specialty coffee industry in 1996, when this research unit organized and hosted the “First Sustainable Coffee Congress” at the National Zoo, an event many consider an early signpost on the road to sustainable coffee. While coffee-industry analysts point to the SMBC as a major catalyst in pushing the specialty-coffee world to consider the ecological side of coffee production, the growth of BF has been slow compared to other initiatives. Part of this tortoise-like start derives from SMBC's small staff not being able to devote



Some shade-coffee farms provide sufficient habitat for birds such as the blue-crowned motmot (*Momotus momota*).

full-time attention to the program, and part of it is undoubtedly due to the stricter criteria involved. However, BF certification is growing, and continued expansion in North American and Japanese markets—coupled with recent interest in Europe—should result in a secure footing for the BF seal.

BF coffee's cachet among hard-core birdwatchers and environmentalists continues to grow as more and more coffee drinkers learn of the science behind the seal and the ongoing attention the SMBC staff gives to this issue of conservation via the marketplace. The nearly 4,000 metric tons of BF coffee currently produced each year on 35 different farms come mainly from the New World tropics. In early 2008, the first African coffee was certified when an Ethiopian group received the BF stamp of approval for its shade management practices—only fitting, given that Ethiopia is the birthplace of all coffee.

### Choices, Choices

So what, exactly, is a concerned consumer to do with such an attractive array of different programs?

If your greatest concern is social justice, go with Fair Trade. Simple.

If you worry about agrochemicals in your food—either because of personal health or that of the planet—the only sure way to avoid them is the USDA Certified Organic certification, alone or coupled with another certification.

If you most want to contribute to conserving habitat for birds and other wildlife, Rainforest Alliance or Bird Friendly coffee is the way to go.

Or, use your purchasing power to address all three and look for “triple certification.” Triple certification assures consumers that the coffee they're buying is socially certified for fair prices to growers, organically certified for residue-free coffee that's produced without agrochemicals, and habitat-certified to ensure coffee farms that promote and preserve local and migratory bird diversity.

Caffè Ibis, for example, is a roaster with national reach that specializes in triple-certified coffees. The Logan, Utah-based company has found a popular niche among socially and environmentally conscious java fans. Embracing the Fair Trade, USDA

Certified Organic, and Bird Friendly certifications, Caffè Ibis has developed a loyal following among the likes of Whole Foods Markets, high-end restaurants, neighborhood cooperatives, and other outlets. And customers can buy the triple-certified coffee online at [www.caffeibis.com](http://www.caffeibis.com).

Such coffees provide North Americans with an affordable entry into the often-distant worlds of ornithological research, good land stewardship in the tropics, and a constellation of innovative efforts spanning latitudes, cultures, and landscapes. Like the migratory birds that benefit from such certified farms, the coffee produced there links us to responsible producers and provides an avenue connecting conservation to the marketplace. And if you let your mind wander while you sip a triple-certified latte and watch birds outside your kitchen window, you might be able to imagine you're seeing them in the cool forest-like setting of a shade-coffee farm. ♪

—Robert A. Rice is a geographer at the Smithsonian Migratory Bird Center, a research unit at the National Zoo.

Left photo: Ekpansio/iStockPhoto.com. Right photo: Rolf Nussbaumer/naturepl.com.