LIFE-CYCLE STUDIES

Bananas

Introduction

Bananas have been called "the world's most perfect fruit." They're high in potassium, low in fat, and a good source of vitamins and fiber. They're also one of the few fruits available year round. Today's sweet yellow banana is a mutant strain of the plantain, a starchy red-green cooking banana that is boiled, fried, or ground for use in staple dishes worldwide. Bananas likely originated in Malaysia, though one of the first mentions dates to 327 B.C.E., when Alexander the Great discovered the fruit during his conquest of India. A Spanish friar brought the first banana roots to the Western Hemisphere in 1516, and the fruit was officially introduced to the U.S. public at the 1876 Centennial Exhibition in Philadelphia, where each banana was wrapped in foil and sold for 10 cents. By the early twentieth century, bananas had become the most valuable fresh fruit in world trade, a position they held until the 1970s.



Doing It Better

Sensitivity to environmental and social concerns has led to recent positive advances in the industry. Since the 1990s, the Rainforest Alliance has offered a seal of approval to banana farms that meet certain standards for sustainability,

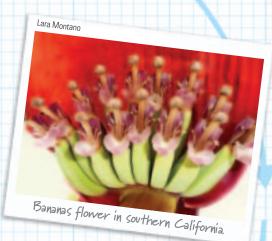
including in waste management, recycling, agrochemical use, and worker conditions. More than 15 percent of all bananas traded worldwide now come from Alliancecertified farms, including all of Chiquita's farms in Costa Rica, Guatemala, Honduras, and Panama. In Europe, sales of "fair-trade" bananas which ensure that farmers earn a minimum price for their crop—have grown by 50 percent a year. In 2007, Co-op America launched a campaign to pressure U.S. stores to also carry the fruit. Some groups advise consumers to choose

Caribbean bananas, which tend



Red bananas in Hawaii.

to be grown on small family farms that use more sustainable production methods and fewer chemicals.



Production

Although referred to as a "tree," the banana plant is really the world's largest perennial herb. Each stem produces just one bunch of fruit—about 15 clumps, or "hands," that together bear some 200 banana "fingers" ("banan" is the Arabic word for finger). More than 300 varieties of bananas exist, and nearly 80 percent of the fruits are consumed in their country of origin. The global trade is based largely on one variety, the Cavendish, grown on large plantations in Central America and the Philippines. Three companies—Chiquita, Dole, and Del Monte—control around 65 percent of the export market.

Because the standard for blemish-free bananas is very high, and the plants have heavy nutritional needs, cultivation relies on as many as 400 different agrochemicals. Sprayed by plane, the toxins can affect not only the fruit, but also local biodiversity, water systems, and worker health. Banana plants are held erect with plastic twine, and the fruit-bearing stems are covered with chemically treated plastic bags to shield them from disease and damage. Once cut, the stems are transported by cableway to a packing shed, where workers wash and sort the bananas, a process that can use up to 100 times the weight of the fruit in water. Bananas that do not meet "quality" standards are thrown away, often dumped at the plantation edge or in rivers. For every ton of bananas shipped, an estimated two tons of waste is left behind. The "good" bananas are packed into boxes, loaded onto refrigerated containers, and

shipped within 48 hours of picking. At their destination, they spend four to eight days in special climate-controlled rooms where they are ripened artificially before being sent to retailers.