

Are We Running Out of **CHOCOLATE?**

**Why the world's favorite treat could get
a lot more expensive—and harder to find**

BY KATHY WILMORE



The next time you eat a piece of chocolate, slow down and savor every bite. There could come a day when this relatively cheap treat is a lot more expensive and harder to find. That's because the rate at which people are gobbling up chocolate far outpaces the rate at which farmers can produce cocoa, its key ingredient.

Cocoa is the powder or paste made from dried, crushed cocoa beans, the seeds of the cacao tree. You can wolf down a chocolate bar in seconds, but cocoa beans are a labor-intensive crop that's difficult to grow.

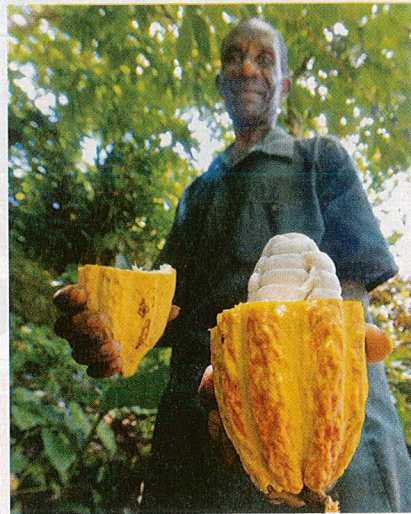
Last fall, two major chocolate companies—Mars Chocolate, based in New Jersey, and Barry Callebaut, based in Switzerland—issued a warning: If people keep eating so much chocolate, there won't be enough to go around.

That day could arrive sooner than you think. In 2013, the world consumed about 77,000 tons more cocoa than was produced. The two chocolate makers estimate that the global cocoa deficit could

reach 1 million tons by 2020, and 2 million tons by 2030.

"We're not in crisis mode yet," says Edward George, a cocoa expert at Ecobank. But "there is a concern that we could have shortages of cocoa in the future."

Why is the world's favorite indulgence at risk? Like all products,



A farmer shows a cocoa pod filled with cocoa beans on the Caribbean island of Saint Lucia.

West Africa produces 70 percent of the world's cocoa.

chocolate is subject to the law of supply and demand. When demand (the amount people want to buy) is greater than supply (the amount available), prices tend to rise. When supply is greater than demand, prices tend to fall. Demand for cocoa has exceeded supply for the last several years.

More Expensive Hershey Bars

That's why cocoa prices have risen by more than 60 percent since 2012. When manufacturers have to pay more for raw materials, sooner or later they pass the costs on to consumers. That happened last summer, when Hershey's announced an 8 percent price hike, its first price increase since 2011. Other chocolate companies, including Mars, the maker

 Download chocolate stats at upfrontmagazine.com

A Brief History of Chocolate

From the Aztecs to today's chocolate craze

1519

Montezuma, the Aztec ruler (below), serves a cocoa drink called xocoatl (shoh-KWAH-tul), which means "bitter water," to Spanish conquistador Hernán Cortés. Cortés likes it and takes it back to Spain.

Mid-1500s to Mid-1600s

With cinnamon and vanilla added to reduce the bitterness, the cocoa drink becomes a treat for Spain's nobility. It later becomes popular throughout Europe—still only as a beverage and only for the elite.

1847

An English company blends cocoa and sugar to make the first edible solid chocolate. Milk chocolate is invented 29 years later, when Daniel Peter of Switzerland adds powdered milk for a less bitter taste.



1890s

Pennsylvanian Milton Snavely Hershey perfects a formula for the mass production of milk chocolate into edible bars. His "Hershey bar" transforms chocolate from an expensive candy for the wealthy to one most people can afford.

Today

Cocoa consumption is on the rise because of higher demand in Asia and a surge in chocolate-based products, like chocolate pizza and chocolate-covered bacon, pretzels, and potato chips.



A 19th-century French hot chocolate vendor



OPPOSITE: INSTEPY STUDIOS LLC/DIGITAL VISION/GETTY IMAGES; THIS PAGE: FREDERIC J. BROWN/ALAMY/GETTY IMAGES (COCOA POD); LEBRECHT MUSIC & ARTS/LEBRECHT MUSIC & ARTS/ (CHOCOLATE PIZZA); CORBIS (MONTEZUMA); CULTURE CLUB/GETTY IMAGES (CHOCOLATE VENDOR); SHUTTERSTOCK (HERSHEY'S, DRIPPING CHOCOLATE); MEDIA BAKERY (CHOCOLATE PIZZA)

of M&M's and Milky Way, followed suit.

Despite the cocoa shortage, shoppers probably haven't noticed any reduction in chocolate-flavored products in stores. So far, food companies have been able to keep up. That's because cocoa processors still have stockpiles to keep candy and food makers supplied. But those reserves are dwindling.

Can the cocoa shortage be fixed by planting more cacao trees? Unfortunately, it's not that simple. Most cacao trees are grown on small family farms in poor countries. Forty percent of the global cocoa bean supply comes from Côte d'Ivoire (Ivory Coast) alone, which has a per capita GDP of only \$1,800.

Unlike growing corn or wheat, which can be planted in vast fields and harvested with machinery, harvesting cacao is a slow, painstaking process, all of it done by hand.

A cacao tree can produce up to 70 pods a year, each of which must be cut down and chopped open. The seeds are then collected and cleaned of the gooey white pulp that surrounds them. Those seeds—cocoa beans—are dried and fermented for at least a week. Then the farmer bags the beans and ships them to companies that process the beans into the powder, paste, and liquid forms used by food and candy makers.

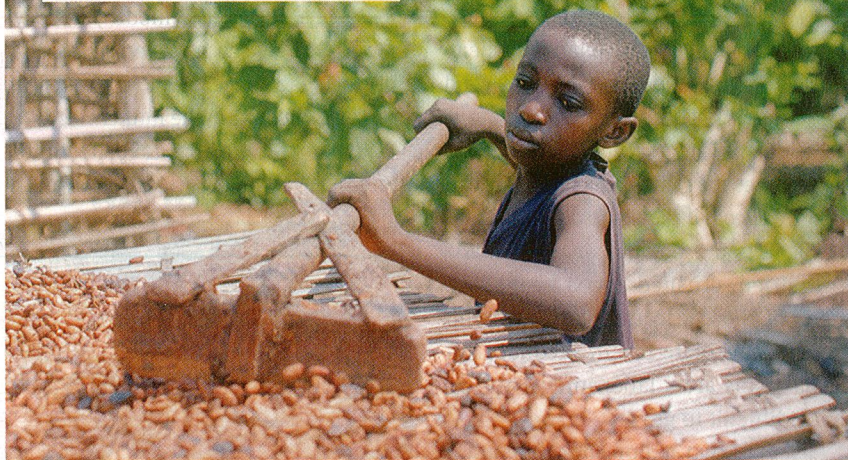
More trees would require more workers, but few cocoa farmers can afford to pay a crew's wages. Instead, many rely on much cheaper slave labor (see "Slaves to Chocolate").

No Future in Cocoa?

Cocoa farmers also have to cope with plant diseases, like frosty pod rot, and insects that destroy plants. Such blights cause "losses as high as 30 percent to 40 percent of global production," according to the International Cocoa Organization. Unusually dry weather in West Africa, where more than 70 percent of the world's cocoa is produced, has also been a factor.

Because of all these problems, many farmers are shifting to crops like corn and rubber, which are easier to grow and more resistant to extreme weather.

As many as 1.5 million children work on cocoa farms in West Africa.



Slaves to Chocolate

The chocolate you eat is likely the product of child labor

An estimated 500,000 to 1.5 million children work on cocoa farms in West Africa, according to the International Cocoa Initiative. Some toil on their family farms, but many are trafficked into slavery.

Deceiving desperately poor parents with false promises of a better life, slavers buy children and take them away. Instead of earning wages as promised, the kids—most are 11 to 16, but some are younger—are forced to work 80 to 100 hours a week without pay. They're provided with only the barest minimum of food and other necessities, and they're often abused and kept out of school.

They face dangerous working conditions on the farm. Cocoa

harvesters use sharp, heavy machetes to cut pods from cacao trees, then to hack them open to get at the seeds. A slip of the wrist can lead to serious injury. Children also carry heavy loads and are often exposed to pesticides and fertilizers.

Child trafficking and slave labor are violations of international law. In 2001, major cocoa- and chocolate-producing companies agreed to work together to abolish such practices, but the problem persists. Experts say that change can come from consumers.

"We need to inform ourselves better," says Joost Kooijmans at UNICEF. "We as consumers have to be much more demanding of the products that we buy."

"Farmers are at the bottom of the chain, and they're not getting any richer, thus they don't see a future in cocoa," says Edouard Rollet, co-CEO of Alter Eco, a fair-trade company in San

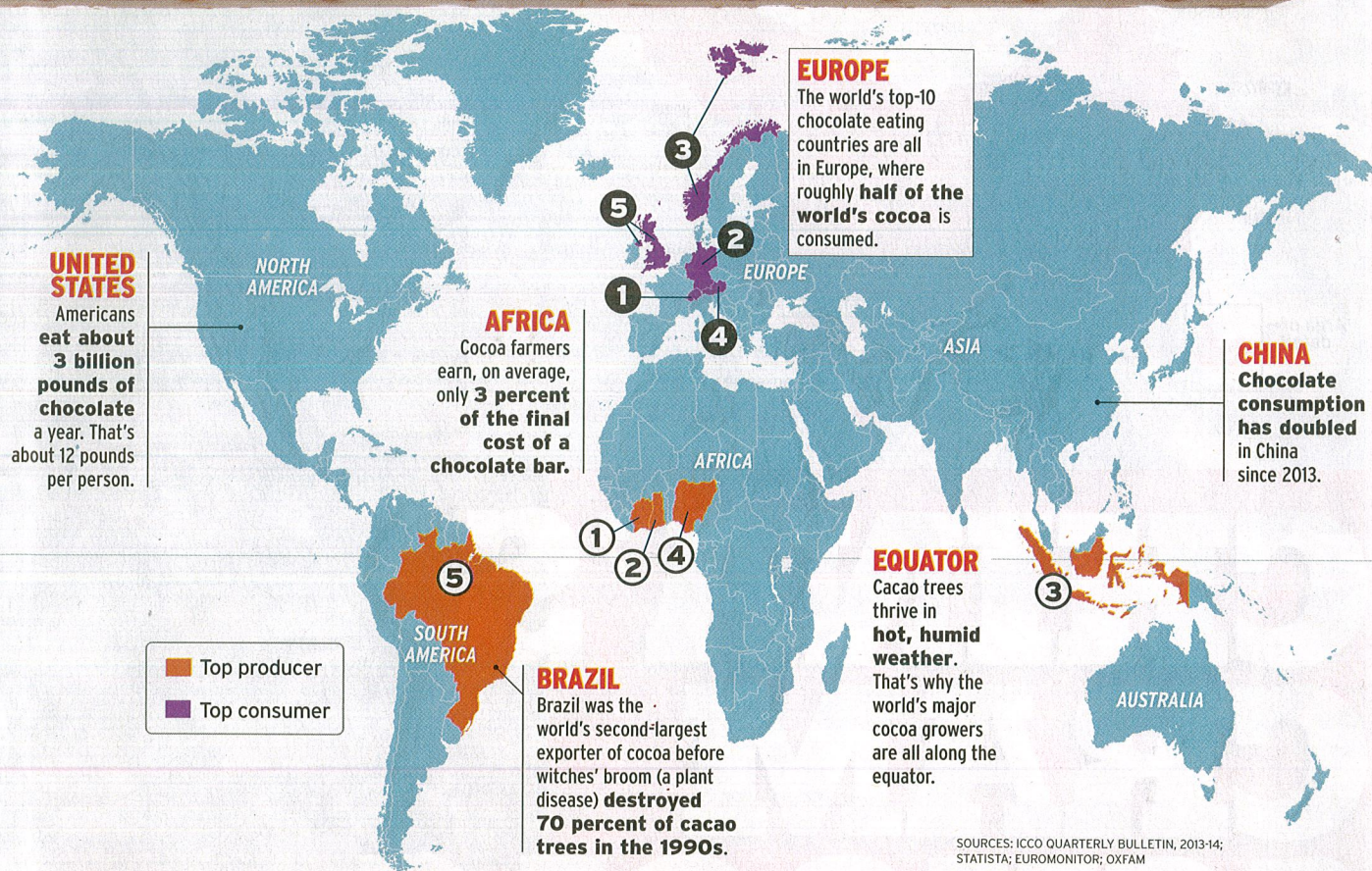
Francisco, California, that works with cocoa growers in Latin America. "So farmers [in West Africa] are planting rubber trees instead of cocoa trees."

As the global cocoa supply falls, the demand for chocolate is skyrocketing. One reason is that food companies keep coming up with new uses for cocoa. Chocolate seems to be everywhere these days, from chocolate pizza to chocolate-covered bacon, pretzels, and potato chips. And all over the world, people are consuming more dark chocolate, which requires more cocoa to make.

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A World of Chocolate

Who grows cocoa and who eats it

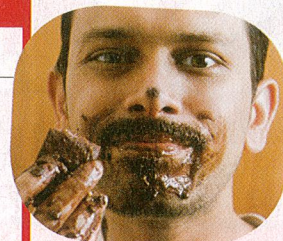


Top 5 Cocoa Producers

COUNTRY	TONS OF COCOA BEANS PRODUCED ANNUALLY
① Côte d'Ivoire	1,730,000
② Ghana	920,000
③ Indonesia	425,000
④ Nigeria	240,000
⑤ Brazil	210,000

Top 5 Chocolate Consumers

COUNTRY	CHOCOLATE CONSUMED (per year, per person)
① Switzerland	23.4 lb
② Germany	21.4 lb
③ Norway	20.5 lb
④ Austria	18.1 lb
⑤ United Kingdom	17.4 lb



Another factor is the growing appetite for chocolate in Asia, particularly in China and India, where a fast-growing middle class means that an increasing number of people have money to buy indulgences like chocolate.

"There's a real danger that demand rising in Asia would push the price [of cocoa] so much that it would become a luxury that few people could afford," says George at Ecobank.

But so far, the Chinese, who eat only about 7 ounces of chocolate per capita per year, are no match for Western

Europeans, who devour the most chocolate per capita (*see chart*). Americans eat about 12 pounds per capita every year.

Even with cocoa supplies tight in recent years, the chocolate industry takes in about \$110 billion a year and is investing in future production. An agriculture research group in Central Africa is developing a new type of tree that can produce up to seven times more cocoa beans than regular trees. Mars, the world's top-selling chocolate maker, just opened a state-of-the-art chocolate factory in Topeka, Kansas.

Even if prices continue to rise, some in the chocolate industry think that, in the long term, consumers will get used to it because few will give up chocolate.

"They will continue to buy the wonderful indulgence that they so love," says Susan Smith at the National Confectioners Association in Washington, D.C. "[Chocolate] tastes great. It makes us happy." •

With reporting by Stephanie Strom of The New York Times. Additional reporting by Alessandra Potenza and Gabriel Tyler.