

GROWING COCOA BEANS

A

ll chocolate begins with cocoa beans, the fruit of the cacao tree (also called a cocoa tree). Scientists know that the cacao tree originated somewhere in South or Central America. Some say the first trees grew in the Amazon basin of Brazil, while others place its origin in the Orinoco Valley of Venezuela. Wherever its first home, we know the cacao tree is strictly a tropical plant thriving only in hot, rainy climates. Cocoa can only be cultivated within 20 degrees north or south of the equator.



Growing Region

The Need for Shelter

The cacao tree is quite delicate. It needs protection from direct sun and wind, requiring a canopy of shade to thrive. Cacao seedlings often are planted in the shelter of taller mother trees such as banana, plantain, coconut and rubber which provide the necessary shade while also producing other important crops. Once the cacao trees are established, they can tolerate much more sunlight, but they grow best on small plots of land in partial shade, tended regularly.

As a general rule, cacao trees get their start in a nursery bed where seeds from high yielding trees are planted in fiber baskets or plastic bags. The seedlings grow so fast that in a few months they are ready for transplanting.



Sustainable Cocoa Growing

Small farmers in tropical regions of the world are important partners in the future production of the world's supply of cocoa. Through sustainable cocoa growing, small farmers cultivate cacao trees as part of a renewable agricultural environment — one that can support the farmer year after year, balancing economic needs with preservation of the natural environment. Cacao trees are grown in the shade of trees that provide other food and cash crops. The farmer tends all of his trees carefully using “machete technology.” If a pod is diseased, it is cut away with a machete or sharp knife and discarded before the disease can spread to other pods. This regular care limits the need for pesticides and fertilizers.

The farmer is encouraged to preserve existing tropical forest areas and to plant additional trees to shelter his cacao trees. This helps create an important natural environment for migrating birds, midges (the tiny flies that are a main pollinator of cocoa) and other wildlife. At the same time, the different tree species make it more difficult for pests and disease to spread from one cacao tree to another, and the soil remains rich and nourishing due to decaying plant matter. Sustainable cocoa growing benefits the farmer, the environment and chocolate lovers everywhere.

In a few areas of the world, cocoa is still grown on large plantations where hundreds of trees are planted together. If grown in full sun without taller trees to shade the cocoa, the plantation-grown trees may only be productive for a few years. Long-term, the direct sunlight stresses the cacao trees, making them more susceptible to pests and disease which can spread rapidly among trees grown close together. The soil also is more easily depleted of nutrients, requiring costly fertilizers to maintain production. Many cocoa plantations have been abandoned because these problems resulted in drastically reduced production.

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The World Cocoa Foundation, sponsored by the chocolate and related industries, supports sustainable cocoa growing in its mission to improve the standard of living of cocoa farmers around the world. The Foundation provides programs that teach cocoa farmers efficient methods to produce quality cocoa in a sustainable, environmentally friendly manner.

A Closer Look at the Cacao Tree

Everything about the cacao tree is just as colorful as its history. An evergreen, the cacao tree has large glossy leaves that are red when young and green when mature. At maturity, the cultivated cacao tree stands 15-to-25 feet tall, though the tree in its wild state may reach 50 feet or more. Cacao trees have been known to live 200 years in their natural environment, but they are most productive for about 25 years.

Moss clings to the cacao tree's trunk, sometimes alongside colorful lichens. In some areas, small orchids grow on its branches. Throughout the year, the tree trunk and major branches sprout



clusters of tiny, waxy pink or white five-petaled blossoms. Of the thousands of flowers that grow on a single tree, only 3-to-10 percent are pollinated by tiny flies and other insects. The pollinated flowers develop into mature fruit about six months later — the pods that contain cocoa beans.

The cocoa pods are a rather unusual site, growing directly from the trees trunk and major branches. The pods are oval, or football-shaped, ranging from 7-to-14 inches long. At first, the pods are green or maroon in color. The green pods generally ripen to a bright yellow-gold and the maroon pods become orange or yellow-orange.

Varieties of Cacao

There are two main species of cocoa: Criollo and Forastero. **Criollo** is sometimes called the prince of cacaos because it is a very high quality grade of cocoa with exceptional flavor and aroma. Less than 15 percent of the world's cocoa is Criollo, grown mainly in Central America and the Caribbean. **Forastero** is a much more plentiful variety of high quality cocoa, representing most of the cocoa grown in the world. Grown mainly in Brazil and Africa, it is hardier, more productive (higher yielding) and easier to cultivate than Criollo and is used in just about every blend of chocolate that is made.

A third type of cocoa also deserves mention. **Trinitario**, a hybrid or cross between strains of the other two types, originated in Trinidad nearly 300 years ago. It possesses a good, aromatic flavor and the trees are particularly suitable for cultivation.

Within these main types, there are several varieties of cocoa, each with distinct qualities. Chocolate makers purchase different varieties of beans and blend them to create their chocolate products. 