

Source: Santa Monica Daily Press

The \$1 billion Valentine tree

by Dr. Reese Halter

February 13, 2010

This year as Valentine's Day approaches consider, for just one moment, where that scrumptious gift you might be surprised to know that it is a gift from the chocolate tree.

The story of chocolate dates back at least 3,200 years to the time of the Olmec peoples of Mesoamerican history, intrigue and flavor.

In America alone we consume over \$14 billion worth of chocolate products including drinks, candies and

In fact, America consumes about 11 pounds per person, per year, most of it between meals. The world consumes at 22 pounds per person, per year.

Chocolate comes from the tropical cacao tree's cantaloupe-sized bean pods. More specifically, it's the pod. There are three species with over 90 percent of the pods coming from Forastero cacao.

The most valuable chocolate with a fruity, spicy flavor comes from the Criollo cacao. Trinitario and other species and its seeds add extra flavor to the Forastero seeds.

The Mayans drank the bitter seed extract (and added chilies) with every meal and they traded it to drier, cooler places where cacao trees could not grow. Ever since it was discovered cacao has been

Evidence of chocolate in America dates back to about 1000 A.D. in Pueblo Bonito in Chaco Canyon, far away from the nearest cacao plantation. It was a prized item of trade between the Chaco Canyon and Central America.

Chocolate not only tastes good but it alters our body's mood-affecting chemicals including serotonin and ethylamine, which the body releases in response to romance.

Chocolate contains caffeine, antioxidants and also high levels of chemicals known as phenolic compounds that may help combat coronary disease. Phenolics are known to prevent fat-like substances in the

and clogging the arteries. Certain chocolate phenolic compounds known as flavonoids are beneficial in preventing heart disease.

The Kuna peoples of Panama drink up to 40 cups of unsweetened cocoa a week and their rates of heart cancer and diabetes is very low.

Chocolate does not promote acne. Acne is related to human hormones.

Dogs are extremely allergic to theobromine, a stimulant compound in cacao. Chocolate is poisonous to dogs. In large quantity it may be fatal for dogs.

Cacao trees naturally grow in the understory, and seedlings need shade. Tiny flowers, growing on the lower branches, depend upon midges and other insects, which feed on the flower's nectar, to cross-pollinate.

Inside each large pod is sweet pulp and between 25 and 50 seeds. It takes about five months for the pod to mature.

In an attempt to increase yield some plantations remove the native overstory thereby casting 100% shade on the cacao seedlings. Without the natural plants and animals in the tropical rainforest, the natural process of nutrient cycling and soil fertilization is lost. The cacao trees become very susceptible to disease, must be sprayed with fungicides and treated with petro-chemical fertilizers.

Moreover, West Africa produces about 40 percent of the world's cocoa and at least \$118 billion in sales goes toward fueling conflicts and buying firearms. Worse still, according to *Tropical Agriculture*, an estimated 284,000 children are enslaved in hazardous conditions along the coast of African countries, where they work on cacao plantations, applying pesticides and using machetes to clear land.

Support Fair Trade Certified cocoa, chocolate bars and chocolate chips sold in over 2,000 retail stores including Safeway, Whole Foods, Target and Wal-Mart.

Hershey's (www.hersheys.com) and M&M/Mars (www.mmmars.com) control two-thirds of the \$1 billion chocolate market and they must scrutinize the cacao plantations — like Starbucks has done in coffee — for child labor and children's rights.

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