

As I sit at my kitchen table trying to decide what to write for my column, it's hard to pick a plant related topic when a blizzard is blowing outside and everything is slowly being covered in the white fluffy stuff. All I really want to do is wrap in a blanket with a hot chocolate and a good book. But one of the most interesting things about horticulture is that it is everywhere. The pages of the book come from trees being processed, but those trees had to be grown by someone. The cotton in the curtains, the mashed potatoes and cornbread that I'm going to eat with my family on Thanksgiving, all of that falls under the umbrella of horticulture. If it is something that would grow in your yard or garden, or is a specialty crop, it relates to horticulture. So it's time to learn about some chocolate.

Chocolate comes from the seeds of the plant "Theobroma cacao" which is native to South America. The plant itself is a tropical evergreen and can grow up to forty feet tall. These plants are a little odd in that the flowers grow directly out of the trunk of the tree. These flowers are pollinated by tiny midges, and these midges are the only organism that pollinate cocoa flowers. After the flowers have been pollinated they form the elongated seed pods that are around six to ten inches long and about four inches in diameter. They can contain anywhere from twenty to sixty seeds per pod, and each tree can have up to seventy pods each year. Back before modern advances in growing, chocolate was a rare commodity in Europe, and before that, in ancient South America.

Chocolate has been traced back as far as 1500 BCE to the Olmec civilization. However their chocolate was strictly in drink form, flavored with vanilla, honey, or chili peppers. It was mostly used for religious ceremonies and royal banquets because it was so rare and valuable. Christopher Columbus encountered it in 1502, but didn't have the opportunity to try the drink and didn't realize its value. When Hernando Cortés was exploring, he was able to observe it in the Aztec royal court. When Cortés returned to Spain several years later, the drink was readily accepted by the upper class as a status symbol, and the Spaniards were able to add sugar to counteract some of the bitterness of the drink. From Spain, it spread to the rest of Europe, where only the elite could afford the chocolate and the sugar to go with it. Chocolate continued in this vein until the industrial revolution, when the machinery made the production of chocolate much faster, lowering the price of labor and making it more affordable to all classes of people.

Getting from cocoa seeds, also known as cocoa beans, to the chocolate that we're all familiar with is a bit of a process, and changes slightly with different kinds of chocolate. The pods are harvested from the tree twice a year, usually around May-August and October-February. The pods are then split open and the seeds harvested. The seeds are then fermented to allow the flavor to develop and kill the plant embryo inside the seed. After fermentation they are dried for ease of shipping. Similar to coffee, the beans are roasted, and then cracked. The shells are removed, and the remaining portions of the bean are called cocoa nibs. These are then ground, removing some or all of the fat content, called cocoa butter. The resulting product is called chocolate liquor. This mixture is then put into a machine to mix, aerate and develop more flavor. The chocolate is then molded and cooled into blocks for use by confectioners.

So next time that you enjoy a hot chocolate, remember that it is a result of a plant and a couple thousand years of history. If you have any questions or would like to suggest a topic for me to write about, feel free to contact me at the Buffalo County Extension Office, at 308-236-1235, or [mearnest2@unl.edu](mailto:mearnest2@unl.edu).