

Peanuts

In third grade music class, we used to sing a chanty song that went something like this: “First we plant the peanuts, plant the peanuts, plant the peanuts. Then we grow the peanuts, grow the peanuts, grow the peanuts. Then we pick the peanuts, pick the peanuts, pick the peanuts. Then we eat the peanuts, eat the peanuts, eat the peanuts!” We sang that until one day, one of the teachers realized something. We don’t pick peanuts, we dig them because they’re underground. Dutifully we all changed the line in the song, none of us really understanding how peanuts ended up under the ground.

I didn’t think much about peanuts until I was in a botany class during my sophomore year of college. My professor had assigned us a research paper on a plant of our choice and I had a lot of trouble picking one to write about. I thought of chamomile or kohlrabi, somewhat exotic yet available to the common consumer. I found a surprisingly scant amount of information on plants such as these. As time ran down and my desperation grew, I noticed volumes and volumes existed on the humble peanut. Because of my third grade music class, peanuts had a special place in my heart. I decided to find out exactly how peanuts go about peanutting.

People have had a lot of interesting ideas about the peanut in the two thousand years of its known existence. The Incas considered them food for the gods. Later peoples used peanuts as animal feed. Today the peanut is a well-known, economically important crop with hundreds of uses.

The Latin name of the plant, *Arachis hypogaea*, gives a clue about the unique characteristics of the peanut. The species name, *hypogaea*, means “underground.” This refers to the subterranean development of the seed pods which had been forgotten by my music teacher. The British know peanuts as ground-nuts or ground peas because of this trait. Though the peanut plant blooms

above ground, the flower curves toward the ground after pollination. It forces its way under the soil, protected by a cap of cells that act like a helmet. Here, the seeds continue their development until they reach a harvestable maturity. So this is why they are dug rather than picked, which now makes a lot of sense to me.

Before technology revolutionized agriculture, harvesting peanuts was a time-consuming, laborious job. Field hands, brandishing pitchforks, followed a horse-drawn plow which severed the tap roots. The workers shook the soil from the plants and turned them upside down, leaves on the ground, pods to the sky. Many pods became lost or damaged during this rough handling, reducing the yield of the crop. To make use of the lost pods, the field was “hogged-off.” This meant that the farmers turned their hogs loose in the harvested fields. The animals, like living vacuum cleaners, would root up the peanuts still underground. The tedious, time-consuming, and costly tasks of separating the peanuts from the plants and shelling were also done by hand instead of machine. In developing countries that cannot afford better technology, these methods still remain.

Six continents—North and South America, Europe, Asia, Africa, and Australia—cultivate peanuts in the warmer parts of the land. In heavily populated countries such as India and China, the nourishing and useful fruit became a major source of sustenance and subsistence. These two countries actually produce more than half the world’s peanuts today. In these countries, peanuts serve as a valuable meat substitute and staple due to their high energy and protein content as well as their high nutritional value. In other countries, like the United States, peanuts remain a snack food though they have many more uses.

George Washington Carver conducted much of the work on various peanut uses and came up with some startling discoveries. In his lifetime, he invented over 300 different peanut products, though only a few became commonplace and economically viable. Some uses include bases for face creams, shaving creams, shampoo, and cosmetics since peanuts have skin energizing properties. They appear in soap, detergent, bleach, metal polish, salves, linoleum, paint, explosives, and medicines.

Peanuts can be ground into high-protein meal, flour, and peanut butter, or crushed to extract the oil. Unusual products such as peanut milk, cheese, and a coffee-like beverage have also been made from the seeds. Peanuts found their way

into space as a base for foods used by astronauts. During World Wars I and II, the oil was extensively used as a lubricant when other sources dwindled. Peanut oil can also be substituted for diesel fuel as an energy source. Even the plant material left in the field after the harvest can be used as a good quality hay for livestock. The outer shells can be used in animal feed, burned for fuel, and made into particle board. The skins, or seed coats, are used in paper making. The seeds can be shelled or unshelled, roasted, boiled, broiled, salted, used in candy, crushed to a paste, or just eaten raw.

Many kids grow up taking big, sloppy peanut butter and jelly sandwiches to school. I usually skipped the jelly in mine, content with the wonderful stickiness of peanut butter. The jelly tended to dilute this stickiness, plus it made my bread soggy. Peanut butter is one of the biggest products from peanuts in the United States. About 75% of the peanuts grown in the nation go to domestic consumption, and half of these go to making peanut butter.

Peanut butter consists of cleaned and roasted peanuts, ground with salt, sugar, and other ingredients such as hydrogenated fats. These fats are added to prevent oil separation and reduce stickiness. Peanut butter was first sold commercially by an enterprising physician who saw potential in its high nutritional value, palatability, and soft consistency, making it a perfect food for invalids. Its popularity grew because of the product's versatility, convenience, and long shelf life.

Another well-known product is peanut oil. Culinary connoisseurs prize this oil for its high flash point (450 degrees Fahrenheit) and lack of flavor. This means that the oil doesn't smoke or burn easily, and it can be used over again since it doesn't absorb or transfer flavors to different foods. Depending on the type, the peanut contains 42% to 52% oil, mostly in the unsaturated form. Peanut oil keeps better than other vegetable oils like soybean and corn oil, and works well as a salad oil or in shortening.

A number of studies concerning the nutritional value of the peanut have been conducted. Since peanuts contain mostly unsaturated fats which have been shown to reduce "bad" cholesterol levels in the blood, they may reduce the risk of health problems like heart attacks and cancer. Peanuts also provide a source of fiber, which has been shown to reduce the risk of certain types of

cancer. Naturally cholesterol-free and containing 13 vitamins and a number of minerals, peanuts give the banana a fair run for the title of nature's perfect food. However, raw peanuts also contain small amounts of toxic lectins and phytic acid. These compounds are found in other leguminous seeds like dried beans and are not harmful in small amounts. Cooking the seeds causes the breakdown of these substances, making them completely safe.

In light of the peanut's history and unique characteristics, it is small wonder that this shrubby, exotic plant has become one of the world's most important crops and has volumes dedicated to it in the library. Every part of this plant can be used and processed into a profitable product, making it an efficient, waste-free investment for farmers. Virtually everyone enjoys peanuts in some form or another, from a favorite candy bar to peanut butter to cooking oil. But most important of all, you have to dig the peanut, dig the peanut, dig the peanut.