

The History of the **SOYBEAN**

The Ancient Soybean

It is not known with certainty when cultivation of the soybean began, but it is believed that it was a staple of the Chinese diet centuries before the pyramids were built. In fact, the story of how the wild soybean – a climbing, vine-like plant that produces small black seeds – was first discovered by a caravan of traveling merchants is one of China's oldest legends. The first written record of soybean cultivation appeared in 2838 BC in the "Materia Medica" by Chinese Emperor Sheng-Nung. From China, soybean cultivation spread to Japan, Korea and throughout Southeast Asia. Medical records from at least 1500 BC from China, Egypt and Mesopotamia also mention the soybean. In ancient times, moldy and fermented substances from soybean curd were commonly used as primitive antibiotics to treat wounds and reduce swelling.

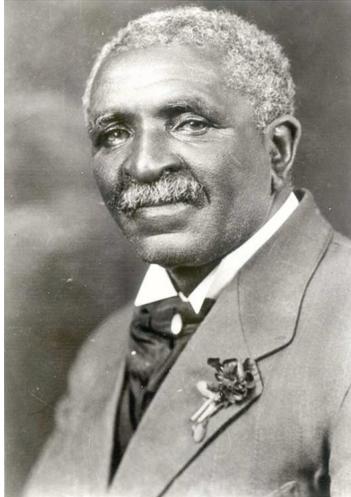


From the East to Europe

Despite its remarkable properties, the soybean remained a crop exclusive to the East for many centuries. First introduced to Europe in 1712 by Engelbert Kaempfer, a German botanist who had studied in Japan, the soybean was regarded as a botanical curiosity. Later Swedish botanist Carl von Linné, originator of the binomial system of rooting plants, would make a scientific study of the soybean. He applied the Greek word *glycine*, meaning "sweet" to all the groundnut species of legumes. Because of the large nodules on the soybean plant, he called it *Glycine Max*, the name generally accepted today. Despite von Linné's research, and extensive experimental work by Austrian botanist Frederick Haberlandt in 1875, poor climate and soil conditions limited attempts to produce soybeans as a commercial crop in Europe.

Soybeans in the New World

Soybeans were first brought to America in the early 19th century as ballasts in trading ships returning from the East. Interest in developing these exotic beans from Asia as a food source happened slowly. In 1804 the first mention of soybean cultivation in the New World appeared when James Mease published literature promoting the soybean as an adaptable crop for Pennsylvania. There is no record of how Mease's first Pennsylvania crop fared. In 1829 a brown-seeded soybean variety was shown in the Botany Garden at Cambridge, Massachusetts, but it would still take about 50 years before any real interest in the soybean as an agricultural crop began. In 1879 soybean crops were harvested at two agricultural experiment stations in New Jersey from seeds obtained from Europe. By 1889 several more agricultural experiment stations in the United States were working with soybeans, using seed varieties brought from Japan. The soybean and the fertile soil and hot, humid summer weather of the American heartland proved the perfect match. By the turn of the century, many American farmers were growing the crop for livestock feed.



George Washington Carver

In 1896 a significant breakthrough for the soybean in America occurred when noted botanist and chemist George Washington Carver became head of the department of agriculture at the Tuskegee Institute in Alabama. Carver's research into new crops for the depleted soil of the South led to extensive experimentation with soybeans and other nitrogen-producing legumes. To find new uses for these crops, he developed more than 300 by-products, including oils and food substitutes. It was Carver's research that led to the development of what would become the two main uses of soybeans on the American continent - edible oil and meal.

Soybeans in the 20th Century

By 1889 the United States Department of Agriculture began introducing new varieties of soybeans from Asia, and research into the soybean's potential began in earnest. By 1907 there would be 23 varieties of the plant in the United States, including 15 introductions based on USDA research.

23
VARITIES OF SOYBEAN PLANTS



William Morse, Soybean Pioneer

William Morse, director of forage crop investigations at Arlington Experimental Farm in Virginia, led the USDA's efforts to gain acceptance of the soybean as a potentially major agriculture crop in America. Morse worked diligently to combat the prevalent skepticism about the little bean's usefulness. He wrote articles about soybeans, talked with farmers and scientists, and continued to research the many Asian varieties.



The American Soybean Association

In 1919 William Morse helped form the American Soybean Association, becoming its first president. For twelve years he helped direct new and more forceful efforts in soybean research and experimentation. He published more than 40 official government bulletins, made hundreds of speeches, and inspired many researchers, plant scientists and industrialists to new efforts. Later Morse spent more than two years in China gathering more than 2,000 soybean varieties for U.S. researchers to study. Eventually his efforts paid off.

A Breakthrough in Harvesting

In 1920 combines were first used to harvest soybeans, making soybeans as easy to harvest as they were to grow. In 1922 the first U.S. soybean processing plant opened. As a result of the forward march of soybean technology and research, the U.S. grew 9 million bushels of soybeans in 1929. By 1939 the crop had increased more than ten times to 91 million bushels.



WW TWO

World War II

The 1940's were a major turning point in the American history of the soybean. Thanks to the tireless efforts of pioneers like William Morse, American farmers and soybean processors were ready to fill in the gap when revolution in China and World War II disrupted soybean production and put traditional sources of protein and edible oils in short supply. As the U.S. soybean producers and processors geared up to meet the demands of war, new technological breakthroughs were made and rapid expansion followed – paving the way for America's post-war leadership in soybean production and research.

Post War Expansion

In the early 1950's, soybean meal became available as a low-cost, high protein feed ingredient, triggering an explosion in the U.S. livestock and poultry production and assuring a vast and continuing market for the soybean farmer's output. In 1956, efforts began to expand export markets by promoting American soybeans and soybean products in Japan and around the world. International marketing offices were established around the world. Attention was turned toward emerging, non-food markets. Research and development lead to the production of soy based biodiesel, ink, candles, building materials and crayons.

2000 and Beyond

For profitability and long-term economic and environmental sustainability, focus turned toward production, product quality and value. In 2014, a record yield of 104 bushels per acre was reported on an Illinois farm. Addressing specific target areas positions the U.S. farmers as leaders in the global marketplace. Today, the ancient grains first cultivated in Asia flourishes in thousands of farms throughout America's heartland – producing an amazing diversity of products that contribute to the well-being of people throughout the world.

