

Soybeans Had An Interesting Journey to Kansas

AGRI-VIEWS

by Chuck Otte, Geary County Extension Agent

Unlike wheat, that was a principle crop in Geary County and Kansas from the early days of agricultural production, soybeans have had a long and interesting trip on their way to being the number one crop being grown in Geary County. Soybeans didn't even show up on Geary County ag statistic tables until 1935 when it is recorded that we grew less than 30 acres of soybeans, and several of those acres were for hay!

Soybeans are native to Southeast Asia and are one of the oldest cultivated crops. Ancient Chinese writings from earlier than 2800 B.C. talk of growing soybeans. They were considered one of the five sacred grains vital to Chinese civilization. There were several species cultivated in ancient times but the species that is grown today emerged as the preferred line. Soybeans were introduced to Japan through Korea by 200 B.C. but weren't really known outside the Orient until the 1600s. At that time a German botanist introduced the soybean to Europe and they made their way to North America in the very early 1800s. It wasn't until the middle of the 20th century, however, before the crop really took off in the United States. New uses were developed for this amazing little seed and demands created by World War II spurred production in the US.

Soybeans are a legume. Legumes have evolved with a symbiotic relationship (it's beneficial to both species) with certain bacteria that allow the bacteria to live in nodules on the root. In return, the bacteria are able to take gaseous nitrogen out of the air and fix it in a form that the plants can use for growth. Not only do they provide nitrogen for the plant that they are living symbiotically with, when the plant dies, the nitrogen is released into the soil for other plants to use. Soybeans and peanuts are two food crops that are legumes but numerous forage crops, including alfalfa and clover, are also legumes. For generations prior to the advent of commercial fertilizer, legumes and livestock manure were the only known source of nitrogen for crop production.

The soybean seed is a nutritional marvel. It is about 20% oil and around 40% protein. While much of the US soybean crop is used for it's oil, the protein becomes a byproduct that is utilized primarily in livestock feed. Around the world though, soybeans are an important human food. In addition to the soybean oil that many of us use in cooking, it is a valuable and inexpensive source of protein in human diets. Soybean flour can be used as an extender and protein enhancer. The well known tofu of Oriental cooking is a soybean product. Edamame is a type of soybean that is eaten in it's immature form just as one would eat peas or green beans. Of growing interest is the use of soybeans and it's byproducts in industrial uses. The uses grow daily but soybeans are routinely used in printing ink, rubber, leather, cosmetics and even in biodiesel as a fuel.

In Kansas and in Geary County soybeans have exploded onto the scene over the past 30 years as improved drought tolerance has allowed soybeans to be grown further west in the state. In most of the past ten years we have grown more acres of soybeans than any other crop, including wheat. Much of this has been driven by the economics. Demand, both domestic and global continues to keep the price of soybeans higher than most other crops. When this is coupled with the ongoing increase in yield potential thanks to advances in plant breeding, we can expect to continue to see soybeans as a critical crop in Geary County and Kansas!