

GREEN BEANS



Although acreage devoted to green bean production is limited in the Yuma area, the crop thrives on the sandy clay soils commonly found in the desert southwest. Green beans are a legume and do fix some needed nitrogen, but the N fixing bacteria are not as active as with other legumes. Therefore producers will typically fertilize green beans with nitrogen containing materials.

The common green bean has been cultivated in Mexico for at least 7,000 years.

Green beans are often called string beans because, years ago, a fibrous string (or vascular tissue) ran along the seam of the bean pod and was noticeable when the beans were snapped. The snapping noise is the reason for its other nickname, the “snap” bean. Through plant breeding techniques, modern varieties usually do not have this string.

Fresh beans are classified into two basic categories: edible pod beans and shell beans. Green beans, otherwise known as snap or string beans, are the most popular edible pod bean in the United States. The lima bean is the most common shell bean sold in the United States.

Green beans originated in Peru and spread to South and Central America by way of the migrating Indian tribes. Spanish explorers from the “New World” introduced them to Europe in the 16th century and then to all parts of the world by trading. They were grown by Native Americans, who would plant them with corn and let the beans grow up the stalk with the corn.

There are only about 44 calories in an entire cup of green beans and are a great source of vitamin C, vitamin K, vitamin A, manganese, potassium and iron. They also contain high levels of riboflavin, calcium, phosphorus, omega-3 fatty acids and niacin. It has been said that the vegetable is good for colon health because of the beta-carotene and vitamin C they contain.

The first to put green beans on their restaurant menus were the French. And they offered different varieties of green beans: green beans (the classic variety), snap beans, butter beans.

In the early part of this century, 'Blue Lake' was the bean grown for canning in the Blue Lake District near Ukiah, California. In 1923, this variety arrived in Oregon, where much of the bean research has since been done. By 1952, western Oregon grew 10,000 acres of the beans, according to James Baggett, retired horticulture professor at Oregon State University in Corvallis. Early on, 'Blue Lake' beans were stringy, and some strains had colored seeds. But seed companies improved the bean and released new strains, and by the '50s, the only beans grown were stringless, white-seeded strains resistant to common bean mosaic. The current 'Blue Lake' is descended from developments by Ferry-Morse Seed Company.

The Spaniards, who initially used them as ornamental plants because they found the bean pods tough, but very much liked the flowers. However, the story goes, some string beans fell into a pot of soup and the cook didn't notice them until it was too late to start anew, so he served them along with everything else.

Seed Savers Exchange, an international network of seed collections based in Iowa, has over 4,000 varieties of beans in their collection and still counting. The best known dry or horticultural beans, such as kidney beans, pinto beans, black beans, and navy beans, are members of this species. So too are most of the familiar bean varieties such as great northern, flageolet, haricots vert, cannellini, borlotti, Jacob's Cattle, Kentucky wonder, Blue Lake, and all the rest.

Green beans are a class of beans grown specifically to be eaten while still unripe and are called string beans, green beans, snap beans, or pole beans. String beans have over the years been cultivated so that they will be "stringless," that is, so they do not have the fibrous inedible string along the pod seam. Shell beans are either low bushy plants that don't need support or climbing (pole) beans which do require support.

Green beans are of nearly universal distribution. They are marketed canned, frozen and fresh and can be steamed, stir-fried, or baked in casseroles. A dish with green beans popular in the southern United States, particularly at Thanksgiving, is green bean casserole. Some restaurants in the USA serve green beans that are battered and fried. Green beans are also sold dried and fried with vegetables like carrots, corn, and radishes.

Green beans are found in two major groups, bush beans and pole beans. Bush beans are short plants, growing to approximately two feet in height, without requiring supports. They generally reach maturity and produce all of their fruit in a relatively short period of time, then cease to produce. Snap beans are harvested at the optimum edible maturity stage when the seeds are about one-third developed.

Over 130 varieties of snap beans are known. Varieties specialized for use as green beans, selected for the succulence and flavor of their pods, are the ones usually grown in the home vegetable garden, and many varieties exist. Pod color can be green, golden, purple, red, or streaked. Shapes range from thin "fillet" types to wide "romano" types and more common types in between. To this end, the French green beans are specifically bred for their flavorful pods.

In canning green beans, an average of 14 pounds is needed per canner load of 7 quarts. As a bushel of green beans weigh 30 pounds, it will yield about 15 to 20 quarts. An average of $\frac{3}{4}$ pound makes 1 pint of frozen beans.

If green beans are grown organically, legume cover crops should be avoided before green beans because many are closely related to beans and share pests. Instead, use as a cover crop, barley, rye grain, rye grass, Sudangrass, wheat, oats, and other grain crops.

In home gardens, green beans are, in fact, the third most commonly grown garden vegetable in the United States, outranked only by tomatoes and peppers. They thrive in nearly every section of the country, tolerate soils that range from sandy to clay, and produce an abundant crop in around 50 days.

Green bean plants, with their butterflylike blossoms in shades of red, pink or white-are considered showy and quite pretty. When early explorers first returned home with these natives of Central and South America, Europeans used them not as food crops but as ornamentals.

Kurt Nolte is an area agriculture agent with the Yuma County Cooperative Extension. He can be reached at 928-726-3904.