## Beans, by Lawrence Davis-Hollander, ©2015

Nothing quite says summertime gardening like the strain in your back after spending hours or even minutes stooped over rows of green beans. Whether pole, bush or intermediate, green beans hold a special place where summer gardens account for a significant percentage of dinner table nutrition. And many a youngster learns the finer points of life while snapping beans on the porch or canning the works in the kitchen. String beans are a uniquely American product, making three bean salad more American than apple pie, depending, of course, upon which beans you use.

A wide array of seeds coming from different plant species may be referred to as beans, such as garbanzo beans, fava beans or soybeans. These are old-world species, while "true" beans have their roots in the Americas and belong to the genus *Phaseolus*. The true bean was at one time classified with *Vignas* (cultivated legumes), such as the cowpea or the black-eyed pea, another old-world group, which is now considered a separate genus.

Approximately 50 species of beans are found in the Americas, and five domesticated species are cultivated for food. These include *P. acutifolius*, the Tepary bean, cultivated in the Southwest and Mexico in relatively arid conditions; *P. coccineus*, the pole bean or scarlet runner bean, originating from Mexico, is typically long vining with large, flat pods and seeds; and *P. lunatus*, the lima bean, which first originated in South America about 8,000 years ago. Native populations grow limas from the southwest to southern South America in dry conditions.

*P. polyanthus*, commonly referred to as the *botil* bean in Mexico, is the most recently domesticated of the beans. It is an older, less-evolved plant and tends to be cultivated in cool, moist tropical climates in Mexico, as well as in South and Central America.

*Phaseolus vulgaris* originated in both South America and Mexico, and is the most widely grown of the true beans — and the most familiar to us. This species includes black, kidney, pinto, navy or pea beans, Great Northern, cranberry, horticultural (or October) and other beans.

## **Growing Beans Beginnings**

While not all botanists agree, evidence points to two separate centers of origin for the bean, one in the Andes about 8,000 years ago, and the other more-recent site in the Tehuacan Valley in Mexico, about 4,500 to 7,000 years ago. Collected wild beans have been found in archeological sites from 10,000 years ago in Argentina. Other botanists suggest the beans came from only one of these locations, and then evolved into two distinct domesticates from the two locations.

Hundreds, if not thousands, of bean varieties evolved to yield a wide array of solid-colored and multicolored dry seeds in different sizes and shapes and with varying tastes and uses in cuisine. In addition to dry beans, some varieties yield wonderful edible fruits, botanically known as a pod or legume, or more commonly known as green or string beans. While pods from beans are technically edible, when they have not been selected for this purpose, they are fibrous,

unpalatable and largely indigestible. This characterizes most string beans prior to the 19th century.

A few varieties possess "strings" that could be easily removed before cooking, hence the term string beans. It wasn't until around 1890 that Calvin Keeney of Le Roy, New York, developed the first stringless beans from which most other stringless bean varieties were derived. In other words, while there are heirloom string(less) beans, most are relatively recent in origin.

Typically, string beans have smaller seeds than their dry bean counterparts, in some cases much smaller, while in other varieties you get a reasonable dry bean yield from "string beans." However, it is probably far more productive to save your mature string bean seeds for replanting next year.

Beans are among the easiest of plants from which to save seed; this is in part due to their cleistogamous flowers — flowers that aren't readily open to pollinators such as bees. Thus, beans are largely self-pollinating, and the seed you sow is the seed you get back — "largely" being the key word. They can cross-pollinate fairly easily in certain instances. Physical evidence of crossing tends to show in the seed coat coloration the first year. An exception, for example, is when two all-black or all-white beans cross-pollinate. If you separate beans by 20 or 30 feet, you reduce the possibilities of crossing.

There are three basic forms of bean plants: long vining or pole beans; twining, which represents a whole range of intermediate types that may be trained on a pole or are self-supporting and relatively short; and bush beans, which do not throw out any twining shoots and were bred to be more compact and nontwining.

## **Old Favorites**

One of my favorite string beans is Black Valentine, introduced in 1897 by Peter Henderson and Co. of New York, a black-seeded variety that yields strong, bushy plants and excellent-tasting green beans with a bit of stringiness. Its ripening period extends over a few weeks — perfect for the home garden, though less suitable for commercial production. I stagger my plantings every two weeks or so and always have them on the table. Even the larger beans are fairly good, although they quickly get tough and can become stringy. The pods mature relatively early in about 50 days. People appreciate their distinct taste, and seeds have become widely available.

If you want to try an old-timey string bean, seek out Red Valentine. It's a rare American variety dating to 1832 that was quite popular in the early 19th century. The plants are small and the pods have good flavor, although they are somewhat stringy. The seeds are beautifully mottled red, hence its name.

Burpee's Stringless Green Pod, introduced in 1894 and bred by Calvin N. Keeney, matures earlier and is completely stringless. The pods are borne high on the plant, making them easier to pick, not to mention crisp and flavorful. The brown-seeded bean's popularity has waned, though it is an excellent string bean and still produced by Burpee.

Peter Henderson introduced Bountiful in 1898, after a \$25 prize was offered for the best name for the New Green Bush Bean No. 1. Bountiful was aptly named as it is a heavy yielder with big plants that sometimes topple from heavy rain and wind. Productive over a long period of time, it is one of the great heirloom string beans, and it was one of the most widely planted green bean varieties in the early 20th century. Its overall strong characteristics have kept it in production today.

Perhaps one of the most well-recognized pole beans is Kentucky Wonder, known before 1864 as Texas Pole. It was introduced as Kentucky Wonder in 1877 by James J.H. Gregory of Marblehead, Massachusetts. Vines are medium in height, typically around 5 to 6 feet. The grayish-green long pods ripen in about 60 days.

One of my favorite pole beans is Cherokee Trail of Tears, a tall, vigorous pole bean with 6-inch fruits. If you don't mind setting up poles, this variety is well worth growing. The pods can become streaked with purple and eventually will turn entirely purple as the seeds ripen to black. In the green bean stage, they are excellent eating. This bean is said to have been carried by the Cherokee in their forced removal in 1838 from the Carolinas to Oklahoma.

Lazy Wife, a white cranberry because of its white seeds, is an old heirloom known from the early 19th century. It is a late producer of 5- to 6-inch tasty pods, which are stringless, thus requiring no work in preparation — perfect for lazy wives — hence the name. This variety is probably best suited for warmer climates due to its late ripening.

A whole world of heirloom pole and bush green bean varieties is out there, some stringier than others, some developed later. All are approachable in the veggie garden, even for the greenhorn. But be prepared, once the beans start producing, it might be tough to keep them harvested!