

POLE BEAN PRODUCTION

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Pole beans are grown commercially in the mountain counties and, on a limited scale, in a few of the eastern counties. They are produced in home gardens throughout the state. Pole beans are grown for their distinctive flavor, long pods, high yield, long harvesting season, and high price.

Soils - A well-drained, loose textured soil is preferred. Soils that cake or crust easily result in poor stands. The soil pH should be 5.5 to 6.5, preferably in the 5.8 to 6.0 range. Well-drained bottomlands in the mountains have been most satisfactory. To reduce soil-borne diseases, follow at least a 3-year rotation. If root rots are a problem, use a 4- to 5-year rotation. Plowing under small grain as a green manure crop will increase the organic matter of the soil as well as the yield and quality of the beans.

Varieties

Dade, introduced in Florida, is the leading variety. It has some resistance to rust and mosaic and is a heavy producer. Pods are 7 to 8 inches long, smooth, uniform, fleshy and oval in shape (60 days).

Kentucky Wonder 191, also known as **White Seeded Kentucky Wonder**, is another important variety. It is hardy, high-climbing and productive. Pods are dark green, 7 to 8 inches long, and about 1/2 inch wide (65 days).

Kentucky Blue (PVP), from **Kentucky Wonder** and **Blue Lake** parents, has 6- to 7-inch, straight, round pods. Kentucky Blue have great flavor with BV and rust resistance (60 days).

The various strains of **stringless Blue Lake** are popular in the western states for high quality processing beans. They also grow well in this state. Pods are about 6 inches long and round in shape. The low fiber content of Blue Lakes, as well as their good color, flavor, and general appearance, make them popular for processing (65 to 70 days).

Romano, also called Italian flat beans, have an outstanding bean flavor. Pods are medium to dark green, 4 1/2 inches long and 3/4 inch wide. Pods should show seed at harvest. This type has good market potential in the northeast (60 days).

In the western part of the state, many heirloom varieties are grown, such as **Greasy Cutshorts**, **Greasy Backs** and **Cornfield Greasys**. Seeds of these heirloom varieties are not commercially available but are saved by growers from year to year, obtained through seed exchanges, or purchased at farmer's markets. These beans are very popular on a regional level and often bring twice the price of other pole beans. Avoid saving seed from virus-infected plants.

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Fertilizer—Follow soil test recommendations. Average soils will require about 400 to 500 lb of 10-20-20 per acre. Fertilizer should be either banded or broadcast and disked in before planting. Some growers broadcast half of the fertilizer and put the remaining half in the row before planting. Sidedress with 20 to 25 lb of nitrogen per acre when the plants begin to “climb” and again when the first blooms set fruit. Additional sidedressing may be necessary if leaching rains occur. Beans are very sensitive to fertilizer injury.

Seed and Seeding — Buy “western-grown” seed if available. Treat seed with a fungicide and insecticide. The ideal stand is 3 to 5 plants per ft of row. Plant seed 2 to 4 inches apart and $\frac{3}{4}$ to 1 inch deep in rows 4 to 5 ft apart. If root rots have been a problem in the past, planting on a 6-inch ridge may help reduce its incidence. To get uniform stands and to reduce seed injury, operate the planter at a speed of no greater than 3 m.p.h. About 40 to 50 lb of seed are required to plant one acre.

Black Plastic—In recent years, some mountain growers have started growing pole beans on raised beds with black plastic and drip-irrigation. The result has been earlier production, higher yields, and improved quality.

Trellising — Stakes (2 by 2 inches) should be spaced every 15 to 20 ft in the row. At least 5 ft, preferably 6 ft, of the stake should be above ground. Tightly stretch a 10 to 12 gauge wire and nail to the tops of the stakes. Stretch a smaller wire or twine and nail to the posts 5 to 6 inches above the ground. Then tie the twine in a crisscross fashion to the top wire and to the bottom wire (or twine) on which the beans will climb. Bean supports should be put up before the bean plants begin producing “runners” and falling over. If home gardeners wish to avoid staking beans, they should consider planting along fences. Another

option is to plant field corn and beans together. In this system, bean seeds are planted along with or shortly after the corn. The bean plants climb the corn stalks as they would a trellis.

Cultivation—Since standard tractor equipment cannot be used after the trellis is put up, cultivation just prior to trellising is suggested. Many growers use horse-drawn equipment or small, narrow tractors for cultivation after the trellises are erected.

Pest Management — Fruit worms, red spiders, bean beetles, bean leaf beetles, root rot, and bean rust have been the most common pests. Consult the current *N.C. Agricultural Chemicals Manual* for specific pesticides. In some years, peanut stunt virus can be a serious problem. Little can be done to control this aphid-spread disease except to avoid planting near any fields containing alfalfa or clover.

Irrigation — Adequate moisture (1 to 1.5 inches per week) is extremely important during pod development. Hot, dry weather after flowering begins will result in poorly-shaped pods that are tough and woody. Irrigation is the best insurance you have against dry weather damage.

Harvest — About 60 to 70 days are required from seeding to first harvest. Pole beans are usually harvested 5 times (occasionally as few as 3 or as many as 10), with about 3 to 5 days between harvests. Pole beans should be harvested before they get tough and woody; thus, timing is important.

Yields—A reasonably good yield would be 250 to 300 bushels per acre, although yields of 400 to 450 bushels per acre (in the mountain region) are not uncommon.