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BIOLOGY AND MORPHOLOGICAL CHARACTERISTICS AND IMPORTANCE OF VEGETABLE BEAN TYPES

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ABSTRACT: There are many unique medicinal plants in our country, one of which is legumes. There is probably no one who does not know the legume vegetable bean plant. However, it is clear that many are unaware of its unique healing properties that heal and protect the human body. It also does not have important information about the biology and morphological features and importance of vegetable beans.

The article provides information on the types, varieties, biology, morphological features and importance of vegetable beans.

Keywords: legume, species, variety, phenological, morphological, early ripening, middle ripening, late ripening, blue grain, leaf, seed.

INTRODUCTION

Vegetable beans stand out from all legumes in that they are crisp and fragrant.

Vegetable beans are much closer to meat in terms of protein content, composition and digestibility. Sweet bean varieties are rich in vitamins.

They are an annual plant that branches from the base of its stem. The leaves are three pairs, the stem is long. [4]

Vegetable beans are self-pollinating plants. But in the south, it is also pollinated by insects. They have a vertical height of 25-30 cm and grow from 1.5 to 3 meters.

Depending on the structure of the vegetable bean pods are divided into sweet (without asparagus-parchment layer), weak sweet (parchment layer is added later, there are fibers at the base of the bean), peel easily peeled (parchment layer ripens early, separates, coarse fibers at the base of the bean). Vegetable bean

grains vary in size, shape and color, depending on the navigation. But the surface of the grain of all varieties is shiny.

Vegetable beans have bullet roots and penetrate to a depth of one meter into the ground. At the root, many tufts are formed.

Vegetable beans are a heat-loving plant, with a growing period of 80-90 days. [2]

For normal growth and development, the average daily temperature should not be less than 10 °C. When the temperature is lower than that, the growth of the bean slows down and it becomes more damaged by fungi. But when the beans are in bloom, the sun gets hot and hurts even if it is hot; in which its comb, flower, and young pods are shed.

Vegetable bean humus grows well in many fertile soils. Conversely, beans do not grow well in saline, swampy, and acidic soils.

The following varieties of beans are grown in Uzbekistan:

Shedraya is a fast-ripening, low-growing

(25-40 cm) variety; Flower pink, stem cylindrical, stem sweet, grain orange. Beetroot is ripened in 40-45 days after planting.

Triumph saccharin 764 is a medium ripening, yielding variety, upright, compact, 30-40 cm high, flowers pink, pods large, sweet, seeds are also large, greenish yellow. This variety is more resistant to anthracnose.

Golden Mountain(zolotaya gora) B-632 - medium-early maturing variety, height 35-40 cm, purple flowers, pods large, cylindrical, black seeds.

North Star (severnaya zvezda) B-690 is a medium-maturing variety, resistant to anthracnose, 30-40 cm high, stem grows spreading, flowers white, seeds white, large. The parchment layer of this variety is made later, so you can use either blue pods or grain pods.

In addition to these simple bean varieties, there are also lima beans. It is fragrant, the flowers are small, greenish-yellow, the pods and grains are large and flat, the grains are of different colors. Lima beans have short and tall varieties. The following varieties are common.

Genderson's Shrubbery (Kustovaya Gendersona) - early maturing variety, short stature (25–35 cm). The pods are short, flat, with 2-3 white grains inside. It ripens in 80-100 days after germination.

Philadelphia - late maturing variety, height 30–35 cm, the pods are large and flat. The seeds are white, of medium size, ripening in 100-120 days after germination. [3]

In crop rotation, beans are planted two to three years ago on fertilized land. Beans give good yields in areas free of potatoes or root crops and melons.

Vegetable beans are plowed deep in the fall, plowed in early spring, and then planted in cultivated land. Heavy soils with compacted soil are plowed without cultivation. Vegetable beans need more fertilizer. It is filled with 3-5 quintals

of superphosphate per hectare, 0.5-1 quintals of ammonium nitrate. Sowing the seeds mixed with nitragin gives good results. [1]

Vegetable beans are planted in the second half of April or early May with a grain or grain-vegetable drill with row spacing of 50-60 cm and bush spacing of 4-6 cm. Simultaneously with planting, a special tool is installed on the drills to open the branches. Seeds are sown to a depth of 3-6 cm, depending on size and soil conditions. Seed beans consume 70-80 kg per hectare if small, 90-120 kg if large.

Vegetable beans are watered 4-5 times during the growing season, row spacing is cultivated and chopped once. When the beans begin to shrivel, 50-100 kg of ammonium nitrate is applied per hectare. Rows are planted with beans, leaving one plant every 10-12 cm.

Vegetable beans are harvested every 5-8 days, 8-10 days after legumes are harvested, i.e., when their grain is officially one-third the size of a grain. Depending on the navigation, it is dialed a total of 6-8 times. In the second and third harvest, a lot of blue beans come out. When picking, the beans are carefully cut or trimmed. It is possible to get more than 70 quintals of green beans per hectare.

Beans planted for blueberries are round when harvested when they reach their normal size. The fact that Don has reached this level is evident from the bumps on its forehead.

In seed farms, a distance of 100 meters is left between the lands where each variety is planted. When the beans begin to ripen and before harvesting, the seed plot is inspected and foreign varieties are removed. Beans are harvested as the leaves begin to turn yellow and most of the pods ripen. When harvesting is delayed, the bean pods open and the grain spills out. Harvested beans are tied in a garden and the grain is left in the field for a few days to ripen and dry.

Vegetable beans are ground in a simple

molotilka. In grinding, the number of rotations of the drum is reduced and 60 percent of the teeth are removed. The crushed grain is dried after sorting. Seed plots yield 15-25 quintals per hectare, depending on the navigation and how it is cared for.

VIGNA VEGETABLE BEANS

Vigna vegetable bean is a legume plant belonging to the genus (*Vigna unguiculata* subsp. *sesquipedalis*), belonging to the legume family (Fabaceae). He is from South Africa.. It is widely used in food and is also used in animal husbandry, poultry and as a green manure. The blue pods of the asparagus varieties of *Vigna* is used for food.

Sparja vigna is a tall plant. . Stems are obovate, sparsely petiolate, leaves trifoliate, flowers white or reddish-purple, stem length 30-40 cm. The grains are smaller, kidney-shaped, different in color, but duller, Fig. 1.



Figure 1. Appearance of Vigna vegetable beans

Care consists of watering 4-5 times during the growing season, cultivating between rows and pruning. At the time of budding it is recommended to apply nitrogen fertilizer at the rate of 50 kg per hectare. If the plants are thick, it is made single, leaving one plant every 10–12 cm. Vigna vegetable beans are harvested every 6-8 days 8-10 days after germination, ie when their grain reaches one third of its original size. Blue beans are carefully cut or sliced. Each hectare of land can yield 70-100 centner and more of blue legumes. Vigna bean seeds sown

for blueberries are harvested when the wax ripens, reaching a normal size. This can easily be detected by looking at the bulge in the pod area.

In seed farms, each variety should be placed at a distance of 100 m from other cultivars. In areas where vigna is planted, varietal cleaning is carried out at the beginning of the first legume period, ie before harvest. The leaves of the Vigna bean crop begin to turn yellow, and most of the pods are harvested when they begin to ripen. Harvested vigna beans are tied in a garden and left in the field for a few days to ripen and dry the grain.

Vigna beans are separated in a grain separator (molotilka), but the speed of rotation of the drum and the teeth are reduced. Depending on the navigation and agro-techniques used in seed farms, the yield is 10-25 centner per hectare. The seeds retain high germination of 95% and up to 7-9 years.

Moon-shaped vegetable beans (*Phaseolus lunatus* L.) - in morphological structure and biology it is close to legumes. In consumption, vegetables are used in the form of the moon, beans and blue grains. The seeds are small, kidney-shaped, Fig. 2.



Figure 2. Moon-shaped vegetable beans

Only the Golden variety is zoned for cultivation in Uzbekistan. Also worth noting Linskaya or lunar Blackberry varieties. Because they are salt resistant and very tasty. The flowers are small, yellow-green, the stems are flat, broad, the seeds are large, flat, of

different colors. Also widespread are the taller, strongly branched varieties of this lunate bean, Branched Fine-Grained, and Armenian-2.

Moon-shaped beans are also planted in the spring in late April, early May in grain or vegetable-grain seedlings in a scheme 70x10-15 cm. Planting depth is 3-5 cm. The sowing norm is 80-100 kg per hectare.

Care consists of watering 4-5 times and working between rows, weeding and mowing.

For moon-shaped bean blue pods, 10-12 days after the pods appear, the pods are harvested 6-8 times, depending on the total navigation. Mostly by hand, the grain is harvested during the milk ripening period. One hectare of land can yield 80-100 centner of blueberries.

References

1. Presidential Decree of the Republic of Uzbekistan dated February 7, 2017 No. PD-4947 "On the Action Strategy for further development of the Republic of Uzbekistan".
2. Buriev Kh.Ch., Juraev R., Alimov O. Storage and pre-processing of fruits and vegetables.. – T.:Mehnat, 2002. P.20-22.
3. Zuev V, Atakhodjaev A, Kodirkhudjaev O. Green vegetables. The book "Growing seedlings and vegetables on protected lands.". Tashkent 2010.Noshir.R.222-223.
4. Khurramov U.Kh, "Development of the basic elements of the technology of selection and cultivation of high-yielding varieties of Beijing cabbage in the period of repeated sowing" Abstract/ Tashkent 2019/ p.3-40.