

## THE IMPORTANCE OF LEGUMES IN INCREASING SOIL FERTILITY AND AGRO-TECHNOLOGY OF CULTIVATION

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**Abstract.** *The advantages of legumes in boosting soil fertility and the agrotechnology of their cultivation are covered in this article. The demand for legumes is rising steadily right now. The production of high-quality cattle feed depends on the abundant protein found in legume grain, stems, and leaves.*

**Keywords:** *bean, light industry, raw materials, Agro-technology, grade, ascachitosis, vitamin, lalmi.*

Today, legumes are widely used in many areas of food and agriculture. The grain of most legumes is a valuable raw material in food and light industry. The importance of legumes and their distribution around the world, how much area is currently cultivated and its productivity depend on the composition of grains, the importance of peas, the biology of legumes, varieties, land preparation for planting, planting care and harvesting technology.

Legumes belong to the legume family, and this group includes peas, lentils, chickpeas, soybeans, beans, mung beans, vetches, common peas, lupins, and other plants. Legumes are different from other plants in terms of composition, first of all, they differ in the amount of protein in the grains, stems and leaves and other properties. The grain of leguminous plants contains 20-30% protein, which is 2-3 times more than the protein in grain crops. Soybean grain contains 35-52% protein and 17-27% oil, similar to the composition of the grain of leguminous plants. The grains of these crops contain vitamins A, B, B2, C, D, E, PP, in addition to protein and oil, which increases their food and fodder value. Nowadays, in addition to grain, stems and leaves of leguminous plants are widely used in other fields. They consist of the following, and their stalks are used to make nutritious hay, silage, and hay flour. The grain and straw of leguminous plants contains 8-15% protein, which is 3-5 times more than the straw of grain crops. Therefore, the grain of leguminous crops is a valuable raw material in the food and light industry. Nowadays, canned green peas and beans, cereals, flour and other products are made. Leguminous grain crops are nitrogen-accumulating plants in their roots, and it has been found that leguminous grain plants can collect up to 50-100 kg of free nitrogen from the air per hectare of land by means of nodule bacteria. Some types of leguminous plants have the ability to assimilate phosphorus compounds that are difficult to dissolve in the roots of peas, mung beans and lupine.

Most of the grain leguminous crops are autumn peas, vetch, soybeans, lupine, and green manure. Therefore, when it is often added to the soil and plowed, it enriches the soil with organic matter and nitrogen and increases soil fertility. This significantly increases the yield of subsequent crops. In the irrigated lands of our republic, when 20-30 tons of plants were mixed with the soil and plowed per hectare, the amount of nitrogen reached 140-200 kg/ha, and the yield increased by 30-50%. Thus, leguminous grain crops help to increase the fertility of the soil, the efficient use of irrigated land and increase the overall productivity of plants. Currently, the area of leguminous crops on the scale of world agriculture is 135 million hectares.

Legumes are among the plants that are widely grown in India, China, America and other countries. In 1998, about 22,200 ha of leguminous crops were planted in our republic. In Uzbekistan, bean, soybean, common pea are grown more. Pea is a valuable food and vegetable. Its grain contains an average of 19-30% protein, 4-7% oil, 46-60% starch, B vitamins, various mineral salts and the most important amino acids that help digestion.

Chickpea is also nutritious fodder for livestock. It is fed to cattle in the form of cereal or ground. Usually, in order to increase the fat content of the milk of black cows, grains of dark varieties with a lot of protein are given. The stalk of the pea plant cannot be fed to cattle, because it contains a lot of organic acids (in its leaves), and the straw is too coarse. Pea is a drought-resistant plant, so it is planted in more humid lands. Peas, as a nitrogen-fixing crop, enrich the soil with nitrogen, when planted before grain crops, it gives good results by cleaning the land from weeds, and prevents damage from harmful insects.

Peas are considered to be an ancient type of crop, originating from Central and Minor Asia. This type of crop is widely cultivated in India and Pakistan. It is also planted in Algeria, Morocco, Turkey, Iran, Mexico and other countries. Peas are planted on more than 10 million hectares of land in the world. Local peas are planted on more than 2,000 acres of land in Uzbekistan, with an average yield of 8-10 s.g. in drylands and 30-32 s.g. in irrigated lands.

Pea belongs to the genus *Cicer arietinum* and is among heat-loving plants, but in the early stages it requires little heat. The seed begins to germinate at 3-4°C, at 8°C it produces grass in 9-10 days. Peas require a lot of heat after emergence, especially during flowering and fruiting. During this period, the temperature should be 20°C for the normal development of the plant. Large pea plants can withstand frosts of 10-11°C, adult plants can withstand frosts of 8°C. Pea is a drought-resistant plant, and asceticosis develops when there is too much moisture. The soil is not very picky. Pea is a day-neutral plant, the growing period is 65-140 days, depending on the growing conditions and varieties. "Zimiston", "Lazzat" and "Milyutinsky-6" varieties are grown in Uzbekistan.

To plant chickpeas, it is necessary to pay good attention to the plow. If the land is well plowed, the soil is softened to a depth of 6-8 cm before planting in the spring. If the soil is compacted, it is loosened at a depth of 10-12 cm. Since peas are a leguminous plant, they first of all need phosphorus fertilizers. When plowing the land in autumn, 4-5 t of manure mixed with 30-45 kg of phosphorus or 50-60 kg of phosphorus is applied per hectare. In the spring work, 30-45 kg of nitrogen fertilizers are applied per hectare, before sowing the seeds are cleaned of impurities, large and flat ones are sorted, treated against diseases and treated with nitragin made from special budding bacteria. The sown seed should meet the quality requirements, its fertility should be 92-95%, its purity should not be less than 99 and 98.5%. Peas should be planted in late March or early April or in late autumn.

Peas are planted in wide rows, 45 or 60 cm between rows. To ensure that the plants are of a standard thickness, it is necessary to sow seeds at the rate of 50-65 kg/ha from 200 to 300 thousand per hectare of land. When peas are planted in double rows, the thickness of the bush per hectare is 0.5-0.8 million, and the seed consumption is up to 100 kg. Depending on the small size of the seed, it is planted at a depth of 3-5 to 7-8 cm. Crops are fertilized before and after weeding, and the row spacing is treated twice. The following agrotechnical methods are used before weeding. Among them, the rows are treated with a light or medium teeth harrow, and then with a light harrow after mowing. It gives good results to cultivate the crops between the rows when the

leaves are slightly withered, it is necessary to do two cultivations and harrowing. It is necessary to soften the first time when the crops are budding, and the second time when they are flowering. Peas ripen in June and July during the hottest period of summer, and while riping slinky and pods dry out quickly. If it is not harvested quickly, most of the crops will die. Therefore, it is recommended to harvest the crop as soon as possible. Pea plant stem and grain are collected in SK-3, SK-5 combine harvester. It will be difficult to harvest plants with low height and low pods. Grain is cleaned in OS-1, OS-3 grain cleaning machines. Sorted grain is poured into closed well-ventilated rooms or stored in bags. Moisture content during storage should not exceed 12-14%. The pea plant is harvested using the above methods.

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