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Ways of Growing Green Peas on the Subsistence Farming

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Abstract

This article highlights the origin of green peas, their composition, morphology and biology, and planting dates. In addition, the planting of green peas as an early and repeated crop, their growth and development, as well as the choice of land for green peas, highlights the need for temperature, moisture, light and nutrients. Growing the green pea plant as an early and late crop is recommended for subsistence farms owners.

Keywords*: green peas, plant biology, relation to temperature, light, moisture, planting methods.*

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INTRODUCTION

Despite the rapid development of science and technology in the world, the problem of food remains one of the most important global problems. Due to strong environmental changes around the world, from year to year there is a decrease in cultivated areas of agricultural products and at the same time an increase in population. Today there are more than 7 billion people on earth, and 3 billion of them are hungry.

Today, food safety is important not only in the quantity of grown products, but also in their diversity, environmental friendliness, richness of minerals useful for the body and human health. In this regard, great importance is given to the priority and further development of agriculture to ensure food security of the population (ADB, 2009, FAO, 2014).

Healthy eating programs are now being implemented in many developed countries. The program is aimed at increasing the consumption of vegetables and the wide use of their assortment to maintain public health. A healthy diet requires high-calorie and protein-rich products, as well as biologically active substances. Many countries are implementing programs to import vegetables containing biologically active substances and non-traditional crops for this country (Kononkov P.F., 1996, 2001, Pivovarov V.F., 2007).

In order to ensure food security in the country it is planned not only to increase the volume of output, but also to improve the quality and expand the range of products. The volume of vegetable production per capita and the recommended media in the republic is several times higher, vegetables - 240 kg instead of 109.2 kg, gourds - 24.2 kg instead of 54 kg

However, the diversity of vegetable and melon crops is still insufficient, since only 35-40 varieties of vegetables out of 1,200 available in the world are used in our country.

Along with the expansion of the assortment of vegetable crops one of the urgent tasks for today is radical improvement of science-based seed production systems of their varieties, their widespread use in production, development of resource-saving seed production technologies.

Vegetables or green peas are a non-traditional crop for our country, and despite the fact that consumer demand for green peas grows from year to year, canned green peas are still imported into our country from abroad. However, the climatic conditions of the republic allow for high yields of green peas several times a year.

Green peas are poorly digested by the body, rich in protein, they are mainly divided into edible (best) and desirable sugar forms with legumes. Legumes are distinguished mainly by liquid food, and green peas in the canning industry, in the preparation of meat, fish and vegetable delicacies, also desirable freshness from other peas, they are also used in frozen form.

Green peas (Pisum sativum L.) are very rich in vitamins A, C, group B and PP, they contain twice as much vitamin B2, one and a half times more vitamin B2 and five times more vitamin PP than durum wheat. 100 g of peas contains 0.30-0.54 mg of carotene, vitamins K-0.28, B1-0.28, B2 -0.15, PP-2.10, B6-0.18, C-20-50 mg (Mahan L. et al., 2013).

Green peas contain more active lipotropic antisclerotic substances (halil (263 mg) and inositol), which play an important role in metabolism in the body. Due to the high content of choline, green peas and their pods have an anti-sclerotic effect, removing radionuclides from the body, preventing the growth of malignant tumors. It helps in the treatment of cardiovascular, hepatic, kidney diseases and is recommended for patients with gastric ulcers, duodenal ulcers. Green peas

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are one of the leading vegetable crops by nutritional value - 20-26% dry matter and 5-7% protein, 6-9% sugar, 1-3% starch, 6-7% fat and 2-6% fiber. It has a nutritional caloric value 1.5-2.0 times higher than that of potatoes and other vegetables.

Another unique healing property is the presence in the grain of a substance prodosin, which is involved in the synthesis and breakdown of amino acids. Disruption of amino acid synthesis in the body leads to epilepsy, skin diseases and a number of other diseases. Green peas also differ from other plants in the richness of biologically active substances and 26 different minerals (phosphorus, potassium, calcium, chlorine, iron and so on). Green peas are widely used in our national cuisine in the preparation of various salads and diet dishes.

Green peas are mainly grown and processed in southern Europe (Bulgaria, Romania, the Baltic states), India, and China.

A unified classification of the vegetable or green pea (Pisum sativum) has not been fully formed due to the fact that many species and traits appear within the species during the process of selection (Emend. COLehm).

As a result of the fact that vegetables or green peas (Pisum sativum) exhibit many traits and characteristics in the process of breeding, a single unified classification is not fully formed, in the production has predominantly biologically unripe sweet taste and uses sugary or twisted (brain) varieties (Pisum sativum convar. meddulare Alef. Emend. C.O.Lehm).

The fruit of peas, like that of all legumes, is a peduncle containing three to twelve grains, with a stalk, porous, weakly quadrangular, lying flat. By structure, the stem is simple and stem-like, and there are short types of segments. In height, there are low-growing, semi-low-growing, medium-growing, and long-growing. Leaves - 1-3 bipartite, with growing folds at the ends. There are also varieties that do not have curls. Flowers are attached to 1-2 inflorescences, in undersized (stem) varieties their number is observed 5-7. Flowering shoots are located mainly in the axils of the leaves, in early ripening varieties they appear -5-6. and above the articulation (late-ripening).

1- picture. Emergence of green pea shoots.

Green peas are self-pollinated. This makes it possible to grow seeds even in subsistence farms. It is important to know the biology of green peas in order to grow them in the garden. Depending on the size of the seeds, green peas can be small (1000 seeds weigh 200 g), medium and pus (300-350 g). The seeds germinate 6-10 days after sowing.

Choosing soil for green peas. The best analogues of green peas are root crops, cabbage, tomatoes and potatoes from cereals and row crops. Legumes, fields free of perennial crops, and

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lands heavily weeded are considered unsuitable for green peas. Weeds lead to a 50-55% reduction in pea yields.

Relation to temperature. Green peas are a cold-resistant plant, seeds begin to germinate at 2-30C, and the temperature of 8-120C is favorable for growth. Plant growth starts at 40C and slows down to 290C. The optimum temperature is 180C, the relative humidity is low, and at a temperature above 250C premature maturation of peas is observed.

Vegetable peas also have an agronomic advantage due to the properties of grain crops that improve soil fertility and physiological condition, reduce the amount of nitrogen fertilizers applied to the soil with air nitrogen fertilizers, and rationally use the soil from natural fertility.

Relation to light. Green peas are a long day plant, growing faster on light and cool days, growing poorly in shady places and in dense plantings.

Relationship to nutrients. The root of green peas makes up 25-30 percent of the plant. Due to the fact that its root system is located mainly on the soil thickness of 35-40 cm, vegetable peas are very demanding to soil fertility, mechanical stability. Green peas themselves absorb 50-55 percent of the nitrogen they absorb from the air. However, in order for the roots to develop sufficiently, you need to give it an initial nitrogen fertilizer at the rate of 30 kg/ha. Molybdenum and boron act as catalysts to accelerate nitrogen fixation. The feeding rate varies depending on the expected yield.

Green peas' relationship to nutrients

	N_2	P_2O_5	K_2O
1 t/ha	30-35	15-20	10-55
5 t/ha	100	70-80	40-50
6 t/ha	120	100	70-80
7 t/ha	140	110	90-100

Green peas' relationship to moisture. Green peas like moisture more than other legumes. When sowing peas in early spring, the field should be at least 70-75 percent moist. The denser the soil moisture (80-90 percent), the more seeds will germinate in one layer. Lack of moisture in the soil, and in this case the increase in air temperature, causes the seeds to go moldy. The plant is relatively moisture-demanding during flowering, blooming, and wax maturity.

The land for growing green peas in subsistence farms will need to be prepared as early as autumn. Because in the southern areas of the country it is recommended to sow in late January-February, and in central areas in early February-early March. If the seeds are sown at the recommended time, green peas germinate before weeds and have a positive effect on their subsequent development. Green peas are recommended to be sown in a ribbon-like way. The distance between the rows is 60 cm; planted in 2,3,4 rows on the inflorescences 70 cm and 90 cm. After full germination of the seeds trellis set (Pic. 2). Seeding rate is determined by the size of the seeds and the quality of the seed. According to the Institute of Botany, in the climatic conditions of the country the number of seedlings per 1 hectare is 0.9-1.0 million seedlings in early-ripening varieties or 200-210 kg, 0.75-0.8 million in medium-ripening varieties. units or recommended planting rate of 180-190 kg. During the growing season, weeds on inflorescences are removed manually. During the growing season, depending on the potential of the variety, you can harvest up to 3-4 times by hand. Today our country grows the variety of green peas

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"Surprise", created at the Institute of Plant Genetic Resources, the growing season of this variety is 90-95 days.

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