



## ADVANTAGES OF USING PEDAGOGIC METHODS IN TRAINING STUDENTS AND YOUNG PEOPLE IN PHYSICAL EDUCATION

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**Annotation:** the article presents information on the effectiveness of mineral fertilizers and biostimulants when planting peanut varieties in various planting schemes in gray soils of the Andijan region. Based on the results of the studies, it was established that the biostimulants Biosol, Geofos, GEO-K had a significant impact on the yield of peanut pods. Compared to the options (20.5-26.1 C/ha), where biostimulants Biosol, Geofos, GEO-K were not used for peanuts and were fed with mineral fertilizers, peanut varieties were fed with mineral fertilizers. When treated with biostimulants Biosol, Geofos, GEO - a high yield of 3.1-10.5 c/ha has been achieved.

**Annotatsiya:** В статье представлены сведения об эффективности минеральных удобрений и биостимуляторов при посадке сортов арахиса в различных схемах посадки в сероземах Андижанской области. По результатам проведенных исследований установлено, что биостимуляторы Биосол, Геофос, ГЕО-К оказали существенное влияние на урожайность стручков арахиса. По сравнению с вариантами (20,5-26,1 ц/га), где биостимуляторы Биосол, Геофос, ГЕО-К под арахис не применялись и подкармливались минеральными удобрениями, сорта арахиса подкармливались минеральными удобрениями. При обработке биостимуляторами Биосол, Геофос, ГЕО - К достигнута высокая урожайность 3,1-10,5 ц/га.

Peanuts are a valuable oil and food plant. Today, oil crops, including peanuts (*Arachis hypogaea* L.) increasing yield and seed quality is important. Peanuts have a special place among other oil crops due to the superior nutritional value and the fact that they are in different forms of consumption. It is one of the main plants rich in nutrients that can be used in the process of human consumption to meet its nutritious energy as well as its demand for protein

Globally, peanuts are planted in 117 countries and the crop area is 27.7 million hectares with a gross yield of 43.9 million tons. On average, 1.6 tons of crops are grown per hectare. Of the total cultivated crop, 68% is Asian and 25% is African Continental Contribution.

The largest number of products grown corresponds to the share of India, China and the United States of America, and it is in these countries that 60-80% of the production is processed. The highest yields worldwide were recorded in China (2.5-3.0 t/ga) and the United States of America (3.0-4.0 t/ga). In our republic, this figure is 1.5-1.8 t/ha when grown as an average repeated crop, and 3.5-4.0 t/ha when grown on advanced farms as the main crop.[1]

The cultivation of peanuts in Uzbekistan, as in the countries of the world, is mainly focused on the domestic market. In the near future, work is underway on the development of the confectionery industry in the Republic and the orientation of products to export to foreign

countries due to the expansion of peanut crop fields, increasing the amount of crop yield from one hectare.

In Uzbekistan, 5.5-6.0 thousand hectares are planted until 2017, and as of 2020, in more than 19 thousand hectares, peanuts are planted mainly as a tacroi crop. An average yield of 15-20 s/Ha is obtained when grown as a repeat crop, 30-35 s/Ha and even higher when advanced innovative technologies are used as the main crop[2].

Currently, special importance is paid to scientific research on increasing the yield of peanuts. In the care of this crop, it is an urgent issue to conduct research in the direction of determining planting standards, fertilizer standards, improving productivity and grain quality, meeting the population's demand for oil and oil products, providing livestock with nutritious feed.

Based on this, experiments were carried out with the aim of determining the optimal planting scheme, mineral fertilizer norms and the effectiveness of biostimulants in the conditions of Meadow Boz soils of the Andijan region, in the cultivation of high and high-quality crops from Peanuts.

Scientific research was carried out in 2022 at the experimental farm of the Institute of Agriculture and agrotechnologies of Andijan region.

In field experiments, the "classical" variety of Peanuts was planted and cared for in 2 70x20-1 and 70x30-1 planting schemes, and studies were carried out on the effect of 3 mineral fertilizers N60 P110 K40, N90, P165, K65 and N120, P220, K85 kg/ha, and on the growth and productivity of biostimulants Biosol, Geophos, GEO-K types of peanuts.

The growth process of the plant is considered to be indicators of crop formation, depending on the existing conditions and varietal biology.

According to the data, tubers and legumes are often watered during the period of formation. When the Peanut is fully grown, ginaphores from the bean are easily separated, the leaf turns yellow. For harvesting, a two-row AP - 70 machine is used. This machine grabs the pods from the soil, cleans them from the soil and leaves them in a plowed state in the field. With the help of grain combines, a crop harvested with a MA-1.5 device is harvested, milled, cleaned. The moisture content of stored legumes should not exceed 8% [23; 212-218-b.]

Crop yield from plants is considered one of its most important indicators. In our studies, it was observed that the planting scheme and the effect of feeding on the formation of crop elements of peanut varieties was significantly greater (Figure According to the results of the study conducted, the number of legumes in one Bush was treated only with Biosol, Geophos, GEO-K biostimulators, and mineral fertilizers reached 20.5-28.7 grains in 70x20-1 planting schemes for separately applied options, with an increase in the feeding area, that is, up to 22.1-36.5 units in 70x30-1 planting schemes.

Only with Biosol, Geophos, GEO-K biostimulators, and mineral fertilizers were applied separately, the planting scheme was up to 29.6-37.3 g per Bush in options with 70x20-1, the planting scheme was up to 44.0-47.7 g per Bush in options with 70x30-1.

In our research, it was noted that the effectiveness of the biostimulator was even higher against the background of mineral fertilizers, the planting scheme was 70x20-1, the Biosol, Geophos, GEO-K biostimulants were treated with, and the option using mineral fertilizers from N-120, P-220, K-85 kg contained 48.2 g of legumes in one Bush, and 57.9 G when the planting scheme was 70x30-1.

From the results of the study conducted, it was found that all variants increased the number of legumes per bush plant (up to 5.4 – 6.3, 3.6-5.3.8 PCs/Bush) and the weight of legumes (up to 10.4 – 11.4, 8.9-10.8 g/Bush) as the feeding area grew.

Figure 1. The effect of various planting schemes and biostimulants on the yield elements and yield of peanuts

Based on information from an experiment on the grain weight in one Bush of peanut varieties, it was found that while the grain weight was 15.7 g/Bush in a 70x20-1 planting scheme, the feeding area increased to 39.4 g/Bush in a 2100 cm<sup>2</sup> planting scheme.

According to information from the results of the study conducted, the number of grains per bush plant as the feeding area increases in all varieties (20,6 – 20,1 – 15,0 pieces / up to Bush) and grain weight (22,8 – 13,7 – 17,3 g / tup) was found to increase.

Data obtained on yield indicators of peanut varieties. Listed in Table 1.

Nº	Sheme of	Fertilazers kg/ga	Common crops	Stem crops	Legumi nous crops	Grain crops	Poundage of 1000 grains
1	70x20-1	Biosol, Geophos, GEO-K	27,9	15,2	12,7	11,0	662,2
2		N-60, P-110, K-40	49,7	27,0	22,7	15,7	667,1
3		N-90, P-165, K-65	54,6	29,7	24,9	17,3	687,9
4		N-120, P-220, K-85	61,5	33,4	28,1	18,1	691,3
5	70x30-1	Biosol, Geophos, GEO-K	24,0	12,7	11,3	10,8	694,5
6		N-60, P-110, K-40	43,5	23,0	20,5	16,4	699,4
7		N-90, P-165, K-65	47,0	24,8	22,2	17,7	720,2
8		N-120, P-220, K-85	54,9	29,0	25,9	19,3	723,6
9	70x20-1	N-60, P-110, K-40+ Biosol, Geophos, GEO-K	63,1	35,6	27,6	25,2	740,7
10		N-90, P-165, K-65 + Biosol, Geophos, GEO-K	81,0	45,6	35,4	30,0	761,5
11		N-120, P-220, K-85 + Biosol, Geophos, GEO-K	87,5	49,3	38,2	30,6	764,9
12	70x30-1	N-60, P-110, K-40 + Biosol, Geophos, GEO-K	54,1	30,5	23,6	21,4	763,1
13		N-90, P-165, K-65 + Biosol, Geophos, GEO-K	68,1	38,4	29,7	25,1	783,9
14		N-120, P-220, K-85 + Biosol, Geophos, GEO-K	74,0	41,7	32,3	24,5	787,3

Based on the results of the overall yield study, it was found that the overall yield was higher in the 70x20-1 planting scheme in all peanut variants, and the overall yield decreased in the 70x30-1 planting scheme.

The highest overall yield factor in the experiment was 21.3-31.0 s/in variants with a planting scheme of 70x20-1, with a bean yield of 17.9-26.1 s/, a grain yield of 12.7-18.1 s/. This was found to have reduced the stem yield to 4.0-8.4 s/in the 70x30-1 planting scheme, and the legume yield to 2.2-6.5 s/.

Based on Table data, only Biosol, Geophos, GEO-K biostimulators were treated, and in variants where mineral fertilizers were applied separately, the planting scheme was 70x20-1,

the stem crop was 15.2-33.4 s/Ha, the legume crop was 12.7-28.1 s/Ha, the grain crop was 11.1-18.1 s/Ha.

Table 1.

Peanut yield indicators

