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The Number of Grains, the Number of Seeds in the Grains, the Mass and the Weight of 1000 Grains in the Soybean

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ABSTRACT: This article describes the results obtained in increasing the norms of sowing soybeans in the conditions of light gray soils of Kashkadarya region.

Keywords: replanting, legumes, soya, sowing norms, sowing periods, grain, grain mass.

Relevance of the topic. Today, in the world agricultural practice, there is an increase in the widespread introduction of soil-saving, resource-saving new technologies that preserve productivity, improve the agrobiological properties of soils, the production of high quality crops.

Research methods. Field and laboratory studies, plant biometric and phenological observations, and soil analysis were performed on the basis of methodological manuals such as “Methodology for State Variety Testing of Agricultural Crops”, "Methods of Agrochemical Analysis of Soils and Plants", "Methods of Agrophysical Research", "Methodology for Research with Leguminous Crops", "Basic Provisions for Determining the Economic Efficiency of Using the Results of Scientific Research Works, New Techniques and inventions, rationalization proposals", and statistical analysis of experimental results was performed using the B.A.Dospekhov method.

Тадқиқотнинг натижалари. It is known that the number of grains in legumes, weight of 1000 grains plays an important role in determining the yield of legumes.

According to B.S.Kamilov, M.P.Ziyatov, J.S.Eshonkulov and Sh.M.Togaev,soybean has the highest grain yield at 65-65-60% soil moisture, and when irrigated 3 times during the application period, an additional grain yield of 2.7-4.8 centners was obtained per hectare.

According to A.M.Abduazimov, Sh.Sh.Sarmanov and N.F.Mirzaev, the soybean plant is highly sensitive to environmental factors and requires high agrotechnology, as it is known that the implementation of agro-technical measures on the basis of scientifically proven recommendations is a guarantee of high yields.

N.Mirzaev noted that soybean varieties will gain 1000 grains if fed in strict compliance with the norms of mineral fertilizers.

N.Khalilov and O.Amirkulov noted that in the conditions of light gray soils of Kashkadarya region, 22.3 t / ha of soybeans from soybeans at early sowing in wheat-free areas will allow to make full use of the region's bioclimatic resources, soil and climatic conditions of replanted soybeans. and depending on cultivation agrotechnologies, the average number of legumes formed in a single plant was found to be 49.4 to 52.3.

According to the experimental data obtained in 2020, it was observed that the number of grains of peanuts, the number of seeds in the grains and the mass of 1000 seeds affected the plant planting norms and timing.According to the data obtained, the sowing rate of peanuts in the 1st sowing period was 200 and 250 thousand seeds per hectare, the number of pods per bush was 5.6 and 5.2 on August 15, 17.8 and 17.0 on September 1, 49.0 and 50.3 units on September 15, respectively, of which the number of seeds per plant was 76 and 64.1, the mass of seed per plant was 9,8 grams and 8,3 grams, the weight of 1000 seeds was 129,2 grams and 129,5 grams, respectively.

When sowing norms are increased to 300 and 350 thousand seeds per hectare, the number of pods per bush was 5.8 and 6.1 on August 15, 20.3 and 18.6 on September 1, 52.4 and 51.2 units on September 15, respectively,of which the number of seeds was 63.9and51.6, the mass of seed per plant was 8.3 grams and 6.7 grams, the weight of 1000 seeds was 130.2 grams and 129.8 grams, respectively.

It can be seen that the increase in soybean planting norms was 0.9-3.4 units higher than the number of legumes in the variants with 200 and 250 thousand seedlings per hectare, respectively. However, the inverse pattern was observed in

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the data obtained on the number and mass of grain in a single plant, and it was found that the number of grains in low-planted varieties was 12 grains and 1.6 grams more, respectively, than the number of grains in high-planted varieties.

Table 1 The number of grains of soybean, the number of seeds in the pod, and the mass of 1000 seeds, 2020

Option №	Croptypes	Sowingdates	Sowing rate ha/thousand pieces	Number of grains per bush, pcs			Number of seeds per plant, pcs	Seed mass per plant, g	1000 seedweight, g
				August 15	September 1	September 15			
9	Soybean	June 25-July 5	200	5,6	17,8	49,0	76,0	9,8	129,2
10			250	5,2	17,0	50,3	64,1	8,3	129,5
11			300	5,8	20,3	52,4	63,9	8,3	130,2
12			350	6,1	18,6	51,2	51,6	6,7	129,8
13		July 5-July 15	200	4,3	15,4	46,3	67,6	8,7	128,3
14			250	4,4	15,0	46,9	59,9	7,7	128,5
15			300	4,4	17,8	48,3	55,1	7,1	128,9
16			350	4,5	17,6	48,8	50,8	6,5	128,7

The above laws were also noted during the second sowing of soybeans.

It should be noted that the repeated soybean was found to be less in the late planting period than in the 1 planting period in 13-14 options compared to the 9-10 options: the number of pods per bush was 1.3 and 0.8 on August 15, 2.4 and 2.0 on September 1, 2.7 and 3.4 units on September 15, respectively,of which the number of seeds per plant was 8.4and4.2, the mass of seed per plant was 1.1grams and 0.6grams, the weight of 1000 seeds was 0.6 grams and 1.3 grams, respectively. These indicators in 15-16 options found to be less: the number of pods per bush was 1.4 and 1.6 on August 15, 2.5 and 1.0 on September 1, 4.1 and 2.4 units on September 15, respectively,of which the number of seeds per plant was 8.8, the mass of seed per plant was 1.2grams, the weight of 1000 seeds were1.3 grams and 1.1 grams, respectively.The above patterns were also observed in the experimental results of the study conducted in 2018 and 2019.

Conclusion. In light gray soils of Kashkadarya region, the increase in soybean sowing norms is 0.9 and 3.4 grains per plant, respectively, but the number of grains in low-grained varieties and the number of grains in high-grained varieties was found to be larger, 12 grains and 1.6 grams, respectively.

In repeated soybean cultivation, the number of legumes per plantfrom 0.8 to 4.1, the number of grains per legume from 4 to 8, and the number of legumes per bush per plant from 1 to 1.3, the weight of 1000 seeds were 0.6 grams and 1.3 gramswere found to be higher in the early planting period than the late planting period.

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