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RESULTS OF FINAL SELECTIONS HELD AT PRIMARY SEED GROWERS OF SOYBEAN.

Siddikov Ravshanbek Inomjonovich

Director of the Scientific Research Institute of Cereals and Legumes, PhD, Professor, Academician of the Russian and Turanian FA. Scientific supervisor.

Yakubov Zafar Latibjonovich

Scientific Research Institute of Cereals and Legumes, head of the laboratory, independent researcher.

Yuldasheva Nargiza Mavlonjonovna

Head of the laboratory. Scientific Research Institute of Cereals and Legumes.

Elyor Mominov Musajonovich

Scientific Research Institute of Cereals and Legumes,

Foundation PhD student.

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Annotation: To establish the primary seed breeding system of the domestic Baraka, To'maris Man-60, Hasildor, Gavhar Ustoz MM-60 foreign Krasnodar varieties Slavia Vilana, included in the State Register for planting in our republic, on a scientific basis, to create high-yielding soybean varieties under our own conditions, and implementation.

Key words: Legume, cotyledon, tillering, flowering, cotyledon, cotyledon, cotyledon, cotyledon, cotyledon, cotyledon, cotyledon, fertility, choices, cotyledon hair, oil.

Introduction. In the field of agriculture, the use of all available opportunities for increasing grain yield and grain quality of grain and leguminous crops, first of all, using high-yielding varieties, biologically studying their characteristics and proper treatment with them ensures positive results.

But any good variety will never lose its genetic characteristics, potential productivity, if it is planted from high-yielding seeds of high planting quality, and if all agrotechnical rules are followed correctly in the process of seed propagation, if it is free from diseases and insects. Therefore, great attention is paid to seed cultivation and its quality indicators in our republic.

Soybeans account for 40% of the total vegetable oil produced in the world today. Our government is paying great attention to the cultivation of soybeans in our country and to meet the needs of the population for soybean oil more fully.

One of such measures is the decisions of the President of the Republic of Uzbekistan No. PQ-2832 of March 14, 2017, PK-3144 of July 24, 2017 on the development of soybean

cultivation from leguminous crops, the creation of high-yielding varieties of soybeans and the expansion of cultivated areas, as well as the systematic organization of soybean selection and primary seed production. and in the decisions of the Cabinet of Ministers "In order to grow soybeans in the Republic in the years 2017-2021 and to satisfy the population's need for soybean vegetable oil more fully, to strengthen the nutritious feed base for animal husbandry", regarding obtaining an abundant and high-quality harvest from soybeans, suitable for each soil and climate conditions creation, establishment of soybean varieties and organization of the primary seed breeding system on a scientific basis, in turn, ensures further development of this sector of agriculture.

In our country, there are opportunities to get at least 2.0-3.0 tons of grain yield per hectare by planting mid-early and mid-early varieties of soybeans as the main crop and early-early and early-early varieties as repeated crops.

In 2019, domestic soybean varieties "Tomaris Man-60", "Baraka", "Hasildor", "Gavhar", "Ustoz MM-60", foreign "Slaviya", "Vilana" were included in the State Register for planting in our country at the Scientific Research Institute of Cereals and Legumes. - During 2021, in order to establish the primary seed production system on a scientific basis, seed nurseries were established, and scientific research was conducted on the reproduction of soybean seeds.

Seed nurseries of 5 soybean varieties belonging to local selection and 2 soybean varieties belonging to Krasnodar selection were established in seed nurseries in 2019 for testing first-year generations, in 2020 for testing second-year families, and in 2021 in first-year propagation nurseries.

In seed breeding, the main condition for having fertile seeds is to focus all attention on ensuring the fertility and purity of these varieties, starting from the study of the generations of new varieties. For this purpose, selections were made several times in each variety, based on the characteristic morphological characteristics of the plant at each growth stage depending on the type.

In order to maintain the fertility of soybean varieties grown in our experiments, during the growth period of soybean plants, selections were made for ensuring fertility and purity of all soybean varieties 4 times.

In order to ensure the productivity of soybean varieties, the first selections for the purity of the soybean varieties were conducted at the flowering stage of the plants, and in this, the soybean plants that were considered foreign and differed from the plants based on the characteristics such as white, white purple, dark purple inflorescences, depending on the color of the flowers of the varieties, as well as those that were strongly damaged by pests, and the soybean plants that were behind in development were removed. selections were continued.

Selections were carried out for the second time on the plants of soybean varieties in the seed nurseries, in which, at the podding stage of each soybean variety, the processes of pod formation differed from each other, and soybean plants affected by diseases and pest insects, which lagged behind in development and growth, were released and selections were carried out.

For the third time, when the growth period of soybean varieties goes to the ripening stage, the leaves of the plants turn yellow naturally, the stem, the hairs in the pods enter the variety-specific color, the appearance of the full grain in the pods is specific to the variety (shape, color of the seed coat, color of the seed bag, size, etc.).) selections were made as a result of the observation of separate, clear separation of foreign varieties in the nurseries of soybean varieties.

Testing of the first-year generations based on the final results of the selections conducted in the generations in the nurseries, 58 of the early soybean varieties Gavhar, 60 of the Slavia variety, 55 of the mid-ripening varieties Vilana, 51 of the Hasildar variety, 57 of the To'maris Man-60 variety, of the mid-late varieties Ustoz MM - 61 of the 60 varieties, 68 of the Baraka variety were released.

The number of pure generations that passed the final selection of soybean plants in the trial nursery of the first year was 190 or 76.0% in the early Slavia variety, 192 or 76.8% in the Gavhar variety, 195 or 78.0% in the mid-early varieties Vilana variety, Tomaris Man-60 193 or 77.2% of the variety, 199 or 79.6% of the Hasildar variety, 182 or 72.8% of the medium Baraka variety, 189 or 75.6% of the Ustoz MM-60 variety. (Table 1)

At the same time, according to the results of the final selections conducted in order to ensure fertility in the families of soybean varieties grown in the second-year trial nurseries, the most released soybean families were 56 families of the early Slavia variety, 40 families of the Gavhar variety, and 46 families of the mid-early Vilana variety. As a final conclusion, the number of pure families was 134 or 70.2% in the Slavia variety, 149 or 76.4% in the Vilana variety, and 152 or 79.% in the Gavhar variety.

41 families of medium Tomaris Man-60 variety, 48 families of Hasildar variety, 47 families of medium Ustoz MM-60 variety, and 58 families of Baraka variety were released as a result of selections held in order to preserve the productivity of soybean varieties.

As a result of the selections, 152 or 78.7% of To'maris Man-60 variety, 151 or 79.1% of Hasildar variety, 142 or 75.% of medium-sized Ustoz MM-60 variety, 124 or 68.1% of Baraka variety % was the number of pure families that passed the final selections.

In order to ensure the fertility of new varieties of soybeans in the seed nurseries, first-year reproduction nurseries of soybean varieties selected from the seeds of their families as a result of selections carried out in the nurseries of the first-year trials and second-year family trials (during 2019-2020) were established, and in these breeding nurseries, the fertility of soybean varieties was also ensured.

Table 1

The results of the final selections held in the nurseries of the first-year trial of the first-year generations and the second-year family trial of soybean primary seed. 2019-2020 yy.

№	Name of soybean varieties	Total number of generations, pcs	Number of offspring produced as a result of selections				Total	Qualified families	
			I	II	III	IV		number of	%
First-year test nursery 2019.									
1	Tomaris Man-60	250	23	16	9	9	57	193	77,2
2	Baraka	250	23	23	11	11	68	182	72,8
3	Slaviya	250	17	21	17	5	60	190	76,0
4	Gavhar	250	23	15	10	10	58	192	76,8
5	Hasildar	250	14	13	12	12	51	199	79,6
6	Vilana	250	8	7	15	25	55	195	78,0
7	Ustoz MM-60	250	12	9	17	23	61	189	75,6
Second-year family trial nursery. 2020 year									

1	Tomasir Man-60	193	10	12	9	10	41	152	78,7
2	Baraka	182	15	12	17	14	58	124	68,1
3	Hasildar	199	14	12	13	9	48	151	75,8
4	Gavhar	192	11	10	8	11	40	152	79,1
5	Slaviya	190	13	14	11	18	56	134	70,2
6	Vilana	195	11	12	9	14	46	149	76,4
7	Ustoz MM-60	189	9	12	14	12	47	142	75,1

In order to ensure fertility in all soybean varieties, selections were carried out in order to ensure fertility.

In the soybean plants in the seed nursery, at the first stage of flowering of soybean plants, depending on the color of the flowers of the soybean varieties, white, white purple, dark purple, weeding was carried out. in order to ensure fertility, cleaning and removal of foreign varieties was carried out.

At the same time, the yield of soybeans is 2.2% from the mid-ripening Hasildar variety, 2.3% from the To'maris Man-60 variety, 2.9% from the Vilana variety, and 2.7% from the mid-ripening varieties Baraka variety, and 3.0% from the Ustoz MM-60 variety. for the purpose of cleaning and removing impurities from foreign species.

Table 2

Selections conducted in nurseries of first-year propagation of soybean primary seed. 2021 year

№	Name of soybean varieties	Selection stages			
		Flowering %	Beaning %	Ripen %	Average %
1	Tomasir Man-60	2,3	1,7	2,2	6,2
2	Baraka	2,7	2,2	2,4	7,3
3	Hasildar	2,2	1,6	2,1	5,9
4	Gavhar	2,4	1,5	1,7	5,6
5	Slaviya	2,7	1,8	2,3	6,8
6	Vilana	2,9	1,9	2,2	7,0
7	Ustoz MM-60	3,0	2,1	2,2	7,3

In order to preserve the variety, selections were made on the basis of characteristics such as the size of the pods, the short and small tip of the pods, and the shape of the pods during the podulation stage of the soybean plants grown in the seed nurseries. organized.

Selections were made to ensure fertility in soybean plants when the soybean cultivars in the first-year propagation nursery entered the ripening stage. As a result of selections conducted on the basis of characteristics such as the natural yellowing of the leaves of soybean plants, the color of the hairs of the stem and pods, the appearance of the full grain in the pods (shape, color of the seed coat, color of the seed coat, size) in the early soybean varieties Gavhar, Slavia as a result of the conducted selections, the release of foreign variety mixtures and diseased plants with low development was 1.7-2.3%.

As a result of the selections conducted in the varieties Ortapishar Vilana, Hasildar, To'maris Man-60, foreign varieties made up 1.7-2.3%, and in the varieties Ortakechpishar Ustoz MM-60, Baraka varieties, foreign varieties mixed with diseased plants that were lagging behind in development were removed 2, It was 2-2.4%.

In 2019-2020, on the basis of the experiments conducted in the nurseries of the first-year trials of generations and the second-year family trials, and as a result of the selections, the first-year reproduction nurseries of soybean varieties were established in 2021.

Soybeans were established on 1 hectare of the early Slavia variety, 1.5 hectares of the Gavhar and Vilana varieties, 2.4 hectares of the mid-early Hasildar variety, and 3.0 hectares of the Tomaris Man-60 variety. Planting nurseries were established on an area of 1.0 hectares of the varieties Ustoz MM-60 and Baraka, which are medium-yielding soybeans.

As a result of the experiments, the amount of seeds obtained from the first-year breeding nurseries of soybean varieties was 1600 kg of the early Slavic soybean variety, 2700 kg of the Vilana variety, and 3000 kg of the first-year soybean seeds of the Gavhar variety.

Table 3

The amount of seeds obtained from the nursery of the first year of propagation of soybean varieties in 2021

№	Varieties	Cropland, hectares	The total amount of seeds obtained from the first-year breeding nursery, kg (physically)
1	Tomaris-60	3,0	8000
2	Baraka	1,0	1700
3	Slaviya	1,0	1600
4	Gavhar	1,5	3000
5	Vilana	1,5	2700
6	Hasildar	2,4	5700
7	Ustoz MM-60	1,0	1800

According to the table, 5700 kg of medium-ripe Hasildar variety, 8000 kg of Tomaris Man-60 variety, 1700 kg of medium-ripe Baraka variety, 1800 kg of Ustoz MM-60 variety, seeds of first-year propagation nurseries were collected.

In order to further expand soybean cultivation areas in our country, in order to increase the weight of soybean grains and soybean seeds, to choose varieties suitable for the soil and climate conditions of each region, to pay attention to the biological characteristics of varieties,

i.e., to correctly place early, mid-ripening, and late-ripening varieties, according to their planting period and norms it is important to note that it is important to follow.

At the same time, it is necessary to fully follow the agrotechnics of cultivation in the fields of soybean varieties planted for seed, in order to grow high-quality seeds from these fields, to clean them from mixtures of other varieties and species, to feed soybean plants with mineral fertilizers, and to properly organize irrigation processes.

First of all, the use of high-yielding varieties, studying their biological characteristics, and proper treatment with them ensure positive results in the establishment of soybean production.

Any good variety will not lose its genetic characteristics if it is planted from high-yielding seeds of high planting quality and if all agrotechnical rules are followed correctly in the process of seed propagation, if it is free from diseases and insects. Only then, when growing soybeans in our country, it is necessary to pay great attention to its quality indicators.

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