GALAXY INTERNATIONAL INTERDISCIPLINARY RESEARCH JOURNAL (GIIRJ)
ISSN (E): 2347-6915
Vol. 11, Issue 09, Sep. (2023)

ANALYSIS OF PRODUCTIVITY INDICATORS OF SOYA COLLECTION SAMPLES

Khayridinova Ranokhon Kakhramon qizi
Master's Student of Tashkent State Agrarian Universityx

Yuldasheva Rano Abdurashidovna
Doctor of Agricultural Sciences (DSc)
Associate Professor, Tashkent State Agrarian University

Mirzaeva Iroda Turdalievna
Doctor of Philosophy in Agricultural Sciences
Rice farming Research Institute

ABSTRACT

The article presents the results of seed weight per plant, seed weight of 1000 seeds, and productivity of the collection variety samples. The samples selected as a result of the research showed a high productivity rate compared to the standard. The article contains information on the yield and economic characteristics of soybean collection samples.

Keywords: Soybean collection, variety, samples, productivity, 1000 seed weight, seed weight per plant, control variety.

SOYA KOLLEKSIYA NAMUNALARINING HOSILDORLIK KO'RSATKICHLARI TAXLILI.

Xayridinova Ra'noxon Qaxromon qizi
Toshkent davlat agrar universiteti magistr talabasi.
xusniddinbaxromov1970@gmail.com

Yuldasheva Ra'no Abdurashidovna
Qishloq xo'jaligi fanlari doktori (DSc)
Dotsent Toshkent Davlat Agrar universiteti

Mirzaeva Iroda Turdalievna
Qishloq xo'jaligi fanlari falsafa doktori
Sholichilik ilmiy tadqiqot instituti

ANNOTATSIYA

Maqolada kolleksiya nav namunalar bir tup o'simlikdagi urug' vazni, 1000 dona urug' vazni va hosildorlik bo'yicha natijalar keltirilgan. Tadqiqotlar natijasida tanlab olgan namunalar xosildorlik boyicha standarga nisbatan yuqori ko'rsatkichni namoyon qilgan. Maqolada soya kolleksiya namunalarining hosildorlik va qimmatli xo'jalik belgilari bo'yicha olingan ma'lumotlar.

Kalit so'zlar: Soya kolleksiyasi, nav, namunalar, hosildorlik, 1000 dona urug' vazni, bir o'simlikdagi urug' vazni, nazorat nav.

INTRODUCTION

The soybean plant is not grown in large quantities in Uzbekistan. The main part of the products made from soybean raw materials - mainly vegetable oil - is imported from abroad, and the main suppliers are the countries of the Eurasian Economic Union, Russia and Kazakhstan. The domestic oil industry produces products both for the food industry and for a number of industries. The average consumption of vegetable oil in the consumer market is at least 14 kg per capita per year. The production of soybean oil also depends on the import of raw materials. Currently, about 280,000 tons of vegetable oil are produced in the country, of which 198,000 tons are imported.

Despite the increase in oil fields, which is unusual for Uzbekistan, its raw material base is still insufficient to establish production capacities. This is the most urgent problem of the field. Since soybean seeds are not used for the production of vegetable oil in our country, we can say that there is currently no reserve of soybean raw materials in the country. If we depend on imported raw materials under such conditions, the country's economy will suffer a lot.

According to the Decree of the President of the Republic of Uzbekistan dated February 7, 2017 No. PQ-4947 "On the Strategy of Actions for the Further Development of the Republic of Uzbekistan" "Introduction of intensive methods to the field of agricultural production, first of all new varieties of agricultural crops adapted to local soil, climate and ecological conditions" special attention is paid to the creation of selection varieties, especially to the development of selection and seed production of soybeans with high protein and oil content. In our republic, research aimed at selecting samples of soybean collection varieties and using them as starting materials to create varieties suitable for specific soil and climate conditions has not been carried out sufficiently. The main problem in the development of soybeans is the low productivity of existing varieties. Quick nausea, rapid loss of its properties in unfavorable conditions. Due to this, creation of new varieties of soybean suitable for local conditions is considered one of the urgent issues.

LITERATURE REVIEW

The growth of soybean production in the world was ensured due to the increase in cultivated areas and the increase in productivity. In the last ten years, the average annual growth rate of planted soybean area was 1.7 percent, and the yield per hectare was 1 increased by 0.0%. As a result, in 2019-2020, the area planted with soybeans in the world amounted to more than 122 million hectares (+19% compared to 2009-2010), the world average yield was 28 centners per hectare (2009-2010 +10 percent compared to -year). .[4;145b, 1;143b, 2-11b, 3;6-7-b, 5; 27b]

During the same period, the Russian soybean market developed very quickly. In the last ten years, the average annual growth of soybean area in the country was 13.4%, productivity increased by 2.8%, gross yield increased by 17.3%. As a result, in 2019, a record amount of soybeans was planted in Russia and the highest harvest in the country's history was achieved. Russia mainly exported soybean meal to the Netherlands (88.5 thousand tons, 14.3% more than last year) and Uzbekistan (74, 0 thousand tons, 4.7% more than last year). In 2020, a significant increase in the price of vegetable oils was noted on the world market. In the same period, soybean oil increased by 14.6% in Argentina, 13.8% in Brazil and 6.0% in the USA. China is the

main buyer of soybeans. It meets the protein needs of its more than a billion people with soy protein.[6; 13b, 7; 20-27-b, 8; 26-b,].

THE PURPOSE OF THE STUDY

Based on the samples of collection varieties of soybeans, it consists in the creation of selection material with a high protein and oil content, suitable for mechanization, valuable economic characteristics, suitable for local conditions and used in the creation of new varieties, and development of scientifically based recommendations.

Tasks of research

- study of valuable economic signs and characteristics of varieties and samples of the collection;
- on the basis of the obtained results, to recommend selection materials with valuable characteristics for further theoretical and practical research for use in creating a new variety.

The object of the Research

O‘zbekiston sholichilik ilmiy tadqiqot institutida mavjud bo‘lgan kolleksiya nav namunalari .

The subject of the research: biology, morphology and phenology of collection variety samples, selection of breeding methods and conduct of control experiments, as well as productivity and its quality indicators.

Research methods: conducting field experiments, planting, phenological observations, biometric measurements, plant care, yield determination. Sources of the Ministry of Agriculture of the Republic of Uzbekistan, the Research Institute of Plant Science of Uzbekistan, the State Commission for Testing Varieties of Agricultural Crops, "Metodika Gosudarstvennogo sortoispytaniya selskohozyaystvennix kultur" , "Methods of Conducting Field Experiments" based on methodological manuals and statistical analysis of the results obtained by B.A. It is performed according to the method indicated by Dospekhov.

The chemical composition of soybean grain allows it to be used for food, fodder and technical purposes. Soybean is a plant that provides grain, vegetable oil, quality protein, nutritious greens and increases soil fertility. Due to the important biological properties of soybeans, the soil is provided with ecologically clean nitrogen, and people are provided with nutritious food products. Soybean oil belongs to the semi-drying oils used in food. Soybean oil has been in great demand in recent years. Therefore, in the cultivation of soybean varieties, it is necessary to create breeding technology and new varieties that increase the content of protein and oil in the grain.

It should be taken into account in the studies aimed at increasing the protein content, that it is stored more in the seeds of the quick-ripening varieties with colored and black color of the seed coat compared to the medium-ripening ones with yellow seeds. In high-protein varieties, the total amount of protein and fat is higher than in high-fat varieties.

As a result of the selection process, the fat content of soybeans increased from 14-15% to 23-24%. But as a result, the number of iodine decreases, which is considered a negative condition. Its various varieties contain up to 45% dietary protein, easily digestible unsaturated fat and up

to 30% carbohydrates. They contain active substances and vitamins: A, B1, B2, B3, B6, E, S, D, K, PP. Grain contains a large amount of minerals such as potassium, calcium, and phosphorus, all of which are important for our daily life.

Soybean pulp, meal, flour and greens are used as fodder. Kunjara contains 38.7% protein and 5.5% oil. Soybean meal and meal replaces milk in the ration of calves.

750-800 kg of meal can be obtained from 1 ton of soybeans with a content of up to 40% protein and 1.4% oil. It is a valuable concentrated feed for livestock.

Soybean is a fruitful plant, it is possible to get a good harvest even if it is not processed and agrotechnical activities are not carried out in a short time. A good harvest can be obtained even on gypsum and saline soils. On cultivated and fertilized lands, it gives an average yield of 22-23 s per hectare.

On April 24, 2023, the samples of the collection were planted by hand in the experimental field of the Scientific Research Institute of Rice. After they ripened, they were harvested on September 5-6, and the yield of 1000 grains, the weight of seeds per plant, and the total yield were studied in the laboratory. Of these, 6310 have high productivity; 7213; 0128790 samples compared to the standard Uzbek 2 variety showed the following indicators: In the experiments, the following samples showed 30.4 grams of grain weight per plant in sample 63-10, 27.7 grams in sample 72-13 , sample 0128790 showed 30.2 grams. Here, Uzbek 2 variety was taken as a standard, and according to this indicator, it was 29.6 grams. It can be seen that our sample 0128790 showed a higher performance compared to the standard

Productivity indicators of collection variety samples

№	Catalog	Seed weight per plant	1000 seeds weight	Productivity s/g	Difference compared to control
1	O'z-2-St	29,6	168,8	28,4	-
2	6310	30,4	167,6	30,2	+1,8
3	464170	24,2	168,6	29,5	+1,1
4	7213	27,7	169,0	32,3	+3,9
5	0128790	30,2	165,4	31,6	+3,2

In the observations on the weight of 1000 seeds, our standard was 168.8 grams, our 6310 sample was 167.6 grams, our 7213 sample was 161 grams, and our 0128790 sample was 174.5 grams, showing a higher index compared to the standard.

Our standard yield is 28.4 s/ha, our 6310 sample is 30.2 s/ha, our 7213 sample is 32.3 s/ha, and our 0128790 sample is 33 s/ha. It can be seen that our sample 6310 + 1.8, our sample 7213 + 3.9, our sample 0128790 + 4.6 percent showed a higher index compared to the standard.

This collection of samples has been monitored for several years and has shown high productivity. In the future, it is planned to create new varieties based on these collections, and it will be possible to achieve good results by involving them in selection work.

Soybean cultivation is being organized gradually. Due to the fact that soybean processing technologies are almost absent in our country, it is mainly used in the preparation of feed products for livestock and farms. Of course, unripe stalks are also used as fodder and are given

to livestock as valuable feed. But in other countries more than 400 soybean products are produced. The demand for soybean seeds will be high if the technologies of its processing are widely introduced and widely applied in production.

CONCLUSION

Our samples selected as a result of the research showed a high rate of productivity compared to the standard. In the future, it is planned to create new high-yield varieties from these samples. To date, several soybean varieties have been created at the Scientific Research Institute of Rice. Now, on the basis of these high performance samples, the creation of new varieties is being carried out.

REFERENCES

1. Soya seleksiyasi va urug'chilik uslubi; Enken B.V 1979
2. Atabaeva. X.N, Israilov.I.A, Umarova.N Soya morfologiya biologiya
1. yetishtirish texnologiyasi 2011,11-bet.
2. G.R.Xolmurodova, G.N.Tangirova, S.T.Jo'raev Soya seleksiyasi va
3. urug'chiligi 2021,6-bet.
4. Yormatova D., Don ekinlari. Toshkent,2003 y.
5. Mannapova M, Mansurov A, "Oqsil va vitaminlar manbai"2000-y
6. Xalmanov N. Soya betakror o'simlik-internet ma'lumoti.
7. Sattorov M, Saitkanova R, Otamirzayev N, Qodirov B, Idrisov H, Tuyg'unov N, Qalandarov B, Ahtamov M, Hayitovlar . "Toshkent viloyatida soya yetishtirish agrotexnologiyasi" . Tavsiyanoma. –Toshkent: 2017.-20-27 b.
8. Panjiyev A, Ibragimov Z. Qishloq xo'jalik mahsulotlarini qayta ishlashning nazariy asoslari ma'ruzalar matni.-Qarshi: Nasaf, 2006. -26-b.
9. Tangirova G, Xolmuradova G. Soya kolleksiya nav namunalari dukkagining morfologik belgilarini tavsifi "Paxtachilik va donchilik" jurnali, - Toshkent, 2022. - №2 (6) – b. 35-39.
10. Tangirova G, Xolmuradova G. Soya kolleksiya namunalari bargining morfologik belgilarining tuzilishi "Paxtachilik va donchilik" jurnali, - Toshkent, 2022. - maxsus son (6) – b. 46-50.
11. Juraev, S. T. (2022). Changes in the weight of raw cotton in one box in varietary cotton hybrids. Spectrum Journal of Innovation, Reforms and Development, 10, 18-21.
12. Jurayev, S. T. (2022). Yield of cotton lines in different climatic-soil conditions of Uzbekistan. International Scientific Journal Theoretical & Applied Science, 11(1), 310-313.
13. Xolmurodova, G. R., Tangirova, G. N., Jo'rayev, S. T. (2022). Селекция и семеноводство сои. LESSON PRESS, 1(1), 88.
14. Jo'rayev, S. T., Xudarganov, K. O. (2022). Qishloq ekinlari urug'chiligi va urpug'shunosligi. LESSON PRESS, 1(1), 167.
15. Jo'rayev, S. T. (2022). Go'za seleksiyasi va urug'chiligi. LESSON PRESS, 1(1), 288.
16. Jo'rayev, S. T., Ashurov, M., Narmatova, G., Toreev, F., Akhmedov, D., Mavlonova, N., Ergashev, J., Baratova, A. (2022). Cotton breeding and seed production. LESSON PRESS, 1(1), 224.

17. Jo'rayev, S. T. (2022). G‘o‘zaning introgressiv duragay va tizmalirning O‘zbekistondagi xar xil tuproq sharoitlarda bo‘lgan adaptiv patinsolidan foydalanish. LESSON PRESS, 1(1), 211.
18. Jo'rayev, S. T. (2022). G‘o‘za genetikasi. LESSON PRESS, 1(1), 96.
19. Jo'rayev, S. T., Ergashov, J. A. (2022). Moyli ekinlar seleksiyasi va urug‘chiligi. LESSON PRESS, 1(1), 120.
20. Жураев, С. Т. (2022). Оценка волокна гибридов хлопчатника, выращенных в различных регионах Узбекистана. Министерство сельского хозяйства и продовольствия Республики Беларусь учреждение образования «Гродненский государственный аграрный университет», 1(52-55), 5.
21. Djonibekova, NE, Jo‘raev, ST, Inoyatova, MH (2022). Effect of bap concentration and content of food environment on “in vitro” regeneration of rizamat (vitis vinifera l) cultivar. European Journal of Agricultural and Rural Education (EJARE), 3(2), 75-78.
22. Joraev, S. T., Ismoilov, A. A., Dilmurodov, Sh. D. (2022). Yasmiq nav va tizmalarining o’suv davri. Xorazm Ma’mun Akademiyasi, 22(6), 5-11.
23. Joraev, S. T., Raimova, D. (2022). Взаимосвязь периода вегитации линий хлопчатника с Некоторыми хозяйственно-ценными признаками в зависимости от регионов возделывания. Tafakkur manzili ilmiy-uslubiy jurnali, 1(1), 4-14.