AGROTECHNICS OF OKRA CULTIVATION IN SURKHONDARYO REGION.

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Abstract: Okra is a non-traditional crop, and it is one of the vegetables that is becoming popular in our country every year. Okra is a very useful vegetable, its fruit contains healing vitamins and minerals. Okra can be used to make a variety of preserves. The main goal of the research work is to introduce new varieties of okra in the dry and harsh continental climatic conditions of Surkhondarya region, to evaluate their morpho-biological and economic characteristics, and to develop important elements of cultivation technology.

Key words: Okra, carbohydrate, protein, oil, iron, calcium, fiber, thiamin, nicotinamide, riboflavin and ascorbic acid, variety, introduction, seed, climatic conditions, plant height, number of joints, pod, length, yield.

Okra, Gambo (Hibiscus esculentus L.) is an annual plant belonging to the hibiscus family, up to 2.5 m tall. It resembles cotton in appearance and flowering. Homeland - East Africa. Varieties are divided into vegetable and fiber groups. Fiber varieties are grown in India, Africa and the USA. Unripe cosaksim fruit is used as a vegetable in liquid food and salads. The fruit contains 3% protein, 0.5% fat, 8% carbohydrates, ripe seeds contain 18% oil. The fruit can be eaten raw, cooked, fried, canned. The stem gives a white coarse fiber, artificial coffee is made from the roasted seeds. It is grown mainly as a vegetable crop in tropical and subtropical countries, North America, Southern Europe, the Caucasus, Crimea, southern Ukraine, partly in Central Asia.

Okra is a non-traditional crop for our region, and it is one of the vegetables that is gaining popularity in our Republic year after year. There are ways to use okra as a food crop and in industry. Edible okra fruits contain carbohydrate, protein, oil, iron, calcium, fiber, thiamin, nicotinamide, riboflavin and ascorbic acid. 100 grams of ripe okra seeds contain up to 20% fat and 20-23% crude borlysine, high protein and vitamin C. Okra is not only a vegetable crop, but the dried seeds can be used to make vegetable curd, or the roasted and ground seeds can be used as a coffee substitute. Technically ripe okra fruits can be boiled, fried, smoked, cooked with other vegetables or eaten on their own. In addition, okra can be used to make various preserves. Okra is a very useful vegetable, its fruit is valued for the presence of healing vitamins and minerals.

Today, the okra plant is grown on more than 120,000 hectares of land around the world. 10.1 million in 2019. tons, including: 6.5 million in India, 6.0 million in China, 3.6 million in Nigeria, 3.2 million in Sudan, 2.8 million in Mali, 1.7 million in Cote d'Ivoire, 1 in Pakistan 2 million, 1.0 million in Cameroon, 74 thousand in Ghana and 68 thousand in Iraq.

Decree of the President of the Republic of Uzbekistan No. PF-5995 of May 18, 2020 "On additional measures to ensure that the quality and safety indicators of agricultural products comply with international standards", dated May 23, 2019 No. PF-5853 dated October "On

approval of the strategy for the development of agriculture of the Republic of Uzbekistan for 2020-2030", No. 504 of the Cabinet of Ministers dated August 25, 2020 "The loss of agricultural crops To a certain extent, this research work contributes to the implementation of the tasks specified in the decrees and decisions of "On the restoration of endangered local varieties with unique signs and characteristics and measures to organize their original seed production" and other regulatory documents. serves.

The introduction and cultivation of this vegetable type, which is new for the soil-climatic conditions of the southern region of our country, has low yield, is resistant to diseases, and is high-quality and rich in valuable substances. allows to further expand the assortment of vegetable crops.[1]

The purpose of the study is to introduce new varieties of okra in the conditions of Surkhandarya region, to evaluate their morpho-biological and economic characteristics, and to develop important elements of cultivation technology.

The tasks of the research are as follows: selection of promising variety samples based on evaluation of morphobiological and economic characteristics of okra plant varieties.

As the object of the study, 3 samples of okra varieties "Okra-120" (USA), "Okra-69" (India), "Okra-152" (India).

The subject of the research is to test samples of 3 varieties of okra and to study the morphological characteristics of the varieties, growth, development and productivity indicators.

Methods of research: The research work of V.F. Belik "Metodika polevogo opita v ovoshevodstve i bahchevodstve" (1992), B.J. Azimov., B.B. Azimov's "Methodology of Experiments in Vegetable, Potato and Potato Cultivation" (2002).

The scientific research work was carried out in the experimental farm fields of the Termiz Institute of Agro-Technology and Innovative Development. The soil of the experimental field is sandy soil, very poorly supplied with nutrients, the groundwater is deep (14 meters), the climate of the region is dry and sharply continental. Before planting, the experimental field was lightly plowed with 150 kg/ha of phosphorus and 50 kg/ha of potassium (physically). The experiment was arranged in triplicate.

The seeds of okra varieties were sown in the third ten days of March on March 28 with a thickness of 70x40 and watered to collect the seeds. When the complete germination of the sown seeds was observed, 75% of seeds of Okra-69 variety germinated on April 8, Okra-120 variety on April 9, and Okra-152 variety on April 11. Also, the first leaves of all varieties appeared between April 15-17.

Among the studied varieties, the first harvest elements appeared in the Okra-69 variety on May 12, in the Okra-120 variety on May 15, and in the Okra-152 variety on May 19.

It can be seen from Table 1 that as the duration of the vegetation period increased, the difference in the biometric parameters of the plant between the varieties was clearly observed. In particular, as of July 15, the height of the plant in the Okra-120 variety is 57.2 cm; 14.2 harvest units; the number of formed crop elements is 20.8, of which 7.9 pods and 1.1 flowers; combs 9.8 pieces, respectively 50.2 cm in Okra-152 variety; 9.2 units; 13.3 units; 5.8 pieces; 0.1 piece; 7.4 units; also 63.8 cm in Okra-69 variety; 12.6 units; 17 pieces; 6.6 pieces; 0.6 pieces; It was 9.8 pieces. *1-table*

Morphobiological characteristics of the okra plant. (as of 15.06.2022)

Varietal name	The height of the plant	Harvest horn	Product elements			
			Dukkagi soni	Guli soni	Shona knot	Total
Okra-120(AQSH)	57.2	14.2	7.9	1.1	9.8	20.8
Okra - 152(India)	50.2	9.7	5.8	0.1	7.4	13.3
Okra -69(India)	63.8	12.6	6.6	0.6	9.8	17

When studying the size of the fruits, the average length of the fruit of the Okra-120 variety is 12 cm, the diameter is 3.9 cm, the average length of the fruit of the Okra-69 variety is 21 cm, the diameter is 2.8 cm, and the length of the fruit of the Okra-152 variety is 18 cm. , the diameter was 3.2 cm.

Table 2

Weight of 1000 grains and yield indicators.

№	Varietal name	1000 seed weight	Productivity t/ga
1.	Okra 120 (AQSH)	64.4 gr	9,8
2.	Okra 69 (INDIA)	59,3 gr	10,9
3.	Okra 152 (INDIA)	59,4 gr	9,1

When analyzing the weight of 1000 grains, the lowest result was 64.4 grams in the sample of okra-120 variety, okra-69 and okra-152 varieties, this index did not differ much from each other (Table 2).

According to the analysis of yield results, the highest marketable yield was 10.9 tons of okra 69, 9.8 tons of okra 120, and 9.1 tons of okra 152.

In summary, among the samples of the studied okra variety, okra variety 69 showed better potential compared to other varieties in the extreme climatic conditions of the region.

This research work is ongoing and other analytical results will be published in future articles.

References:

1.Ibroximov B.A., Nizomov R.A. Noan'anaviy sabzavot bamiya (Hibiscus esculentus L.) ni yetishtirish va uning ishlatilishi. // «O'zbekiston qishloq va suv xo'jaligi» jurnalining «Agro ilm» ilmiy ilovasi. - Toshkent, 2019. -№ 6 (63). - B. 45-47. (06.00.00; №1).

2.Ibroximov B.A., Nizomov R.A. Bamiyaning axamiyati va yetishtirish texnologiyasi / «O'zbekiston yoshlari: Agrar soxani rivojlantirishda mening xissam» mavzusidagi Respublika ilmiy-amaliy anjumani (5 dekabr 2017 y). - Toshkent. 2017. - B. 67-69.

3. R.A.Nizomov., B.A.Ibroximov. Turli ekish sxemalarida bamiya hosildorligi va meva tarkibidagi biokimyoviy moddalarning o'zgarishi. // «O'zbekiston agrar fani xabarnomasi» jurnali. - Toshkent, 2020. - № 5 (83). - B. 109-113. (06.00.00, №7).

4. B.A.Ibrohimov. Bahorda bamiya (Hibiscus esculentus L)ni ko'chatidan ochik maydonlarda ekish muddatlari. // «O'zbekiston qishloq va suv xo'jaligi»

jurnalining «Agro ilm» ilmiy ilovasi. -Toshkent,2020. -№ 5 (69). - B. 48¬
51. (06.00.00; №1).
5. Zuev V. Qodirxo‘jaev O. Bamiya / O‘zbekiston qishloqxo‘jaligi. - Toshkent, 2003. -№ 6. - 19-20 b.
6. Ostonaqulov T.E., Zuev V.I., Qodirxo‘jaev O.Q.Sabzavotchilik. Qishloq xo‘jalik oliy o‘quv yurtlari talabalari uchun darslik. – T.: 2009. 46 – b
7. https://uz.wikipedia.org/w/index.php?title=Bamiya&oldid=2833673