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STUDY OF GARLIC VARIETY SAMPLE COLLECTION

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Introduction. In many countries of the world, garlic is an ancient crop that is cultivated as a medicinal plant for humans. Garlic has very good medicinal properties and is a vegetable rich in valuable substances. It is added to various foods, and salads and is widely used in the processing industry.

Antibiotic drugs against microbes causing various diseases are prepared from alliin glucoside extracted from garlic. Eating garlic helps lower blood pressure, remove unnecessary cholesterol from the body, and improve gastrointestinal function.

Garlic is one of the most valuable vegetable crops, next In recent years, many new varieties have been cultivated in the countries of the world extensive research work is being carried out. Cultivation of this crop in Uzbekistan in the 60s-70s of last century researching the study of technology and local varieties (Khodjaev. G.F., 1969).

In the following years (2010-2020), SPE and KITI Surkhondarya Scientific Experimental Station conducted research on the study of garlic varieties and the creation of new varieties. entered into the register and patented by the Intellectual Agency (State Register *2021.*, № NAP 00403, № NAP 00404, № NAP 00406).

Our further researches are aimed at the creation of varieties of garlic that are productive, suitable for long-term storage, and transportable, embodying important economic characteristics.

Methods and materials. 21 samples of resistant and locally grown garlic varieties served as research material. Comparative variety Yujno-violetovyy khar was placed after 10 variety

ISSN: 2775-5118 VOL. 2 NO. 5 (2023) I.F. 9.1

samples. Onions were planted on September 10-20. Researches were carried out on the basis of OST-4671-78, Metodicheskie ukazaniya po ekologicheskomu ispytaniyu ovoshchnyx kultur v otkrytom grunte, Metodika Gosudarstvennogo sortoispytaniya selskohozyaystvennyx kultur.

During the period of operation, phenological observations were made (germination of onions (10%; 75%), emergence of flower stalks, yellowing of stems, technical ripening of bulbs). The yield was measured 3 days after harvesting. Quality and poor-quality crops were measured separately. In the low-quality harvest, onion heads less than 2.5 cm in diameter, diseased and infested with pests, and withered were included.

Results and their analysis. During 2020-2021, 21 varieties of garlic samples were studied. It took 16 days for the comparative Yuzhno-fioletovy and local varieties to germinate the bulbs.

The time from germination to flowering was 188 days in samples of the experimental comparative variety, Resistant and local variety, and 200 days in clone K-81.

The period from germination to full technical ripening was 223 days in experimental variety samples, only the K-81 clone was 240 days.

Plant height (including flower stem length) K-5, K-7, K-8, K-9, K-10, K-11, K-12, K-13, K-14, K-15, K -16, K-17, K-19, K-20, K-21, K-22 varieties 45-55 cm, comparative variety, Hardy, K-3, K-4, K-6, K-18 varieties 56 -60 cm, only clone K-81 was 83 cm, 23-38 cm higher than local and comparative varieties. This variability is due to the flower stem.

A difference was also observed in the studied cultivars according to the number of leaves. If the number of leaves was 9.0 pieces in the comparative and local varieties, it was observed that this indicator was 12 pieces only in the K-81 variety.

There was also a slight difference in leaf length between cultivars. Locally grown Hardy, K-3, K-4, K-5, K-7, K-8, K-10, K-11, K-14, K-15, K-16, K-17, K In varieties -18, K-20, K-22, K-81, the length of the leaf was 45-50 cm, while in the comparative and other studied varieties, the length of the leaf plate was slightly shorter and was 42-45 cm.

It was observed that there is a significant difference between the varieties in terms of the width of the leaf plate. Comparative variety, Resistant K-3, K-4, K-5, K-6, K-7, K-8, K-9, K-10, K-

ISSN: 2775-5118 VOL. 2 NO. 5 (2023) I.F. 9.1

11, K-12, K-13, K- 14, K-15, K-16, K-20, K-21, K-22, K-81 varieties have a leaf width of 3.0-3.2 cm, while K-17, K-18, In K-19 samples, it was 2.3-2.5 cm.

One of the most important indicators is the weight of the garlic bulb.

In our research, samples of varieties such as K-16 (72g), K-20 (69g), K-22 (69g), and K-81 (69g) with a high index of onion head weight were selected.

Comparative grade, K-3, K-4, K-5, K-6, K-7, K-8, K-9, K-10, K-11, K-12, K-13, K-15, K-17, K-18, K-19, K-21 variety samples, onion head weight was 24-66 g, compared to other varieties, it was observed that it was 6-43 g less.

The number of bulbs in the onion head is one of the important economic characteristics, and the purpose of research is to create varieties with a relatively small number of bulbs, but high weight, large bulbs, and suitable for long-term storage.

In experimental varieties, the number of bulbs per bulb was 13.0-14.0 pieces (Table 1).

Table1

Onion description of garlic variety samples, 2020-2021.

Variety samples	Onion head				Onions	
	height, cm	diameter, d, cm	index	weight, g	quantity, pcs	weight, g
Yuzhno-fioletovy, q.n.	3,6	5,5	0,6	61	14	4,3
durable,	3,8	5,8	0,7	65	13	4,6
Control	3,7	5,6	0,7	58	14	4.0
K-3	3,6	5,6	0,7	58	14	4,1
K-4	3,6	5,6	0,6	62	13	4,4
K-5	3,7	5,2	0,7	56	13	3,9

ISSN: 2775-5118 VOL. 2 NO. 5 (2023) I.F. 9.1

K-6	3,8	5,6	0,7	59	14	4,1
K-7	3,8	5,7	0,7	63	13	4,9
K-8	3,8	5,8	0,7	61	14	4,3
K-9	3,7	5,2	0,7	57	13	4.1
K-10	3,6	5,5	0,7	59	14	4,1
K-11	3,8	5,6	0,7	62	14	4,4
K-12	3,9	6,0	0,7	64	13	4,8
K-13	3,1	3,8	0,8	34	10	3,2
K-14	3,9	6,0	0,7	65	13	4,9
K-15	3,9	6,3	0,6	72	13	5,4
K-16	2,9	3,3	0,9	24	10	2,1
K-17	2,9	4,1	0,7	27	11	2,2
K-18	2,8	4,0	0,7	30	10	2,9
K-19	3,8	6,4	0,6	69	13	5,1
K-20	3,6	5,4	0,7	62	13	4,4
K-21	3,9	6,2	0,6	70	14	5,0
K-22	3,9	5,9	0,7	69	13	5,0

In some K-14, K-17, K-18, and K-19 samples, the number of bulbs was 10-11, and the average weight of one bulb was 2.1-3.2 g. It was observed that the bulb weight of these varieties was 1.1-2.2 g less than the comparative variety. The average weight of one bulb was 5.0-5.4 g in K-16, K-20, K-22, and K-81 variety samples. Resistant, K-5, K-8, K-12, K-13, K-15, K-21 samples have 4.4-4.9 g, and in the comparative variety and other samples, the bulb weight is 2.1-4, It was 3 g.

ISSN: 2775-5118 VOL. 2 NO. 5 (2023) I.F. 9.1

Studies have shown that onion head weight is significantly related to its height and diameter. The largest onion head sample K-20 (69g) was 3.8-4.0 cm in height and 6.0-6.4 cm in diameter. In the comparative Yujno-fioletovy variety, the weight of the bulb was 61.0 g, the height of the bulb was 3.6 cm, and the diameter was 5.5 cm. The same situation was observed in samples K-14, K-17, K-18, K-19.

2 tables

Yield and quality of garlic samples,

2020-2021

Variety samples	Productivity, t/ha			
	common	compared to the comparative variety, %	Commodity item	in relation to the total yield, %
Yuzhno-fioletovy, q.n	19,5	100,0	18,5	94,8
Durable, control	21,4	109,7	21,0	98,1
K-3	18,5	94,8	17,6	95,1
K-4	19,0	97,4	18,0	94,7
K-5	21,0	107,6	20,4	97,1
K-6	18,0	92,3	17,1	95,0
K-7	20,0	102,5	19,5	97,5
K-8	22,8	117,0	22,2	97,3
K-9	21,9	112,3	21,0	95,8
K-10	19,5	100,0	19,0	97,4
K-11	21,4	109,7	20,4	95,3

ISSN: 2775-5118 VOL. 2 NO. 5 (2023) I.F. 9.1

K-12	21,9	112,3	21,0	95,8
K-13	22,7	116,4	22,4	98,6
K-14	10,9	55,8	10,4	95,4
K-15	22,8	117,4	22,3	97,8
K-16	24,7	126,7	24,3	98,3
K-17	10,5	53,8	9,0	85,7
K-18	12,8	65,6	11,9	92,9
K-19	13,8	70,7	12,8	92,7
K-20	23,3	119,5	22,8	97,8
K-21	19,5	100,0	18,6	95,3
K-22	23,8	122,0	23,3	97,8
K-81	23,2	119,0	23,0	99,1

It was found that the samples of the studied variety are different in terms of productivity and quality of the crop.

For example, the yield in the comparative variety was 19.5 t/ha, while in the sample K-22, this indicator reached 23.8 t/ha, Table 2.

Garlic variety samples differ significantly from each other in terms of yield and crop quality. The highest total productivity was observed in samples K-16, K-20, K-22, and K-81 and was 23.2-24.7 t/ha.

The highest marketable productivity was observed in samples K-16, K-20, K-22, and K-81 and was 23.2-24.7 t/ha. In samples of this variety, 98.3-99.1% of the total yield was considered marketable.

K-81 is a relatively late-ripening variety, the growth period was 240 days, the weight of the bulb was 67 g, the number of bulbs was 13, and the weight of the bulbs was 4.9 g. Productivity was 23.2 t/ha.

When bulbs are learned to be stored at room temperature, they will come naturally good preservation was observed until February-March of the year. Locally grown garlic bulbs fully germinate in September-October and become unprofitable.

Based on the results of the research in 2020-2021, K-16, K-20, K-22, and K-81 variety samples were found to be promising in terms of onion head weight and total and market productivity.

The total productivity of these varieties is 23.2-24.7 t/ha, which is 19.0-26.7% higher than the comparative variety. The highest marketable yield was observed in the samples of this variety.

Summary. As a result of the research, samples of varieties such as K-16 (72), K-20 (69g), K-22 (69g), and K-81 were isolated and considered promising. In these clones, bulb head and bulb weight were also higher.

These varieties are propagated based on clonal selection and are used as a starting source to create varieties suitable for local conditions, with a high average weight of bulbs and bulbs, low number of bulbs, high and quality yield, suitable for long-term storage.

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