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SELECTION OF SHALOT VARIETIES IN THE SOIL-CLIMATE CONDITIONS OF ANDIJAN REGION

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Abstract
In the article, the highest total yield of shallot varieties grown in the soil-climatic conditions of Andijan region is Sprint (44.2 t/ha), Uralsky fioletovy (40.4 t/ha) and Kunak (39.4 t/ha) and the total yield the highest commodity yield in Sprint (42.5 t/ha), Uralsky fioletovy (38.6 t/ha) and Kunak (37.4 t/ha) varieties it is stated that it has been determined.

Keywords: Shallot, number of leaves, leaf length, leaf diameter, onion head weight, total yield, commodity yield.

ANDIJON VILOYATI TUPROQ-IQLIM SHAROITIDA SHALOT PIYOZI NAV NAMUNALARINI TANLASH

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Annotatsiy
Maqolada Andijon viloyati tuproq-iqlim sharoitida yetishtirishga shalot piyozi nav namunalaridan eng yuqori umumiy hosildorlik Sprint (44,2 t/ga), Uralskiy fioletoviy (40,4 t/ga) va Kunak (39,4 t/ga) navlarida hamda umumiy hosil tarkibidagi eng yuqori tovarbop hosil miqdori Sprint (42,5 t/ga), Uralskiy fioletoviy (38,6 t/ga) va Kunak (37,4 t/ga) navlarida aniqlanganligi keltirilgan.

Kalit so'zlar: shalot piyozi, barglar soni, barg uzunligi, barg diametri piyozboshcha vazni, umumiy hosildorlik, tovar hosildorlik.

Introduction

Although the onion family is widespread on all continents and includes 30 families and 650 species, only 20-25 species are used for food by the world's population and 12 species are used in

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agriculture. Despite this, onion species are widespread in all parts of the world: Europe, North and South America, Australia, Asia, and Africa. China - 871.0 thousand tons, Mali - 696.0 thousand tons, Japan - 528.0 thousand tons, and Korea - 406.0 thousand tons.

Shalot has been known to humanity since ancient times, but it is not as widespread as ordinary onions. The reason for this can be considered vegetative propagation, which is related to the difficulties of seedling propagation and cultivation [3; 4]. There is no consensus among researchers on the origin of this onion variety, but most of them consider Asia to be the birthplace of this onion variety.

However, the shallow onion is not widespread in Uzbekistan, which is due to the lack of zoned varieties and the lack of scientific justification for cultivation and storage technologies. Furthermore, scientific research on the technology of scientifically sound onion cultivation in the soil and climatic conditions of the Fergana Valley has not been conducted. Therefore, the study of foreign breeding sources of the onion lettuce plant in the republic, as well as the improvement of certain elements of its cultivation technology, requires research.

Research Methodology

The objects of the study were seeds, shoots, leaves and fruits of the shallot varieties Sprint, Uralsky fioletoviy, Zvezdochka, Izumrud, Kaskad, Krepish, Kunak, Semeyniy, Sibirsky yantar and Sir-7. The research was conducted on 20 plants in each sample of shallot varieties with 4 rotations, 2 rows, a plot length of 5.15 m, a nominal area of 5.6 m2 and a planting scheme of 50+20/2×7.5 cm. The important morphobiological and valuable economic characteristics of the varieties were evaluated when growing shallots from 45-day-old seedlings.

Field experiments were conducted based on the methodological manuals "Methodology of conducting experiments in vegetable, melon and potato growing" (Azimov BJ, Azimov BB, 2002), "Methodology of field experiments in vegetable and horticultural production" (Belik VF, 1992) and "Methodological instructions for studying onion and garlic collections" (Kazakova AA, Borisenkova LS, 1986). Statistical analysis of the research results was performed using the computer program "Excel 2010" and "Statistica 7.0 for Windows", calculated using the dispersion method of "Methodology of field experiments" (Dospekkhov BA, 1985) with a confidence interval of 0.95%.

Research Results

When determining the number of leaves per bush of shallot varieties suitable for cultivation in the soil and climatic conditions of the Andijan region, it was determined that the Semeyniy variety had 3.2 leaves, the Kaskad variety had 3.3 leaves, the Krepish variety had 3.4 leaves, the Uralsky violet variety had 3.5 leaves, the Sibirsky Yantar variety had 3.5 leaves, the Sir-7 variety had 3.7 leaves, the Sprint variety had 3.8 leaves, the Zvezdochka and Kunak varieties had 3.9 leaves, and the Izumrud variety had 4.2 leaves (Table 1).

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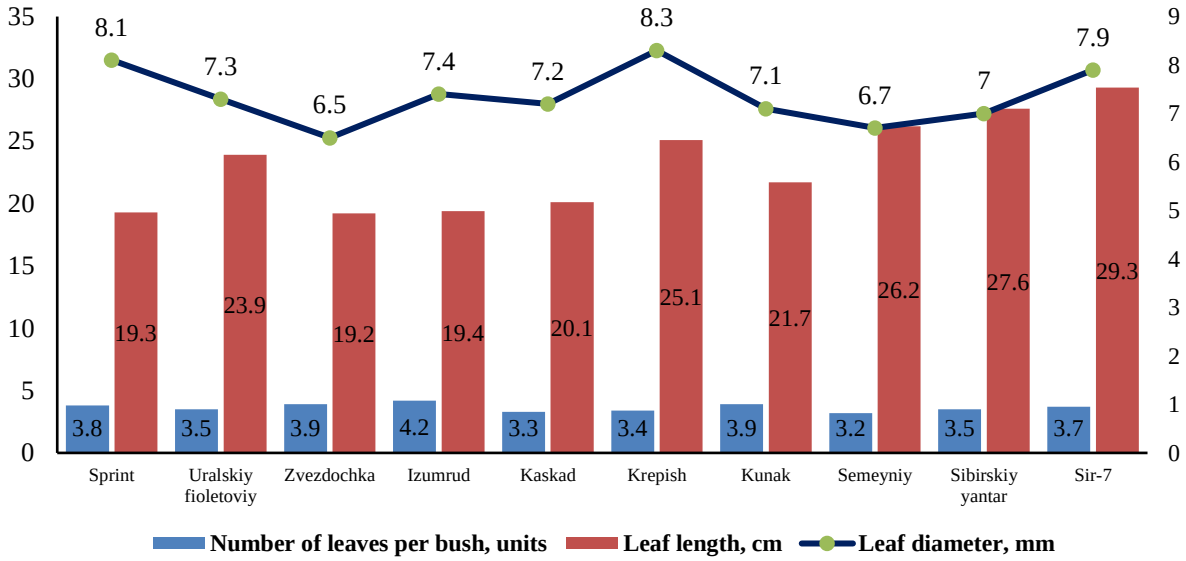

1- Pic. The number, length, and diameter of leaves per bush of Shalot onion variety samples (2022-2024).

The leaf length of shallot varieties is Sprint - 19.3 cm, Uralsky violet - 23.9 cm, Zvezdochka - 19.2 cm, Izumrud - 19.4 cm, Cascade - 20.1 cm, Krepish - 25.1 cm, Kunak variety - 21.7 cm, Semeiny variety - 26.2 cm, Sibirsky yantar in the variety - 27.6 cm and in the Sir-7 variety - 29.3 cmIt was also determined that the leaf diameter of the shallot varieties Sprint variety – 8.1 mm, Uralsky violet variety – 7.3 mm, Zvezdochka variety – 6.5 mm, Izumrud variety – 7.4 mm, Kaskad variety – 7.2 mm, Krepish variety – 8.3 mm, Kunak variety – 7.2 mm, Semeyniy variety – 6.7 mm, Sibirsky yantar variety – 7.0 mm and Sir-7 variety – 7.9 mm.

When the number of bulbs in the head of shallot onion samples was determined in 2022, the Sprint variety had 9 bulbs, the Uralsky Violet, Siberian Amber varieties had 7 bulbs, the Zvezdochka variety had 6 bulbs, the Sir-7, Semeyniy, Krepish, Kaskad varieties had 5 bulbs, and the Kunak, Izumrud varieties had 3 bulbs.In 2023, the number of bulbs in the onion crop was 10 in the Sprint variety, 8 in the Siberian Amber variety, 7 in the Sir-7 and Krepish varieties, 6 in the Ural Violet, Semeyniy, and Kaskad varieties, 5 in the Zvezdochka variety, and 4 in the Kunak and Izumrud varieties. In 2024, the number of bulbs in the onion crop was 9 in the Siberian Amber variety, 8 in the Sprint variety, 7 in the Cascade variety, 6 in the Sir-7 and Krepish varieties, 5 in the Ural Violet, Kunak, and Izumrud varieties, and 4 in the Semeyniy and Zvezdochka varieties. The average number of bulbs per bulb of shallot onion varieties in 2022-2024 was 9 in the Sprint variety, 8 in the Siberian Amber variety, 6 in the Kaskad, Sir-7, Krepish, Uralsky Violet varieties, 5 in the Semeyniy, Zvezdochka varieties, and 4 in the Kunak, Izumrud varieties (Figure 2).

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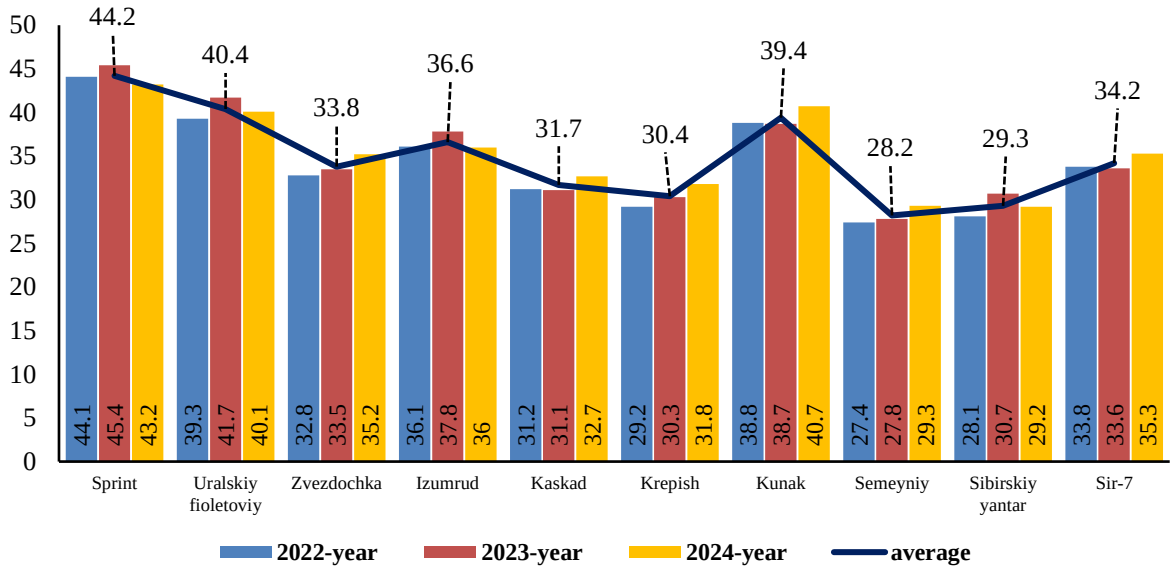

2- fig. Number of bulbs per bulb of Shalot onion variety samples, pcs.

When the weight of 1 bulb of shallot onion varieties was determined in 2022, the Zvezdochka variety was 49.0g, Uralsky violet variety – 55.7 g, Sprint variety – 34.0 g, Sir-7 variety – 33.6 g, Siberian amber variety – 24.3 g, Semeyniy variety – 27.4 g, Kunak variety – 33.6 g, Krepish variety – 50.4 g, Kaskad variety – 33.6 g and Izumrud variety – 21.3 g. In 2023, the weight of 1 bulb was 59.2 g for the Uralsky Violet variety, 54.6 g for the Krepish variety, 48.0 g for the Zvezdochka variety, 36.8 g for the Sprint variety, 35.7 g for the Kunak variety, 34.0 g for the Sir-7 variety, 34.0 g for the Kaskad variety, 34.0 g for the Semeyniy variety, 26.9 g for the Siberian Amber variety, and 22.9 g for the Izumrud variety. In 2024, the weight of 1 bulb was 56.8 g for the Uralsky violet variety, 51.0 g for the Zvezdochka variety, 49.4 g for the Krepish variety, 36.4 g for the Sir-7 variety, 36.4 g for the Kaskad variety, 36.4 g for the Kunak variety, 34.3 g for the Sprint variety, 33.3 g for the Semeyniy variety, 28.6 g for the Sibirsky yantar variety, 24.0 g for the Izumrud variety, and 21.1 g for the Izumrud variety. The weight of the bulb of the shallot onion variety samples in 2024, when mathematically and statistically processed, was EKF05 – 1.7 g and Sx% – 4,5 % (Figure 3).

According to the data in Figure 3, the average weight of 1 bulb of shallot onion varieties in 2022-2024 was 57.2 kg for the Uralsky Violet variety.g, Krepish variety – 51.5 g, Zvezdochka variety – 49.3 g, Sir-7 variety – 34.7 g, Kaskad variety – 34.7 g, Sprint variety – 34.7 g, Kunak variety – 34.5 g, Semeyniy variety – 27.6 g, Sibirsky Yantar variety – 24.8 g and Izumrud variety – 21.8 g. The bulb weight of shallot onion variety samples in 2022-2024, when mathematically and statistically processed, was EKF05 – 1.1 g and Sx% – 3,1 %.

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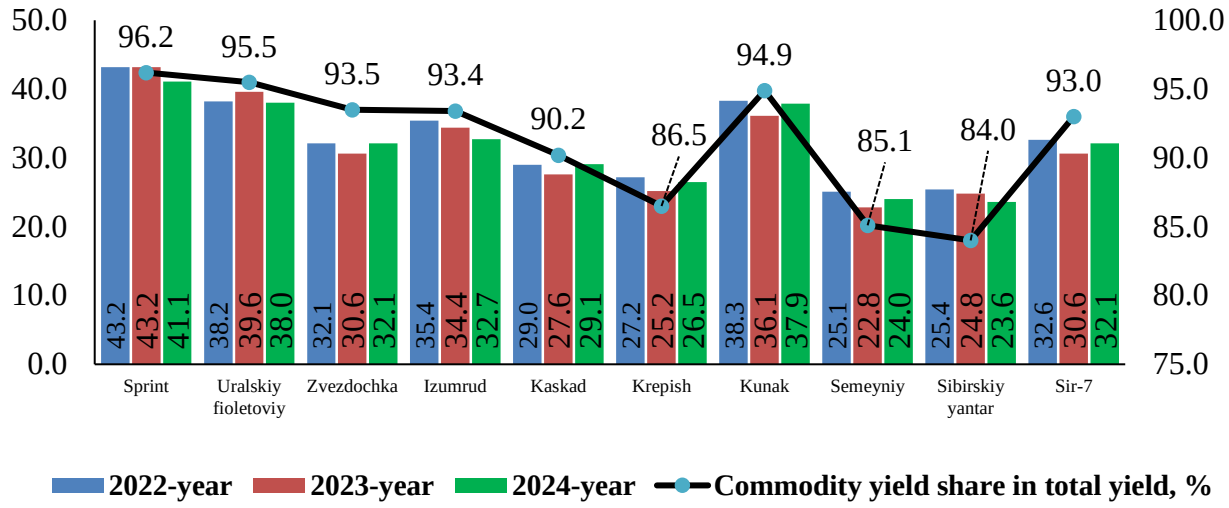

3-Fig. The weight of 1 onion of chicken onion varieties, g

According to the results of a study conducted on the selection of shallot varieties suitable for cultivation in the soil-climatic conditions of the Andijan region, it was determined that the highest total yield in 2022 was the Sprint variety - 44.1 t/ha, the Uralsky violet variety - 39.3 t/ha, the Kunak variety - 38.8 t/ha, while the lower ones were the Izumrud variety - 36.1 t/ha, the Sir-7 variety - 33.8 t/ha, the Zvezdochka variety - 32.8 t/ha, the Kaskad variety - 31.2 t/ha, the Krepish variety - 29.2 t/ha, the Siberian amber variety - 28.1 t/ha, and the Semeyniy variety - 27.4 t/ha (Table 1).

Table 1 Total yield of shallot varieties, t/ha

Sample name	Total yield, t/ha			
	2022	2023	2024	average
Sprint	44.1	45.4	43.2	44.2
Ural violet	39.3	41.7	40.1	40.4
Star	32.8	33.5	35.2	33.8
Emerald	36.1	37.8	36.0	36.6
Cascade	31.2	31.1	32.7	31.7
Crepe	29.2	30.3	31.8	30.4
Day	38.8	38.7	40.7	39.4
Semieny	27.4	27.8	29.3	28.2
Siberian amber	28.1	30.7	29.2	29.3
Secret-7	33.8	33.6	35.3	34.2
EKF05	1.4	1.5	1.6	1.2
Sx%	4.1	4.4	4.4	3.3

According to the data in Table 1, in 2023, the highest total yield was found for the Sprint variety - 45.4 t/ha, the Uralsky violet variety - 41.7 t/ha, while the lower ones were the Kunak variety - 38.7 t/ha, the Izumrud variety - 37.8 t/ha, the Sir-7 variety - 33.6 t/ha, the Zvezdochka variety -

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33.5 t/ha, the Kaskad variety - 31.1 t/ha, the Sibirsky yantar variety - 30.7 t/ha, the Krepish variety - 30.3 t/ha, and the Semeyniy variety - 27.8 t/ha. It was found that the highest total yield per unit area in 2024 was in the Sprint variety - 43.2 t/ha, the Kunak variety - 40.7 t/ha, the Uralsky violet variety - 40.1 t/ha, while the lower ones were in the Izumrud variety - 36.0 t/ha, the Sir-7 variety - 35.3 t/ha, the Zvezdochka variety - 35.2 t/ha, the Kaskad variety - 32.7 t/ha, the Krepish variety - 31.8 t/ha, the Semeyniy variety - 29.3 t/ha, and the Sibirsky yantar variety - 29.2 t/ha.

According to the results of a study conducted on the selection of shallot varieties suitable for cultivation in the soil and climatic conditions of the Andijan region, it was determined that in 2022-2024, the highest total yield was in the Sprint variety - 44.2 t/ha, the Uralsky violet variety - 40.4 t/ha, and the Kunak variety - 39.4 t/ha, while the lower ones were in the Izumrud variety - 36.6 t/ha, the Sir-7 variety - 34.2 t/ha, the Zvezdochka variety - 33.8 t/ha, the Kaskad variety - 31.7 t/ha, the Krepish variety - 30.4 t/ha, the Siberian amber variety - 29.3 t/ha, and the Semeyniy variety - 28.2 t/ha.

According to the results of a study conducted to select shallot varieties suitable for cultivation in the soil and climatic conditions of Andijan region,The amount of marketable crops in the total crop also varies,In 2022, Sprint variety - 43.2 t/ha, Kunak variety - 38.3 t/ha, Uralsky violet variety - 38.2 t/ha, Izumrud variety - 35.4 t/ha, Sir-7 variety - 32 ,6 t/ha, Zvezdochka variety - 32.1 t/ha, Cascade variety - 29.0 t/ha, Krepish variety - It was 27.2 t/ha, Sibirsky amber variety - 25.4 t/ha and Semeiny variety - 25.1 t/ha.The marketable yield of Sprint variety in the total yield in 2023 is 43.2t/ha,Uralsky violet variety - 39.6t/ha,Kunak variety – 36.1t/ha,Emerald variety – 34.4t/ha,Starfish variety – 30.6t/ha,Sir-7 variety – 30.6t/ha,Cascade type – 27.6t/ha,In the Crepish variety – 25.2t/ha,Sibirsky Yantar variety - 24.8t/ha andSemeyniy variety – 22.8t/ha (see Table 2).

Table 2 Yield characteristics of shallot cultivars

Sample name	Marketable yield, t/ha				Marketable yield in total yield share, %
	2022	2023	2024	average	
Sprint	43.2	43.2	41.1	42.5	96.2
Ural violet	38.2	39.6	38.0	38.6	95.5
Star	32.1	30.6	32.1	31.6	93.5
Emerald	35.4	34.4	32.7	34.2	93.4
Cascade	29.0	27.6	29.1	28.6	90.2
Crepe	27.2	25.2	26.5	26.3	86.5
Day	38.3	36.1	37.9	37.4	94.9
Semieny	25.1	22.8	24.0	24.0	85.1
Siberian amber	25.4	24.8	23.6	24.6	84.0
Secret-7	32.6	30.6	32.1	31.8	93.0
EKF05	1.4	1.3	1.2	0.9	-
Sx%	4.2	4.0	3.7	2.9	-

According to the data in Table 2, the marketable yield of the Sprint variety in 2024 as a percentage of the total yield is 41.1t/ha,Uralsky violet variety - 38.0t/ha,Kunak variety – 37.9t/ha,Emerald variety – 32.7t/ha,Starfish variety – 32.1t/ha,Sir-7 variety – 32.1t/ha,Cascade type – 29.1t/ha,In the Crepe variety – 26.5t/ha,Semeyniy variety – 24.0t/ha and the Siberian Amber variety - 23.6

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t/ha. According to the results of the 2022-2024 selection of shallot varieties suitable for cultivation in the soil and climatic conditions of the Andijan region, the marketable yield in the total yield was 42.5 t/ha for the Sprint variety, 38.6 t/ha for the Ural Violet variety, 37.4 t/ha for the Kunak variety, 34.2 t/ha for the Izumrud variety, 31.8 t/ha for the Sir-7 variety, 31.6 t/ha for the Zvezdochka variety, 28.6 t/ha for the Kaskad variety, 26.3 t/ha for the Siberian Amber variety, 24.6 t/ha for the Semeyniy variety, and 24.0 t/ha for the Semeyniy variety. It was also determined that the share of marketable yield in the total yield was 96.2% for the Sprint variety, 95.5% for the Uralsky violet variety, 94.9% for the Kunak variety, 93.5% for the Zvezdochka variety, 93.4% for the Izumrud variety, 93.0% for the Sir-7 variety, 90.2% for the Kaskad variety, 86.5% for the Krepish variety, 85.1% for the Semeyniy variety, and 84.0% for the Siberian amber variety.

CONCLUSION

As a result of scientific research on the selection of shallot varieties suitable for cultivation in the soil and climatic conditions of the Andijan region, the highest total yield was observed in the varieties Sprint (44.2 t/ha), Uralsky violet (40.4 t/ha) and Kunak (39.4 t/ha), andThe highest marketable yield in the total yield was determined in the varieties Sprint (42.5 t/ha), Uralsky violet (38.6 t/ha) and Kunak (37.4 t/ha).

REFERENCES:

1. Vodianova O.S. Shallot onion variety Kainarsky // Magazine “Breeding and seed production”. – Moscow, 1982. - No. 1. – P. 26.
2. Grinberg E.G., Vanina L.A. Results and prospects of shallot selection in Siberia // Materials of the scientific and practical conference “State and problems of scientific support for vegetable growing in Siberia” dedicated to the 70th anniversary of the West Siberian vegetable experiment station. – Barnaul, 2002. – P. 70-76.
3. Grinberg E.G., Vanina L.A., Zharkova S.V., Suzan V.G., Shlikova E.A., Denisyuk S.G. Scientific bases of introduction, selection and agrotechnics of shallots in Western Siberia (monograph). – Novosibirsk, 2009. – 208 p.
4. Suzan V.G. Study of shallot varieties // Journal “Agrarian Bulletin of the Urals”. – Novosibirsk, 2008. – P. 91-93.

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