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ORGANIZATION OF SELECTION TEST AND COMPLEX EVALUATION OF  
PROMISING RADISH (RAPHANUS SATIVUS) VARIETIES

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**Abstract.** In order to increase the assortment of radishes in our country and create radish varieties with high quality indicators, primary sources were tested. As a result of studying the morphological and economic characteristics of the variety samples, the following varieties of radish were selected for selection work: Lola, Ertapishar, local, foreign F1 Celesta, F1 Tinto, F1 Bodiam, F1 Vienna, F1 Sora hybrid varieties, Amethyst and Felitsia varieties for creating purple radish varieties, and white Ertapishar varieties for promising varieties.

**Keywords:** radish, promising varieties, root crop, yield, collection, growing season.

**Анотация.** С целью расширения ассортимента редиса в нашей стране и создания высокоурожайных, высококачественных сортов редиса для экспорта на внутренний и внешний рынки проведена апробация первичных источников. В результате изучения морфологических и хозяйственных признаков сортообразцов для селекционной работы были отобраны следующие сорта редиса: Лола, Эртапишар, местные, зарубежные F1 Селеста, F1 Тинто, F1 Бодиа, F1 Вена, гибридные сорта F1 Сора, сорта Аметист и Фелиция для создания фиолетовых сортов редиса, а также белый сорт Эртапишар для создания перспективных сортов.

**Ключевые слова:** редис, перспективные сорта, корнеплод, урожайность, сбор, вегетационный период.

**Introduction.** Radish (*Raphanus sativus* L) is an annual plant belonging to the Brassica family. In the first year, white root crops and seeds are harvested. Radish is a widely cultivated vegetable crop in different countries of the world. Root vegetable crops originated mainly in the Mediterranean region. The center of origin of radish is the Mediterranean and southwest and east Asia. Radish began to be cultivated 5 thousand years ago. Root vegetables are widely grown everywhere, especially in countries with temperate climates. In Uzbekistan, radish is one of the oldest vegetable crops. Among root crops, radish ranks second only to carrots in terms of cultivated area. [1] The radish root contains 86.9% water, 13.1% dry matter, 1.9% protein, 9.4% carbohydrates, 0.1% oil, 1.7% fiber, and 0.8% ash. Radish contains mineral salts such as potassium, calcium, sodium, magnesium, iron, phosphorus, sulfur, carbohydrates, ascorbic acid, and phytoncides. Radish increases the secretion of gastric juice, stimulates appetite, improves gastrointestinal function, and has antiseptic properties. Radish is recommended for use as a remedy for rheumatism, coughs, colds, diuretics, expectorants, and throat and lung diseases. [2] 23 varieties of radish are included in the State Register of Agricultural Crops in the Republic of Uzbekistan. These are the varieties of local selection Lola (2004) and Ertapishar (1981) of the



Scientific Research Institute of Vegetables, Melons and Potatoes. In addition, the Maysky mestny (1957) radish variety was created at the Scientific Research Institute of Vegetables, Melons and Potatoes. The fact that 23 varieties of radish are included in the State Register in our republic is due to the insufficient selection work on this crop. A lot of selection work is carried out on radish in foreign countries. In particular, more than 95 varieties of this crop have been created in the Russian Federation and included in the State Register. In our country, radish The purpose of the research is to test and isolate primary sources for the creation of high-yielding, high-quality radish varieties for export to domestic and foreign markets. Research materials and methods. The study was carried out at the Surkhandarya Scientific Experimental Station of the Scientific Research Institute of Vegetables, Melons and Potatoes. The station is located in the Termez district of the Surkhandarya region. The climate of the region is characterized by sufficient light and heat, continental variability and dry air. The duration of sunlight is 2800-3500 hours per year, with 366-410 hours of sunlight per month in summer and 110-136 hours in winter. The variability of temperature during the day is high (12-16°C in winter and 16-22°C in summer). The object of the study was 30 samples of radish varieties of local and foreign selection, including local Lola, Ertapishar, and foreign F1 Celesta, F1 Tinto, F1 Bodiam, F1 Vienna. Dungansky 12-8, Duro Krasnodarskoye varieties brought from Russian countries.

Materials and methods. The research was conducted based on the methods of “Methodology of conducting experiments in vegetable, melon and potato growing” (2002), “Methodical instructions for ecological testing of vegetable crops in open ground” (1981), “Methodology of State variety testing of agricultural crops” (2015). Each variety has an area of 2.8 m<sup>2</sup>, four rotations. The standard variety is Lola. Phenological observations (seed germination, the formation of the first and 5-6 true leaves, root formation, root ripening) and biometric measurements were carried out during the growing season. The yield of the variety samples was determined. The crop was divided into quality and poor quality. Root crops with a diameter of less than 0.8 cm, diseased and damaged by pests were included in the poor quality crop.

Results and discussion. Varietal samples Seeds were sown in the field on February 20, 2026. In all variety samples, the germination of seeds was 7-8 days. The duration of the action period between the studied varieties, that is, the period from seed germination to technical ripeness of the root crops, was almost the same. After full germination of seeds, the appearance of the first true leaf was 5-6 days in the comparative varieties Lola, Ertapishar, Dungansky 12-8, Duro Krasnodarskoe, Cherry red, Dve Dekadi, while this indicator was 4 days in the hybrid varieties F1 Celesta, F1 Tinto, F1 Bodiam, F1 Vienna, which was 2-3 days shorter than the comparative variety and other varieties. In the Lola, Ertapishar, Cherry red, Dve Dekadi and the hybrid varieties F1 Celesta, F1 Tinto, F1 Bodiam, F1 Vienna, the 5-6th true leaves appeared on the 11-12th day, while in the remaining varieties this indicator was formed on the 14-16th day. The earliest root crop formation among the studied varieties was observed in the hybrid varieties F1 Celesta, F1 Tinto, F1 Bodiam, F1 Vienna and was 35 days. In all other radish varieties, this indicator was 36-49 days. (table 1)

Table 1

Development phases of radish varieties and hybrids, seeds

(spring term 2026)

/r	T	Variety and hybrid	germination date		true leaf emergence, date		link, date		technical maturity, date	
			1	7	1	7	1	7	1	7



		0%	5%	0%	5%	0%	5%	0%	5%
1	Lola, st	2 5.02	0 2.03	0 8.03	1 5.03	0 4.03	1 0.03	2 0.03	0 2.04
2	Ertapi shar	2 6.02	0 2.03	0 8.03	1 5.03	0 6.03	1 1.03	2 2.03	0 6.04
3	F <sub>1</sub> Selesta	2 5.02	0 2.03	0 8.03	1 5.03	0 4.03	1 1.03	2 0.03	0 2.04
4	F <sub>1</sub> Tinto	2 6.02	0 2.03	0 8.03	1 5.03	0 4.03	1 0.03	2 1.03	0 3.04
5	Lola	2 7.02	0 4.03	1 1.03	1 8.03	0 8.03	1 6.03	3 1.03	2 2.04
6	Sora	2 7.02	0 4.03	1 1.03	1 8.03	0 9.03	1 6.03	3 1.03	2 2.04
7	Noms iz	2 7.02	0 4.03	1 1.03	1 9.03	0 9.03	1 6.03	3 1.03	2 3.04
8	Cherr red, radish	2 5.02	0 4.03	1 1.03	1 9.03	0 9.03	1 1.03	2 3.03	0 3.04
9	Selest a	2 7.02	0 4.03	1 1.03	1 8.03	1 0.03	1 6.03	3 1.03	2 3.04
10	Chem pion	2 6.02	0 2.03	0 9.03	1 8.03	0 6.03	1 2.03	2 3.03	0 4.04
11	Lola, st	2 5.02	0 2.03	0 8.03	1 5.03	0 4.03	1 1.03	2 1.03	0 3.04
12	Dung anskiy 12- 8	2 7.02	0 4.03	1 1.03	1 9.03	1 0.03	1 9.03	0 8.04	2 3.04
13	Noms iz	2 7.02	0 4.03	1 1.03	1 9.03	1 1.03	1 9.03	0 6.04	2 2.04
14	Hong danzi Jifeng	2 7.02	0 4.03	1 1.03	1 8.03	0 8.03	1 8.03	0 6.04	2 1.04
15	Diego	2 6.02	0 4.03	1 1.03	1 8.03	0 6.03	1 8.03	0 2.04	1 3.04
16	F <sub>1</sub> Sora	2 5.02	0 2.03	0 8.03	1 5.03	0 5.03	1 1.03	2 3.03	0 4.04
17	Ameti st	2 6.02	0 2.03	0 8.03	1 5.03	0 6.03	1 2.03	2 3.03	0 4.04
18	Dve Dekadi	2 6.02	0 2.03	0 8.03	1 9.03	0 6.03	1 8.03	2 8.03	0 5.04
19	Felitsi ya	2 6.02	0 2.03	0 8.03	1 8.03	0 6.03	1 2.03	2 3.03	0 6.04
20	F <sub>1</sub> Bodiam	2 6.02	0 2.03	0 8.03	1 5.03	0 5.03	1 1.03	2 1.03	0 4.04
21	Lola, st	2 6.02	0 2.03	0 8.03	1 5.03	0 4.03	1 1.03	2 2.03	0 4.04
22	Helga	2 6.02	0 3.03	1 1.03	1 9.03	1 1.03	1 9.03	0 6.04	2 1.04



3	2	Diana	2	0	0	1	0	1	2	0
4	2	Red silver radish	2	0	1	1	1	1	0	2
5	2	F <sub>1</sub> Vienna	2	0	0	1	0	1	2	0
6	2	Dungon	2	0	1	1	1	1	0	2
7	2	Roxanne	2	0	0	1	0	1	2	0
8	2	Bolie konchiki	2	0	1	1	1	1	0	1
9	2	Kesht zar	2	0	0	1	0	1	2	0
10	3	Duro Krasnodarskoe	2	0	0	1	0	1	2	0

Table 2  
Duration of development periods in radish varieties and hybrids (spring period 2026)

r	T/ Variety and hybrid	sowing-germination, day	after germination, day		
			Until the appearance of the 1st true leaf, days	Until 5-6 leaves appear, day	days technical ripene root vegetables
1	Lola, st	5	12	24	37
2	Ertapishar	6	11	25	40
3	F <sub>1</sub> Selesta	5	12	24	37
4	F <sub>1</sub> Tinto	6	11	24	37
5	Lola	7	13	33	55
6	Sora	7	13	33	55
7	Nomsiz	7	13	33	56
8	Cherry red, radish	5	15	27	38
9	Selesta	7	13	33	56
10	Chempion	6	12	22	38
11	Lola, st	5	12	25	38
12	Dunganski y 12-8	7	13	41	56
13	Nomsiz	7	13	39	55
14	Hongdanzi Jifeng	7	13	39	54
15	Diego	6	12	36	47



16	F <sub>1</sub> Sora	5	12	27	39
17	Ametist	6	11	26	38
18	Dve Dekadi	6	11	31	39
19	Felitsiya	6	11	26	40
20	F <sub>1</sub> Bodiam	6	11	24	38
21	Lola, st	6	11	25	38
22	Helga	6	12	40	55
23	Diana	7	10	26	39
24	Red silver radish	6	14	40	56
25	F <sub>1</sub> Vienna	5	12	27	39
26	Dungon	7	13	41	56
27	Roxanne	5	12	27	41
28	Bolie konchiki	8	12	38	51
29	Keshtzar	6	11	26	40
30	Duro Krasnodarskoe	6	11	25	40

The earliest varieties of root crops from seed germination to technical ripeness were the hybrids F<sub>1</sub> Celesta, F<sub>1</sub> Tinto, F<sub>1</sub> Bodiam, F<sub>1</sub> Vienna, which matured in 35 days. The varieties Ertapishar, Dungansky 12-8, Duro Krasnodarskoe, Cherry red, Dve Dekadi ripened in 42-45 days. The morphological characteristics of the leaves of the variety samples are given in Table 3.

Table-3

Leaf description of radish varieties and hybrids (spring term 2026)

t/r	Variety and hybrid	Leaf						
		Color	Shape	Features	Length, cm	Width, cm	Quantity, pcs	Weight, grams
1	Lola, st	dark green	lyre-shaped	less	5,5 8	3,8	5	4,0
2	Ertapishar	dark green	lyre-shaped	less	14, 7	7,7	8	29,8
3	F <sub>1</sub> Selesta	dark green	lyre-shaped	less	4,7	3,9	5	4,6
4	F <sub>1</sub> Tinto	dark green	lyre-shaped	less	6,1	3,9	6	4,3
5	Lola	dark green	lyre-shaped	less	16	7,3	7	46,4
6	Sora	dark green	lyre-shaped	less	17	7,4	7	49,5



		green							
7	Nomsi z	da rk green	lyre -shaped	less	17	7,4	7	53,7	
8	Cherry red, radish	da rk green	lyre -shaped	less	17	10, 3	7	32,7	
9	Selesta	da rk green	lyre -shaped	less	16	7,2	6	45,8	
0	1 Chemp ion	da rk green	lyre -shaped	less	8,6	6,5	6	21,6	
1	1 Lola, st	da rk green	lyre -shaped	less	5,8	3,7	5	3,6	
2	1 Dunga nnskiy 12-8	da rk green	lyre -shaped	less	16	7	7	34,1	
3	1 Nomsi z	da rk green	lyre -shaped	less	18	8,1	7	50,1	
4	1 Hongd anzi Jifeng	da rk green	lyre -shaped	less	15	7	7	21,4	
5	1 Diego	da rk green	lyre -shaped	less	15, 7	5,7	7	32,3	
6	1 F <sub>1</sub> Sora	da rk green	lyre -shaped	less	9,8	6,1	6	12,7	
7	1 Ametis t	da rk green	lyre -shaped	less	7,7	5,3	6	8,1	
8	1 Dve Dekadi	da rk green	lyre -shaped	less	14, 4	7,3	5	14,7	
9	1 Felitsiy a	da rk green	lyre -shaped	less	6,9	4,5	6	11,8	
0	2 F <sub>1</sub> Bodiam	da rk green	lyre -shaped	less	5,7	4,2	7	11,0	
1	2 Lola, st	da rk green	lyre -shaped	less	7,3	5,3	6	12,1	
2	Helga	da	lyre	less	9,3	6,3	6	23,2	



2		rk green	-shaped						
3	2	Diana	da rk green	lyre -shaped	less	5,9	4,1	7	10,1
4	2	Red silver radish	da rk green	lyre -shaped	less	14,6	8,1	9	24,0
5	2	F <sub>1</sub> Vienna	da rk green	lyre -shaped	less	7,7	4,4	6	5,6
6	2	Dungon	da rk green	lyre -shaped	less	18,5	8,2	8	51,6
7	2	Roxanne	da rk green	lyre -shaped	less	6,5	4,1	6	3,8
8	2	Bolie konchiki	da rk green	lyre -shaped	less	17,8	6,3	8	37,3
9	2	Keshtzar	da rk green	lyre -shaped	less	13,3	7,1	9	40,4
0	3	Duro Krasnodarskoe	da rk green	lyre -shaped	less	10	6	6	21,6

The leaf color of the plants was observed to be dark green in the comparative varieties Lola, Ertapishar, Cherry red, Dve Dekadi variety and F1 Selesta, F1 Tinto, F1 Bodiam, F1 Vienna hybrid varieties. The leaf shape of the standard Lola, Ertapishar, Cherry red, Dve Dekadi variety and F1 Selesta, F1 Tinto, F1 Bodiam, F1 Vienna varieties is lyre-shaped. In all other varieties, the leaf shape is oval. Leaf hairs are rare in the standard Lola, Ertapishar, Cherry red, Dve Dekadi variety and F1 Selesta, F1 Tinto, F1 Bodiam, F1 Vienna varieties, and this feature is absent in all other varieties. The shortest leaf length was observed in Lola, Dungansky 12-8, variety and F1 Selesta, F1 Tinto, F1 Bodiam, F1 Vienna hybrid varieties, which were 4.7-7.3 cm. The longest leaves were 10-18.5 cm in the varieties Ertapishar, Duro Krasnodarskoye, Dungon, Red silver, and 5.8 cm in the Standard Lola variety.

The morphological structure of the rootstocks varied among the varieties. The shape of the rootstocks was flat-round in the hybrid varieties Lola, F1 Celesta, F1 Tinto, F1 Bodiam, F1 Vienna, and the elongated varieties Cherry red, Dve Dekadi, Felitsiya. (Table 3)

Table-3  
Morphological description of the root crop of radish plant varieties or hybrids

Variety	and	Root vegetable
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hybrid	The color of the core	The color of the bark	Shapel y	Weight, grams	% relative to standard
Lola, st	light red	red	round	15,81	100
Ertapishar	white	white	round	32,1	203
Selesta F1	light red	red	round	16,13	102
Tinto F1	white	red	round	19,8	125,2
Lola	white	och pushti	round	17,4	110
Sora	white	red	round	17,19	108,7
Nomsiz	white	red	round	17,45	110,3
Cherry radish	red, white	red	long	48,4	306,1
Selesta	white	och pushti	round	25,96	164,1
Chempion	white	red	round	29,8	188,4
Lola, st	light red	red	round	26,5	100
Dunganskiy 12-8	white	red	round	47,8	180
Nomsiz	white	red	round	18,05	68,1
Hongdanzi Jifeng	white	pink	round	18,1	68,3
Diego	white	pink	round	25,46	96
Sora F1	white	red	round	27,43	103,5
Ametist	pink	pink	round	19,4	73,2
Dve Dekadi	white	pink	long	18,21	68,7
Felitsiya	white	pink	long	20,3	76,6
Bodiam F1	white	red	round	25,97	97,2
Lola, st	white	red	round	23,72	100
Helga	white	pink	round	15,9	67
Diana	white	pink	round	23,15	97,5
Red radish	silver white	pink	round	33,1	139,5
Vienna F1	light red	red	round	24,17	101,8
Dungon	light red	pink	round	53,27	224,5
Roxanne	white	red	round	17,23	72,6
Bolie konchiki	light red	red	round	63,5	267,7
Keshtzar	pink	pink	round	62,18	262,1
Duro Krasnodarskoe	light red	red	round	78,63	331,4



The varieties with red and dark red skin color are Lola, Cherry red, Dungansky 18-8, Champion, Roxanne and F1 Sora, F1 Celesta, F1 Tinto, F1 Bodiam, F1 Vienna, the light pink varieties are Celesta, Diego, Red silver, Dungon, the purple varieties are Amethyst, Felitsia. The average weight of the standard varieties of Lola, F1 Celesta, F1 Tinto, F1 Bodiam, F1 Vienna was 15.81-24.17 g, while the largest Bolie cone was Duro Krasnadarskoye, which was 63.5-78.63 g on average or 267.7-78.63% higher than the standard. Among the varieties with large root crops, Ertapishar (32.1 g), Cherry Red (48.4 g), Champion (29.8 g) and Dungansky 12-8 (47.8 g) stood out, which were 180-306.1% higher than the standard variety. Small root crops were Lola, st (15.81 g) F1 Celesta (16.13), F1 Tinto (19.8), Ametist (19.4), Dve Dekadi (18.21) Roxanne (17.23), which were 102-125.2% higher than the standard. The remaining varieties had root crops lower than the standard variety, equal to 67-96 g.

Of the studied varieties, the highest total yield was observed in the Duro Krasnodarskoe variety - 26.192 t/ha, in the Dungansky 12-8 variety - 35.385 t/ha, in the Bolie konchiki variety - 19.335 t/ha, in the Cherry red, radish variety - 24.928 t/ha and in the F1 Bodiam hybrid variety - 23.332 t/ha, or 151.6-196.4% more than the standard Lola variety. In the standard Lola variety, this indicator was 15.389 t/ha. The lowest total yield was in the Felitsia variety - 6.671 t/ha and in the Dungon variety - 6.310 t/ha, or 43.3-47.3% compared to the standard. In the remaining varieties, this indicator was 87.2-146.4 t/ha (Table 4).

Table-4

Yield indicators of radish varieties or hybrids

Variety and hybrid	Total yield of plant mass, kg	Leaf mass, kg	Root mass, kg	Community yield t/ha	Compare to control, %
Lola, st	5.955	2.103	3.852	13.757	100
Ertapishar	8.597	4.156	4.441	15.860	115.2
Selesta F1	8.046	2.718	5.329	19.032	138.3
Tinto F1	8.149	2.507	5.643	20.153	146.4
Lola	17.779	13.63	4.149	14.817	107.7
Sora	12.455	9.911	2.544	9.085	66
Nomsiz	5.326	3.176	2.15	7.678	55.8
Cherry red, radish	13.371	6.391	6.98	24.928	181.2
Selesta	16.549	13.749	2.8	10.000	72.6
Chempion	6.525	2.496	4.029	14.389	104.5
Lola, st	6.917	1.799	4.309	15.389	100
Dunganskiy 12-8	19.206	9.298	9.908	35.385	229.9
Nomsiz	18.276	14.509	3.767	13.453	87.4
Hongdanzi Jifeng	11.47	6.171	5.299	18.925	122.9
Diego	7.078	4.007	3.071	10.967	71.2
Sora F1	6.818	1.924	4.894	17.478	113.5
Ametist	7.593	2.853	4.74	16.928	110
Dve Dekadi	14.173	9.827	4.346	15.521	100.8
Felitsiya	2.907	1.039	1.868	6.671	43.3
Bodiam F1	8.83	2.297	6.533	23.332	151.6
Lola, st	5.101	1.368	3.733	13.332	100



Helga	6.107	4.306	1.801	6.432	48.2
Diana	3.02	0.955	2.065	7.375	55.3
Red silver radish	7.104	3.847	3.257	11.632	87.2
Vienna F1	7.328	1.795	5.726	20.450	153.3
Dungon	5.258	3.491	1.767	6.310	47.3
Roxanne	4.718	1.742	2.976	10.628	79.7
Bolie konchiki	10.28	4.866	5.414	19.335	145
Keshtzar	12.552	8.808	3.744	13.371	100.2
Duro Krasnodarskoe	12.058	4.724	7.334	26.192	196.4

In the studied variety samples, the marketable yield was observed in the Ertapishar variety at 15,860 t/ha, in the F1 Selesta hybrid variety at 19,032 t/ha, in the F1 Tinto hybrid variety at 20,153 t/ha, and in the F1 Vienna hybrid variety at 20,450 t/ha, or 115.2-153.3% of the total yield. The lowest marketable yield in the Helga and Felitsia varieties was 43.3-47.3%.

#### Conclusion.

As a result of studying the morphological and economic characteristics of the variety samples, the following varieties of radish are recommended for selection of promising varieties in terms of yield: white radish Ertapishar variety, red radish Lola, Dungansky 12-8, Duro Krasnodarskoe, Keshtzar, Roxanne varieties, foreign hybrid varieties F1 Celesta, F1 Tinto, F1 Bodiam, F1 Vienna.

#### Literature

1. Ostanakulov T.E., Zuyev V.I., Kadirkhodjayev O.Q. "Vegetable growing". Tashkent., 2009. - 380 p.
2. Ostanakulov T.E., Zuyev V.I., Kadirkhodjayev O.Q. "Vegetable growing". Tashkent., 2008. - 7 p.
3. B.J.Azimov, B.B.Azimov "Methodology of conducting experiments in vegetable growing, melon growing and potato growing" 2002. -13 p.
4. R.A.Hakimov, A.S.Hakimov, A.A.Toshmuhamedov. "Seed production of vegetables and melon crops". Tashkent, 2003. -110 p.
5. Zuev V.I., Kadirkhozhaev O.Q., Adilov M.M., Akromov U.I. Vegetable and melon growing. Tashkent . 2009.-p. 124-135.
6. State Register of Agricultural Crops Recommended for Planting in the Territory of the Republic of Uzbekistan. -Tashkent, 2020. -p. 55.
7. A collection of "100 books" prepared in cooperation with the "Ministry of Food and Agriculture" of the Republic of Turkey and "Denizbank".
8. Zuev V.I., Abdullaev A.G. Vegetable crops and their cultivation technology. T., "Uzbekistan", 1997. -p. 342
9. Boriev Kh.Ch., Zuev V.I., Kadirkhodjaev O.Q., Muhamedov M.M. "Progressive technologies of cultivation of vegetable crops in the open field" T., "National Encyclopedia of Uzbekistan" 2002. -p. 245- 251.
10. Boltaev B.S., Sulaymonov B.A., Mavlyanova R.F., Kholmurodov E.A., Rustamova I.B. Pests, diseases of vegetable crops and measures to combat them. Tashkent: 2013. -p. 23-28.

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