



GRAIN TECHNOLOGICAL QUALITY INDICATORS IN RODUCTIVITY OF VARIETIES AND LINES AT THE ECOLOGICALLY COMPETITIVE VARIETY TESTING PLANT OF WINTER WHEAT

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Abstract.

In the article, selection works were carried out to evaluate grain yield and grain technological quality indicators from the biological and economic characteristics of winter wheat hybrid lines, and the comprehensively productive KN-5126 hybrid line was submitted to the state variety test as a variety created in local conditions.

Key words. Plant, shade, variety, line, soil, adaptability, growth, development, growth period, 1000 grain weight, yield.

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Introduction. Wheat is one of the most important crops for mankind because it is a staple in many diets around the world. According to FAOSTAT data, 760.1 million tons are produced worldwide, of which China produces 134 million tons of wheat more than other countries, followed by India (98.5 million tons), Russia (85.7 million tons), and the United States (47.4 million tons). , France (37.0 million tons), Australia (31.8 million tons), Canada (30.0 million tons), Pakistan (26.7 million tons),

Ukraine (26.3 million tons), Germany (24.5 million tons) is growing. The global climate change and the conflicts between the two countries that export the most grains in the world, bringing the world economy to the brink of a global crisis, are worried by international experts. In the course of such an economic crisis, it is possible that some countries will face extremely difficult situations in providing their population with food products. In this situation, the problem of food supply is increasing, and



some countries are taking measures not to export the main types of food they grow. Therefore, agriculture and food production is becoming the most pressing issue today.

Decree No. 5853 of the President of the Republic of Uzbekistan "On approval of the strategy of the development of agriculture of the Republic of Uzbekistan for the period 2020-2030" states that "Ensuring the safety of food products and improving the consumption ration, the food security state, which provides for the cultivation of the required amount of food products development and implementation of the policy" are defined as the priority directions for the implementation of the Strategy. For this, first of all, it is necessary to select wheat varieties suitable for the climatic conditions of the region, with high grain quality, and to improve agrotechnologies of their cultivation [1].

Cooperation with scientific institutions of foreign countries is being strengthened in order to further strengthen the scientific research conducted by the scientists of the Scientific Research Institute of Cereals and Legumes in the selection of grain crops and raise it to the level of world requirements. More than 5,000 varieties and samples of the world gene pool, which differ from each other in terms of geographical origin and biological and economic characteristics, were collected from scientific research institutes of Russia, Kazakhstan, Kyrgyzstan, India, and Serbia. Varieties and samples are carefully evaluated in the gene pool, and those with the best indicators are used as the starting material for the selection of grain crops.[2]

In order to create new varieties, 450-500 combinations of simple and complex crossbreeding are carried out every year among varieties and lines of long geographical origin, which differ from each other in terms of biological and economic characteristics, high yield, resistance to diseases, and high grain quality. As a result of crossbreeding, the efficiency of creating hybrid seeds is 70-85 percent.

In the next 5 years, breeding scientists of the Institute will create high-yield varieties of winter wheat, Nadir, Qadr, Khamkor, Rizq, Andijon-3, Ravnaq, Asr Chilgisi, Sharaf-100, Oq-

yor, Yangi Zamon, Yangi Taraqqiyot, and test agricultural crops of the Republic of Uzbekistan. Submitted to the State Commission.

In 2020-2021, the growth development, biological and economic characteristics of 39 varieties and hybrid lines of winter wheat were studied in the ecologically competitive variety test nursery of selection at the Research Institute of Cereals and Legumes. In order to compare the growth, development phases and productivity of the varieties and lines in the ecological variety test, the Chillaki variety, which was created in local conditions and was recommended for planting in our Republic, and the Asket variety belonging to the Rostov selection of Russia were planted as a model variety (St). In the ecological variety test, all the important agrotechnical activities carried out during the period from the growth of varieties and lines to ripening, depending on the soil and climatic conditions of the region, were studied, and the valuable biological and economic characteristics of the plant were evaluated.

Research methodology.

Phenological observations were evaluated and analyzed under field and laboratory conditions. observation and assessment Russian Institute of Plant Science (1991) and main periods in phenological observations (germination, emergence, budding, tuber, spike, milk, wax, full ripening) wintering, dormancy, disease resistance in field conditions International classification developed by the Russian Institute of Plant Science (SEV Triticum type, 1983) methodological manuals were used.

The number of productive stems, plant height, spike length, number of spikes in a spike, number of grains in a spike, weight of one spike, weight of 1000 grains, technological and physiological parameters of plants were determined in the laboratory of nature and physiology. Mathematical analysis of experimental results Dospekhov B.A. (1985) were analyzed according to the method developed.

Research results.

Ecological variety test experiments were conducted in the central experimental field of the Scientific Research Institute of Cereals and Legumes. The soil of the central experimental



field is grassy soil, and the water table is 1.5-2.0 meters. The mechanical composition of the soil is medium sand, the parent rock consists of alluvial-proluvial deposits.

According to agrochemical tests, the experimental field is humus-rich and well supplied with nutrients. (Table 1)

Table 1
Agrochemical profile of experimental field soil.

Soil layers, cm.	Amount of compost, (humus %)	Gross, %		Mobile form,%		
		Nitrogen	Phosphorus	Nitrat	Phosphorus	Potassium
0-30	1,62	0,135	0,146	19,5	34,6	210
30-50	1,01	0,084	0,120	15,3	27,8	180
50-70	0,81	0,072	0,090	7,8	15,4	120
70-100	0,34	0,031	0,027	4,2	10,1	80

In such a driving layer (0-30 cm), the amount of humus is 1.62 percent of total nitrogen and the amount of total phosphorus is 0.135 and 0.146 percent.

During the planting study of the varieties and lines in the ecological variety test, the annual norms of feeding with mineral fertilizers were determined based on the region and soil conditions. Before planting the varieties, phosphorus was given in the amount of 90 kg, potassium in the amount of 60 kg, and nitrogen in the amount of 180-200 kg during the growing season of the plant.

In the conducted experiments, when the duration of the growth development period

of the varieties and lines in the ecological variety test was analyzed in days, the vegetation period until the fruit ripening in the studied varieties and lines was 215-220 days in early varieties, 225-235 days in mid-ripening varieties, and 240-240 days in late-ripening varieties. It was 245 days.

In the conducted experiments, the productivity indicators of varieties and lines, which are one of the main valuable farms, were analyzed for each return in the test nursery of an ecologically competitive variety, and the average productivity was observed as follows. (Table 2)

Table 2
A competitive variety of winter wheat cultivars in a nursery trial productivity indicators.

№	Varieties and samples name	Productivity obtained by returns, ts/ha.				Average yield ts/ha.	Compared to the St variety (+/-)
		I	II	III	IV		
1	Chillaki st	52,8	52,9	53,1	53,1	53,0	0
2	Ascetic st	68,7	67,2	69,4	69,6	68,7	15,7



3	KH-5130	70,6	69,1	71,3	71,5	70,6	17,6
4	KH-3898	75,5	74	76,2	76,4	75,5	22,5
5	KH-5428	70,5	69	71,2	71,4	70,5	17,5
6	KH-3256	75,4	73,9	76,1	76,3	75,4	22,4
7	KH-446	72,5	71	73,2	73,4	72,5	19,5
8	KH-3884	77,2	75,7	77,9	78,1	77,2	24,2
9	KH-3044	70,5	69	71,2	71,4	70,5	17,5
10	KH-5126	78,6	77,1	79,3	79,5	78,6	25,6
11	AC-2010-D-34	66,1	64,6	66,8	67	66,1	13,1
12	AC-2015-C210	64,1	62,6	64,8	65	64,1	11,1
13	AC-2010-D10	62,8	61,3	63,5	63,7	62,8	9,8
14	AC-2011-D-1	69,3	67,8	70	70,2	69,3	16,3
15	AC-2010-D-22	70,1	68,6	70,8	71	70,1	17,1
16	AC-2012-D-12	64,1	62,6	64,8	65	64,1	11,1
17	AC-2012-D-44	71,1	69,6	71,8	72	71,1	18,1
18	AC-2012-D-11	70,1	68,6	70,8	71	70,1	17,1
19	AC-2012-D-3	66	64,5	66,7	66,9	66,0	13,0
20	AC-2012-D-34	64,1	62,6	64,8	65	64,1	11,1
21	AC-2010-D33	73,7	69,7	74,1	73,3	72,7	19,7
22	AC-2010-D23	68,2	69,3	65,1	66,2	67,2	14,2
23	AC-2010-D30	64,1	65,3	63,7	60,9	63,5	10,5
24	AC-2010-D45	72,7	71	70,9	72,2	71,7	18,7
25	AC-2010-D21	81,7	79,2	75,3	75	77,8	24,8
26	AC-2012-D28	70,1	69,9	69,1	68,9	69,5	16,5
27	AC-2012-D31	76,3	75,9	76,3	74,3	75,7	22,7
28	AC-2012-D1-8	70,3	68,9	69,3	67,5	69,0	16
29	AC-2012-D14	72,2	71,1	70,3	72,4	71,5	18,5
30	AC-2012-D3	66,2	65,7	65,7	64,4	65,5	12,5
31	AC-2013-D0	79,1	78,7	79,3	78,5	78,9	25,9
32	AC-2013-D33	82,5	80,7	79,9	83,7	81,7	28,7
33	AC-2013-D14	48,1	47,5	47,9	47,7	47,8	-5,2
34	AC-2013-D9	40,1	39,7	39,3	38,9	39,5	-13,5

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35	AC-2013-D3	58,2	57,9	58,1	57	57,8	4,8
36	AC-2014-D7	64,1	62,9	63,9	63,9	63,7	10,7
37	AC-2014-D3	66,2	65,7	66,4	65,3	65,9	12,9
38	AC-2014-D15	41,2	39,9	39,9	41	40,5	-12,5
39	AC-2014-D39	43,9	42,9	43,7	44,3	43,7	-9,3
40	Average	67,2	66,0	67,0	67,0	66,8	13,8
	HCP ₀₅	2,12	1,30	1,73	1,68	1,70	
	S x %	2,70	2,65	1,70	1,81	2,21	

Productivity indicators of varieties and lines in a competitive variety test: model Chillaki variety 53.0 t/ha, Asket variety 68.7 t/ha, the highest indicator was observed in AS-2013-D33 line 81.7 t/ha, AS-2013-D30 line 78.9 t/ha, line KN-5126 78.6 t/ha, line AS-2010-D21 77.8 t/ha, line KN-3884 77.2 t/ha, line AS-2010-D21 77,8 ts/ha, 75.5 ts/ha in KN-3898 line, 75.4 ts/ha in KN-3256 line, and 72.7 ts/ha in AS-2010-D33 line, 72.5 ts/ha in KN-446 line, AS -2012-D-44 line 71.1 ts/ha, KN-5428, KN-3044, KN-5130 lines 70.5-70.6 ts/ha, AS-2010-D22, AS-2012-D11 lines 70.1 ts/ha average yield was obtained. Naturally, among the tested varieties and lines, there were also those with low performance. AS-2013-D9, AS-2014-D15, AS-2014-D39 and AS-2013-D14 lines were 39.5 t/ha, 40.5 t/ha, 43.7 t/ha, and 47, yielded 8 t/ha. When comparing the productivity indicators of the varieties lines studied in the nursery with the model variety, the highest indicator is AS-2013-D33 line 28.7 t/ha, AS-2013-D30 line 25.9 t/ha, KN-5126 line 25.6 t/ha, It was found that additional yield was obtained in KN-3884 line 24.2 t/ha, AS-2010-D21 line 24.8 t/ha, KN-3898 line 22.5 t/ha, KN-3256 line 22.4 t/ha.

In the experiment, the biometric parameters of the lines, which are one of the signs of biological economy in the creation, selection and evaluation of the local variety from the selected lines in the ecologically competitive variety test nursery, were observed as follows.

When the plant height was studied, the model Chillaki and Asket varieties were 70.6-85.0 cm, and in the selected lines it was 114.0 cm in the KN-3044 line, 113.0 cm in the AS-

2012-D-3 line, AS-2010-D-22, AS-2012-D- 34 lines 110.0 cm, AS-2010-D-10, AS-2012-D-44 lines 107.3 cm, AS-2011-D-1 line 106.3 cm, AS-2013-D33 line 106.0 cm, AS-2012-D-12 line 104.0 cm, AS-2012-D3 line 103.0 cm, AS-2015-D-210 line 102.3 cm, AS-2014-D7 line 101.5 cm, AS-2012-D- 1 line 99.3 cm, AS-2014-D39 line 98 cm, KN-5130 line 97.3 cm, AS-2014-D15 line 96.6 cm, AS-2012-D14 and AS-2013-D9 lines 95.0 cm, KN It was 94.6 cm in -446 line (Table 2605 3).

When studying the spike length, the average length was 8.1 cm in Chillaki variety and 9.5 cm in Asket variety. The spike length in the selected lines was 11.3 cm in the KN-3898 line, 11.2 cm in the KN-3884 line, 10.6 cm in the AS-2012-D-44, AS-2012-D-3, AS-2013-D33 lines, AS-2012 -10.5 cm in the D-34 line, 10.3 cm in the AS-2012-D3 line, 10.1 cm in the AS-2015-D-210 line, in the AS-2012-D-1, AS-2010-21, AS-2014-D15 lines 10.0 cm, 9.8 cm in AS-2010-D-34 line, KN-5428, KN-3256, KN-3044, 9.6 cm in AS-2012-D14 lines, KN-5126, AS-2010-D-10, AS-2010 - 9.3 cm in lines D23, AS-2012-D41-8, AS-2014-D3/ AS-2014-D39. organized.

The number of spikes in one spike is 16.6 pcs. in the template variety Chillaki variety, 19.3 pcs. in the Asket variety, 24.6 pcs. - 21 units in 2010-D21, AS-2012-D-3 line, 20.0 units in AS-2013-D33, KN-3044 lines, 19.7 units in AS-2014-D15, AS-2014-39 line, KN-3256 line 19.6 pieces, AS-2013-D23 line 19.5 pieces, KN-3884, AS-2015-D-210, AS-2010-D-22, AS-2012-D-1,



AS-2012-D-34, It was 19.0 units in AS-2010-D45, AS-2012-D14, AS-2014-D7 lines.

The number of grains in one spike is 48.3-43.3 pieces in the sample Chillaki and Asket varieties, 58.0 pieces in the KN-3898 line, 54.0 pieces in the KN-5428 line, 51.3 pieces in the AS-2012-D-1 line, AS-2015-D-210 in the selected varieties and lines. 50.6 units on the line, and 50.0 units on the AS-2012-D-34 line.

The grain weight in one ear is 2.1-1.9 g in standard varieties, 2.6 g in selected varieties and lines, i.e. in AS-2015-D-210 line, 2 in KN-3898, AS-2012-D-1, AS-2012-D-34 lines, 4 gr, AS-2010-D-34, 2.2 gr in AS-2010-D21 line, 2.1 gr in KN-5428, AS-2010-D23, AS-2010-D45, AS-2014-D15 lines, KN-3884, AS-2010-D33, AS-2012-D-41-8, AS-2012-D3, AS-

2013-D30, AS-2013-D33, AS-2013-D23, AS-2014-D3 lines It was 2.0 gr.

The weight of one thousand grains is 43.0-40.5 g in the sample Chillaki and Asket varieties, in the studied varieties and lines AS-2012-D14 line 44.5 g, AS-2015-D-210 line 44.0 g, AS-2012-D3 line 43.8 g, AS-2010-D23 line 43.7 gr, AS-2014-D7, AS-2012-D-1 lines 43.5 gr, AS-2012-D-34 line 43.3 gr, AS-2013-D9, AS-2014-D15 lines 43.0 gr, AS-2010-D-34 line 42.8 gr, KN-5126, AS-2010-D-10 lines 42.6 gr, AS-2010-D33 line 42.5 gr, AS-2013-D14 line 42.3 gr, KN-3044 line 42.2 gr, AS-2010-D30, AS-2012-D41-8, KN-3884, AS-2014-D39 line 42.0 gr, AS-2010-D21, AS-2012-D31 lines 41.5 g, AS-2013-D33, AS-2013-D23, AS-2014-D3 lines 41.2 g, AS-2012-D-3 line 41.9 g, KN-5130 line 41.0 g, .

Table 3
Biometric performance of cultivar and hybrid lines in competitive nursery stock

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No	The name of the variety and lines	Plant height, (cm)	Spike length, (cm)	The number of spikes in one spike, (pieces)	Number of grains in one ear, (grains)	Grain weight in one ear, (g)	Weight of 1000 grains, (g)
1	Chillaki st	70.6	8.1	16.6	48.3	2.1	43.0
2	Ascetic st	85.0	9.5	19.3	43.3	1.9	40.5
3	KH-5130	97.3	8.6	18.3	37.3	1.6	41.0
4	KH-3898	89.3	11.3	24.6	58.0	2.4	38.6
5	KH-5428	88.3	9.6	23.0	54.0	2.1	38.8
6	KH-3256	76.3	9.6	19.6	43.0	1.4	38.1
7	KH-446	94.6	8.6	18.6	37.3	1.6	38.8
8	KH-3884	80.0	11.2	19.0	45.0	2.0	42.0
9	KH-3044	114.0	9.6	20.0	37.6	1.7	42.2



10	KH-5126	77.6	9.3	17.6	46.6	1.9	42.6
11	AC-2010-D-34	92.0	9.8	18.3	45.3	2.2	42.8
12	AC-2015-D21	102.3	10.1	19.0	50.6	2.6	44.0
13	AC-2010-D10	107.3	9.3	9.6	38.3	1.8	42.6
14	AC-2011-D-1	106.3	8.3	18.0	39.3	1.6	39.2
15	AC-2010-D-22	110.0	9.0	19.0	33.3	1.4	38.1
16	AC-2012-D-12	104.0	8.8	17.0	49.3	1.9	40.1
17	AC-2012-D-44	107.3	10.6	17.6	38.6	1.9	40.4
18	AC-2012-D-1	99.3	10.0	19.0	51.3	2.4	43.5
19	AC-2012-D-3	113.0	10.6	21.0	40.6	1.8	41.9
20	AC-2012-D-34	110.0	10.5	19.0	50.0	2.4	43.3
21	AC-2010-D33	89,0	9,0	18,7	42,5	2,0	42,5
22	AC-2010-D23	93,6	9,3	17,3	44,3	2,1	43,7
23	AC-2010-D30	93,3	8,0	18,0	39,7	1,9	42,0
24	AC-2010-D45	85,6	8,5	19,0	42,3	2,1	40,2
25	AC-2010-D21	90,0	10,0	21,7	45,3	2,2	41,5
26	AC-2012-D28	90,0	9,0	17,2	37,8	1,8	40,2
27	AC-2012-D31	85,0	8,3	17,7	41,0	1,9	41,5
28	AC-2012-D41-8	94,6	9,3	18,7	42,3	2,0	42,0
29	AC-2012-D14	95,0	9,6	19,0	45,0	2,2	44,5
30	AC-2012-D3	103,0	10,3	22,7	46,0	2,0	43,8
31	AC-2013-D30	101,3	9,0	18,6	41,4	2,0	43,1
32	AC-2013-D33	106,0	10,6	20,8	39,7	2,0	41,2
33	AC-2013-D14	93,3	9,8	19,0	41,9	1,8	42,3
34	AC-2013-D9	95,0	8,0	17,2	37,0	1,7	43,0
35	AC-2013-D23	83,3	9,5	19,5	43,5	2,0	41,2
36	AC-2014-D7	101,5	9,0	19,0	43,0	1,9	43,5

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37	AC-2014-D3	93,3	9,3	18,3	41,7	2,0	41,2
38	AC-2014-D15	96,6	10,0	19,7	42,5	2,1	43,0
39	AC-2014-D39	98,0	9,3	19,7	41,0	1,9	42,3

The ecologically competitive variety studied for the experiment in the test nursery and the grain technological quality indicators of the hybrid lines were analyzed in laboratory conditions.

The average grain size is 820-830 gr/l in model variety Chillaki and Asket varieties, 834 gr/l in KN-5126 line, 830 gr/l in KN-5428 line, AS-2013-D33 line 823 gr/l in studied variety and hybrid lines. AS-2012-D-3 line 820 gr/l, AS-2010-

D45, AS-2013-D30 line 819 gr/l, AS-2010-D33 line 817 gr/l, AS-2012-D-1 line 815 gr/l, KN-5130 line 814 gr/l, AS-2012-D31 line 813 gr/l, AS-2012-D28 line 811 gr/l, KN-446, KN-3044, AS-2012-D-44 810 g/l, AS-2010-D30 line 806 g/l, KN-3256 line 805 g/l, AS-2010-D-10 line 800 g/l. It was found in the results of the analysis that the grain quality of other studied varieties and hybrid lines is lower than 800 g/l. (Table 4).

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Table 4
Grain technological quality indicators of selected varieties and lines in the competitive variety test

No	The name of the variety and lines	Grain type, (gr)	Transparency (%)	Gluten (%)	Protein content (%)	IDK (%)	Group
1	Chillaki st	850	60,0	28,8	12.5	80	II
2	Ascetic st	836	62,3	27,9	13.9	85	II
3	KH-5130	814	63,9	32,0	14.8	75	I
4	KH-3898	789	62,5	31,8	15.0	75	I
5	KH-5428	830	65,3	35,0	14.7	85	II
6	KH-3256	805	68,1	32,5	14.1	85	II
7	KH-446	810	65,2	30,6	15.0	90	II
8	KH-3884	789	62,5	31,8	14.5	75	I



9	KH-3044	810	65,5	36,0	15.0	95	II
10	KH-5126	808	60,4	33,5	15.2	70	I
11	AC-2010-D-34	790	67,8	28,1	14.1	70	I
12	AC-2015-D21	765	60,5	24,2	12.7	100	II
13	AC-2010-D10	800	65,2	24,8	13.0	80	II
14	AC-2011-D-1	720	67,2	27,0	13.9	75	I
15	AC-2010-D-22	793	60,8	30,5	14.5	80	II
16	AC-2012-D-12	750	59,9	28,7	14.2	85	II
17	AC-2012-D-44	810	64,0	29,2	14.3	95	II
18	AC-2012-D-1	815	71,0	31,2	14.5	80	II
19	AC-2012-D-3	820	63,5	27,8	13.5	80	II
20	AC-2012-D-34	715	48,7	25,5	13.2	115	III
21	AC-2010-D33	817	63,7	30,3	14,3	80	II
22	AC-2010-D23	793	62,7	28,9	14,5	70	I
23	AC-2010-D30	806	63,0	29,2	13,9	75	I
24	AC-2010-D45	819	57,5	31,2	14,3	75	I
25	AC-2010-D21	793	60,8	30,5	14,5	80	II
26	AC-2012-D28	811	63,7	29,3	14,5	95	II
27	AC-2012-D31	813	71,3	31,2	14,5	80	II
28	AC-2012-D41-8	790	67,2	30,1	14,5	75	I
29	AC-2012-D14	745	59,7	28,8	14,2	85	II
30	AC-2012-D3	789	67,3	29,7	14,7	70	I
31	AC-2013-D30	819	58,3	30,7	14,5	75	I
32	AC-2013-D33	823	63,7	27,7	13,5	80	II
33	AC-2013-D14	723	59,7	25,5	13,2	100	II
34	AC-2013-D9	711	49,5	25,1	12,9	105	III
35	AC-2013-D23	767	63,7	29,7	14,5	80	II
36	AC-2014-D7	793	68,2	30,1	14,7	75	I
37	AC-2014-D3	737	63,5	28,1	13,5	95	II



38	AC-2014-D15	712	47,8	25,5	13,2	115	III
39	AC-2014-D39	710	53,9	24,7	13,3	105	III

The grain transparency of varieties and lines in the nursery is 60-62.3% in model Chillaki and Asket varieties, 71% in selected varieties and lines, namely AS-2012-D31, AS-2012-D-1 lines, KN-3256, AS-2014-D7 lines. 68.1%, 67.8% in AS-2010-D-34 line, 67.2% in AS-2011-D-1 line, 65.5% in KN-3044 line, 65.3% in KN-5428 line, KN-446, AS-2010-D -10 lines 65.2%, AS-2012-D-44 line 64%, KN-5130 line 63.9%, AS-2013-D33, AS-2012-D28, AS-2013-D23 line 63.7%, AS -2012-D-3, AS-2014-D3 line was 63.5%, KN-3898, KN-3884, AS-2010-D23 lines were 62.5-62.7%.

The results of the analysis of the amount of gluten in laboratory conditions are 28.8-27.9% in the model Chillaki and Asket varieties, 36.0% in the KN-3044 line, 35.0% in the KN-5428 line, 33.5% in the KN-5126 line, KN-3256 line 32.5%, line KN-5130 32.0%, lines KN-3898, KN-3884 31.8%, lines AS-2012-D-1, AS-2010-D45, AS-2012-D31, lines 31 ,2%, AS-2013-D30 line 30.7%, KN-446 line 30.6%, AS-2010-D21, AS-2010-D-22, AS-2010-D21 lines 30.5%, AS It was 30.3 in -2010-D33 lines. Other hybrid lines studied were found to have less than 30 percent gluten content as a result of laboratory analysis.

IDK indicator results were observed in the studied varieties and hybrid lines as follows. It was observed that 80-85 units belong to the II group in Andoza Chillaki and Asket varieties. Experienced KN-5130, KN3898, KN-3884, AS-2010-D34, AS-2011-D1, AS-2010-D23, AS-2010-D30, AS-2010-D45, AS-2012-D41-8, AS -2012-D3, AS-2013-D30, AS-2014-D7 lines are 70-75 and belong to the I-group strong wheat class. In other studied lines, the IDK index was 80-115 units and it was determined in laboratory conditions that they belonged to the II-III group.

The results of protein analysis in laboratory conditions are 12.5-13.9% in model Chillaki and Asket varieties, 15.2% in KN-5126 line, 15.0% in KN-3898, KN-446, KN-3044 line, 14.8% in KN-5130 line. , 14.7% in lines KN-5428, AS-2014-D7, AS-2012-D3, KN-3884, AS-2010-D22, AS-2012-D1, AS-2010-D23, AS-2010-D21,

AS-2012-D28, AS-2012-D31, AS-2012-D41-8, AS-2013-D30, AS-2013-D23, KN-3898, KN-3884, AS-2010-D-22, AS- It was 14.5% in 2012-D-1 lines, 14.3% in AS-2012-D-44 line, 14.2% in AS-2012-D-12 line. The results of the analysis revealed that the amount of protein in other hybrid lines studied was less than 14 percent.

Conclusion. Based on the results of the conducted experiments, the lines selected from the lines resistant to diseases, external factors, productive and productive in all respects were selected from the lines studied over the years in ecological variety testing. The selected line was named KN-5126 (Aq yor) and submitted to the state variety testing commission.

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