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Creation of High-Yielding Winter Wheat Varieties with High Yield and Grain Quality Suitable for Irrigated Conditions.

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Annotation: One of the most pressing issues today is the creation of varieties and hybrids of winter soft wheat with high grain yields and high quality, suitable for the irrigated conditions of the country, the selection of collection samples for use in the selection process. Therefore, in our research to create new varieties and hybrids of winter soft wheat and to carry out selection work to test them at all stages of the selection process. In order to achieve this goal, hybridization was carried out using varieties and samples of world winter soft wheat, Uzbekistan-25, Navbahor, Yogdu, Aziz varieties of winter wheat were created and the primary seed system was widely introduced into production.

Key words: selection, collection, hybridization, combination, hybrid, yield, 1000 grain weight, biometrics, gluten, protein,gluten deformation index.

Relevance and necessity of the topic. Worldwide, according to the Kleffman Group, in 2019 there will be 218 million. hectares of wheat are grown, more than half of which, or 122 hectares, are accounted for by the world's leading wheat-growing countries. 30 million in India, 27 million in Russia, 26 million in the European Union, 24 million in China and 15 million in the United States. hectares and 7 million hectares in Ukraine, Turkey and Iran. hectares or 3% of the area under wheat in the world.

The highest yields were 6.4 tons per hectare in Egypt, and an average of 5.5-5.9 tons per hectare in China and the European Union.

In terms of productivity, Uzbekistan ranks 4th with 4.9 tons per hectare, followed by Ukraine with 4.1 tons per hectare.

World wheat production in 2019 amounted to 762.2 million tons, grain production increased by 3.9% compared to the previous year and increased by 6.7% compared to 2011.

According to the FAO, the 2020 wheat harvest will reach 758.3 million tons worldwide. tons, which is expected to decrease by 0.5% compared to previous years, which is also higher than in previous years.

Global wheat growth forecasts for 2020, North Africa's Morocco drought conditions in 2020 are expected to have a negative impact on yields, and Algeria and Tunisia are expected to produce better yields than in previous years.

The Southern Hemisphere is expected to produce a good crop of wheat, with 21.4 million tonnes in Australia, 20.3 million tonnes in Argentina and Brazil. tons are expected to be harvested.

[1]https://latifundist.com/rating/top-10-stran-proizvoditelej-pshenitsy-v-2019-godu
[2]https://agrovesti.net/lib/industries/cereals/mirovoe-proizvodstvo-pshenitsy-sostavit-758-3-mln-tonn-v-2020-godu.html

Materials. Meadow soils of the Central Experimental Field of the Grain and Legume Research Institute, world gene pool varieties and samples of winter soft wheat of different ecological and geographical origins, as well as promising winter soft wheat varieties and hybrid populations recommended for sowing in the republic are used. The subject of the study is the hybrid lines, which combine the useful economic characteristics and features of combinations obtained on the basis of hybridization in 2004-205, the growth and yield of winter soft wheat varieties and specimens.

Research methods. During the experiment, phenological observation, field and laboratory analyzes were carried out according to the method of the All-Russian Research Institute of Botany [2]. Biometric analyzes were carried out according to the method of the State Commission for Variety Testing of Agricultural Crops [9]. Statistical analyzes were performed based on the method of B.A. Dospekhov [4]. The stabilization was performed in the Twell method, in determining the degree of superiority (Nr) B.A. Griffing [3] method was used.

RESULT

Hybridization of varieties and samples of winter soft wheat and inheritance of valuable economic traits, characteristics.

Confuseingof autumn cereals is carried out in two simple and complex ways.

Simple confusion- A one-time confusion between two parent forms is called simple confusion. Due to the fact that the process of simple cross-breeding is much easier, in the past of scientific selection is still widely used.

Complex hybridization involves the re-saturation of the obtained hybrid populations with one of the parent plants, involving more than two varieties and specimens.

In the creation of new high-yielding, high-yielding varieties of winter soft wheat, our research was carried out in 4 directions [5, 6] using the method of in-species hybridization of selection, based mainly on individual selection.

In our research, Muchurin's principles of hybridization of selected forms on ecological-geographical origin were widely used, as well as repeated hybridization of newly created young hybrid populations with other high-yielding varieties.

As a result of hybridization, new forms that embody the characters and characteristics of our target have also been selected through individual selection and individual testing. This method has been and continues to be the most basic and effective method in the selection of cereal crops. [7, 8]

In 2004-2005, hybridization of hybrids was carried out between 58 varieties and samples of 58 varieties and samples of winter soft wheat, which differ in ecological and geographical origin, biological characteristics and have valuable economic features and characteristics. simple combination (syncl cross) and complex (top cross) hybridization were performed in 76 combinations. During the mixing process, 5 ears were selected in each variety and specimen, the maternity forms for the combinations were casterated and wrapped (insulated) with specially prepared parchment bags. From April 25 to May 3, hybridization of paternal pollinators of varieties and specimens selected as fathers in hybridization was carried out.

Table 2

Hybridization of autumn soft wheat varieties and samples. 2004-2005

№	Hybridization combination	Number of corns mixed, pcs	Date		The number of mixed ears	The resulting grains,	
			Bud	Dusting		pcs	%
1.	Kroshka x KNIICXUzbekistan-25	5	25.04.05	30.04.05	75	54	72

2	Starshina x CA-99-45-1 Yogdu	5	22.04.04	27.04.04	75	53	70
3	Polovchanka x KNIICX-L53. Navbahor	5	29.04.04	03.05.04	75	55	73
4	Andijan-1 x KNIICX-L99 Aziz	5	29.04.04	03.05.04	75	53	71
5	Mars -1 x Chillaki baraka	5	20.04.04	25.04.04	75	51	68
6	Del - 243 x Kroshka	5	24.04.04	29.04.04	75	51	68
7	Starshina x CA02.-1	5	22.04.04	27.04.04	75	49	65
8	Del – 207 x Polovchanka	5	29.04.04	03.05.04	75	50	67
9	Del -224 France x Yeyka	5	29.04.04	04.05.04	75	45	60
10	Mars x CA02-233-1	5	23.04.04	28.04.04	75	49	65
11	Marc x Tibet	5	23.04.05	28.04.05	75	41	55
12	Mars x Yublennaya	5	25.04.05	30.04.05	75	43	57
13	Del 239 x Palchik	5	25.04.05	30.04.05	75	43	57
14	22-2-30 x 415/15-3	5	20.04.05	25.04.05	75	39	52
15	Del 345 x Yublennaya	5	27.04.05	02.05.05	75	38	51
16	Umanka x CA02-13	5	21.04.05	26.04.05	75	39	52
17	Bobur x 495-91к -3-7-1	5	21.04.05	25.04.05	75	42	56
18	Mars x CA02-131-2	5	20.04.05	25.04.05	75	40	53
19	Mars x Tibet -5	5	20.04.05	25.04.05	75	38	51
20	Mars x 1967-14 б-3	5	20.04.05	25.04.05	75	33	44

The number of hybrid grains obtained as a result of mixing was found to be 33 to 55 grains or 44-73 per cent. The highest grain yield was 73% in Polovchanka x KNIICX-L53 hybrid, 72% in Kroshka x KNIICX hybrid, and 71% in Andijan-1 x KNIICX-L99 hybrid. The lowest yields were found to be 33 grains or 44 percent in the Mars x 1967-14b-3 hybrid, 51 percent in the Mars x Tibet-5 and Del 345 x Yublennayahybrids, and 52 percent in the Umanka x CA02-13 hybrid.

It was observed that the formation of highly hybrid grains depends on the origin of the paternal and maternal forms, the maturity of the pollinator and the seed, the ability of the seed to retain pollen.

Observations were made by placing the hybrid grains formed as a result of mixing in the experimental field in the father-hybrid-mother system for the next year's harvest.

Inheritance of plant neck.

Although the plant height indicator is not one of the morphological features of winter wheat, it is more closely related to the fact that the plant height is inextricably linked with its dormancy resistance indicator.

Although the plant height indicator is not a self-determining factor, but as a result of long-term selection for each soil-climatic conditions, each region forms its own optimal ecotype of plant height. For drought zones, the placement of tall varieties of winter wheat ensures high yields.

The importance of plant height, heredity, and how this trait is passed down from generation to generation have been studied by many scientists.

In our studies, the analysis of plant height transmission from generation to generation shows that this indicator is used in the generation of F_1 hybrids Andijan-1xKNIICX, Del -224 France x Yeyka, 22-2-30 x 415 / 15-3, Mars x CA02-233-1, Bobur x 495-91k -3-7-1, Del 239 x Palpich combinations showed high (*hp = 1.1-2.7*) dominance, high dominance in combinations and partial (*hp = 0.1-1.0*) dominance in hybrids in 13 combinations, 1 Mars- A hybrid negative dominance (*hp = -0.1*) was observed in the 1 x Chillaki combination.

Inheritance of ear length

Ear length. In autumn soft and hard wheat varieties, the ear length indicator is 8 cm in length from the short ear in terms of heredity. The average ear length is 8-10 cm and the long ear length is 10 cm higher.

The length of the ear is an important indicator in the formation of the yield index, the results of numerous studies in a number of publications on the number of ears, the number of grains in the ear and its weight is the main indicator. In the hybrids studied in the hybrid nursery, the ear length ranged from 8.0 cm to 11.0 cm, and F_1 hybrids were observed to show all high daminability (hp = 1.1–5.6). When analyzing the results of this indicator in F2 hybrids, it was observed that high dominance in F_2 hybrids showed high (hp = 1.1-2.4) dominance in 14 combination hybrids and partial dominance (hp = 0.3-1.0) in 6 combination hybrids. According to this indicator, F_3 hybrids did not have high (hp = 1.1) dominance in Andijan-1 x KNIICX -L99 combinations, partial dominance in 11 hybrid combinations (hp = 0.1-1.0) and no dominance in Mars x SA02-233-1 hybrid combination.

4.2.3 Inheritance of the number of grains in a single ear.

In winter wheat, the number of grains per grain is one of the indicators of crop productivity.

In winter wheat varieties, the total grain size depends on the number of productive stalks and the number of grains in the ear. The number of grains per grain is of great importance in wheat selection.

In the field of selection, which focuses on selection-yield and methods of science-based agrotechnologies, it is necessary to study and know the following structural elements, at the expense of which productivity is formed. Plant productivity is characterized by various quantitative characteristics, which in turn are the result of a complex interaction of genotype and environment.

When analyzing the number of grains per ear in our research study, it was observed that in F_1 hybrid offspring, this figure averaged 40.4–43.7, which was higher than that of the parent forms. When this indicator was studied from generation to generation, the hybridization showed high dynamicity (hp = 1.1–3.6) in all combinations. This figure was higher in hybrids of 9 combinations when analyzed for F_2 generation hybrids (hp = 1.1-2.5)

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Table 3

Inheritance of plant height and ear length in F_1 -F_2 -F_3 generations of winter soft wheat (2005-2008)

№	The name of the cross-breds	The form of mothe rhood	The form of father-hood	Plant height, cm						The form of mother hood	The form of father-hood	Ear length, cm					
				F_1	hp	F_2	hp	F_3	hp			F_1	hp	F_2	hp	F_3	hp
1.	♀Kroshkax KNIICX♂, “Uzbeksitan-25”	98,2	87,5	93,3	0,1	90,5	0,4	87,8	-0,9	8,9	7,9	10,1	3,4	9,6	2,4	8,9	1,0
2	♀Starshina x CA-99-45-1♂“Yogdu”	87,9	94,2	92,2	0,4	91,7	0,2	89,5	-0,5	8,2	9,5	10,2	2,1	9,7	1.3	9,2	0,5
3	♀Polovchanka x KNIICX -L53♂. “Navbahor”)	105,1	90,2	99,5	0,3	99,2	0,2	97,7	0,0	9,2	7,8	10,4	2,7	9.8	1,9	9,1	0.8
4	♀ Andijan-1 x KNIICX-L99♂ (Aziz)	102,7	100,5	104,2	2,4	102,0	0,8	100.0	-1.5	9,8	8,2	10,2	2,4	9.8	1.9	9,3	1,1
5	♀Mars-1 x Chillaki ♂ (Baraka)	105,9	89,2	97,5	-0,1	94,2	-0,4	91,0	-0,8	10,2	7,9	11,0	1,7	10,5	1,3	10,0	0,8
6	♀Del - 243 x Kroshka♂	89,5	98,2	95,6	0,3	94,7	0,2	90,0	-0,9	9,6	8,9	10,2	2,7	9,7	1,3	9,0	0,7
7	♀Starshina x CA02-13♂	87,9	97,5	95,8	0,7	93,5	0,2	90,7	-0,4	8,6	9,2	10,2	5,6	9.7	2.7	9,2	1,0
8	♀Del- 207 x Polovchanka♂	100,2	105,1	103,2	0,2	102,1	-0,2	99,7	-1,2	8,3	9,2	10,0	2,8	9,5	1,7	9,1	0,8
9	♀Del-224 x Yeyka♂	88,2	91,2	93,7	2,7	92,9	2,1	92,5	1,8	8,5	8,2	9,0	4,3	8,7	2,3	8,5	1,0
10	♀Mars x CA02-233-	105,9	97,2	107,2	1,3	105,	1,0	103,9	0,5	10,2	8,2	11,	1,1	9,8	0,6	9,2	0,0

	1♂					9						0					
11	♀Mars x Tibet♂	105,9	86,7	96,8	0,1	95,7	-0,1	94,9	-0,2	10,2	7,9	11,2	1,9	10,0	0,8	9,3	-0,4
12	♀Mars x Yublennaya♂	105,7	95,7	105,1	0,9	103,7	0,6	100,7	0,0	10,2	8,7	11,2	2,7	10,7	1,7	9,7	0,3
13	♀Del 239 x Palchik♂	95,7	87,9	96,2	1,1	95,4	0,9	94,5	0,7	9,2	8,2	10,2	3,0	9,2	1,0	9,0	0,6
14	♀22-2-30 x 415/15-3 ♂	95,2	90,2	95,3	2,4	93,2	1,0	91,7	0,0	10,3	9,9	10,8	3,5	10,5	2.0	10.0	-0,5
15	♀Del 345 x Yublennaya♂	93,2	95,7	94,7	0,2	93,5	-0,8	90,5	-3,2	9,7	8,7	10,9	3,4	9,5	0,6	9,1	-0,2
16	♀Umanka x CA02-13 ♂	102,3	97,5	100,2	0,1	101,5	0,7	98,9	-0,4	9,5	10,2	11,0	3,2	10,4	1,6	9,8	-0,1
17	♀Bobur x 495-91к -3-7-1♂	98,9	100,2	100,2	1,0	99,7	0,2	98,9	-1,0	10,7	9,2	11,0	1,4	10,5	0,7	10,0	0,1
18	♀Mars x CA02-131-2 ♂	105,9	97,2	103,5	0,5	100,9	-0,2	99,9	-0,4	10,2	9,7	10,9	3,8	10,0	0,2	9,7	-1,0
19	♀Mars x Tibet -5 ♂	105,9	85,1	104,5	0,9	100,7	0,5	100,0	0,4	10,2	8,0	11,0	1,7	10,2	1,6	9,9	0,7
20	♀Mars x 1967-14 б-3 ♂	105,9	90,1	100,5	0,3	99,7	0,2	98,9	0,1	10,2	8,7	11,0	2,9	10,5	1,1	9,5	0,1

dominance and partial (*hp = 0.3–1.0*) dominance was observed in 11 combinations. Decreases were observed in F_3 hybrids, with high (*hp = 2.0*) dominance in 1 Kroshkax KNIICXhybrid, no dominance *(hp = 0.0*) in 2 Mars x Tibetan and Del345 x Yublennaya combinations, and partial (*hp =) in 10 combinations. 0.1-1.0*) dominance and negative (*hp = -0.1-1.0*) dominance was observed in 7 combinations.

Inheritance of 1000 grain weight index

In creating high-yielding varieties of winter wheat, it is important to ensure that the main elements that determine the yield, namely the number of productive stalks per unit area, the number of grains per grain, grain weight per grain and the weight of 1000 grains, are optimal.

The yield index of a plant is one of the main characteristic features of this variety and is an indicator of the variety that is most important in selection work. This in turn is determined by different quantitative characteristics that are the result of complex interactions between the genotype and the external environment, i.e., ear length, number of grains per ear, number of grains per ear, and grain weight per 1000 grains. [4] In the winter durum wheat varieties, the 1000 grain weight index is a highly variable character trait, ranging from 26–56 g. can be in the range of.

Based on the above, our study also carried out analyzes of the inheritance of 1000 grain weight of newly created hybrids.

The results of the analysis show that in the newly created hybrids, this figure is 41-44 g in the F1 joint hybrids. found to exhibit dominance over parental forms in all F_1 hybrids. Especially Andijan-1 x KNIICX-L99. (Aziz), Umanka x SA02-13, Del - 243 x Kroshka, Kroshkax KNIICX, “Uzbekistan-25”, Polovchanka x KNIICX-L53. Navbahor), Del 345 x Yublennaya, Mars x SA02-233-1, Starshina x CA-99-45-1 showed high dominance (*hp-2.7-5.6*) in the “Yogdu” crossbreed combinations. When studied in F_2 generation on this indicator, it was found that 4 hybrids showed high, 2 dominant, and 12 showed partial dominance. High-density (*hp = 2.0-2.6*) dominance in hybrids of 1000 grain weight F3 hybrids Kroshkax KNIICX, Starshina x CA-99-45-1 Polovchanka x KNIICX, Del-243 x Kroshka combinations, F_3 hybrids partially (0.2) in 6 generations. -1.0) dominance, negative domination in 7 (*hp = -0.1-1.0*) and dominance in 3 combinations (*hp = 0.0*).

Results of a study of newly created hybrid populations of winter wheat in a controlled seed-plot

In this seed-plot, 17 hybrid populations were planted between 2011 and 2013, with an average plant height of 77.5–98.6 cm in hybrids, and most of the newly created hybrids exhibited semi-stunted characteristics. The average length of the ear is 7.0-8.6 cm, the highest in experimental varieties Krasnodarskaya-99, Sa-99-82, Ac-2000-148-2 and hybrids 8.0-8.6 cm. In hybrids AC-2005-62 (Uzbekistan-25), AC-2004D48 (Navbahor), AC-2004D33 (Yogdu) this figure is 8.1-8.3 cm. formed. The number of grains per head was 36.6-43.6, the highest rate was 43.6 in AC-2004D14 hybrids, and AC-2005D62 (Uzbekistan-25), AC-2004D33 (Navbahor), AC-2004D33 (Yogdu). 40.3-43.4 units. When the new lines in the test were analyzed for 1000 grain weight, this figure averaged 38.1-44.3 grams. The highest performance was in the hybrids SA-99-82, AC-2004-62 (Uzbekistan-25), AC-2004D33 (Yogdu), AC-2004D48 (Navbahor) 42.1-43.3 gr.

When analyzing the yield of hybrids studied in the seed-plot, the average yield was 62 quintals per hectare for the controlled Chillaki variety, 70.9 quintals per hectare for the Krasnodar-99 variety, with the highest yields AS-2005-62 (Uzbekistan-25), AC-2004D48 (Navbahor), AC-2004D33) hybrids yielded 75.3, 74.9, 74.0 quintals, respectively, or 4.2-13.3 quintals per hectare higher than the average for control varieties. (Table 6)

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Number of grains per ear and inheritance of 1000 grain weight in F_1 -F_2 -F_3 generations of winter soft wheat (2005-2008)

№	The name of the cross-breds	The form of mothe rhood	The form of father-hood	Number of grains per ear, pcs						The form of mother -hood	The form of father-hood	1000 grain weight, gr					
				F_1	hp	F_2	hp	F_3	hp			F_1	hp	F_2	hp	F_3	hp
1.	♀Kroshkax KNIICX♂, “Uzbeksitan-25”	40,0	38,0	42,0	3,0	41,2	2,2	41,0	2,0	40,2	41,2	42,7	4,0	42,5	3,6	42,0	2,6
2	♀Starshina x CA-99-45-1♂“Yogdu”	41,7	42,6	43,0	1,9	42,8	1,4	42,5	0,8	40,2	41,7	43,6	2,7	42,9	2,6	42,5	2,1
3	♀Polovchanka x KNIICX -L53♂. “Navbahor”)	40,8	42,5	43,3	2,0	42,9	1,5	42,5	1,0	41,4	40,2	43,2	4,0	42,2	2,8	42,0	2,0
4	♀ Andijan-1 x KNIICX-L99♂ (Aziz)	41,5	40,3	42,2	2.1	41,8	1.5	41,3	0,7	40,7	41,0	41,7	5,6	41,5	4,3	41,0	1,0
5	♀Mars-1 x Chillaki ♂ (Baraka)	42,5	40,2	42,9	1,4	42,2	0,7	41,7	0,3	42,1	40,2	42,5	1,4	41,9	0,8	41,5	0,4
6	♀Del - 243 x Kroshka♂	40,7	40,0	41,6	3,6	41,0	1,9	40,6	0,7	39,7	40,2	41,0	4,2	40,8	1,4	40,5	2,2
7	♀Starshina x CA02-13♂	41,7	40,5	42,4	2,2	41,6	0,8	40,8	-0,5	40,2	43,2	44,7	2,0	43,0	0,9	41,7	0,0
8	♀Del- 207 x Polovchanka♂	41,7	40,8	42,3	2,3	41,7	1,0	41,1	0,1	40,5	41,4	42,0	2,2	41,2	0,6	40,9	-0,1

9	♀Del-224 x Yeyka♂	39,3	41,2	42,6	2,5	41,5	1,3	40,6	0,4	39,7	42,2	43,2	1,8	41,8	0,7	40,9	-0,1
10	♀Mars x CA02-233-1♂	42,5	40,5	43,0	1,5	42,2	0,7	41,5	0,0	42,1	41,5	42,9	3,7	42,0	0,7	41,5	-1,0
11	♀Mars x Tibet♂	42,5	41,2	43,2	2,1	42,1	0,9	41,3	-0,9	42,1	38,2	42,6	1.9	41,9	0.9	40,1	-0,1
12	♀Mars x Yublennaya♂	42,5	39,7	43,0	1,4	42,2	0,8	41,2	0,1	42,1	40,2	42,5	1,4	41,7	0.6	41,4	0.3
13	♀Del 239 x Palchik♂	40,7	40,2	41,0	2,2	40,8	1,4	40,4	-0,2	40,1	41,7	42,9	2,5	41,9	1.3	40,9	0,0
14	♀22-2-30 x 415/15-3 ♂	39,7	40,2	40,4	1,8	40,2	1,0	40,1	0,6	41,7	39,7	42,2	1,5	41,1	0,4	40,5	-0.2
15	♀Del 345 x Yublennaya♂	40,3	39,7	40,8	2,7	40,4	1,3	40,0	0,0	41,0	40,2	41,9	3.9	41,0	1,0	40,7	0,3
16	♀Umanka x CA02-13 ♂	40,7	41,0	41,6	1,9	41,1	1,0	40,3	-0,1	43,7	43,2	44,7	5,0	43,2	-1,0	42,9	0,0
17	♀Bobur x 495-91к -3-7-1♂	41,5	40,9	42,0	2,7	41,7	1,7	41,0	-0,5	42,7	39,5	45,2	2.6	42,1	0.6	41,1	1,0
18	♀Mars x CA02-131-2 ♂	42,5	40,5	43,0	1,5	42,7	1,0	41,7	0,2	42,1	39,5	44,5	2.9	42,0	0.9	41,1	0.2
19	♀Mars x Tibet -5 ♂	42,5	41,2	42,7	1,3	42,1	0,4	41,4	-0,7	42,1	39,5	43,2	3,5	41,2	0.3	40,3	-0.4
20	♀Mars x 1967-14 б-3 ♂	42,5	39,7	42,7	1,1	41,5	0,3	40,6	-0,4	42,1	40,2	43,7	2.7	41,2	0,5	40,5	-0,7

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Table 6

Biometric data of cultivar samples studied in the control seed-plot. (2011-2013)

№	Variety and line name	Plant height. sm	Ear length sm	The number of ears in 1 ear. psc	The number of grains in 1 ear. psc	Grain weight per 1 ear. gramm	Grain weight per 1000 ear. gramm	Yield ts / ga
1	2	3	4	5	6	7	8	9
1	Chillakist	80.8	7.5	16.0	40.0	1.7	**41.6**	62,0
2	Krasnodar99 st	98.6	8.6	17.0	43.0	1.8	42.5	70,9
3	CA-99-82	90.5	8.3	17.5	39.2	1.6	44.3	68,1
4	CA-99-110	86.5	8.5	16.0	38.4	1.7	41,8	63,5
5	CA-99-87	86.0	7.6	18.0	38.3	1.7	42,1	63,5
6	Ac-2000-148-2	90.0	8.0	19.0	38.0	1.7	42,5	69,2
7	Ac-2000-163-10	85.0	8.0	19.0	40.0	1.7	38.1	60,7
8	Ac-2000-135-3	85.0	7.5	17.0	39.0	1.6	39.6	62,0
9	Ac 2000-134-3	85.0	7.0	19.0	39.1	1.7	40.0	66,3
10	Ac-2004-81	81.5	7.6	19.0	39.0	1.7	42.5	62,9
11	Ac 2004-88	84.0	8.0	18.0	40.0	1.6	40.0	61,6
12	Ac 2005C62 (Uzbekistan-25)	85.7	8.1	17.1	40.3	1.7	43.3	75,3
13	AC-2004Д 35	86.5	8.0	18.3	41.6	1.9	39.5	63,3
14	AC-2004Д 11	80.0	7.4	17.0	36.6	1.6	40.1	61,9
15	AC-2004Д 14	79.3	8.0	17.3	43.6	1.8	40.0	61,6
16	AC-2004Д48 **(Navbahor)**	88.6	8.2	18.5	42.0	1.8	42.1	74,9
17	AC-2004Д33 **(Yogdu)**	87.5	8.3	18.0	43.4	1.8	42.5	74,0

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Table 7

Technological quality indicators of grain of varieties and stripes on the controlled seed plot. (2011-2013)

№	Variety and line name	Grain natura, g/l	Transparency, percent	The amount of gluten, %	Grain natura	Groups
1	**2**	**3**	**4**	**6**	**7**	**8**
1	Chillakist	820	61,0	30.0	85,0	II
2	Krasnodar99 st	755	58.4	28.5	80.0	II
3	CA-99-82	815	50.0	30.0	82.5	II
4	CA-99-110	825	52.0	34.0	105.0	III
5	CA-99-87	810	65,0	32,3	80.0	II
6	Ac-2000-148-2	803	60,2	35,0	100.0	III
7	Ac-2000-163-10	750	50.0	28.3	100.0	II
8	Ac-2000-135-3	815	50.0	30.0	90.0	II
9	Ac 2000-134-3	785	50.0	28.0	100.0	II
10	Ac-2004-81	815	64.5	26.3	112.0	III
11	Ac 2004-88	820	60.0	28.5	107.5	III
12	Ac 2005C62 (Uzbekistan-25)	848	60.0	30.0	73.8	I
13	AC-2004D 35	80.3	65.0	30.0	110.0	III
14	AC-2004D 11	835	50.0	28.0	90.0	II
15	AC-2004D14	815	60.0	28.0	95.0	II
16	AC-2004D48 **(Navbahor)**	840	51,5	30,0	75,0	1
17	AC-2004D33 **(Yogdu)**	830	57,5	30.5	75,0	1

When analyzing the non-specificity of newly created hybrids, ie technological quality indicators of grain, the average grain yield in the studied hybrids was in the range of 750-848 g.l., in the control Chillaki variety 820 g.l. formed. The highest values are 840-848 g.l. identified in the nursery hybrids AC-2004D33 (Yogdu), AC-2004D48 (Navbahor), AC-2004-62 (Uzbekistan-25). Grain transparency averaged 50-65% in cultivars and hybrids, while in control cultivars the figure was 58.4-61.0%, with high transparency in the nursery being 65% in SA-99-87 hybrid, 64.5% in AC-2004-81 hybrid, AC-2004D- It was 62% in 61 hybrids, 60% in AC-2004-62 (Uzbekistan-25), 57.5% in AC-2004D33 (Yogdu) and 51.5% in AC-2004D48 (Navbahor). Analyzes of gluten content show that this figure averages 25.5–35% in the test hybrids, with the highest rate of 32.5–35% SA-99–87, AC-2000–124–16, AC-2000–148–2, AC-2000. -124-3, AC-2004D25, SA-99-82, AC-2004D62 (Uzbekistan-25), AC-2004D33 (Oil), AC-2004D48 (Navbahor), and 30-30.5%. The IDK index was 73.8-110 units on the lines and was determined in the hybrids of gluten quality group 1 in hybrids AC-2004D48, AS-2005-62, AC-2004D33. The hybrids AC-2004D11, AC-2004D14, AC-2000-134-3, AS2000-163-10 studied in the nursery belonged to group II, and other hybrids in the nursery belonged to group III. (Table 7)

Conclusion

Based on the study of varieties and samples of the world gene pool of autumn soft wheat, Russia, France, China, which have high yields and high technological quality of grain, are middle-ripe. was of great importance in the creation.

1. It was determined that the samples of winter soft wheat, mainly from Russia, France, China, can be used as primary materials in the selection process by selecting varieties and samples that give a higher and higher quality grain yield than the standard variety.

2. Intergenerational transmission of plant height in newly created hybrids in F_1 joint Andijan-1x KNIICX, Del-224 France x Yeyka, 22-2-30 x 415 / 15-3, Mars x CA02-233-1, Bobur x 495-91k -3-7-1, Del239 x high (hp = 1.1-2.7) dominance in Palchik combinations and partial (hp = 0.1-1.0) dominance in hybrids in 13 combinations and negative dominance in Mars-1 x Chillaki combinations (hp = -0.1) was observed.

3. In hybrids, the ear length ranged from 8.0 cm to 11.0 cm, with high dominance in all F_1 hybrids (hp = 1.1-5.6), high dominance in F_2 hybrids in 14 combinations (hp = 1.1-2.4), and partial dominance in 6 combinations. (hp = 0.3-

1.0), F_3 | high (hp = 1.1) dominance in Andijan-1 x KNIICX -L99 combinations, partial dominance in 11 hybrid combinations (hp = 0.1-1.0) and dominance in Mars-1 x CA02-233-1 hybrid combination were not observed.

4. It was found that the number of grains per single ear in newly created hybrids was 40.4-43.7 in F_1 hybrid offspring, which was higher than the parent forms in this respect.

5. According to the results of the experiment, the intergenerational transmission of 1000 grain weight index was confirmed to be effective in F_1, F_2, F_3 generations.

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