

HIGH KERNEL QUALITY OF VARIETY AND LINES OF DURUM WHEAT

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Annotation. In the article wrote quality indices of the 14 variety and lines of durum wheat studied in advanced yield trial of experimental field of irrigated areas of Scientific Research Institute for Rainfed Agriculture.

Key words. Durum wheat, variety, lines, vitreous, protein, gluten, IDK.

Durum wheat is one of the most important grain crops, with 38.1 million tons of durum wheat grown on more than 17 million hectares in the world. Canada (5.2 million/t), Italy (4.3 million/t), Turkey (3.7 million/t), USA (2.3 million/t), Kazakhstan (2.2 million/t), Syria (2.2 million/t), Algeria (2.2 million/t), France (1.9 million/t), Morocco (1.8 million/t), Greece (1.1 million/t), Spain (1.0 million/t), Tunisia (1.0 million/t) [1].

The demand for durum wheat has been unmet for several years In Uzbekistan

The creation of yielding and high-quality varieties of durum wheat that meet the requirements of the state standard remains a pressing issue.

Results of analysis. In the irrigated experimental field of Scientific Research Institute for Rainfed Agriculture in 2019-2021, 14 varieties of durum wheat, The following results were obtained when studying the grain quality indicators of vitreous, total protein, gluten and IDK.

Schedula №1

Quality indicators of variety and lines of durum wheat.

№	Name of variety	Kernel vitreous, %	Protein quantity, %	Gluten quantity, %
1	Макуз-3	83,1	15,8	30,1
2	Мингчинор	85,8	16,8	32,4
3	Истикболли	85,1	17,4	31,4
4	№299	88,9	17,4	30,7
5	№ 576	76,6	14,9	29,0
6	№ 586	85,3	15,7	26,8
7	2012/7	91,5	17,7	33,8
8	2012/77	81,2	15,8	30,2
9	Azeghar-3	80,2	13,9	25,8
10	Mikki-3	78,1	14,5	26,9
11	ICAMOR TA-04	86,4	14,9	26,7
12	Курант	94,1	17,8	33,5
13	Агат Донск	88,6	18,0	33,9
14	Кристелла	92,0	17,9	33,7

The protein content of vitreous durum wheat is high in non-vitreous grains [2; 19-32- pp.]. Durum wheat varieties are divided into 3 groups according to grain vitreous: 1) low - less than 80%; 2) average - 81-95%; 3) high - more than 95%. In the 2019-2021 research years, the grain vitreousness was 76.6-94.1% of durum wheat varieties studied in advanced yield trial. The results of the experiment has not reveal the presence of varieties and ridges with high vitality of the grain vitreous. The lowest rated varieties and ridges were 3, and the average rated varieties and lines were 11.

Protein is an important indicator in assessing the quality of wheat grain. [3; 597-604-pp.]. The total protein content of durum wheat is also divided into 3 groups: 1) low – less than 12 %; 2) medium – 12-15 %; 3) high – more than 15 %. The total protein content in the grain content of durum wheat varieties and lines studied in

the advanced yield trial was 13.9-18%. When the results of the study are evaluated by the total protein content of the grain 4 varieties and lines with middle protein content, 10 varieties high protein content.

The amount of gluten is divided into 5 groups (very low - less than 16%; 2) low - 16-24%; 3) medium – 24,1-32%; 4) high – 32,1-40%; 5) very high - more than 44%). 4 varieties and lines with low gluten content, 10 varieties and lines with medium gluten content.

The IDK of 14 varieties and lines studied in the competitive test field was 63,6-91,8%. According to the IDK, 6 varieties and ridges belong to the I class, and 8 varieties and ridges to the II class.

Conclusion. According to the results of research conducted in the advanced yield trial varieties of durum wheat for irrigated areas in 2019-2021, evaluated on the quality of 14 varieties and ridges Mingchinor, 2012/7, 2012/77, Kurant, Agat Donsk, Kristella varieties and lines as well as higher than other varieties and than standard «Makuz-3».

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