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EFFECT OF PLANTING TIMES ON GRAIN QUALITY INDICATORS OF WINTER WHEAT

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Abstract: This article contains information on how to increase the quality of grain by correctly determining the planting dates of winter wheat varieties, what parameters grain quality depends on. As the object of the study, imported varieties of autumn soft wheat (*Triticum aestivum* L) "Alekseich", "Vekha", "Gurt" and local varieties "Aziz", "Navbakhor", "Uzbekistan-25" were taken. As a result of the research, it was found appropriate to plant winter wheat in October in order to achieve high grain yield from local and foreign varieties.

Keywords: winter wheat, variety, planting time, grain, grain quality, protein, transparency, elongation deformation of gluten, grain nature.

Introduction: It is important to grow quality products from winter wheat grains. Quality indicators of grain depend on indicators such as nature of grain, transparency, protein and gluten content, respectively. For example, grain type determines its weight and density and affects quality. According to the accepted classification, the nature of wheat grain is 785 g/l. if greater than, 745-785 g/l. medium natural and 745 g/l. less than is called low natural wheat. One of the main technological quality indicators of grain is its transparency. The transparency of the grain depends on the amount of starch grains. It has been found in studies that starch is in the range of 61.5–83.0%. Usually, the degree of transparency of wheat grain is divided into the following groups: up to 40%, 40-60% and more than 60%.

One of the important indicators determining the quality of cereal is its protein content. The amount of protein depends on the biological characteristics of winter wheat varieties and external factors, including the time of planting. This can also be seen from the research results.

The quality of gluten is characterized by its color, elasticity and elasticity. Gluten indicator is important in the production of quality bread. The gluten content of flour products is as follows: high grade-28%; extra-28%; 1st grade-30%; 2nd - 25%; Nutritious-20% are divided into groups.

Literature review. Addition of dry wheat gluten (DWG) to wheat grains with low gluten quantity and quality improves the physical properties of the dough made from weak flour to the level of strong dough. The addition of more than 4% of DWG does not improve the baking properties of the flour. Therefore, it is recommended to add 3-4% DWG to baking flour. As a result of adding DWG in the amount of 3-4%, the quality of gluten can be transferred from the III-unsatisfactory weak group to the II-unsatisfactory group. [1].

The technological quality indicators of winter wheat grain are among the characteristics that are most needed in selection work. Protein and gluten contained in grain are considered to be one of the main indicators of grain quality, and genotype and environment significantly influence its composition [2].

Marinciu C., Saulescu N.N. found in their experiments that the protein content of wheat grain is the main factor in baking bread, and the high protein content is related to the good quality of the bread. Protein content of wheat is genetically controlled and proved to have strong variability depending on wheat variety, growing conditions, soil fertility and other factors [3].

Research results. When we analyzed the experimental results obtained based on the above classifications, in the Gurt variety planted on September 15, the grain quality was 800 g/l, the grain transparency was 55.9%, the protein content was 13.8%, the gluten content was 26.8%, and the elongation deformation of gluten was 103 IDG. In the variant planted on October 1, grain quality is 800 g/l, grain transparency is 55.4%, protein content is 14.3%, gluten content is 27.8%, the elongation deformation of gluten is 75.4 IDG, in the variant planted on October 15, the grain quality is 790 gr /l, grain transparency 57.0%, protein content 14.2%, gluten content 28.1%, gluten elongation deformation 74.9 IDG, grain quality in the

variant planted in the 1st seed 765 gr/l, grain transparency 52.9%, protein amount was 14.0%, gluten content was 26.4%, the elongation deformation of gluten was 105.5 IDG. In the Uzbekistan-25 variety, grain quality is 810 g/l, grain transparency is 55.9%, protein content is 14.1%, gluten content is 26.5%, and the elongation deformation of gluten is 85.6 IDG in the variant planted on October 1. grain quality 810 gr/l, grain transparency 60.5%, protein content 14.3%, gluten content 28.2%, gluten elongation 82.9 IDG, grain quality 820 gr/l, grain transparency in the variant planted on October 15 60.5%, protein content 14.2%, gluten content 29.2%, elongation deformation of gluten 75.4 IDG, grain quality 760 gr/l in the variant planted in the 1st row, grain transparency 53.9%, protein content 13, 8%, gluten content 27.7%, gluten elongation deformation 85.9 IDG.

Grains belonging to the 1st group were harvested in variants planted on October 1-15 in Gurt and Vekha varieties, and in variants planted on October 15 in Uzbekiston-25, Navbakhor, Aziz varieties.

Conclusion.

Based on the obtained results, foreign introduction for growing quality grain from winter wheat Alekseich, Vekha. It is recommended to plant the varieties Uzbekistan-25, Navbakhor, Aziz are created in local conditions on October from 1 to 15.

Table 1

The effect of planting times on grain technological quality indicators of winter wheat varieties (2022)

Varietal name	Planting times	The nature of the grain, g/l	Transparency, %	The amount of protein, %	The amount of gluten, %	Indicators of IDG	Group
Alekseich	15.09.	810	55,4	14,1	28,5	82,4	2
	01.10.	820	65,5	14,2	30,8	77,9	2
	15.10.	830	65,5	14,2	32,8	77,9	2
	01.11.	760	55,4	13,9	26,4	80,9	2
Gurt	15.09.	800	55,9	13,8	26,8	103	3
	01.10.	800	55,4	14,3	27,8	75,4	1
	15.10.	790	57,0	14,2	28,1	74,9	1
	01.11.	765	52,9	14,0	26,4	105,5	3
Vekha	15.09.	800	69,4	14,1	27,5	85,4	2
	01.10.	825	70,0	14,2	29,0	74,8	1
	15.10.	830	69,5	14,2	30,6	74,9	1
	01.11.	760	53,4	13,9	26,9	84,6	2
Uzbekistan-25	15.09.	810	55,9	14,1	26,5	85,6	2
	01.10.	810	60,5	14,3	28,2	82,9	2
	15.10.	820	60,5	14,2	29,2	75,4	1
	01.11.	760	53,9	13,8	27,7	85,9	2
Navbakhor	15.09.	810	52,9	14,2	28,0	85,4	2
	01.10.	830	65,5	14,3	29,3	77,9	2
	15.10.	830	65,5	14,2	29,3	74,8	1
	01.11.	790	50,4	13,8	26,9	100,5	3
Aziz	15.09.	815	54,9	14,3	27,5	85,4	2
	01.10.	815	65,5	14,3	29,5	77,9	2
	15.10.	820	66,0	14,2	32,6	75,4	1
	01.11.	810	58,4	14,0	27,4	85,6	2

LIST OF USED LITERATURE

- 1.** Khakimov Sh.Z., Turgunpolatova Sh.M.. "Increasing the flour properties of local wheat grains". Prospects for the maintenance of grain, leguminous, oilseed, food crops with high yield and quality, resistant to global climate changes, Proceedings of the international scientific and practical conference, May 13, 2022, 106 pages.
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