
**CHANGES IN THE NATURE OF THE GRAIN UNDER THE INFLUENCE OF THE HARVESTING PERIOD
BASED ON SOILCLIMATIC CONDITIONS AND MOISTURE CONTENT OF THE GRAIN**

BY

**ISHANKULOVA GAVKHAR NORKULOVNA
ASSOCIATE PROFESSOR
KARSHI INSTITUTE OF ENGINEERING AND ECONOMICS**

ABSTRACT

In recent years, consistent reforms have been implemented in our country to increase the yield and technological quality indicators of soft winter wheat varieties under different soil and climate conditions. Diversification of production in the development of agriculture in our republic, improvement of land and water relations, creation of a favorable agribusiness environment and a high added value chain, support for the development of cooperative relations, wide introduction of market mechanisms, information and communication technologies in the field, as well as scientific achievements "Effective use" is important for research on the development of agro-measures to increase and maintain the productivity of wheat varieties and improve quality indicators.

KEYWORDS: Wheat, Grain Type, Harvest Time, Variety, Desert Region, Sub-Desert Region, Mountain Region

Grain type is one of the characteristics underlying the classification of wheat grain in all countries. For soft wheat, its minimum value is at least 750 g/l for the first and second classes, and 710 g/l for the third and fourth classes (Muqimov et al., 2022). Wheat productivity and quality indicators play a decisive role in the formation and operation of the food safety system. "Wheat occupies the largest part of cultivated land in the world (about 14%) and the main share in world food trade. World food markets remain fairly stable after record harvests in recent years, including cereal crops (wheat, corn) (Tangirov, 2022). The growth of wheat production increased from 699.0 million tons in 2012 to 760.1 million tons in 2020, which is an increase of 8.8 percent (61.1 million tons). The main part of grain production is occupied by the countries of the European Union (about 20% of the world production), of which 50% of the production falls on Germany and France. It is followed by Spain and Great Britain with a share of 10-12 percent each. The second world grain producer is China, its share of the world market is about 18%, and the average annual production is 129.7 million tons. India accounts for about 13% of the global market with a 22% increase in production over the last 10 years (or 228 million tonnes)". One of the urgent issues is the creation of technologies for harvesting wheat grain based on these indicators.

Table 1: Changes in the nature of grain due to climatic conditions and the effect of harvesting on the basis of grain moisture (2010-2012)

No	Harvest times according to grain moisture	Name of varieties	Grain type, g/l		
			Desert area	Pre-desert region	Mountainous area
1	Harvesting in the 1st term, grain moisture 20-22%	Yaksart	744.2	769.2	778.4
2		Krasnodarskaya-99	766.6	776.9	790.5
3		Selyanka	766.6	778.9	791.1
4		Ghazgon	762.3	772.9	794.2
5		Turkestan	760.9	771.8	790.5
6	Harvesting in the 2nd term, grain moisture 14-16%	Yaksart	760.4	799.6	800.4
7		Krasnodarskaya-99	786.4	793.5	797.9
8		Selyanka	777.4	785.4	797.7
9		Ghazgon	782.2	790.9	803
10		Turkestan	777.4	783.3	801.2
11	Harvesting in the 3rd term, grain moisture 10-12%	Yaksart	753.9	783.3	790.4
12		Krasnodarskaya-99	776.6	780.4	793.6
13		Selyanka	756.9	780.7	796.2
14		Ghazgon	774.4	779.1	798.7
15		Turkestan	765.5	778.8	796.8
16	Harvesting in the 4th term, grain moisture 8-9%	Yaksart	750.7	779.5	788.5
17		Krasnodarskaya-99	771.3	777.7	792.1
18		Selyanka	752.6	780	794.3
19		Ghazgon	771.2	776.8	797.6
20		Turkestan	763.4	775.3	794.2

In our research, it was observed that the nature of grain changes under the influence of climatic conditions and harvesting period (see Table 1). In the Kasbi district, the grain content of the varieties in the 1st period of harvesting was 744.2-766.6 g/l, the lowest value was observed in the Yaksart variety (744.2 g/l), the highest value was observed in the Krasnodarskaya-99 and Selyanka varieties (766.6 g/l) it was observed that the highest grain quality (760.4-786.4 g/l) of autumn soft wheat varieties was harvested in the 2nd period, and it was reflected in the full ripening of the grain. This indicator was found to be 16.2-19.8 g/l higher than the harvest in the 1st period. In the 3rd period, grain quality (753.9-776.6 g/l) was found to be lower compared to the 1st and 2nd periods. Also, it was determined that grain quality (750.7-771.3 g/l) was low in the 4th period. In Karshi district, the grain content of the varieties in the 1st period of harvesting was 769.2-778.9 g/l, the lowest indicator was observed in the Yaksart variety (769.2 g/l), the highest indicator was observed in the Selyanka variety (778.9 g/l). observed. Increase in grain quality of autumn soft wheat varieties at harvest in the 2nd period, when analyzed in the section of varieties, the lowest is 783.3 g/l in the Turkestan variety (11.5 g/l higher than the harvest in the 1st period), the highest is 799.6 g in the Yaksart variety /l (30.4 g/l higher than the harvest in the 1st term) was determined at full ripening of the grain. The grain quality (788.8-783.3 g/l) in the 3rd term harvest is lower than the

1st and 2nd harvests, and the grain quality (775.3-780.0 g/l) is also low in the 4th term harvest. determined to be.

In Shahrizabz district, in the 1st harvest, the grain content of the varieties was 778.4-794.2 g/l, the lowest value was observed in the Yaksart variety, and the highest value was observed in the Gozgon variety. The increase in the grain quality of the varieties in the harvest of the 2nd term, that is, the lowest Selyanka variety was 797.7 g/l (6.6 g/l higher than the 1st harvest), the highest was 803.0 g/l in the Gozgon variety (1st term 8.8 g/l higher compared to harvest) was determined at full ripening of the grain. In the harvest of the 3rd term, the grain quality (790.4-798.7g/l) is lower than in the 1st and 2nd harvests, and the grain quality (788.5-797.6 g/l) is also low in the 4th harvest.

To sum up, the nature of winter wheat grain is a variable size under the influence of the natural soil-climate conditions of the cultivated area and the time of harvest based on the moisture content of the grain. When analyzed according to the harvest period, it was found that the highest rate is in the 2nd harvest period, that is, when the grain is fully ripe.

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