



## QUALITY INDICATORS OF WHEAT VARIETIES

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<https://doi.org/10.5281/zenodo.10893312>

### ARTICLE INFO

Received: 23<sup>th</sup> March 2024

Accepted: 28<sup>th</sup> March 2024

Online: 29<sup>th</sup> March 2024

### KEYWORDS

*Wheat, grain, protein, gluten, IDK indicator, variety, flour, bread.*

### ABSTRACT

*This article analyzes the wheat grain quality indicators.*

Since the first years of independence in our republic, comprehensive measures have been developed and implemented by our government to fully satisfy the population's need for cereals and bread products grown on our own.

Agriculture, in particular the production of rich crops from corn crops, is one of the areas of important strategic importance in the Agriculture of our country. In order to improve the standard of living of the population of our country, a number of works are being carried out. But despite this, there are several problems in providing the population with quality food. A special place in this is occupied by quality flour and flour products obtained from grain crops.

The quality level of grain grown in Uzbekistan has a huge impact on the quality and safety of products made from it, as well as on the country's economy. In addition, it is associated with the crucial importance of bread and bakery products for human life and activity.

The growing need of the population of the Republic for cereals and bakery products necessitates an increase in grain production and an increase in its quality.

The wheat plant is considered the main agricultural crop grown on the largest areas in the world. Wheat flour, along with being tasty, satisfies 17-45% of your daily energy needs.

At the moment, hard and soft wheat types are mainly planted in the world. Wheat varieties grown in Uzbekistan are unique and are distinguished from others by their physicochemical composition and technological properties.

One of the main indicators of the quality of wheat grain is the total protein and wet gluten content in its composition, as well as the IDK indicator, which determines the nutritional value and technological properties of grain [1,2]. The protein contained in grain affects not only the quality of the grain, but also its processing products and technological



properties. Too many quality indicators will depend on the amount of gluten in the grain, its baking properties on the amount of protein in the grain.

The amount and quality of protein in wheat grain varies depending on varietal characteristics, soil climatic conditions, fertilization, damage to the plant by diseases and pests, as well as other factors.

This is what we know from the literature that when wheat grain has a high protein and gluten content, the higher quality bread can be made from it [3].

The high or low protein content is influenced by the biological nature of the variety, cultivation style, and climatic conditions [5].

From the studies of many authors, we know that the amount of protein in grain will largely depend on the factors of the external environment, the type of soil, its water regime, the crops planted before and the amount of nitrogen fertilizers [4,5,6].

A.V.Andrutshenko and M.D.Fedorova's perennial research on wheat grain quality has shown that varietal samples isolated from native populations differ from the wheat standard. The authors note that varieties with a high technological character are distinguished by a high protein content. By state standards, varieties with a total protein content of wheat grain of 14-17 percent and wet gluten of more than 28 percent are included in the category of strong wheat, and flour from such varieties is used as an "improver" in the production of bread. Varieties with a protein content of 12-14 percent and a gluten content of 28% are included in the middle category and are the main varieties in bread making. Wheat grain with a protein content of 10-12 percent and a gluten content of more than 22 percent is considered the third category, that is, weak wheat, and is used in bread production by adding flour of the "improver" category.

One of the main goals in wheat selection is to raise the quality of grain, and this indicator is fundamental when allowing the introduction of newly created varieties into the state register. In this regard, the study of quality indicators in the samples of the studied variety is also one of the main goals of our scientific work.

We have collected and analyzed more than a hundred samples of flour products and samples of ancient wheat varieties from all regions and districts of the Republic in order to check the amount of iron and zinc element in the flour products consumed by the population nowadays, as well as some quality indicators, correlation between them.

The results of the analysis showed that in varieties such as Qizil-sharq, Qora-qiltiq and Grekkum, which were once widely planted in Uzbekistan, the amount of gluten was 48%, 46%, 42% and the IDK indicator was 60.2, 74.4, 70.9.

It should also be said that no relationship with the amount of elements was found in the wheat varieties analyzed.

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