

ANALYSIS OF THE EFFECTIVENESS OF THE COLD CONDITIONING SYSTEM ON THE QUALITY INDICATORS OF GRAIN PRODUCTS.

Akramova Guklhayo

PhD student in Andijon Machine Building Institute, Uzbekistan

Undoubtedly, bread is the main food product of the Uzbek people and other peoples of Central Asia. For this reason, much of our arable land is grown in wheat. It is necessary to provide the agricultural enterprises of the President of the Republic of Uzbekistan and the Cabinet of Ministers with modern technologies for the development of agriculture and agro-industry in our country, the consistent development of export and import industries, the production of quality products, as well as to supply the population with quality products. A number of resolutions and orders have been developed. Including the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan “On additional measures to improve the system of accounting for grain and its processed products, strengthen control over their storage” [1], Resolution of the President of the Republic of Uzbekistan on measures to create an effective system for the development of production and expansion of production cooperation in the republic [2], Resolution of the Cabinet of Ministers of the Republic of Uzbekistan “Digitalization in the agro-industrial complex and agriculture of the Republic of Uzbekistan. Decision on measures to develop the system” [3], resolutions of the President of the Republic of Uzbekistan on “Measures for the widespread introduction of the digital economy and e-government”.

The demand for grain and grain products in our country is great. This places a great responsibility on enterprises. The use of science and technology in enterprises is the reason for many successes. Among them are the following graphs.



Figure 1. Volume dynamics of cereal production in our country for the next 5 years (in tons).

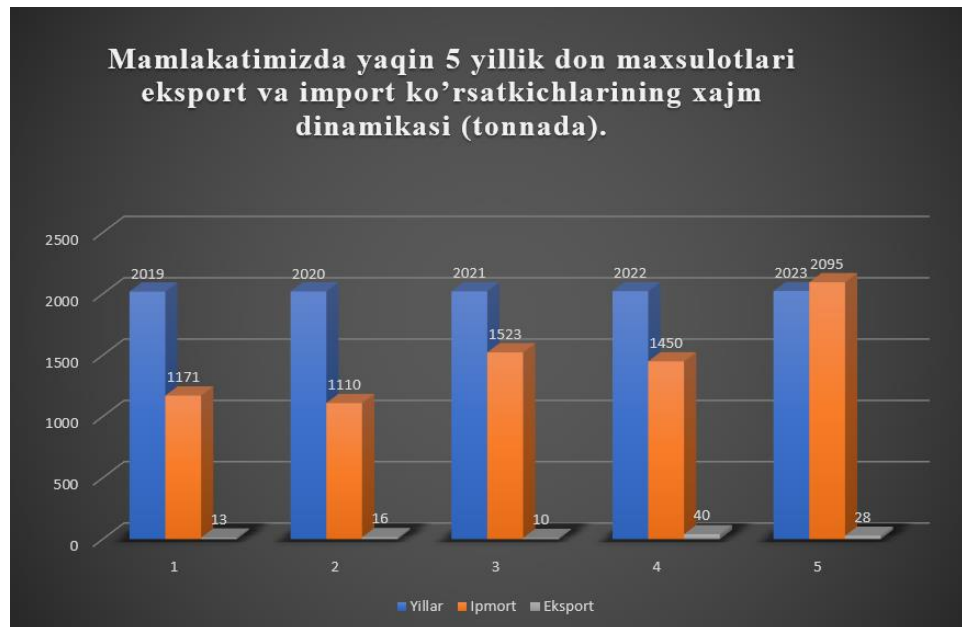


Figure 2. Volume dynamics of export and import indicators of grain products in our country for the next 5 years (in tons).

From this it is clear that the grain industry is developing every year, however, we will also touch on a number of shortcomings of the enterprise's production system.

In this article we will point out the shortcomings of grain processing processes, including threshing grain ears, in the previous system and discuss ways to eliminate them.

The main task facing workers in the flour milling industry is to increase production and quality of finished products. Solving this problem is impossible without the use of an automated control system for the processes of moistening and cleaning grain before grinding.[4]

Cold hydrothermal treatment is the simplest method of moisture-thermal treatment for the purpose of purposefully changing the properties of grain and does not require complex equipment. Cold conditioning schemes for grain grinding involve processing the grain in a washing machine.

The effectiveness of cold grain conditioning largely depends not on the average moisture content of the grain mass, but on the uniformity of moisture content of the individual grains that make up this grain mass. Moisture transfer from more moistened grains to less moistened ones occurs only during long-term boiling of the grain.[5]

The subject of the article is mainly the analysis of quality indicators of grain products.

Optimization of technological technologies, grain characteristics, and its processing by hydrothermal method. Grain conditioning is used in flour, grain and feed production technologies. Technological improvements are achieved by adjusting processing parameters depending on the properties of the grain (for example, temperature, pressure, humidity, duration of output operations). In a scientific journal

of the twentieth century, the term “grain conditioning” was replaced by the term “hydrothermal processing of grain.”

Hydrothermal treatment of grain is used in the production of grain from buckwheat, oats, barley, and wheat. In this case, the process becomes significantly more complicated (compared to hydrothermal processing of grain to produce flour). As a result, a significant reduction in the strength of the films covering the grain and a strengthening of the core is achieved, which increases the yield of high-quality grain. In addition, specially developed hydrothermal grain processing technology is used for grain processing.

Hydrothermal processing of grain allows not only to change technology, but also to improve the quality of grain, as well as the consumer characteristics of the finished product, for example, by choosing the optimal parameters for hydrothermal processing of grain, you can improve the culinary properties of flour[6].

Two types of conditioning are used in flour production:

- Cool and high speed.
- The main parameters of the air conditioner:
- Humidity, duration of infusion, temperature, pressure.

A specific combination of parameters, that is, hydrothermal treatment, is the simplest method of moisture-thermal treatment to purposefully change the properties of grain, such as parameter values.

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