



**THE EFFECT OF GRAIN STORAGE METHOD ON THE PRODUCTION OF QUALITY  
PRODUCTS**

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**Annotation**

The complexity of the organization of storage of large batches of cereals and cereals is associated with their physiological and physico-chemical properties. Grain is a living organism, in which various vital processes take place; the intensity of these processes is associated with the conditions of the external environment. If the external environment conditions have a good effect on the metabolism of grain cells, this will lead to a decrease in the quantity by worsening the quality of the unconditional grain.

**Base words and phrases:** grain products, microorganisms, chemical and biological factors, grain quality, pests, methods of combating, respiratory process, various mixtures, cereals, feed in bulk.

**Introduction**

The process of grain storage this is the last stage in grain production, which includes the physical, chemical and biological factors, which affects the properties of the grain heap, which is a grain and storage object, as well as the state of the grain.

Knowing the legalities of the phenomena that occur in the grain pile allows you to apply the scientifically based measures necessary to ensure the quantitative and qualitative preservation of the grain.

Many difficult in the storage of grain products are associated with this, which means that they are every "consumer" other than human beings, that is, in the presence of micro organism and pests.

It follows that as a result of the influence of micro organism and pests, the quality of the product decreases quantitatively and deteriorates. If the storage of grain products is not organized in accordance with demand, rodents (rats, mice) and birds slaughter and pollute the grain.

In addition, special cases that occur in flour and cereals during the storage period also alter their in-house properties. Finally, the quantity and quality of all grain products can change as a result of their physical properties.

Thus, it is necessary to protect the stored products from the natural and occurring destruction, their biotic environmental factors, as well as to create conditions that are resistant to intensive metabolism occurring in grain cells. This issue can be solved only by preparing the product for storage and creating certain conditions of storage.

All this can be done by preparing the necessary equipment and storage areas, which are equipped with devices, taking into account the characteristics of grain products.



In the field of storage of grain products in the interests of the national economy and consumers, the following issues are put forward.

1. Storage of grain products without destruction or with minimal loss in mass.
2. Storage without deterioration of the quality of grain products.
3. Improve the quality of grain products in storage.
4. Reduction of labor costs in the storage of grain products.

Some disposal that occurs in terms of quantity and quality during the storage process is inevitable, while others are caused by improper storage. Unavoidable mechanical destruction is a grain hoarfrost that is not taken into account, which occurs when moving grain and grain products from one place to another. In storage, the loss of dry substances during the inhalation of cereals is suddenly considered a waste of biological order.

Properly organized storage process allows to prevent the spread of grain products, their consumption by birds, rodents and pests, as well as the loss of mass that occurs during self-heating and the development of microorganisms.

Very large damage can be caused to the disposal, which is associated with a deterioration in the quality of the product. Loss of grain freshness in storage (changes in color, taste and smell) leads to a deterioration in the quality of cereals, flour and bread from it, sometimes making them unsuitable for consumption.

Another reason that leads to a decrease in the quality of cereals is its excessive long-term storage. Any product will even show a certain long-term durability property, even when stored in optimal conditions. It is intended to be stored for a certain period of time, the purchase property of a product that has already begun to wear out and is stored in excess of it is lost. Many categories of flour and cereals sharply lose their quality in the second-third year of storage. And in two or four years there is a decrease in the properties of grain seeds. Grain cereals with a spike and legumes, intended for the production of food and feed, are considered to be more durable for a long time. However, with the passage of time in them (after 7-15 years), there is usually a decrease in the technological and food suitability characteristics. Thus, the need for timely sale of cereals and seeds, in which the state of wear and tear is maintained, leads to the inevitability of periodic exchange, as well as to a significant deterioration in their quality.

As for storage without deterioration of its quality – a necessary condition.

In storage, various technological practices are used in order to improve the quality of grain products, that is, to ensure good storage and increase the level of durability.

It is known that in most cases it is possible to create a certain storage regime and also improve the quality of breadcrumbs of flour. However, in the enterprises of Agriculture and grain processing and grain processing, the processing of cereals intended for seeds, food and feed is of great importance. Systematic increase in the quality of products is one of the important requirements of the market economy.

Without well-organized and timely cleaning work, it is impossible to reliably store cereals and, even more so, to ensure their productive use in the national economy. To clean the grain from impurities, a



large park of machinery and OMS with different productivity, which is attached to the technological path, is required.

When drying the grain mass in storage, grain pickers with different duty and productivity are used in grain processing enterprises. Due to the fact that the season of harvesting cereals grown in our country coincides with the scorching hot and dry period, the moisture content of the acceptable grain is about 8-9%. Therefore, in most cases, there will be no need to use a dryer either.

To create a favorable temperature regime of storage, ventilation of cereals and cereals will be necessary. For this purpose, a transport control system and grain cleaning machines or special active ventilation equipment are used. As a cooling agent, it is possible to use chilled air with the help of natural or cooling equipment.

In order to achieve high-quality storage of grain in the specified period, it is necessary to protect it from the effects of insects, ticks, as well as rodents and birds belonging to the category of pests. This action is carried out by the use of various chemical agents.

Ensuring the timely and qualitative implementation of the above-mentioned measures will ensure the next stage, that is, the processing of grain and the receipt of more quality products.

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