
PROBLEMS IN THE FIELD OF GRAIN PROCESSING TECHNOLOGICAL PROCESSES AND IMPROVEMENT OF THEIR PREVENTION MEASURES

Muhammadjon Qosimov

Assistant, Fergana Polytechnic Institute, Fergana, Republic of Uzbekistan

E-mail: qosimov.muhammadjon@inbox.ru

Farzona Nasriddinova

Student 76-21 group, Fergana Polytechnic Institute, Fergana, Republic of Uzbekistan

Abstract

Based on the expediency of using an image impact machine for grinding grain and grain, it simplifies the technological process, improves their quality and increases its stability during storage. It increases the importance of the scientific basis and structure of the universal technology of flour production with high productivity and quality.

Keywords: machine, grain, production, flour, clean, nature, flour products

Introduction

Today, the production and consumption of high-quality flour and flour products is considered one of the urgent problems in our country. In order to satisfy the population's desire for high-quality flour products, to improve the quality of flour products, it is necessary to improve the technological processes of grain cleaning, preparation, cleaning and grinding, and in the field of grain processing technologies. In this regard, an important factor is the implementation of technological processes based on experienced scientific conclusions [1-4]. In order to prepare high-quality flour, it is necessary to develop the fundamental principles of grain processing industry technologies and further improve them. On this front, among the famous scientists and specialists, YA.N. Kupris, V.L. Girshson, P.G. Demidov, A.L. Sokolov, N.V. Panchenko, L.E. Aizikovich, A.R. Demidov, M.E. Ginzburg, G.A. Egorov, L.A. Gyaebov, S.V. Zverev, L.I. Kotlyar, P.P. Tarutin and other scientists conducted research and gave their recommendations [5-9]. In our opinion, the opinions expressed by our scientists can be interpreted in different ways due to the fact that new directions have begun to appear in the field of flour production. As a result of our observations in the field, we found it necessary to include a number of suggestions and recommendations in order to improve the process.

The Main Part

In particular, the following factors are important: - increase the efficiency of grain pre-cleaning in elevators; - improvement of the process of formation of grain grinding batches; - increase the efficiency of grain care in the production of flour and grain products; - to improve the process of pre-grinding grain during high-quality grinding

and to create a new high-performance machine for its implementation; - development and justification of technological conditions for improving the design of a cylinder mill for grinding grain products; - improvement of technological processes of grain production and development of technologies for production of new high-quality flour products, etc. Therefore, the above-mentioned factors are important in the production of high-quality flour and flour products. It is possible to solve the problems of the world's scientists and representatives of the field of flour production [10-14]. There are enough problems waiting to be solved in the field. In particular, there is a need to research the issues of high efficiency of pre-cleaning of grain and separation of small fraction, changes in the structural, mechanical and technological properties of the cleaned grain mass, which help to improve the quality of flour, and it is useful to start systematic work to eliminate them. . In particular, one of the existing problems today is the need to use a simpler and less energy-consuming machine at the initial grinding stage, taking into account the multi-stage nature of selective grinding of grain products during grinding. It is also necessary to create a new machine for pre-grinding grain and justify its mechanical and technical parameters; it is important to determine whether its structural and mechanical properties change or not as a result of grain processing in inhaler-sterilizers, as a result of which it is important to study the impact of grain cracking and the initial grinding process. The development of efficiency criteria reflecting the final results of complete cleaning of all grains is one of the existing problems in the field of flour production today. One of the most complex processes - the need to develop a new technological scheme of integrated use of screens and air flows with concentrators to improve grain separation in grain production - is currently considered one of the most pressing problems for all flour mills or combines. Eliminate these problems As a result of the experiments, the following was determined.

A) The high efficiency of preliminary cleaning of grain before sending it to the flour mill was studied. According to it, when at least 50-60% of weeds and grain mixtures are separated, the total yield of flour increases by 0.20.5%;

B) The high efficiency of mixing the grains of different initial batches before grinding was found: the amount of grains in the mixture increased by 3.14% on average, a number of scientists (YA.N. Kuprits, E.D. Kazakov, etc.) As mentioned, the influence of the biological factor of mixing was studied;

C) It was determined that it is necessary to develop a new machine for pre-grinding grain, which differs from the cylinder mill with increased productivity (up to 4000 kg / cm per day). It was determined that this machine should reduce energy consumption (by 2 times) due to the reduction of the area occupied by the machine.

D) It has been theoretically proven that it is possible to increase the efficiency of the raw material production process in high-quality grinding by increasing the yield of grinding and improving their quality. Based on the observations and experiences, we offer the following regarding the improvement of the technological processes of grain processing in the grain processing industry:

- Preliminary cleaning and fractionation of grain in warehouses;
- Formation of grinding batches of grain in the production of flour grinding;
- Use of effective methods of grain surface cleaning;
- Production of a new grinding machine with pre-grinding of grain and initial parameters developed in the process of grain formation;
- Use of entolerator-sterilizers to prepare grain for grinding before destruction;
- Development and implementation of new methods of using concentrators in grain production to increase the efficiency of the separation process of grain products;

Conclusion

In conclusion, it can be said that based on the feasibility of using an image impact machine for grinding grain and grain at the same time, it simplifies the technological process, improves their quality and increases its stability during storage. It increases the importance of the scientific basis and structure of the universal technology of flour production with high productivity and quality.

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