Increasing economic efficiency of flour production from grain of the main cereal crops by extrusion method

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Problem statement

• Enrichment of mass consumption products with various physiologically valuable components to give them additional useful properties is one of the perspective directions of food technology improvement. Replacement of a part in flour varietal by flour from the extruded grain at production of bread, bakery and flour confectionery give the chance to expand the product range of a functional orientation.

• Calculate of the standard cost estimate of wheat, barley and oat flour on existing and proposed technologies.

• The calculation of the economic effect of the introduction of new technology.
• The efficiency of grain processing is estimated by a number of technical and economic indicators of the processing plant, the main ones are the output volume of finished products, reducing waste and losses, increasing the quality of flour products.

• Comparative assessment of the output norms in the grain processing of the main cereal crops on the existing and developed technologies.

• Extrusion processing of grain crops ensures the inclusion and preservation of vitamins, minerals and proteins in the new types of flour.
Conclusions

As a result of the research it was found that the proposed technology of obtaining flour from the grain of the main cereal crops by extrusion allows to reduce the cost of production, to fully use the production capacity, to expand the range of products manufactured by flour plants, to reduce technological losses in the production of finished products, increases the output of finished products.

- The comparison of the output norms in the processing of grain from the main cereal crops on the existing and developed technologies was carried out.
- The calculations of the flour production efficiency showed that the processing of wheat will increase the volume of marketable products by 10.0 %, barley – by 14.8 %, oat – by 22.3 %, in this regard, the profitability of production of new high-yield types of flour will increase: wheat by 15 %, barley – by 29.3 %, oat – by 45.6%.
- Crops have a higher economic effect in the production of extruded flour due to the low cost of raw materials and a decrease in technological waste.
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