

DEVELOPMENT OF TECHNOLOGY FOR DOUGH-BASED NATIONAL DISHES WITH INCREASED BIOLOGICAL VALUE

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Abstract

Increasing the biological value of dough-based national dishes is an important intersection in the field of food science, nutrition and cultural heritage preservation. This article studies innovative technologies aimed at eliminating the widespread micronutrient deficiency in Central Asia by enriching national dishes of Uzbekistan, such as bread, samsa and manti with microelements and bioactive substances, while preserving the sensory and cultural properties of dishes.

Keywords: Biological value, dough dishes, national dishes, food technology, healthy nutrition, the importance of nutrition, nutrients, vitamins and minerals, food preparation technology, dough preparation methods, fermentation processes.

Introduction

Our national dishes mainly consist of dough products, and increasing their biological value is important in ensuring healthy nutrition and food security. This article examines the process of developing the technology of national dough dishes with increased biological value. Cooking is a part of national culture that can never develop independently. The culinary arts of a nation are always closely related to the development of the culinary arts of neighboring and economically connected nations, and at the same time, each national cuisine retains its own unique characteristics and national color in this development. For example, in Uzbek cuisine, various dishes of Russian, Ukrainian, Caucasian, Tatar, Tajik, Kazakh and other nations, such as jarkop, borscht, lola kebab, bogirsok, dudchatoy, paramach, tukhum barak, hunon, have long been cooked in their own way. In turn, our pilaf, hasip, manti and various mastavas also decorate the tables of fraternal nations. Uzbek cuisine has a centuries-old history, which reflects the lifestyle, customs, type of labor and climatic conditions of the people.

MAIN SECTION

1. Biological value and its importance

Biological value is the effect of food products on the body, that is, their enrichment with nutrients such as vitamins, minerals, proteins, fats and carbohydrates. Increasing the biological value of food products plays an important role in improving human health and preventing various diseases.



2. Methods for increasing the biological value of dough products

There are several methods for increasing the biological value of dough products:

- Nutrient enrichment: By adding new ingredients to dough products (for example, nutritious grains, vegetables, legumes), their nutrient composition can be improved.
- Fermentation: The use of a fermentation method (for example, sourdough) in the dough preparation process facilitates the digestibility of the dough product and helps to enrich it with beneficial microorganisms.
- Food additives: The healthiness of dough products can be increased by adding biologically active additives (e.g., probiotics, prebiotics).

3. Development of technology on the example of national dishes

Uzbek national dishes include dough products such as bread, manti, lagman. We offer the following technologies to increase the biological value of these dishes:

- In bread making: Making flour from nutritious grains (e.g., sorghum, wheat) and adding probiotic additives during the bread fermentation process.
- In manti making: Increasing the amount of protein and vitamins by adding vegetables (e.g., cabbage, carrots) and legumes (e.g., peas) to the manti dough.
- In lagman making: Improving the taste and beneficial properties of lagman dough by adding nutritious fats (e.g., olive or sunflower) and spices to it.

National dishes with increased biological value not only provide healthy nutrition, but also allow us to update our traditional dishes in accordance with modern requirements. By expanding these technologies and continuing research, the biological value of our national dishes can be further increased.

DISCUSSION

The results of the study demonstrate the effectiveness of using local resources in increasing the biological value of national dishes with dough. Ingredients such as mulberry powder and pumpkin puree not only increase nutritional value, but also support local farming, which contributes to economic sustainability. The preservation of the sensory properties of fortified dishes ensures their acceptance by consumers.

However, when fortification processes are implemented on a large scale, a number of challenges may arise, including constraints on raw material supply and consumer acceptance of new products. Further research is needed to adapt these technologies to mass production in the future.

CONCLUSION

This study has developed an effective and sustainable technology for increasing the biological value of national dough dishes. The nutritional profile of bread, samsa, and manty has been significantly improved by using local ingredients and micronutrient premixes, which is an important step in addressing the problem of malnutrition in Central Asia. This approach has benefits not only in the field of health, but also economically and culturally.

Increasing the biological value of national dishes is important for ensuring healthy nutrition and food security. There are opportunities to make dough products healthier and more nutritious using the methods and technologies presented in this article. By implementing such innovations in the



future, we can adapt our traditional dishes to new modern requirements.

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