

**NEW TECHNOLOGIES AND FEATURES OF THE PRODUCTION OF BAKERY PRODUCTS OF THE NEW GENERATIO
(НОВІТНІ ТЕХНОЛОГІЇ І ОСОБЛИВОСТІ ВИРОБНИЦТВА ХЛІБОБУЛОЧНИХ ВИРОБІВ НОВОГО ПОКОЛІННЯ)**

У роботі порушено питання користі та необхідності вживання хлібобулочних виробів і їх вплив на здоров'я людини. Проведено аналіз впливу використання функціональних інгредієнтів при виготовленні хлібобулочних виробів. Охарактеризовано актуальні шляхи розвитку хлібобулочної галузі.

Ключові слова: раціональне харчування, користь, хлібобулочні вироби, вплив, функціональні інгредієнти, шляхи розвитку.

The work raises the question of the usefulness and necessity of the use of bakery products and their impact on human health. An analysis of the influence of the use of functional ingredients in the manufacture of bakery products has been carried out/ Current ways of development of the bakery industry are characterized.

Key words: rational nutrition, benefit, bakery product, influence, functional ingredients, development pathways.

Bakery products are food products that are baked from flour, yeast, salt, water and additional raw materials for bakery products.

By weight, bread products are divided into bread (products weighing more than 500g) and bakery products (500g and less), and bakery products, in turn, into large pieces (200-500 g) and small pieces (50-200 g). From the group of improved bakery products, butter products (with a sugar and fat content of 14% or more according to the recipe) are separately distinguished [1].

Bakery products are among the most important food products of the daily diet of the population of Ukraine. They are about 50% carbohydrate, 5-8% protein, and up to 1% fat. They are a source of many minerals, especially potassium, phosphorus, magnesium, and B vitamins. A good third of all the energy and protein that we get from plants comes from eating bakery products [2].

Complete refusal of bread and bakery products can lead to depression, inflammation and fatigue. Therefore, most nutritionists believe that 150 grams of raw or stale bread will not ruin your figure or cause any harm to your body, but, on the contrary, when eaten in moderation, will inhibit the excellent work of the digestive tract and have a beneficial effect on your digestive and immune systems [3].

Because of its many beneficial ingredients, bread can be a valuable source of vitamins and minerals. The B vitamins found in bread and baked goods help to normalize the nervous and cardiovascular systems, as well as to improve the functioning of the intestines. Vitamin E is a powerful antioxidant, involved in DNA synthesis and stabilization of red blood cells and muscle tissue. In addition, bread is rich in potassium, magnesium, calcium, phosphorus, chlorine, iron, vanadium, manganese, cobalt, and other elements that are better absorbed from bread products. Experts strongly recommend keeping bread in the diet, as it is included in national dietary guidelines for developed countries, and the World Health Organization (WHO) recommends that you eat at least 25 grams of bread a day [4].

In my opinion, the best bread and bakery products are baked independently at home in the oven. Generally, in such bakery products, are made with rye or coarse-ground flour instead of ordinary white flour of the highest grade to make them more useful. Such bakery products have the most attractive appearance, a characteristic smelling aroma when baked, a crunchy golden(or other color) crust, the inner pulp comes out soft sometimes a little elastic. The taste and color of bakery

products mainly depend on the ingredients from which the product is prepared, as well as on the addition of certain food additives such as sunflower, flax, chia, sesame, poppy and other seeds, as well as dried fruits, pieces of fruit or candied fruit, various fruit berry and sweet fillings.

Despite the high energy value of bakery products, it is necessary to take into account that for each age group of the population, products for a specific purpose are needed. Therefore, the amount of essential nutrients and minerals, vitamins in baked goods produced by traditional technology, is insufficient for a balanced human diet, including the low protein content does not provide the body fully with essential amino acids. Therefore, there is a need to create new products that will contain ingredients that can improve the physiological processes in the human body, boost its immune system, be able to sustain an active lifestyle in challenging environmental conditions. To this end, a variety of raw materials can be used to enhance the nutritional and biological value of bread products, giving them therapeutic and preventive properties. First of all, natural raw materials of plant and animal origin, as well as special single-component and multi-component additives [5].

Research of the chemical composition of such natural raw materials as fruit and berry puree, parsley, juices, powdered products from vegetable and fruit juices, have shown their high nutritional value and the possibility of use in the baking industry to create new varieties of baked goods with corresponding dietary properties [6].

The effectiveness of the use of fruit and vegetable products is determined by the fact that they are harmless additives of natural origin and are distinguished by a high content of the most important components – vitamins, organic acids, minerals, carbohydrates, cellulose, pectin, as well as corresponding technological properties. When mixing the yeast dough, add fresh fruits, such as avocado and apricots, citrus cider. First of all, apricots enrich new products with vitamin A and iron, and thanks to ivy we get products enriched with vitamins PP, P, nutrients – potassium, calcium, sodium, iron, which are very important for the normal functioning of the human body [7]. Citrus fruits are of great value, containing sucrose, glucose, fructose, water-soluble pectin, citric acid, with the macronutrient potassium, a lot of calcium and phosphorus. The core of this fruit is rich in vitamin C – 120-180 mg, up to 490 mg of vitamin P, as well as vitamins B1, B2, carotene, concentrated essential oils, glucosides, pectin substances, cellulose. Cedar is processed into a powder, which produces vitamin P and pectin, which are added to the dough when it is baked I'm going to start with the baked goods [8].

All organizational and economic problems of innovation in bakeries can be grouped into two groups: quantitative and qualitative. In turn, quantities can include: output the needs of the population of a given region; increasing the volume of sales of products by introducing it's the ability to market new products to new markets, to increase the share of high-end products, and so on. The qualitative indicators of the organizational and economic level include: improvement in the quality of products; expanding the range and creating new types of products; replacement of equipment with new generation technology and others.

Given the existing trends in the market of bakery products, the priority ways of innovative development of industry enterprises are:

- improving the quality of products;
- constantly updating the range;
- increasing the product range;
- expanding target markets.

To sum up, knowing the benefits and using whole grain products rationally can increase the content of valuable nutrients and minerals in your body, strengthen immunity, and improve bowel function. The introduction of bakery products enriched with protein-carbohydrate complexes, cell-based additives and functional ingredients will be particularly useful and effective. Due to the increasing variety of bakery products from year to year and the growing demand for bakery products, the use of priority paths for the development of bakery enterprises will be relevant.

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