

FEATURES OF THE TECHNOLOGICAL PROCESS OF SOURDERED BREAD PRODUCTION

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Abstract. The peculiarity of the bakery industry in Ukraine is that it is characterized by a smoothed network and high density of enterprises, as there are bread factories and small bakeries in each region. Modern trends in the development of the industry are a combination of large enterprises and small businesses. The use of classical technologies is important, but there is growing interest in the use of craft technologies in the production of sourdough bread. Sourdough bread is a traditional type of bread produced by natural fermentation of dough using live yeast. Such bread has better organoleptic characteristics, higher nutritional value and a longer shelf life. The main stages of the technological process include the preparation of sourdough, kneading dough. At this stage of the technological process, previously prepared active sourdough is added to the dough. An important stage of production is the fermentation process, which usually lasts 4-12 hours or more depending on the cooking technology. At this stage of the technological process, taste, structure and porosity are formed. The next stage of the technological process is the formation of semi-finished products of the desired shape and proofing. After proofing, the formed semi-finished products are baked. The final stage of the technological process for the production of sourdough bread is the cooling process. Thus, based on the analysis of the technological process for the production of sourdough bread, we can conclude that this technological process is a more complex and lengthy process compared to yeast bread. The growing popularity of this product reflects the trend towards a healthy lifestyle and a return to traditional production methods and providing consumers with high-quality and healthy products.

Keywords: bread, craft technologies, sourdough, quality, safety, production.

One of the current trends in the baking industry is the use of craft technologies, namely the production of sourdough bread. In addition, in the production of this range of bread, recipes and technologies for the production of dietary and special types of bread, for example, gluten-free, as well as with the addition of seeds, etc. are used. The raw material for production is local raw materials, since Ukraine is an agrarian country, therefore it has a sufficient amount of grain for its own domestic production. In

addition, flour milling enterprises are closely related to the baking industry [1, 2]. In recent years, there has been a revival of the traditions of baking sourdough bread in the world and in Ukraine. This process not only returns us to the roots of culinary heritage, but also brings numerous benefits for the health and quality of the resulting baked goods. Sourdough bread is one of the oldest products made by humans. This method of baking bread has a thousand-year history and encompasses various cultures around the world. It was used in ancient Egypt, as well as in medieval Europe, where each family had its own traditions of making sourdough bread. In Ukraine, sourdough bread has always been an important symbol of family well-being and prosperity. The process of making it has been passed down from generation to generation, and today many people are returning to these ancient traditions, highly appreciating its taste and usefulness. According to research, consumers are increasingly choosing sourdough bread, Italian, rye or baguette bread instead of regular bread. This indicates a growing interest in products with natural ingredients and traditional production methods.

Making sourdough bread is a more complex and time-consuming process than making yeast bread. The sourdough is made from flour and water, which, after a certain period of fermentation, allows the development of wild yeast and lactic acid bacteria. The process of making sourdough bread involves several steps: preparing and ripening the sourdough, kneading the dough, fermenting it, and finally baking it. Each step requires careful control of time and temperature to achieve optimal quality of the final product. This process takes longer than using regular yeast, but it results in bread with a richer flavor, better texture, and a richer composition of nutrients [3]. The fermentation process during making sourdough bread helps increase the bioavailability of vitamins and minerals. This is done by breaking down phytic acid, which is found in grains and can interfere with the absorption of nutrients. In addition, sourdough bread is characterized by a deep taste and aroma, which are achieved due to the long fermentation process. This gives the product unique organoleptic characteristics that are difficult to achieve when using yeast.

Due to natural fermentation, sourdough bread is rich in probiotics, which have a positive effect on digestion and overall health. It is important that sourdough bread has an extended shelf life compared to yeast bread, which is certainly an advantage for its production and the implementation of production technologies. This is ensured by natural acids formed during fermentation, which prevent the development of mold, which ensures a long shelf life of bread without the use of chemical preservatives. In the modern world, where fast food has become the norm, a return to traditional methods of baking sourdough bread is relevant. This not only contributes to the preservation of cultural heritage, but also meets modern requirements for healthy eating. In the context of globalization and standardization of products, interest in local traditions and natural products is becoming an important aspect of preserving the cultural identity and health of the nation.

The advantages of sourdough bread over yeast bread are obvious: improved absorption of nutrients, unique taste, positive effects on health and long shelf life. The growing popularity of this product reflects the trend towards a healthy lifestyle and a return to traditional production methods. The relevance of the issue emphasizes the

importance of supporting local traditions and providing consumers with high-quality and healthy products.

Therefore, it can be noted that the modern industry faces certain problems and challenges, namely the rise in energy prices, which affects the cost price, competition from imported products, the need to update equipment at many enterprises. Given this, the development prospects are to expand the range through useful additives and starter cultures, increase exports to EU countries, and support local producers and craft bakeries.

References

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Анотація. Особливість хлібопекарської галузі в Україні полягає в тому, що вона характеризується розгладженою мережею та високою щільністю розміщення підприємств, так як у кожному регіоні є хлібозаводи та малі пекарні. Сучасні тенденції розвитку галузі це поєднання великих підприємств і малого бізнесу. Важливим є використання класичних технологій, але зростає інтерес до використання крафтових технологій у виробництві хліба на заквасці.

Хліб на заквасці – традиційний вид хліба, що виробляється шляхом природної ферментації тіста з використанням живої закваски. Такий хліб має кращі органолептичні показники, вищу харчову цінність та більший термін зберігання. Основні етапи технологічного процесу включають підготовку закваски, замішування тіста. На даному етапі технологічного процесу додається до тіста раніше підготовлена активна закваска. Важливим етапом виробництва є процес ферментації тобто бродіння, який за звичай триває 4-12 годин або більше в залежності від технології приготування. На даному етапі технологічного процесу формується смак, структура та пористість. Наступним етапом технологічного процесу є формування напівфабрикатів потрібної форми та вистоювання. Після вистоювання сформованих напівфабрикатів здійснюють випікання. Заключним етапом технологічного процесу виробництва хліба на заквасці є процес охолодження.

Таким чином, на основі аналізу технологічного процесу виробництва хліба на заквасці, можна зробити висновок, що даний технологічний процес є більш складним і тривалим процесом у порівнянні з дріжджовим хлібом. Зростаюча популярність цього продукту відображає тенденцію до здорового способу життя та повернення до традиційних методів виробництва та забезпечення споживачів якісними та корисними продуктами.

Ключові слова: хліб, крафтові технології, закваска, якість, безпечність, виробництво.