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ХАРЧОВИХ ТЕХНОЛОГІЙ

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МОЛОДИХ УЧЕНИХ,
АСПІРАНТІВ ТА СТУДЕНТІВ**



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РОЗДІЛ 1

**АКТУАЛЬНІ ПИТАННЯ ЗБЕРІГАННЯ
ТА ТЕХНОЛОГІЇ ПЕРЕРОБКИ ЗЕРНА,
ОВОЧІВ ТА ФРУКТІВ**

ethyl acetate content is 35-37.5 mg/dm³ in young beer. For this purpose fermentation temperature should not exceed 14 °C as the Fig. 1b shows.

Fermentation temperature raising intensifies the formation of higher alcohols (see Fig. 1b). It should be noted that the higher alcohols concentration above 100 mg/dm³ impairs taste and useful properties of beer. In process of wort fermentation at dry matter concentration of 16 % in the studied temperature range it wasn't possible to reach the normal content of higher alcohols in beer, that may be due to the negative impact on yeast cells from increased osmotic pressure of medium.

Thus, at dry matter concentration of 16 % of high gravity beer wort the main fermentation should be carried out in a temperature range of 9-14 °C. It should be continued to search for ways that would reduce the formation of higher alcohol at fermentation of high-gravity wort.

Scientific Supervisor – Ph. D., Associate Professor Kosiv R.B.

BAKING MIXES –THE NEW WAY TO WIDEN THE RANGE OF FINISHED PRODUCTS AT THE FLOUR MILLS

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The grain handling industry in Ukraine remains high and still has a promising potential due to a good crop capacity, which is enough for internal needs and a grain export as well. We can take pride that Ukraine is one of the leader on a worlds in quality and blackearth areas under crop and our wheat is in good demand within food market world-wide. However, this facts on firms our retard comparing to the progress of the world trends. The growth of the economy which is based upon the planet natural recourses exploitation and harmful industry for the environment nowadays moves away to the past. The oil and the gas, the coal and the ore are not getting as a gold vein today for the country-exporter.

Today, the leader is somebody who owns a new knowledge, scientific innovations: How to produce a new, saving time, resources and energy? Instead of selling relatively cheap basic materials and purchasing expensive high-technology, the country should produce that hi-tech itself. Speaking to the point regarding the milling industry in Ukraine, we might say that this trade provides our manufacture and population needs by the volume of produced goods but not by assortment.

Traditionally the wheat and the rye flour are in use for the bread and bakery production in Ukraine and neighboring states. Permanently growing up marketable competition requires maximum effectiveness and the opportune actions from every enterprise. Any businessman is stimulated and forced to look for his own way of progress under the current market conditions.

Here are the main points of effectual strategy: the growth of productiveness; the diminution of loss; the widening of the range of finished products; the introduction of new technologies; the improvement of working conditions.

In our time the major part of Ukrainians prefers having the baked goods which are made with one's own hand or by special devices. Therefore the particular bakery mixtures are applied and just some quantity of water and other ingredients need to be added. So that, the

development of such compositions is perspective. The tasks which have to be settled are: 1) Market research in order to determine the demand on specific type of mixes; 2) Production process optimization of the mixture recipes that enables to achieve a high profitability and quality of finished products; 3) To provide the universality of the cooking method. (To have a good sales market it's important to arrange an option baking the bread at home and on the baker's shops as well); To arrange the optimal nutritiousness for finished products; 5) Equalization of the high quality of baking mixes.

The complete floury mixes which are comprised of natural vegetative components will help significantly to solve the tasks of nutritiousness and at the same time to put on the market a wide range of baked products using the quick method of cooking. No doubt, a big, medium and also small business would be interested in it indeed.

It is worth mentioning the key difference between "floury mixes" and "baking ones". The last one consists of not only floury components but dry ingredients as leavening agents that lightens the cooking greatly requiring just certain quantity of water to get the dough finally.

Breads are consumed with every meal of the day, not to mention for snacks. Here are some more of the world's breads: Corn Bread From the USA; Cuban Bread; Focaccia Bread; French Bread; Fry Bread; Irish Soda Bread; Italian Bread; Naan; Pita Bread; Rye Bread.

According to International Industrial Bread-baking Association research from 2011, one of the largest bread makers and consumers is Turkey. The country with 72.8 mln population produces 9.1 mln tons of bread every year that accounts 124 kg for each person. Nowadays there's a tendency of decrease of eating bread – 1-3 % every year. In such countries, like Italy, Belgium, Greece we can see the increasing of market of wholesale cheap types of bread. The small baking is more common in Turkey. In Greece it reaches 96.5 %, in Italy – 85 %, in France – 65 %, in Spain – 60 %. The industrial bakery is more appropriate for Austria, Germany, Great Britain, The Netherlands and Belgium – 60 % of mass production.

Baking mixes are the pre-mixed formulation of ingredients used for the cooking of baked goods. Baking mixes may be commercially manufactured or homemade. At the first time, baking mixes entered the market before Second World War in the USA and Canada. In Europe – in the early 50-thies. In our country this trend is just starting its development.

In my investigation I'm not going to promote different brands and companies. The aim is to explore the world-wide market of such products and make the conclusion, which ones are suitable for Ukrainian milling industry.

In the USA there's a great number of large enterprises, which were established a hundred years ago and started producing the grain products. Now they are the world leaders in food industry. Like The King Arthur Flour Company, which was founded in 1790. As a result of the most common mixes for bread machine research we can notice the baking mixes for: white toast bread; sweet bread; specific bread; wheat&rye bread; healthy bread; rye bread.

The main tasks for the enterprise which starts in producing baking mixes is reinstallation of packaging department. Bunkers, batchers, mixers and packaging machines should be installed after determining the dosage and mixing modes. The control of technological process, equipment effectiveness and product quality are required. The activity and interaction of components are the critical point in equalizing the high quality of mixes during the stock-age as well as the homogeneity.

Scientific Supervisor – DSc Zhygunov D.

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