

## New baking strategies: NanoBak Technology

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**Introduction.** Bakery and macaroni industry is a leader in the food market saturation. Bread is one of the major components of the human nutrition and provides about 30% of physiological needs for nutrients and energy.

Confectionery products are not products of everyday consumption, but they are very popular among different populations and, consequently, affect health. As a result of complex research technologies of sweets, biscuits, cakes for different population groups have developed. In the baking industry urgent task is to expand the range and the production of raw materials with improved properties and search for new raw materials. Currently, in Ukraine there is a need in the baking products of prophylactic and dietary purposes.

Bakery production - is one of the most important sectors of the food industry. Therefore, it is important to ensure an increase in the production of mass consumption with high nutritional and biological value, which would not only satisfy the physiological needs of the human body for nutrients and energy, but also perform preventive and curative functions.

So new technologies based on high modes of processing raw materials are very perspective, and in the first place it's extrusion technology. Extrusion technology, due to its versatility, is quickly gaining a strong position in manufacturing a wide range of food grain-based. As a major component of grain raw material is starch, and during the extrusion process there is happening a changing of physical and chemical properties of starch.

Extrusion processing of vegetable proteins increases their nutritional value and prolongs shelf life, because during an extrusion we have an inactivation of enzymes that degrade the taste and reduce the quality of the product during storage.

Innovative technologies in baking - this question is very popular abroad.

For example, one of the innovations is the Nano-Aerosol Humidification System. It is the latest climatic chamber for baking.

A lot of people recognize the importance of new baking strategies. One example is the NanoBak Technology. The system saves money, cuts energy costs, and conveys better bread in one swift punch to the world .

NanoBak Technology is a fresh humidification system in which tiny droplets are formed using ultrasound. The droplets provide humidity to the proving chambers and fermentation process reducing energy demands by thirty percent compared to conventional methods. Additionally, weight loss and peeling of crust during refrigeration is decreased.

Emden, Germany is the birthplace of this modern baking contraption. The new system with its constant distribution of humidity increases the durability of breads, pastries, cakes, and donuts. The baking industry also benefits with decreased energy costs on the production line resulting in economical and ecological advantages.

**Conclusions.** Times are changing and so are breads and pastries. The baking industry is adapting to fast paced technology and sophisticated consumer demands with high flexibility. Therefore, for the introduction of new technologies and innovations in Ukrainian production, we need to monitor international technologies.

### References:

- 1.<http://bakersprideco.com/innovative-baking-technology/>
- 2.[www.understandingnano.com/food.html](http://www.understandingnano.com/food.html)