

OPTIMIZING THE FORMULA OF MEAT-CONTAINING HALF-FINISHED PRODUCTS IN DOUGH

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Abstract

The given research is based on a system approach with the application of mathematical modeling methods, statistical data processing, and comparative analysis. We were trying to solve a problem of optimizing the formula of pelmeni minced meat and dough with the defined chemical composition and predictable consumer properties.

Several calculated variants of formulae for pelmeni minced meat and dough were obtained as a result of solving the task; the expected values of chemical composition properties and the cost of formula composition were defined for those variants. All the calculated variants of minced meat formulae are different from the control variant in having lower cost of raw materials and lower fat content, making it possible to reduce energy value, and higher content of balanced protein.

The model formulae of pelmeni minced meat and dough obtained by calculation provides the basis for drafts of production forms and records for manufacturing frozen half-finished products in dough.

The results made it possible to solve important tasks of both supplying people with complete scarce protein, and enlarging the range of half-finished products meant for medium and low income consumers.

Key words: *Mathematical modelling, Optimization of the formula, Half-finished products in dough, Pelmeni, Ravioli.*