quality of life of NPP workers, military personnel who participated in nuclear weapons tests, radiologists, etc.

All studies in this field are very contradictory. Therefore, the influence of low doses in general, and the effect of hormesis in particular, need additional study.

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THE ANALYSIS OF VOLUMES OF THE FOOD INDUSTRY WASTES

Food waste pollute vast areas of land. Almost all enterprises of the food industry emit gases and dust, worsening air condition and lead to an increase in the greenhouse effect and of course have a negative impact on water resources. Daily millions of people throw away remnants of food, tainted products, packages, glass and plastic bottles, and much more. All this accumulates and requires ongoing processing and disposal, but because of the large volumes of waste, lack of high-tech equipment, these operations may be slow.

The aim of our research is to analyze volumes of the food industry waste generation and the creation of innovative technologies for the use of various wastes as alternative energy sources.

The object of analysis is the city of Smorgon and its industries. Defining activities in the industry is the production of wood products and paper (56.8%), production of food products, beverages (24.6%), manufacture of machinery and equipment (10.5%), electricity supply, gas, steam and water supply (3.1%). The largest enterprises of food industry are "Smorgon Dairy" the branch of OJSC "Lida Milk Plant", UPE "Smorgon plant of bread production" and numerous catering facilities. On the territory of the Smorgon and Smorgon district landfill SMW "Black Forest" is located and 23 mini-sites are located. During the research such concepts as "food industry" were examined, its basic industries were named, environmental problems were characterized that are related to food production and analysis of the volumes of waste food generation was carried out.

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HORMESIS WITH THE AID OF DYNAMIC SYSTEMS

The term "hormesis" introduced S. Zontman and D. Ehrlich in 1943, comes from the Greek hórmēsis (fast movement, aspiration) and is the stimulating effect of moderate doses of stressors. To indicate the positive effect of low doses

of ionizing radiation, the term radiation hormesis, which was proposed in 1980 by Lucky T. [1].

In this paper we discuss the proposed O. Gerasymov use of certain provisions of the theory of dynamical systems, in particular - of stochastic resonance, as hormesis concept.

The International Commission on Radiological Protection has formed a concept about the linear no-threshold dependence of the probability of stochastic effects the dose. Formation of the concept is derived from the hypothesis that the harmful effects of ionizing radiation on the cell causes changes that could develop into a mutation at any arbitrarily small dose.

United Nations Scientific Committee on the Effects of Atomic Radiation to the data on the positive effects of low doses of ionizing radiation in fact casts doubt on the idea of the linear no-threshold harmful effects of radiation at low doses and cause arguments about the need to replace this paradigm [2].

Existing probabilistic approach does not carry any evidence.

It is concluded that the proposed O. Gerasymov approach differs from the no-threshold or probabilistic approaches and opens the way for an alternative parameterization of the phenomenological framework of hormesis.

The absence of sufficient data, is strictly addressed to the phenomenon of dose-effect needed to clarify the parameters of the influencing factors, hampers proper parameterization data on radiation hormesis in any of the proposed approaches. The task of forming accurate phenomenological database is a separate problem.

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2. Petin, V. G., Pronkevich, M. D. Radiation hormesis under the influence of small doses of ionizing radiation: A manual for the course "Ecological Biophysics". – Obninsk: INPE MEPhI, 2012. – 73 p.

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THE STUDY OF THE BIOLOGICAL PROPERTIES OF MELANIN PIGMENTS OF BASIDIOMYCETES IN ARTIFICIAL CULTURE

Melanins represent a numerous and intensively studied class of natural polyphenolic pigments. Melanin’s pigments detect in living organisms on all evolutionary levels.

The research of physical and chemical, biological properties the melanin’s pigments of the mushrooms received in the conditions of deep cultivation, definition of their type and predecessors, studying of a possibility of practical use as medical and treatment-and-prophylactic medicines.