

Genetically modified food: evaluating risks and benefits

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Introduction. Genetically modified food is a fairly common thing for people nowadays. It takes a tremendous part in the population's nutrition and yet it is considered to be one of the largest problems for a healthy way of life. All over the world it is argued about the safety of genetically modified produce. The relevance of this research is determined by numerous factors, in particular the disinformation of the population about the influence and effects of the GMO on human body, the vast sales of genetically modified produce in stores as well as fair indifference of the Ukrainian people about their health.

Materials and methods. In the research, the methods of analysis, synthesis, prediction and generalization were used. Information base of the research serves the works of Ukrainian and foreign scientists, scientific articles and publications.

The results and discussion. Genetically modified foods include the presence of transgenic organisms. Transgenic is called species of plants, which successfully operates a gene, transplanted from other species of plants or animals. The transgenes may affect the products, giving them significant advantages. Foods derived from genetically modified crops can have a better taste, look better and be stored longer. However, it is already a well-known and proved fact that this creates a number of problems mainly connected with the deterioration of human health. Some people question that. Therefore, in order to find a proper answer to this question, numerous researches have been conducted. They have shown that food with introduced genes of animals does not only adversely affect human body, but also brings a variety of genetic abnormalities that might even have lethal effect. In other words, people run the risk of losing their health as upon consuming food containing GM genes, in the human organism the appearance of deviations in the genotype is probable, leading to more frequent incurable diseases and defects in subsequent generations. Scientists believe that the transgenes are linked with the growing number of allergic and oncological diseases as well as the problem of obesity. This is not taking into account minor and short-timed health issues, such as indigestion and decreased immunity. Notable, that in spite of all the dangers, there was no substantiated scientific research until recently that indicated all the probable risks of authorized genetically modified products' application. However, according to several sources, it is incorrect to be categorical towards genetically modified food as it can have a number of benefits. It is claimed that the chemicals contained in such a food are accumulated less than in any of their natural counterparts. Apart from that, some GM genes destroy herbicides due to the content of a particular enzyme. In favour of GM product, it is stated that all the plants obtained through genetic modification, are mandatory tested for biological and food safety. Therefore, the argument against it cannot be considered accurate as doctors consider that the influence of genetically modified products on humans is not immediate and will become apparent only in 50 years – when changes at least one generation people that were fed transgenic food.

Conclusion. GM food has a unique opportunity to save the world from hunger, to protect the planet from ecological and demographic catastrophes. However, at the same time GM plants are violating the ecological balance in nature and can negatively affect our health. Hence, if to examine this question from two perspectives, it is indicated that disadvantages outweigh, making genetically modified food extremely harmful.