

## Legal Norms for Ensuring the Quality and Safety of Food Products

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**Abstract:** This article examines the role of biological and landscape diversity in Uzbekistan as a component of national wealth and analyzes, from a legal perspective, the issues of ensuring the quality and safety of food products during the utilization of biological resources. The concepts of biodiversity and “biological resources” are explored, highlighting their economic and social significance for food, industrial, and medical sectors. The study comparatively investigates the national legislation regulating the use of plant resources, food quality and safety, and healthy nutrition, alongside the recommendations of international organizations. Environmental and legal risks associated with genetic engineering and genetically modified organisms (GMOs) are analyzed, substantiating the need for a dedicated law on genetic engineering in Uzbekistan. Furthermore, proposals are made to incorporate the GMO concept into the “Law on the Quality and Safety of Food Products,” clarify the functions of authorized sanitary and veterinary authorities, and optimize certain legal provisions. The author emphasizes the necessity of harmonizing national legislation on the rational use of biological resources and food safety with international experience.

**Keywords:** biological resources, biodiversity, food safety, genetic engineering, genetically modified organisms, environmental law, food legislation, healthy nutrition, improvement of national legislation, international experience, sustainable development, environmental security.



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The biological and landscape diversity of Uzbekistan’s nature is an integral part of our national wealth. This wealth has emerged over several millennia of evolution and represents a vast legacy left to us by our ancestors. It is our solemn and responsible duty to preserve this legacy for future generations in a diverse and sustainable manner.

It should be noted that there are different approaches regarding the origin of the term “biodiversity.” According to some scholars, the term was first used by G. Bates [1] in 1892. Other scholars argue that the term “biodiversity” was first [2] applied by V. Rosen in 1968 during the national conference “US Strategy for Biodiversity Relations” [3].

According to the Convention on Biological Diversity, “biological resources” include genetic resources, organisms and their parts, and ecosystems that are valuable or potentially useful to humanity[4].

It is difficult to imagine the full range of products and services arising from biodiversity. Certain species are critically important. For example, humans use approximately 7,000 plant species for food, 90% of the world’s food products are derived from just 20 species, and three of these (wheat, maize, and rice) supply half of the global population’s food needs. Biological resources also serve as important raw materials for industry and medicine[5].

According to the Law of the Republic of Uzbekistan “On the Protection and Use of the Plant World,” the collection of wild plants for medicinal, technical, and food purposes by legal and natural persons is allowed in accordance with the procedure established by legislation. In particular, this is carried out in accordance with Article 27 of the Law “On Forests” and Clause 11 of the Regulation “On the Use of Plant World Objects and the Procedure for Obtaining Permits in this Area,” approved by Resolution No. 290 of the Cabinet of Ministers on October 20, 2014.

In the use of biological resources, the following issues are particularly important for ensuring the quality and safety of food products:

- Human activities related to production and consumption have increased the demand for natural resources on the one hand, and worsened environmental conditions on the other;
- International expert studies on food safety show that the situation in the world and in some regions is complex, raising serious concern;
- According to the United Nations Food and Agriculture Organization (FAO) and the World Health Organization (WHO), over 840 million people worldwide—almost one in eight—are undernourished, and more than 30% of the world’s population suffers from malnutrition, including deficiencies in essential microelements and vitamins. As a result, over 160 million children experience growth, physical, and intellectual development impairments;
- Environmental degradation continues, and soil deterioration is exacerbated by the continuous use of chemicals, mineral fertilizers, and pesticides[6].

In particular, the production of food and the fulfillment of growing food demand are lagging behind the rapidly increasing global population. The 21st century has begun as a testament to human ingenuity and intellectual advancement. Humanity has become accustomed to regarding the latest achievements and successes in science and technology as routine[7].

On an international scale, population growth necessitates satisfying the demand for natural resources and agricultural products, ensuring the rational use of resources, and achieving development under conditions of sustainable growth, while forming a legal and regulatory framework and introducing innovative technologies based on scientific progress.

In this context, the activities of genetic engineering positively influence the development of ecology and agriculture by promoting environmental protection, rational use of natural resources, and ensuring ecological safety for the population. These objectives are considered key factors in achieving sustainable development.

Furthermore, it can be stated without doubt that genetic engineering and its advancements will become the primary and decisive factor in solving increasingly complex global challenges such as hunger, water scarcity, environmental pollution, and almost all problems associated with human survival. In particular, research in genetic engineering has achieved high results in addressing the food problem and increasing the yield of agricultural crops, which are directly related to this issue[8]. Today, the majority of agricultural products available on our markets are derived from varieties and breeds developed using genetic engineering innovations. For instance, humanity

readily accepts apples and potatoes resistant to certain pests, or tomatoes and cucumbers that are safe for human consumption but lethal to rodents.

In recent years, many developed countries have relied on the achievements of genetic engineering to meet the growing demand for agricultural products. For example, over the past two to three years, American watermelons appearing in our markets have shown smaller seeds, higher water content, and greater sweetness compared to traditional varieties[9].

Genetic engineering expands human capabilities and creates new dimensions in understanding natural laws, addressing urgent ecological and medical problems, and coordinating and harmonizing various sectors of industry and agriculture. It also contributes to solving numerous ecological and social issues[10].

Scientific research in genetic engineering serves as a fundamental tool for developing vaccines that prevent diseases, medicines that rapidly treat illnesses, and new types of food products. However, such progress requires adherence to ecological safety and respect for natural laws. For example, U.S. scientists have publicized in the media the creation of drought-resistant rice varieties by altering the DNA code of rice grains through cloning techniques.

It should be noted that experiments and practices conducted to achieve new results may yield not only positive but also negative consequences, which researchers cannot always fully guarantee. In particular, modifying the genes of previously unrelated plant and animal species may pose unforeseen risks to humans in the future. Therefore, organizing the rational use of natural resources for scientific purposes and establishing the legal mechanisms to regulate this issue is of critical importance.

In the literature, human intellectual and creative activity is carried out in all areas related to living nature, such as medicine, biology, zoology, selection, genetics, physiology, etc. It is noted that any living being can be the object of genetic engineering research.

The product obtained as a result of genetic engineering activities is a matter that falls within the scope of civil legal relations, but this process itself is closely related to the laws of nature and the legislation on nature protection.

In foreign countries, this activity is considered an object of environmental law and is considered a separate institution for study. According to I.V. Gushchin, genetic engineering and the relations related to it fall within the scope of environmental legal relations.[11] Article 28 of the Ecological Code of the Republic of Kazakhstan provides for the procedure for carrying out genetic engineering activities, and also establishes environmental legal requirements that must be observed by persons carrying out this activity.

The results of genetic engineering can be quite dangerous for human health and the environment. If a regulatory legal act is developed in this regard, this document will pay primary attention and priority to environmental relations, which will serve as a basis for serving as a special source of environmental law.

Many CIS countries have adopted legislative acts regulating this very area. For example, the Russian Federation has adopted the Law “On State Regulation of Activities in the Field of Genetic Engineering”. Switzerland, New Zealand, Ukraine, Moldova, Armenia, and Belarus have created legal frameworks aimed at protecting the environment and ensuring the rational use of living nature and environmental safety in the field of genetic engineering[12].

The need to adopt the Law of the Republic of Uzbekistan “On Genetic Engineering” has arisen.

In our opinion, the law proposed for adoption above should reflect the legal concept of genetic engineering activities, state regulation of activities in the field of genetic engineering, protection and rational use of natural resources, ensuring the environmental safety of the population, the

limits and norms of environmental and ecological safety during the implementation of this activity, and measures for the legal protection of the results of genetic engineering.

Innovative ideas and projects, which are an important means of social development, serve to expand the range of goods produced, reduce production costs, and introduce environmentally friendly technologies.

The unique soil and climatic conditions of Uzbekistan, the average number of sunny days in our country of 320 days a year, and the consistent alternation of all four seasons create favorable opportunities for growing a wide variety of the main varieties of high-quality fruits and vegetables.

It should be noted that a comprehensive set of measures has been implemented in the republic to ensure the gradual growth of the food industry and increase food production in the country. As a result, in recent years, the quality of the population's nutrition has significantly improved, the structure of food consumption has changed, per capita consumption of meat and meat products has increased by 1.3 times, milk and dairy products by 1.6 times, egg consumption by 2.2 times, vegetable consumption by 2.6 times, potato consumption by 1.7 times, and fruit consumption by 4.0 times.

The improvement in the structure of nutrition and diet, together with other factors, has had a positive effect on population health indicators. Over the past 10 years, the proportion of underweight children has more than halved (from 4 percent to 1.8 percent), and the incidence of anemia in women has decreased by 2.5 times. The average life expectancy of the population of Uzbekistan has increased by 6.5 years (from 67 to 73.5 years), with the average life expectancy of women reaching 75.8 years[13].

In the 1990s, Uzbekistan, which was an agrarian country and dominated by cotton, imported potatoes, grains, vegetables, meat, and dairy products. However, these products could have been grown domestically, in our fertile fields. But they were not. You will learn the reason for this from this book. Today, 96 percent of food products are produced domestically, and the rest is exported abroad.[14] It should be noted that the Law of the Republic of Uzbekistan “On the Quality and Safety of Food Products” establishes the legal basis for providing the population with high-quality and safe food products. The requirements of this law also apply to perfumes, cosmetics, and tobacco products. This law establishes state standardization in the field of ensuring the quality and safety of food products, state registration of food products and equipment intended for their preparation and in contact with food during use, certification of technologies, equipment, products and tools intended for their production, storage, transportation and trade in food products, planning measures to ensure the quality and safety of food products, creation and production of new food products, use and disposal of food products that do not comply with norms and rules, and liability for violation of legislation on the quality and safety of food products.

“...human health, life expectancy and quality of life are closely related to healthy and rational nutrition...”[15].

On August 29, 2015, the Cabinet of Ministers of the Republic of Uzbekistan adopted the Resolution “On Approval of the Concept and a Set of Measures to Ensure Healthy Nutrition of the Population of the Republic of Uzbekistan for 2015-2020”, according to which the Concept and a Set of Measures to Ensure Healthy Nutrition of the Population of the Republic of Uzbekistan for 2015-2020 are aimed at solving the following priority tasks:

preventing diseases associated with unhealthy eating and reducing their prevalence, organizing widespread explanatory work on healthy nutrition as the basis of a healthy lifestyle for the population, including strengthening the promotion of healthy nutrition, including through the active use of the media;

To further regulate the system of organizing nutrition in educational and medical institutions, to improve the regulatory and legal framework, to improve the diet of organized children's groups, to introduce effective mechanisms for monitoring the quality of food products and food raw materials produced in the territory of the Republic of Uzbekistan and delivered from abroad;

to create conditions that ensure the satisfaction of the population's needs for healthy nutrition by stimulating the production of food products in our country, especially products enriched with important micronutrients, to create food products based on local raw materials, and to form an environment conducive to the introduction of healthy nutrition principles among the population;

to prioritize fundamental scientific research in the field of healthy nutrition and dietetics aimed at studying the diet of various groups of the population and the causes of the development of diseases associated with nutrition.

CIS countries have adopted normative documents in this regard. "Fundamentals of the State Policy in the Field of Healthy Nutrition until 2020 and the Plan of Measures" of the Russian Federation (2010), Federal Targeted Program of the Russian Federation for the Development of Physical Culture and Sports for 2016-2020 (2015), Concept and Action Plan for the Implementation of the State Policy of the Russian Federation to Combat Tobacco Consumption for 2010-2015 (2010), Decree of the Republic of Moldova "On Approval of the National Program on Nutrition and Dietary Guidelines for 2014-2020 and the Plan of Measures for 2014-2016" (2014), Resolution of the Republic of Moldova "On Approval of the National Program on Tobacco Control for 2012-2016" (2012), "Comprehensive Program to Combat Tobacco Smoking for 2011-2015" (2011), "State Program of Measures to Prevent and Eliminate Alcoholism and Alcoholism for 2011-2015" of the Council of Ministers of the Republic of Belarus (2011), "State Program for the Development of the Healthcare System "Health of Kazakhstan" for 2011-2015" (2011). This Decree covers issues of nutrition, physical activity, tobacco and alcohol.

In the Law of the Republic of Uzbekistan "On the Quality and Safety of Food Products", biologically active additives to food are natural or biologically active substances that are identical to natural substances, obtained by processing food raw materials or artificially and are intended for direct consumption with food or for inclusion in the composition of food products concentrates of substances, food raw materials - objects of plant, animal, microbiological, as well as mineral origin used for the production of food, water, food additives - substances, compounds in their natural or synthesized form, intentionally added to food in order to impart certain properties and (or) preserve them, are also reflected in the issues related to them.

The Law "On the Quality and Safety of Food Products", adopted in 1997, should be amended and supplemented, taking into account the reforms carried out over the past period, achievements in the field of science and technology, and achievements in the field of legislation of foreign countries. In the current version of the Law, Article 1 states that "The requirements of this Law also apply to perfumes, cosmetics and tobacco products." It is proposed to remove the norm in the second part of this article. In our opinion, perfumes, cosmetics and tobacco products and tobacco products are subject to other legislation. That is, they are included in the framework of relations regulated by the Law of the Republic of Uzbekistan "On Sanitary and Epidemiological Well-being of the Population" dated August 26, 2015. Also, relations related to "tobacco products" are included in the framework of relations regulated by the Law of the Republic of Uzbekistan "On Restrictions on the Distribution and Consumption of Alcohol and Tobacco Products" dated October 5, 2011.

Article 2 of the Law "On the Quality and Safety of Food Products" is called the main concepts, and it is necessary to introduce the concept of genetically modified organisms (GMOs). In particular, genetically modified organisms are a living organism whose genotype has been modified using artificial genetic engineering techniques. In the development and further

enrichment of such concepts, the speeches of President Islam Karimov at the opening ceremony of the international conference on “Important Resources for the Implementation of the Food Program in Uzbekistan” and the expert Scholars can be further enriched by their opinions.

Article 5 of the Law “On the Quality and Safety of Food Products” is called state regulation in the field of ensuring the quality and safety of food products, and the third part of this article should be supplemented with the following norms. It is proposed. It is necessary to introduce norms that state “in the protection of food safety, state sanitary or veterinary bodies shall take remedial measures”. Such norms are considered and implemented in practice as tasks performed by these bodies. The establishment of such norms in the legislation would be impractical from a practical point of view. In addition, the Law of the People's Republic of China “On Food Safety” [16] (Article 114), the Law of the Republic of Belarus “On the Safety of Food Products for Human Life and Health” (Article 14), and the Law of the Republic of Kazakhstan “On the Quality and Safety of Food Products” (Article 22) clearly define the powers of specially authorized bodies.

In conclusion, it should be noted that the urgent problems that require solving in improving the legal basis for ensuring the quality and safety of food products when using biological resources, ensuring food safety, undoubtedly require further coordination of efforts in this area and large-scale international cooperation, joint development of forward-looking approaches and conclusions. Because improving the legal basis for ensuring the quality and safety of food products when using biological resources requires systematic and continuous analytical study and improvement of regulatory and legal documents based on the experience and practice accumulated in different countries of the world.

#### **LIST OF MATERIALS USED AND RECOMMENDED**

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