NOVATEUR PUBLICATIONS
JournalNX- A Multidisciplinary Peer Reviewed Journal
ISSN No: 2581 - 4230
VOLUME 7, ISSUE 1, Jan. -2021

INTERNATIONAL EXPERIENCE IN ENSURING THE QUALITY AND COMPETITIVENESS OF FOOD PRODUCTS

N.SH. MUMINOV
Doctor of Technical Sciences, Professor, Head of the Department of Standardization And Certification agricultural products "of the Tashkent State Agrarian University, muminov.najmiddin@mail.ru

N.N.AKOBIROVA
Trainee Researcher

ABSTRACT:

This article describes the activities and international experience of developed countries in ensuring the quality and safety of food products and their competitiveness. The role and significance of food in the human body is indicated. The negative effect of harmful and toxic substances on the human body is indicated. The analysis of ways to provide the population with food is carried out. An analysis of the work carried out in the Republic of Uzbekistan to ensure the quality and safety of agricultural and food products is made, recommendations are given for raising them to a new level of provision.

KEYWORDS: food quality, food competitiveness, food safety, chemical composition, toxicity, international experience, standardization, certification.

INTRODUCTION:

President of the Republic of Uzbekistan Sh.M. Mirziyoyev held a meeting on September 23 and 28, 2020 on the state of providing the country's population with high-quality and safe agricultural and food products, increasing their export orientation, as well as the effectiveness of reforms in the system of technical regulation, standardization, certification and metrology.

It was decided that in the republic it is necessary to abolish over 5,000 outdated standards adopted before 1995, bring technical regulations on product quality and safety in line with the requirements of international standardization organizations, the requirements of standards of European countries and the Eurasian Economic Union (EAEU).

It was noted that in recent years 43% of the country's standards have been brought up to world standards - their total number has reached 12 thousand. The task was set to bring by the end of next year the number of international standards implemented in the country to 14 thousand and the level of compliance with national standards to 50%, and in 2021 - to 21 thousand (75%).

Proceeding from this, the achievement of the quality and competitiveness of food products is relevant in providing the country's population with high-grade food products and increasing their export potential. In order to increase the export volume, the products delivered to the world market must comply in all parameters and indicators with the requirements of international standards, norms and rules.

It is known that the world's population is ~ 7.83 billion people and increases daily by 260-310 thousand, and every week on average by a million. Modern man consumes ~ 850 g of food and 2.2 liters of liquid per day. Thus, the daily diet of the world's population is more than 4.2 million tons of food. It is characteristic that the

production of natural and food raw materials lags and will lag behind the rate of population growth. Today the problem of insufficient consumption of proteins and vitamins by the population is acute.

A significant role in covering the global food shortage was assigned to the expansion of cultivated areas, an increase in livestock, crop and livestock productivity.

Another approach is real. This is an increase in the nutritional value of products, which is associated with the use of productive varieties of plants with a high content of protein, vitamins, and the breeding of new breeds of farm animals.

The chemical structure of food was the primary code that determined the types of metabolism and biochemistry of the body. The introduction of flowers, roots and other plants rich in vitamins and microelements into the diet is the restoration of the necessary balance.

In the modern food industry, various methods are used to improve the quality of food products and improve the technological process. The use of food additives is considered to be the most cost-effective, and as a result, they are widely used in most countries.

One of the ways to solve the food problem is the chemical synthesis of food products and their components. A qualitatively different direction for a possible solution to the food problem is the use of genetically modified (GM) products. The use of seeds of genetically modified plants significantly increases the yield.

It is believed that with the current population of the planet, only GM foods can save the world from the threat of hunger, since with the help of genetic modification, it is possible to increase yields and change the quality of food.

Others, on the other hand, see genetic engineering as a departure from the classical principles of breeding. Interference with natural processes can have a detrimental effect on consumers of modified products, as well as lead to environmental imbalances, disruption of the nutritional food chain, etc.

Food contains more than 650 substances necessary for normal life. Each of these substances has its own place in the chain of biochemical processes. 96% of organic and inorganic substances obtained with food have certain medicinal properties.

According to the data of the World Health Organization (WHO), more than 500 thousand chemical compounds are used in industry, of which 40 thousand are harmful and 12 thousand are toxic. For many compounds, maximum permissible levels have not been established, including for food products.

In this regard, an urgent task is to control the quality of food products, the purpose of which is to protect the consumer from low-quality and dangerous products.

Consider international experience in ensuring the quality and competitiveness of food products in different regions and countries of the world.

EUROPEAN FOOD CONTROL LEGISLATION:

In 1920, the German Institute for Standards (DIN) established the DIN conformity mark in Germany. The DIN mark is registered in Germany in accordance with the trademark protection law. In 1926, the official concept of "certification" appeared in England. The certification is largely voluntary and is represented by several national systems. The largest of these is the British Standards Institute.

A 1938 decree created a national certification system in France under the NF (French Standard) mark. In 1952, India passed a law on ISI certification marks. At the same time, the Canadian Standards Organization (CAS) was established in Canada. In the early 1960s, Denmark, Sweden, Norway and Finland developed their own regional system. Its activities are based on the "Special Rules", national committees decide the issues of awarding the product with the conformity mark.

Unlike Western Europe, the United States does not have uniform certification rules (a single national certification body). However, despite the absence of a single national certification body, attempts are being made to adopt common criteria for existing certification systems.

The world community, while removing technical barriers to trade, strives to implement the principle of "one standard, one test, one conformity assessment or tested once, accepted everywhere."

For this purpose, a national accreditation system for testing laboratories has been created, registration of certification systems is being organized. This principle is largely reflected in a number of provisions of the European Community (EU), the essence of which is a clear separation of mandatory and voluntary requirements for product quality indicators, harmonization of requirements of standards, technical regulations, etc.

Food control legislation in the EU has a three-tiered structure.

In the EU, the most important safety indicators for agricultural products and products of processing industries are defined in regulations and directives and are aimed at protecting public health, consumer interests (preventing falsification and fraud in the sale of food), protecting animals, plants and the environment.

The regulations of European law define a specific framework for the application of national and regional law.

They are flexible enough to allow for your own interpretation of national regulations in any country that is a member of the EU, without contradicting European legislation.

For example, UK legislation governing maximum residual levels of pesticides in food is based on European Codex Alimentarius: Pesticiduesin Food legislation, while legislating the maximum residual level of pesticides to be found in food, taking into account the need to produce safe food.

In cases where there is no specified maximum level of pesticide content, it is established by national legislation on the basis of analytical data.

In the EU countries, new directives are constantly being developed, lists of controlled substances are being finalized, maximum permissible levels (MRLs) are established for their content in certain foods or raw materials.

The EU has developed and continues to improve the certification system for agricultural production. For example, the decree "On organic farming and appropriate labeling of agricultural products and foodstuffs" defines the requirements for the production of organic products.

This standard assumes quality control at all stages of production, starting with raw materials. Today, it is impossible to sell agricultural and food products on the EU market without a confirmed quality and safety

management system at the enterprise based on HACCP principles (Hazard Analysis and Critical Control Point, which means risk analysis and critical control points), which are a key element of the family of international standards. ISO 22000.

Food processing companies ensure the safety of their products and conduct their wn controls.

The functioning of the enterprise self-control system is audited by a government agency.

The basic principles legally declared by the EU countries in the field of veterinary medicine and foodstuffs require the adoption of obligations on "self-control" at the enterprise, veterinary supervision of food products at the enterprise, as "self-control" of the functioning of unified border control bodies, EU-approval of certain enterprises and organizations , regionalization in crisis cases.

EU food law ensures the free circulation of food and feed. Regulation (regulation) EC No. 178/2002 of the European Parliament and of the Council establishes:

General principles and requirements for food safety;

Food safety procedures;

The obligations of the participants related to food and feed at all stages of production and consumption;

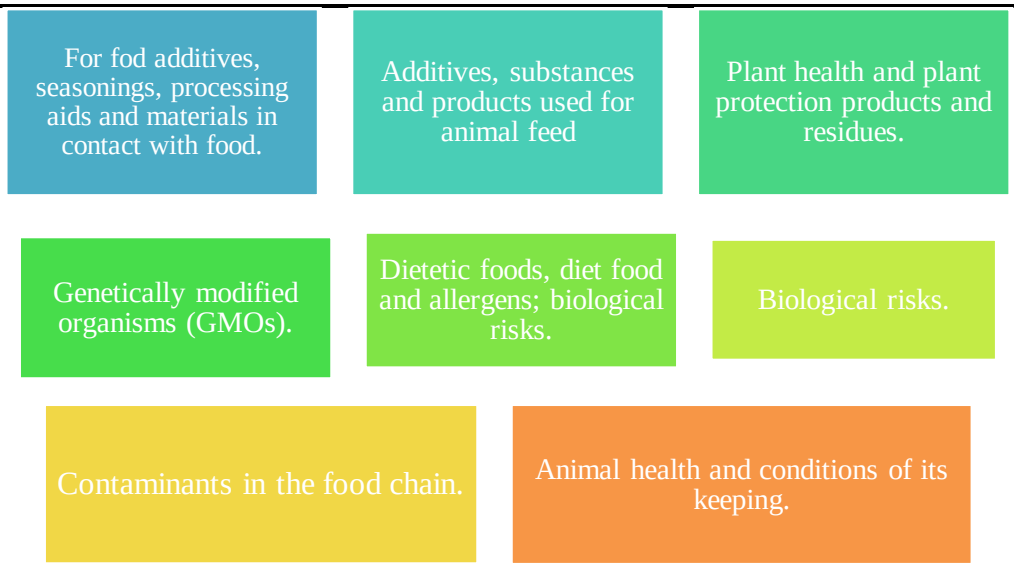
Responsibility for food products of organizations participating in the food chain, the basis of a rapid response system for notification of immediate or indirect risks to human health, and is determined by the European Coordinating Body for Food Safety.

Such an EU body is the European Food Safety Authority (EFSA), which includes 8 scientific committees (scientific groups). The main task of the committees is to provide scientific advice and substantiation to EFSA, which should provide scientific and technical support, independent information and exchange of information on risks, a high level of protection of human life and health.

Collecting and analyzing the data obtained allows monitoring and better characterization of risks that have a direct or indirect impact on food and feed safety.

The European Food Safety Authority is responsible for risk analysis (a mandatory procedure of three elements: risk assessment (scientific advice and analysis of information: identification and description of the hazard; exposure assessment; risk description); exchange of risk information (about hazards and risks - professional competence , prevalence, transparency in relation to the consumer); risk management (legislation and supervision) - the formation of legislation in the EU and member countries where food supervision is carried out by the FVO in Dublin).

Information on control systems may be requested from third countries. The function of laboratory control is transferred to importing countries, subject to supervision by EU authorities (reference laboratories).



The presence of such laboratories in importing countries is necessary in order to prove continuity of control from farm to table. The competent authority must delegate control functions to laboratories that are functioning, assessed and accredited in accordance with DIN EN ISO / IES17025.

The RASFF (Rapid Alert System) system is designed for the rapid exchange of information between states in order to protect the consumer from any, even potential, hazards arising from the consumption of food. The main objective of this system is to prevent the placement or withdrawal from the Community market of food (or feed) that pose a significant risk to the health of the consumer.

The main food groups that require the establishment and operation of an alarm system are: fish, meat, milk, fruits and vegetables, grains, nuts, spices, etc.

The reasons for the need for an alert can be bacteria, mold, mycotoxins, heavy metals, organic environmental pollutants, pesticides, veterinary drugs, various additives found in food that pose a risk to consumer health.

UNITED STATES FOOD QUALITY CONTROL:

In the United States, quality management developed after the industrial revolution at the turn of the 19th and 20th centuries, which put an end to handicraft and required new approaches to the organization and quality of work as a result of the transition to large-scale and mass production of products.

In the United States, food safety requirements are governed by both federal and state laws. The main regulatory act at the federal level is the Consumer Safety Law.

The United States has a stable and highly effective food and drug quality control system that takes into account safety requirements. The system aims to ensure that agricultural products are produced using methods and substances that preserve the integrity of natural products.

The basis of this system is the Food and Drag Administration (FDA). The FDA exercises oversight functions, accredits and oversees independent peer laboratories. The FDA is an independent body outside the sphere of influence of the federal ministries: health and agriculture.

To protect the consumer, the FDA sets limits for the concentration of substances in food and conducts frequent checks of the so-called "market basket" when products are purchased in different regions of the United States and then analyzed. The FDA conducts inspections of incoming food imports.

Attention to quality and safety issues in the United States is currently paid at all levels of the executive and legislative branches, as well as the public, a system of incentives has been created for food manufacturers, including agricultural ones, in order to conduct certification of production, implement quality management systems and security.

Considerable attention is paid to creating incentives for enterprises and organizations to produce high-quality and safe products for the domestic market. For example, enterprises that have not passed certification according to the QS-9000 system (quality standard based on the principles of the international standards of the ISO 9000 series) cannot take part in the competition for receiving orders for the supply of products for state needs.

The use of chemical substances by agricultural producers is severely limited by law, the use of cytotoxic substances based on carbohydrates is completely prohibited.

In the United States, the National Organic Program (USDA) is being implemented, which promotes the active development of a certification system for agricultural production. It is a system of regulations, mechanisms and structures for their application. The regulatory framework is aimed at creating a quality control system at all stages of product production, starting with raw materials (used feed, grain, etc.). For example, today in the structure of the WTO there are more than 14.5 thousand standards.

Thus, in the United States, a certain chain is being created that ensures the achievement of unconditional quality and safety of food products on the basis of certification and control of land, raw materials, production, transport and trading companies and a product at the stage of production and sale.

A distinctive feature of the food quality and safety regulatory system in the United States is the involvement of independent expert companies with testing laboratories.

FOOD SAFETY REGULATORY SYSTEM IN JAPAN:

The urgency of the problem of food security in Japan acquired after the crisis in the world economy in 1974, associated with a sharp jump in prices for raw materials and energy resources. Japan, which is self-sufficient in rice, fruits, vegetables, seafood, is highly dependent on the supply of corn, cereals, legumes, while the consumption of rice is constantly decreasing, giving way to imported goods.

The USA is currently the main exporter to Japan. They account for 23.9% of Japanese imports, the bulk of which are agricultural products.

The government document "Policy of providing the country with food" outlines the main goals of food security:

- maintain the level of self-sufficiency in food, increasing production, and effectively use the resources available in Japan;
- conclude a bilateral agreement with exporting countries, guaranteeing a stable supply of food;
- create a reserve of the most important agricultural products to prevent a crisis;
- expand aid to agriculture in developing countries to diversify sources of imports.

The state policy of Japan in the field of food security is import-oriented and is aimed primarily at expanding the market for food suppliers and reducing the share of major importers in the total supply.

Thus, we can conclude that the quality of the products plays a special role in providing the population with food products and increasing the export potential in the food and processing industry.

It is known that the competitiveness of a product is traditionally determined by a

number of factors, such as the cost of production, operating costs, service, and authority and supplier status. However, one of the main indicators of the product was and remains the high quality of the offered product.

Using the experience of the countries of the European Community, the United States and Japan will improve the state system of control and supervision of the quality and safety of agricultural products, eliminate inconsistencies in the regulatory and legal requirements of the Republic of Uzbekistan with world standards.

Achieving high quality and ensuring the safety of products of the agro-industrial complex of the Republic of Uzbekistan, the creation of unified rules and requirements for producers of agricultural products and food products will greatly facilitate the task of promoting these products to the countries of near and far abroad.

An important issue in the field of ensuring the quality and competitiveness of products is the actualization and harmonization of the requirements and indicators of the national standards of the republic with the requirements of the standards of the international organization ISO and the standards of industrialized countries.

The analysis of the achievements and the experience of the developed countries in ensuring the quality and safety of products dictates that the production enterprises of the republic, taking into account the advanced experience of work, need to develop a comprehensive action plan to increase production capacity, expand the range of products.

It is necessary to provide for the improvement of existing technologies, taking into account the latest achievements of science and technology, the introduction of innovative approaches, modernization and reconstruction of production, to ensure the quality and safety of products, to update and harmonize existing regulatory documents, as well as to implement the requirements of international ISO standards.

Considering that the level of professional knowledge and production skills of higher education specialists is the main factor in ensuring the quality and safety of food products, the Department of Standardization and Certification of Agricultural Products of the Tashkent State Agrarian University pays special attention to ensuring the integration of education - science - production.

Agreements of cooperation were concluded with the departments of the agency "Uzstandard", in particular, the Research Institute of Standardization, Certification and Technical Regulation, the National Institute of Metrology, the Center for Accreditation of Testing Laboratories and Certification Bodies, the Republican Center for Scientific Testing and Quality Control ("UzTest" DUK), as well as other republican and foreign specialized departments.

According to this, planned scientific research, scientific and methodological educational and organizational work is being carried out to improve state educational standards and curricula, to prepare textbooks and teaching aids.

REFRENCES:

1) Law of the Republic of Uzbekistan "On the quality and safety of food products"
2) Law of the Republic of Uzbekistan "On certification of products and services"
3) The Law of the Republic of Uzbekistan "On technical regulation" dated 23.04.2009.
4) GOST R 52173-2003. Raw materials and food products. Method for identification of genetically modified sources (GMOs) of plant origin.

5) GOST 30178-96. Raw materials and food products. Atomic absorption method for the determination of toxic elements.
6) Guide to methods of analysis of food quality and safety / ed. I.M.Skurikhin, V.A.Tutelyana. - M.: Brandes-Medicine, 2008. -- 341 p.
7) Eller KI Methods of quality control and food safety // Ros. Chem. zhurn. - No. 1. - 2004. - P. 92–96.
8) Krestyansky Bulletin "USA guarantees the quality and safety of American food in Russia." 08.10.20016
9) Minchenko O.S. "Comparative analysis of the use of mechanisms for attracting experts and expert organizations in Russian and foreign practice." April 2014
10) Analytical Bulletin No. 8. "Actual problems of ensuring food security." 2018
11) Obolkina V., Nagaitseva T., Kovalenko Y., Nemchenko J. "US experience in creating a system of regulation and control of food safety".
12) Donchenko L.V., Nadykta B.D. Food safety: textbook. for universities - M.: Pishchepromizdat, 2001. - S. 525.
13) Ensuring food quality and safety 1. Food and health in Europe: a new basis for action Copenhagen, WHO Regional Office for Europe, 2005.
14) Soklakov V.V. ISO 22000: 2005: a new generation of food safety management systems // Standards and quality. - 2006.
15) Кувандиков, А. Л. (2019). ВЛИЯНИЕ СИСТЕМЫ ТЕХНИЧЕСКОГО РЕГУЛИРОВАНИЯ НА РАЗВИТИЕ ВНЕШНЕЙ ТОРГОВЛИ. *Экономика и социум*, (3), 228-233.