

Chapter 2.3.

MANAGEMENT OF AGRICULTURAL AND FOOD PRODUCTS SAFETY: CONCEPTUAL FRAMEWORK, EXPERIENCE OF THE EUROPEAN UNION AND PRACTICE IN UKRAINE

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1. Scientifically-methodical principles of single normative space of European Union and feature of its formation in Ukraine

Adoption in Ukraine's strategic course associative, and then full membership in the European Union Association Agreement EU-Ukraine (Association Agreement, 2014) accompanied by the appearance of a number of global challenges and issues, including the question of increasing the competitiveness of domestic goods pushed to the fore. Its essence is to ensure that products applicable requirements of the directives and regulations of EU and international and European standards. Regarding domestic agricultural and food products, is a key condition of its exports to the EU Member States in favor strict adherence to EU regulations concerning its safety and quality for consumers. In a broader sense refers to the regulatory framework or normative component (regulatory or normative dimension space) economic environment in which entrepreneurs operate in the agricultural and food sector (personal and peasant farmers, agricultural processing and food-company).

However, for an objective analysis of the situation with the state regulatory space directly in the EU must first apply to the assessment of the nature of fundamental scientific categories and their definitions, which are long-term operating problems, researchers said. In addition, due to expansion of research involved in terms of other disciplines and they were given treatment, which revealed the deeper features of a particular problem. Important basic categories of economic science, that is, its conceptual and categorical apparatus includes such popular notions as "space", "economic space", "space society" (Shults, 2010), "medium", "economic environment", "medium enterprise (external, macro, micro, internal)" and others. Abroad analysis of key macro factors (called PEST-analysis) have the following components: political and legal, economic, socio-cultural, technological environment (Saenko, 2006). Therefore, it is important to evaluate the relationship and interdependence between such basic concepts as "space and environment".

The scientific literature is used a wide range of phrases, the main of which is the term "space".

However, the corresponding load meaningful phrase provide the following features: geopolitical, humanitarian, research, economic, information, life, social, space, cultural, scientific, educational, religious, etc. market. Often, before defining feature space used is another important characteristic, namely only. In addition, the “space” can be specific or sectoral colors, namely, agricultural, industrial, geographical, water, air, peripheral, media, medical, network, cellular, tourism, finance, urban and more. In addition, the space can be specific in its dimension, such as: global, world, European, regional, areal, local as well as mega-, macro-, meso-, micro- and even nanospots.

An analysis of these features to draw this conclusion: narrow sectoral boundaries or “spot” use of the term “space” show a tendency to expand, consolidation, enrichment, acquisition of additional features as a result of institutional changes as in a particular community, and throughout the international community. This is reflected in the fact that the shared (common or uniform) rules for the specific types of spaces for a variety of geographically close countries, the transformation and convergence of basic principles of economic and social policy of conducting neighboring countries. This desire to unite in various forms necessary to achieve the key objective for these countries: efficient and rapid solutions to common or similar problems. Thus, the use of such features as a global, world, European, regional, areal, local displays the geographical location of the integration process at different hierarchical level.

The term “single” is used not as a single, but as a unifying definition or description that includes all the elements (objects, components, particles) that make up its own specific space. Thus for different types of spaces that term can combine rather different components. In addition, the basic nature of this association is to integrate not only these components, but also directly to different spaces that combine and operate on a single regulatory and organizational and institutional framework or system of institutions that generate relevant information flows or broadcast social and cultural values, or in the implementation of various international integration programs. One of the most prevailing among existing associations need to specify the “*single economic (regulatory) space*” of the EU. It was formed in the voluntary association of member states, which began with the 50’s. Its limits are common principles of entrepreneurship, harmonized rules for foreign economic relations, functioning unified system of technical regulation, introduced common (common to all) sanitary and phytosanitary measures, already for a long time demonstrated the effective functioning of the European model of food safety, removed any restrictions the movement of people, goods, services, capital in its internal borders, but with the exception of third countries.

Summarizing the wide range of publications studying the problem should be noted that for the economy “*space*” there are reasons to consider, especially as the area where the natural resources, material objects and people that combines a variety of legal forms of to ensure the achievement of their goals. In this context, the “*environment*” in practice and in the theoretical sense, including economic and social conditions, which is different livelihoods of local populations and production activities of business entities.

Thus, environmental or external to each business entity “*environment*” includes a set of environmental conditions, economic, social and institutional structures, and other factors that enable, mediate and accompany its business. However, besides the above-mentioned elements and factors significant impact on entities engaged in formed economic ties and social relations are the kind of network structure in which the company is held and based or with which conduct manufacturing and other activities.

Thus, the “*space*” acts as a bulk operation Environmental entire economy, its regional units, i.e. different clusters. It (“*Space*”) is revealed through configuration territorial consolidation of production facilities, organized flow of resources, technology direction and intensity of relationships, the closeness of economic relations between business entities and spatio-temporal parameters (i.e. chotyrohmirnist: length, width, height and time). However, the “*environment*” can be described as external to the particular business entity conditions and factors of its order within the space-time continuum in which the company operates. So common between “*economic space and economic environment*” is that the company, as legally independent and elementary particle national economy operates directly in the part of the economic space that is included in the scope of his interests, which extends the impact of productive capacity (raw zone resource provider) and within which are purchased and sold products (markets of raw materials, energy, finished products).

However, difference between “*economic space and economic environment*” is that the environment of a particular business entity (PBE) is only part of the economic space, although the impact of PBE and can spread beyond the specific space. For example, the impact of the international corporation that conducts operations in various parts of the world, beyond the direct economic space of the country in which the head office and its main production units. So, it is a zone of direct influence of the enterprise, which can not be stable at different times. As the business structure in different periods of time is at the stage of the life cycle, which takes place at a particular time, the real part of the economic area, which is within its influence, compared with the previous stage, expanded or minimized. However, such a straightforward relationship – it is extremely rare, and the vast majority of situations is changeable and even contradictory. This is because here their dominant role played by communications company with the environment: its density, diversity, vectors and intensity information, investment, logistics and other resource flows. In this respect, each company is unique, that is, only if a single entity.

However, there is sufficient reason to distinguish between “*economic space and economic environment*” on grounds such as the material basis of the operation of businesses and organization-legal, but in a broader sense – institutional environment that is no less and sometimes more value than the base. It covers legislation and regulations, traditions, customs, status and functions of the enterprise, social behaviors staff. Since this research priority is economic space and its normative component (regulatory framework), it is appropriate to his diagnosis and the line segment: agricultural (or agricultural and food) and off-agricultural sectors.

Research has established criteria for the selection of individual spatial systems (sub-systems society) different hierarchical levels. The most common of them on a territorial basis (i.e., clear the limited economic relations, processes and phenomena spatial scope) and by type of activity (The Association Agreement between Ukraine, 2014), although there is expansion of a number of criteria structuring economic space. According to the first (regional) approach isolated regions of different taxonomic levels (macro-, meso- and micro-) and not just a second-level features in this case are the geographical position, cultural and ethnic origin, specific economic conditions, zonal differences, function, performed by the region in the social division of labor, and the presence of inter-territorial interaction between business entities located in different regions, between regions so directly, that is, complex structures.

The second approach is to design indirect economic relations, processes and pheno-

mena occurring in the economic area, its coordinates. This spatial boundaries can be vague, that is blurred, extend beyond territorial units intersect and overlap one another as interest entities are not limited to the borders of the town, region or country. The more such crossings, *vzayemoprnyknenn* and circulation, the more dense is economy. In this section you can isolate and analyze economic space enterprise sector, industry sector, a separate individual, group, community, etc. (Olshanskaya, Fashevsky, Belokon & et al., 2009).

However, as in the present conditions defining characteristic acts interpenetration and interweaving close relatives or related concepts, then placed in a “*pure*” economic space of the country, territorial and production complex or a region impossible. This is because the elementary particles that make and basic elements of economic space are quite complex relationships and interactions with similar or different functional purpose objects of other types of spaces, which ultimately contributes to their mutual enrichment.

Since the early 2000s there was acceleration of unification and integration process in various sectors of economy, humanitarian sphere, public administration and so on. Even then acquired “*rights of citizenship*” and began actively used phrases (terms), reflecting current realities, including: a single educational space (Rybka, 2004), the only research space, a single energy space, the only cultural space, a single regulatory space, the only media space and others. In these examples, the basic term “space” is complemented basis (educational, cultural, regulatory, etc.) and through their union formed a generic term (normative space). Another feature is “only” is a component of an integrated concept of “single regulatory space” (SRS) and means: *on the one hand, as a general, i.e. one in many countries; and on the other hand, and this is necessary to emphasize – reflects the trend towards convergence, harmonization and integration of regulatory frameworks (measurements of spaces) around the world in a single, common for all.*

Note that the agricultural and food sector in Ukraine are diverse transformations that carry controversial impact on the primary production structures. Therefore, the domestic agricultural sector requires deep diagnostics, meticulous and objective assessment of the current situation in order to develop scientifically based approaches and directions and complex legislative and regulatory measures, investment, innovation and technological and practical. Their implementation should ensure the withdrawal of domestic production to the level of requirements introduced in the EU. This is a key condition for the integration of agricultural and food sector of Ukraine to the domestic market of the Member States and the production of agricultural and food products, which in terms of safety and quality is free to come and realize the European market. So we are talking about forming a common economic space, which is based will be based on the unity of the legal framework and its common agricultural domain for Ukraine and EU Member States.

Thus, the agricultural and food sector economic space serves an integral part of public space and the Ukraine is quite dynamic, organizationally and functionally structured orderly system of agricultural and food production and related types of business. In this system, integrated business entities of various legal forms (from private farms to agricultural holdings, from micro entities to large food processing) which are interconnected and technologically and economically. Their operation is aimed at solving the main task: meet the priority needs of members of society in a safe and high-quality agricultural and food products in sufficient quantities and at reasonable prices based on the rational use of the process involved in the production of natural, energy, human and other resources.

Normative space agrosphere Member States enshrined directives and technical regulations, systems of standardization, metrology, accreditation, conformity assessment, market surveillance and best practices set out in the regulations diverse European Union. In other words, the required space – a territorial and economic environment of businesses within which all business organizations adhere to a common “*rules of the economic game*”: adopted standards and specifications, special requirements, best practices, technical regulations, and in a broad sense – basic technical regulations, including market surveillance of compliance regulations, sanitary and phytosanitary measures concerning the safety and quality of agricultural and food products.

For modern conditions specified regulatory space may be limited to individual enterprise sector (economic activity), region, country, union of countries, including members of the European Union. Hard borders as the economic environment and regulatory space does not exist; it may be continuous, and fragmented, as well as fully formed, and in the making. Thus, the required space (normative dimension) is the key component, ie, one of the most important aspects of the economic environment. Another close in content component acts as the legal and regulatory framework of business and legal forms of business activity, where and for direct involvement are formed, take the signs normalized economic action and made economic relations between business entities.

However, a significant problem is how common “*rules of the economic game*” applied in everyday production activities of enterprises and to what extent. Unambiguous and transparent business entities adopted “*rules of the economic game*” suggests a uniform or unified economic environment, and subject to the availability of territorial gaps – the integration of individual fragmented parts in “*single regulatory space*”. The process of European integration, aimed at ensuring the entry of domestic entities in this space, basically involve adapting production to the requirements of regulations.

Standard component (regulatory framework) Economic Space introduced and operated for the past thirty years in the Member States. In Ukraine during the 1998-2016 a set of regulations has been developed that largely formed regulatory support agricultural and food sector. In its basic parameters regulatory framework designed to comply with European regulations, and therefore technical regulations must be harmonized with the base model technical regulations for the agricultural sector. In this regard it is important to analyze and reveal the nature and structure of the agricultural and food sector regulatory Ukraine, its difference from similar, operating in the EU, and on this basis to offer their areas of convergence and adaptation to European standards of domestic enterprises. Compliance with this condition will act as a guarantee of domestic enterprises producing safe and high quality agricultural and food products, which, subject to other components (certificate of conformity) is free to enter the food markets of the Member States.

As a clear idea of the required space (or dimension) agricultural and food sector in domestic science has not yet been formed, its existence is possible only if the functioning of economic space. Thus, the current regulatory framework is one of the economic space measuring agricultural and food sector, an indicator of its progressiveness in accordance with modern concepts of economic environment. Given that the study is aimed at the diagnosis process of integration of national agricultural and food sector in the EU single regulatory space, it is important to reveal the structure of the current regulatory framework of the agricultural sector and to characterize it.

As for the structure of the term “*single regulatory space*”, then the system includes the following levels, structural elements and activities of the relevant subjects for the restructuring and consolidation of space, namely:

- A set of state central executive bodies (CEBs), corporate organizations and institutions and civil associations involved in varying degrees of development and adoption of modern regulatory framework and its implementation requirements in the economic area agricultural and food sector;
- Structure of regulations and regulatory framework of economic space, which is identified through the technical regulations and sanitary and phytosanitary measures;
- CEB activities on completion of market surveillance for compliance with mandatory requirements for safety and quality of agricultural and food products;
- Activity of economic entities on the implementation of the requirements of regulations directly in the field of agricultural and food enterprises based on adaptation of the agricultural sector to the current regulatory framework. Consequently, the domestic regulatory system should be harmonized with the base model technical regulations, which operates in the EU;
- Management of building the regulatory space on the part of CEB, corporate bodies and NGOs directly within the EEA and interaction with the specialized institutions of the EU and other international organizations.

Formation of a single regulatory space of the domestic agricultural and food sector under current conditions – a dynamic process that involves several interrelated steps, acts as a reflection of the real impact of the EU to Ukraine and is aimed at the approximation and harmonization of national regulations with European and domestic enterprises to adapt its requirements. Ultimately, reforming the national system of technical regulation (STR) as one of the important components of the integration of Ukraine into a single regulatory space of the European Union, will be accompanied by a number of diverse transformations and changes, including:

- *Firstly*, the completion of the STR in accordance with the base model technical regulations for the agricultural sector of the EU;
- *Secondly*, convergence, integration and union of the main components of the national STR, which now are at different stages of formation;
- *Thirdly*, the increasing influence of national STR processes comply with European regulations on domestic enterprises safety and quality of agricultural and food products;
- *Fourth*, the formation, organization-building and practice of public market surveillance of compliance with regulations on safety and quality of agricultural and food products;
- *Fifth*, the implementation of sanitary and phytosanitary measures in the domestic agricultural and food sector according to European standards;

Sixth, the convergence and integration of STR with a European base model and the emergence of the basis of the new integrated components – single regulatory space (SRS) EU-Ukraine.

Objective indicator of the process will be smooth flow of domestic agricultural and food products to the food markets of the Member States, the SRS's ability to further develop the ability to self-preservation and integrity under opposition from internal transformations and damaging external influences. Analyze and systematize establishment, structure and diversified activity on the formation of modern regulatory Economic Area agricultural and food sector.

In shaping the regulatory framework agricultural and food sector participate organi-

zational structures with different legal status, but the results of their work will be not only legal, but direct practical value. Legal documents that will form a complex lace, meaning “cloth” regulatory space should have:

- *Firstly*, the different legal status (binding – voluntary – is recommended to perform only certain areas or entities);
- *Secondly*, to respect the hierarchy in terms of “the strength of their influence” (laws – ordinances – resolution – orders – regulations – recommendations);
- *Third*, a broad set of regulations for the practical implementation (technical regulations – national standards – standards enterprises – technical conditions for production – codes established practice – basic programs and simplified procedures proportionate to risk and based on the approaches and principles HACCP).

Among the institutions of government national authorities involved in almost all the subjects of the highest echelon, including the Parliament of Ukraine, President of Ukraine, the Cabinet of Ministers of Ukraine, who make the laws, issuing decrees, approve technical regulations and are preparing other regulations, ordinances, orders, orders, prescriptions and more. For the sphere of technical regulation when analyze on a “bottom-up” link next two are the ministries of Economic Development and Trade (*Economic Development*) and Agriculture and Food (*the Agriculture Ministry*). *Ministry of Economic Development* is the main body in the system of central executive bodies to form and implement state policy in the sphere of technical regulation (standardization, metrology, certification, evaluation (confirmation) of compliance, accreditation of conformity assessment, quality management).

However, given the specificity of agricultural and food products of the functions of technical regulation assigned to the Ministry of Agrarian Policy of Ukraine. In particular, one of the main objectives of the Agriculture Ministry is to develop and implement the state policy in the field of safety and quality parameters of individual foods. In this connection, it must be emphasized that the scope of the functions assigned to the Ministry all the food resources of the launch of their growth (i.e., including the creation of genetic material) to the ultimate level – consumption of finished products, and due to this the requirements for food raw materials and processes of production, their engineering, manufacturing, agrochemical, veterinary and other support, including compliance with safety and quality parameters.

Meanwhile, the Agriculture Ministry is also tasked to develop technical regulations, standards and other regulations, realization of functions in the sphere of technical regulation and inspection, review and abolition of sectoral regulations, preparation of annual work plans for Standardization (within the powers defined by law). Standards and technical regulations should cover all the products and apply as general requirements for the products and processes of production (horizontal level), and for specific types of agricultural and food products – from cultivation to consumption (vertical slice). To implement these and other problems in Ukraine was established more than 160 *technical committees for standardization* (TC), including in the Agriculture Ministry – about 30.

Formation of the agricultural and food sector space provides a broad set of diverse regulations, which should cover all aspects of the given object of research. In this connection, it is advisable to give the established definition of basic documents:

- *Normative document* – document containing rules, regulations, general principles, procedures or specifications relating to various activities or their results.

Today is established the following hierarchy of regulations, including the Law of Ukraine, decrees of the President of Ukraine, the Verkhovna Rada of Ukraine, decrees and orders of the Cabinet of Ministers of Ukraine, central executive orders and regulations. However, directly in STR legislated so vertical regulations:

- *Technical regulations* – legal act, approved by the Verkhovna Rada of Ukraine, the Cabinet of Ministers of Ukraine, joint or separate decisions of the European legislative bodies – the European Commission, European Council, European Parliament, which is defined product characteristics or related processes or methods production and service requirements, including the relevant provisions, *with which compliance is mandatory*. Technical regulations may also contain requirements to terminology, symbols, packaging, marking or labeling that apply to a specific product, process or production method. Technical Regulation contains sanitary measures. In the absence of technical regulations for a particular object of regulation, approved by the Verkhovna Rada of Ukraine or the Cabinet of Ministers of Ukraine applied, if technical regulations of the European Union;
- *Standard* – a document developed by consensus and approved by an authorized organization that sets the rules, guidelines or characteristics related activities or its results, including products, processes or services, compliance with which is optional. The standard may include requirements to terminology, symbols, packaging, marking or labeling that apply to a specific product, process or service. The standard does not contain requirements for food safety established sanitary measures;
- *Technical specifications* – a document approved by the market operator, which identifies the technical requirements for food and / or processes of production.

We note that the European Union has developed a kind of hierarchy structure and regulations of different legal status, namely:

- *EU directives* – legislation that set the same for all member countries of the Community requirements for safety, life and health, environment and natural resources and more. Directive shall enter into force on the day (or twenty days) of their publication in the Official Journal of the European Communities (Official Journal of the European Union – OJEU). They are binding, but implementation legislation in EU member states, taking into account national specificities. To implement their provisions, each country chooses the form and means;
- *EU regulations* – are binding in all its components and are directly applicable in all Member States. Most of the regulations are acts of unification of rules that carry European integration. Regulation shall enter into force twenty days after publication in the OJEU. As for the production of food and animal feed, the Directive establishes the basic safety requirements that are implemented and become binding as regulations which are relevant links to existing rules in standards;
- *EU decision* – are binding only upon those to whom they are addressed. The decision is often a means of implementing other EU regulations and apply only to specific cases;
- Recommendations and conclusions of the EU – is not binding and only adopted to implement the requirements of statutory documents or other acts of the EU.

The most common tool for implementing the legal and regulatory environment that continues to grow in the EU are the standards: international, European, national, regional (interstate) standards bodies, private (corporations and groups) and enterprises. EU standards are applied producers voluntarily. Obtaining universal acceptance standards

provided by the publication in the OJEU source data and only then it is considered as harmonized. Products that meet the requirements of the harmonized standards shall be deemed consistent with the fundamental requirements.

The total number of standards prepared by international and European organizations for standardization (ISO, IEC, ETSI, CEN, CENELEC), is about *70 thousand Units, including for agricultural and food sector (agriculture and food processing) – more than 2.1 thousand* (Inclar Apex, 2011).

As for the structure of the agricultural and food sector regulatory framework, it is possible to present these elements (Krysanov, 2016): the legal framework; standards; technical regulations; accreditation of conformity assessment bodies; conformity assessment procedures; Market Supervision over compliance with mandatory requirements. *The structure (first part) should be supplemented with the second part – sanitary and phytosanitary measures* (The Association Agreement between Ukraine, 2014). Analyze the results of the transformation of post-regulatory system in the European base model for each of these components. It will evaluate the passed way and need to be done to achieve equivalence with European national STR, namely:

1. *legal basis* – already has fifty of the laws of Ukraine: basic, framework, for certain products and for the control of economic activity, and a dozen bills that require primary decision to bring national legislation STR in compliance with European legislation. It includes over 1.7 thousand EU directives, regulations, decisions and amendments are related to agricultural legislation – 40% (agriculture and food) (Inclar Apex, 2011);
2. *standards* – because as of mid-2016 National Fund regulations amounted to about 30 thousand. Standards, including 15.1 thousand. National, including 11.3 thousand. Harmonized with international and European regulations. During 2006-2015 canceled the validity of 19.4 thousand international standards. However, remain in force until the beginning of 2018 at 13.5 thousand. Interstate standards Ukrainian State Standard (USS) and State Standard (SS) identical to 1992 to prevent the emergence of “legal vacuum” of 2018 is necessary to distinguish between requirements that are fixed in SS on required (safety) and keep them in technical regulations and voluntary (quality) and transfer them to the standards (which still need to develop and harmonize with European);
3. *technical regulations* – there TR 50, of which 46 developed based on the regulations of the EU (40 – required for use). It defined product characteristics or related processes and production methods, with which compliance is mandatory. TR can contain requirements to terminology, symbols, packaging, marking or labeling (Verkhovna Rada of Ukraine, 2014). Lack TR food enhances the current legal disorder and burden of this connection of additional regulatory approvals. Hence, the need to expand work on TR: complete development still “dormant” and start preparing new technical regulations (as well as draft laws of Ukraine on certain types of food);
4. *accreditation of conformity assessment bodies* – its essence is certification by the National Accreditation Agency of Ukraine (NAAU) the fact that a particular conformity assessment body (CAB) meets the requirements of harmonized national standards for conducting certain activities on conformity assessment (testing, calibration, certification, control). The result of internal activity NAAU began more than six accredited CAB, operating in Ukraine, but with expired certificates of accreditation is still more than 360 CAB. So last required to match the requirements of regulations and conduct their accreditation. Regarding international recognition NAAU, the European Association for Accreditation (European co-operation for accreditation – EA) acknowledged that all activities NAAU meet the regulatory requirements in

Europe in the field of accreditation. So NAAU conducting activities which has been recognized at EU level. However, NAAU is a member of the International Laboratory Accreditation Cooperation (International Laboratory Accreditation Cooperation – ILAC) and a signatory to the Multilateral Agreement (the Agreement on Mutual Recognition) (Multilateral agreement – MRA) in areas of accreditation of testing and calibration laboratories and inspection bodies. Thus, accreditation, provided NAAU in the above areas is equivalent accreditation granted national accreditation bodies – signatories of the ILAC MRA in 80 countries. It offers direct access to accredited CAB International and European best practices for conducting work on certification helps eliminate technical barriers and simplification of border crossing procedures of the Member States and the WTO: the presence of European or international certificates of quality / safety of the products exported, it eliminates the re-certification;

5. *conformity assessment procedures* – include procedures for sampling, testing, monitoring, evaluation, verification, registration, accreditation and approval and combinations thereof. They are carried out by accredited CAB. The end result is to ensure that the products (processes, systems, staff, organ) meets the requirements of the law. However, the requirement of time – mutual recognition of all Member States EA certificates of accreditation certificates and test reports issued by them. Prior to EA includes 26 EU member states. In Ukraine, created the necessary conditions, compliance with which is a guarantee equivalence of test results and the basis for their mutual recognition by Member States EA;
6. *Market Supervision over compliance with mandatory requirements* – the final link in national STR, which should be equivalent to the European model of market surveillance. According to the “Blue Guidance” market surveillance aimed at ensuring that products meet the applicable requirements, providing a high level of protection of public interests such as health and safety in general, health and workplace safety, consumer protection, environmental protection environment and security, while ensuring that the free movement of products is not restricted more than is permitted by law harmonized Union. Market surveillance guarantees citizens equal protection throughout the single market irrespective of origin (“Blue Guide”, 2014). Note that products placed on the market after evaluating its compliance with regulatory requirements (summarized in the laws of Ukraine, technical regulations, standards, codes of established practice) directly by the manufacturer (in the case of low risk to consumer safety), the other party (accredited CAB), or third side (reference laboratory). To ensure effective control by market surveillance should be assigned the appropriate powers provided material and financial resources and qualified personnel for implementation of assigned functions and the planned activities and tasks. One of the most difficult and vital technical regulation serves the agricultural sector. So the situation there and in food markets should track one body, that is, the State Service of Ukraine on Food Safety and Consumer Protection.

Thus, there is sufficient reason to conclude that in all components of STR Ukraine marked notable progress. However, to complete the approximation of national STR with the base model EU technical regulations necessary to carry out complex final work in order to complete its formation and balance for all elements. Only with the following recognition can provide a national system of technical regulation equivalent to the European base model.

It must be emphasized that the model presented above transformation of post-Soviet Ukraine's regulatory system in the base system of technical regulation, which was introduced in the EU, based on new approaches, such as:

- a) *"splitting" regulations* that were fixed in the ex-Soviet standards into three main groups: basic (fixed in the laws of Ukraine), mandatory (technical regulations), voluntary (in standards);
- b) *raise the national system* of accreditation of conformity assessment requirements to the level of European and international accreditation organizations in recognition of their equivalent;
- c) *raise the conformity assessment bodies* (bodies with inspection of management system certification bodies, personnel certification requirements (general, quality and competence) testing and calibration and medical laboratories) at the level of requirements stipulated harmonized national, European and international standards, to ensure mutual recognition of certificates of accreditation certificates and test reports, which take place in countries participating in European and international accreditation organizations;
- d) *raising the conformity assessment procedures* that are provided for domestic conformity assessment bodies, the level of claims, which follow CAB member countries of European and international accreditation organizations;
- e) *forming instead of post-Soviet system of state control* over compliance with regulatory requirements in each enterprise of the State Service of Ukraine on Food Safety and Consumer Protection, which deals with supervision (control) over compliance with regulatory requirements products which are put on the market;
- f) *the demarcation and consolidation of responsibility*: the production of safe and quality products – with the manufacturer for safety of products put on the market – for the state, and the degree of quality of the products purchased by households – directly to the consumer.

Regarding the second part of the food safety system – *sanitary and phytosanitary measures (SPS)* – then their implementation has developed a comprehensive strategy (The Cabinet of Ministers of Ukraine, 2016). It includes three sections: Public Health; Animal Health; Phytosanitary measures. The total number of 270 events, including sections on: almost 80, about a hundred and more than 90 events; terms of their training – 2016-2019, introducing – 2016-2020 biennium. Implementation – is implementing the requirements of the Directives, executive directives, regulations, enforcement of regulations, decisions, enforcement of decisions and recommendations of legislative and other EU legal framework Ukraine.

Note that sanitary and phytosanitary measures envisaged SPS Agreement (*Appendix A, p. 1*), and their practical implementation include:

- All relevant laws, decrees, regulations, requirements and procedures including inter alia end product criteria;
- Production processes and production methods;
- Testing, inspection, certification and approval;
- Quarantine treatments including relevant requirements for the transport of animals or plants or to the materials necessary for their survival during transport;
- Provisions on relevant statistical methods, sampling procedures and methods of risk assessment;
- Requirements for packaging and labeling that are directly related to food safety.

So, at the end of implementation of SPS, i.e. after 2020, and taking into account the real convergence of domestic STR with basic European model of technical regulation can be an objective basis for recognizing as equivalent to national food safety system with a system of food and feed animals operating in the European Union.

Diverse activities of government agencies that are involved in the formation of regulatory agricultural and food sector, to varying degrees based on and consistent support of European and international organizations to this directly or indirectly relevant. On the Ukrainian side, except the Ministry of Economic Development and the Agriculture Ministry, had previously been involved Ministry of Health of Ukraine, Ministry of Environmental Protection of Ukraine, the National Commission Ukraine Codex Alimentarius National Accreditation Agency of Ukraine and a number of regulatory agencies (public service: veterinary and Phytosanitary, technical regulations, sanitary and epidemiological, plant quarantine, state inspections, on consumer protection, agriculture, environmental). From September 2014 began State vet services reorganization and related control structures and formation on their base of *the State Service of Ukraine on food safety and consumer protection* (The Cabinet of Ministers of Ukraine, 2015). Formation of its territorial network will be completed this year and they started in April 2016 to perform the functions of market surveillance of products displayed on the market. So take some time to master out its powers and functions, test them in practice (identify “bottlenecks”, inconsistency or duplication of functions, lack of competence) and make the necessary adjustments.

As for international organizations, their role has been particularly active in the second half of the 2000s, that is, when Ukraine has implemented programs and standardization work carried out to improve the current system of state regulation of food safety. The forms of support were different: funding projects to assess the situation in the sphere of technical regulation and preparation of proposals for the adaptation of the European model; Direct participation of Ukrainian specialists in various seminars abroad to study the experience of practical work and regulators; funding for the development of quality infrastructure in Ukraine; organization and financing directly in Ukraine conferences and seminars for experts on various topical issues of formation of food safety and more.

Active role in the financing of various projects and technical assistance received the following international organizations: the International Finance Corporation (IFC), World Bank Group, Canadian International Development Agency (CIDA), Agency for International Business and Cooperation EVD (EVD) and the Swedish Agency international development cooperation (SIDA). Performed projects “Business environment and enterprise development in Ukraine” and “The investment climate in Ukraine”. These and other projects ended specific conclusions and practical recommendations for public administration in relation to intensify the process of regulatory reform in Ukraine.

However, in 1997 the European Commission introduced a new tool for the integration of the regulatory framework in the EU legislation of beneficiaries *Twinning* (Twinning, n.d.). *Twinning* – a tool for institution building in the context of EU enlargement and a new form of direct technical cooperation between the authorities of the Member States and the EU to empower beneficiaries of state authorities, their structure, regulation and staffing and so on. Already implemented over two thousand projects *Twinning*, and CIS countries it has become available since 2005 (Tacis). Ukraine was one of the first, which were covered by this project. *Twinning* project can be both classic (up to 36 months and a budget of up to 2 mln. Euros) and lightweight (up to 6 months and a budget of 250 thousand Euros). With the implementation of the *Twinning* project the partners (partners) to share the benefits, including:

- Exchange of experience and knowledge based on equal communication between twinning partners (“between civil servants”);

- Implementation of best practice of the authorities of the Member States;
- Complementarity in the case of a consortium;
- Achieving compliance with national law in a particular field of EU norms and standards;
- Conducting training sessions, improving professional training and career opportunities;
- Establish long-term working relationships, professional networks to improve awareness of the country in the EU;
- Development and implementation of regulations that are adapted to the requirements of the EU and is a prerequisite for the implementation of agreements (joint agreements, action plans, integration into a common internal market of the European Union);
- Changes in organizational practices and culture, improve communication and coordination between the partners of the *Twinning* project and others.

One of the most important regulatory agencies, which provides communication infrastructure national accreditation with European and international, serving National Agency of Accreditation of Ukraine (NAAU). *This is a fundamental condition for achieving equivalence (mutual recognition) conformity assessment services to be provided and the Ukrainian and European and / or international conformity assessment bodies (CAB), accredited for this relevant accreditation bodies.* To domestic accredited CAB can provide conformity assessment services that would be recognized in Europe and worldwide, NAAU has become a regular member of ILAC and EA, should be – IAF. To this end NAAU was provided and continues to be given to various international aid.

To this we add that in 2015 the European Commission Directorate General of neighborhood and talks on expanding cooperation with NAAU held in Kyiv seminar on “European practice accreditation of conformity assessment bodies in the direction of food safety.” The seminar was attended by over a hundred professionals. The said direction of cooperation will also be actively used to improve Ukrainian institutions of various regulatory agencies.

2. European model for the safety of agricultural and food products

The system of food safety and animal feed, which is formed and functioning of the European Union, is the result of many rounds of lengthy negotiations and multilateral international agreements related to the regulation of international trade. The first of these is the GATT-47, after watching its provisions complement and expand GATT became 78, and already it updated version – GATT 94. The successor to GATT became the World Trade Organization (WTO), which was established in January 1995 after signing 15.04.1994 relevant multilateral agreements in the city Marrakech (Morocco). While the organization consisted of 128 countries in September 2015 were 161 WTO member country and the negotiations for it were still 22 countries. The negotiations on WTO accession Ukraine was launched 30/11/1993, and after compliance with all procedures and signing relevant documents 16.05.2008 it became a full member of this organization.

In the preamble to the Agreement Establishing the World Trade Organization (WTO Agreement) recognizes the right of every country to direct the development of trade and economic entrepreneurship to address such important tasks:

- Raising standards of living, ensuring full employment and a significant and steady growth of real income and effective demand;
- Expansion of production of goods and services and trade, taking into account the optimal

- use of the world's resources in accordance with sustainable development;
- The desire to protect and preserve the environment and improve the means for doing so in a manner that is consistent with their respective needs and concerns at different levels of economic development;
 - The desire to develop an integrated, stable and a longer multilateral trading system, covering GATT-94, previously achieved results of trade liberalization efforts, and the results of the Uruguay Round of multilateral trade negotiations 1986-1994 and others.

The preamble of the TBT Agreement, 94 (Technical Barriers to Trade) states that no country should be prevented from taking measures necessary to ensure the quality of its exports or protect the life or health of humans, animals or plants, protection the environment, or to prevent deceptive practices, at the levels it considers appropriate, subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where prevail the same conditions or a disguised restriction on international trade, and must comply with other provisions of this Agreement and others.

General principles and approaches to ensure the protection of life or health of humans, animals or plants, environmental protection, have found a specific introduction and implementation of the European Union. In this respect, the fundamental starting point – the nature and structure of sanitary measures envisaged SPS Agreement (*Appendix A, p. 1*), and their practical implementation, namely:

- All relevant laws, decrees, regulations, requirements and procedures including inter alia end product criteria;
- Production processes and production methods;
- Testing, inspection, certification and approval;
- Quarantine treatments including relevant requirements for the transport of animals or plants or to the materials necessary for their survival during transport;
- Provisions on relevant statistical methods, sampling procedures and methods of risk assessment;
- Requirements for packaging and labeling that are directly related to food safety.

With specific regard to businesses, for objective assessment mechanisms, tools and “technology” to guarantee the safety of food and animal feed advisable to seek legal and regulatory framework and the practical experience of the European Union.

You must be noted that food security is one of the cornerstones on which was formed and sought to provide its citizens the European Union. In particular, in order to develop concrete measures to build the EU internal market 28-29.06.1985 was published by the Council and approved by the White Paper “Completing the internal market” (Commission of the European Communities, 1985). The book contained about three hundred measures must realize the Commonwealth until 1992 and which were grouped into three main objectives, namely:

- a) Eliminate physical borders by refusing checks on persons and goods at internal borders;
- b) Elimination of technical frontiers, ie the elimination of barriers that existed in national regulations concerning the production of goods and services by harmonizing relevant standards or mutual recognition;
- c) The elimination of tax frontiers, such as overcoming obstacles caused by differences in indirect taxation, based on harmonization or convergence of rates of value added tax and excise duties.

Through all of the White Paper “Completing the internal market” is held idea of a new

concept of legal harmonization. According to it should happen harmonization of member states of the European Union and this should be a powerful impetus for the internal market and the transition to a common market.

Meanwhile, 07/05/1985 EU Council of Ministers adopted a resolution on a new approach to technical harmonization and standards. It included four main principles on which the new approach was based, in particular:

- a) harmonization of legislation is limited to establishing, by issuing directives, based on Article 100 of the Treaty establishing the European Economic Community, the essential safety requirements, compliance with which is mandatory (or other requirements in the interests of impersonal circle of people) to be met by products on the market which thus can move freely within the Community;
- b) the task of preparing the technical specifications needed for the production and introduction into the market circulation of goods that meet the basic requirements set by the Directive, given the current state of technology, relying on organizations competent in the field of standardization;
- c) These technical specifications are not mandatory and maintain the status of voluntary standards;
- d) However, public authorities are obliged to recognize that products manufactured in accordance with harmonized standards (in their absence – the requirements of national standards), deemed to meet “*essential requirements*” established by that Directive.

However, the implementation of key provisions of this resolution is possible, provided that the capacity of said system. You need to fulfill two conditions: first, to provide quality assurance standards in respect of “*essential requirements*” established by Directives; and secondly that public authorities fully held accountable for the safety (or other specified requirements) on its territory.

Another Resolution on the Global Approach to conformity assessment, the European Council adopted 21.12.1989. It was released additional fundamental principles, the most important of which are:

- a) a consistent approach in the EU legislation is ensured through the development of modules for the various phases of the conformity assessment procedures and by establishing criteria for the use of such procedures for identifying and notifying authorities for such procedures and for the use of CE marking; (Notification – formal registration certification body (CB) by the EU Commission in the official list of the EU by assigning appropriate number);
- b) the generalized use of European standards relating to quality assurance (standard series EN 29000) and the requirements to be fulfilled by the above relevant bodies (standards series EN 45000), the creation of accreditation systems and the use of techniques are actively distributed in all Member States as well as at the level of the Community.

Note that the series of European standards EN 29000 regulate the development of quality systems and EN 45000 – evaluation, quality system certification and accreditation of quality system certification. European standards series EN 29000 are analogous to international standards ISO 9000, which includes three standards describing three quality system, and twenty-two standards containing guidelines and guidelines for selecting and building systems, such as (latest version):

- ISO 9001: 2015. Quality Management System. Requirements;
- ISO 9002: 2008. Quality Management System. Model for quality assurance in production, installation and service;
- ISO 9003: 2008 Quality Management System. Model for quality assurance in control of the finished product and its trials.

In member states of the European Union national standards for quality systems is developed or created directly on the basis of ISO 9000 or refer to standards EN 29000 series. To the family of European Standards EN 45000 series includes:

- EN 45001. General requirements for the testing of laboratories;
- EN 45002. General requirements for assessment (certification) testing laboratories;
- EN 45003. General requirements for accreditation bodies laboratories;
- EN 45011. General requirements for bodies operating product certification;
- EN 45012. General requirements for bodies operating certification of quality systems;
- EN 45013. General requirements for bodies operating certification held certification of personnel;
- EN 45014. General requirements for the application of provider.

The essence of the Global Approach to conformity assessment, which was defined in the resolution of the Council of 21.12.1989, was the fact that, on the one hand, to provide the necessary conditions for reliable conformity assessment, and the second, to promote confidence between the parties to trade relations through competence and transparency of conformity assessment bodies. Thus, the main objective of this concept is to build confidence in the certification of suppliers to test results, the activities of control and authorized by the application of certification and accreditation. When using this procedure the participants of trade relations between producers and consumers will form the necessary confidence:

- The quality and safety of products;
- The quality and competence of the testing laboratory;
- The quality and competence of the certification body;
- The quality and competence of the bodies that accredit testing laboratories and certification bodies.

Thus, in the second half of the 1980-s was formed only institutional and legislative, regulatory and organizational framework of a common economic space and the regulatory environment, which created the necessary conditions for the organization of the common internal market in the European Union's borders. And in the 1990-s, carried out active development of quality infrastructure the main components of which were and are metrology, standardization and conformity assessment. At the same time, conformity assessment interacts with other fields, including: system management, accreditation and equivalence of accreditation of testing and calibration laboratories and certification bodies of products and services, quality management systems and environmental management, staff and of control between countries or industry associations, metrology, standardization and statistics and others.

It should be noted that since the early 90-s laid the basic foundations of security products, which later began to be differentiated by type of industrial goods. Crucial in this respect was the directive 92/59 EPC – on general product safety, which was confirmed following imperative: any consumer goods present on the national markets of the Member States EPC should be safe. This means that the product under normal or reasonably anticipated conditions of use, taking into account the life not cause risk or minimal risk to life and health. The magnitude of this risk is the general criterion of security of any consumer product. In assessing the risk included: product characteristics, including its composition, packaging, storage conditions; the impact of other goods in cases of joint use; clearance

labeling, instructions for use, information on the product provided by the manufacturer; category of consumers for whom the product is intended.

Directive 92/59/EPC applies to all products that are no industry guidelines and complements the national legislation in the part where it covers only certain aspects of safety. In the absence of sectoral directives goods in accordance with Directive 92/59/EPC, is considered safe if it meets national standards (standards). In the absence of a national standard for safety assessment can be used international standards adopted technical regulations and even science and technology. Requirements for product safety as producers are obliged to comply and those who provide their sales (transportation, storage, sale).

After nine years, it was recognized that Directive 92/59/EPC must make a number of amendments in order to complement, enhance or clarify some of its provisions in the light of experience acquired, new significant changes in the security of consumer products, and changes made to The contract, especially in article 152 on public health, and article 153 concerning consumer protection, and in the light of the precautionary principle. Therefore, in the interests of clarity, it was made a full review and adopted a new Directive of the European Parliament and of the Council 2001/95/EC – on general product safety (from 03.12.2001).

However, the formation of scientifically based legislative and regulatory foundations of modern infrastructure and quality has set the need to significantly improve the protection of consumers and their confidence in providing safe food. This was inspired by crises in the food industry, have been associated with acute outbreaks of diseases in farm animals (foot and mouth disease, transmissible like a sponge encephalopathy of cattle, poultry plague, sex hormones in pork, antibiotics in honey, dioxin in feed, eggs and poultry, etc.) (Gryshchenko, 2013). All this led to the development and study of new approaches to risk management in food safety and led to public debate. They were initiated by the “Green Book” (1997) and had led in January 2000 “White Paper on food safety” (White Paper on Food Safety). The basis of food safety on the principles underlying the new (1985) and Global (1989) approach.

It should be noted that in the European Union in the 1990 developed the following practices: development of the new bill is based on the so-called “White Paper» (White Paper), which often proceeds the “green book» (Green Paper). The latter is a document of the European Commission (EC) (Green Papers, 2006), the aim of which is to initiate public discussion and initiate a process of consultation at European level on specific topics, in particular in terms of social policy, the single currency, telecommunications and more. The result of these discussions and consultations may be later published “White Paper”, which is an official document of the European Commission. “White Paper” (2006) containing practical recommendations for Community action in certain sectors of the economy, developed by official agencies and experts in the relevant specialty. If the Council supports a “white book”, then it becomes a program of action of the European Union in the relevant industries.

“The White Paper on Food Safety” consists of nine chapters, summary and additions. The “White Paper” concept of food hygiene related not only to the final product, but also extended to the entire food chain, including primary production. These provisions are a key reference point in the formation of modern legal framework aimed at ensuring proper control in the production of food, animal feed and efficient control of their safety, the necessary basis for the creation of a unified and transparent system of food safety (SFS) throughout the food chain. The global and integrated approach to SFS provided with modern legal framework regulating clear duties and responsibilities of all participants in the food chain

according to the principle “from farm to fork” and involves the following basic points:

- *First*, based on food safety is the position on recognizing animal beings with feelings, and so manufacturers are obliged to take care of their terms in three areas: cultivation, transport and slaughter of animals. This is a complex concept covers all components of their animal health and nutrition, animal welfare, care about their welfare and permanent veterinary control, protection and plant health, compliance with health standards for processing and preparing food;
- *Secondly*, mandatory state control of all links in the chain of production and consumption of food, the safety of all kinds;
- *Third*, responsibility for compliance with the principles of safety is differentiated by all levels of government: a) European Commission (forming the legal basis and the obligatory organization of official controls); b) the national authorities (the organization comply with standards of the food business operator); c) the food business operators (compliance with manufacturers, suppliers and distributors within their responsibilities and minimizing risks);
- *Fourth*, to ensure respect for the health, safety, protection of economic and legal interests of consumers and their right to an objective and timely information;
- *Fifthly*, including consumers, as the final link of the food chain, in public discussion of food safety problems, learning new rules and requirements (personal responsibility for the proper storage, use and preparation of food), taking into account their wishes and comments at improving the system monitoring compliance with the principle of transparency in European politics of food safety at all levels in order to increase confidence in the producers of food resources etc.;
- *Sixth*, the implementation of the Commission of effective monitoring and evaluation of performance of national authorities, of their ability to implement effective biosafety system at both the country and direct food producers, as evidenced by the results of the examination (audit and inspection) some of them to determine the compliance of enterprises with the requirements of technical regulations and others.

“White Paper on food safety” issue also includes risk analysis, traceability and prevention of food hazards, such as (Tavliu, 2014):

- a) Risk analysis is considered as the foundation on which policy is based food safety. In addition, three separate steps apply risk analysis: risk assessment (economic advice and information analysis) risk management (legal supervision and evaluation system) and notification of risk (between all participants of the food chain);
- b) a prerequisite for a successful policy on food and feed have traceability of food products, their ingredients. Traceability must ensure that in the event of a health risk to consumers, you can take steps to retirement of relevant feed and food;
- c) when approving decisions on risk management, if possible, use preventive methods;
- d) for regulation at European Community level should take into account other important factors that are important to protect the health of consumers and to promote fair management in food trade. These factors include environmental issues, animal welfare, sustainable agriculture, consumer demands for quality products, providing true information and identify important characteristics of the product, including methods of processing and production.

It should be noted that the main provisions of the “White Paper on Food Safety” became an important foundation for the development in the first half of 2000 these years a number of regulations of higher authorities of the Community which were later called primary EU law and which are still in force. Among them, the most important are those that directly relate to the fundamental principles of food safety and scientific and metho-

dological support in their implementation in practice, including:

- Regulation (EU) №178/2002 “On determining the general principles and requirements of food Code for the establishment of food safety and the establishment of measures to comply with food safety”;
- Regulation №852/2004 of the European Parliament and the EU Council “On food hygiene”;
- Regulation (EU) № 853/2004 of the European Parliament and the Council “On establishing specific hygiene rules to be applied to food products of animal origin”;
- Regulation №854/2004 of the European Parliament and the EU Council “On departmental control certain products of animal origin intended for human consumption”;
- Regulation №882/2004 of the European Parliament and the EU Council “on official controls to ensure conformity with feed and food law, regulations, health and animal welfare”;
- Commission Regulation (EU) №2073/2005 “On the microbiological criteria applicable to foodstuffs”;
- Regulation (EU) № 764/2008 of the European Parliament and the Council “On establishing procedures for the application of certain national technical rules to products lawfully sold in another Member State and repealing Decision number 3052/95/EU.”

At the same time, it is necessary to draw attention to the fact that in parallel with the development of a new generation of regulations occurred and significant changes in relations between consumers of food and food producers, intermediaries and shopping centers. In order to overcome consumer mistrust quality, and most importantly – food safety began to play the crucial role of food-trading corporations, shopping malls, purchasing patterns and retail. This they began to implement a quality management system assessment and regulatory compliance capabilities for all participants of food production chain, including feed manufacturers. But the initial trade structure each put forward their own demands on suppliers of food and independently developed criteria for their evaluation. Checks, i.e. suppliers audits conducted various trade bodies several times a year, required considerable time and resources diverted staff from work and showed their very low efficiency. In this connection, suppliers of products or had to adapt to these requirements or implement it only in their retail outlets. When they were producers of large amounts of products, they have to deliver different commercial structures and adapt to the requirements of each of them, this created many problems objectively and put the necessity of unification.

Thus, in the early 2000 it was considered appropriate and necessary to create a unified assessment system vendor products. The solution to this current problem was first held in 2002 in Germany through the introduction of international standards for food (International Food Standard – IFS). This standard was widespread among the manufacturers own brands that supply products to retailers. Their certification for compliance with IFS suggests that proper quality management system is functionally capable, and proof of this is the certificate that was issued by the European Commission notified the certification center. Later began to develop other standards, including BRC Food, BRC I, HACCP, GlobalGAP, ISO 9001, ISO 14001, ISO 22000, FSSC, which, as demonstrated practices actually become an instrument of competition among suppliers to retailers and rapid promotion of its products market. Their defining characteristic is that each of them positioned higher than the previous level of guarantees not only quality but also product safety. Note that these standards differ orientation requirements (standard on a system or product), depth of use (horizontal

or vertical standard) and wide coverage (regional, national or international) (Tavlui, 2014).

In the basic regulations of the EU have been further developed, in-depth and detailed practical guidance a number of fundamental principles. In particular, Regulation (EC) №172/2002 of the European Parliament and of the Council (from 28.01.2002) were consistent and deep relationship and the implementation in practice these successive and interrelated terms: *risk-prevention traceability, transparency – food products and animal feed, international standards. We expand them more and taking into account practical direction.*

In section 1 “General principles of food law” Regulation 178/2002 (The European Parliament and of the Council, 2002, p. 5-10) *sets out common principles which form the legal basis of horizontal EU legislation.* They are based upon the achievement of common objectives in the area of food. These include (*a summary of the key provisions*):

- *Common tasks.* A legislation is system of food safety (SFS) pursues one or more of the general objectives of a high level of human life and health and consumer protection, and includes fair practices in food trade, taking into account, where appropriate, the protection of animal health and their conditions of detention, plant health and the environment. SFS aimed at achieving free movement of food and animal feed in the Community manufactured or sold in accordance with the general principles and requirements of this Chapter;
- *Risk analysis.* SFS is based on risk analysis except where this is not appropriate to the circumstances or nature of the event. Risk assessment should be based on the available scientific evidence and should be made independent, objective and transparent manner. Risk management should take into account the risk assessment, and in particular the conclusions Authority (European Food Safety Authority of products) other reasonable factors and the precautionary principle if requirements are appropriate, in order to achieve common objectives SFS ;
- *The precautionary principle.* In special circumstances, may be adopted interim measures of risk management needed to ensure a high level of health protection chosen by the EU, while waiting for further scientific information for a more comprehensive risk assessment. Measures taken based on the precautionary principle must be proportionate and no more restrictive of trade than is required to achieve a high level of health protection that the EU has chosen, taking into account other factors;
- *Consumer protection.* SFS is aimed at protecting the interests of consumers and facilitate the implementation of consumer competent choice about the foods that they consume. It aims to prevent: (a) fraudulent or deceptive practices; (B) the falsification of food; (C) any other practices which may mislead the consumer;
- *Principles of transparency* (Section 2) *include public consultation and public awareness.* Public consultation should be open and transparent and carried out directly or through representative bodies, during the preparation, evaluation and revision of SFS, except where the urgency of the issue does not allow this. If there are reasonable grounds to suspect that food or animal feed may pose a risk to human or animal health, depending on the nature, seriousness and degree of that risk, public authorities must begin to take the necessary steps to inform the public about the nature of risk health, identifying the most complete food or animal feed, or type of food or animal feed, the risk that they may present, and the measures that are taken or to be taken to prevent, reduce or eliminate this risk.

In section 3, “General obligations in the food trade” established *requirements for food and feed* (The European Parliament and of the Council, 2002), namely:

- *Food products and animal feed imported into the Community* for placing on the market within the Community must satisfy the relevant requirements SFS or conditions that are approved by the Community;
- *Food products and animal feed exported from the Community* or re-exported from the Community for placing on the market of a third country must satisfy the relevant requirements SFS, unless otherwise required by authorities of the importing country, or meet the established laws, regulations, standards, codes of practice, or other legal or administrative procedures in force in the importing country;
- *International standards*. Without prejudice to their rights and obligations, the Community and the Member States: (a) promote the development of international technical standards for food and animal feed, as well as the development of sanitary standards; (B) promote the coordination of standards for food and animal feed; (C) promote the development of agreements on recognition of the equivalence of specific measures relating to food and animal feed; (D) pay particular attention to the special development, financial and trade needs of developing countries, to ensure that international standards do not create unnecessary obstacles to exports from developing countries; e) promote consistency between SFS and international technical standards, ensuring in this way that a high level of protection, which is selected by the Community is not reduced.

In section 4, “General requirements of food law” *systematized requirements for food safety and animal feed, traceability and responsibility for compliance with the law* (The European Parliament and of the Council, 2002), especially major ones are:

- *Requirements for food safety*. Food should not be placed on the market if it is unsafe. Food products are considered hazardous if they: (a) are harmful to health; (B) unfit for human consumption;
- *Safety requirements for animal feed for the animals*. For animal feed if they are dangerous should not be placed on the market or fed to any farm animals. Animal feed considered dangerous for the intended use if they have a negative effect on human or animal health; make the food derived from animals are used for food, unsafe for human consumption;
- *Method of presentation*. Without prejudice to more specific provisions SFS, advertising and presentation of data on food or animal feed must not mislead the consumer;
- *Responsibility*. Operators whose activities are related to food and feed for animals at all stages of production, processing and distribution within the activities under their control must ensure that food and animal feed requirements SFS which of their activities and shall verify that such requirements;
- *Tracking*. The ability to track food and feed for animals used for food, and any substances intended for introduction into food or animal feed, should be ensured at all stages of production, processing and distribution. Market operators whose activities are linked to the food, feed for animals should be able to identify who supplied food, animal feed, animals used for food production, or any substance intended for administration to food or animal feed;
- *Responsibility for food*: food market operators (hereinafter – FMO).
 1. If FMO considers or has reason to believe that the foods that he has imported, produced, processed, manufactured or distributed without the requirements of food safety, it must immediately begin the withdrawal of food from the market and inform the competent authorities. If products could no longer reach the consumer – must effectively and accurately inform the consumers about the reasons for their withdrawal and recall back from consumers products already delivered to them when other measures are not

sufficient to achieve a high level of health protection.

2. FMO shall, within their respective activities, initiate procedures to withdraw from the market products that do not meet the requirements of food safety and promote food safety by transferring the relevant information required to track food and to cooperate in the case relevant trials.
 3. FMO shall immediately inform the competent authorities if foods that he put on the market may be harmful to human health; the measures taken to prevent risks to the final consumer and shall not prevent or discourage any person to cooperate with the competent authorities, if it can prevent, reduce or eliminate the risk that comes from food.
 4. FMO cooperate with the competent authorities in the implementation of measures to prevent or reduce the risks that are the food that they supply or supplied;
- *Responsibility for animal feed*, operators of market of forage are for animals (hereinafter – FMO).
1. If FMO considers or has reason to believe that the animal feed which it has imported, produced, processed, manufactured or distributed without satisfying the security requirements for animal feed, it must immediately begin the removal of animal feed from the market and inform competent authorities.
 2. FMO shall, within their respective activities, initiate procedures to withdraw from the market products that do not meet safety requirements for animal feed, and promote food safety by transferring the relevant information needed to track animal feed and collaborate if appropriate trials.
 3. FMO shall immediately inform the competent authorities if it considers or has reason to believe that the animal feed, which he put on the market can not meet the safety requirements for animal feed; the action taken to prevent risk arising from the use of animal feed and shall not prevent or discourage any person to cooperate with the competent authorities, if it can prevent, reduce or eliminate the risk that comes from animal feed.
 4. FMO should encourage the competent authorities in the implementation of measures to prevent risks, which are animal feed which they supply or set.

Opening the mandatory requirements of EU legislation for food and animal feed, and the associated problems and risks that have found their logical solution in Regulation (EU) number 178/2002 of the European Parliament and of the Council (from 28.01.2002) (The European Parliament and of the Council, 2002, p. 5-20), while it is necessary to draw attention to the organization prevent their occurrence in practice under conditions of food processing production. The most appropriate in this respect is codified in Regulation (EU) number 852/2004 of the European Parliament and the Council on the hygiene of foodstuffs (from 29.04.2004) Basic principles of safe agricultural and food products in the food chain (The European Parliament and of the Council, 2004), namely:

- Responsibility for food safety lies with the food industry;
- Is necessary to ensure food safety at all stages of the food chain, starting with primary production;
- It is important that food products that can not safely be stored at ambient air, especially for frozen food stored at one and the same temperature in all stages of the food chain;
- General procedures for the use of procedures based on HACCP principles, together with the use of critical hygiene practices should raise the level of responsibility in the food industry;
- Guides to good practice application is a valuable tool to assist food business operators at all

- levels of the food chain in observing hygiene rules and the application of HACCP principles;
- Must determine microbiological criteria and temperature control requirements based on hazard assessments conducted by scientists;
- Need to ensure that imported products meet the EU requirements for food safety;
- Imported products have the same or similar standards of food hygiene, which are made in the EU.

It should be noted that for the period of time that has passed after the adoption of this resolution was developed and tested a number of diverse instruments pre-requisite programs (basic programs) and prevention of the emergence of risks and / or prevent or minimize their impact in case of detection. These requirements found necessary practical detail when developing standards and implementing their demands on enterprises in the EU member states, specialized in the production of food and / or feed for animals. However, given the need to monitor the progress of Ukraine to the European model of safety it is advisable to analyze the situation that emerged in the domestic agricultural sector is that concerns not only the food-processing facilities, but also at primary production entities.

3. A retrospective of the concepts of quality management and food safety in terms of market and planned economy.

It must be emphasized that as a result of the former USSR virtually independently of the global economy in the post-Soviet republics formed a unique management model production of quality products, which was based on the key provisions of the state standard (GOST), as shown above. However, the adaptation of post-Soviet Ukraine to regulatory approaches and basic principles which formed the base model technical regulation that has been successfully operating in the European Union encourages the search and use of adequate attitude to quality control systems that are introduced in the domestic agricultural and food sector. So, should more thoroughly analyze the approaches and principles on respect which formed the quality management system in a market economy in order to realize their positive characteristics for the Ukrainian economy.

In theoretical terms, the term “quality” is interpreted very broadly (quality of life, quality of climatic conditions) and relatively narrow (quality of goods and services). But in retrospect, the first priority was the issue of quality, later added and safety of food, and in the context of integration into the European Union in the first place came the safety of agricultural and food products. This is clearly seen in the transformation of Ukraine titles framework law on food safety:

- Law of Ukraine “On quality and safety of food products and raw materials” (from 23.12.1997 Number 771/97-VR);
- Law of Ukraine “On the safety and quality of food” (from 23.12.1997 771/97-VR as amended on 06.09.2005. The following amended);
- Law of Ukraine “On basic principles and requirements for safety and quality of food” (the Law of Ukraine “On amendments to some legislative acts of Ukraine concerning food» of 22/07/2014 1602-number UII).

However, the basis of quality control on the principle “to ensure compliance with regulations concerning product and manufacturing technology.” The structure of the regulations, which were set requirements for products and processes of manufacturing, included:

- *In the Soviet period (up to 1992)*, state (USSR) standards (GOST), national standards Ukrainian (NSU), standards-governmental organizations (mostly scientific and technical so-

cities) standards enterprises, technical specifications for production;

- *In the period of independence of Ukraine (1992):* Standards of the USSR, which were legalized by granting them the status of international, i.e. CIS (GOST), state (1993 and national – since 2003) standards of Ukraine (SSU) harmonized national standards (GOST ISO; ISO EN), technical regulations, the laws of Ukraine on certain types of food, national standards (NS) industry standards (GATS), standards organizations of Ukraine (SOU) specifications for production.

Differentiated legal status of the above-mentioned regulations, varying degrees of responsibility for the violation, lack of coordination (gaps and / or overlapping) periods of validity and protracted timeframe force obsolete regulations require deep analysis of the situation in the field of standardization, technical regulation, management of safety and quality on the agricultural sector of Ukraine and taking into account the theoretical principles and experience of advanced countries.

In this regard, there was a problem to diagnose the formation of management quality and safety in terms of planning and the policy and market economic systems, as well as significant changes in the role of various regulatory documents to ensure compliance with the safety and quality of agricultural and food products.

Note that in today's globalized economic environment, one of the important tools of consumer loyalty to products in favor of its safety and quality, for which they are "voting with their wallets". Meanwhile, under the fierce competition in the markets of agricultural and food products should be aware that the quality of the product – it is only a derivative of a concept – "quality management" and "quality of" a synonym for which is "perfect" (organization, company or institution). In turn, the perfection of the agricultural enterprises – is not only quality products, but also reduce its cost, improve productivity, increase competitiveness, create new jobs and more (Buryak, 2013). For these reasons the view, however, more and more deeply analyze the development of theoretical and methodological principles of quality and safety of agricultural and food products in the light of the transformation of conceptual approaches, the introduction of the standards and technical regulations in processing food production in order to strict compliance with safety and quality of food products and evaluation of conformity. Particular attention should be paid to the implementation of quality management systems and safety based on national, European and international standards, and especially – the effectiveness and efficiency of their functioning in the modern world.

Systematics, synthesis and elaboration of conceptual approaches to quality management system took place at the turn of the nineteenth and twentieth centuries, when establishing the streaming (conveyor) industrial production and quality control has become an integral component. Note that the system management techniques as an object of research and international experience, it is thoroughly covered in the works of local and foreign (Buryak, 2013; Yakubovsky, 2014; Karpenko & Komkov, 2007). Among experienced professionals should draw attention to the work, which systematically singled out and different periods of the evolution of scientific principles and trends of quality management³⁰. In particular, the proposed transformation of the hierarchical model of quality management concepts, which are listed below, but of adjusting to modern scientific views and methodological approaches to this problem:

- *First* – early twentieth century. – The concept of control of production processes and technical parameters of production (continuous production control, culling of parts that do not meet the necessary requirements);

- *The second* – 20-40 years. XX century. – The concept of process-oriented management (statistical quality control methods, sampling, control Shuharta cards, table plans and sampling) in order to meet production requirements and regulatory parameters that are fixed in standards;
- *The third* – 50-60 years. XX century. – The concept of total quality control (Total Quality Control – TQC), Shuharta cycle, Deming (P – D – C – A: Plan – Plan, Do – carries, Check – checks, Act – Act); documenting the quality of regulation with a view to cooperation in quality between senior and middle managers and specialists of the department of quality, determine their powers and responsibilities; shift from simple detection of defects in output to prevent shortage during its production; introduction of certification by a third party. The trend shift from price factor of competition in the market to factor in the quality of goods;
- *The fourth* – 70-80 years. XX century. – The concept of comprehensive quality management (Total Quality Management – TQM); the concept of quality and flexibility; Deming System fourteen principles of quality management and its seven “deadly disease”¹. Development and implementation of international standards for quality management systems (ISO 9000 standard), providing evidence about the ability of enterprise customers maintain the quality. The trend shift from factor to factor quality goods quality used technology;
- *The fifth* – since early ‘90 of the twentieth century. – The concept of environmental protection and product safety, based on the emergence of a new generation of international quality standards (ISO 14000 series standards). They were set requirements for environmental protection and product safety as an adequate response to the challenges of globalization and the interests of society. The trend shift from technology to the quality factor of the quality of human resources, quality of education, quality of intellectual resources, quality of living areas and material well-being, and in the broadest sense – to improve the quality of life of society.

In 2000, the World Health Organization (World Health Organization – WHO) has developed, formulated and adopted the Global Strategy for Food Safety, whose mission is “reducing the proportion of diseases caused by food, the general level of public health and social environment” (Yakubovsky, 2014). Unlike the traditional approach (hazard evaluation directly from food) in the Global Strategy approach linked to the main focus on the concept of consideration and prevent occurrence of food risks at all levels of the chain for the production and supply of agricultural and food products to consumers.

With specific regard to the food industry, the long time it dominated the traditional methods, such as inspection and / or quality control of food products. The introduction of the system for controlling food safety associated with the beginning of the 1960s, when the development and production of food products for special purposes (for food astronaut during long interplanetary expeditions in space) used a system Hazard Analysis and Critical Control Points – HACCP (Latin – «Hazard Analysis and Critical Control Points»). HACCP concept was officially presented by «Pillsbury» in 1971 at the First American National Conference on

¹ Management System William Edwards Deming: a) **fourteen principles of Quality Management**: consistency purposes; new philosophy; away from dependence on mass control; end the practice of procurement for the cheapest price; enhance each process; type in practice training and retraining; leadership; banish fear, services, offices; discard the empty slogans and appeals; remove any number of rules and objectives; allow employees to be proud of their work; encourage the pursuit of education; commitment to improving the quality and effectiveness of senior management; b) **seven «deadly disease» Quality Management**: no permanent goal; focus on the short term; reliance on readily available information (and lack of focus on data collection for process improvement); annual assessment of competencies; frequent changes in management personnel; company focus solely on clear quantitative indicators; excessive medical costs and others.

Food Safety. Its main characteristic – compliance with two dominant principles to guarantee food safety: the principle of consideration and taking into account all stages of production and supply of food to consumers and the principle of identification and control of hazards. For almost half a century period it has proved its effectiveness, was approved and adopted by international organizations (*World Health Organization; Codex Alimentarius Commission; International Commission on microbiological food safety*). Its use allows you to move from test development to final product safety (preventive) measures, implementation of which is aimed at ensuring food safety in all links in the food chain under the concept “from farm to fork”.

This is regarding the origin, development and promotion methods of management system on the territory of Europe, the USA and Japan. As the experience breakthrough on the priority areas of technological support in some countries or regional units had their extension of their distribution in production, which were located in other associations of states.

As for Ukraine, as part of the former Soviet Union, it has accumulated in its economy virtually the entire range of tools, means and mechanisms of production management system and methods of production of quality products that were introduced at the enterprises of various branches of the All-Union national economy. But usually it passed with a certain lag from their introduction in the territory of other Soviet republics, in the first place – the Russian Federation. Priority was given to the military-industrial complex and the dominant sectors of industry (heavy and power engineering, to production of a wide range of vehicles, etc.). In particular, the beginning of the introduction of systematic approaches to quality management is considered the organization in 1955 at an aircraft factory in Saratov system of defect-free manufacturing products (*system ODFMP*), enterprises Gorky region in 1958 was introduced the system of “Quality, reliability resource of the first products” (*system QRROTFP*), the Yaroslavl engine plant in the 1962-1964 biennium. – A system of organization of work to improve the moto (system rules) and in almost the same period (1961-1967) – Lviv system defect-free work (*SDFW*). On the introduction of quality management system for processing-food enterprises had not yet discussed.

At the time the food industry was introduced first input control of raw materials and outgoing finished goods, although the technological requirements and held control throughout the processing chain. He covered the tracking values relevant quantitative and qualitative indicators that reflect the dynamics processing processes, in order to prevent deviations from normative parameters and/or their timely correction. For a long time the main means of control of the final product was an organoleptic method, which was carried out with the direct participation of specialists of the control and using human senses. But this method could identify only a limited number of indicators: appearance, taste and smell, consistency, internal structure, clarity (turbidity), etc., and moreover, when they lack credibility. However, in order to improve the reliability of control later on the basis of laboratory studies using physical and chemical methods have begun to analyze the situation and change the characteristics of food raw materials and finished products. However, these methods because of their of complexity, complexity and duration of the research have shown their inability and even ineffective. Under these conditions, only the introduction of modern physical methods (optical, electric, ultraviolet, thermal, etc.) allowed to change the situation.

At the same time, the emergence of various factors influenced a large number of microorganisms in the environment and transfer their activities directly in agricultural production is accompanied by bacterial contamination of food materials. Another reason

– failure to comply with sanitary conditions of production and storage of agricultural raw materials and is accompanied by the occurrence of oxidative processes, the appearance of various fungi and so on and so required of its microbiological research. These studies have been able to execute qualified and specialized only in the laboratory, and the establishment and accreditation of laboratories is possible only for large enterprises and organizations that belong to the state system of technical regulation and consumer protection. Since the range was accredited laboratories and is now very limited, we were only sample surveys.

Practice shows that of sensory, physical, chemical and microbiological control and the results of such studies can objectively assess the situation regarding the quality of a particular party food. However, the main problem was and is to prevent cases of food risks or minimize their consequences for consumers in every link of the food chain.

Thus, the transition to the industrial processing of food raw materials and the manufacture of the final product, i.e. for direct human nutrition problems guaranteeing its quality and safety, prevent risks to consumers pushed to the fore, acquired priority and became the subject of theoretical developments and teaching materials for their practical solutions.

In order to more adequate perception of progress in the implementation of quality system management, and later safety of agricultural and food products, detailing their essential features and characteristics of the different economic systems was developed paradigm. It covers a period of 60 years, when these methods began to be implemented in Ukraine, and still with the emphasis on the test range of areas (Table 1).

This fundamental change note the role of standards in ensuring compliance with regulatory requirements in the manufacture of products. Given the directive planned economy to comply with the standards of the USSR (GOST) were mandatory. “Non-compliance punishable by law” – this record was placed on the first page of each regulations. In the transition to market methods of managing the situation has changed (see Subsection 1).

In addition, the state withdrew from direct responsibility for controlling the production process – now responsible for all output and its regulatory compliance rests with the producer. However, in order to implement the assumed functions of product safety, it actively shapes public market surveillance system for trade in agricultural and food products on their compliance with the mandatory requirements.

Changed legal framework and practical nature of standards: mandatory from voluntary status he acquired for the manufacturer and it mainly regulated by quality products as well as the requirements for its production processes. The Law of Ukraine Food Safety (Verkhovna Rada of Ukraine, 2014) noted that *standard* – a document developed by consensus and approved by an authorized organization that sets the rules, guidelines or characteristics related activities or its results, including products processes or services, *compliance with which is optional*.

However, the responsibility for product safety performance relies on *technical regulations*. According to the Law of Ukraine (Verkhovna Rada of Ukraine, 2015) *technical regulations* – legal act, which defined product characteristics or their related processes and production methods, including relevant procedural provisions, *the observance of which is mandatory*.

Technical regulations approved by the Cabinet of Ministers of Ukraine have the status of regulations of direct action as the laws of Ukraine, and therefore their requirements are mandatory for compliance by all manufacturers. Note that in Ukraine on the basis of legislation of the European Union (ie EU directives and technical regulations) has

developed and adopted 46 technical regulations, including 40 technical regulations are mandatory for application (Vitkin, 2015). To implement the Law of Ukraine “On Technical Regulations and Conformity Assessment” (Verkhovna Rada of Ukraine, 2015), which came into force on 10.02.2016, it is necessary to prepare projects another 33 regulations and implement them in accordance with the applicable legislation.

However, it should be noted that until now remain valid specifications, although their state registration canceled. Technical requirements – a document approved by the market operator, which identifies the technical requirements for food and / or processes of production should be noted that “food business operator (hereinafter – *operator market*) – an entity that carries out activities for or without for-profit and which manages the power for which the primary production, manufacture, sale and / or turnover of food and / or other sanitation facilities (except for materials in contact with food), and is responsible for implementation of this Law and legislation on safety and some quality food. By operators are individuals, if they carry out activities for or not for-profit and engaged in the production and / or circulation of food or other objects of sanitary measures. Operator market agri-food market is also considered (Verkhovna Rada of Ukraine, 2014). So are entrepreneurs, engaged in cultivation of agricultural raw materials, its processing and production and sales of finished food products. We believe that the continuation of this normative document as technical conditions are a temporary measure, due to the diverse range of circumstances, including: the lack of standards for certain products and processes, exclusive products and foods, making them no threat to health or with minimal risk to consumers.

Table 1. PARADIGM [comparative characteristics] of the system to ensure safety and quality agricultural products with different [regulatory and market-based economic systems]*

Planned and administrative economic system (1960-1980)	A socially oriented market economic system (1990-2010)
1. The essence, the main mission of the chosen concept of quality/safety	
Orientation to compliance with applicable regulatory documents (agreements for production, routings, specifications and standards) in the process of growing of agricultural raw materials and their processing to production of finished food products	Focus on providing consumers with safe and high quality agricultural products and food products with the lowest cost of their cultivation and processing, to maximize profits
2. Legislative-methodical bases and medico-biological requirements and sanitary-hygienic standards	
Medical-biological requirements and sanitary norms of quality food raw materials and food from 01.08.1989 No. 5061-89 (Mbws); Addition to Mbws from 01.08.1989 No. 5061-89 (19.11.1991 No. 122-12/805); Sanitary rules and norms (SanPiN); Hygienic standards (GN); the Maximum permissible concentration (MPC) and approximate permissible levels (SDT) harmful substances, etc.	Agreement on the application of sanitary and phyto-sanitary measures (the SPS Agreement-94), together with the General agreement on tariffs and trade 1994 (GATT-47); Agreement on technical barriers to trade (TBT Agreement-78); Codex Alimentarius Commission; the New and Global approaches to establish a „common regulatory space“ on the territory of member countries of the European Union
3. Toolkit for implementation the concept of quality/safety	
Requirements of standards and specifications for raw materials and food products, which include quantitative and qualitative parameters of components and finished products, processing technology and storage conditions	Directives, Regulations, Decisions and Recommendations of the European Union, the international and European and harmonized national standards on safety and quality of agricultural products and food products

Planned and administrative economic system (1960-1980)	A socially oriented market economic system (1990-2010)
4. Management system (management) the quality/safety	
<p>The system of integrated quality management: Dnipropetrovsk, Lviv and Sumy on the basis of standardization (all only for industrial, that is, with the exception of food industry enterprises)</p>	<p>Modern management system: ISO 9000 – series international standards, which systematized the requirements for quality management systems of organizations and enterprises (latest version of DSTU ISO 9001 : 2009 – quality management system); ISO 14000 series – environmental management system DSTU ISO 14001-97 the safety management system environment); HACCP – hazard analysis and critical control points (DSTU 4161-2003 system of food safety management. Requirements); ISO 22000 : 2005 (DSTU ISO 22000: 2007) system of food safety management. Requirements to all organizations in the food chain; Integrated management system – combining several standards and models to enhance synergistic effect</p>
5. The provision of „rights of citizenship“ control systems (management) the quality/safety certification bodies	
<p>The introduction of certification of the functional systems of management of enterprises of Ukraine took place only in the late 1980s and in the absence of national authorities was carried out by international certification authorities</p>	<p>International certification authorities: Bureau Veritas (1828), Lloyds Register of Shipping, Société Générale de Surveillance, German Lloyd, Det Norske Veritas, TUV Rheinland, American Petroleum Institut, Maritime Register of Shipping; National certification: UkrSEPRO (1996), Ukrainian Association for quality, a certification of management systems „PRIROST“</p>
6. The role of managerial staff (senior management) Enterprise	
<p>The implementation of administrative measures to ensure the development and implementation of quality management systems (to improve the efficiency of production at industrial enterprise and training of staff efficient use of resources, accountability for work quality and btdevetl products, putting the „first presentation“</p>	<p>The creation of a favorable moral climate in the company with the aim to improve the culture in the production, implementation and certification of safety management systems/quality, orientation of the team on the unconditional compliance with the system requirements process approach and constant improvement of security/quality arkaroola products</p>
7. Focus safety/qualityProducts	
<p>Low levels of defects (i.e. btdevetl) industrial products</p>	<p>Orientation to satisfaction of needs in safe and quality food products based on the results of a survey of consumer demands and their customization</p>
8. Control over observance of requirements of normative documents	
<p>Representatives of Gosstandart of the USSR, Department of technical control of the enterprises through direct control of the quality of the production process, the departments of quality management based on the analysis of quality/defects of products, the development of plans for the improvement of quality of products and their implementation, conducting „Days of quality“</p>	<p>The implementation of the requirements contained in the international and European standards for manufacturers is voluntary, at the same time the technical regulations of the European Union, based on the requirements of standards, codes of practice and other regulations is a prerequisite</p>

Planned and administrative economic system (1960-1980)	A socially oriented market economic system (1990-2010)
9. The role of engineering staff and shop workers	
Orientation to ensure strict adherence to the mainly quantitative rather than qualitative indicators of performance targets	Clear fulfillment of the requirements of HACCP, required documentation of the violations, their analysis and elimination. A phased implementation of HACCP according to the product specialisation of the enterprises – to 20.09.2019 G.
10. Methods of control	
Directive methods: certification of production on conformity to applicable regulatory requirements, evaluation of conformity of products to requirements of state Standards, approved specifications, and enforcing a stable level of quality during the entire product life cycle. The introduction of state acceptance of production on 1,5 thousand industrial enterprises (1987)	Product certification (self, consumer, third party), the functional certification of management systems (quality, safety, environmental protection, occupational safety and health, information security, social responsibility), state market control and supervision over execution of mandatory requirements arkaroola products
11. Responsibility for violation of requirements of normative documents	
On the first page of each normative document (GOST) always contained the following paragraph: „non-compliance is punishable by law“ – that is, its requirements are binding. However, they almost universally violated, even at the enterprises of the military-industrial complex. For non-compliance with standards practiced by the withdrawal of premiums, fines, administrative penalties	In case of discrepancy between arkaroola of production requirements, inspection shall be conducted for all food chain with the aim of identifying those parts where they are violated. Production shall be suspended until elimination of the violations established, and in difficult cases selected (cancelled) license or other document. Range of penalties: administrative and criminal liability, fines, seizure of goods not meeting the above requirements to a full stop of production. Dangerous products withdrawn from the market by the manufacturer and at his expense to dispose of
12. Markings or labeling of products	
GOST 1.9-67 „State sign of quality. The shape, size and manner of the use“ – to indicate a high quality series of domestic certified products (since 1967)	CE (FR. Conformité Européenne) – the European conformity (confirms the product conformity with European safety standards for human, property and environment); PDO (Protected Designation of Origin) – protected designation of origin (product, closely associated with its territory); PGI (Protected Geographical Indication) – protected geographical indication (product associated with its territory); TSG (Traditional Specialities Guaranteed) – traditional product (traditional production methods and guarantees compliance preparations); Organic farming – organic agriculture; Label Rouge Label Rouge: a high quality product; UKRAINE: „Quality“; BioLan the Biolan Ukraine „national conformity mark“; „a Good sign“

Planned and administrative economic system (1960-1980)	A socially oriented market economic system (1990-2010)
13. The ratings of companies and products	
<p>Socialist competition for the fulfillment of planned indicators of production (per month, quarter, year, five years) between enterprises in the same industry, their internal organizational units (departments, shifts, teams, units, individual employees) compliance schedules summarizing production activities for a certain period of time and determining the winners</p>	<p>Models of perfection: the Japanese name Deming, an American named Baldrige, EFQM European (describes any organization using nine criteria: Leadership; Strategy; Staff; Partnership and resources; Processes, products and services; results that relate to Customers, Staff and Society; Key results. Criteria include 32 sub-criteria); Levels of enterprise excellence: recognition of excellence in Ukraine in Europe; quality Competitions: – national – international in CEE – award for excellence EFQM; the all-Ukrainian quality competition „100 best goods of Ukraine“ (held annually)</p>
14. The effectiveness of the control systems (management) safety/quality	
<p>Low and very low effectiveness of functioning of systems of governance due to the lack of competition between enterprises in terms of planning and policymaking of the economy and low motivation of interest of the employees in high results of their own work</p>	<p>The high efficiency of functioning of systems of management of the companies that received the certificate of the international certification authorities. Low productivity enterprises certificate on safety management system/quality issued the national certification bodies</p>
15. Modern and functional model of management (management) safety/quality	
<p>Zakonservirovat and brake to scientific and technical progress, the nature of the normative documents of the former USSR (GOST and TU) later played the role of a significant factor to justify a start (since the mid 90's those years) reconsideration of standards that were developed and approved prior to 1992, all in the power of intergovernmental normative documents or their cancellation, the harmonization of national standards with European and international regulatory documents and the like. At the end of 2015 the Fund of national standards in Ukraine was 30247 normative documents, which 9014 – harmonized with international and European standards. In the food sector of the total number of normative documents exceed 3,4 thousand, including the national more than 1.8 thousand of them harmonized – 0,9 thousand standards</p>	<p><i>The system of certification producers of agricultural products pogarskiy:</i> GlobalGAP (GAP – Good Agricultural Practice – good agricultural practice); „IFOAM basic standards concerning organic production and processing“; The corporate standards of food safety management: BRC (British Retail Consortium – the standard of the British retail consortium); IFC (International Food standard is an international standard of food production); Diagram FAMI-QS (Feed Ingredients and their Mixtures Quality System – feed ingredients and their mixtures quality system); GFSI (Global Food Safety Initiative – global initiative for food safety).</p>

Source: Developed by the authors.

Conditional denotations: №№1-15 are the Essence is signs of the systems of safety / of quality of agrarian and food products

At the same time, it is necessary to draw attention to trends spreading in Ukraine at different periods of the implementation process of system management methods in the field of quality and food safety, and their efficiency and effectiveness. In this connection diagnostics identified and agreed for the time periods most remarkable characteristics of quality management systems, and later the safety of agricultural and food products (Table 1) allows you to organize and offer some important conclusions, and to link them with appropriate practice, introduced in this field foreign companies, including:

- In the Ukraine to the problems of threats to human health from food products increased attention on the part of scientists actively began to emerge after the accident – the spread of radionuclides in the environment, contamination of food raw materials, their storage and distribution differentiated between participants food chains, including man as the final link. Due attention is also paid to the development of standards on pollution raw food and ready-made food different types of radionuclides and heavy metals other harmful organisms, processing methods and methods to reduce their concentration and the establishment of minimum, maximum and standard values of different types of pollution and so on. Mostly these types of studies conducted allied scientific institutions in 80 years;
- Basic regulations medico-biological and hygienic nature of the agricultural raw materials and food products were released late the existence of the former USSR, but they are still in force, and in the absence of their own development is a period of time will perform its core regulatory function;
- The first positive examples of implementation of system management methods were actually introduced in Ukraine since the mid 90's. This was a result of the redemption of the food industry, which has been in collective ownership, foreign corporations and modernization of technical and technological base, involving the parent companies of foreign advanced technology, fully meet the requirements of European and international standards for production processes and products. Another option – building in Ukraine new enterprises based on modern European technologies;
- The first attempt to introduce systematic management methods in domestic enterprises took place in the early 2000s, that is, when really started out of the national economy with the economic crisis and the European Union was introduced only (internal) market for the smooth movement of goods between the Member States . However, insufficient professional level of national certification centers and low demand to companies that commissioned projects implementing quality management systems, to achieve the desired level of perfection of production had the effect of formal implementation. That is why, according to experts, more than 20% of certified quality management systems in Ukraine actually function (Kalyta, 2011).

In European countries, leading retailers and food companies develop and implement their own (private) standards that provide enhanced safety and quality of agricultural and food products than conventional. When it adopted the minimum safety guaranteed when implementing HACCP (The International Institute for Food Safety and Quality, 2010). On its own food production companies provide and the products of their suppliers require a certificate of conformity of management system standards and a certification schemes recognized by GFSI (Global Food Safety Initiative – Global Initiative for Food Safety) (Slyva, 2015). The key idea GFSI «Certified once – accepted everywhere» is that the company which has been certified for compliance with a standard recognized by the GFSI, no need to additionally certified by another equivalent standard. Today GFSI recognized these ten standards and certification schemes, including: FSSC 22000 (version dated October 2011); IFS Food Standard (version 6); BRC Global Standard (version 6); SQF CODE (7 publications, 2 level); Global Red Meat Standard (GRMS) (4 edition, version 4.1); GLOBAL GAP (version 4); Canada GAP Scheme (version 6); Global Aquaculture Alliance Seafood Processing Standard (2 edition of August 2012); PrimusGFS Standard (version 2.1 in December 2011); IFS PACsecure. In addition, GFSI recognized standards and certification

schemes that imposed on more than a dozen major companies producing food products and ingredients that are private, including: Hormel Foods Corporation, The Coca-Cola Company, Kraft Foods Inc. Migros, Danone, Sodexo and others.

Thus, in the member states of the European Union demands of consumers in terms of improving trust and confidence in product safety, reducing the likelihood of food risks go to a higher level and are implementing through the implementation of standards and certification schemes recognized by GFSI. Penetration of these companies in the food market demonstrates that Ukraine gradually included in the scope of their interests and it will encourage domestic agricultural producers to step up their efforts to implement modern business management systems.

4. Introduction of the management systems is on the enterprises of agrarian and food sector of Ukraine

One of the important indicators of promoting agricultural and food sector of Ukraine into the EU market may be the availability of certified accredited CAB functional management systems: safety, quality, environmental management. However, to recognize the functional role of systems management indicator of national agricultural and food sector integration in the internal market of the Community may, in our opinion, only strict compliance with several important preconditions (i.e. prerequisites), namely:

- *First*, the company should have advanced (modernized) technical and technological base that is able to produce a modern range of products that will meet the requirements of international and/or European regulations and be competitive in the food market of the Community;
- *Secondly*, the company officially introduced and certified safety management system (HACCP or ISO 22000: 2005 (ISO 4161-2003 Ukrainian version or of ISO 22000: 2007) or further introduced another (quality, environmental management) to create an integrated system accordance with applicable regulations;
- *Thirdly*, certification performed NAAU accredited conformity assessment bodies (CAB), specializing in conducting of certification of management systems;
- *Fourth*, local CAB accredited for compliance with the European EN 45012 “General requirements for bodies operating certification of quality systems” or the international standard ISO/IEC 17021: 2011 “Conformity assessment. Requirements for bodies operating audit and certification of management systems. “For management system certification of food additionally applicable requirements of the standard ISO/TS 22003 “management system of food safety. Requirements for organizations engaged in audit and certification of food safety management”;
- *Fifth*, the certificate issued to the enterprise management system is a key reason for its recognition in the member states of the European and international accreditation organizations EA and ILAC;
- *Sixth*, the presence of the company certified management system simplifies obtaining the certificate for compliance with food safety and quality requirements according to European requirements and the basis for the recognition of domestic products such that corresponds to the “essential requirements” Union harmonization legislation (“Blue Guide”, 2014).

Let us analyze the situation in the agricultural and food sector on the implementation of management systems for each component separately, namely industry for the production of food, beverages and tobacco products, as well as in agriculture, forestry and fisheries.

Table 2. Structural transformation industry manufacture of food products, beverages and tobacco products*

Name indicators	Unit measurement	2001	2006	2010	2013	2014	2014 to	
							2001	2010
1	2	3	4	5	6	7	8	9
1. The number of enterprises	<i>Units</i>	9079	8379	6551	6407	5528	60.8	84.3
2. Of them large and medium	<i>Units</i>	2398	2305	1358	1215	1051	43.8	77.3
3. The cost of fixed assets	<i>mln.UAH</i>	21454	50263	91985	116776	125745	In 5.8 times more	136.7
- depreciation of fixed assets	<i>%</i>	42.2	48.4	45.1	48.5	47.2	+5.0	+2.1
of them into sections:								
a) 10. Food production	<i>mln.UAH</i>	16540	38286	66309	82552	87559	in 5.3 times more	132.0
- depreciation of fixed assets	<i>%</i>	55.6	52.1	45.2	47.0	42.5	-13.1	-2.7
b) 11. The production of beverages	<i>mln.UAH</i>	4133	9744	22025	29132	32604	In 7.9 times more	148.0
- depreciation of fixed assets	<i>%</i>	36.4	38.4	44.5	55.1	62.5	+26.1	+ 18.0
c) 12. The production of tobacco products	<i>mln.UAH</i>	781	2233	3651	5092	5582	In 7.1 times more.	152.8
- depreciation of fixed assets	<i>%</i>	26.2	28.7	35.4	36.3	39.3	+ 13.1	+3.9
4. The number of full-time employees, including:	<i>thousand people</i>	548.5	566.7	417.9	402.4	349.4	63.7	83.6
- large and medium-sized enterprises	<i>thousand people</i>	478.6	520.0	369.6	358.6	313.2	65.4	84.7
- small businesses	<i>thousand people</i>	69.9	46.7	48.3	43.8	36.2	51.7	74.9

Source: Compiled and calculated by: (State Statistic Service of Ukraine, 2015; State Statistic Service of Ukraine, 2014; State Statistic Service of Ukraine, 2014, The Activity of entities of large...; State Statistic Service of Ukraine, 2015, The Activity of entities of large...).

The meat packing, food processing disclosed in *Table 2* statistics. In relatively better condition are companies that belong to the section 12 *Tobacco production*. Typically, they are part to the business entities with foreign capital, depreciation of fixed assets significantly lower than the bulk of enterprises – 39.3%, and therefore fitness for work exceeds 60%. Peak production potential updates with foreign technology took place in the middle of those 90 years and their further operation took place in strict compliance with the requirements for production technology tobacco products. All five large and medium-sized enterprises equipped with modern systems of management and therefore the prospect of their further operation is not burdened by special problems.

Diametrically opposite situation under 11. *Drinks production*: almost all large and medium-sized (more than 120) companies provided management systems (or they are introduced). But the very high rate of depreciation (62.5%) suggests that there is a clear distinction between entities with different backgrounds capital. In our view, companies with foreign capital are in a better position compared to facilities that are owned by entities of the national capital.

Note that the first of them – are businesses that were built in Ukraine since independence, or at different times bought in collective owners. By means of the new owners was carried out radical modernization of the main and auxiliary production and transport and procurement departments. Almost all production facilities equipped with certified systems management and employees engaged sufficiently proficient to perform their production duties that prevents output in violation of regulations. So just subgroup companies for the production of beverages with domestic capital and require special attention to identify strategies for further development. According to expert estimates, the number of medium-sized enterprises where no safety management system / quality is within 30-40 units.

Almost a similar situation in the 10. *Food production*: the number of large and medium-sized enterprises at 920 units. (Depreciation of fixed assets – 42.5%, and suitability for work exceeds 57%), the drop in depreciation OZ almost 5 pp. clearly correlated with the reduction of the number they more than three hundred of production capacity. This can be explained by the withdrawal fixed assets of the balance sheet entities. However, only 700 units, provided systems management, with a minority of them (foreign capital) is certified by the international certification centers, and more – in the home. The latter subgroup together with enterprises for the production of beverages where no management system just may be the ground on the selection and testing strategies for entry into the European economic environment, including mechanisms and instruments for adaptation (adapting) their facilities and products to the regulatory requirements of the European Union.

Note that at the beginning of 2016 (*Table 3*) functional management system implemented and certified at more than 700 enterprises, and the development and implementation stage – in about one hundred (820 in total for entrepreneurs). The structure of these functional systems control the number of specialized systems management amounted to:

- ISO 9000 (Ukrainian version of ISO 9001: 2009) – the requirements for quality management systems of organizations and enterprises (QMS), certified management systems – 413 units, In a state of development and implementation – 22 units;
- ISO 14000 (ISO ISO 14001-97) – Environmental Management System (Safety Management System Environment), respectively, 30 and 10 units;
- HACCP (ISO 4161-2003) – Hazard analysis and critical control points (system of food safety. Requirements), respectively, 279 and 91 units;
- ISO 22000: 2005 (ISO ISO 22000: 2007) – a system of food safety. Requirements for any organization in the food chain, respectively, 438 and 77 units.

Table 3. The prevalence of quality management systems and food safety in the food industry of Ukraine, units

The types of economic activity (food industry)	Implemented and/or is introduced the functional management system according to requirements of international standards:								Implemented and/or implemented functional management systems of all kinds:			Reference (2014): just the food industry
	ISO 9000		ISO 14000		HACCP		ISO 22000		just	including:		
	In a state of development and implementation	Implemented (certified)	In a state of development and implementation	Implemented (certified)	In a state of development and implementation	Implemented (certified)	In a state of development and implementation	Implemented (certified)		organized	in stage introduction	
1	2	3	4	5	6	7	8	9	10	11	12	13
Meat	5	53	0	5	15	85	24	52	239	195	44	750
Dairy	1	63	1	5	11	70	14	61	226	199	27	401
Distillery	1	52	0	4	4	20	2	14	97	90	7	102
Alcohol	1	22	1	0	3	4	1	2	34	28	6	55
Beer Soft	0	31	2	6	5	39	12	15	110	91	19	496
Oil and fat	0	31	0	2	5	40	0	19	97	93	5	471
Sugar	2	19	1	1	4	6	3	8	44	34	10	91
Patisserie	7	33	1	2	11	43	5	26	128	104	24	116
Canning	1	15	1	1	4	17	6	11	56	44	12	335
Bakery and pasta	1	29	1	0	10	27	14	23	105	79	26	1158
Fish processing	0	7	0	0	1	20	0	13	41	40	1	193
Other	3	58	2	4	4	67	10	35	183	164	19	1360
Only Ukraine	22	413	10	30	77	438	91	279	1360	1160	200	5528

Source: Internal data of the Department of food of Ministry of agrarian policy and food of Ukraine as of 01.01.2016.

Legend: ISO 9000 (latest version of DSTU ISO 9001: 2009) is a series of international standards, which systematized the requirements for quality management systems of organizations and enterprises (quality management system) ISO 14000 series (DSTU ISO 14001-97) – environmental management system (safety management system environmental); HACCP (DSTU 4161-2003) – analysis of hazards and critical control points (management system of food safety. Requirements); ISO 22000: 2005 (DSTU ISO 22000: 2007) system of food safety management. Requirements for any organizations of food chain.

Meanwhile, the share of management systems for functional groups was respectively: quality – 32% of environmental management – 3% safety (HACCP + ISO 22000) – 65%. In June 2014 the proportion was as follows (in%): 40: 1.8: more than 58.

Thus, a clear tendency that manufacturers prefer to implement safety management systems (where one and a half times more than the quality systems in general, and the number only those systems implemented – almost eight times more). Thus, recycling-food enterprises prefer the introduction of functional SME that minimize risk to market unsafe food.

Thus, the total number of 1.05 thousand. Large and medium-sized enterprises in almost 700 facilities implemented (or implemented) HACCP (or its equivalent – of ISO 22000: 2007), and in some cases – one or two other systems (ISO 9000 and/or ISO 14000). Consequently, the remaining food-processing facilities, including small and those where there are only a quality management system for safety or the environment, should ensure time-bound implementation of permanent procedures based on HACCP principles.

Note that the traditional approach to the assessment of the situation and prospects justify the introduction of HACCP in food processing enterprises (large and medium) was acceptable to the entry into force of the Law of Ukraine framework of food safety (Verkhovna Rada of Ukraine, 2014). It aims at the approximation of national systems guaranteeing food safety from European. At its core – differentiated responsibility of all participants in agricultural and food chain to ensure regulatory compliance on a “farm to table”, as well as clear procedures performed by HACCP. The main characteristic of food safety management is that for market operators clearly assigned responsibility: to ensure the traceability of the production of the final product on a “step back, step forward” (string control). In other words, the company must have accurate information about raw materials and other ingredients where and when they arrived, and in violation of the regulations concerning their safety or quality – to return to the supplier.

At the same time, the company must store information about where and who was sent to output, storage period which – three to six months after the closing date of implementation of the work was put on the packaging the labeling. This approach is much easier to find a particular culprit problems with safety and quality of food and other participants in the food chain – to prove their innocence, if necessary – to withdraw the items from sale.

Note that without a HACCP on agricultural and food sector enterprises Ukraine will not be able to implement the quota for the supply of products, as provided for by the Association Agreement EU-Ukraine. Meanwhile, deep and detailed analysis of the situation showed that today in agriculture has generated such biologically safe production sectors, namely:

- *Organic production*: about 300 operators of organic products and certified area of agricultural land exceeding 400 thousand ha;
- Production of environmentally friendly agricultural raw materials for the manufacture of baby food and dietetic 60 primary producers;
- *Primary producers in the holding company that is grown agricultural raw materials* for the production of safe and high quality agricultural and food products in compliance with harmonized national or European standards;
- *Primary producers, who introduced their own “pre-requisite programs”* and fully focused on the production of safe and quality food raw materials;
- *Primary producers in the composition of food-trading corporations* (ATB, large pocket, Eco-Pro-

ducts, Cocktail, BILLA, METRO, Novus, etc.), Grown safe and quality products and supply of commercial enterprises. Basic requirement: strict compliance with cultivation technologies, harvesting, delivery and timely implementation of these products.

Returning to the issue of implementation of HACCP note that it takes time and considerable resources. In this regard, the Law of Ukraine provides for entry into force of certain legislative provisions at different times. Given this conduct groups of enterprises by types of processed foods and depending on their size.

We emphasize that the law of Ukraine (Verkhovna Rada of Ukraine, 2014) by market operators assigned responsibility for implementation of legislation on individual safety and quality of food within the activities they carry out. By operators include entities engaged in primary production, production and/or circulation of food and other sanitation facilities. Since primary production (production and growing production, including harvesting, milking, breeding animals to slaughter, hunting animals, fishing and harvesting wild plants), its application is not mandatory, the agricultural producers can use flexible or simplified application procedures based on HACCP principles and approaches (the so-called basic program or programs required prior actions), provided low risk for food safety (International Organization for Standardization, 2011). Similar programs have previously applied for those processing food facilities in which no functional management system, including small businesses (International Organization for Standardization, 2009), in order to determine their readiness for implementation of HACCP. In the case of lack of training – for them previously implemented programs required prior actions (program prerequisites). Only in this way can ensure compliance with regulatory requirements for safety and quality of the final agricultural and food production policies in the EU.

Approximate number of food-processing enterprises in three groups, selected in accordance with the terms set by law implementing HACCP (Verkhovna Rada of Ukraine, 2014), is:

- *The first group* – facilities that carry out activities with food, which is a part of the raw ingredients of animal origin (except small capacity). The codes for the classification of types of economic activity CTEA-2010: 10.1 – meat and meat products; 10.2 – Processing and preserving of fish, crustaceans and molluscs; 10.5 – production of dairy products. Terms implementation of HACCP – until 20.09.2017. Number of capacity – about 200 units. Should be implemented – about 50 units;
 - *Second group* facilities that carry out activities with food, which included no raw ingredients of animal origin (except small capacity)*. Terms implementation of HACCP – until 09.20.2018 p. Codes for NACE 2010: 10 – food production; 11 – Beverages; 12 – manufacture of tobacco products. Number under CTEA 2010 (a difference of terms) = $(10 + 11 + 12) - (10.1 + 10.2 + 10.5)$ = more than 800 units. Should be implemented – about 250 units;
 - *The third group* small capacity***. Terms implementation of HACCP – until 09.20.2019 g, Total – about 4,5 thousand units, including without micro (up to 10 employees) – 1.2 thousand units.
- * The rest of the food-processing facilities (except small capacity). Note that *raw ingredients of animal origin* completely correlate with the definition under the Law of Ukraine the following phrases: *unprocessed food product* – a food which had not been processed, in addition to severing, cutting, separation of bone cutting, breaking, skinning, cleaning, tryminhu, removal or other shell membrane, cooling, freezing and thawing;

** According to the Law of Ukraine (Verkhovna Rada of Ukraine, 2014), *small power* – power that supply food products to the final consumer, are no more than ten people working staff, occupying an area of no more than 400 square meters, or power, which do not provide food to the final consumer and have no more than five people working staff. This definition in terms of the number of working staff (no more than ten people) coincides with the definition of micro, imposed by the State Statistics of Ukraine, but other parameters – completely different. That is why our study assume that the number of small capacity corresponding to the number of small businesses. But for a comprehensive assessment of the situation it is necessary to conduct a special survey of small businesses on a specially designed program.

To guarantee the safe production of agricultural and food products for domestic enterprises is appropriate to apply advanced foreign experience implementing HACCP. The main requirement – to ensure the effective functioning HACCP should be conducted before evaluating specific production readiness on the possibility of its implementation. In case of non-production with the minimum requirements – must develop and implement a number of measures for special purposes, based on codes of established practice and procedures of modern sanitary control. In this regard, priority attention should be given to companies included in the I (first) group (meat, dairy and fish products) and where no SMS (safety management system) for which the Law of Ukraine (Verkhovna Rada of Ukraine, 2014) determined the final HACCP implementation date – 20/09/2017.

Experience in businesses where implemented and operated SMB food shows the following. Just the owners of food-processing facilities, where so far no SMbs in this regard and should actively pursue practical action designed to radically improve the situation. They should be a catalyst for positive change in the areas of production and procurement of safe and quality food raw materials. The aim is to provide the necessary assistance to producers of meat, dairy and fish raw materials, which will then proceed for further processing and production of finished food products. However, food-processing enterprises should actively participate in the implementation of pre-requisite programs and maintain appropriate conditions for the functioning capacities relating not only primary production, but also other relevant sub-level agricultural and food chain, including (The Ministry of Agrarian Policy and Food of Ukraine, 2012).

2.4. *Program prerequisites, HACCP system should cover the following processes:*

2.4.1. Proper planning of production, auxiliary and amenity rooms to avoid cross-contamination;

2.4.2. Requirements for state facilities, equipment, repairs, maintenance of equipment, calibration, etc., as well as measures to protect food from contamination and impurities;

2.4.3. Requirements for state planning and communications – ventilation, water supply, electricity and gas supply, lighting, etc.

2.4.4. The safety of water, ice, steam, auxiliary materials for processing (processing) of food products, objects and materials in contact with food;

2.4.5. Clean surfaces (procedures for cleaning, washing and disinfection of production, auxiliary and domestic buildings and other surfaces);

2.4.6. Health and hygiene personnel;

2.4.7. Protect product from impurities; waste production and waste, their collection and removal from power;

2.4.8. Control of pests, determining the type, prevent their occurrence, means of prevention and control;

2.4.9. Storage and use of toxic compounds and substances;

2.4.10. Specifications (requirements) to control raw materials and suppliers;

4.2.11. Storage and transportation;

2.4.12. Control of the process;

4.2.13. Labelling of food and consumer awareness.

The implementation of these objectives with a view to ensuring compliance processes possible if:

- *Firstly*, the modernization of technical and technological basis of agricultural and food processing, manufacturing and introduction of modern management of production processes;
- *Secondly*, to ensure compliance with market operators engaged in primary production, and use of power, to which the production and / or circulation of food products, the level of sanitary requirements provided for by Article VII Law of Ukraine (Verkhovna Rada of Ukraine, 2014);
- *Thirdly*, the formation of a modern system of traceability of raw materials (indicators of quality and safety) systems procurement (purchase) of raw materials and other ingredients, system sales of the finished product;
- *Fourth*, training, professional development and training of technical personnel to the new conditions of industrial activity and the introduction of personal responsibility for the improper performance of professional duties and so on. Personal responsibility for the technical staff responsible and conscientious performance of their duties in accordance with the staff list and in accordance with the requirements SMB tracking parameters critical control points (CCP) production process and prompt response to their rejection – is the “alpha and omega” system safety management agricultural and food products.

Development and implementation of these measures requires some investment and training for responsible use of the above good practice. Given the limited time to introduce all the rules above Law of Ukraine (Verkhovna Rada of Ukraine, 2014), the main producers for final food products, in our opinion, are three possible approaches to the preparation and selection of models in plain-term (i.e. two to four years):

- *Seek financial and material resources* for the drafting of innovation and technological modernization, and its implementation in order to drive recycling, food production to a new level, and the design, implementation and certification of SMBs;
- *Most of the remaining potential capacity*, operated, and the entry into force of the said rules – to stop and dismantle production. This does not exclude such an option as the construction on land liberated from outdated facilities, the new enterprise using modern technology;
- *To amend the existing quality management system* and / or environmental management system for environmental safety (i.e., the creation of integrated systems) during the relevant works to bring manufacturing to regulatory requirements that are implemented and respected in the European Union.

In this context, there is reason to evaluate and prospects of agricultural producers: a large part of them can adapt to the new requirements of the modern globalized production, the second – will be focused only on the needs of families in organic food crops and backyard livestock, and others – gradually closes production, and quite often due to the absence of the younger generation for its maintaining, and often to complete its liquidation.

However, for a group of operators (The Ministry of Agrarian Policy and Food of Ukraine, 2012) possible and appropriate to implement procedures based on HACCP principles, providing simplified their use in all cases given species (nature) process technology, which provides operators, and sizes of power. Requirements for the development, implementation and effective enforcement procedures under the simplified approach must be proportionate to the risk. In determining the applicability of a simplified approach to procedures accounted for hazards associated with process and food product, the likelihood of their impact on food safety.

Control of hazardous factors provided simplified equivalent measures that are effective in the application of procedures based on HACCP principles. In facilities with low risk (not made preparation, handling or processing of food) hazards can be controlled through the use of assumptions. In such cases it is sufficient only application of the principle of 1 HACCP “hazard analysis” and not allowed to use other principles of HACCP.

4.5. *These facilities may include (list is not exhaustive):*

4.5.1. Movable and / or temporary facilities (tents, kiosks, counters, moving vehicles to trade);

4.5.2. Power, exercising and cooking for beverages (bars, coffee shops, etc.);

4.5.3. The capacity of performing simple process steps for the preparation of food (such as cutting), provided that the proper prerequisites programs, such operations;

4.5.4. Power, transport or store pre-packaged foods or foods that do not spoil quickly (long term storage).

In implementing these models perspective of the vast majority of food-processing enterprises and entities of initial production will be adapted to European regulatory space, and their products – to flow freely on the food markets of the Member States.

At the same time, it is necessary to draw attention to the fact that in the implementation of HACCP has the right to exist and this food is that it can definitely be described as low quality, that is manufactured using low content of natural ingredients, various additives and substitutes (soy, cereals) etc. However, its safety for consumers must be guaranteed, and the composition of the product for certain listed on the label. But if the manufacturer will bring to market unsafe food, then for such violations under the framework of the Law of Ukraine food security (Verkhovna Rada of Ukraine, 2014) provides for the imposition of fines, which significantly increased compared to the previous size.

5. Epilogue (summarizing results of integration of agro-food sector of Ukraine into the European Union internal market)

In the food industry, there are about 5.6 thousand companies, including:

- Large and medium-sized enterprises – 1.05 thousand employing 313.2 thousand employees;
- Small businesses: the number – about 4500 units, Including without micro (up to 10 employees) – 1200 units, where generally employed 36.2 thousand workers.

In the primary production (agriculture, forestry and fisheries) are more than 46 thousand economic structures, including rustic – 44 ths. business entities, including:

- Large enterprises – 28 units and more than 46 thousand employees;
- Average – about 2.6 thousand companies and about 0.3 ths. individual entrepreneurs (IEP), where there are more than 360 thousand employees;

- Small (not micro) – About 4,5 thousand companies and about one thousand individual and micro enterprises (up to 10 employees and payroll) – respectively about 10 thousand. And nearly 25 thousand, where there are over 150 thousand employees.

In *Table 4* the results of targeted government agencies at various levels are summarized, industry associations agricultural and food sector and interested companies, whose efforts since the late 1990s were aimed at ensuring the transition from post-regulatory system in the European base model technical regulations. The first – a model of rigid state control over compliance with requirements of state standards (SS) at each company, and the second – the base model technical regulations established and successfully operates in the European Union. Its fundamental difference – the entire responsibility for compliance with regulatory safety parameters coined production relies on the manufacturer, which it produces, and the quality – the consumer that it is buying according to your preferences and depending on their financial capabilities. In *Table 4* the results of targeted government agencies at various levels are summarized, industry associations of the agricultural sector and interested companies whose efforts are focused on ensuring the transition from the post-Soviet model of rigid state control over compliance with requirements of SSU SS every enterprise to the European base model technical regulations when the responsibility for compliance with regulatory safety parameters coined production relies on products that it produces, and the quality – the consumer, which it buys according to their preferences and depending on their financial capabilities. With specific regard to technical regulations, over the first five main components is a significant advancement and approaching the final phase, and the sixth – level access to practical creation of system of market surveillance for compliance with the mandatory requirements of the food production industry. To ensure the formation of public market surveillance need at least one year of practical work and on its results – adjusting the legal framework, improving the territorial structure, professional development specialists, forming the image of the territory of the EU, WTO and other international organizations as a reliable national market surveillance authority issued certificates that can be trusted fully.

These indicators (p.7 *Table 4*) apply only to food, beverages and tobacco, for which the NASSR system is mandatory. However, since the primary production (production and growing production, including harvesting, milking, breeding animals to slaughter, hunting animals, fishing and harvesting wild plants), its application is not mandatory, the agricultural producers (p. 8 *Table 4*) can use flexible or simplified application procedures based on HACCP principles (so-called basic program or programs required prior actions), provided for low-risk product safety (International Organization for Standardization, 2011). Similar programs have previously applied for those processing food facilities where no functional management system, including small (International Organization for Standardization, 2009), in order to determine their readiness for implementation of HACCP. In the case of establishment of unpreparedness, then they also previously implemented programs required prior actions or basic programs. Note that the basic program (program prerequisites) HACCP into account the following (The Ministry of Agrarian Policy and Food of Ukraine, 2012):

- The use of pre-requisite programs HACCP involves the development and implementation of procedures for market operators hygiene throughout the food chain that are necessary for the production and supply of safe food for human consumption, as well as the rules for handling food;

- Program prerequisites are mandatory and are designed for efficient functioning of the food safety and control hazards and should be developed, documented and fully implemented by market operators before applying the HACCP system. The scope of the pre-requisite programs should cover all potential threats to safety. Only in this way can ensure compliance with regulatory requirements for safety and quality of the final agricultural and food production policies in the EU.

Table 4. Summarizing the results of the convergence of national technical regulation system (TRS) for food complex with the base model of the EU and implementation of functional systems management, basic programs and simplified procedures based on HACCP principles in the agricultural sector of Ukraine

Situation at the end of April 2016	Should be developed (to implement)
1. Legislative and regulatory framework	
adopted and enacted about 50 laws of Ukraine (basic, framework of food safety for certain types of products, control of economic activity);	Adopt and implement more than a dozen draft laws of Ukraine, including key, „On state control in the field of safety and quality of food and feed, animal welfare,“ etc.;
2. Harmonization of national database standards	
National standards base includes 30 thousand. Regulations, of which harmonized with European 10 thousand. And 13,5 thousand. SS and SSU SS, the validity of which was canceled in December 2015 year, but extended to early 2018 year to business was able to adapt to new conditions;	To prevent „legal chaos“ in 2018 need to implement a range of measures: - Divide the requirements of SS and SSU SS required to (fix technical regulations (TR) and voluntary (Pin to national standards); - Develop plans and estimate the volume of work for Standardization (SS revision and elaboration TR); - To seek funds for the work of standardization (development of national standards and TR);
3. Development of technical regulations	
Approved 50 technical regulations, of which 46 developed based on the regulations of the EU (40 – required for use);	Resume work for Standardization (TR sector): - See „mothballed“ laws for certain types of food and implement them; - To refine the list of technical regulations on the safety of agricultural and food products and to develop in a matter of priority; - Complete development of „dormant“ and expand the work to develop new TR;
4. Accreditation of conformity assessment bodies	
Accredited in accordance with the requirements of harmonized national and international standards 620 of Conformity Assessment Bodies (CAB);	It should intensify work to bring into line with the requirements of harmonized national and international standards and conduct accreditation at the CAB 340;

Situation at the end of April 2016	Should be developed (to implement)
5. Conformity assessment procedure	
<p>- Conformity assessment – proving that the requirements for product, process, system, person or body made by testing, monitoring or certification;</p> <p>- Conformity – issue a declaration of conformity (certificate of conformity) based on a decision that is taken after appropriate (necessary) conformity assessment procedures that have proven to their satisfaction;</p> <p>Number of claims TRS components Name situation at the end of April 2016 should be developed (to implement)</p>	<p>To ensure equivalence (unity) test results and their mutual recognition must sign an agreement on mutual recognition between NAAU (National Accreditation Agency of Ukraine) and ILAC (International Laboratory Accreditation Cooperation), which will remove barriers (re-testing products) at moving goods between countries that are signatories to this Agreement (about one hundred countries). This agreement was signed with the European Association for Accreditation (EA). Members of EA today has 26 member states of the European Union;</p>
6. State market supervision of compliance with regulations	
<p>Cabinet of Ministers of Ukraine „On optimization of central authorities“ (from 10.09.2014 year №442) established State Service of Ukraine on Food Safety and Consumer Protection (State Border Guard Service of Ukraine) by the State Veterinary and service and liquidated State Border Guard Service of Ukraine, Sanitary-epidemiological service Inspectorate sanitary-epidemiological service</p>	<p>To ensure the success of the new service must:</p> <ul style="list-style-type: none"> - Complete reorganization and / or liquidation of regional offices and liquidated inspection service; - Complete filling staff vacancies in management, institutions and organizations in the regions, cities and districts; - To provide the necessary facilities departments and institutions where they do not exist; - Provide adequate funding (about 1 bln. USD)
7. Implementing functional management systems in the food industry	
<p>Management system introduced functional management systems:</p> <p>ISO 9000 (Ukrainian version of SSU ISO 9001: 2009) – the requirements for quality management systems of organizations and enterprises (QMS), certified systems – 413 units., In a state of development and implementation – 22 units.;</p> <p>ISO 14000 (SSU ISO 14001-97) – Environmental Management System (Safety Management System Environment): 30 and 10 units.;</p> <p>HACCP (SSU 4161-2003) – Hazard analysis and critical control points (system of food safety. Requirements): 279 and 91 units.;</p> <p>ISO 22000: 2005 (SSU ISO 22000: 2007) – a system of food safety. Requirements for any organization in the food chain: 438 and 77 units.</p>	<p>It is necessary to introduce functional:</p> <ul style="list-style-type: none"> - Facilities that carry out activities with food, which is a part of the raw ingredients of animal origin (except small capacity) *. Terms implementation of HACCP – until 20.09.2017 year. Number of capacity – about 200 units.; - Facilities that carry out activities with food, which included no raw ingredients of animal origin (except small capacity). Terms implementation of HACCP – until 20.09.2018 year. Number – more than 800 units.; - Small capacity. Terms implementation of HACCP – until 09.20.2019 year. The total amount – about 4.5 thousand units., Including without micro (up to 10 employees) – 1200 units.; <p>* The rest of the food-processing facilities (except small capacity). Note that raw ingredients of animal origin completely correlate with the definition under the framework of the Law of Ukraine on food safety following phrases: unprocessed food product – a food which had not been processed, in addition to severing, cutting, separation of bone cutting, breaking, removing the skin, removal or other shell membrane, cooling, freezing and thawing;</p>

Situation at the end of April 2016	Should be developed (to implement)
8. Implementation of basic programs and simplified procedures based on HACCP principles in primary production	
Introduced various functional management system, baseline programs and simplified procedures based on HACCP principles in primary production, estimated at about a thousand farms	should be implemented basic programs and simplified procedures based on HACCP principles in primary production for more than 40 thousands of businesses primary production. Of them: - Average – about 2600 enterprises and about 0.3 thousand individual entrepreneurs; - Small (not micro) – About 4,500 companies and nearly one thousand individual entrepreneurs and micro enterprises (up to 10 employees and individual entrepreneurs) – respectively about 10 thousand and nearly 27 thousand.

Source: developed by the authors.

It should be noted that as the proportion of primary production enterprises, which introduced functional management system, estimated a few percent, but now they do not have a significant impact on the situation in the production of food raw materials.

So, except operators of food and feed business where functional management system already certified or in the process of practically all natural and legal persons involved in the production and / or treatment facilities sanitary measures (food, animals, intended for human consumption, and for processing aids and materials in contact with food), subject to the introduction of basic programs and functional safety management system (HACCP and SSU ISO 22000: 2007). The deadline for implementation set by the Law of Ukraine framework of food safety – until September 2019 year. So here is just a matter of priority efforts should target economic entities of the agricultural sector to solve the problem.

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