

Kyryliuk I. M.

*Lecturer of Department of management and economic security
Bohdan Khmelnytsky National University of Cherkasy, Ukraine;
e-mail: in_kirilyk@ukr.net*

Kyryliuk Ye. M.

*Doctor of Economics, Professor
Department of Economic Theory, Innovation and International Economics
Bohdan Khmelnytsky National University of Cherkasy, Ukraine;
e-mail: en_kirilyk@ukr.net*

EUROPEAN AND UKRAINIAN TECHNICAL REGULATION SYSTEMS IN THE AREA OF ANIMAL PRODUCT QUALITY AND SAFETY: SOCIO-ECONOMIC ASPECTS

Abstract. The article looks at socio-economic aspects solutions for the problem of ensuring the safety and quality of animal husbandry products that is extremely acute in Ukraine at present. Considerable amounts of animal source foods circulating on the market in the country are falsified according to one or more parameters. Animal source foods contain palm oil, various stabilizers, enzymes, antibiotics, traces of heavy metals, toxic substances, veterinary drugs, etc. The safety control system used in Ukraine right now is based only on testing the final products and is inefficient. It does not promote the competitiveness of the Ukrainian animal husbandry products on the world market.

Results. The authors hereof substantiated the need to utilize the current approaches to the animal products quality and safety assurance that are used in the European Union (EU) member countries and have proven their efficiency. The paper sets out the comparative analysis results related to the European and Ukrainian technical regulation system (TRS) in the area of animal products quality and safety. It is established that the last five years have seen the continuing functional approximation of the Ukrainian TRS to the EU and World Trade Organization (WTO) requirements. Still, it mostly concerns the TRS formation as a whole and is unrelated to the animal husbandry industry (sector).

Originality. Problems are revealed that reduce the efficiency of sanitary and phytosanitary measures in the area of production and trade of animal products and feeds in Ukraine. The key aspects of using horizontal or process approach to ensuring animal products safety in Ukraine are revealed. The specifics of the current European animal products quality certification systems are determined that may serve as the prototype of the Ukrainian certification system. It is determined that Ukraine still lacks a developed mechanism for the agricultural businesses to be able to implement and support the prerequisite programmes (PRP) related to animal product safety. Yet, it has to precede the implementation of the Hazard Analysis and Critical Control Point (HACCP) principles by such businesses.

Practical relevance. The paper indicates the causes of the Ukrainian legislation inefficiency in the area of ensuring animal product quality and safety. The study contains the ways of improving such legislation. We revealed the basic prerequisites for applying risk-based approach in the animal products safety government control in Ukraine. The study shows the results of the analysis of social and economic factors that cause the low quality and lack of safety of the animal products in Ukraine. It is proven that the problem resolution requires a comprehensive approach, which is not limited to the increase of state control efficiency and the successful harmonization of the Ukrainian technical regulation system with the European one.

Keywords: product safety, product quality, animal husbandry products, animal source foods, technical regulation system, sanitary measures, animal products hygiene.

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Кирилюк І. М.

*викладач кафедри менеджменту та економічної безпеки,
Черкаський національний університет імені Богдана Хмельницького, Україна;
e-mail: in_kirilyk@ukr.net*

Кирилюк Є. М.

*д.е.н., професор кафедри економічної теорії, інноватики та міжнародної економіки,
Черкаський національний університет імені Богдана Хмельницького, Україна;
e-mail: en_kirilyk@ukr.net*

ЄВРОПЕЙСЬКА ТА УКРАЇНСЬКА СИСТЕМИ ТЕХНІЧНОГО РЕГУЛЮВАННЯ У СФЕРІ ЯКОСТІ Й БЕЗПЕЧНОСТІ ПРОДУКЦІЇ ТВАРИННИЦТВА: СОЦІАЛЬНО-ЕКОНОМІЧНІ АСПЕКТИ

Анотація. Наукову статтю присвячено розкриттю соціально-економічних аспектів вирішення проблеми гарантування безпечності та якості продукції тваринництва. Обґрунтовано необхідність застосування сучасних підходів до гарантування якості й безпечності продукції тваринництва, які використовуються у країнах-членах Європейського Союзу (ЄС) і довели свою ефективність. Викладено результати компаративного аналізу європейської та української системи технічного регулювання (СТР) у сфері якості й безпечності продукції тваринництва. Виявлено проблеми, які знижують ефективність в Україні санітарних і фітосанітарних заходів у сфері виробництва й обміну продукції тваринництва та кормів. Розкрито ключові аспекти застосування горизонтального або процесного підходу до гарантування безпечності продукції тваринництва в Україні. Визначено специфіку сучасних європейських систем сертифікації якості продукції тваринництва, які можуть стати прототипом української системи сертифікації. Вказано на чинники неефективності українського законодавства у сфері гарантування якості й безпечності продукції тваринництва. Показано шляхи удосконалення такого законодавства. Розкрито базові передумови застосування ризик-орієнтованого підходу до державного контролю безпечності продукції тваринництва в Україні. Проаналізовано соціально-економічні чинники, які зумовлюють низьку якість і небезпечність окремих продуктів харчування тваринного походження в Україні. Доведено, що вказана проблема для свого вирішення потребує комплексного підходу, який не обмежується підвищенням ефективності системи державного контролю та успішною гармонізацією української системи технічного регулювання із європейською.

Ключові слова: безпечність продукції, якість продукції, продукція тваринництва, продукти харчування тваринного походження, система технічного регулювання, санітарні заходи, гігієна продукції тваринництва.

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Кирилюк І. Н.

*преподаватель кафедры менеджмента и экономической безопасности,
Черкасский национальный университет имени Богдана Хмельницкого, Украина;
e-mail: in_kirilyk@ukr.net*

Кирилюк Е. Н.

*д.э.н., профессор,
кафедры экономической теории, инноватики и международной экономики
Черкасский национальный университет имени Богдана Хмельницкого, Украина;
e-mail: en_kirilyk@ukr.net*

ЕВРОПЕЙСКАЯ И УКРАИНСКАЯ СИСТЕМЫ ТЕХНИЧЕСКОГО РЕГУЛИРОВАНИЯ В ОБЛАСТИ КАЧЕСТВА И БЕЗОПАСНОСТИ ПРОДУКЦИИ ЖИВОТНОВОДСТВА: СОЦИАЛЬНО-ЭКОНОМИЧЕСКИЕ АСПЕКТЫ

Аннотация. Научная статья посвящена раскрытию социально-экономических аспектов решения проблемы обеспечения безопасности и качества продукции животноводства. Обоснована необходимость применения современных подходов к обеспечению качества и безопасности продукции животноводства, используемых в странах-членах Европейского Союза (ЕС) и которые доказали свою эффективность. Изложены результаты сравнительного анализа европейской и украинской системы технического регулирования (СТР) в области качества и безопасности продукции животноводства. Выявлены проблемы, которые снижают эффективность в Украине санитарных и фитосанитарных мер в сфере производства и обмена продукции животноводства и кормов. Раскрыты ключевые аспекты применения горизонтального или процессного подхода к обеспечению безопасности продукции животноводства в Украине. Определена специфика современных европейских систем сертификации качества продукции животноводства, которые могут стать прототипом украинской системы сертификации. Указано на факторы неэффективности украинского законодательства в сфере обеспечения качества и безопасности продукции животноводства. Показаны пути совершенствования такого законодательства. Раскрыты базовые предпосылки применения риск-ориентированного подхода к государственному контролю безопасности продукции животноводства в Украине. Проанализированы социально-экономические факторы, которые обуславливают низкое качество и опасность отдельных продуктов питания животного происхождения в Украине. Доказано, что указанная проблема для своего решения требует комплексного подхода, который не ограничивается повышением эффективности системы государственного контроля и успешной гармонизацией украинского системы технического регулирования с европейской.

Ключевые слова: безопасность продукции, качество продукции, продукция животноводства, продукты питания животного происхождения, система технического регулирования, санитарных мероприятий, гигиена продукции животноводства.

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Introduction. In the last decades the problem of ensuring animal products quality, and their safety in particular, has become extremely acute in Ukraine. According to numerous studies, the country is witnessing a uncontrolled filling of the market with falsified products with «the smell of milk and meat» containing palm oil, various stabilizers, enzymes, antibiotics, veterinary drugs, etc. [1, p. 109]. Traces of heavy metals, toxic substances, radionuclides in the feed and, correspondingly, in the animal products cause hepatotoxic, mutagenic and carcinogenic effects, immune deficiencies and allergies, nervous system dysfunctions, cancers, acute and chronic toxemias caused by the direct and cumulative effects of the toxic agents.

Considering that it is necessary to substantiate the need to utilize the current approaches to the animal products quality and safety assurance that are used in the European Union (EU) member countries and have proven their efficiency. Besides that, the high requirements of the EU legislation and the demands of the European consumers become a considerable barrier on the way of exporting the Ukrainian animal products, and these products have a considerable value added part. In other words, the main hindrances for the Ukrainian animal products trade with the EU are not the import rates, but specifically the technical barriers.

Objects and methods of study. The study targets the technical regulation processes in the area of animal products quality and safety in the EU and Ukraine. The objective of the study is the comparative analysis of European and Ukrainian technical regulation systems in the area of animal products quality and safety, as well as using the results of the analysis to substantiate the ways of improving the Ukrainian system in the conditions of forming the free trade area with the EU.

The main tasks of the research are: 1) to determine the institutional basics for the functioning of the European animal foods quality and safety technical regulation system; 2) to reveal the key aspects of using horizontal or process approach to ensuring animal products safety; 3) to reveal the specifics of the current European animal products quality certification systems; 4) to

analyse the algorithms and mechanisms for approximating the Ukrainian technical regulation system to the EU and World Trade Organization (WTO) requirements; 5) to reveal the problems that reduce the efficiency of sanitary and phytosanitary measures in the area of production and trade of animal products and feeds in Ukraine.

The main idea of the research is that the availability of considerable opportunities to expand the raw materials supply base, the intensive feed production development in Ukraine, subject to the development of efficient organizational and economic solutions based on the European practices, may become the key to solving the acute problem of assuring the animal products quality and safety. Sufficient animal protein consumption is acknowledged by the world as an irreplaceable prerequisite of the growth of mental capacities of a person, the formation of the intellectual potential of the nation as a whole. Besides that, the quality of the products is one of the global determinants of competitive ability that underlies the formation of the international valued-added chain. At present, Ukraine predominantly exports the products with low value added share, thus confirming its status of a mere supplier of raw materials within the world economy. The working hypothesis is therefore that in the conditions of WTO membership and the functioning of the free trade area with the EU the possibility for the Ukrainian agricultural goods manufacturers to obtain a larger share of value added is primarily related to the more active trade in animal products the consumption volumes of which show stable growth in the world.

The authors hereof propose elements of a theoretical model (similar to the European one) for assuring animal products quality and safety in Ukraine, where the food supply chain is viewed as integrated according to the «farm-to-table» principle; the prerequisite of the successful policy of increasing the animal foods quality is the traceability of feeds and foods, their components at all stages of the food supply chain; the feed manufacturers, farmers and food businesses have the primary legal responsibility for food safety; risk analysis is a fundamental component of the animal foods safety policy.

The methodological basis for the research is provided by the scientific developments and the results of interdisciplinary research on the problems of products quality and safety, sustainable food supply, methods and models of their practical application in various social and economic conditions. Methodological support of the research is based on the complex (systemic) approach, which allows for a more in-depth and exact reproduction of the researched processes of quality food supply in all the variety of their actual manifestations.

Results and discussion. Until the early 2000 in the EU, legal acts (directives, regulations) that determined the processes of assuring animal products quality and safety were vertical or product-oriented. Similar to the local legislation, they contained the detailed description of norms and quality indicators for certain types of animal products, yet they did not provide for the feed control and the analysis of the feed dangerous factors. This resulted in multiple product safety issues (bovine spongiform encephalopathy, presence of hormones in pork, antibiotics in honey, dioxin in eggs and poultry meat, etc.), which caused the European consumers to lose faith in the proper quality of agricultural and food industry products [2].

As a reaction to a series of scandals with the foods and the changes in the minds of the consumers, a new concept of animal products hygiene was substantiated in the EU. According to this concept, the notion of hygiene concerns not only the final product (milk, meat, eggs, honey), but spreads to the whole chain of production, particularly the primary production of feeds. As a result, dominant now in the EU is the horizontal approach to products quality and safety: a series of fundamental documents is developed that cover all types of foods and all the processes related to their production and trade.

The EU has adopted detailed norms and standards for the products (permission to bring on the market, banned substances), for the process (HACCP, one step forward one step back traceability), for the consumer information (labelling), as well as for the procedures (official control).

Increasing the responsibility of all food chain participants for the animal foods quality and safety determined their more active efforts to perform voluntary certification. In order to meet the regulation requirements and win the consumer trust, European manufacturers implement additional measures of animal foods quality and safety assurance, particularly, the ones based on the certified systems of quality management that cover the whole value added chain. Many scientists state that the certification mechanism, though voluntary, is very well spread across the agrarian and food industries. Certified systems confirm that the indicators or properties of the product, as well as the method of its production comply with the established criteria and the additional requirements to the environmental friendliness, animal protection, organoleptic characteristics, geographical place of origin, etc. [3, p. 84].

Presently, the most famous standards in the area of foodstuffs are IFS, BRC Food, BRC loP, Dutch HACCP, GLOBALGAP, ISO 9001, ISO 14001, ISO 22000, ISO 22002-1(2,3), FSSC. These standards differ from each other by the orientation of requirements (system or product standard), depth of application (horizontal or vertical standard), the extent of application (regional, national, international). As of 2010 in the EU according to the Register there were 441 systems of quality certification for agricultural and food products.

In order to harmonise these systems and limit their combined pressure towards the increase of manufacturer's expenditures (who are often forced to certify their products according to several schemes) the Regulation (EC) № 1151/2012 «On quality schemes for agricultural products and foodstuffs» was adopted effective as of January 2013. The new Regulation is in general accord with the existing quality schemes and only introduces certain changes into the requirements of the previous legal acts (Regulations (EC) No. 509/2006 and 510/2006). The changes concern the simplified regime for several quality schemes; mandatory usage of logos for the products manufactured in the EU, starting from 4 January 2014; creation of the legal basis for registering geographical names of the third countries to the EU register by means of bilateral agreements. Generally, the regulation created a more reliable basis for the protection and encouragement of animal products quality.

European consumers are increasingly interested in obtaining the information on the ways the animals are kept and treated at the farms and the level of their well-being. Accordingly, there is growing motivation among the producers to improve the well-being of the animals and show that through various certification programs which allows for the increase of the demand for their products. As of now there is a European system of mandatory labelling the edible eggs with the information about the animal well-being during production. This system is based on the EU legislation on keeping the hens (requirements for the size of the premises, cages, obligatory free ranges for walking the hens, etc.).

In the EU Strategy on Animal Welfare is developed, which is oriented towards ensuring the better information for the consumers and the companies about the animal well-being, including the statement of the corresponding information on the label and the package of the products originating from these animals. During the last decade the European Agricultural Fund has allocated approximately 70 million Euros annually to the farmers for supporting the animal well-being[4]. Now the European Commission substantiates the need of creating the European network of information centres on animal protection and well-being.

Along with this, increasingly popular and expanding in the European countries recently are the volunteer animal protection certification systems («Animal Welfare Labelling»). In the UK, the «Freedom Food» program is spreading, in Germany – «Neuland», in France – «Label Rouge», in the Netherlands – «Beter Leven», in Switzerland – «RAUS» (regular walking), «BTS» (systems of keeping the animals in the buildings, especially beneficial for the animals). Project Econ Welfare financed by the EU envisages the further development of the animal rights protection initiatives.

It is important to point out that in the present Ukraine only some elements of the national technical regulation system are being formed in the area of animal products manufacture and trade, which ensure the implementation of a horizontal or complex approach (to replace the product-oriented ones) to the quality and safety assurance. Within the last 5 years one can see the more

active efforts towards the functional approximation of the Ukrainian technical regulation system to the EU and WTO requirements. Still, these efforts mostly concern the TRS formation as a whole and have no specific relation to the animal husbandry industry.

The basis for the implementation of the measures on the regulation of the general principles and legal requirements on animal product and feed safety is laid by the Law of Ukraine «On the Main Principles of and Requirements on Foods Safety and Quality» (as amended Law No. 1602 dated 22.07.2014) [5]. Although previously the Order of the Ministry of Agrarian Policy and Food of Ukraine «On Approval of Requirements on the Development, Implementation and Application of Constantly Acting Procedures Based on the Hazard Analysis and Critical Control Point (HACCP) System Principles» dated 01.10.2012 No. 590 [6] was adopted, and current were national standards of Ukraine DSTU ISO 22000:2007 «Food safety management systems – Requirements for any organization in the food chain (ISO 22000:2005, IDT)» and DSTU ISO 22005:2009 «Traceability in Feed and Food Chains. General Principles and Main Requirements for the Development and Implementation of the System (ISO 22005:2007, IDT)».

The Law of Ukraine «On main principles and requirements to foodstuffs safety and quality» [5] conceptually determined the procedure for ensuring the safety and certain quality indicators for animal products in Ukraine, which are manufactured or traded. This procedure corresponds to the European principles of ensuring safety and quality. It envisages mandatory accreditation in accordance with DSTU ISO/IEC 17025:2006 standard «General requirements for the competence of testing and calibrating laboratories» for all laboratories performing the product testing, and reference laboratory networks are established. It approves the mandatory hygiene requirements for the facilities, where the animal products are produced or traded, the premises where animal origin foods are processed or reprocessed, to mobile or temporary facilities, equipment and inventory, hygiene requirements to water supply, handling the food waste, requirements to the hygiene of the personnel at the facilities who work in the area of handling the animal products, hygiene requirements to animal foodstuffs, including their packing, primary packing, thermal processing, etc.

One of the key moments was the regulation of implementing the European principle of traceability and risk analysis along the whole animal product production and trade chain, as well as the usage of HACCP by the subjects of these chains. The final and transitional provisions of the Law of Ukraine «On main principles and requirements to foodstuffs safety and quality» for the facilities that handle food products, which include non-processed animal ingredients (except small facilities) envisage the requirement that starting from Quarter IV of 2017 HACCP-based procedures are to be implemented and applied. According to the State Service of Ukraine for Food Safety and Consumer Protection, as of 01.08.2017 the HACCP system is implemented by 362 production facilities handling food products containing non-processed animal ingredients. 867 other facilities are planning to complete the implementation by late 2017 [7].

Yet, the standard ISO 22000:2005 envisages that the prerequisite for the implementation of HACCP principles should be the development, implementation and support of the prerequisite programmes (PRP) for animal product safety at agricultural companies. The said programs ensure efficient control of hazardous factors and their management in feed production, feeding, watering and grazing processes, the identification and transportation of animals, monitoring their health, usage of veterinary drugs, milking, etc. [8]. The necessity of taking the measures on managing the hazardous factors in production, transportation, storage and other handling of animal products is also set out in Article 40 of the Law of Ukraine «On main principles and requirements to foodstuffs safety and quality» that have come into effect since September 2016.

At the same time, the mechanism of development and implementation of these prerequisite programs is regulated by the ISO 22002-3:2011 standard «Prerequisite programs on foods safety. Part 3. Agriculture», which is not yet approved as national in Ukraine. Accordingly, the mechanism of implementation and application of these prerequisite programs into practice of the national agricultural business is not yet approved. Thus, the system of animal products quality and safety assurance technical regulation contains a collision now: manufacturers have to take measures within the second stage on assuring animal products safety (implementation of HACCP principles), without knowing the mechanism of implementing stage one measures (development and implementation of prerequisite programs in animal husbandry).

This lack of system and chaotic way of technical regulation implementation fails to promote animal product safety and quality. Besides that, there is a need to approve over ten technical regulations in Ukraine, which would determine the responsibilities related to the processes of production, storage, transportation, trade of the main types animal products: milk, meat (veal, pork, mutton, goat meat, poultry meat, etc.), eggs, fish, as well as feed. Developed at present are only drafts of some of them, including the drafts of technical regulations «Raw Milk Production and Quality and Safety Management», «Confirmation of Requirements for Fish Meal Feed Safety and Quality», etc.

Now the safety of many animal products is controlled by the outdated standards and requirements developed still in the Soviet Union times. As a result, national standards contain no detailed requirements for the content in the animal products of certain antibiotics, hormones, current veterinary drugs, traces of chemicals (incl. dioxin), insecticides, as are implemented in the EU-countries. For instance, in several EU countries (Germany, Belgium, the Netherlands, France, Spain) in the second half of 2017 there was the «egg scandal», as eggs and chicken meat were found to contain traces of fipronil – and insecticide chemical used at the facilities to fight ticks, fleas, cockroaches, etc. Standards acting in Ukraine have no provisions for controlling the content of this chemical in animal products (as well as the the chemicals similar to it).

There is no control in Ukraine for some of the indicators of the milk raw materials (e.g. the freezing point). In general, according to certain safety indicators (bacterial contamination, somatic cell count) national DSTU requirements 3662-97 «Whole Cow Milk. Requirement for Purchasing» are considerably lower that the ones in the EU and the USA (table 1).

Table 1

Comparative analysis of milk quality standards in the USA, the EU and Ukraine

Somatic cell count (thousands/ml)	Bacterial contamination (thousand cells/ml)	USA	EU	Russia	Ukraine
< 100	< 3				
< 100	< 5	Cl. A			
< 100	< 30		Excellent		
< 150	< 5	Cl. B			
100-200	30-50		Good		
< 200	< 10	Cl. C			
200-350	30-50	Unacceptable	Average		
< 300	< 100			High Grade	
< 400	< 100		Satisfactory		Extra
301-500	101-500		Unacceptable	Grade I	
< 400	< 300				High Grade
350-500	300-500				
> 500	> 500				
501-1000	501-4000			Grade II	
< 600	< 500				Grade I
< 800	< 3000				Grade II

Source: data from the Ministry of Agrarian Policy and Food of Ukraine [9].

Although in the conditions of integration into the European and world markets the sale price of milk mainly depends on its quality indicators, the system of milk quality in Ukraine does not meet the world standards (at the same time the requirements to the quality of milk have a stable tendency to grow). Domestic milk is considered low-quality, which causes the low income of its producers, prevents the expansion of external markets of its processed products and, consequently, the development of its production [10, p. 457].

At the same time mere raising of the standards will not provide a solution, as its main production (74% by 2016 data [11, p. 9]) is provided by the private sector, producing mostly grade II milk. Besides that, the processing facilities see the lack of raw materials and often accept the milk with bacterial contamination of over 3 mln. cells per ml, i.e. the milk that does not meet even grade II standards.

Low quality and lack of safety of certain foods of animal origin in Ukraine is, to a large extent, caused by the low standard of living of the population and low income of most local families, which forces the demand for low-quality products that the people are forced to consume. When choosing between quality and poor quality products, a Ukrainian consumer quite often chooses the latter, which, may, among other things, be produced in non-sanitary conditions at people's homes. The consumer often substitutes the somewhat more expensive animal products with the cheaper vegetable-based ones. Thus, raising the quality of animal products, which would, consequently, make it somewhat more expensive, will cause the replacement phenomenon to become even more extensive.

Throughout the last decades in Ukraine, the monotonous fat and carbs food intake is characteristic of the majority of the population. 60-80% of the energy value of the rations of both adults and children is provided by the carbohydrates based on bread, potatoes, oil and sugar. In 2016, the consumption of all main types of animal foods was considerably lower: milk and dairy – 55% of the rational consumption rate, fish and fish products – 48%, meat and meat products – 64%, eggs – 92% (table 2).

Table 2

Consumption of the main animal foods by the population of Ukraine per day per person (kg per year)

Food types	Rational consumption rate	1990	1995	2000	2005	2010	2015	2016	2016 as % of the rational rate
Meat and meat products	80	68.2	38.9	32.5	39.1	52.0	50.9	51.4	64
Milk and dairy	380	373.2	243.6	197.7	225.6	206.4	209.9	209.5	55
Eggs, pcs.	290	272	171	164	238	290	280	267	92
Fish and fish products	20	17.5	3.6	8.3	14.4	14.5	8.6	9.6	48

Source: data from the State Statistics Service of Ukraine [12].

In 2016 only 28.8% of the daily average consumption in Ukraine was ensured by consuming foods of animal origin (with the threshold of 55%). Daily average calory value of animal foods consumed per person comprised 790 kilocalories (kcal) [12, p. 11]. Yet the lowest threshold of their consumption (minimum physiological norm) in Ukraine is considered 1375 kcal. In the developed countries the consumption norm for foods of animal origin, below which hunger starts along with irreversible processes in the body, comprises 1650 kcal. And in Ukraine the actual consumption indicators are more than twice lower. They are a proof of an actual catastrophic condition of the national health. Yet, without animal proteins, a human body cannot function properly. Unlike vegetable proteins, animal proteins contain all the nonessential and essential aminoacids, also in the exact proportions that the human body requires.

This means that the problem of animal product quality and safety assurance has deep beginnings caused by a series of factors, including social and economic ones, so resolving the situation would require a systemic (complex) approach, which is not limited to mere increase in state supervision (control) efficiency and successful harmonization of the domestic technical regulation system with the European one.

Conclusion. Vertical or product-oriented approach towards animal product quality and safety assurance used in Ukraine before 2015 and the control system it caused, which was based on testing the final products, were reactionary, inefficient and non-compliant with the current international tendencies. Such approach, besides that, also caused great problems with the supervision of meeting the requirements for the quality and safety indicators.

European practice shows that a horizontal or comprehensive approach, elements of which are now being formed in Ukraine, would ensure efficient combination and enhancement of product control with process control. This guarantees the continuity of the animal product quality assurance process and increases the efficiency of the organizational and economic measures.

The problem of ensuring the safety and quality of the animal products is a complex problem, and besides the solving of the standardization issues mentioned in this study, the creation of an efficient technical regulation system should be based on the corresponding certification of the manufacturer, and only then on the quality control for the product the manufacturer produces. This is what European practice is like.

In the ET the certification is issued for the soils where the feeds are grown, the feeds themselves, the equipment, the technological devices, the personnel, the transportation, the trading network and many more aspects of animal product manufacture. Accordingly, there is efficient control over the whole chain from production to the consumption. In some EU countries (particularly, the UK) a business is unable to participate in government contracts, if it is not certified [13].

Considering the lack of system and the chaotic character of the measures taken to shape the Ukrainian technical regulation system in the area of animal product circulation, the large amount of work that had to be done on a very short notice, the lack of appropriate financing and the corresponding qualified personnel, the said system so far fails to ensure the proper animal product quality and safety. The legislation in the area of animal product quality and safety assurance in Ukraine still remains inadequate and incomplete.

The key legal act required to increase the efficiency of animal products safety and quality control and supervision system in Ukraine was adopted only in 2017. It is the Law of Ukraine No. 2042 dated 18.05.2017 «On state control of compliance with the legislation on foodstuffs, feeds, byproducts of animal origin and on animal health and well-being» [14], which will come into effect in April 2018. It is necessary to mention the development and adoption of the Laws of Ukraine «On feed safety and hygiene», «On providing information to the consumers about food products of animal origin», «On new foodstuffs and ingredients», «On subjects and materials that contact foodstuffs».

Besides that, within 3–4 years, it is necessary to adopt a large number (around 40) of subsidiary acts, developed pursuant to the key Laws of Ukraine already adopted «On main principles and requirements to foodstuffs safety and quality» and «On state control of compliance with the legislation on foodstuffs, feeds, byproducts of animal origin and on animal health and well-being». Let alone the subsidiary acts necessary for the implementation of the laws mentioned in the previous paragraph. Generally, this area requires the largest amount of work, so its fast completion is practically impossible. One of the reasons is the limited number of specialists, who can professionally work with such subsidiary legislation.

At the same time, it is necessary to ensure reliable implementation of the new requirements – the mere harmonization of laws is not enough. First of all, it concerns another component of assessing the state control (supervision) efficiency, which is the availability of sufficient specialized inspection and laboratory services. There is an urgent need in teaching at least four thousand inspectors according to the European standards (primarily on the matters of performing HACCP-based system audit with the drawing of the corresponding statement on officially approved form). HACCP-based system audit is the basis for the current state supervision (control) system in the area of animal products production and trade. Without the corresponding training, it is impossible to implement one of the most essential principles of the European model of state supervision (control), which is the priority of applying the risk-oriented approach.

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