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**FEATURES OF AGRO INSURANCE IN UKRAINE****ОСОБЛИВОСТІ АГРОСТРАХУВАННЯ В УКРАЇНІ**

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*The article is devoted to the definition of the current trends in the development of the insurance market for agricultural crops in Ukraine. It is revealed that the agro-insurance market is actively developing today. The analysis of functioning of the market of insurance of agricultural crops in the period with 2005 for 2017 is carried out and it is defined, that revival of the market after the long crisis has begun in 2016. However, there are some problems that hinder agricultural insurance. One of the main reasons is the mutual distrust of agricultural commodity producers and financial companies that are engaged in insurance of agricultural risks. The insurance of agricultural crops in the market shows the activity of international companies to introduce insurance programs for farmers. The insurance products that are currently represented in the agricultural insurance market and on what terms are defined. Also, new insurance programs beneficial for agrarians, taking into account an increasingly wide range of risks, have been identified. Thus, today the agricultural insurance market is actively developing and requires the improvement of the insurance mechanism for the functioning of agrarian enterprises. Insurance companies offer new beneficial insurance programs for farmers, taking into account all the wider range of risks.*

**Key words:** agriculture, insurance, agribusiness market, insurance contract, insurance premiums, insurance sum, insurance programs, index insurance.

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Стаття присвячена визначенню сучасних тенденцій розвитку ринку страхування сільськогосподарських культур в Україні. Було виявлено, що ринок агостраховання сьогодні активно розвивається. Також проведено аналіз функціонування ринку страхування сільськогосподарських культур в період з 2005 по 2017 рік і визначено, що поживлення ринку після тривалої кризи почалося в 2016 році. Проведена оцінка такого розвитку за показниками: кількість укладених договорів, застрахована площа, страхова сума, страхові премії, страхові ставки та рівень виплат. Основними тенденціями розвитку страхування сільськогосподарських культур за останні роки є збільшення на 21% укладених договорів та на 30% збільшились страхові премії в млн грн. Застрахована площа і страхова сума в млн грн. зменшились на 6% і 5% відповідно. Після кризи 2014 року почала зростати середня ставка премій в середньому на 42% за рік і в 2017 році вона складає 3,5%. Одним з найбільш продуктивних років по рівню страхових виплат був 2016 рік (44,2%). Експерти дали прогнози щодо зростання ринку сільськогосподарського страхування на 2018 рік. Це пов'язано із збільшенням ризиків, які залежать від погодних умов. Раніше озими в основному були застраховані від пошкоджень морозами, а сьогодні існує загроза від весняних заморозків. Метеорологи прогнозували більш жорсткі умови ведення фермерських господарств для агаріїв, тому потреба у страхуванні своєї діяльності зростає. Однак є деякі проблеми, які заважають розвитку сільськогосподарського страхування. Однією з основних таких причин є взаємна недовіра до сільськогосподарських товаровиробників і фінансовим компаніям, які займаються страхуванням сільськогосподарських ризиків. Страхування сільськогосподарських культур на ринку показує активність міжнародних компаній по впровадженню страхових програм для фермерів. Страхові продукти, які в даний час представлені на ринку сільськогосподарського страхування і на яких умовах вони визначені. Крім того, були визначені нові страхові програми, які є вигідними для агаріїв і враховують все більш широкий спектр ризиків.

**Ключові слова:** сільське господарство, страхування, ринок агробізнесу, договір страхування, страхові внески, страхова сума, страхові програми, індекс страхування.

Статья посвящена определению современных тенденций развития рынка страхования сельскохозяйственных культур в Украине. Было выявлено, что рынок агострахования сегодня активно развивается. Также проведен анализ функционирования рынка страхования сельскохозяйственных культур в период с 2005 по 2017 год и определено, что оживление рынка после длительного кризиса началось в 2016 году. Есть некоторые проблемы, которые мешают сельскохозяйственному страхованию. Одной из основных причин является взаимное недоверие к сельскохозяйственным товаропроизводителям и финансовым компаниям, которые занимаются страхованием сельскохозяйственных рисков. Страхование сельскохозяйственных культур на рынке показывает активность международных компаний по внедрению страховых программ для фермеров. Страховые продукты, которые в настоящее время представлены на рынке сельскохозяйственного страхования и на каких условиях они определены. Кроме того, были определены новые страховые программы, выгодные для аграриев, с учетом все более широкого спектра рисков.

**Ключевые слова:** сельское хозяйство, страхование, рынок агробизнеса, договор страхования, страховые взносы, страховая сумма, страховые программы, индекс страхования.

**Introduction and review of literature.** It said that today, most companies are looking for effective ways to alleviate the risks of economic activity, especially as agricultural enterprises that operate under risky agriculture depend on weather and other unpredictable conditions [1]. At the same time, climate risks pose a threat to the function of the global food system and therefore also a hazard to the global financial sector, the stability of governments, and the food security and health of the world's population [2].

Moreover, in the conditions of protracted political and economic crisis, devaluation of the national currency, groundless state policy and a number of other factors, caused the violation of effective work of the economic system of Ukraine. Under these conditions, stabilization of the situation can be achieved through the development and quality functioning of agriculture, which will provide solutions to the issues of improving its food and financial security [1]. Furthermore, agriculture is a promising branch of the country's economic development. But at the same time it is one of the most risky, because the success of the industry depends largely on weather conditions. Prices for agrarian products are constantly increasing, so the

loss or lack of harvest leads to significant material losses for producers and leads to loss of benefits. Ukraine's accession to the WTO in 2008, the launch of the free trade zone with the European Union in 2016 sets new requirements for agricultural products, requires the creation of a more competitive environment in the country. Reliable protection of producers of agricultural products from risks provides insurance.

Modern aspects of insurance business development of agrarian enterprises are covered in the writings of many Ukrainian and foreign scientists, in particular V.D. Bazilevich [4], Emmanuelle Augeraud-Véron [3], K.G. Vobloh, O.E. Gudz, S.S. Osadzya, B.K. Supikhanova, David P.M. Lezaksza [2], T. Lunta [2], William S. Mulherna [2], S.A. Navrotsky, I.M. Paska, T.A. Rotova, N.S. Tanklevska [1], Molly M. Jahn [2], Aled W. Jonesb [2], Ya.P. Shumedli and others. However, taking into account the constant economic changes and turbulence in the development of the agrarian economy, the question of identifying the characteristics of insurance activities of agrarian enterprises remains relevant.

Bazylevych V.D. analyzes the actual problems of the theory and practice of insurance in the market conditions economy, reveals the peculiarities of the development of the insurance business in Ukraine. Attention is focused on new types of insurance for our country [3]. Taro Mieno, Cory G Walters, Lilyan E Fulginiti considered that the impact of crop insurance on changes in input use has attracted much attention by economists, while there are a number of studies on this topic, they frame moral hazard in inputs use in a static model. However, when agricultural producers are forward-looking, they would make input allocation decisions realizing that their decisions would affect their future actual production history [5].

Agroinsurance, according to Yu.V. Samoilyk is a "kind of civil law relationship in protecting the property interests of individuals and legal entities involved in agricultural production in the event of certain events (insurance cases) identified by the insurance contract or current legislation." According to her, the essence of "agri-insurance" consists in "compensation of losses of an agricultural producer caused by the influence of foreign economic instruments and adverse natural and climatic conditions responsible for this person" [6, p. 345-354].

**The purpose of the article.** The purpose of this search is to identify the specifics, condition and problems of the development of insurance activities of Ukrainian agrarian enterprises.

**Results and discussion.** Planning of various types of entrepreneurial activity, including agricultural production, is associated with risk. Risks arise at each stage of the enterprise's activity: during the preparation and execution of production plans, supply, sales, in assessing the market situation, in violation of terms of supply of raw materials and sales of products, etc [7]. Risk is a phenomenon that can not be avoided, therefore, each enterprise should develop a risk management system that arises or may arise and plan possible ways to minimize the negative impact of risk on their activities [8].

Insurance is one of the most effective methods of reducing the risk of impact on the results of the operation of the enterprise. Today, the insurance segment of the market in Ukraine is relatively young and is in the stage of formation. However, we can already state that insurance is one of the most important segments of market economic relations. It is insurance that is able to ensure not only security, stability, social guarantees in society through the mechanism of insurance protection, but in the long term can become an important mechanism for redistribution of investment resources and a mechanism for resolving the issue of employment for the population [4].

At the present stage of economic development of the country, insurance is one of the few branches of the economy of Ukraine, which in recent years has a significant stable annual increase in the volume of services rendered. In Ukrainian, the term "insurance" comes from the word "fear", in some ways echoing with European languages, in which the term comes from the words "confidence", "security", "prudence", etc. [9]. In today's insurance literature, in dictionaries and encyclopedias there are more than 20 different definitions of the concept of "insurance". However, most scholars tend to make such a determination that insurance

is a means of reimbursing damages to a natural or legal person, through the distribution of payments between many individuals. Losses are compensated from the insurance fund that is at the disposal of the insurance company.

The content of insurance is a system of closed redistributive relations between its participants, the object of which is the formation at the expense of monetary contributions of the target insurance fund to recover from it the possible extraordinary and other losses of the insured or to pay cash to citizens in case of loss of their ability to work [10]. Obviously, Bazilevich V.D. believes that the economic content of insurance is that this type of human activity is aimed at protecting the property interests of legal and natural persons who have suffered in connection with the occurrence of insurance cases defined by the contract or insurance law at the expense of insurance funds formed by the participants insurance [4]. All these definitions confirm the diversity of the manifestation of insurance and the complexity of its unambiguous definition.

The notion of "classification" comes from the Latin *classis* – rank, class. The Latin root defines the "quintessence" of this concept, its most significant, the most significant meaning: the division of objects of a certain set of common features with the formation of a system of classes in this set. Consequently, the classification is understood as the system of the subsystems of certain terms (classes) in a particular field of knowledge or human activity, used as a means for establishing interrelationships between these concepts (classes) [4]. Classification of insurance is carried out on various grounds. Often, insurance is classified according to historical, legal and economic characteristics. Classification of insurance on a historical basis is associated with the allocation of stages of development of certain types of insurance.

Insurance creates for all participants the level of rights, the opportunity to profit, the desire to take risks, gives confidence in the development of entrepreneurial activity, creates new incentives for increasing productivity and ensuring economic development. The importance of insurance continues to grow, as with the development of socio-economic relations both within and outside the country, scientific and technological progress is facing increasing risks, which can not be resisted without compensation guarantees. Due to a wide range of insurance, after the occurrence of an insured event, insurance payments are a reliable guarantee of economic security of legal entities and individuals [11].

The necessity of insurance of activity of enterprises is conditioned by the fact that losses occur more often from the actions of destructive phenomena which can not be controlled by a person. Given the risk nature of the functioning of any enterprise and the less risky people, there is a need to prevent the elimination and compensation of losses as a result of adverse events or risks [12].

The agribusiness market in Ukraine began to develop actively in the early 2000s. During these 17 years, Ukraine has twice attempted to introduce a system of state support, which directly affected the increase of agricultural insurance market indicators. Having analyzed the trends of the agrarian risk insurance market development in the period from 2005 to 2017, we can conclude that 2016 was the first year of recovery after prolonged stagnation. In 2017, the growth dynamics spread to more indicators [13]. The agribusiness market in Ukraine began to develop actively in the early 2000s. During these 17 years, Ukraine has twice attempted to introduce a system of state support, which has directly affected the increase of indices of the insurance market of agriculture. Having analyzed the trends of the agrarian risk insurance market development in the period from 2005 to 2017, we can conclude that 2016 was the first year of recovery after prolonged stagnation. In 2017, the growth dynamics spread to more indicators. Trends in the development of the market of agri-insurance can be seen from the data in Table 1 and in Figures 1-2.

Thus, compared to 2016, the number of contracts increased by 164 contracts, which is 21%. In 2017, 427 agreements were concluded – for the winter and 530 for the spring-summer period. The volume of collected insurance premiums in the hryvnia has increased for the third year in a row, in particular, in 2017, it grew by 30% and amounted to UAH 204.4 mil-

Table 1

Dynamics of insurance of agricultural crops in 2005-2017 \*

Indexes	Year												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Number of concluded contracts	910	1330	4397	1637	1980	1217	2710	1936	1722	1392	1062	793	957
Insured area, thousand hectares	390	670	2360	1171	510	553	786	727	869	732	689	700	657
Amount of bonuses, mln UAH	12,8	28,5	116,7	155,4	42	72,1	136,3	130,4	135,4	73	78	157	204
Subsidy, mln UAH	5,8	12,5	47,8	72,8	-	-	-	-	-	-	-	-	-
Average rate of bonuses, %	3,79	д/в	4,54	4,93	3,24	3,84	3,74	3,77	3,1	2,4	2,0	2,5	3,5
Payout level, %	д/в	д/в	д/в	д/в	36,48	50,94	28	41	9,7	7,6	12,9	44,2	3,72

\* Formed by authors according to [14]

lion. Also, in 2017, the volume of insurance premiums increased in dollar terms. In 2017 it amounted to 7.7 million dollars, which is 28% more than in 2016. The total insured amount in 2016 was higher by UAH 327 billion than in 2017 [14].

According to the index of the insured area, the championship belongs to Poltava (75.6 thousand hectares, or 11.5%) and Khmelnytsky (75.3 thousand hectares, or 11.5%), regions. According to them, there are Dnipropetrovsk (67.3 thousand hectares, or 8.7%), Kharkiv (57.5 thousand hectares, or 7.3%), Chernihiv (48.0 thousand hectares, or 7.1%) and Ternopil (39.4 thousand hectares, or 6.0%). The volume of collected awards in the oblast of Ukraine was in the following order: Poltava (UAH 33.7 million, or 16.5%), Dnipropetrovsk (UAH 18.1 million, or 8.8%), Sumy (UAH 17.8 million, or 8.7%), Kherson (15.9 million Hryvnia, UAH 7.8%), Khmelnytsky (UAH 15.6 mln or 7.6%), Rivne (UAH 14.8 mln or 7.2%), Mykolayivska (UAH 12.5 mln or 6.1%) and Cherkassy (UAH 11.5 mln or 5.6%) [14].

A significant part in agri insuring is animal insurance. In the year 2017, 23 animal insurance agreements (13 – cattle, 9 – pig insurance and 1 – poultry insurance) were concluded. The total insured amount was UAH 316 million, and the insurance premium paid was UAH 2.4 million. Claims for insurance indemnity and, consequently, insurance payments are not recorded.

The average rate of the insurance premium for the concluded contracts is 0.8%. The low rate of insurance premium under animal insurance contracts indicates that these contracts do not cover the main risks of livestock production. Probably, based on the contracts, the animals were used as collateral for obtaining a loan [15].

Experts give forecasts of the growth of the insurance market for agriculture in 2018. This is due to an increase in the risks associated with weather conditions. Previously, they were mostly insured by winter frost damage, and today there is a threat from spring frosts. Meteorologists predict more stringent farming conditions for farmers, so the need for protection in insurance is growing. However, there are problems that hamper agricultural insurance. One of the main reasons is the mutual distrust of agrarian commodity producers and financial companies involved in agricultural risk insurance.

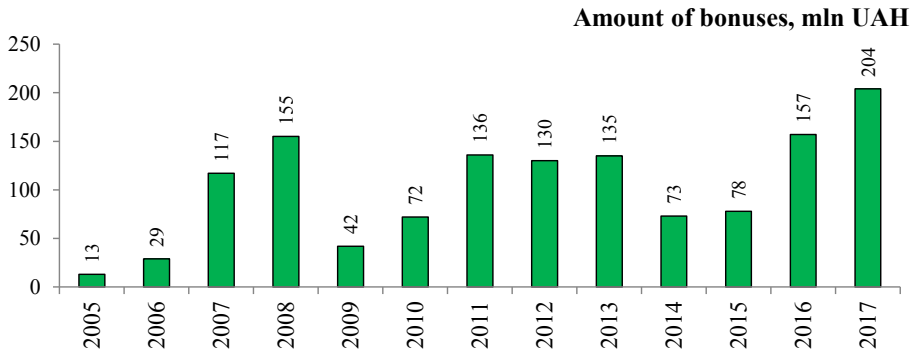


Fig. 1. Dynamics of agricultural insurance market development\*

\* Formed by authors according to [14]

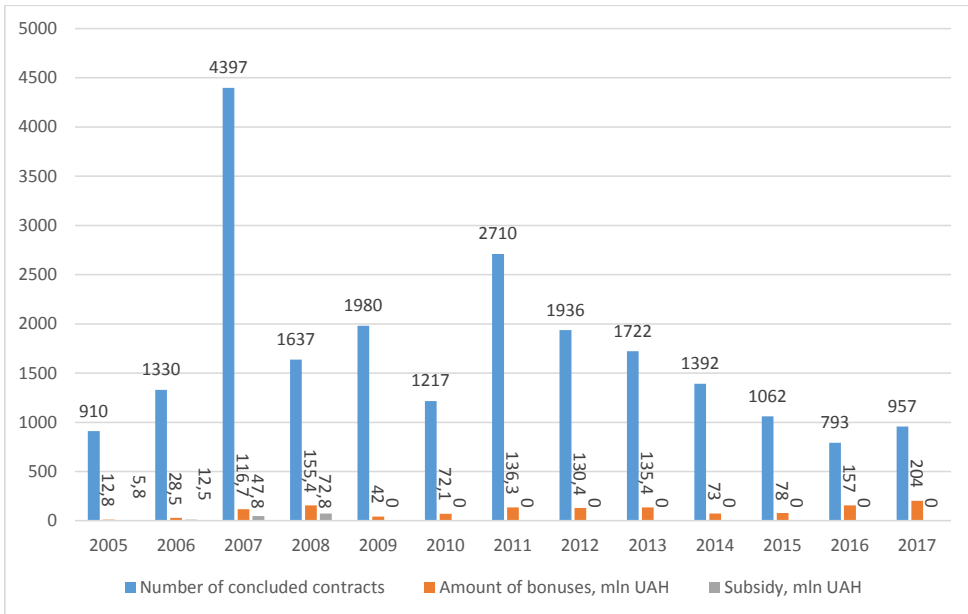


Fig. 2. Trends in the agricultural insurance market for 2005-2017\*

\* Formed by authors according to [14]

Table 2

Consolidated Animal Insurance Data, 2017

Kind of animals	Number of contracts	Insurance amount, UAH	Amount of bonuses, UAH	Average bonus rate, %
Pigs	9	190436212	1867156	1,0
TOP	13	111514671	486070	0,4
Poultry	1	14049785	73059	0,5
Total	23	316000668	2426285	0,8

Source: Analytical Study "Ukrainian Agribusiness Market in 2017 Underwriting Year"

Agrarians do not believe that they will receive compensation in the event of an insured event, and insurance companies, in turn, do not know how to work with the agrarian sector, they are not sure that they can assess all possible risks. The use of transparent, affordable insurance products can simplify communication between the parties [13].

In 2016, the International Finance Corporation (IFC) project, together with its partner companies – Syngenta, Credit Agricole Bank, AXA Insurance, introduced a comprehensive program for agribusiness "Your harvest is our concern". This program is designed for three years. As part of this program, an innovative insurance product was introduced for crop insurance and future winter wheat harvest. It is designed primarily for small and medium-sized agricultural producers, which are limited in funding. This product is tied to financing by Credit Agricole Bank and obtaining trade credits from Syngenta. Thus, the product is oriented on the current and potential customers of these companies.

Winter wheat insurance for the entire period of cultivation is included from the moment when the insurance company's representatives left the fields, fixed the quality of the stairs and the farmer paid his part of the insurance payment. The insurance product provides an insurance cover consisting of two phases with an appropriate repayment after each phase. The first phase is winter risks, and the second one is spring-summer risks. The main advantage of the first phase is that the coverage level of the area under the culture is 95%. This is the highest figure available on the market today. Insurance companies typically offer insurance coverage at 70% of the sum insured. The second advantage is the settlement of insured events and the payment for each perished hectare of cultivated area. The second phase (after the restoration of the vegetation) involves the insurance of the future harvest. The level of insurance cover in this case is equal to 70% of the average yield of winter wheat in the household for the last three years. The innovation of this product lies in the fact that insurance covers not only the costs incurred for sowing, but also part of the planned costs of growing and harvesting [13].

Nowadays, not only in Ukraine, but also in the whole world, index insurance is gaining in popularity. It does not require the departure of an inspector to establish an insured event. The benefits of this approach are evident: simplicity, cheapness and fast payout. This is a transparent and understandable method of insurance. There are many varieties of index insurance products. In particular, weather and "crop" can be distinguished [16]. Index insurance provides the right of the policyholder for compensation in the event that the yield of the insured crop will fall below the guaranteed level. Index insurance is performed on those weather risks that are measured by certain parameters. Therefore, they are limited by temperature, precipitation, wind force, snow cover thickness, and so on. But hail to this list does not fall. The index can insure autumn drought, the inability to start sowing due to the absence of precipitation or their redundancy. Unlike traditional insurance, the index does not require mandatory pre-insurance survey of crops and the assessment of losses incurred by the economy [17].

Conclusion. Consequently, insurance is a special type of economic activity, in the process of which an insurance fund is created, from which, in the event of an insured event provided for by law or contract, payments to policyholders are made. In a market economy, insurance is, on the one hand, a means of protecting business and the well-being of people, and on the other – a kind of entrepreneurial activity that generates profit. At the same time, agriculture is highly risky, the issue of using crop insurance as a method of reducing future loss of benefits is relevant and timely. The main tendencies of the development of insurance of agricultural crops in recent years are an increase of 21% of the concluded contracts and 30% increase of insurance premiums in UAH million. Insured area and insured amount in UAH million. decreased by 6% and 5% respectively. After the crisis in 2014, the average rate of premiums began to increase by an average of 42% per year and in 2017 it is 3.5%. One of the most productive years on the level of insurance payments was 2016 (44.2%). In addition, the activity of international companies regarding the introduction of insurance programs for agrarians is followed. Thus, today the agricultural insurance market is actively developing and requires the improvement of the insurance mechanism for the functioning

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of agrarian enterprises. Insurance companies offer new beneficial insurance programs for farmers, taking into account all the wider range of risks.

The scientific novelty of this study is determined by further development of identification of peculiarities and problems of development of insurance of activity of agricultural enterprises in the part of identification of basic insurance products and possibilities of their use was developed.

Prospects for future research are the need to make forecasts for further insurance of crops, as well as identify the most effective insurance products for agribusinesses.

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