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INSTITUTION «ACADEMICIAN YURIY
BUGAY INTERNATIONAL SCIENTIFIC
AND TECHNICAL UNIVERSITY»**

**DEVELOPMENT OF THE INNOVATIVE
ENVIRONMENTAL AND ECONOMIC SYSTEM
IN UKRAINE**

Collective monograph

Edited by: Khudolei Veronika
Doctor of Science (Economics), Professor
Ponomarenko Tetiana Doctor of Science
(Economics)

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The monograph is designed for a wide range of readers, including students of economic specialties, scientists, civil servants and representatives of the real economy sector who are interested in transforming the economic system of Ukraine in accordance with global trends and development drivers.

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PREFACE

The issue of developing an innovative environmental and economic system in Ukraine today is relevant to the applied-science discourse. I believe that it is precisely this kind of work that reveals the theoretical and methodological basis of the problem of strategic management of the innovative development of the economic system of Ukraine in the context of the deployment of the fourth industrial revolution and the transition of the global economy to the sixth technological paradigm and the knowledge economy, meets the requirements of the time.

The monograph investigates the theoretical foundations of the formation of innovative components of scientific - technological and industrial security of the economic system at the state and regional levels, management of the innovative basis for financial and investment components of competitiveness, development and validation of new methods for assessing global and local challenges of the present in the system of ensuring environmental security.

The monograph consists of five sections. The first section is devoted to the theory and methodology of strategies for innovative economic development and enhancement of competitiveness. The scientific developments of the authors concerning the modern paradigm of strategic management in macroeconomic dimensions are presented. The microeconomic aspects of strategic management and competitiveness management are revealed. The second section is devoted to the latest conception of the formation of innovative factors of public administration of economic growth. The approaches to institutional and technological design of innovative models in the field of public administration, the mechanism of implementation of the principles of the concept of compliance of all components of public administration with economic growth are proposed. The third section deals with the issues of the innovative basis of financial management and monetary-credit policy. The scientific-methodical principles and practical tools for improving the system of public finance management - optimization of the taxation system, public sector debt, the latest principles of the budget and monetary-credit policy, FinTech development, are worked out. Innovative financial technologies and investment security tools are offered. The fourth section focuses on the determinants of national economic security. The globalization factors of foreign economic security are investigated. Innovative drivers of social security of regions of Ukraine are determined. The mechanism of implementation of the integrated territorial management of environmental security in the conditions of transition to sustainable development is formed. The fifth section addresses to the principles of

creating a favorable business environment for entrepreneurship activities in Ukraine. The main mechanisms of attraction of direct investments into the real sector of the economy are revealed.

The authors' collective body of the monograph included experienced and young scientists - representatives of academic and scientific institutions: V.N. Karazin Kharkiv National University, Pryazovsky State Technical University, Sumy State University, Bogdan Khmelnytsky Cherkassy National University, International Humanitarian University, Meritt Group Ltd., National Technical University "Kharkiv Polytechnic Institute", State Higher Educational Institution "Kherson State Agrarian university " and others.

The monograph is prepared in the context of four research topics: "Diagnosis of regional economic systems economic development in the conditions of new regionalism formation" (State registration number 0118U001590), "Trends in the modernization of economic management systems" (State registration number 0118U001636), "Environmental responsibility in management" (State registration number 0118U001635), "Modernization determinants of the socio-territorial systems transformation in Ukraine in conditions of the European integration strengthening processes" (State registration number 0118U001588).

The monograph is designed for a wide range of readers, including students of economic specialties, scientists, civil servants and representatives of the real economy sector who are interested in transforming the economic system of Ukraine in accordance with global trends and development drivers:

*Ponomarenko Tetiana,
Vice-Rector for International Programs and Projects, Doctor
of Science (Economics), Professor in the Department of
International Economics, Audit and Finance Academician
Yuriy Bugay International Scientific and Technical University*

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Tanklevska N. .,
Doctor of Science in Economics, Professor
Yarmolenko V.,
PhD student,
Kherson State Agrarian University

AGRICULTURE: STATE, PROBLEMS AND PROSPECTS

***Abstract.** The article is devoted to the definition of modern trends in the development of the insurance sector of agricultural crops and animals. It was found that the agribusiness market is actively developing. The analysis of functioning of the insurance market of agricultural crops in the period from 2005 to 2017 is carried out and it is determined that the market output after a protracted crisis began in 2016. The state of insurance of farm animals for 2017 is covered. An*

assessment of such development in terms of: the number of concluded contracts, the insured area, the insurance amount, insurance premiums, insurance rates and the level of payments. It is indicated what problems today are facing both insurance companies and agrarians, which hinder the effective functioning of the agri-insurance market. It is determined what insurance products are presented at today's agri-insurance market and on what conditions. It was revealed what further development of agricultural insurance should be directed towards.

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

In the conditions of protracted political and economic crisis, devaluation of the national currency, groundless state policy and a number of other factors led to a violation of the effective functioning 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]. Today, 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. The prices of agrarian products are constantly increasing, so the loss or lack of harvest leads to significant material damage to 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 [2].

Agriculture is traditionally a risky area of activity. This is especially true of Ukraine, in which the successful results of the agricultural producer are largely determined by weather conditions. The development of agricultural production is affected by the risks of natural disasters and unforeseen extraordinary events. The unforeseen natural phenomena reduce the quantity and quality of crop crops and destroy thousands of hectares of land, causing significant losses to agricultural producers. To protect the property interests of agricultural producers and to ensure the further development of agriculture, insurance is used as one of the most important areas of state agricultural policy.

Agroinsurance, according to Yu.V. Samoylyk 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" [3, p. 345-354]. O.V. Kravchuk interprets agricultural insurance "... as a combination of measures to protect property interests of citizens, organizations and institutions engaged in agricultural activities in the event of certain events at the expense of insurance reserves organized by specialized insurance state and non-state structures" [4, p. 85-91].

Agricultural insurance is an economic relationship with regard to the insurance protection of property interests of agricultural producers in the event of certain events (insurance cases) determined by law, due to money funds formed by the insurer by paying insurers insurance payments (insurance premiums) and income from the placement of these funds funds. The main purpose of insurance of agricultural risks is partial or complete compensation of the economic entity for losses due to unfavorable, mainly natural, phenomena. The objective economic necessity of using insurance in agriculture is explained by the insufficient capacity of the state and the market to ensure a wide maneuverability of financial resources of business entities.

The purpose of agri-insurance is the monetary compensation of losses incurred as a result of the lack of crop yields lost or damaged by weather-climatic factors, fires and other adverse events that may occur during the cultivation of agricultural crops and as a result of the death or disease of farm animals . Insurance plays an important role in the development of agrarian production, as insurance protection adds confidence to farmers and provides the opportunity to plan for further development, and also stimulates agrarian enterprises to introduce more perfect production processes. The organization of insurance protection helps to

increase the creditworthiness of agricultural producers and their access to credit resources, and as a consequence, the introduction of new technologies. In addition, insurance increases the level of settlement discipline and reduces the risk of non-fulfillment of obligations to counteragents as a result of unforeseen events. Therefore, the organization of agricultural risk insurance with state support is a prerequisite for the development of the agrarian sector of the economy.

The development of the agrarian insurance system in Ukraine was very thorny. Thus, at the time of the USSR, compulsory insurance was provided for crops at state farms and other state agricultural enterprises, and it was completely monopolized. It is believed that this system was very effective, because with the help of Ukrderzhstrakh ensured reliable insurance protection of the harvest at rather low rates of insurance.

The system approach to insurance of agrarian risks was made by adopting the Law of Ukraine "On Stimulation of Agricultural Development for the Period 2001-2004" [5]. An important stage in the development of the system of insurance of agricultural risks was the adoption in 2004 of the Law of Ukraine "On State Support to Agriculture in Ukraine" [6], in which the insurance procedure was significantly regulated and the allocation of the State Budget funds to reduce the cost of insurance premiums (fees) paid subjects of the agrarian market. The main purpose of this instrument is to create a more favorable environment for the financing of agriculture by banks

For the first time the state budget funds under the Program of cheaper insurance payments were allocated in 2005, in the amount of 54 million USD, in 2006 - 10 million UAH, in 2007 - 50 million UAH, in 2008 - 200 million UAH. In 2008, due to the fact that the level of utilization of funds under the program was low, out of the anticipated expenditures of 200 million UAH, 111.3 million UAH were directed to other agrarian support programs. Under the program of subsidized insurance, UAH 88.7 million was left, of which UAH 60.1 million was used, and the payables arrears, which arose as of January 1, 2009, amounting to UAH 12.2 million, were settled.

To protect the property interests of agricultural producers and to ensure the further development of agriculture, insurance is used as one of the most important areas of state agricultural policy. The main objective of insurance in the agrarian sector of the economy is to stabilize production by compensating losses as a result of adverse events, which can not be predicted in time and space.

The whole set of risks that arise in agriculture can be divided into four groups, which are presented in Table 1.

Table 1

Main types of risks in the activities of agroindustrial enterprises *

Types of risk	Forms of influence	Negative impact
Natural	Natural-erosive processes	Lack of agricultural products due to adverse weather conditions
Technogenic	Physical and chemical pollution of soils, the use of mineral fertilizers and pesticides is not in accordance with norms, soil contamination with pesticides, fuel and lubricants, waterlogging and wind saltiness of land and increase production of energy inputs	Deterioration of soil quality and reduced yields of environmentally friendly products
Anthropogenic	Water and wind erosion, deterioration of soil structure, mechanical damage and soil compaction, constant impoverishment of humus and nutrients	Soil degradation, loss of soil cover, reduction of nutrients in the soil and disturbance of natural balance.
Radiation	Ionizing radiation of radiation materials in the environment	the distribution of radioactive materials to agricultural products, which leads to a decrease in its quality or makes it unsuitable for use
Ecological and economic	Use of ecologically dangerous technologies in the process of production of agricultural products	Reducing the quality and competitiveness of agricultural products

* According to [7]

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 2 and in Figures 1-2.

Thus, compared with 2016, the number of contracts increased by 164 contracts, which is 21%. In 2017, 427 contracts 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 million. 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 [8].

Table 2

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	3,7 ²

* Formed by authors according to [8]

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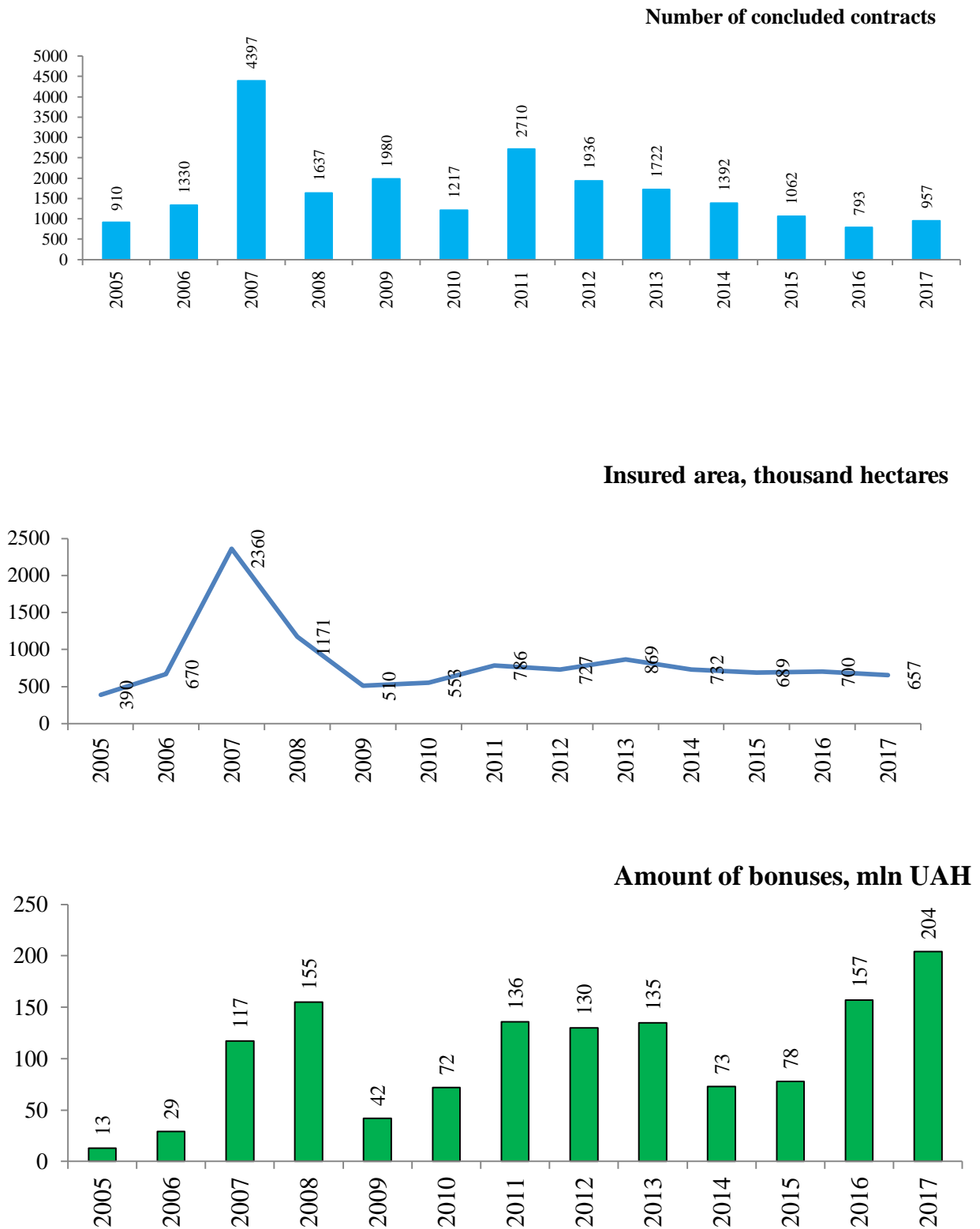


Fig. 1. Dynamics of agricultural insurance market development *

* Formed by authors according to [8]

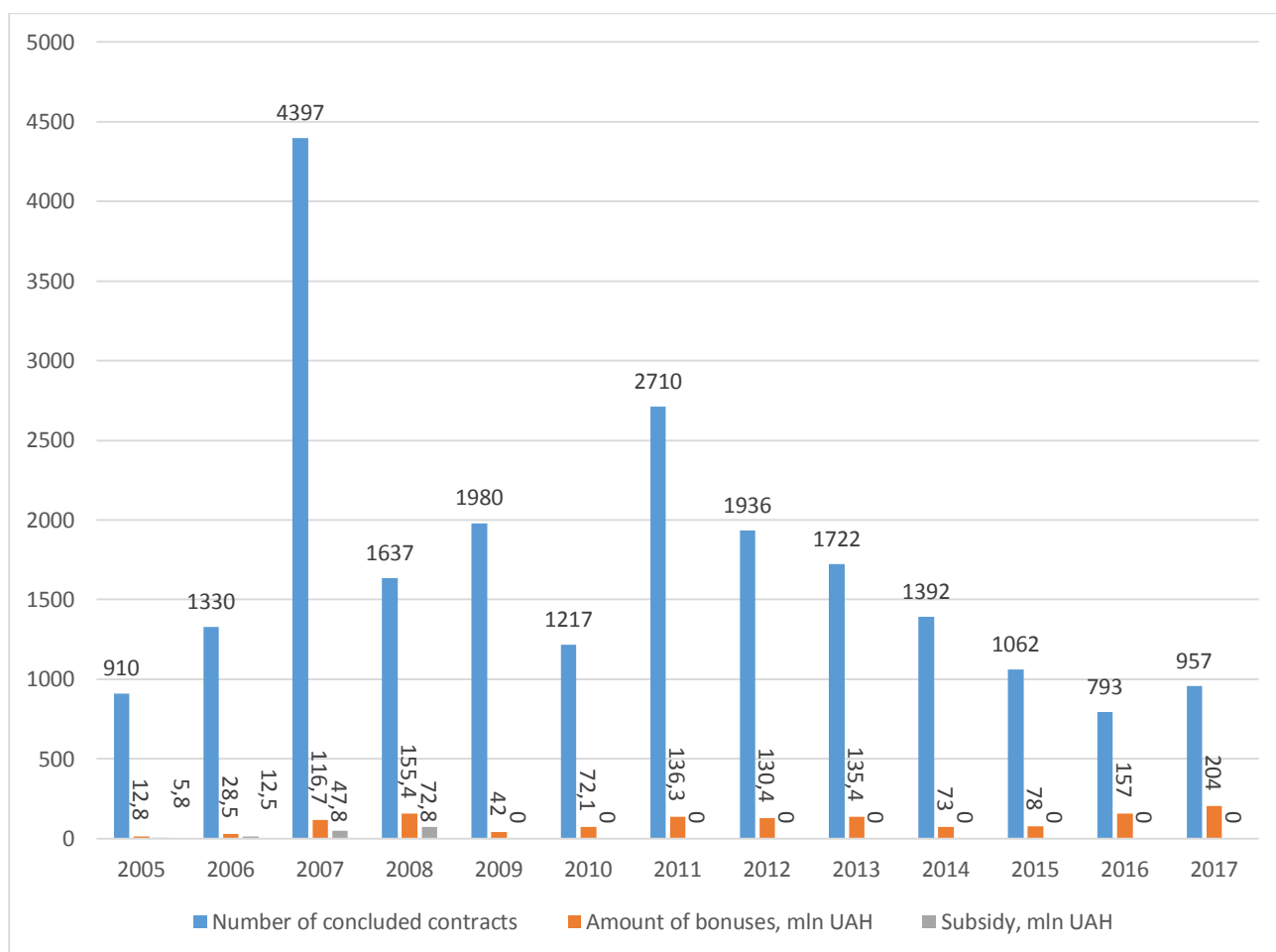


Fig.2 Trends in the agricultural insurance market for 2005-2017 *

* Formed by authors according to [8]

The largest number of contracts was concluded in Ternopilska (98) and Dnipropetrovska (94) oblasts. According to the index of the insured area, the championship belongs to the Poltavska (75.6 thousand hectares) and Khmelnytsky (75.3 thousand hectares) areas. Table 3 shows the insurance data by region.

Table 3

Insurance data by region, 2017 *

Region	Number of contracts	Area, ha	Insurance amount, UAH	Amount of bonuses, UAH	Average premium rate	Amount of bonuses, UAH / ha
Vinnitska	55	17,730	240,054,159	9,504,101	4.0%	536
Volynska	10	2,225	23,098,100	805,192	3.5%	362
Dnipropetrovska	94	67,343	588,701,087	18,087,414	3.1%	269
Donetsk	15	7,709	43,177,595	906,326	2.1%	118

Zhytomyr	47	11,888	116,802,143	3,706,853	3.2%	312
Zakarpats'ka	3	573	2,178,592	90,691	4.2%	158
Zaporiz'ka	31	11,914	81,138,885	3,161,282	3.9%	265
Ivano-Frankivs'ka	20	19,857	170,691,572	4,595,453	2.7%	231
Kievskaya	34	8,792	70,436,055	2,631,687	3.7%	299
Kirovogradskaya	55	27,222	164,257,088	4,241,486	2.6%	156
Luganska	7	3,620	40,061,879	1,708,338	4.3%	472
Lvivska	25	13,570	174,362,176	6,499,652	3.7%	479
Nikolaevska	23	24,204	275,635,044	12,526,133	4.5%	518
Odeska	9	7,831	19,243,961	808,106	4.2%	103
Poltavs'ka	75	75,645	771,680,987	33,713,141	4.4%	446
Rivnens'ka	21	13,873	322,457,325	14,807,476	4.6%	1,067
Sums'ka	43	46,959	623,807,675	17,765,292	2.8%	378
Ternopil's'ka	98	39,365	300,122,758	7,917,288	2.6%	201
Kharkivs'ka	46	57,460	165,196,591	5,061,456	3.1%	88
Khersons'ka	54	37,398	359,408,559	15,925,942	4.4%	426
Khmel'nyts'ka	68	75,326	497,094,091	15,594,123	3.1%	207
Cherkas'ka	42	27,178	380,232,455	11,474,045	3.0%	422
Chernivets'ka	16	11,439	163,638,437	4,607,752	2.8%	403
Chernihivs'ka	66	48,023	319,888,911	8,307,642	2.6%	173

* Source [8]

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 10.2%), Kharkiv (57.5 thousand hectares, or 8.7%), Chernihiv (48.0 thousand hectares, or 7.3%), Sumy (46.9 thousand hectares, or 7.1%) and Ternopil (39.4 thousand hectares, or 6.0%). The volume of collected awards of 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 UAH or 7.8%), Khmelnytsky (UAH 15.6 million, or 7.6%), Rivne (UAH 14.8 million, or 7.2%), Mykolaiv region (UAH 12.5 million, or 6.1%) and Cherkassy region (UAH 11.5 million, or 5.6%). [2]. Figure 3 shows the state of insurance of agricultural crops by regions.

In 2017, the majority of concluded agricultural insurance contracts determined the winter wheat (47.3% of the concluded contracts), 25.2% for winter rape, 8.9% for sunflower seeds and 6.4% for winter barley, . The leading position of winter wheat is also observed in the overall structure of insurance payments

(about 54%, moreover, most payments were made under insurance contracts from total death for the period of overnight). Among the main products of insurance in agriculture, according to the results of 2017 were the following programs: total death (10.4% of contracts), total death + spring frosts (2.0%), named risks (14.8%), partial and complete death + spring frosts (32.2%) (Table 4).

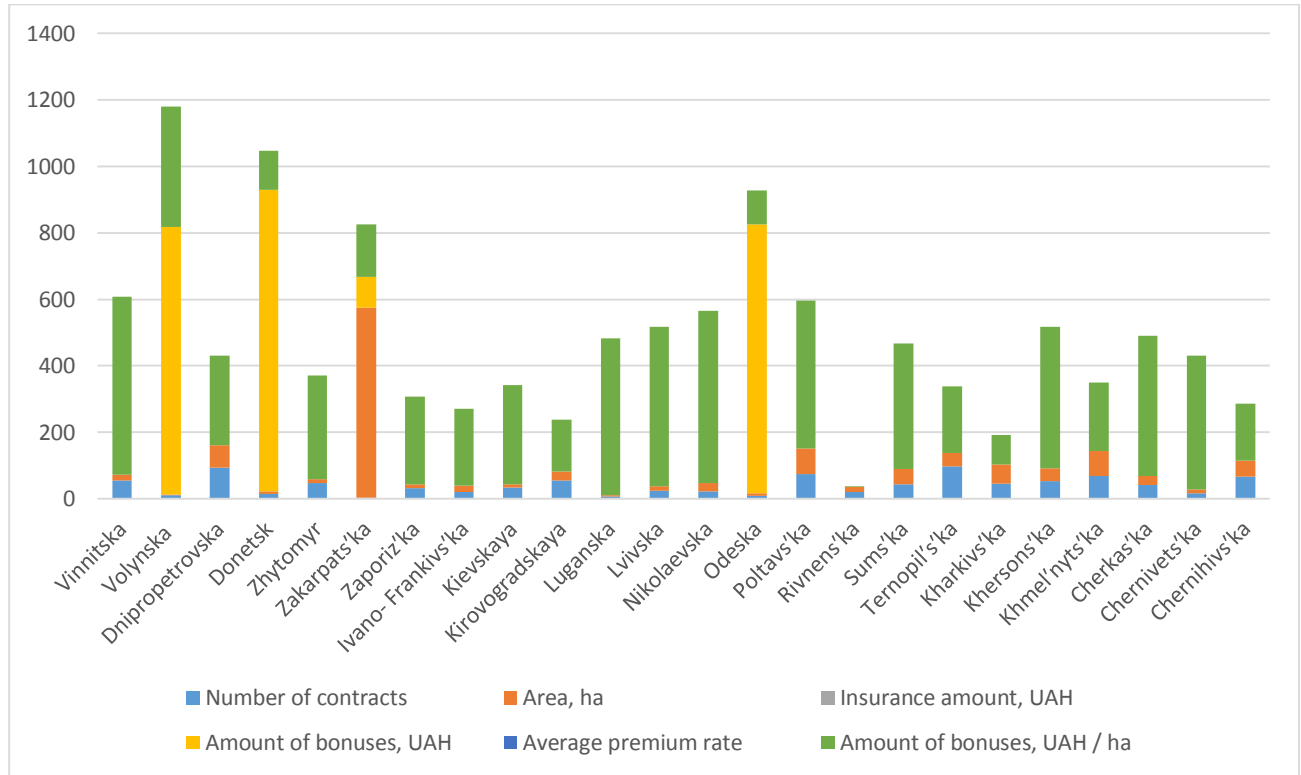


Fig. 3. A consolidated insurance diagram in terms of areas

* Formed by authors according to [8]

Table 4

Analytical data of major agricultural insurance products in 2017

Indicator	The share of concluded contracts	The share of the insured area	Percentage of the sum insured	Percentage of bonuses collected
complete death	10,4	6,5	2,7	3,6
named risks	14,8	13,3	16,2	5,8
full death + spring frosts	32,2	43,2	10,1	9,6
partial and complete destruction + spring frosts	2,0	1,1	0,1	1,7

Today, there are about 450 insurance companies in Ukraine that have the right to take out risk insurance. In 2017, only 24.6% of them, ie 58 companies out of 445, took part in subsidized insurance. Such an indicator once again emphasizes the complexity of insurance in the agrarian sector. Not all insurance companies understand the features of such insurance. Not all insurance companies in the state have appropriate specialists - agronomists, zootechnics, etc.

In 2017, insurance of agricultural crops was carried out by 13 insurance companies. Indicators of insurance for this period are shown in Table 5.

Table 5

Consolidated insurance data by insurance companies, 2017 *

Company	Number of contracts	Area, ha	Insurance amount, UAH	Amount of bonuses, UAH	Average bonus rate, %	Payments, UAH
AXA	82	49705	269939806	6518798	2,4	278056
Aska	108	127559	551139192	17497926	3,2	1512775
Aska DC	1	72	289224	13015	4,5	37760
Brokbiznes	30	19281	383315791	5705248	1,5	3071547
Gardian	25	10199	88587217	4093767	4,6	0
Zdorovo	5	3707	25725027	824562	3,2	584111
Ingo Ukraine	137	147893	602567349	17554086	2,9	1857209
Kraina	84	39613	337395892	14353506	4,3	171500
Oranta Sich	1	203	2740850	19186	0,7	0
PZU Ukraine	306	118745	879962338	15974039	1,8	115585
TAS	5	2107	8976765	369556	4,1	0
UASK	21	6502	200279764	12006526	6,0	0
Universalna	152	131557	2562446940	109516655	4,3	0
Total	957	657144	5913366125	204446870	3,5	7628542

* Source [8]

According to the number of concluded contracts, the championship belongs to the insurance company "PZU Ukraine" (306 contracts, which is 32.0% of the total). It is followed by Universalna (152 contracts, or 15.9%), Ingo Ukraine (137 contracts, or 14.3%), Asko (108 contracts or 11.3%), Kraina (84 contracts, or 8.8%), "AXA" (82 contracts, or 8.6%). According to the volume of the insured area of the company headed by the list, they were in the following order: "Ingo Ukraine" (147.9 thousand hectares, which is 22.5% of the total volume), "Universalna" (131.6 thousand hectares, or 20.0%) " Asko "(127.6 thousand hectares, or

19.4%), "PZU Ukraine" (118.7 thousand hectares, or 18.1%), AXA (49.7 thousand hectares, or 7.6%) and Kraina (39.6 thousand hectares, or 6.0%). The largest amount of insurance premiums was collected by the insurance company Universalna (109.5 million UAH, or 53.6%). Insurance companies Ingo Ukraine (UAH 17.6 million or 8.6%), Aska (UAH 17.5 million, or 8.6%), PZU Ukraine (UAH 16.0 million, or 7.8%), Kraina (UAH 14.4 million, or 7.0%) and UASK (UAH 12.0 million, or 5.9%). 8 insurance companies made insurance payments under agrarian insurance contracts. As can be seen from Diagram 5, according to this indicator, they are in the following order: Brokbiznes (UAH 3.1 million, or 40.3% of the total amount of payments), Ingo Ukraine (UAH 1.9 million, or 24, 3%), Asuka (1.5 million UAH or 19.8%), Zdorovo (584.1 thousand UAH or 7.7%), AXA (278.1 thousand UAH, or 3.6%), «Kraina» (171.5 thousand UAH, or 2.2%), PZU Ukraine (UAH 115.6 thousand, or 1.5%) and Asko DS (UAH 37.8 thousand, or 0.5%).

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.

Table 6

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"

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 [9].

A small share in agri-insurance is the liability insurance of legal entities for causing damage to the life and health of agricultural workers is necessary to increase the material provision of rural residents, increase their welfare. In the agrarian sector, the number of concluded personal insurance contracts is much lower than in urban areas, due to the lack of necessary funds for the conclusion of an insurance contract, lack of awareness of the rural population, distrust of the reliability of insurance coverage and other circumstances [10].

Problematic issues that complicate the development of the agrarian insurance market are:

1) from the side of agricultural producers: low level of awareness about the need to use insurance services; insufficient financial capacity, which does not allow to buy insurance services; lack of trust in insurers (in general, to insurance).

2) on the part of insurance companies: the imperfection of insurance products and services; absence of compulsory insurance, providing financial support to agricultural producers; complexity and opacity of insurance contracts; complexity and non-transparency of procedures for obtaining compensation; the limited and imperfect existing insurance services and the absence of insurance products that would satisfy different categories of producers; high cost of insurance; cases of inappropriate behavior of individual insurance companies (implementation of fictitious insurance); insufficient interest of insurance companies in the proper development of agro-insurance in Ukraine; lack of skilled personnel in the state of insurance companies that understand the particularities of agriculture.

At the same time, active political activity around agrarian insurance puts financial security in the development of agriculture in conditions of certain legislative uncertainty. For example, WTO policy implies a reduction in state support in certain aspects of economic activity, which worsens competitive conditions for potentially economically weak business entities. Instead, I note

the broad lobbying measures of the "green basket", namely subsidizing the system of agricultural insurance, the prevention of contamination and the fight against plant pests and other measures [11]. Stimulating investment in agricultural production can actively encourage the flow of capital into the industry, and therefore requires the introduction of insurance, as an active element of protecting financial resources and ensuring the financial security of all participants in the process [12].

Today, insurance companies in Ukraine offer many insurance products that are affordable for agrarians on affordable and affordable terms. In 2016, a project of the International Finance Corporation (IFC), with 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.

The insurance of winter wheat 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. An insurance product provides an insurance covering two phases with an appropriate repayment after each phase. The first phase is winter risks, 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 coverage 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 on sowing, but also part of the planned costs of growing and harvesting.

Nowadays, not only in Ukraine, but also in the whole world, index insurance is gaining popularity. It does not require the departure of the inspector to establish an insured event. The benefits of this approach are obvious: simplicity, cheapness and quick 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 [13]. 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 provide for mandatory pre-insurance survey of crops and the assessment of losses incurred by the economy.

Gardening and viticulture are becoming increasingly popular in Ukraine. These industries are more vulnerable to weather conditions, diseases and pest infestations. Therefore, farmers are increasingly resorting to insurance of the plantings and harvest themselves. LLC "Universal insurance brokers and consultants" with the participation of the association "Ukrsadprom" has developed a new program of insurance of perennial plantations (trees, bushes) of stone and seed crops, as well as strawberries, raspberries, currants, grapes, walnuts, hazelnuts and their harvest.

The insurance amount for insurance of perennial plantings is determined within the limits of their book value or cost of planting material, according to the accounting data.

When insuring long-term crops, the insured amount is determined within the value of the future harvest, which is calculated on the basis of the average crop

yield of the farm for the last five years multiplied by the area of the plot and the cost of the unit of harvest.

An insured event in insurance for perennial plantings is a loss of 5% of plantations. The case is recognized as insured in the presence of plantings and their death, the fact of adverse effect, causal relationship between the fact of the onset and the fact of the death of plants. Insurance risks, in particular, are frostbite, icing, fire, freezing, storm, hurricane, rain. The agreement is concluded for one year. Franchise is from 5%. In 2019, Agrofirma "Deltrafrut" received from the insurance company ASKA 1,635 million USD for losses lost due to a thunderstorm and hail crop of apples.

From March 2019 beekeepers, whose beekeepers are officially registered, will be able to insure the families of bees. Insurance services will be provided by IC Brokbiznes. Under this insurance contract, the owner of the apiary will independently choose the amount of insurance payments. From this depends the cost of payment for the family of bees, but on average 6.1-6.2% of the sum insured, plus a further 2% deductible. At the same time, the insurance company reserves the right from the person who caused the damage to recover in its favor losses from poisoning of bees.

Consequently, given that agriculture is highly risky, the issue of using crop insurance as a method for reducing future loss of benefits is relevant and timely [2]. For agrarian enterprises, insurance should become an effective financial and economic tool for protecting the peasant's property interests during the production and processing of agricultural products. Further development of agricultural insurance should be aimed at creating favorable and safe conditions for doing business with all participants in the agrarian market, which involves the distribution of risks between agricultural producers, processing enterprises, banks, insurance companies and the state.

It is also necessary to develop a network of agents who can meet with farmers and explain how their products work. The importance of self-esteem and clear rules among insurance companies is important. After all, dishonest players in

the market can mislead customers because of the restrictions on the terms of contracts that allow you to refuse to pay. The lack of clear rules, even in the circle of insurance companies, has a significant impact on the market. A state program of regulation and support of insurance of agrarian risks is also needed. If in other countries such a mechanism for minimizing risks works and fully justifies itself, it may and must contribute to the more stable development of Ukrainian agrarian business.

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