

***SOCIAL TRANSFORMATIONS OF THE  
NATIONAL ECONOMY IN THE CONTEXT  
OF EUROPEAN INTEGRATION PROCESSES***

**Monograph**

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THE CONTEXT OF EUROPEAN INTEGRATION PROCESSES***

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organizations to the standards and the full implementation of the partnership of insurers, the state and farmers in its formation.

### *References*

1. The project "Development of financing of the agricultural sector in Europe and Central Asia". URL: [https://www.slideshare.net/ssc\\_social/ifc-66057807](https://www.slideshare.net/ssc_social/ifc-66057807)
2. Prospects for agricultural insurance in Ukraine. URL: <http://agro-business.com.ua/agro/ahrostrakhuvannia/item/12688-perspektyvy-ahrostrakhuvannia-v-ukraini.html>
3. Press service of the "Ukrainian Club of Agricultural Business". URL: <https://landlord.ua/news/85-agrariyiv-ne-koristuyutsya-strahuvannyam-posiviv-ta-vrozhayu/>
4. Insurance mechanisms for financial support of sustainable agricultural development in Ukraine. URL: [https://kon-insurance.mnau.edu.ua/files/work\\_2019/45.pdf](https://kon-insurance.mnau.edu.ua/files/work_2019/45.pdf)
5. Decree of the Cabinet of Ministers of Ukraine "On Amending the Procedure for Using Funds Provided in the State Budget to Provide Financial Support for the Development of Farms" dated January 30, 2019 No. 126. URL: <https://www.kmu.gov.ua/ua/news/uryad-rozshiriv-napryami-pidtrimki-fermerskih-gospodarstv>
6. ASKA. URL: <https://aska.ua/ru/business-insurance/agro>
7. Ukrainian Agrarian Insurance Company. URL: <https://uaic.com.ua/ua/dobrovilne-straxuvannya-silskogospodarskix-rizikiv/>
8. Insurance company UPSK. URL: <https://upsk.com.ua/service/corporate/agrostrahuvannya/>
9. Insurance company PZU Ukraine. URL: <https://www.pzu.com.ua/en/corporate/sh.html>
10. LLC AGRORISK. URL: <https://agrorisk.kiev.ua/en/>
11. URL: [http://www.aau.org.ua/media/publications/529/files/Market%20Survey%20Report\\_2018\\_04\\_13\\_11\\_06\\_14\\_365993.pdf](http://www.aau.org.ua/media/publications/529/files/Market%20Survey%20Report_2018_04_13_11_06_14_365993.pdf)
12. Farmers in Ukraine can be insured against ASF. URL: <https://news.agro-center.com.ua/agri-policy/fermeriv-v-ukraini-mozhut-strahuvati-vid-achs.html#.XW-sNSLTs0>
13. [Electronic resource]. URL: <http://pigua.info/uk/post/news/fahivci-poasnili-comune-pospisaut-strahuvati-fermeriv-vid-acs>
14. Ukraine's agricultural insurance market: updated data on payments in 2017 and preliminary insurance data in 2018. Analytical study. URL: [http://www.aau.org.ua/media/publications/529/files/Market%20Survey%20Report\\_2018\\_04\\_13\\_11\\_06\\_14\\_365993.pdf](http://www.aau.org.ua/media/publications/529/files/Market%20Survey%20Report_2018_04_13_11_06_14_365993.pdf)
15. New subsidized insurance for farmers. URL: <http://archiwum.poldio.pl/5/38/Artykul/328003>
16. The agricultural insurance market of Ukraine is developing. URL: <https://assogu.org.ua/rynok-agrostrahuvannya-ukrayinyrozvvayetsya/>

### ***1.11 Agricultural Insurance in the USA: An Example of Public-Private Partnerships in Agricultural Risk Management***

Agricultural producers face a lot of natural, production, commercial risks. Flood, hail, heat, frost, insects, plant diseases, livestock epidemics, machinery breakage, price fluctuations, changes of tariff and nontariff regulation of trade, terms of credit and many other factors cause the fluctuations of results of production and famers' incomes. Agriculture is a well-known high risky area of

business. But the results of operation of agriculture influence on whole food chain and food security, well-being of farm families, rural development, generate a set of positive externalities. These arguments have been included into scientific and political foundation to develop the private and public agricultural risk management programs, including insurance programs in the USA.

In the US, in the first decade of the XXI century, about 45% of field crops production value were insured, in the EU, the covering crops production by the insurance was lower (23%) [5]. The US farmers do not bear the high risks of agribusiness and food production by themselves, society shares farmers' risks through environment of insurance and price hedging institutes, government programs and agencies. Agricultural risks are divided between economic agents.

In Ukraine, the level of coverage of agricultural risks by insurance is very low, it is an evidence of inefficient insurance programs and risks distribution in the economy. In 2017 there were insured only 2.4% (657.1 thousand hectares) of sown area under agricultural crops (27 585 thousand hectares), the insurance value (UAH 5 913 million) covered 0.8% of total output in agricultural production (UAH 707 792 million), 1.4% of output of agricultural enterprises (UAH 42 8399 million). The burden of high risks of food production is carried by agricultural producers.

The USA experience is worthy to study to create the efficient insurance private-public programs, to provide sustainable development of Ukrainian agriculture.

The assessment of the current trends in the agro-insurance market in Ukraine, revealing the reasons that decrease its effective functioning were done by L. Tulush, O. Prokopchuk (2018) [13]. They proved the discrepancy between dynamics of the agrarian sector development and volume of agro-insurance in Ukraine, substantiated the underdevelopment of insurance instruments in Ukraine as compared to the developed countries in the agricultural sector. They believed that the efficient form of development of the system of agricultural insurance was the private-state partnership [13].

We offered (2016) the building up the public social private partnership for the development of efficient agricultural risk management system, including insurance schemes and mechanisms [8].

The changes of regulatory environment of insurance programs in Ukraine has been considered by N. Shibayeva (2018) [12].

The European researchers study the US experience in the agricultural risk management and insurance programs very carefully. Joint Research Centre and Institute for Protection and Security of the citizen of European Commission prepared special Reports (2006, 2009) on Risk Management and Agricultural Insurance Schemes in different countries. They recognized, that risk management tools such as insurances and futures markets are very developed in North America. Yield, revenue and income insurances covered most risks in the USA agriculture [5,7].

The aim of our research is to reveal the main features of the agricultural insurance system in the USA, its advantages and disadvantages to implement for the development of the efficient agricultural insurance system in Ukraine.

The investigation of the practice of agricultural insurance in the USA has showed, that the wide range of the insurance products was offered by many private insurance companies. They are working in agreement with the United States Department of Agriculture Risk Management Agency (USDA RMA). The recognition of the fact of high risk of agricultural production in the society and implementation public action to support farmers in the USA belong to the 20-30-th of XX century.

The collection of data and scientific analysis are the basement for the development of insurance products, agricultural policy and support programs. National Agricultural Statistics Service of USDA keeps records related to the sources of crop losses. These records help to develop the efficient insurance products and programs. There is a fragment of data collection concern the main sources of hazards for the selected crops (barley, corn, sunflower, wheat) in the USA in Table 1.

**Table 1 – Crop losses of the US farmers: average percentage of indemnities attributed to specific hazards, by selected crops**

Type of hazard	Barley (1956-2016)	Corn (1948-2016)	Sunflower (1976-2016)	Wheat (1948-2016)
Drought (heat)	43	53	28	44
Hail	15	5	7	11
Precipitation	30	25	48	21
Frost, freeze (other cold damage)	5	3	6	13
Flood	0	2	0	0
Cyclone, tornado	2	2	3	3
Insect	2	0	2	0
Disease	2	1	2	2
Decline in prices	0	10	2	3
Other	0	0	2	0

Source: Data of National Agricultural Statistics Service (2017) [3]

So, the main hazard for the grain production is drought in the US. But there are different sources of losses for different crops.

The yield insurance covers many crop production risks related to any meteorological event. There have been also developed and introduced revenue and income insurances in the US. Revenue insurance combines yield and price insurance. Income insurance takes also into account the costs of production. The USA experience gives an example of well-developed agricultural risk management system, in which there is involvement as private, as well public sector in the insurance schemes.

Many former types of insurance product were based on the results of the individual farms and losses. The index insurance products were developed and demanded. Index insurance is based on an index of deviation that is common for particular area (administrative unit); compensation is dependent on the statistical

yield for the area, in the case of area-revenue insurance – on the area yield and area price. The index insurance is in the focus of researchers to evaluate and improve its schemes [10,11].

Crop-yield insurance in the USA typically includes two categories: crop-hail insurance and multi-peril crop insurance. Crop-hail insurance is among the earliest forms of insurance in many countries (France, Germany, the USA), it is generally available from private insurers because hail occurs in a limited place and time, and private insurers are able to cover the losses using own capital reserves. It is possible to transform the risk of hail into financial instruments since the risk is isolated. Multi-peril insurance offers a combined package covering not only hail but flood, as well as drought, frost. Also additional risks such as from insect or bacteria-related diseases might be covered.

The insurances in the livestock sector is used too in the USA. Besides some offered insurance products for livestock production, as well the programs for sanitary assistance, wide spread diseases have been designed.

Purchasing of many insurance products for reducing of agricultural risks by farmers is subsidizing by the federal government in the USA.

The development of active practice of agricultural insurance in the USA was not one-day deal. The Federal Crop Insurance Act established the first Federal Crop Insurance Program in 1938. But it was not successful due to high program costs and low farmers' participation. New era of crop insurance was marked by the introduction of a public-private partnership between the U.S. government and private insurance companies by changes in the legislation of 1980 aimed to increase participation in the Federal Crop Insurance Program. The Federal Crop Insurance Reform Act of 1994 restructured the program. In 1996, the Risk Management Agency was created in the U.S. Department of Agriculture to administer the Federal Crop Insurance Program. Through subsidies built into the new program farmers' participation increased significantly. By 1998, more than 180 million acres of farmland were insured under the program, it has been three times increase since 1988 [9].

Due to assessments (Rudden J., 2019), in 2014, crop insurance policies covered 294 million acres (32% of all land in farms use) in the USA. Approximately 83% of US crop acreage was insured under the federal crop insurance program. On average, the federal government subsidized 62 percent of the premium. Major crops were insurable in most counties. Four crops (corn, cotton, soybeans, and wheat) accounted for more than 70% of total enrolled in insurance contracts acres. For these crops, a large share of plantings was covered by crop insurance. In 2014, the portion of total corn acreage covered by federal crop insurance was 87%; cotton, 96%; soybeans, 88%; and wheat, 84% [9].

In our study we have considered the experience of the USA related to the insurance of major crops, that is important for the crop production and export of Ukraine – barley, corn, sunflower and wheat (Table 2). The area covered by insurance programs, the level of premiums and indemnities for these crops are reflected in the Table 2.

**Table 2 – Planted area, production and crop insurance programs (coverage, amount of premiums and indemnities) by selected crops in the USA, 2016**

Indicators	Barley	Corn	Sunflower	Wheat
Area planted, thousand acres	3 059	94 004	1 597	50 119
Area harvested, thousand acres	2 565	86 748	1 534	43 850
Area insured, thousand acres	2 172	82 143	1 436	42 808
Area insured, % of area planted	71.0	87.4	89.9	85.4
Production, thousand bushels	199 914	15148 038	2654 735 (pounds)	2308 723
Value of production, thousand US dollars	942 180	51703 698	470 120	9104 215
Maximum insured product, thousand US dollars	428 456	39571 024	269 000	6771 938
Amount of premium, thousand US dollars	58 849	3533 455	46 958	1109 986
Premium as a share of value of production, %	6.2	6.8	10.0	12.2
Premium as a share of value of insured product, %	13.7	8.9	17.5	16.4
Indemnities, number	2 763	97 512	1 602	70 837
Area of indemnities, thousand acres	341	9 515	199	8 042
Amount of indemnities, thousand US dollars	27 572	949 174	20 625	499 809
Indemnities as share of premium, %	46.9	26.8	43.9	45.0

*Source: developed by authors using data of NASS, USDA (2017) [3]*

So, the planted area for these four major crops under the insurance programs reached from 71.0% of planted area for barley to 89.9% for sunflower. The insurance was most expensive for wheat producers, premiums were 12.2% of value of production (16.4% of value of insured product) and sunflower producers (10.0% and 17.5%, respectively), less expensive for barley producers, premiums equaled 6.2% of value of production (13.7% of insured product) and corn producers (6.8% and 8.9%, respectively). The premium subsidies amounted 58% of total premiums for these crops and radically diminished the costs of insurance for farmers.

The agricultural product market operates such way, usually it reduces part of losses of producers under production fall: if supply decreases, then prices go up. The relationship between yield and market prices became important factor for grounding of income stabilization and insurance programs. C. Zulauf (2002) calculated coefficient of correlation between average annual prices and average annual yield of some crops in the USA for 1986-1999 [14]. He confirmed the tight negative correlation between average annual prices and crops yield. Under such tight negative correlation reduction of yield is compensated by price growth. In this case the state programs targeted to the compensation of farmers' income losses may better mend market inefficiency than programs connected to the price or amount of production fluctuations. Such conclusions have built the theoretical basis for implementation of revenue assurance programs in the USA.

The Agricultural Act of 2014 offered two new government programs – Price Loss Coverage (PLC) and Agriculture Risk Coverage (ARC) for American farmers [1]. Price Loss Coverage Program worked like insurance for farmers in the case of



prices fall in the market. The payments as Price Loss Coverage were provided to producers with base acres of wheat, feed grains, rice, oilseeds, peanuts, and pulses (so called covered commodities) when market prices fall below the reference price. The payment rate was the difference between the reference price and the annual national-average market price (or marketing assistance loan rate, if higher). For each covered commodity enrolled on the farm, the payment amount equaled the payment rate, times 85 percent of base acres of the commodity, times payment yield.

Producers participating in the Agriculture Risk Coverage (ARC) Program were able to choose county-based or individual coverage for the cases of losses. For producers choosing county-based ARC, payments were provided when county crop revenue (actual average county yield times national farm price) drops below 86 percent of the county benchmark revenue (5-year Olympic average county yield times 5-year Olympic average of national price or the reference price—whichever was higher for each year), calculated separately for irrigated and nonirrigated crops. For each covered commodity enrolled on the farm, the county ARC payment amount was the difference between the per-acre guarantee (as calculated above) and actual per-acre revenue (but no greater than 10 percent of the commodity's benchmark revenue), times 85 percent of base acres of the commodity. In the case of producers' choice in the favor of individual ARC instead of county revenue, payments were issued when the actual individual crop revenues, summed across all covered commodities on the farm, were less than the ARC individual guarantee. The farm's individual ARC guarantee equaled 86 percent of the farm's individual benchmark guarantee, defined as the sum across all covered commodities, weighted by plantings, of each commodity's average revenue—the ARC guarantee price (the 5-year Olympic average of national price or the reference price—whichever was higher for each year) times the 5-year Olympic average individual yield. The payment amount was the individual farm payment rate (the difference between the individual farm guarantee and actual individual farm revenue, but no greater than 10 percent of the farm's benchmark revenue) times 65 percent of base acres for all covered commodities for the individual farm [1].

The state programs to reduce farmers' risks were offered in the US state agricultural policy by Agricultural Act 2014 not only for crop producers but also for dairy producers. The Margin Protection Program (MPP) for dairy producers offered producers insurance based on the average actual dairy production margin (difference between the all-milk price and average feed cost). All dairy operations were eligible to participate, and paid only the administrative fee (\$100) if they selected protection at the minimum margin level (\$4.00 per cwt of milk). Higher levels of protection were available, for which producers had to pay both the administrative fee and a premium [1].

The current farm law in the USA, the Agriculture Improvement Act of 2018, was signed in December, 2018, and will remain in force through 2023. The 2018 Farm Act makes few changes in agricultural and food policy in compare with 2014 Agricultural Act [2, 6]. Crop insurance options and agricultural commodity

programs are planned to exist much as under the 2014 Farm Act. The Congressional Budget Office projects that 9 percent of all outlays for the implementation of 2018 Farm Act will fund crop insurance programs. For PLC and ARC Programs, covered commodities will include wheat, oats, barley, corn, grain sorghum, rice, soybeans, sunflower seed, rapeseed, canola, safflower, flaxseed, mustard seed, crambe and sesame seed, dry peas, lentils, small chickpeas, and large chickpeas [2]. The Margin Protection Program will be replaced by similar Dairy Margin Coverage Program (DMC), which offers protection to dairy producers when the difference between the “all-milk” price and the average feed cost (the margin) falls below a certain level selected by the producer [2, 6].

Federal Crop Insurance programs still offer hundreds insurance products, that are realized by private insurance companies and subsidized by government. These products permit to cover production and revenue losses, price drop for the row crops, livestock, specialty crops, organics, dairy and many other agricultural productions.

The overview of the US practice of agricultural insurance has given the ground for the following conclusions. The modern practice of agricultural insurance in the USA testifies there were have been built up well-developed insurance system with private and public efforts to reduce agricultural risks. There is wide spread insurance coverage in the US in many aspects: amount and percentage of producers participating in the insurance contracts, types of risks, volume and value of production, planted acreage, objects (production results, revenues, incomes, margin). Hundreds insurance products as for single risk coverage as well for multi risk coverage, tradition and index insurance for crop and livestock production have been offered for farmers. The level of insurance coverage in the crop production is more than 80% of planted acreages. Federal government subsidies insurance premiums (in 2017, about 60%) paid by farmers, also offered and managed the Agricultural Risk Coverage, Price Loss Coverage, Dairy Margin Coverage programs, that protect farmers’ revenue.

But agricultural insurance is expensive in the USA. There is high level of premiums (9-10%, in average, for comparison in EU – 4%), government insurance subsidies lead to growth of demand for the insurance products and their prices (premiums).

In Ukraine, to promote the sustainability of agriculture, realization of its resources potential there is a need to develop agricultural insurance and risk management practice. To achieve these purposes following important steps might be done using the best practice of the US:

- to facilitate the composition of databases necessary for the efficient insurance product and risk management;
- to design and supply the wide range of efficient insurance products,
- to restart government program of partially subsidizing insurance premiums paid by agricultural producers;
- to introduce new technologies of monitoring of agricultural production for risks reduction (satellites, drones, mobile chips, etc.);
- to open up new methods of risks and losses assessment;

- to improve educational programs in agricultural risk management;
- to introduce agricultural risks management system at agricultural enterprises;
- to establish regulatory framework for the public-social-private partnership in risk management in agriculture.

### *Reference*

1. Agricultural Act (2014). *113-th Congress of the USA*. URL: <https://www.fns.usda.gov/snap/agricultural-act-2014-pl-113-79-feb-7-2014>
2. Agriculture Improvement Act of 2018. *115-th Congress of the USA*. URL <https://www.govinfo.gov/content/pkg/BILLS-115hr2enr/pdf/BILLS-115hr2enr.pdf>
3. Agricultural Statistics 2017, United States Department of Agriculture, National Agricultural Statistical Service. Washington D.C.: *United States government printing office*. URL [https://www.nass.usda.gov/Publications/Ag\\_Statistics/2017/Complete%20Ag%20Stats%202017.pdf](https://www.nass.usda.gov/Publications/Ag_Statistics/2017/Complete%20Ag%20Stats%202017.pdf)
4. Agriculture of Ukraine 2017. (2018): Statistical Yearbook. Kyiv: State Statistics Service of Ukraine.
5. Agricultural Insurance Schemes (2006). European Commission, Directorate General, Joint Research Centre; Institute for Protection and Security of the citizen of European Commission, *ISPRA*. URL: [https://ec.europa.eu/agriculture/sites/agriculture/files/external-studies/2006/insurance/summary\\_en.pdf](https://ec.europa.eu/agriculture/sites/agriculture/files/external-studies/2006/insurance/summary_en.pdf)
6. Farmers' Guide to 2018 USDA Farm Bill Programs / *USDA*. URL: <https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/Farm-Bill/pdf/farmbill-2018-brochure.pdf>
7. Risk Management and Agricultural Insurance Schemes in Europe. Executive Summary (2009) / M. Bielza Diaz-Caneja, C.G. Conte, F.F. Gallego Pinella, J. Strobrmair, R. Catenaro, C. Dittmann. European Commission, *Institute for Protection and Security of the Citizen*. URL: [http://publications.jrc.ec.europa.eu/repository/bitstream/JRC51982/lr\\_ipsc\\_reference\\_report\\_execsummary\\_agriculture\\_insurance.pdf](http://publications.jrc.ec.europa.eu/repository/bitstream/JRC51982/lr_ipsc_reference_report_execsummary_agriculture_insurance.pdf)
8. Onegina, V. (2016). Public Social Private Partnership and Risk Management in Agriculture. *Journal of KNUITD*, Volume 5(103). P. 37-43.
9. Rudden, J. Crop Insurance in the United States. *Statistics and Facts*. URL: <https://www.statista.com/topics/3968/crop-insurance-in-the-united-states/>
10. Sarris, A. (2013) Weather index insurance for agricultural development: Introduction and overview. *Agricultural Economics*. Vol. 44, Iss. 4-5. P. 381-384.
11. Shen, Z., Odening, M. (2013). Coping with systemic risk in index-based crop insurance. *Agricultural Economic*. Vol 44, Iss. 1, P. 1-13.
12. Shibayeva, N. V. (2018) Regulatory Policy in Agrarian Sphere. Kharkiv, Stylna typography. 469 p.
13. Tulush, L.D., Prokopchuk, O.T. (2018). Agro-insurance market in Ukraine: trends and prospects. *Ekonomika APK*. #8. P. 55-65.
14. Zulauf C (2002). Income Variability of U.S. Crop Farms and Public Policy in L. Tweeten, S. Thomson (Ed.). *Agricultural Policy for the 21-th Century*. Iowa State Press: A Blackwell Publishing Company, 2002. P. 91-108.

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**Грановська Людмила Миколаївна**, доктор економічних наук, професор, завідувач відділом зрошувального землеробства Інституту зрошувального землеробства НААН України (підрозділ 1.2).

**Грималюк Андрій Вікторович**, кандидат економічних наук, доцент, доцент кафедра загальної економічної теорії і економічної політики Одеського національного економічного університету (підрозділ 5.1).

**Гудзь Тетяна Павлівна**, доктор економічних наук, доцент, професор кафедри фінансів та банківської справи ВНЗ Укоопспілки "Полтавський університет економіки і торгівлі" (підрозділ 2.5).

**Дичко Аліна Олегівна**, доктор технічних наук, професор, професор кафедри інженерної екології Національного технічного університету України «Київський політехнічний інститут імені Ігоря Сікорського» (підрозділ 1.16).

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