

ЕКОНОМІКА ТА УПРАВЛІННЯ НАЦІОНАЛЬНИМ ГОСПОДАРСТВОМ

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STATE FUNDING PROBLEMS AND DIRECTIONS IN AGRICULTURAL SECTOR**ПРОБЛЕМИ РОЗВИТКУ ТА НАПРЯМИ ДЕРЖАВНОГО ФІНАНСУВАННЯ АГРАРНОГО СЕКТОРА ЕКОНОМІКИ**

Urgency of the research. The importance of the study of existing problems, the most significant determining factors of influence and the main directions of state funding of the agricultural sector are obvious as agricultural production is a strategically important sector of national economy of Ukraine.

Target setting. It is reasonable to study foreign experience on the financial state support of agricultural producers, rural infrastructure etc. in order to adapt to local realities and assessment of prerequisites for its use in Ukraine.

Actual scientific researches and issues analysis. International experience in public finance and state supporting of the agricultural sector were investigated by such scholars as N. Buha, A. Gordeyev, A. Kalina, A. Nazarkevych, N. Trusov, Yu Ulianchenko A. Tsvirko and others.

Uninvestigated parts of general matters defining. Researchers have not worked out the adaptation of foreign experience of state funding of the agricultural sector concerning food security provision of state agricultural policy.

The research objective. It is necessary to examine existing problems and the current state of the agricultural sector to develop effective lines of public financing of international experience and a shortage of financial resources.

The statement of basic materials. The authors classified the main problems of the agricultural sector in arising levels, solution requires public funding. Analysis of the current state of the agricultural sector and its main factors of economic growth is done. Foreign experience of state funding as part of the state agrarian policy in comparison with domestic realities is provided. The results of research can be used in the development and implementation of state program funding and budget supporting of agricultural production.

Conclusions. The agricultural sector of the national economy Ukraine has considerable potential development, but the potential presence does not mean its automatic implementation, and existing problems in the field indicate that Ukraine needs a clear and prudent agricultural policy involving an effective mechanism and governmental support.

Актуальність теми дослідження. Важливість вивчення існуючих проблем, визначення найсуттєвіших факторів впливу та основних напрямів державного фінансування розвитку аграрного сектора економіки є беззаперечною, оскільки протягом останнього часу саме сільськогосподарське виробництво стало стратегічно важливою галуззю національної економіки України.

Постановка проблеми. Доцільним є вивчення закордонного досвіду щодо фінансової державної підтримки розвитку аграрних виробників, сільських територій, інфраструктури тощо з метою адаптації до вітчизняних реалій та оцінки передумов його використання в Україні.

Аналіз останніх досліджень і публікацій. У наукових працях таких вчених, як Н. Буга, А. Гордєєв, А. Каліна, О. Назаркевич, Н. Трусова, Ю. Ульянченко, А. Цейрко та ін. досліджується міжнародний досвід державного фінансування та підтримки розвитку аграрного сектора економіки.

Виділення недосліджених частин загальної проблеми. Дослідниками ще недостатньо опрацьовані питання адаптації закордонного досвіду державного фінансування розвитку аграрного сектора економіки в контексті реалізації державної аграрної політики та забезпечення продовольчої безпеки.

Постановка завдання. Необхідно дослідити існуючі проблеми та сучасний стан розвитку аграрного сектора економіки для розробки дієвих напрямів державного фінансування з урахуванням міжнародного досвіду та в умовах дефіциту фінансових ресурсів.

Виклад основного матеріалу. Авторами класифіковано основні проблеми розвитку аграрного сектору економіки за рівнями виникнення, вирішення яких потребує державного фінансування. Проведено аналіз сучасного стану розвитку аграрного сектору та основні фактори його економічного зростання. Досліджено зарубіжний досвід державного фінансування в рамках реалізації державної аграрної політики у порівнянні з вітчизняними реаліями. Отримані результати дослідження можуть бути використані при розробці та реалізації державних програм фінансування і бюджетного забезпечення аграрного виробництва.

Висновки. Аграрний сектор національної економіки України має значний потенціал розвитку, проте наявність потенціалу ще не означає його автоматичної реалізації, а існуючі проблеми в галузі свідчать про те, що Україні потрібна чітка та виважена аграрна політика із залученням механізму ефективної державної підтримки галузі.

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Keywords: development; problem; agricultural sector; gross output; state funding; labor productivity.

Ключові слова: розвиток; проблема; аграрний сектор; валова продукція; державне фінансування; продуктивність праці.

Urgency of the research. The importance of the study of existing problems, the most significant determining factors of influence and the main directions of state funding of the agricultural sector are obvious, since the last time it was the agricultural production of strategically important sector of the national economy of Ukraine. Given the high risks of agricultural production and its investment attractiveness worse in comparison with other sectors of the national economy (eg, mining, trade, finance), there is a practice of public financial support, which is part of state funding.

Target setting. Foreign experience in implementing financial state support of agricultural producers, rural infrastructure development has studied in order to identify the main prerequisites for implementation and use in the agricultural sector of the national economy of Ukraine.

Actual scientific researches and issues analysis. International experience in public finance and support the development of the agricultural sector in the studied scientific works of scientists as N. Buha, A. Gordeyev, A. Kalina, A. Nazarkevych, N. Trusov, Yu Ulianchenko A. Tsvirko and others.

Uninvestigated parts of general matters defining. Researchers have not worked out the adaptation of foreign experience of state funding of the agricultural sector concerning food security provision of state agricultural policy.

The research objective. It is necessary to examine existing problems and the current state of the agricultural sector to develop effective lines of public financing of international experience and a shortage of financial resources.

The statement of basic materials. Currently, the agricultural sector is a leader in the economy of each country, as it ensures food security. Given the high risks of agricultural production and its investment attractiveness worse in comparison with other sectors of the national economy (eg, mining, trade, finance), there is a practice of state financial support, which is part of public funding. State financial support to the agricultural sector should be targeted and the most targeted. In our opinion, the philosophy of state financial support for agricultural producers should be to tag "well when help, but even better - if not prevent."

Existing problems of the agricultural sector of the economy can be classified as a problem of national, regional and problems of entities. [1, p. 69] (Fig. 1).

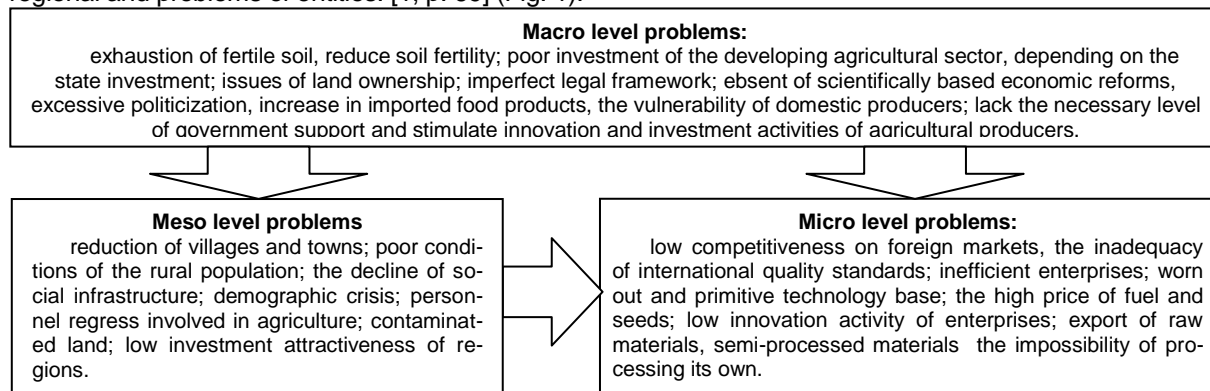


Fig. 1. Classification issues of the agricultural sector by levels of origin

These problems in all countries are partly solved by subsidizing the agricultural sector. According to A. Tsvirko, there is standard subsidies, defined climatic conditions (average annual air temperature), and while southern countries subsidize an average of \$ 10. / Ha and, for example, Norway – 3500 Dollars. / Ha [2, p. 228]. For Ukraine, according to experts, including [3], the amount of subsidy could be around \$ 500. / Ha.

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Exploring ways of solving the existing problems in Ukrainian agricultural sector first should be evaluated is the main indicators of dynamic development according to the official website of the State Statistics Service of Ukraine [4] (Tab.1)

Table 1

The main indicators of the agricultural sector of Ukraine for 2001-2015 years

Key figures	Value index by year									Changes in 2015 compared to 2001
	2001	2008	2009	2010	2011	2012	2013	2014	2015	
1. The index of gross agricultural production, % to 2000	110,2	133,5	131,1	129,0	154,7	147,8	167,4	172,1	163,9	+53,7
- crop	112,3	146,8	139,9	134,2	175,0	160,7	189,5	198,0	187,7	+75,4
- animal husbandry	106,8	112,2	116,9	120,9	122,5	127,2	132,3	130,9	126,1	+19,3
2. Productivity index, % till 2000	127,7	470,6	485,2	490,2	610,4	589,9	743,4	842,9	826,0	+698,3
3. The number of employed population, (million people)	4,15	3,32	3,15	3,12	3,41	3,50	3,58	3,09	2,87	-1,28
4. Agricultural land area, million hectare	41,83	41,63	41,60	41,58	41,56	41,54	41,53	41,51	42,73	+0,9
5. The profitability of agricultural production, %	18,3	13,4	13,8	21,1	27,0	20,5	11,2	25,8	45,9*	+27,6
- crop	35,8	19,6	16,9	26,7	32,3	22,3	11,1	29,2	50,9*	+15,1
- animal husbandry	-6,6	0,1	5,5	7,8	13,0	14,3	11,3	13,4	22,6*	+29,2

* Preliminary data

Table 1 shows that over the past 15 years, the volume of gross agricultural output increased by 1.6 times, including gross crop production increased by 1.9 times, and animal products – by 26%. The main reasons for the growth of agricultural production can be considered as: annual increase in demand and food prices in the world; increased demand for crop products; increase the yield of major crops and increase in gross fees as due to favorable weather conditions;

introduction of innovative technologies of crop production; in the livestock production – the introduction of new technologies in the growth of live weight poultry and pig raising; increase the productivity in dairy and beef cattle breeding.

Another factor in the growth of agriculture we believe automation and mechanization of human labor, which has provided increased productivity in 2000-2015 by 8.2 times, while as the number of employed persons decreased by 31% and gross output increased by 64%. This is evidence of expanded reproduction and to draw conclusions on agricultural production innovation.

The dynamics of basic indices 1990-2015 is formed on the basis of the data presented in [5], in particular, gross output – Fig. 2 [5; with. 39–41], and productivity – Fig. 3 [5, p. 47].

From the data presented in Fig. 2 shows that the bottom of the crisis in agricultural production occurred in 1999, while gross production decreased compared with 1990, twice, with the volume of crop production amounted to 52.6% of 1990 levels, and livestock products - 44.5%. Since 1999, started to grow agricultural production, in which the volume of crop production reached 127.6% maximum level of 1990 in 2014. In 2000-2015 the maximum base index of gross animal products 56.1% recorded at the end of 2013.

The total volume of gross agricultural output in 2014 reached its maximum and amounted to 92.6% compared to 1990 level. During 2015 there was a decline in agricultural production, and therefore the agricultural production index fell to the level of 2013 and amounted to 88.2% of production as of 1990.

There is a reason to believe that an important factor in economic growth in Ukraine's agricultural sector was the intensification of agricultural production, mechanization and automation of labor, which also affected the efficiency of human resources (Fig. 3). Labor productivity in agriculture is calculated as the ratio of gross agricultural production in constant prices of 2010 the average number of workers employed in agricultural production.

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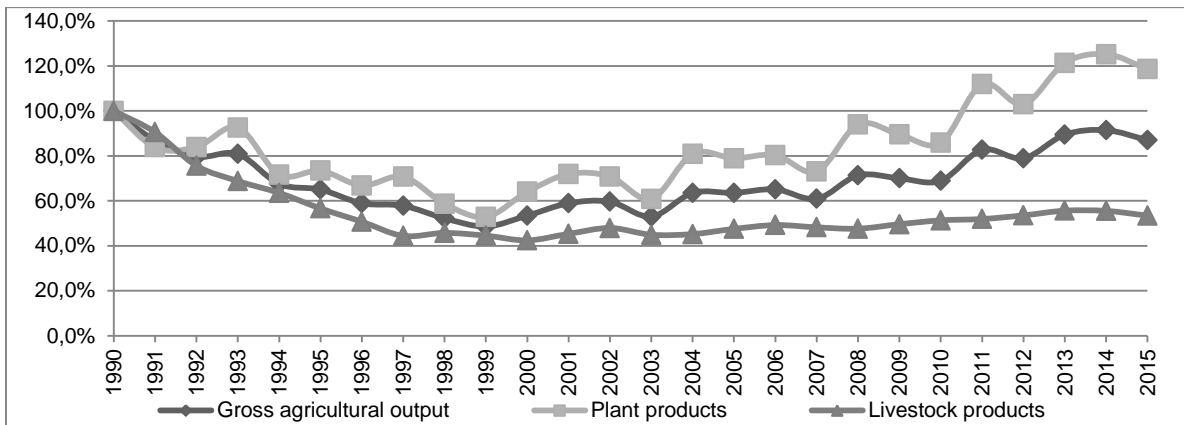


Fig. 2. Basic indices of gross agricultural output, % till 1990

Analyzing the dynamics of labor productivity in agriculture, it should be noted that at the end of 2015 it is exceeded the level 4.4 times compared with 1990.

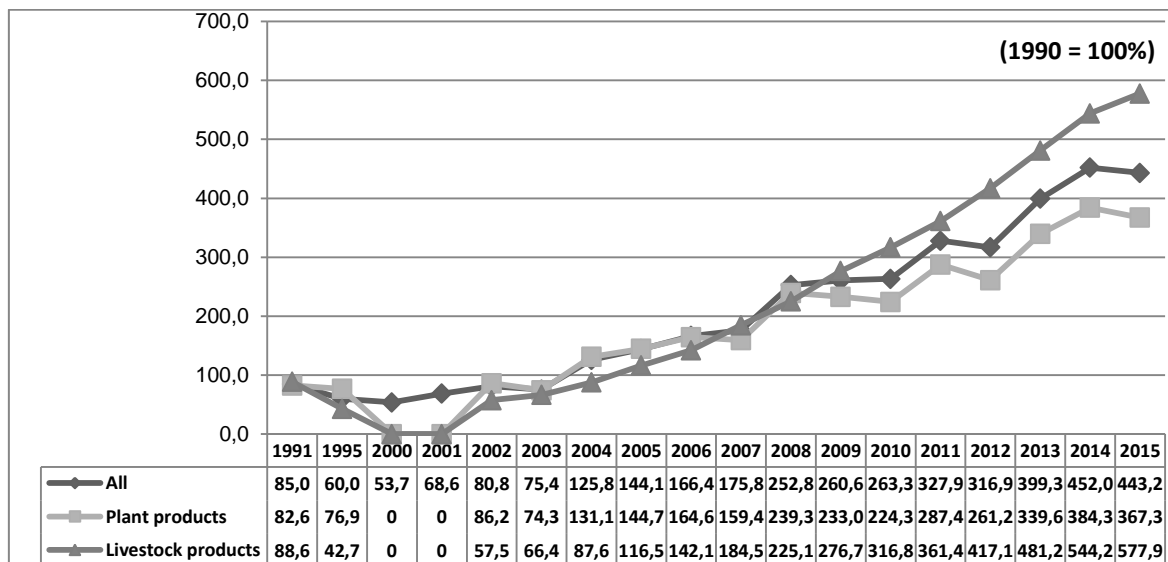


Fig. 3. Basic indices of labor productivity by 1990%

Significantly, the first time the productivity of agricultural production exceeded by 25.8% the 1990 level in 2004. Labour productivity in crop exceeded the 1990 level by 31.1% in 2004, while livestock by 16.5% in 2005. To assess the impact of the dynamics of labor productivity dynamics of gross agricultural construct Fig. 4, reducing values of a period of growth that took place in 2000-2015.

From the data presented in Fig. 4 shows that productivity growth by 1% causes the growth of gross agricultural production to 0.093%. The linear form of communication is described by the coefficient of determination R^2 , whose value 0.9507 means that the reliability of impact is 95.1%.

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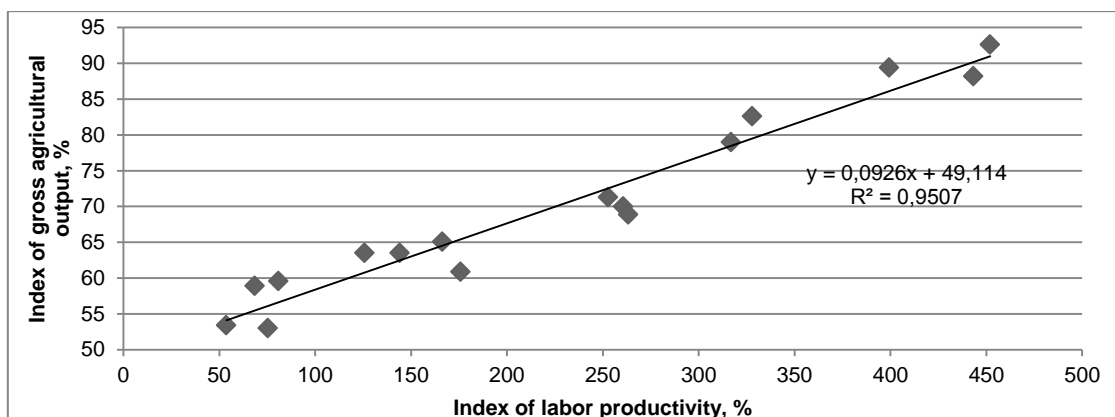


Fig. 4. Schedule influence productivity in the production of gross agricultural output in 2000-2015 (ln % till 1990)

Dynamics of labor productivity and agricultural production also had a positive impact on the profitability of agricultural production (Tab. 2), which increased from 18.3% in 2001 to 45.9% in 2015. This crop production during the period of analysis was profitable, up 50.9% achieved in 2015, and at least 7.9% - in 2005. In 2000-2006 livestock production was unprofitable, the biggest loss recorded in 2000 at -33.8%, and the highest yield - 2015 year at 22.6%.

Growth factor of gross agricultural output can also be seen inflation. Prices for agricultural products for the past 15 years increased by 4 times, including crop production - 3.7 times, for animal products - by 5.5 times [4]. It is also worth noting that agricultural land 41,827 thousand. Ha, since 2000, declined annually and in 2014 amounted to 41 512 Ha, losing 0.8%.

According to A. Kalina, the international experience of public funding of the agricultural sector of the national economy to solve the problems of outlined circles (Fig. 1) worked out mechanisms of direct government funding and indirect economic regulation. Thus, in the United States (US) and Canada share of direct public funding is over 20%, and in the European Union (EU) - less than 10%, but most resources are spent to support prices. Price support the agricultural sector in the EU is up to 91% of the total amount o

However, as noted by A. Kalina, the international experience of public funding of the agricultural sector of the national economy to solve the problems of outlined circles (see. Fig. 1) worked out mechanisms of direct government funding and indirect economic regulation. Thus, in the United States (US) and Canada share of direct public funding is over 20%, and in the European Union (EU) - less than 10%, but most resources are spent to support prices. Price support the agricultural sector in the EU is up to 91% of the total amount of budget funding in the US - 48%, Canada - 53% [6]. In developed countries, a significant proportion of the income of the farmer is formed by public sources: the EU and the US - 40%, Finland and Japan - 70%. According to expert estimates all forms of public financial support in the EU are more than 10 thousand. Euro per year per full-time farmer [7, p. 237].

According to A. Nazarkevych, the experience of state funding of the agricultural sector in European countries demonstrates the fundamentally new scheme of interaction between state and business entities associated with the direct addressing economic problems through effective, transparent regulatory instruments. Government measures to finance the agricultural sector in the developed countries of North America and Europe are not only market oriented (financial support or limit the supply and demand), they also aim to cause structural changes as necessary to balance the internal and inter-sectorial allocation [8, p. 17; 9] (Tab. 2). In this regard, is crucial state regulatory policy in the agricultural sector, the effectiveness of which depends on the situation and the level of public financing programs for agricultural development in a shortage of financial resources and financial decentralization.

Table 2

ЕКОНОМІКА ТА УПРАВЛІННЯ НАЦІОНАЛЬНИМ ГОСПОДАРСТВОМ

**The main directions of state funding of agricultural sector in USA
Canada and EU countries**

Country	Areas of public funding of the agricultural sector:	
	market direction	aimed at structural changes
USA	<ul style="list-style-type: none"> - Compensation for 1 hectare acreage withdrawn from circulation; - Support for prices to stabilize farm income; - Consolidation of soft loans for companies; - Support for cultivation methods that significantly affect the environment by means of compensation payments. 	<ul style="list-style-type: none"> - Preferential loans for the production of certain products; - Various forms of export promotion; - Financial assistance in the form of investment allowances; - The organization of free economic zones to attract investment.
Canada	<ul style="list-style-type: none"> - Support for prices to stabilize incomes of farmers, similar to the US; - Insurance income for farmers; - The state guarantee compensation insurance premiums in certain sizes. 	<ul style="list-style-type: none"> - Promote investment in the development of individual sectors and industries; - Program to support specific areas.
EU countries	<ul style="list-style-type: none"> - Compensation for 1 ha acreage withdrawn from circulation; - The use of quotas for milk, meat, sugar, and tobacco; - Support the price of olive oil and durum wheat. 	<ul style="list-style-type: none"> - Co-financing programs of the weakest and needy areas; - Development of indicative plans for economic and social development; - The organization of free economic zones to attract investment.

Areas of state funding of the agricultural sector in developed countries listed in the table. 2, is relevant for Ukraine. However, in Ukraine for the development of agriculture in the consolidated budget in 2016 laid the funding of state programs following: financial support measures in agriculture through cheaper loans; research and applied scientific research and development, works for the state target programs and public order in the area of agriculture, training of scientific personnel and scientific developments in standardization and certification; training of specialists of agriculture; liquidation and ecological rehabilitation area of influence of mining state enterprise «Solotvyno salt extraction» Tyachiv district, Transcarpathian region; financial support measures in agriculture; Agrarian Fund expenses associated with a set of measures for storage, transportation, processing and export of objects of state price regulation of state intervention fund; loans to farmers; State support for the livestock industry; Agrarian Fund of forming the state intervention fund and the purchase of material and technical resources for agricultural producers; organization and regulation of institutions veterinary and phytosanitary security; leadership and management of fishery recreation complexes and other budgetary institutions in the field of fisheries; applied research and development, works on government orders in the field of fisheries; International activities in the fishing industry; research, engineering, and scientific training in forestry; forestry and hunting, guarding and protection of forests in the forests; state control in agriculture; leadership and management of food safety and consumer protection; organization and regulation of institutions in the system of the State Service of Ukraine on food safety and consumer protection [10].

Conclusions. So, the agricultural sector of Ukraine's economy is growing rapidly, particularly the increase of gross output in 2015, compared to 2000, was 64%, including crop production – 26%, livestock – 31%; during the same period, labor productivity in agriculture increased by 7.4 times; as a result the profitability of agricultural production during 2010-2015 was about 26%, which is a significant achievement, as in 2000, losses amounted to -1%. The authors proved that an important factor in economic growth in Ukraine's agricultural sector was the intensification of agricultural production, mechanization and automation of labor, resulting detected a strong correlation between productivity and gross output of agriculture. Thus, we can conclude that the agricultural sector of the national economy Ukraine has great potential for development, but the availability of capacity does not mean its automatic implementation, and existing problems in the field indicate that Ukraine needs a clear and prudent agricultural policy involving the mechanism of effective state support area.

ЕКОНОМІКА ТА УПРАВЛІННЯ НАЦІОНАЛЬНИМ ГОСПОДАРСТВОМ**References**

1. Buga, N. Y. (2014). Stan ta problemy aharnoho sektora ekonomiky Ukrainy u suchasnykh umovakh [State and problems of the agricultural sector of Ukraine in modern conditions]. *Visnyk aharnoi nauky Prychornomor'я – Ukrainian Black Searegion-agrarian scientific bulletin*, Vol. 1, pp. 64-70 [in Ukrainian].
2. Tsvyrko, A. A. (2011). Finansovoe obespechenie agrarnogo sektora ekonomiky [Financial support for the agricultural sector of the economy]. *Izvestiia Tul'skogo gosudarstvennogo universiteta Ekonomicheskie i iuridicheskie nauki – News of the Tula State University. Economic and legal sciences*, No. 1-2, pp. 228–234 [in Russian].
3. Gordeiev, A. (2008). Realizatsiia Gosprogrammy razvitiia selskogo khoziaistva - zalog prodovol'stvennoi stabilnosti strany [The implementation of the state program of development of agriculture - the key to the stability of the country's food]. *APK: ekonomika, upravlenie – Agro-industrial complex: economy, management*, No. 7, pp. 5–9 [in Russian].
4. Ofitsiinyi sait Derzhavnoi sluzhby statystyky Ukrainy [Official Website of the State Statistic of Ukraine]. Retrieved from: <http://www.ukrstat.gov.ua> [in Ukrainian].
5. Prokopenko, O. M. (ed.) (2016). Sil'ske hospodarstvo Ukrainy 2015 [Agriculture of Ukraine 2015]. Kyiv. State Statistics Service of Ukraine [in Ukrainian].
6. Kalina, A. (2012). Regulirovanie selskokhoziaistvennogo rynku i politika podderzhki [The regulation of the agricultural market and support policy]. *APK: ekonomika, upravlenie – Agro-industrial complex: economy, management*, no. 2, pp. 45-49 [in Russian].
7. Trusova, N. V. (2013). Svitovyi dosvid derzhavnoi pidtrymky rozvytku sil'skohospodarskoho vyrobnytstva [The world experience of state support of agricultural production]. *Zbirnyk naukovykh prats Tavriiskoho derzhavnoho ahrotekhnolohichnoho universytetu (ekonomichni nauky) – Proceedings of the Tauride Agrotechnological State University (economic sciences)*, No. 4 (24), pp. 235–239 [in Ukrainian].
8. Nazarkevych, O. B. Zbirnyk naukovykh prats Tavriiskoho derzhavnoho ahrotekhnolohichnoho universytetu (ekonomichni nauky) [International experience of state regulation and support of small farms]. *Naukovyi visnyk Uzhhorodskoho universytetu. Seriya Ekonomika – Scientific bulletin of Uzhhorod University. Series "Economics"*, Vol. 3 (44), pp. 17–19 [in Ukrainian].
9. Ulyanchenko, Yu. O. (2007). Derzhavne rehuliuвання aharnoho rynku v krainakh YeS i SShA: dosvid dlia Ukrainy [State regulation of the agricultural market in the EU and the United States: experience for Ukraine]. *Derzhavne budivnytstvo – State building*, Vol. 2. Retrieved from: http://nbuv.gov.ua/j-pdf/DeBu_2007_2_56.pdf [in Ukrainian].
10. Pro Derzhavnyy byudzhet Ukrainy na 2016 rik: Zakon Ukrainy vid 25 hrudnya 2015 roku № 928–VIII [Law of Ukraine On State Budget of Ukraine for 2016 from Desember 25, 2015 No 928–VIII]. Retrieved from : <http://zakon3.rada.gov.ua/laws/show/928-19/print1484075684577165> [in Ukrainian].

Література

1. Буга, Н. Ю. Стан та проблеми аграрного сектора економіки України у сучасних умовах / Н. Ю. Буга // Вісник аграрної науки Причорномор'я. – 2014. – Вип. 1 – С. 64-70.
2. Цвырко, А. А. Финансовое обеспечение аграрного сектора экономики / А. А. Цвырко // Известия Тульского государственного университета. Экономические и юридические науки. – 2011. – № 1-2. – С. 228–234.
3. Гордеев, А. Реализация Госпрограммы развития сельского хозяйства – залог продовольственной стабильности страны / А. Гордеев // АПК : экономика, управление. – 2008. – № 7. – С. 5–9.
4. Офіційний сайт Державної служби статистики України [Електронний ресурс]. – Режим доступу : <http://www.ukrstat.gov.ua>.
5. Сільське господарство України 2015 : статистичний збірник / відповідальний за випуск О. М. Прокопенко; Державна служба статистики України. – К., 2016. – 360 с.
6. Калина, А. Регулирование сельскохозяйственного рынка и политика поддержки / А. Калина // АПК : экономика, управление. – 2012. – № 2. – С. 45-49.
7. Трусова, Н. В. Світовий досвід державної підтримки розвитку сільськогосподарського виробництва / Н. В. Трусова // Збірник наукових праць Таврійського державного агротехнологічного університету (економічні науки). – 2013. – № 4 (24). – С. 235-239.
8. Назаркевич, О. Б. Міжнародний досвід державного регулювання та підтримки малих сільськогосподарських підприємств / О. Б. Назаркевич // Науковий вісник Ужгородського університету. Серія Економіка. – 2014. – Вип. 3 (44). – С. 17–19.
9. Улянченко, Ю. О. Державне регулювання аграрного ринку в країнах ЄС і США : досвід для України [Електронний ресурс] / Ю. О. Улянченко // Державне будівництво. – 2007. – № 2. – Режим доступу : http://nbuv.gov.ua/j-pdf/DeBu_2007_2_56.pdf.
10. Про Державний бюджет України на 2016 рік [Електронний ресурс] / Закон України від 25 грудня 2015 р. № 928-VIII (зі змінами та доповненнями). – Режим доступу: <http://zakon3.rada.gov.ua/laws/show/928-19/print1484075684577165>.

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