

РОЗДІЛ 1

ЕКОНОМІКА ТА УПРАВЛІННЯ НАЦІОНАЛЬНИМ ГОСПОДАРСТВОМ

UDC 334.021:631.1

DOI: <https://doi.org/10.32782/2304-0920/2-81-1>

Bulysheva Daria
Varfolomeyeva Oksana
Panasyuk Olha
Odessa State Agrarian University

PUBLIC-PRIVATE PARTNERSHIP ON THE WAY OF SUSTAINABLE DEVELOPMENT OF THE AGRICULTURAL INDUSTRY IN THE COUNTRY

The prerequisites for introducing the foundations of public-private partnerships in the agricultural direction of country development are researched. It is determined that agricultural land remains the main component of land use in the EU. The relevance of the development of the agrarian vector of social relations is proved. The necessity of making additional investments and ensuring the mutual interest of the state and private land users in the sustainable development of agriculture is justified. The prerequisites for introducing the foundations of public-private partnerships in the agricultural direction of country development are researched. The advantages and steps of the corresponding mechanism are examined from an environmental, economic, and social point of view, taking into account the fundamentals of “agrosharing”, as a general rational and highly efficient use of natural resources of the agricultural sector, aimed at protecting the environment, and making producers profit through the introduction of high-tech innovations.

Keywords: public-private partnership, agriculture, environmental-economic approach, agrosharing.

Formulation of the problem. Existing political, economic and technological vectors for the development of society and expected trends in the macroeconomic environment have a direct impact on agricultural land use. According to experts [4], agriculture will continue to play a prominent role in the EU society in 2030, with a slight reduction in land use. Due to climate change and environmental obligations, the pressure on agricultural areas cannot be compensated only by advances in management and technologies, such as precision farming, SMART farming etc. After all, this will lead to an increase in productivity but not to sustainable development of territories.

The area of arable crops in the EU is expected to continue declining, which (along with a slight increase in productivity) limits further expansion of production. The EU's domestic demand for grains and oilseeds is still mainly defined by feed use, although industrial use will grow faster. Like previous forecasts, medium-term forecasts for this year show steady global demand on agricultural production, creating opportunities for increasing grain exports from the EU. To ensure the demand for relevant products, as well as the environmental sustainability of the territories, it is necessary to develop innovative approaches to the development of agricultural land use. In connection with the foregoing, the involvement of business structures (as the main investors) in the system of planning and strategizing the development of agricultural lands is an actual direction of their development.

Analysis of recent research and publications. Scientists identify several stages in the development of economic cooperation, which have become the basis of public-private partnership. Firstly, financing mechanisms for mining projects were applied in oil production in Texas, 1930. The same mechanisms were seen in the preparation of projects for the development of oil fields in the North Sea in the end of the 20th century, projects related to the

extraction of gas and other minerals in Australia and some other countries. Secondly, financing of independent energy projects in the energy supply sector was first applied in the USA in 1978, contributed to the development of joint ventures. Funding for public infrastructure developed in the UK due to the Private Finance Initiative Act in the early 90s of XX century [5]. Nowadays, such projects are known as classic public-private partnership projects. The problems of the development of public-private partnerships in various sectors were researched by scientists from all over the world, such as S. Brew, R. Daniel, K. Felsing, C. Greve [5], R. Kramer, J. Marcus, D. Maurrasse [7], F. Monteiro, A. Mishchuk, J. Newman [8], Rankin M. [13], C. Theus, P. Pattberg [10]. But a comprehensive study of the mechanism of public-private partnership in the field of agricultural activity has not been conducted.

Highlighting unresolved parts of a common problem. A worldwide problem is the irrational use of natural resources. Agriculture in Ukraine in recent years has shown steady dynamic development and it is also one of the sources of environmental damage. The share of agriculture in national GDP exceeds this indicator in other leading countries – exporters of agricultural products. About 9% of the world's chernozem reserves are located in Ukraine, while their share is about 60% of all agricultural land and 44% of the entire country. The prospects of public-private partnerships in agricultural production have been given the attention of many researchers. However, this study researches the advantages and steps of the corresponding mechanism from an environmental, economic, and social point of view, that is, from the view of the sustainable development of territories.

The purpose of the article is to justify the relevance of introducing the foundations of public-private partnership in agriculture as the main tool for ensuring sustainable development of this sphere.

Main results of research. Agricultural land remains the main component of the EU land use, but it faces competition from other types of land use. The total use of agricultural land in the EU is expected to continue to decline, albeit at a slower rate than in the last decade. Agricultural areas around the world in 2015-2017 amounted to about 4,800 million ha. In the EU, the total agricultural land area reached 178 million hectares in 2018, which is a small fraction of the total agricultural land used in the world, but makes up about 50% of all land in the EU. In Ukraine, the corresponding index is 68.7%. Agricultural land, in addition, is the main production resource and, mainly, the main economic basis for the development of the Ukrainian farms. A slight decrease in this indicator in recent years in Ukraine (since 1994 – by 0.6%) [2] does not have a positive effect on the environment. The EU agricultural land has declined by 6% since 2000, mainly due to urbanization. The latest available data show that forests and forest lands are occupied up to 42% of the EU in 2015, which is 2.6% more than in 2009. Urbanization in the EU usually affects agricultural efficiency and soil fertility. However, despite the clear trend of urbanization, it remains negligible in terms of total agricultural area.

Arable crops account for 45% (80 million ha) of the total number of agricultural lands in 2018. Permanent pastures occupy one third (almost 60 million hectares). It is followed by fodder land (21 million ha) and perennial crops (11.5 million ha), which are 12% and 6%, respectively. In particular, cereals are 31% of the total agricultural lands. France has the largest cereal area, accounting for 17% of the total EU. It is followed by Poland (14%), Germany and Spain (both 11%). [3]

In recent years, more and more agricultural lands have been used for organic production. Over the past 4 years, this indicator has increased by 6.6%. The annual increase in organic grain area has been especially significant in Bulgaria (+ 16%), Croatia (+ 4.8%), France (+ 5.5%) and Italy (+ 3.3%).

Based on these expected trends, the organic area can reach 19 million hectares in 2030, which is about 11% of the total agricultural land of the EU [3].

Analyzing the above data on the development of agriculture in various countries, it should be noted the need for additional investments and ensuring mutual interest of the state and private land users in the sustainable development of agriculture. In this aspect, the implementation of public-private partnership (PPP) is relevant. Public-private partnership is a system of relations between public and private partners, in the implementation of which the resources of both are combined with an appropriate distribution of risks, responsibilities and rewards (reimbursements) between them, for mutually beneficial cooperation on a long-term basis in the creation (restoration) of new and modernization (reconstruction) of existing facilities requiring investment, and in the use (operation) of such facilities [7].

Analyzing advantages and risks of PPP, it would be useful to notice that the first group of advantages of PPP includes the fact that the country can use the efficiency of the private sector in the development of the agricultural sector. Therefore, this process occurs more efficiently, falling within the framework of the budget and the established deadlines. This is achieved through a system of payments that are tied to the phased implementation of work on time.

The second group of advantages includes the continuous implementation of projects, which is

especially important in the agricultural sector, taking into account the requirements for rational land use, crop rotation, etc. The attractiveness of PPP schemes is due to the fact that even in conditions of limited state financial resources for the implementation of one or another project that can arise in the country with raising funds for the next stage of the project, implementation of the project will be provided with the necessary planned pace due to the financing by private partners.

The third group of benefits includes effective risk sharing. One of the main principles of PPP is the distribution of risks to the party that can better manage them. For each individual project, the risk allocation scheme may be different, depending on many factors.

The fourth group of advantages includes the intensification of the implementation of PPP projects. Attracting interested private partners to the implementation of projects with their financial, organizational, intellectual resources, that are complementing by the country's capabilities, multiplies the effectiveness, makes it possible to intensify the implementation of projects.

PPP also stimulates multilateral cooperation. The United Nations Economic Commission for Europe Guidebook on Promoting the Governance in Public-Private Partnership states that "multilateral cooperation is an important aspect of creating PPP training programs that save resources and prevent from reinventing the wheel" [13].

In addition to the positive aspects, there are some risks that participants in public-private partnerships have to face and look for ways to level them. Such risks include a lower quality of control and management compared to conventional projects. This is due to the long term of PPP contracts. Financial risks are an integral part of public-private partnership projects, since financial flows in such projects depend on a number of factors, some of which are very difficult to predict. There are also conflicts between the financial and social objectives of the project in the framework of PPP. In order to be attractive to the private sector, PPP projects should be based on the prospects for financial profit, at the same time usually all non-revenue-generating parts of the project fall under the responsibility of the state partner, and commercial components relate to private partners.

Despite the foregoing risks PPP is indicated among the key mechanisms for implementing the policy of modernizing the economy of Ukraine, solving important socio-economic problems. The high efficiency of PPP as a form of interaction between the state and business has been proven by the experience of many countries of the world. Today, objective circumstances for the implementation of PPP mechanisms have been updated. The implementation of large-scale modernization projects in various sectors of the economy requires significant investment resources, a powerful source of which can be private business [8]. At the same time, in the context of the post-crisis development, business interest in government support is growing, which will reduce the risks of private investments and increase the reliability of investment projects for credit organizations.

The legal form of PPP implementation should provide the investor with attractiveness, security of investing in state property and implementation of the main goal of the project, that is, to develop the area that is strategically important for both country and business. For this, the country should perceive a private investor as an equal partner. Demanding from him/her the fulfillment of obligations stipu-

lated by the agreement, the country should guarantee one hundred percent fulfillment of its own.

According to the World Bank Group [14], public-private partnerships do not usually include turn-key construction or service contracts; these are classed as public procurement projects, or privatization of utilities where the public sector still has a limited ongoing role. The Organization for Economic Cooperation and Development (OECD) defines Public Private Partnerships (PPPs) as “long term contractual arrangements between the government and a private partner whereby the latter delivers and funds public services using a capital asset, sharing the associated risks” [12]. In this aspect, the introduction of “agrosharing” as a common use of natural resources by all participants in the agricultural sector, taking into account the sustainable development of these relations in the context of environmental

protection, profit generation and the introduction of high-tech innovations in agriculture, is reasonable.

Public-private partnership is a tool that helps governments to use the experience and effectiveness of the private sector, attract capital and stimulate development. They also help to distribute risk between the public and private sectors where it can be best managed, and provide a reasonable allocation of resources to meet the most pressing development needs. Public-private partnerships can help national and municipal governments to collaborate with the private sector to improve access and quality of agricultural land.

Given the above, an important task is the introduction of the foundations of PPP in agriculture, because it and related sectors directly affect the lives of the majority of the world’s population. More than 40 percent of the population is employed in agriculture. Agriculture also accounts for more than

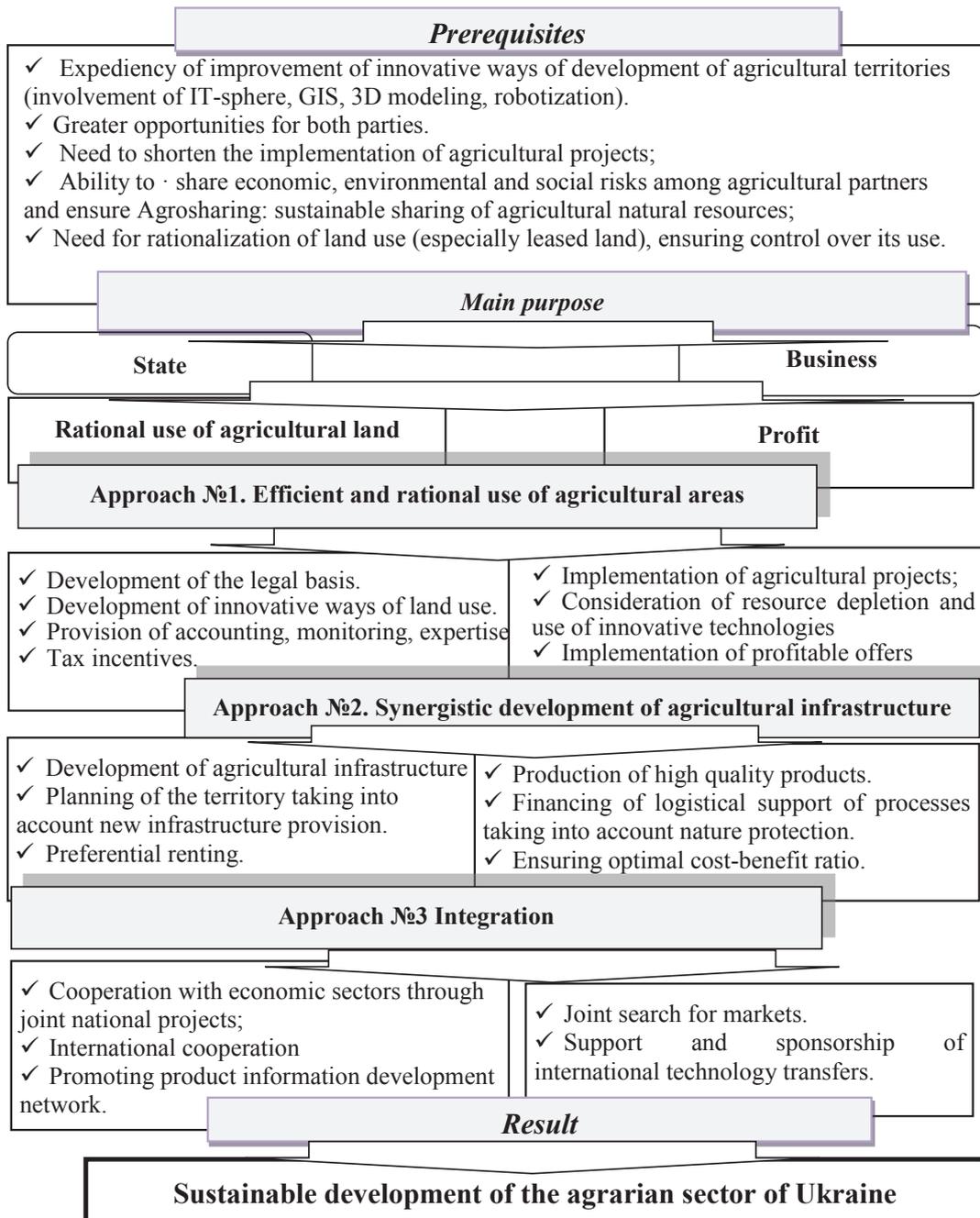


Figure 1. The scheme of public-private partnership effectiveness in the agricultural sector

70 percent of global freshwater consumption and about 30 percent of global greenhouse gas emissions. The development of highly efficient infrastructure and increasing the efficiency of agriculture will have a direct positive impact on the standard of living of the population, providing their needs and helping to combat negative environmental impacts. According to experts, by 2050, food demand will grow by 70 percent. However, agricultural areas are subject to significant pressure due to increased demand for land, lack of control over leased land and clear environmental standards for their use, low productivity and significant losses.

To solve these problems, additional annual investment of about 83 billion USD is required [11]. Productivity increase is seen mainly due to improved farming methods (agricultural machinery, agrochemicals, new seed varieties, new irrigation methods, etc.) and organizational & economic mechanism of its management (effective crop rotation system; environmental control, norms and rules; sustainable land market; standards for the transfer of land for rent and conditions for their return). In this case, the strategic guideline for sustainable development of agricultural land use is public-private partnership, in which the business sector can provide the first component, and the country provides the second one. In the case of an established PPP mechanism in the field of agricultural land use, achievements in the agricultural sector will be more accessible.

In our opinion, the primary tasks of developing PPP in agricultural land use are: analyzing the experience of implementing PPP in other sectors and eliminating risks based on the above experience, developing strategic approaches to use of PPP, creating an institutional and legal framework of its implementation (Figure 1). Agricultural industry requires significant investments (which private entrepreneurs can provide) and at the same time a strategic approach and proper control over the use of the main resource (state function). In this aspect mutual interest and control can be observed on both sides: private individuals are interested in obtaining long-term lease of agricultural territories at preferential rental rates and in making profit for the sale of agricultural products. And the state is interested in the possibility of full control over the targeted and efficient use of land without harm to soils and the environment, investing in the relevant industry and the full operation of the tax system.

Some studies and the European reports on the results of the implementation of PPP [10] indicate negative trends in its development. They say that only few countries have consolidated experience and knowledge in implementing successful PPP projects. But it should be noted that in most cases the implementation of PPP has been considered in the field of technology, education, energy, transport, infrastructure. We propose the introduction of PPP frameworks in the agricultural land use system.

Successful PPP projects in agriculture includes:

- construction, operation and management of irrigation projects in Brazil, India etc.;
- recycling of agricultural waste (waste granulation) in the Republic of Moldova;
- creation, maintenance and management of markets for fruits, vegetables and local agricultural products in the Philippines and Jordan;
- construction and operation of grain terminals in the seaports of the Philippines.

Conclusions. PPP in the agricultural sphere is considered by us as an instrument of realization and achievement of potential benefits of both the state and business structures in implementing joint strategic activities of agriculture. The main results include the following: earlier implementation of the planned investment program, as PPP can provide important additional funding; the possibility of increasing the efficiency and use of agricultural territories in the projects implementation by completing individual projects more quickly; the opportunity to "share" the risks and bases of sustainable use of natural resources in the agricultural sector as a basis for "agrosparing" throughout the partnership as a joint rational and highly efficient use of natural resources of the agricultural sector aimed at environmental protection, profit from producers through the introduction of high-tech innovations; better service and maintenance over traditional projects due to the lifelong approach; possibility of the most effective combination of public and private expertise to conduct in-depth project evaluation and achieve project scale optimization; improving the efficiency of managing public and private property on mutually beneficial terms; creation of conditions for use of the latest technologies and introduction of innovations in the agricultural sphere; reducing the burden on the state budget and optimizing budget expenditures; optimization the mechanism of protection of private business by the state.

References:

1. Simson O. (2011). Derzhavno-pryvatne partnerstvo v innovacijnij sferi. [Public-Private Partnership in Innovation] *Bulletin of the Academy of Law Sciences of Ukraine*, vol. 4, pp. 224–225.
2. Derzhavna sluzhba statystyky Ukrainy (2019). *Statystychnyj shorichnyk Ukrainy* [Statistical Yearbook of Ukraine]. Zhytomyr: TOV "BUK-DRUK".
3. European Commission, DG Agriculture and Rural Development (2018). *EU agricultural outlook for markets and income, 2018-2030*. Brussels.
4. Vives A. et al. (2006). Financial Structuring of Infrastructure Projects in Public-Private Partnerships: An Application to Water Projects. URL: <https://publications.iadb.org/en/publication/10977/financial-structuring-infrastructure-projects-public-private-partnerships> (accessed 13 April 2020).
5. Greve C., Hodge G. (2016). *Rethinking Public-Private Partnerships : Strategies for Turbulent Times*. New York: Routledge.
6. United Nations Economic Commission for Europe (2008). *Guide Book in Promoting the Governance in Public-Private Partnership*. New York. Geneva: UN.
7. Maurrasse D. (2014). *Strategic Public Private Partnerships: Innovation and Development*. Cheltenham: Edward Elgar Publishing.
8. Newman J. (2017). *Governing Public-Private Partnerships*. McGill-Queen's University Press.
9. Pattberg P. (2013). *Public-private Partnerships for Sustainable Development: Emergence, Influence and Legitimacy*. Cheltenham: Edward Elgar Publishing.
10. European court of auditors (2018). *Public Private Partnerships in the EU: Widespread shortcomings and limited benefits: special report*. Available at: https://www.eca.europa.eu/Lists/ECA Documents/SR18_09/SR_PPP_EN.pdf (accessed 13 April 2020).
11. Knowledge Lab. *Public-Private partnership: reference guide*. Available at: <https://pppknowledgelab.org> (accessed 11 April 2020).
12. Organisation for Economic Co-operation and Development (2012). *Principles of Public Governance of Public-Private Partnerships*. Available at: <https://www.oecd.org/governance/50254119.pdf> (accessed 11 April 2020).

- Rankin M., G6lvez Nogales E., Santacoloma P. et al. (2017). Public-Private Partnerships for Agricultural Transformation – Trends and Lessons from Developing Countries. *The Emerald Handbook of Public-Private Partnerships in Developing and Emerging Economies*, Emerald Publishing Limited. 191–219.
- What are public-private partnerships? Available at: <https://ppp.worldbank.org/public-private-partnership/overview/what-are-public-private-partnerships> (accessed 02 April 2020).

Список використаних джерел:

- Сімсон О. Державно-приватне партнерство в інноваційній сфері. *Вісник Академії правових наук України*. 2011. № 4. С. 224–225.
- Статистичний щорічник України 2018 : статистичний збірник / Державна служба статистики України. Житомир: ТОВ «БУК-ДРУК», 2019. 482с.
- EU agricultural outlook for markets and income, 2018-2030 / European Commission, DG Agriculture and Rural Development. Brussels, 2018. 128.
- Financial Structuring of Infrastructure Projects in Public-Private Partnerships: An Application to Water Projects. / A. Vives et al. 2006. URL: <https://publications.iadb.org/en/publication/10977/financial-structuring-infrastructure-projects-public-private-partnerships> (дата звернення: 13.04.2020).
- Greve C., Hodge G. Rethinking Public-Private Partnerships : Strategies for Turbulent Times. New York: Routledge, 2016. 240 p.
- Guide Book in Promoting the Governance in Public-Private Partnership / United Nations Economic Commission for Europe. New York. Geneva: UN, 2008.
- Maurrasse D. Strategic Public Private Partnerships : Innovation and Development. Cheltenham: Edward Elgar Publishing, 2014. 208 p.
- Newman J. Governing Public-Private Partnerships. McGill-Queen’s University Press, 2017. 200 p.
- Pattberg P. Public-private Partnerships for Sustainable Development : Emergence, Influence and Legitimacy. Cheltenham : Edward Elgar Publishing, 2013. 273 p.
- Public Private Partnerships in the EU: Widespread shortcomings and limited benefits : special report / European court of auditors, 2018. URL: https://www.eca.europa.eu/Lists/ECA Documents/SR18_09/SR_PPP_EN.pdf (дата звернення: 13.04.2020).
- Public-Private partnership : reference guide / Knowledge Lab. URL: <https://pppknowledgelab.org> (дата звернення: 11.04.2020).
- Principles of Public Governance of Public-Private Partnerships / OECD, 2012. URL: <https://www.oecd.org/governance/50254119.pdf> (дата звернення: 11.04.2020).
- Public-Private Partnerships for Agricultural Transformation – Trends and Lessons from Developing Countries / Rankin M. et al. *The Emerald Handbook of Public-Private Partnerships in Developing and Emerging Economies* : Emerald Publishing Limited, 2017. 191-219p. URL: <https://doi.org/10.1108/978-1-78714-493-420171007>
- What are public-private partnerships? World Bank Group. URL: <https://ppp.worldbank.org/public-private-partnership/overview/what-are-public-private-partnerships> (дата звернення: 02.04.2020).

Бульшева Д. В.
Варфоломеева О. А.
Панасюк О. П.

Одесский государственный аграрный университет

ГОСУДАРСТВЕННО-ЧАСТНОЕ ПАРТНЕРСТВО НА ПУТИ УСТОЙЧИВОГО РАЗВИТИЯ АГРАРНОЙ ОТРАСЛИ СТРАНЫ

Резюме

Исследованы предпосылки внедрения основ государственно-частного партнерства в сельскохозяйственное направление развития государства. Определено, что сельскохозяйственные земли остаются основным компонентом землепользования ЕС. Доказана актуальность развития аграрного вектора общественных отношений. Обоснована необходимость вложения дополнительных инвестиций и обеспечение взаимной заинтересованности государства и частных землепользователей в устойчивом развитии сельского хозяйства. Исследованы предпосылки для внедрения основ государственно-частного партнерства в аграрном направлении развития страны. Рассмотрены преимущества и шаги соответствующего механизма с эколого-экономико-социальной точки зрения с учетом основ агрошеринга, как общего рационального и высокоэффективного использования природных ресурсов аграрного сектора, направленного на охрану окружающей среды, получение прибыли производителей на основе внедрения высокотехнологичных инноваций.

Ключевые слова: государственно-частное партнерство, сельское хозяйство, эколого-экономический подход, агрошеринг.

Булишева Д. В.
Варфоломеева О. А.
Панасюк О. П.

Одеський державний аграрний університет

ДЕРЖАВНО-ПРИВАТНЕ ПАРТНЕРСТВО НА ШЛЯХУ ДО СТАЛОГО РОЗВИТКУ АГРАРНОЇ ГАЛУЗІ КРАЇНИ

Резюме

Дослідження присвячено обґрунтуванню актуальності впровадження основ державно-приватного партнерства в сільському господарстві як основного інструменту забезпечення сталого розвитку цієї сфери на тлі світової проблеми нерационального використання природних ресурсів. Визначено, що сільськогосподарські угіддя залишаються основною складовою землекористування в ЄС. Доведено актуальність розвитку аграрного вектора суспільних відносин. Аналіз даних про розвиток сільського господарства в різних країнах дав можливість підтвердити необхідність додаткових інвестицій та забезпечення взаємної зацікавленості держави та приватних землекористувачів у сталому розвитку сільського господарства. У цьому аспекті було доведено, що реалізація державно-приватного партнер-

ства (ДПП) є актуальним вектором розвитку співпраці. Державно-приватне партнерство як система відносин між державними та приватними партнерами, у реалізації якої ресурси обох сторін поєднуються з відповідним розподілом ризиків, відповідальністю та винагородою між сторонами, – є оптимальним інструментом для взаємовигідного співробітництва на довгостроковій основі щодо створення нових та модернізації існуючих напрямків розвитку сільського господарства, що потребують інвестицій. Досліджено передумови запровадження основ державно-приватного партнерства в аграрному напрямку розвитку країни. В якості основних результатів ДПП було визначено: дострокове виконання запланованої інвестиційної програми; можливість підвищення ефективності та використання сільськогосподарських територій у реалізації проектів шляхом швидшого виконання окремих проектів; можливість «розподілу» ризиків та засад сталого використання природних ресурсів у сільськогосподарському секторі як основи для «агрошерінгу» як спільного раціонального та високоефективного використання природних ресурсів аграрного сектору, спрямованого на охорону навколишнього середовища, отримання прибутку від виробників завдяки впровадженню високотехнологічних інновацій; кращий сервіс та обслуговування в порівнянні з традиційними проектами; можливість найбільш ефективного поєднання державної та приватної експертизи для досягнення оптимізації масштабу проекту; підвищення ефективності управління державною та приватною власністю на взаємовигідних умовах; створення умов для використання новітніх технологій та впровадження інновацій у аграрній сфері; зменшення навантаження на державний бюджет та оптимізація бюджетних витрат; оптимізація механізму захисту приватного бізнесу державою. Дослідження доводить актуальність впровадження ДПП в основу розвитку аграрної сфери.

Ключові слова: державно-приватне партнерство, сільське господарство, еколого-економічний підхід, агрошерінг.
