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ISSUES OF USING FINANCIAL RESOURCES TO ENSURE SUSTAINABLE DEVELOPMENT OF THE AGRICULTURAL SECTOR

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ABSTRACT

The agricultural sector is characterized by a number of specific features. First of all, reforms in this area are accompanied by instability of production. Many circumstances, such as climatic fluctuations, inflation rate, credit-price growth, decrease in purchasing power, significant reduction in state support for agriculture and the entire agro-industrial complex, increase in debts of agricultural producers and industrial enterprises producing means of production necessary for agriculture and agricultural producers, etc., affect the financial security of agricultural enterprises to one degree or another. In conditions of market relations, financial security, financial stability, financial security act as an important component for economically independent enterprises. Taking all this into account, the article approaches financing as the main condition for sustainable development of the agricultural sector. The author studies the experiences of Latvia, China, and Britain and makes proposals on financing directions to ensure sustainable development of the agricultural sector. The article analyzes the interaction of sustainable development and the agricultural sector, the needs arising from the goals of sustainable development, and argues that access to financial resources is a necessary condition for sustainable development. According to the author, sustainable development requires adequate financial support, and financing should be organized in accordance with the specialization of the agricultural sector, the characteristics of the region and the soil. In this case, it can be more efficient.

KEYWORDS

Agricultural Sector, Sustainable Development, Financial Support, Banks, Loans, International Experience, China, Latvia, Great Britain Experience, Specialization

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Introduction.

Ensuring sustainable or continuous development is one of the main challenges of the modern era and is relevant for all sectors. In particular, the sustainable development of the agricultural sector, which is the main provider of the daily normal life of society, is both necessary and one of the main requirements of the modern era. In particular, if we take into account that the requirements for sustainable development are mostly related to environmental and climate issues, and the agricultural sector is also a sector that is quite dependent on environmental factors, then it becomes clear how important sustainable development is for the agricultural sector. The productivity of daily consumer goods produced by the agricultural sector depends on climate, soil fertility, water supply, etc. seriously. Nine of the sustainable development goals covering seventeen areas are directly related to the environment and, therefore, are related to the agricultural sector. In this sense, the sustainable development of the agricultural sector is of particular relevance, and ensuring this development, in turn, requires the necessary financial support. All this makes issues such as financial security and easy access to necessary financial resources relevant in the agricultural sector, as in other areas. In this regard, well-established relationships between banks and agriculture are very important for any transformation or development that an agricultural producer wants to implement.

It is clear that financing is an inherently global phenomenon with its own requirements and is maintained by global actors through relevant centers. The relationship between farmers and financial institutions is a universal complex that can be easily replicated around the world. However, in practice, financial relationships are locally constructed and reshaped for each process and activity.

Along with all this, the incomplete formation of the territorial-area management structure based on market relations in the agricultural sector, the low accounting ability of economic entities, and the difficulties arising in protecting the domestic market in most cases lead to the financial and economic activities of enterprises ending with losses. It is in such conditions that the self-regulation capabilities of agricultural production and the market do not correspond to modern realities, the presence of numerous infrastructures in stimulating local producers, financial-credit, insurance, banking and other problems still lead to the fact that there are still cases of imbalances in the level of supply and demand in the market. That is why, from the point of view of management, its sustainable development in the context of the formation of market relations in the agricultural sector should be widely considered, and the main principles of its formation should be determined (Atashov B.KH., 2017. Aliyev İ.H., Huseynov S.Y., 2013).

Studies show that an incompletely regulated market cannot immediately adapt to the principles and requirements of private economic market relations that have just emerged as a result of the privatization of property and lands in the agricultural sector in conditions of unformed competition. In particular, the lack of subsidies for individual farms in the agricultural sector, the slow implementation of a consistent preferential financial and credit policy, the allocation of small amounts of investments for the development of the agricultural sector or their inappropriate allocation are the main factors hindering the development of the agricultural sector. In addition, the need to improve the existing guardianship policy, including insurance relations, the failure to fully utilize the existing potential for the development of processing and service enterprises, etc. create problems in the sustainable development of the agricultural sector. Along with all this, one of the main conditions for the sustainable development of the agricultural sector is the protection of the domestic market, production at the level of meeting domestic demand. As in all areas, the efficient realization of products in the agricultural sector is of great importance for sustainable development. In this regard, it would be more appropriate to take a comprehensive approach to issues such as financial security, sales, protection of the domestic market, etc. for the sustainable development of the agricultural sector. Of course, it is difficult to cover all of this in one article, and in this article we will try to clarify the issues of financial security. The presented article conducts research and analysis on financing the agricultural sector, access to financial resources, and thus ensuring the sustainable development of the sector (Aliyev İ.H., 2013).

Methods

Purpose of the study: Scientific and theoretical substantiation of the financial security of the agrarian sector and its impact on sustainable development, investigation of the characteristics of financial security, accessibility to financial resources, and development of proposals for improving the financial stability of the agrarian sector.

Research methodology: Analytical, statistical, normative analysis, induction, deduction, etc. methods were used during the study.

The applied significance of the study is that the results of the research on the financial security and sustainability of agricultural enterprises can be applied in relation to the stability and strengthening of the financial situation of the agrarian sector in our country.

Research results: In order to increase the financial stability of the agrarian sector, it is necessary for agricultural enterprises to have easy access to financial resources. For this purpose, it is important to conduct financing in accordance with specialization and territorial characteristics.

The article presents innovative solutions for the application of technological innovations, risk management, acceptance and provision of sustainability, and expansion of trade relations.

Originality and scientific novelty of the research: the stability and strengthening of the financial situation of the sustainably developing agrarian sector have been comprehensively investigated, and relevant proposals and recommendations have been developed that can be considered significant from a scientific and practical point of view.

Results

Common forms of financing in the agricultural sector.

Sustainable development of the agricultural sector is impossible without a properly formed financial mechanism. Financial sources used for the development of the agricultural sector are classified into 2 groups: 1) internal financial sources; 2) external financial sources.

Internal financial sources include depreciation funds, profits, income from production and sales, and external sources include credit resources, foreign investments, and state subsidies. It is necessary to specifically analyze investments, loans, and subsidies from these financial sources. Investments are the material basis of economic growth. Solving the problems of the development of the agricultural sector requires expanding the scale of direct investments that ensure the process of reproduction. Maintaining social, economic, and environmental balance in order to ensure sustainability in the agricultural sector depends to a large extent on the correct adoption of investment decisions. Because existing investments, when assessed from the point of view of sustainable development, give impetus to the formation of a favorable development environment. At the same time, the efficient use of all existing sources of investments is of particular importance. The main financing methods that enterprises can use are bank loans, financial leasing, factoring and forfeiting. Enterprises should have accurate and sufficient information about the types of resources and which resources are suitable for which investment (Hüseyn R.Z., 2018).

Recently, leasing mechanisms have been used as one of the widespread solutions in investing in the agricultural sector. Enterprises that cannot use bank loans or do not have sufficient capital decide to pay all investment costs through financial leasing. In the case of widespread financial leasing, the lessor acquires the property not for its own use, but for leasing it, the right to choose the property and its seller belongs to the lessee, the property is directly taken over by the lessee and put into use by him, the lessee sends claims regarding the quality of the property, its completeness, and the correction of defects during the warranty period directly to the seller of the property, the risk of accidental loss and damage to the property passes from the seller to the lessee after the property acceptance and handover act is signed. Within these conditions, financial leasing is one of the most widely used mechanisms for financing the agricultural sector (Khalilov H.A., 2024).

As mentioned, financing is a complex process closely linked to international organizations and corporations, agreements and protocols, policies and ideologies. Financial relations are more intertwined, closely related relationships in the local context, and attention should be paid to the algorithmization of the role of individual clients. Studies give grounds to conclude that there are discrepancies between the rhetoric of financing and reality. It is wrong to approach agro-financial relations simply as a mirror of a single financial logic on a global scale. This may manifest itself more in factors such as the differences in localized methods of agriculture, different local opportunities or regional constraints. For example, agriculture is at the center of discussions about its environmental impacts, and the importance of this discussion varies not only in individual countries, but even in individual regions and zones. Therefore, approaches and policies may also differ, aiming to encourage different behaviors of banks and financial entities. In addition, of course, the characteristics of soils and ecosystems may be suitable for different agricultural strategies and different crops. Consequently, although the relationship between the financial sector and agriculture is expected to follow a single logic, sectoral arrangements and characteristics should also be taken into account, depending on how agrifinance is organized in practice. In other words, agricultural financing should be viewed as a process (Guo L., Tang M., 2022).

Observations demonstrate that, despite the growing interest of banks in agriculture, the agri-food sector is poorly understood by financial actors and perceived by analysts as relatively risky. At the same time, banks have often been hesitant to engage with the sector without additional guarantees. As a result, the principles that structure farmer-banker relationships are largely shaped by contextual negotiations between financial actors and governments. It is crucial for farms to remain competitive, and because they can determine the rules for accessing credit, financial actors have powerful tools to shape farmers' behavior. At the same time, for farmers to access finance, they must demonstrate financial literacy, a viable business, and a willingness to repay the loan (Mammadzade T., 2022, Jikun H., 2019, Khan F.U., 2024).

Financial security of the agricultural sector in the context of globalization.

The financial security of economic entities in each area is characterized by the placement, use and sources of their formation of funds. To determine the financial situation, a financial analysis is carried out, which includes the following: express analysis of the financial situation (analysis of the structure of assets and

liabilities, property, reserves and expenses); analysis of financial stability; analysis of financial results of activities; analysis of profitability and business activity.

It should also be noted that financial health is very important for financial security. The financial health of any area is reflected in key indicators that monitor how they acquire and use resources. These financial results express the activities of not only the company and its employees, but also business partners, government, financial institutions, tax agencies, etc. related parties. An analysis of corporate finance is carried out to understand economic dynamics. The objectives of financial analysis are: to identify changes in the financial situation, as well as factors affecting sustainability, to assess qualitative and quantitative changes in the financial situation (Aliyev İ.H., Huseynov S.Y., 2013).

In the current era of globalization, agricultural production enterprises face numerous challenges that can stabilize their financial situation. These challenges range from volatile prices to trade policies, environmental impacts and increasing demands for technological adaptation. At the same time, the aforementioned challenges also provide opportunities for development and innovation. Therefore, it is of great importance to conduct research to ensure sustainable development by stabilizing and strengthening the financial situation of the agricultural sector. First of all, let us note that the rapid integration and globalization observed in modern times formalizes physical borders, and the international mobility of goods and services is intensifying. This in turn strengthens competition, complicates the competitive struggle, and sectors that do not respond to competition in the market are doomed to gradually lose their position (Gasimli V.A., 2022, Tang L., Shiyu S., 2022).

At the same time, globalization and integration lead to an increase and acceleration of international trade, capital and information flows. This can have both positive and negative consequences for agricultural enterprises. While positive effects are expected with the wider dissemination of advanced practices, the existing disproportions in competitiveness, technical and technological armament, etc. can also be characterized by negative effects. In addition to all this, foreign markets offer access to new export targets and foreign investments, which can be considered as a source of finance for the sustainable development of the agricultural sector. International cooperation can also lead to technology transfer and the development of production practices, as mentioned above. However, agricultural sector entities are vulnerable to external shocks such as price fluctuations in global commodity markets, currency fluctuations, trade barriers and changes in international policies. There is also great pressure to maintain competitiveness while adapting to the principles of environmental sustainability. All this also forms a necessity to be able to continue competing. In other words, the financial provision required for the sustainable development of the agricultural sector, easy access to financial resources of the sector in general, is also necessary for competitiveness. Because competitiveness is necessary to maintain a position in the market and to be able to continue, without which sustainable development is impossible (Huseyn R.Z., 2018, Khalilov H.A., 2024).

Sustainable development of the agricultural sector and climate change issues

The environmental factors mentioned have a significant impact on agriculture, most notably through negative impacts on food security. As global temperatures rise, food production becomes more difficult and uncertain due to changing weather patterns, extreme weather events and other environmental disruptions. At the same time, experts say that the global food system is responsible for about a third of greenhouse gas emissions, second only to the energy sector, and is the number one source of biodiversity loss. Up to a point, rising temperatures and increased carbon dioxide can be beneficial for crops, but rising temperatures also increase water demand by accelerating evaporation from plants and soils. For areas of the world where water resources are limited, climate change is causing more negative impacts on agricultural production through reduced water resources, increased extreme events such as floods and severe storms, heat and the spread of pests and diseases (Aliyev İ.H., Huseynov S.Y., 2013).

The impact of climate change is already clearly visible. Currently, many countries around the world are experiencing unseasonal weather conditions. During the harshest period of winter, January-February, temperatures are above normal, which is seriously affecting production productivity in the agricultural sector. In the agricultural sector, it increases the costs allocated to water, fertilizer, etc. and the costs of product production in general. Therefore, the agricultural sector's access to the necessary financial resources is of great importance.

The already observed ecological changes, along with the increase in the volume of production in general, have made the production of environmentally friendly products a necessity. Without achieving this, it is impossible to ensure competitiveness and conduct long-term profitable activities.

Ecologically friendly agricultural production, carried out without the use of chemical fertilizers and pesticides, based on the principles of protection and restoration of natural resources, is one of the main challenges of the modern world. This approach is aimed at producing products without harming the soil, water, air and the health of living beings. For this reason, ecologically friendly agriculture is considered one of the main pillars of the green economy (Huseyn R.Z., 2018, Dustova M., Musagaliev A.J., 2023).

As mentioned, the green economy is a model that ensures environmental sustainability, social equity and economic growth. In this model, the main goals are the efficient use of natural resources, reduction of carbon emissions and environmental protection. Agriculture plays a major role in this area, as it directly depends on natural resources (water, soil, air), plays an important role in ensuring food security of the population, and is the main source of employment in rural areas.

In addition to all this, ecologically clean agriculture recommends reducing the use of chemicals, which ultimately prevents pollution of the natural environment, water and soil. This is also very important in terms of protecting biodiversity. On the other hand, ecological agriculture reduces its carbon footprint, helps retain carbon in the soil and consumes less energy, which should be specially noted as one of the requirements of the green economy. Studies show that by supporting small and medium-sized farmers, ecological agricultural production can be further increased, thereby increasing social well-being in rural areas and strengthening local communities. At the same time, products grown using ecological methods are healthier and safer, which contributes to protecting the health of the population. The introduction of ecotourism and innovative technologies to promote ecological production creates new economic opportunities in agriculture. Taking these into account, the financing of the agricultural sector should also prioritize the aforementioned areas (Boucher S., Carter M., 2020, Fugile K., Gautam M., 2019).

International experience in the formation of a sustainably financed agricultural sector

Looking at the experience of different countries, it is clear that, for example, in Latvia, the private banking sector is relatively new, having emerged after Latvia regained its independence in the early 1990s. In 1993, the “Mortgage and Land Bank of Latvia” was a state-owned bank created specifically to address the financing gap in agriculture. However, it was the World Bank that, in 1993, helped to establish financial support institutions that provided loans and credit guarantees to farmers in cooperation with the national government. The solution presented – through an organization called “Laukkredits” – operated independently of the already established state institutions. Due to the low credibility of the existing institutions, it chose to internalize most of the services that would normally be outsourced. Finally, Laukkredits was integrated into the state-owned Mortgage and Land Bank of Latvia in 1997. In reality, only a small group of farmers were financed, and many farms failed to repay their loans, which seriously undermined farmers' confidence in bank credit as a development option. Nevertheless, the programs provided access to finance for at least some farms in Latvia, and Laukkredits thus became a training ground for the first generation of market-oriented agricultural economists, some of whom later pursued careers in commercial banking (Kuchin S.A., 2019).

Experience shows that after the merger of the two financial institutions, there was no bank that paid special attention to agriculture. However, despite the lack of overt interest in agriculture for some time, the “Mortgage and Land Bank of Latvia” remained the bank with the largest number of agricultural clients.

Latvia, which joined the EU in 2004, provided farmers with access to subsidies, which made them more attractive to banks. This resulted in an increase in agricultural financing, both in real terms and as a short-term increase in the share of loans issued in total. In fact, research also proves that real interest in agriculture in the banking sector arose only after the economic crisis of 2009.

After the financial crisis of 2008-2009, the volume of loans granted to farmers increased by more than 15%. This period brought changes in bank-farmer relations, in addition to the maintenance of the relationship. For example, some banks changed their internal structures in order to support their relations with farmers. At the same time, the state also sold the “Mortgage and Land Bank of Latvia”, thus losing the most important loan portfolio of agriculture. State support for the sector and the ongoing process of concentration and consolidation in agriculture also attracted banks. Observations also show that banks are mainly interested in working with large farms. Thus, it is clear from the above that financing of agriculture in Latvia has come a long way and is mainly ensured by the purposeful activities of the state. In any case, as can be seen in the Latvian experience, the activities of large farms are more attractive and reliable for financial institutions (Girvins M., Hvarregaad M., 2022).

Studies show that Danish farmers generally have easy access to cheap, long-term finance. Observations show that the banking sector in Denmark is divided into many small banks with different geographical areas

of activity, national and multinational banks. At the same time, bank branches operate in most settlements, even in villages. Therefore, a number of small rural banks have a very high share of their loan portfolios to the agricultural sector, sometimes the share of agricultural loans in the total loan portfolio exceeds 50%.

Traditionally, private ownership has dominated Danish agriculture, and although the proportion of private ownership has declined somewhat in recent years, around 85% of farms are still privately owned. Unlike joint-stock companies, which can raise capital by issuing new bonds, private companies are sensitive to changes in asset values and large investments (Girvins M., Hvarregaard M., 2022).

After a long period of dynamic growth, agricultural assets in the UK fell by around 5.6 percentage points between 2019 and 2022. This is explained by a variety of reasons, but the main reason is the decline in land prices. At the same time, the amount of liabilities for the agricultural industry increased by 17.4 percentage points over the same period, mainly due to an increase in bank loans to farmers. The increase in liabilities is part of a long-term trend, and the amount of long-term liabilities for the agricultural industry has more than tripled in the past 20 years, from £5,428 million in 2003 to £14,716 million in 2022.

Research shows that agricultural financing in the UK is concentrated in the hands of a few large banks. Lloyds and HSBC are the main lenders, and although HSBC does not have a team of agricultural specialists, it does provide significant support for the development of “agricultural specialists”. Of these banks, Lloyds has a longer history and rich experience in lending to the agricultural sector. In particular, Barclays Bank in the UK also provides loans to the agricultural sector, with approximately 27% of the bank’s loans going to agriculture. Thus, it seems that the relationship between agriculture and banking in the UK is well established and works effectively. Banks provide loans against land and normally lend up to 60-80% of the value, and up to a maximum of 50% for non-land assets (Girvins M., Hvarregaard M., 2022).

In China’s experience, research shows that financial inclusion has a significant impact on the growth of agricultural output. The average annual growth rate of 5.2% is largely driven by technical change. At the same time, financial inclusion also provides a basis for the use of financial services in rural areas. Analysis shows that in China, financial inclusion strongly contributes to productivity growth in provinces with warmer climates, provinces that are mainly based on rice farming or classified as major crop producers. In addition, financial inclusion develops the traditional mode of self-sufficient production towards cooperative production based on specialization, which affects the growth of agricultural production. Technical change is the only component of agricultural output growth that improves significantly over a selected period of time. Thus, financial inclusion promotes technological innovations in agriculture, facilitates research and innovation in agriculture. In particular, it directs agricultural entities to join production associations and large industrial chains, where they can more easily implement technological improvements (Guo L., Tang M., 2022).

Discussion

Easy access to financial resources is necessary for the sustainable development of the agricultural sector. Because sustainable development requires a careful approach to environmental factors, maintaining a balance in nature-society relations, and preserving biodiversity, and the economical use of natural and economic resources. This, in turn, necessitates the application of new techniques and technologies that allow for more efficient use of resources, and the formation of a new approach. All this can be achieved only by obtaining the necessary financial support. In this sense, access to financial resources acts as a necessary condition for the sustainable development of the agricultural sector. Considering that climate change has also been observed with certain effects on the agricultural sector in recent years, the necessity and continuity of financial support becomes clear. The efficient use of financial resources requires the specialization of the agricultural sector, taking into account the territorial and soil characteristics.

Conclusion and Suggestions

Thus, it is clear from the research that, as can be seen from the research conducted in different countries, although there are many similarities in the financing of the agricultural sector, there are also differences. For example, in Latvia, banks are more interested in providing loans to large farms, while in Denmark, banks have developed to villages and all economic entities have easy access to agricultural loans. In Great Britain, banks mainly provide loans in exchange for land. However, in general, although the processes of financing agriculture in Britain are normal, they are constantly being improved. In China, one of the countries with the largest economy in the world, loans to the agricultural sector are provided more for technical improvement. In China, in addition to supporting the organization of production, financing the agricultural sector encourages the producer to develop deeply, that is, to improve the quality and competitiveness of the product.

Regardless of its form, financing of the agricultural sector has a direct and diverse impact on food security, which is a necessary condition for the normal life of society. Necessary financing allows economic and technological development, farmers to increase crop production, which in turn contributes to improving food security and accessibility. In particular, a well-financed agricultural sector creates conditions for farmers to produce a wider variety of products. As a result, it increases the sustainability of food security and has a positive impact on food security. In general, financing of the agricultural sector is an important tool not only for supporting economic development, but also for ensuring food security. Financial support for farmers, investments in technological innovations and the development of product markets increase the efficiency of agriculture, resulting in the production of more and more diverse food products. This contributes to the sustainable development of the agricultural sector, meeting food needs, regional development and the sustainable development of the national economy in general. During financing, it is considered more appropriate to take into account the characteristics and specialization of the region, land, and attract financial resources to new techniques and technologies in accordance with the Chinese experience.

REFERENCES

1. Atashov B.Kh. "Structural and efficiency problems in the agricultural sector". Baku, Cooperation, 2017, 536 page;
2. Aliyev İ.H., Huseynov S.Y. and etc. "National economy: modernization and sustainable development". Baku, 2013, "Europe" publishing house, 473 pages;
3. Gasimli V.A., Huseyn.R.Z. and etc. "Green economy". Baku, 2022, "Azprint" publishing house, 280 page;
4. Huseyn R.Z. "Competitive production in the agricultural sector: challenges of globalization and development opportunities. Baku, European Publishing House, 2018, 408 page;
5. Mammadzade, T. (December 2022). "Financing Mechanisms for Sustainable Agricultural Development in the Nakhchivan Autonomous Republic." *Agricultural Economics*, N4 (42), 56.
6. Khalilov H.A. "Evaluation of the impact of average annual temperature indicators on the productivity of grain crops." *Journal of Agricultural Economics*, 2024, №1(45), p. 24-39;
7. Boucher S., Carter M. and etc. "Risk rationing and wealth effects in credit markets: implications for agricultural development" / *American Journal of Agricultural Economics*? 2020, №90, pp.23-37;
8. Dustova M., Musagaliev A.J. "The Significance of the experience of foreign countries in government financial support of agriculture". *Partners Universal International Research Journal*", Vol.: 02 Issue: April 2023, pp.162-167;
9. Fuglie K., Gautam M. and etc. "Harvesting prosperity: Technology and productivity growth in agriculture". Washington, Word Bank, 2019, pp.63-87;
10. Guo L., Tang M. and etc. "Financial support for agriculture, chemical fertilizer use and carbon emission from agricultural production in China". *International Journal "Environ Res public health"*, 2022, №19(12), doi: 10.3390/ijerph19127155;
11. Grivins M., Hvarregaard M. and. etc "Financial subjectivities in the agricultural sector6 A comparative analysis of relations between farmers and banks in Latvia, Denmark and the UK". *Journal of Rural Studies*, vol.86, 2022, pp.117-128;
12. Huang Jikun "Fostering inclusive rural transformation in China and other developing countries in Asia". Center for Chinese Agricultural Policy and Peking University, 2019. P.80;
13. Khan F.U., Nouman Muhammad and etc. "Constraints to agricultural finance in underde-veloped and developing countries". *International Journal of Agricultural sustainability*, Vol. 22, İs.1, 2024, p. 23-31;
14. L.Tang, S.Shiyu "Fiscal incentives, financial support for agriculture and urban-rural inequality". *International review of financial Analysis*, Vol.80, 2022, pp.12-22\$
15. Reid P.A. "Investing in agriculture". <https://www.elibrary.imf.org/view/journals/022/0003/003/article-A007-en.xml>;
16. Sun Yan "Research of financial support for agricultural development". *Journal Business and economic development*, Vol. 5, İs.1, p.21-28;
17. Taipov T., Kurmanova G. and etc. "Public Administration in the agricultural sector of Kazakhstan". *Revista Espagios*, Vol. 38, (№44), 2019, pp.29-41;
18. Yuling G., Man C. and Xin He "Influence of financial support to agriculture on carbon emission intensity of the industry". *Sustainable* 15, №3 (228), <https://doi.org/10.3390/su15032228>
19. «Мировой опыт экономической поддержки аграрного сектора». LAP Lambert Academic Publishing, 2019, dekabr, pp. 48-65;
20. Кучин С.А. «Мировой опыт финансовый поддержки аграрного сектора экономики и возможность его адаптации в России». *Управление экономическими системами, электронный научный журнал*, 2019, №8(44), стр. 27-46;
21. <https://openknowledge.fao.org/server/api/core/bitstreams/d19de276-10f8-48c6-b0b8-3fbeb0cdf4b/content>;

22. <https://documents1.worldbank.org/curated/zh/461421559326915086/pdf/The-Digital-Financial-Services-for-Agriculture-Handbook.pdf>;
23. <https://openknowledge.fao.org/server/api/core/bitstreams/4f1107a3-9f40-4670-9db7-2835cefb19d5/content>;
24. https://www.fi-compass.eu/sites/default/files/publications/financial_needs_agriculture_agrifood_sectors_eu_summary.pdf;
25. <https://eec.eaeunion.org/upload/clcr/review.pdf>;
26. https://www.swisscontact.org/en/news/farmers-practicing-conservation-agriculture-to-receive-access-to-finance-through-agriculture-and-rural-development-bank?gad_source=1&gclid=Cj0KCQjw99e4BhDiARIsAISE7P9AeheTV3oqfc_MaV_OImrHoyVdEOglKQLVPVZug_EfW_sYIBol538aAo8hEALw_wcB
27. https://agriculture.ec.europa.eu/news/access-finance-remains-insufficient-farmers-and-agri-food-smes-2023-10-12_en
28. <https://www.worldbank.org/en/topic/agriculture/brief/food-security-update>
29. <https://www.worldbank.org/en/what-we-do/climate-stories-project>
30. <https://www.worldbank.org/en/topic/agriculture>
31. <https://www.worldbank.org/en/topic/climatechange>
32. <https://www.nationalgeographic.com/>
33. https://www.ipcc.ch/site/assets/uploads/2018/05/EM_FAO_IPCC_report.pdf
34. <https://www.ipcc.ch/publication/fao-ipcc-expert-meeting-on-land-use-climate-change-and-food-security/>
35. <https://www.unectf.org/>
36. <https://unfccc.int/>
37. <https://www.climate-chance.org/en/event-calendar/cop29-baku/>