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ASSESSMENT OF AGRICULTURAL PRODUCTION GROWTH RATES AND INVESTMENT DEVELOPMENT FACTORS

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ABSTRACT----------
This article analyzes the growth dynamics of agricultural production and evaluates the impact of investment development factors on production efficiency. The study is based on statistical data covering 2010-2024 and the initial period of 2025. It assesses production growth in farmer enterprises, dehkan and household farms, and agricultural organizations. The research also examines the role of investment activity, technological modernization, and innovation in ensuring sustainable agricultural growth and improving sectoral productivity.
KEYWORDS: *agriculture, investment development, agricultural sector, production growth, investment activity, farmer households, innovative technologies, efficiency.----------*

I.INTRODUCTION

Today, agriculture is considered one of the strategic sectors of the national economy, playing a significant role in ensuring food security, increasing employment, supplying raw materials to industrial sectors, and expanding export potential. Global climate change, water resource scarcity, and the growing demand for food products observed in the world economy further intensify the necessity of improving agricultural production efficiency.

Under modern economic conditions, the sustainable development of agricultural production is closely associated with the level of investment activity, modernization of production processes, introduction of innovative technologies, and efficient utilization of resources. In particular, attracting investments into the agricultural sector is regarded as one of the key factors for increasing production volumes, creating higher added value, and ensuring competitiveness in international markets. In recent years, Uzbekistan has been implementing large-scale economic reforms aimed at modernizing agriculture, developing the cluster system, expanding export-oriented production, and increasing investment attractiveness. In particular, the introduction of innovative technologies, application of water-saving technologies, and enhancement of production efficiency have been identified as priority directions of state agricultural policy.

The growth rates of agricultural production in the country have demonstrated different trends across various periods. While certain years were characterized by significant growth in production volumes, some periods also experienced declining tendencies. This indicates that agricultural production is highly dependent on investment provision, technological development, financial resources, and natural-climatic conditions [1].

Moreover, significant differences exist in the growth rates of production among farmer households, dehkan and household farms, and agricultural organizations. In particular, the considerable fluctuations observed in farmer households indicate the existence of problems related to the efficiency of investment resource utilization and production stability.

In addition, the dynamics of crop production and livestock production are not identical. Crop production is highly dependent on natural-climatic conditions, water resources, and agro-technological support, whereas livestock production demonstrates relatively stable growth tendencies.

The above-mentioned circumstances highlight the necessity of conducting an in-depth economic and statistical analysis of agricultural production growth rates and evaluating the impact of investment development factors on agricultural production.

II. LITERATURE REVIEW

Issues related to investment development, production efficiency, and agricultural growth factors in agriculture have been extensively studied by both foreign and domestic economists. The economic essence of investment activity, its role in the production process, and its significance within the reproduction system have been examined in the scientific works of I.A. Blank, L.L. Igonina, R.A.Fatkhutdinov, J.M. Keynes, J. Tobin, and F. Modigliani.

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In the research conducted by A.A. Kozlov, particular attention was devoted to the development of investment activity in agriculture within the framework of reproduction processes, effective utilization of investment resources, and regional forecasting mechanisms. The author emphasizes that investment activity is one of the main factors of expanded reproduction in agriculture [2].

P.V.Goncharov's scientific studies focus on the formation of mechanisms for managing innovation and investment activities in agricultural enterprises, strategic management of investment processes, and financing of innovative projects. The study evaluates investment activity as an important factor in increasing the competitiveness of agricultural production [3].

The studies of F.B. Daniyarova developed theoretical and practical foundations for improving the efficiency of investments in agriculture, substantiating the close relationship between the effectiveness of investment resources, food security, and modernization of agriculture [1].

D.D.Jalalova investigated organizational and economic mechanisms for stimulating the introduction of innovative technologies in agriculture. The study demonstrated that the application of innovative approaches and modern technologies is an important factor in increasing production efficiency in the agricultural sector [4].

III. METHODOLOGY

The study employed methods of economic-statistical analysis, time-series analysis, comparison, grouping, and graphical representation. Statistical data on agricultural production growth rates for the period 2010-2025 served as the empirical basis of the research [5].

IV. RESULTS AND DISCUSSION

The analysis of agricultural production growth rates revealed that the dynamics of agricultural production were not uniform across different categories of farms. While stable growth was observed during certain periods, some years were characterized by sharp declines and recovery trends. In particular, high fluctuation amplitudes were recorded in farmer households and agricultural organizations. This situation is associated with the level of investment resource utilization, technological provision of production, and state support mechanisms.

In dehkan and household farms, relatively stable growth was observed, which can be explained by their adaptability to internal resources. Furthermore, crop production demonstrated a higher degree of volatility compared to livestock production.

Table 1. Dynamics of Agricultural Production Growth Rates (%)

Years	All farms	Farmer households	Dehkan households	Agricultural organizations
2018	97.2	81.0	101.0	146.7
2019	103.5	123.8	99.6	83.2
2020	105.5	111.6	100.5	160.1
2021	104.2	105.3	101.5	138.8
2022	101.7	96.5	102.5	112.6
2023	103.6	108.3	100.3	116.7
2024	102.8	106.5	102.3	96.0

Source: compiled by the author based on statistical data.

According to Table 1, the growth rates of agricultural production differed significantly across farm categories. In particular, the decline in the growth rate of farmer households to 81.0 percent in 2018 indicates the high dependence of production on investment resources and technological provision. In the following period, a sharp recovery was observed, and the growth rate reached 123.8 percent in 2019.

Agricultural organizations demonstrated high growth indicators during 2017-2020, which was associated with large-scale investment projects, modernization of production, and the development of the cluster system.

Relatively stable growth was observed in dehkan and household farms, which can be explained by their adaptability to internal resources and continuity of production.

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Figure 1. General Trend of Agricultural Production Growth

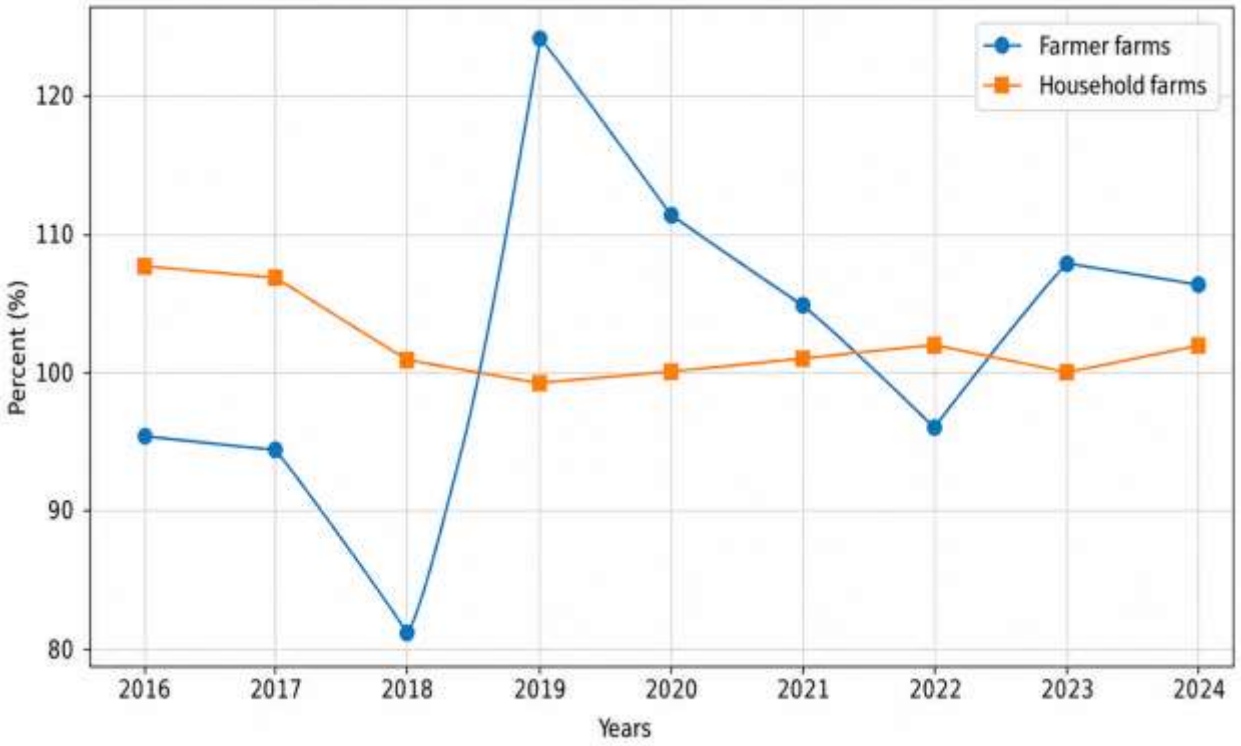


Figure 1 illustrates the differences in growth rates between farmer farms and household farms during 2016-2024. The growth rates of farmer farms were characterized by significant fluctuations, particularly a sharp decline in 2018 followed by a rapid recovery in 2019 [5].

This situation demonstrates the high dependence of farmer farms on:

- investment resources,
- credit support,
- machinery and technologies,
- production infrastructure.

In contrast, household farms showed relatively stable growth rates throughout the analyzed period. This can be explained by their adaptability to internal resources and the continuity of agricultural production processes.

Overall, the figure indicates that investment provision and technological modernization significantly influence the sustainability and growth dynamics of agricultural production.

Table 2. Growth Rates of Crop and Livestock Production (%)

Years	Crop production	Livestock production
2018	92.4	103.9
2019	104.9	101.8
2020	107.1	103.1
2021	104.6	103.8
2022	100.1	103.4
2023	104.9	102.2
2024	102.7	102.8

Source: compiled by the author based on statistical data [5].

Interpretation of Table 2

The data presented in Table 2 indicate that crop production is considerably more volatile than livestock production. In particular, the growth rate of crop production declined to 92.4 percent in 2018 [5].

This situation can be explained by:

- water scarcity,
- declining productivity,
- agro-technological problems,
- insufficient efficiency in the utilization of investment resources.

Meanwhile, livestock production demonstrated relatively stable growth, with indicators ranging from 102 to 108 percent in most years.

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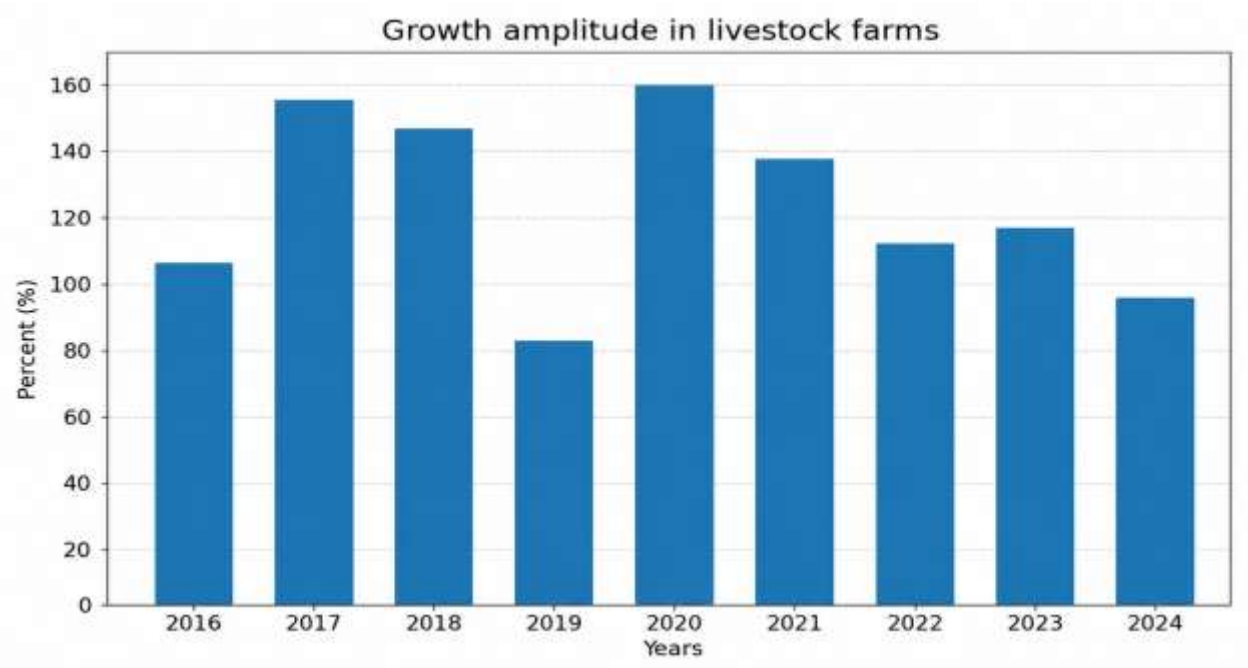


Figure 2 demonstrates the growth amplitude of agricultural organizations during 2016-2024 and reveals substantial fluctuations in production growth rates. The highest growth indicators were observed in 2017 and 2020, when the growth rates reached 156.8 percent and 160.1 percent respectively [5].

The sharp increase in these years was mainly associated with the acceleration of investment activity in the agricultural sector, expansion of cluster-based production systems, and implementation of technological modernization programs. In addition, state-supported investment projects contributed to the improvement of production capacity and infrastructure in agricultural organizations.

However, the decline observed in 2019 indicates that agricultural organizations remain highly sensitive to changes in investment flows, financial support mechanisms, and external economic conditions.

Overall, the figure confirms that sustainable agricultural growth largely depends on investment provision, modernization processes, and the effective management of production resources.

VI. CONCLUSION

The conducted research demonstrated that the growth rates of agricultural production are closely associated with the level of investment development. The analysis revealed that agricultural production dynamics were not uniform across different categories of farms. In particular, farmer households and agricultural organizations experienced high fluctuation amplitudes in production growth rates.

According to the research findings, the sharp fluctuations in production volumes observed in farmer households are explained by their strong dependence on investment resources, credit funds, and technological provision. In contrast, dehkan and household farms demonstrated relatively stable growth tendencies due to their adaptability to internal resources.

Furthermore, crop production was found to be significantly more volatile than livestock production. This situation is closely related to:

- natural-climatic conditions,
- water resource availability,
- productivity levels,
- agro-technological factors.

Agricultural organizations demonstrated high growth rates in certain years due to large-scale investment projects, development of the cluster system, and modernization processes. At the same time, the declining tendencies observed during some periods indicate the high level of investment risk in agricultural production.

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Based on the research findings, the following scientific and practical recommendations were developed:

1. It is necessary to introduce a comprehensive system for evaluating the efficiency of investment activities in agricultural enterprises.
2. It is advisable to expand long-term preferential credit mechanisms for farmer households.
3. Innovative and resource-saving technologies should be widely introduced into agricultural production.
4. The application of water-saving technologies and modern agro-technical methods in crop production should be strengthened.
5. It is important to improve investment risk management systems in agricultural organizations.

In general, accelerating investment development in agriculture is one of the key factors for improving agricultural production efficiency, ensuring food security, and expanding export potential.

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