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TRENDS AND GROWTH IN AGRICULTURAL PRODUCTION FROM DEKHKAN AND SUBSIDIARY FARMS IN UZBEKISTAN

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Abstract

This study evaluates the dynamics of agricultural production from dekhkan and subsidiary farms in Uzbekistan over the years 2022 and 2023, focusing on the total agricultural output, its growth trajectory, and the share of dekhkan farms in national production. Using region-specific data, this paper explores the patterns of growth, regional disparities, and the impact of policies designed to increase rural agricultural productivity. Overall, findings indicate significant growth in agricultural production across Uzbekistan, with varying contributions from dekhkan and subsidiary farms. The results suggest that dekhkan farms continue to play a pivotal role in the country's agricultural sector, though challenges remain in certain regions.

Keywords: *Dekhkan Farms, Subsidiary Farms, Agricultural Productivity.*

Introduction. Agriculture remains one of the most vital sectors of the Uzbek economy, contributing significantly to the nation's GDP, employment, and rural livelihoods. Uzbekistan, located in Central Asia, has a long-standing tradition of agriculture, with its fertile soil and favorable climate conditions supporting the cultivation of a wide range of crops such as cotton, wheat, fruits, and vegetables. The agricultural sector is integral not only to food security but also to the economic and social development of rural areas, which house a substantial portion of the country's population. The agricultural landscape of Uzbekistan is characterized by a dual system comprising large-scale agroclusters and private commercial farms alongside a large number of smallholder farms, known as dekhkan and subsidiary farms. These smallholder operations are primarily family-run, employing traditional farming methods alongside increasingly modernized practices. Dekhkan farms are especially prominent in rural areas, accounting for a substantial portion of the nation's crop and livestock production. Although the total area farmed by dekhkan farms is often smaller compared to large-scale operations, they are highly significant in terms of output, contributing to both local food supplies and national agricultural production.

In the past few decades, Uzbekistan has pursued extensive reforms aimed at boosting agricultural productivity, improving rural livelihoods, and reducing dependency on large-scale monoculture farming systems. One of the most prominent policy changes has been the shift from state-controlled cotton farming towards a more diversified agricultural system. This shift has encouraged the expansion of dekhkan and subsidiary farms, which now represent a larger share of agricultural output. This policy also aims to encourage smallholder farmers to adopt more sustainable and efficient farming practices, improve market access, and integrate rural economies more effectively with urban and national economies. However, despite these reforms, there are still significant challenges to achieving equitable agricultural growth across the country. These challenges include regional disparities in agricultural productivity, limited access to modern agricultural technology, varying levels of access to financial resources, and the vulnerability of agriculture to climate change. Furthermore, some regions still rely heavily on outdated farming techniques, and there is a continued need for infrastructure development, such as irrigation systems, to support smallholder farms.

The government has also placed emphasis on improving the agricultural potential of regions that have traditionally been less developed or are struggling with agricultural output. For instance, regions like Karakalpakstan and Syrdarya region have lower levels of production compared to more agriculturally productive areas like Andijan, Samarkand, and Kashkadarya regions. This uneven growth across regions necessitates targeted policy interventions to ensure that the benefits of agricultural reforms are more evenly distributed and that smallholder farmers can overcome the structural challenges they face. This paper seeks to investigate the patterns of agricultural production from dekhkan and subsidiary farms in Uzbekistan, focusing on the years 2022 and 2023. By analyzing total agricultural output and the share contributed by dekhkan farms across various regions, we aim to provide insights into the role these smallholder farms play in the broader agricultural sector. Additionally, the paper discusses regional trends, challenges, and the evolving role of dekhkan farms in the national economy, offering policy recommendations for improving productivity, sustainability, and rural livelihoods in the future.

Through this analysis, we hope to contribute to the growing body of knowledge on the development of Uzbekistan's agricultural sector, particularly with respect to the challenges and opportunities faced by smallholder farmers. The findings will also provide useful insights for policymakers, agricultural planners, and development agencies working to strengthen the agricultural sector in Uzbekistan, particularly in fostering inclusive growth and ensuring food security in rural communities.

Methodology. The study uses data from the Ministry of Agriculture of Uzbekistan, which provides figures on both total agricultural production and the share contributed by dekhkan and subsidiary farms in each of Uzbekistan's 13 regions. We analyze two sets of data:

a)Total agricultural production in billion soums for 2022 and 2023.

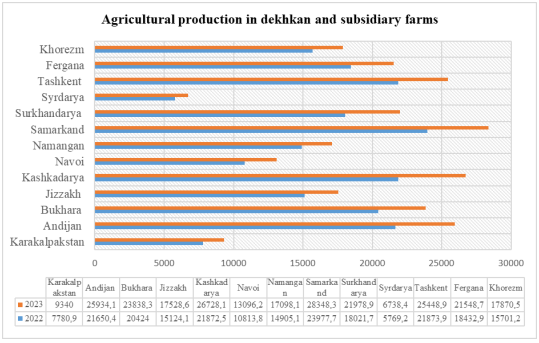
b) Share of dekhkan and subsidiary farms in the total agricultural output for the same period.

The regions are examined to identify patterns of growth in agricultural production, the relative contribution of dekhkan farms, and the factors driving these changes. The analysis includes the calculation of both absolute growth rates in agricultural production and percentage changes in the share of dekhkan farms across regions.

Results. The total agricultural production in Uzbekistan showed substantial growth between 2022 and 2023. The aggregate increase across all regions reflects the overall positive impact of governmental support for the agricultural sector, including investments in technology, irrigation systems, and financial assistance for smallholders. Key regions

that exhibited significant growth include: Andijanregion: from 21,650.4 billion soums in 2022 to 25,934.1 billion soums in 2023, representing an increase of 19.7%. Kashkadarya: from 21,872.5 billion soums in 2022 to 26,728.1 billion soums in 2023, an increase of 22.3%. Samarkand: from 23,977.7 billion soums in 2022 to 28,348.3 billion soums in 2023, a growth of 18.1%.

The highest absolute increases were seen in the most populous and agriculturally diverse regions, suggesting that both the scale of production and the demand for agricultural products are growing steadily.



	Karakalpakstan	Andijan	Bukhara	Jizzakh	Kashkadarya	Navoi	Namangan	Samarkand	Surkhandarya	Syrdarya	Tashkent	Fergana	Khorezm
2023	9340	25934,1	23838,3	17528,6	26728,1	13096,2	17098,1	28348,3	21978,9	6738,4	25448,9	21548,7	17870,5
2022	7780,9	21650,4	20424	15124,1	21872,5	10813,8	14905,1	23977,7	18021,7	5769,2	21873,9	18432,9	15701,2

Figure 1. Agricultural production in dekhkan and subsidiary farms

The share of dekhkan and subsidiary farms in the total agricultural production also increased slightly from 62.2% in 2022 to 63.1% in 2023. This upward trend highlights the expanding role of smallholder farmers in the national agricultural economy. Some regions exhibited particularly high shares, signaling a reliance on these farms for local food security and economic stability: Navoi: The share of dekhkan farms increased from 70.8% in 2022 to 72.0% in 2023, the highest in the country, reflecting a strong rural economy based on small-scale production. Kashkadarya: The share increased from 67.9% in 2022 to 69.3% in 2023, indicating significant reliance on dekhkan farms for agricultural output. Khorezm: From 67.4% in 2022 to 68.3% in 2023, suggesting the importance of these farms in the region's agricultural landscape.

However, some regions, such as Namangan and Syrdarya, showed relatively smaller increases or slight declines in the share of dekhkan and subsidiary farms, pointing to possible challenges such as urbanization, land use changes, or the need for more targeted agricultural policies.

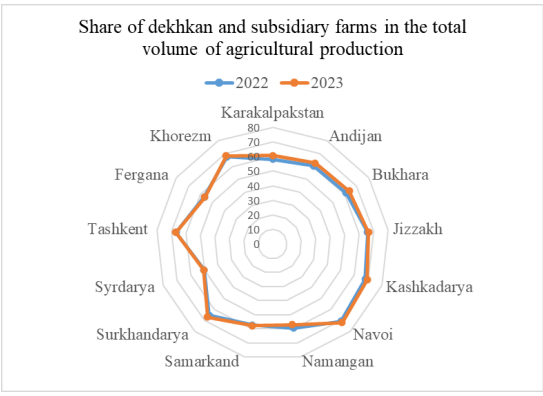


Figure 2. Share of dekhkan and subsidiary farms in the total volume of agricultural production.

Discussion. The variation in agricultural production and the share of dekhkan farms across Uzbekistan's regions suggests differing levels of agricultural development, local policy effectiveness, and resource availability. Regions such as Samarkand, Kashkadarya, and Andijan regions have seen substantial improvements in both total production and the share of dekhkan farms, benefiting from favorable agricultural conditions, substantial investments, and effective government policies.

In contrast, Syrdarya and Namangan regions, despite experiencing some growth, show lower rates of increase in the share of dekhkan farms, signaling potential challenges related to land fragmentation, lack of modernization, or less efficient farming practices. For example, Syrdarya region, with a share of just 50.3% in 2022 and 50.4% in 2023, may require more attention to improve smallholder farmer productivity and integration into regional agricultural supply chains.

Implications for Agricultural Policy. The growing importance of dekhkan farms in the total agricultural output is indicative of a shift toward more sustainable and diversified agricultural production. To capitalize on this growth, the government should consider:

- Investing in Rural Infrastructure: Continued investment in irrigation, transportation, and storage facilities will help boost productivity and reduce post-harvest losses.

-Enhancing Farmer Education and Technology Access: Providing farmers with better access to modern farming techniques, including precision agriculture, pest management, and soil conservation, could further enhance production efficiency.

- Promoting Agro-processing: Encouraging smallholder farmers to move up the value chain through agro-processing and local food production could improve income levels and economic sustainability.

- Strengthening Regional Agricultural Research: Tailoring agricultural research to specific regional conditions, such as soil type, water availability, and climate patterns, will support region-specific crop choices and farming practices. While the growth of dekhkan farms is promising, the impact of climate change on agriculture in Uzbekistan cannot be ignored. Factors such as water scarcity, erratic weather patterns, and rising temperatures may pose future risks to agricultural output. It is critical to integrate climate-smart agricultural practices into future policy frameworks to ensure long-term sustainability.

Conclusion. The period from 2022 to 2023 has seen a positive trend in agricultural production in Uzbekistan, particularly in the role played by dekhkan and subsidiary farms. While the national share of these farms in total agricultural output has increased, regional disparities highlight the need for focused policy interventions. Regions such as Navoi, Kashkadarya, and Khorezm have demonstrated strong growth, while areas like Namangan and Syrdarya need more targeted support to harness the full potential of smallholder farming. The findings underscore the importance of continuing investments in rural infrastructure, agricultural technology, and farmer education to ensure that dekhkan farms can sustainably contribute to the country's agricultural and economic growth. Looking ahead, addressing climate challenges will be crucial for maintaining and accelerating this progress.

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