

INCREASING THE EFFICIENCY OF PROCESSING AGRICULTURAL PRODUCTS
IN UZBEKISTAN

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Abstract

This article analyzes the issues of increasing the efficiency of processing agricultural products in Uzbekistan. The relevance and scientific significance of the problem are associated with increasing the volume and volume value of agricultural products processed. The research methodology includes the study of official statistics and empirical data on government strategies, as well as cluster and innovation approaches. The research results show that by expanding processing capacity and developing the value chain, it is possible to increase current harvest and export indicators[1][2]. Conclusions and suggestions serve as a basis for improving agricultural policy and future research.

Keywords

agricultural sector, agricultural products, processing, added value, cluster system, efficiency, innovation.

Аннотация

В данной статье анализируются вопросы повышения эффективности переработки сельскохозяйственной продукции в Узбекистане. Актуальность и научная значимость проблемы связаны с увеличением объёмов и стоимости перерабатываемой сельскохозяйственной продукции. Методология исследования включает изучение официальной статистики и эмпирических данных о государственных стратегиях, а также кластерных и инновационных подходов. Результаты исследования показывают, что за счёт расширения перерабатывающих мощностей и развития цепочки создания стоимости возможно повышение текущих показателей сбора урожая и экспорта[1][2]. Выводы и предложения служат основой для совершенствования аграрной политики и будущих исследований.

Ключевые слова

аграрный сектор, сельскохозяйственная продукция, переработка, добавленная стоимость, кластерная система, эффективность, инновация.

Introduction. Agriculture is a key sector in the economy of Uzbekistan: it provides approximately 25% of GDP and ~26% of the population with labor resources[3]. In order to meet the demand of the consumer market, develop rural areas, and increase export potential, special attention is paid to the processing of agricultural products. At the same time, the republic is striving to replace raw materials, which previously brought the main export income, with

processed products with high added value[1]. However, the existence of infrastructure and technological gaps in the sector continues to reduce the efficiency of the sector, from product collection to storage and processing. For example, although the production volume of fruit and vegetable products exceeded 22 million tons in 2023, their processing rate increased from 8% in 2016 to 15% (3.3 million tons) in 2023[1]. This indicator is consistent with the plan of Uzbekistan to increase the share of processing to 25–30% by 2030 in the 2020–2030 strategy[2]. Therefore, increasing the capacity for deep processing of products in the agricultural sector is one of the current issues today.

Literature review. Scientific sources highlight several principles for increasing the efficiency of the agricultural sector. According to the analysis of Utanov (2025), in order to achieve efficiency in agriculture, it is necessary to widely introduce modern technologies, provide financial and scientific support to farmers, and develop strategies for the efficient use of resources - primarily water and land.[4] Also, innovative approaches and the digitalization of agriculture are noted as important factors in increasing the efficiency of the agricultural sector[4][5]. Cluster systems are being introduced to create processing opportunities not only on farms, but also along the entire value chain: this approach allows for increased productivity by integrating the chain from the enzyme to the final product[5][2]. Current literature shows that it is also necessary to reduce losses during harvesting by improving aircraft and other transport vehicles, storage and freezing infrastructure[6][7].

Research methodology. The study was conducted based on an empirical-statistical approach. The main data were resolutions of the President of Uzbekistan, Government decrees and official statistical reports. In particular, the “Agricultural Development Strategy (2020–2030)” and international analytical reports were analyzed[2][8]. Official tables on the volume of production and processing in the fruit and vegetable, meat and dairy sectors, as well as data on the development of the cluster system and digitalization programs were studied[8][5]. In addition, the article cited scientific sources on agrarian reforms, clusters, and innovative approaches - in particular, Utanov (2025) and other research findings.[4] The methodology used descriptive analysis, comparative statistical analysis, and case study methods.

Analysis and discussion. Today, Uzbekistan is implementing many initiatives aimed at increasing the efficiency of the agricultural processing sector. The Presidential Decree sets the goal of expanding processing capacities and increasing the share of product processing to 30% by 2030[2]. Practical experience shows that the production of fruit and vegetable processing increased by 3.5 times in 2016–2023, and the volume of frozen and canned products also increased significantly[1]. In particular, in 2023, the volume of fruit and vegetable production exceeded 22 million tons, and the share of their processing was 15% (3.3 million tons)[1]. However, this is still a low result compared to previous years - the target is around 25–30%. For example, there are also achievements in livestock farming: meat processing capacity increased by 2.4 times from 2016 levels to 458 thousand tons in 2023 (140% compared to 2016). Milk production capacity increased by 146% from 2016 to 3.1 million tons. The number of enterprises in the food industry increased from 9.4 thousand in 2016 to 22.5 thousand in 2023, the number of employees increased from 85 thousand to 110.5 thousand, and the volume of products produced increased from 23.2 trillion soums to 86 trillion soums. These growth indicators have increased the export potential along with the domestic market. However, there are also technical and organizational problems in the processing sector. Due to the insufficient development of cold

storage facilities, agro-logistics centers, and transport infrastructure, product losses of up to 30% are observed during harvesting and storage[6]. In 2019, there were only 31 agro-logistics centers and more than 1.5 thousand refrigerated warehouses in the republic, while now these indicators have increased to 78 and ~2 thousand, respectively[7]. In the future, the number of agro-logistics centers is planned to be increased to 100, and the storage capacity to 2.5 million tons[7]. These measures are important for reducing post-harvest losses and increasing the ability to process products at full capacity.

Large-scale programs are being implemented by the state and international partners to modernize the agricultural sector. For example, it was reported that by 2022, 633 agroclusters were registered, and their main task is to form a complete chain from the field to export[5]. Through the cluster system, farmers, processing and export enterprises will be united and a value-added chain will be created[5][2]. According to the goals set for 2023, it is planned to increase the processing capacity of melon products to 3.2 million tons, milk to 3 million tons, and meat to 450 thousand tons[8]. To this end, investments will be attracted in high-value-added chain projects with a total value of \$1 billion[8]. In addition, it is planned to allocate \$600 million in investments to digitize agriculture[5]. Digital technologies - electronic land registry, yield monitoring, online advisory services, etc. - will help increase farmers' labor productivity. As noted in the analysis of Utanov (2025), the widespread introduction of modern technologies is necessary to increase agricultural efficiency[4].

Conclusions and recommendations. The results of the study showed that the agricultural processing sector in Uzbekistan is developing rapidly, which has significantly increased economic efficiency. In 2016–2023, the volume and share of fruit and vegetable processing increased several times (from 8% to 15%)[1], and meat processing capacity increased by 2.4 times[9]. At the same time, there is still great potential to achieve the goal of a 30% processing share for 2030 set in the agricultural policy. Efficiency can be further increased by improving infrastructure (storage of nitrogenous raw materials, agrologistics centers, modern technologies) and expanding markets[6][7]. Also, expanding clusters and providing financial and scientific and technical support to farmers will stimulate agricultural innovations.

In the future, it is recommended to increase the number of research and practical projects focused on the processing sector of the agricultural sector, in particular, research in the field of buyer markets, logistics solutions, and technological innovations. This will serve as a foundation for setting strategic indicators and developing effective solutions for local producers.

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