INNOVATIVE WORLD

ISSN: 3030-3079

ORIENTAL JOURNAL OF ACADEMIC AND MULTIDISCIPLINARY RESEARCH

SHARQ AKADEMIK VA KO'P TARMOQLI TADQIQOTLAR JURNALI

Scientific Journal

2026/6

www.innoworld.net

+998 33 5668868

ORIENTAL JOURNAL OF ACADEMIC AND MULTIDISCIPLINARY RESEARCH

Volume 4, Issue 6
2026

Journal has been listed in different indexings

The offical website of the journal:
www.innoworld.net

Uzbekistan-2026

PROSPECTS FOR DEVELOPING VEGETABLE EXPORTS

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ABSTRACT. Uzbekistan has emerged as a significant supplier of vegetable products in the Eurasian agricultural market, exporting over 2 million tons worth $1.5 billion in 2024. This article examines the current state, key challenges, and strategic prospects of vegetable export development in Uzbekistan. Drawing on official statistics from the State Statistics Agency of Uzbekistan, FAO data, and recent sector analyses, the study identifies critical constraints including cold chain infrastructure deficiencies, post-harvest losses of 20–30%, and market concentration risks. The article proposes evidence-based recommendations covering logistics modernization, product diversification, digital trade platforms, and regulatory harmonization. The findings contribute to the ongoing policy discourse on sustainable agricultural export growth in transition economies.

Keywords: vegetable exports, Uzbekistan agriculture, cold chain logistics, export diversification, agri-food trade, Central Asia

Introduction. Uzbekistan's agricultural sector accounts for approximately 19% of GDP and employs roughly 24% of the national labour force, making it a cornerstone of the country's economic fabric (USDA FAS, 2025). Within this sector, the fruit and vegetable subsector has undergone remarkable transformation following the liberalization of price controls and production quotas between 2020 and 2021, which encouraged farmers to shift away from cotton monoculture toward higher-value horticultural crops.

The importance of vegetable exports has grown steadily over the past five years. In 2024, Uzbekistan exported over 2.04 million tons of fruits and vegetables valued at $1.5 billion, representing approximately 4.4% of total national export revenues (State Statistics Agency, 2025). This positive trajectory positions the country among the leading fresh produce exporters in the post-Soviet space and signals strong untapped potential for further expansion.

Yet despite these achievements, significant structural challenges persist. Post-harvest losses estimated at 20–30% of production, insufficient cold storage capacity, fragmented smallholder supply chains, and heavy dependence on a narrow set of destination markets all constrain the sector's competitiveness and long-term sustainability. Against this backdrop, the present article assesses the current export performance of Uzbekistan's vegetable sector, identifies the primary barriers to growth, and proposes strategic directions aligned with the government's own target of reaching $3.5 billion in agri-food exports by 2025 (Presidential Resolution PP-136, April 2025).

The article is organized as follows: Section 2 reviews recent export performance trends supported by statistical data; Section 3 analyses the principal geographic and product dimensions of trade; Section 4 discusses structural constraints; Section 5 presents a visual overview of the export ecosystem; and Section 6 outlines forward-looking policy and investment recommendations.

2. Export Performance: Trends and Statistical Overview

Uzbekistan's vegetable and fruit export volumes have increased substantially over the five-year period from 2020 to 2024, as illustrated in Table 1 below. The sector registered a compound annual growth rate (CAGR) of approximately 10.9% in volume terms and 17.8% in value terms, reflecting both expansion of cultivated area and rising global commodity prices.

Table 1. Uzbekistan fruit and vegetable export dynamics, 2020–2024

Year	Volume (million tons)	Value ($ billion)	Growth rate (%)	Main markets share (%)	% of total exports
2020	1.35	0.78	—	72.1	2.8
2021	1.52	0.91	+12.6	74.3	3.1

2022	1.68	1.04	+10.5	75.8	3.5
2023	1.76	1.20	+4.8	76.3	3.9
2024	2.04	1.50	+15.9	78.1	4.4

Source: State Statistics Agency of Uzbekistan (stat.uz), 2024–2025.

A particularly strong performance was recorded in 2024, when total export volumes surpassed the 2 million ton milestone for the first time, reaching 2.04 million tons with a year-on-year growth of 15.9% in volume and a proportional rise in value to $1.5 billion (State Statistics Agency, 2025). This growth was driven primarily by expanded sales to Russia and Kazakhstan, as well as increased shipments of onions and cabbage to Pakistan.

From a product perspective, onions ($44 million), cabbage ($41.2 million), and mash bean ($26.8 million) were the three highest revenue-generating vegetable commodities during the January–May 2024 period (yuz.uz, 2024). These figures underscore the relatively high unit-value of leguminous crops and the large-volume nature of bulb vegetable trade. Nonetheless, product concentration remains a concern, as dependence on a small number of high-volume, low-value commodities exposes exporters to price volatility.

Contextually, fruits and vegetables collectively accounted for 3.9% of Uzbekistan's total exports in mid-2024, rising to 5.9% by October 2025 (Statistics Committee, 2025). By October 2025, the country had already exported 1.82 million tons of fruits and vegetables valued at $1.72 billion — a 7.3% increase in volume and a remarkable 39.7% surge in revenue compared with the same period in 2024 (Smartcherry World, 2025). These figures confirm an accelerating upward trend that shows no sign of reversal.

3. Geographic and Product Dimensions of Vegetable Trade

Geographic concentration is among the most defining features of Uzbekistan's current export profile. As Table 2 illustrates, four destination markets — Russia, Kazakhstan, Pakistan, and China — collectively absorb the overwhelming majority of Uzbek vegetable shipments.

Table 2. Top export destinations for Uzbekistan's fruits and vegetables, 2024

#	Country	Volume (tons)	Value ($ million)	Share (%)	Key products
1	**Russia**	815,100	632.9	40.3	Onion, tomato
2	**Kazakhstan**	520,500	189.8	25.5	Cabbage, carrot
3	**Pakistan**	312,400	145.2	15.3	Mash bean, onion
4	**China**	198,700	87.4	9.7	Garlic, pepper
5	**Kyrgyzstan**	98,300	24.5	4.8	Potato, tomato
6	**Others**	95,000	20.2	4.4	Various

Source: State Statistics Agency of Uzbekistan; UN COMTRADE, 2025.

Russia remains by far the dominant destination, absorbing 815,100 tons valued at $632.9 million in 2024 — equivalent to approximately 40.3% of total fresh produce export value (kun.uz, 2025). Kazakhstan followed with 520,500 tons worth $189.8 million. Pakistan's imports of Uzbek vegetables — predominantly dried mash bean ($207.3 million) and chilled onions ($57.3 million) — make it a strategically important market, particularly given Pakistan's growing demand for high-protein legumes (UN COMTRADE, 2025).

In terms of product composition, Uzbekistan's comparative advantages are most pronounced in bulb vegetables (onions, garlic), brassicas (cabbage, cauliflower), legumes (mash, lentils), root vegetables (carrot, beetroot), and selected cucurbits (cucumber, pumpkin). The country's continental climate, fertile loessial soils, and centuries-old irrigation traditions collectively support high yields and diverse crop calendars. Premium quality niche crops such as cherry tomatoes, sweet peppers, and specialty greens have also begun entering European and Gulf markets, albeit in modest volumes.

Market diversification into the European Union, Gulf Cooperation Council (GCC) states, and Southeast Asia remains a key strategic priority. Presidential Resolution PP-136 (April 2025) has set a target of obtaining phytosanitary permits for 30 new product categories in eight additional countries by end-2025, directly targeting these emerging destinations.

Structural Constraints and Challenges. Despite the encouraging export trajectory, a number of structural constraints continue to limit Uzbekistan's ability to compete effectively in global vegetable markets.

Cold chain infrastructure represents the most acute bottleneck. As of January 2024, the country had 1,907 cold storage facilities with a combined capacity of approximately 1.0 million tons — sufficient to cover only 4.5% of annual gross horticultural production (EastFruit / FreshPlaza, 2024). Given that export volumes have already surpassed 2 million tons annually, experts estimate a storage deficit of 385,900 tons, requiring a 33.8% increase in capacity (UzDaily, 2025). The lack of adequate refrigerated storage accelerates post-harvest deterioration, reduces shelf life, and imposes a competitive penalty in quality-sensitive markets.

Post-harvest losses represent a related and equally pressing challenge. Expert estimates place losses at 20–30% of total fruit and vegetable production, which at 2024 production levels of approximately 23 million tons implies losses in the range of 4.6 to 6.9 million tons annually (UzDaily, 2025). These losses, if reduced to internationally competitive levels of 10–12%, could generate an additional $1.1–1.7 billion in annual revenue at current export prices.

Supply chain fragmentation also constrains export competitiveness. With approximately 5.5 million dehkan and household farms responsible for 54.9% of total horticultural output (UzDaily, 2025), consolidation of supply into export-grade lots of consistent quality, variety, and sizing remains operationally challenging. The absence of robust farmer cooperatives and modern pack-house infrastructure at the farm gate level results in quality variance that impedes access to high-value retail channels in destination markets.

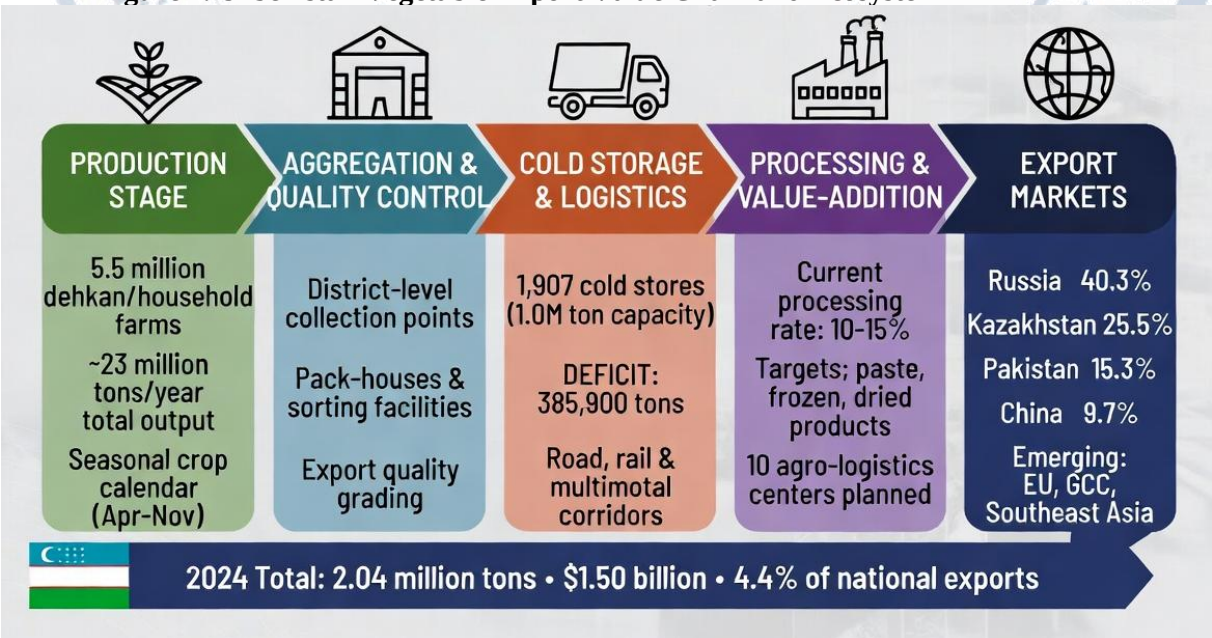
Regulatory and phytosanitary compliance is an emerging constraint as Uzbekistan targets more demanding export markets. While access to the Eurasian Economic Union (EAEU) space is relatively straightforward, entry into EU, UK, or Japanese markets requires conformance with stringent maximum residue limits (MRLs), traceability requirements, and food safety management systems (HACCP, GlobalG.A.P.) that most Uzbek producers currently lack.

Processing capacity limitations compound the above challenges. Processing levels for Uzbek fruit and vegetable products do not exceed 10–15% of total output (UzDaily, 2025), which means the country largely exports fresh, perishable commodities subject to seasonal price swings. Value-added processed products — pastes, purees, frozen vegetables, dried herbs — could capture significantly higher margins and extend export windows across the calendar year.

5. Uzbekistan Vegetable Export Ecosystem: Structural Overview

Figure 1 below provides a schematic representation of the key actors, value chain stages, and export flow pathways that constitute Uzbekistan's vegetable export ecosystem. The diagram illustrates the journey from primary production through aggregation, storage, processing, and logistics to final destination markets, while also identifying the principal intervention points where targeted policy measures can generate the greatest impact.

Figure 1. Uzbekistan Vegetable Export Value Chain and Ecosystem



Source: Compiled by the author based on State Statistics Agency of Uzbekistan (2025) and expert assessments.

Strategic Recommendations and Forward Outlook. Based on the analysis presented in the preceding sections, the following strategic directions are proposed to enhance the competitiveness and sustainability of Uzbekistan's vegetable export sector over the medium to long term.

First, accelerating cold chain infrastructure investment is the single most impactful near-term intervention available. The government should establish a dedicated co-financing program modeled on successful analogues in Georgia and Moldova, where subsidies covered 60–70% of cold store construction costs (FreshPlaza, 2025). The Presidential Resolution PP-136 (April 2025) has already set a target of expanding cold storage capacity from 1,306 thousand tons in 2024 to 1,930 thousand tons by 2027 — a 47.8% increase that, if achieved, would largely close the current deficit.

Second, developing agri-food processing capacity is essential for value capture and export window extension. The government's plan to establish 10 agro-logistics centers and over 1,000 refrigerated warehouses, combined with investment in industrial-scale shock-freezing facilities, provides a sound policy foundation. Targeting a processing rate of 30–35% of output within five years would meaningfully shift Uzbekistan's export mix toward higher-margin processed categories, insulating the sector from fresh market price volatility.

Third, geographic diversification of export markets must be systematically pursued. The current concentration in Russia (40.3% of value) exposes the entire export sector to geopolitical and logistical disruption risks. Priority attention should be given to EU markets — particularly Poland, Germany, and the Baltic states — where Uzbek organic and specialty vegetables can command significant premium prices. The Gulf Cooperation Council states represent another high-value opportunity given their year-round import dependency and proximity via air freight corridors.

Fourth, digital traceability and e-commerce platforms offer a modern route to market access and premium positioning. Integrating Uzbek vegetable exporters into B2B agricultural trading platforms, developing a unified national food safety traceability system compatible with HACCP and GlobalG.A.P. requirements, and supporting exporters in obtaining international certifications would collectively enhance market credibility.

Fifth, developing farmer cooperative structures and contract farming schemes would address the supply chain fragmentation that presently constrains export grade consistency. Farmer cooperatives linked to export-oriented pack-houses and logistics hubs can aggregate the output of smallholders into commercially viable consignments while providing technical extension services and access to finance.

The combined impact of these interventions, fully implemented, could plausibly position Uzbekistan among the top five global exporters of onions, garlic, and mash bean within a decade — destinations beyond the EAEU becoming routine, and value-added processed exports constituting at least 25–30% of the total sectoral export value.

Conclusion. Uzbekistan's vegetable export sector has demonstrated impressive and accelerating growth over the 2020–2024 period, driven by agricultural policy liberalization, expanding cultivated area, and growing regional demand. The achievement of the $1.5 billion export milestone in 2024 — with volumes exceeding 2 million tons for the first time — marks a structural turning point for the sector.

However, sustaining this trajectory and translating volume growth into commensurate value growth requires decisive action to overcome the cold chain deficit, reduce post-harvest losses, increase value-added processing, and diversify toward higher-value destination markets. The government's stated target of $3.5 billion in agri-food exports by 2025 and the ambitious investment programs outlined in Presidential Resolution PP-136 provide a credible institutional framework for this transformation.

The evidence reviewed in this article suggests that Uzbekistan possesses the agronomic endowments, demographic dynamism, and institutional momentum necessary to become a globally competitive vegetable exporter. Realizing this potential will depend on the pace and quality of implementation of the structural reforms and infrastructure investments outlined above, as well as on the development of a private sector capable of capturing the full value chain from farm gate to foreign supermarket shelf.

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