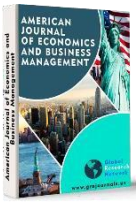

American Journal of Economics and Business Management

Vol. 8 Issue 1 | **pp.** 357-366 | **ISSN:** 2576-5973

Available online @ https://www.globalresearchnetwork.us/index.php/ajebm

Article

Analysis of the Current State of Agricultural Production in Our Country

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Abstract: This study analyzes the current state of agricultural production in Uzbekistan, focusing on challenges in legume crop cultivation and export. Using statistical analysis and monographic observation, the research examines production dynamics, export trends, and economic factors affecting the sector. Key findings reveal substantial growth in legume exports from Syrdarya region, despite barriers such as outdated infrastructure and insufficient market integration. Recommendations emphasize forming an "Association of Legume Producers," improving seed quality, enhancing export logistics, and aligning production standards with international benchmarks. These measures aim to optimize economic efficiency and bolster Uzbekistan's agricultural export potential.

Keywords: grain production, beans, mung bean, millet, food safety, economic effectiveness.

1. Introduction

To increase export volumes, it is essential to expand the production of competitive export-oriented goods. The growth of agricultural product volumes can be achieved by increasing productivity, improving irrigation systems, using high-yield crop varieties, applying modern plant protection methods, using fertilizers, improving soil reclamation conditions, and enhancing product quality and competitiveness.

State support for agricultural product exports is implemented through organizational, economic, and foreign policy mechanisms. The system of state support for agricultural exports is generally stable and aimed at exploring new foreign markets.

Uzbekistan's agricultural development strategy identifies the limiting factors and key issues affecting the export of agricultural products. Increasing the export potential of the agricultural sector, expanding the volume of value-added products, introducing a wide certification system based on international standards, and developing cooperative relations are among the priority directions of this strategy.

To achieve these goals, the following tasks are outlined:

- Conducting negotiations in new target export markets and defining priority directions for trade agreements.
- Evaluating opportunities to expand the use of the "Made in Uzbekistan" brand to promote local food products in target export markets.

Citation: Kudratov Alisher Alijanovich Analysis of the current state of agricultural production in our country. American Journal of Economics and Business Management 2024, 8(1), 357-366.

Received: 23th Dec 2024
Revised: 28th Dec 2024
Accepted: 24th Jan 2025
Published: 27th Jan 2025

- Providing information on export markets, improving export preparedness, trade regimes, and financing options for trade through advisory services. [1]
- Registering pesticides and their maximum residue limits (MRLs) in compliance with international conventions and other standards on plant protection, and improving the system of providing information to exporters and producers.
- Developing an export growth strategy for the top 10-15 main exportable products based on multi-year data and market trend analysis in the fruit, vegetable, and livestock sectors[2].

The analysis of the current state of agricultural production in our country is shown below.

2. Materials and Methods

Many scientists, including A.A.Ivanov, G.E.Grishin, V.V.Koshelyaev[3], I.M.Ageev, Ye.M.Ageev, I.V.Vasilyev[4], Ye.P.Chirkov, A.O.Khramchenkova[5], Shephard[6], G.Pyatt[7], O'donnell[8], domestic scientists X.A.Idrisov[9], S.Sh.Makhmudov[10], G.Q.Turayeva[11] and others, have conducted research on this topic.

With the Shephard distance function, a new direction of research began in determining the total impact of production factors expressed in different units of measurement on the final product, or in other words, efficiency.

G. Pyatt notes that "Shephard here developed technologies and the resulting cost and revenue functions by mapping output vectors onto subsets of input vectors representing the unlimited technical possibilities of production. The approach, as expected from the previous volume, is highly mathematical and therefore incomprehensible to most economists."

O'donnell improved the methodology for determining efficiency indices in terms of aggregate quantities, emphasizing that effective economic and business policy development requires accurate measurement of changes in total factor productivity (TFP) and its components.

In the process of scientific research, analytical analysis of statistical data, monographic observation and analysis, the role and impact of legume cultivation on ensuring food security were studied. The study attempted to deeply study the problem by analyzing statistical data. Dehkan farms engaged in mung bean cultivation operating in the Syrdarya region were selected as the object of research.

3. Results

In 2023, Uzbekistan's foreign trade turnover amounted to USD 62.6 billion, of which USD 24.4 billion was exports and USD 38.1 billion was imports (Figure 2.4).

In the structure of the country's exports, the highest share was recorded in Tashkent city, accounting for 20.3% or USD 4,964.5 million, while the lowest share was in the Jizzakh region, with 0.7% or USD 173.3 million. The highest export growth rates compared to 2022 were recorded in the Kashkadarya (141.5%), Khorezm (120.1%), Samarkand (117.2%), Navoi (111.5%), Syrdarya (101.7%), and Tashkent (106.3%) regions. The lowest growth rate was observed in the Fergana region at 81.8%.

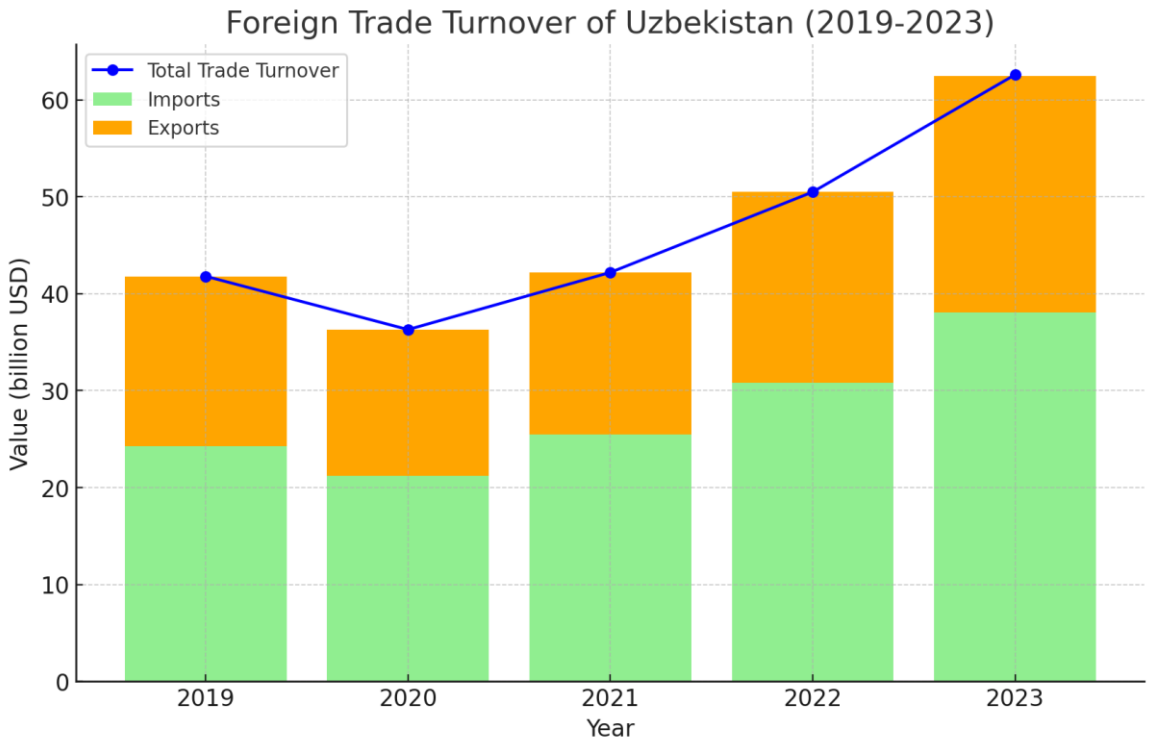

Figure 1. Uzbekistan's Foreign Trade Turnover, billion USD[1]

Due to the significant attention paid by the government to the development of agriculture and horticulture, the quality and volume of exported products have been steadily increasing year by year. For instance, in 2023, 1,757.7 thousand tons of fruits and vegetables were exported, which is 1.1 times or 18.9 thousand tons more than in 2022.

In 2023, fruits and vegetables, accounting for the major share of food exports, reached a total export value of USD 1,180.8 million. This figure is 3.3% higher than the same period in 2022, making up 4.8% of total exports. Among fruits and vegetables, the largest shares of exports were mung beans (10.2%), grapes (7.3%), dried grapes (5.8%), peaches (including nectarines) (5.7%), onions (5.2%), cherries (4.5%), tomatoes (3.7%), apricots (3.4%), and melons and watermelons (3.4%).

In 2023, the Russian Federation accounted for the largest volume of fruit and vegetable exports by value, representing 37.0% of the total export volume. This figure is 2.2 times higher than the export volume to Pakistan. A total of 437.4 thousand tons of fruits and vegetables worth USD 611.4 million were sent to Russia, making up 37.0% of the total fruit and vegetable exports. Uzbekistan's second-largest consumer of fruits and vegetables was Pakistan (16.7%), followed by the People's Republic of China (12.3%) and Kazakhstan (10.3%). These four countries are the primary markets for Uzbekistan's fruit and vegetable exports, collectively accounting for 76.3% of the total.

In 2022, the Syrdarya region produced 31,818 tons of leguminous crops, of which 13,705 tons (43.0%) were exported, 3,182 tons (10%) were sold in markets in Tashkent city and other regions, and 15,567 tons (47.0%) were used for domestic consumption (Table 1).

Table 1
Volume of Leguminous Crop Sales in the Syrdarya Region, Tons (2023)[2]

[1] Calculated based on data from the State Statistics Agency under the President of the Republic of Uzbekistan.

[2] The calculations are based on the data from the Statistics Department of the Syrdarya Region.

№	Districts	Total production	Use		
			Export	To Tashkent and Other Markets	For domestic consumption
1	Boyovut	214	162,8	0	51,2
2	Gulistan city	1428	728,6	90,4	609
3	Mirzaobod	3640	2174,9	623	842,1
4	**Okoltin**	4980	3310,9	356,5	1312,6
5	Sardoba	2654	1826,8	340	487,2
6	Sayhunobod	3114	1555,4	213	1345,6
7	Syrdarya	6370	5697,7	272,3	400
8	Khavos	3546	2271,1	340	934,9
9	Gulistan city	865	507,4	72	285,6
10	Yangier city	9,8	6,2	2,2	1,4
11	Shirin city	243,2	187,6	23,6	32
Total:		**27064**	**18429,4**	**2333,0**	**6301,6**

As seen from the table, legume products are primarily grown in the Saykhunobod, Syrdarya, Khovos, and Okoltin districts, while they are grown in smaller quantities in the Mirzaobod district.

Additionally, the export of legume products in the region is well-established. Specifically, 43.0% of the legume products grown in the region were exported for a total of 16,369.5 thousand USD. This figure represents a 46.8% increase compared to 2020 (Table 2).

Table 2

Volume of Legume Products Exported by Syrdarya Region (in thousand US D)[3]

№	Districts	Years				2023 Compared to 2020 (%)
		2020	2021	2022	2023	
1	Boyovut	166,7	-	-	162,8	97,6
2	Gulistan city	-	712,5	891,8	728,6	-
3	Mirzaobod	-	294,0	1 767,7	507,4	-
4	**Okoltin**	149,6	3240,1	2597,0	2174,9	14 марта
5	Sardoba	2747,5	782,5	689,1	3310,9	120,5
6	Sayhunobod	120,9	-	809,3	1555,4	12 марта
7	Syrdarya	241,0	1027,9	993,8	1826,8	7,5 марта
8	Khavos	4647,9	3770,2	4321,0	5697,7	122,5
9	Gulistan city	2807,7	4265,7	3167,6	2271,1	80,8
10	Yangier city	269,3	29,6	1,6	6,2	2,3
11	Shirin city	-	-	1130,6	187,6	-
	Total:	**11150,6**	**14122,5**	**16369,5**	**18429,4**	**165,2**

[3] The calculations are based on the data from the Statistics Department of the Syrdarya Region.

From the table, it can be observed that during 2020-2023, Boyovut District and Shirin City exported legume products for two consecutive years. Additionally, Gulistan District, Saykhunobod District, and Gulistan City managed to establish legume exports over three years.

Between 2020 and 2023, the volume of legume exports increased 14 times in Mirzaobod District, 12 times in Saykhunobod District, and 7.5 times in Sardoba District. On the other hand, the export volume decreased by 20.5% in **Okoltin** District and by 7% in Syrdarya District. In Yangier City, this figure sharply declined by 99.4%.

When analyzing the composition of exported legume products in Syrdarya Region, it can be seen that in 2023, nearly 72% of the exports were beans, 18.1% were mung beans, and 9.9% were millet. The value of beans exported in 2022 increased by 71.6% compared to 2020. Similarly, the export of millet grew by 96.5%, whereas the export of mung beans decreased by 14.4% during this period (Table 3).

The table also shows that the legume products grown in Boyovut District were only exported in 2020. The beans and mung beans produced in this district were exported to Afghanistan and Pakistan. In Gulistan District, in addition to beans and mung beans, millet was also exported. These products were exported to Afghanistan, Pakistan, Georgia, and Iran. In Gulistan City, only beans were exported to Pakistan.

In Mirzaobod District, 2,585.9 thousand USD worth of beans were exported in 2022, which is 30.3 times higher than in 2020. These products were sold to Afghanistan, Georgia, and Pakistan. Additionally, mung beans were exported to China, and millet was exported to Afghanistan and Pakistan.

Table 3

Volume of Legume Products Exported by Syrdarya Region (in thousand USD)[4]

[4] Calculated based on the data from the Statistics Department of the Syrdarya Region.

№	District	Product name	2020	2021	2022	2023	2023 Compared to 2020 (%)
1	Boyovut district	**Beans**	141,5	-	-		-
		Mung bean	25,2	-	-		-
2	Guliston district	**Beans**	-	578,0	-	708,2	-
		Mung bean	-	66,3	-		-
		Millet	-	68,2	891,8	20,4	-
3	Guliston city	**Beans**	-	294,0	1767,7	507,4	-
4	Mirzaobod district	**Beans**	85,4	3119,4	2585,9	2056,7	24,1 марта
		Mung bean	64,2	99,4	-	93,2	145,2
		Millet	-	21,3	11,1	24,9	-
5	Okoltin district	**Beans**	2305,0	724,6	180,3	1514,9	65,7
		Mung bean	401,6	57,9	508,8	1796,0	4,5 марта
		Millet	40,9	-	-		-
6	Saykhunobod district	**Beans**	-	-	312,8	237,8	-
		Mung bean	120,9	-	496,5	1317,6	10,8 марта
7	Sardoba district	**Beans**	172,3	799,9	846,7	1610,8	9,3 марта
		Mung bean	68,7	228,0	55,1	16,8	24,4
		Millet	-	-	92,0	199,2	-
8	Syrdarya district	**Beans**	2232,9	1634,2	2413,1	2299,9	103,0
		Mung bean	1625,4	2112,5	1805,9	3397,7	2,0 марта
		Millet	789,6	23,5	102,0		-
9	Khovos district	**Beans**	1657,6	4158,7	2722,7	1621,8	97,8
		Mung bean	1150,1	101,0	46,5	0,6	0,3
		Millet	-	6,0	398,4	648,6	-
10	Yangier city	**Beans**	269,3	15,8	1,1	1,1	0,4
		Mung bean	-	13,8	0,5	5,1	-
11	Shirin city	**Beans**	-	-	949,5	54,0	-
		Mung bean	-	-	44,5	133,5	-
		Millet	-	-	136,6		-
Total by region		**Beans**	**6864,0**	**11324,6**	**11779,8**	**10612,6**	**154,6**
		Mung bean	**3456,1**	**2678,9**	**2957,8**	**6760,5**	**195,6**
		Millet	**830,5**	**119,0**	**1631,9**	**893,1**	**107,5**

In Okoltin District, bean exports decreased by 92.2% during this period, while mung bean exports increased by 26.7%. These products were exported to Afghanistan, Iraq, Pakistan, China, and Kazakhstan. In Saykhunobod District, mung bean exports in 2022 increased by 4.1 times compared to 2020. Mung beans were exported to China, while beans were sold to Pakistan and Iran.

From 2020 to 2022, bean exports in Sardoba District increased by 4.9 times, whereas mung bean exports decreased by 19.8%. In this district, only millet worth 92,000 USD was exported to Pakistan in 2022. Mung bean and bean products were sold to Afghanistan, Georgia, Iraq, Pakistan, Tajikistan, and Iran.

During this period, bean exports in Syrdarya District increased by 8.1%, mung bean exports rose by 11.1%, while millet exports decreased by 87.1%. In addition to the countries mentioned earlier, the exported legume products were also sold to South Korea, the Netherlands, Taiwan, Ukraine, Bulgaria, Vietnam, Hong Kong, Italy, and Panama.

In Khovos District, bean exports increased by 64.2% during this period, while mung bean exports decreased by 96.0%. Additionally, millet exports were established in the district in 2021 and 2022. These products were mainly exported to Afghanistan, Pakistan, and Tajikistan.

It can also be seen that legume exports were established in Yangier and Shirin cities. In Yangier City, mung beans and beans were exported, while in Shirin City, in addition to these products, millet was also exported. Overall, legume exports in the region have developed to a certain extent, and the geography of exports has been expanding year by year.

Discussion One of the effective tools for improving the economic mechanisms of the grain legume market is managing socio-economic processes in the agro-industrial complex according to circumstances. As a result, the main outcomes of state regulation of grain legume markets at the global, national, regional, and local levels should be directed toward the following:

- Establishing relatively equivalent price relationships between agricultural producers, processing enterprises, and resource suppliers;
- Creating infrastructure for the legume grain market and ensuring equal access to it for all participants;
- Promoting and protecting the interests of the national agro-industrial complex in national and global markets for legume grain products;
- Ensuring the high quality and environmental safety of grain and legume products and their processed products;
- Guaranteeing physical and economic access to legume products in volumes not less than the rational consumption norms required for an active and healthy lifestyle for the population.

To achieve these strategic goals, it is advisable to implement the following tasks:

- Strengthening regional food independence, security, and self-sufficiency;
- Increasing the total yield and quality of legume crops;
- Using effective methods of pricing policy;
- Encouraging demand for high-protein food grains;
- Ensuring a guaranteed sales system considering the quality of legume grain products;
- Organizing and supporting the functioning of wholesale markets and grain exchanges, highlighting the legume grain segment;
- Supporting integration processes in the agro-industrial complex.

To implement the assortment strategy, the following measures need to be taken:

- Ensuring the guaranteed production of high-quality legume crops (innovative production technologies);
- Improving the use of legume crops and reducing production costs per unit of final product;

- Increasing the supply of grain legumes and expanding the fodder base;
- Enhancing the quality of legume crops based on new energy- and resource-saving technologies, advanced technologies, and elite seeds.

Since the commodity distribution process of grain legumes is closely tied to their physical movement and the transfer of ownership rights, the following measures must be implemented to promote the sale of legume grain products and improve their competitiveness in global markets:

- Developing new standards to improve product quality and aligning them with existing international requirements;
- Developing ISO 9000 series standards considering new technologies and quality policies and ensuring the professional development of personnel;
- Certifying enterprises producing grain legume products under ISO 14000 standards to address environmental protection and land reclamation issues;
- Providing metrological support for the industry, rationalizing controlled processes, accounting for technological errors, setting optimal accuracy standards, simplifying technology, and reducing production costs while maintaining high product quality through materials balance optimization.

The implementation of these proposed measures will ensure that consumer demand for grain and legume products is fully met with minimal financial, material, and labor resources.

Mung beans hold a special place in the export structure of our country. To ensure the high competitiveness of regional products in global markets and stimulate innovative activity in the agricultural sector, it is necessary to create a strong marketing complex based on the region's economic potential for growing legumes. For this, it is essential to establish an "Association of Legume Producers" in our country.

Additionally, analysis shows that, in many cases, farming households, dehqon (private farmers), and household farms face difficulties and economic losses due to issues with seed production, lack of clear information about product cultivation, and barriers to mung bean export. Furthermore, a lack of knowledge about new high-yield varieties, non-compliance with agricultural techniques for mung bean cultivation, and inadequate equipment for planting, processing, and harvesting legumes affect productivity.

Moreover, there is a shortage of modern specialized equipment for sorting, cleaning, and packaging seeds. Most of the existing equipment and machinery is outdated, both physically and technologically, resulting in low efficiency.

Based on the above, it can be said that there is no unified management system for growing legumes, monitoring seed supply, and marketing and exporting these products. Therefore, to improve the management system in this area, it is appropriate to establish an "Association of Legume Producers" in our country.

The effective organization of the activities of the Association of Legume Product Producers should primarily be based on democratic principles. These principles should include voluntary membership in the association, democratic governance of its activities, members contributing their shares, and the fair distribution of profits derived from

domestic market sales and exports among members. This will contribute to the sustainable development of the association's activities. Additionally, the association's activities must comply with the regulatory and legal framework of the country.

The Association of Legume Product Producers plays a critical role in addressing issues such as providing producers with quality seeds, particularly seed production and new variety selection, plant protection and quarantine, quality control of products, organizing logistics services, collaborating with scientific research centers and companies involved in exporting legumes, and providing advisory services. Moreover, the association is of significant importance to farmers and dehqons (private farmers) by fostering cooperation with them to introduce innovations, achieve higher productivity, and increase the income of households. The primary tasks of the association are to support the activities of farmers, dehqons, and household farms, supply them with necessary resources and knowledge, and ensure the sector's development.

4. Conclusion

In conclusion, the cultivation of legumes and their efficient utilization, along with increasing the areas for secondary crops across the country, is becoming a challenging issue year by year. The main reasons for this include the negative circumstances mentioned earlier, along with inefficient use of financial resources allocated for the construction of hydrotechnical structures, collector-drainage networks, and irrigation and reclamation measures, which have had a detrimental impact to some extent. Based on the analysis, the following measures should be implemented to address the existing issues in this system:

- Develop sufficient organizational-economic relations mechanisms between water management organizations responsible for expanding secondary crop areas in the agricultural sector and effectively using land and water resources by implementing reclamation measures.
- Cultivating legume crops enriches the soil with nutrients and ensures the population has access to protein-rich food products. To achieve this, it is necessary to further optimize the integration system between the agricultural sector and the food program and develop long-term strategic plans.
- In arid areas of the agricultural system, introduce drought-resistant and high-yield legume crops (mung beans, beans, kidney beans, etc.) in extensive fields based on foreign experience.
- Develop a roadmap to identify areas suitable for cultivating legume crops, increase the productivity of these areas, and improve their reclamation conditions and water supply. Implement large-scale irrigation and reclamation measures within state programs to achieve these goals.

REFERENCES

1. http://www.agricultu re.uz/filesarchive/3 _kism_makola_19_06.pdf
2. Presidential Decree No. PF-5853, dated 23.10.2019
3. On Approval of the Strategy for the Development of Agriculture in the Republic of Uzbekistan for 2020–2030
4. Иванов, А. А., Гришин, Г. Е., & Кошеляев, В. В. (2012). Рациональное использование почвенно-климатических ресурсов-основа повышения экономической эффективности производства зерна. Нива Поволжья, (3), 96-101.
5. Агеев, И. М., Агеев, Е. М., Васильев, И. В., & Кащеев, А. В. (2010). Повышение эффективности выращивания зернобобовых в Оренбургской области. Известия Оренбургского государственного аграрного университета, 3(27-1), 12-14.

6. Чирков, Е. П., & Храмченкова, А. О. (2019). Методические основы экономической оценки эффективности кормопроизводства. Вестник Брянской государственной сельскохозяйственной академии, (2 (72)), 35-44.
7. Shephard, R. W. (2015). Theory of cost and production functions. Princeton University Press.
8. Pyatt, Graham. "Theory of Cost and Production Functions." (1972): 1059-1061.
9. O'Donnell, C. J. (2012). An aggregate quantity framework for measuring and decomposing productivity change. Journal of Productivity Analysis, 38(3), 255-272.
10. Idrisov , X. ., Matholiqov , R. ., & Xoliqov , M. . (2022). KUZGI BUG'DOYDAN KEYIN EKILGAN MOSH NAVLARINING SIMBIOTIK FAOLIYATINI O'RGANISH. Центральноазиатский журнал образования и инноваций, 1(2), 51–56. извлечено от https://www.in-academy.uz/index.php/cajei/article/view/6620
11. https://imrs.uz/publications/articles-and-abstracts/agricultural_product
12. Turayeva, G. (2023). Factors for increasing the stability of grain production and performance indicators. Theoretical aspects in the formation of pedagogical sciences, 2(6), 45-50.