ORIGINAL ARTICLE

INTERNATIONAL JOURNAL OF ARTIFICIAL INTELLIGENCE

ISSN: 2692-515-x, Impact Factor: 9.23

American Academic publishers, volume 6, issue 03,2026

Journal: https://www.academicpublishers.org/journals/index.php/ijai

ENHANCING THE EFFICIENCY OF EXPORT ACTIVITIES OF FRUIT AND VEGETABLE CLUSTERS IN THE REPUBLIC OF UZBEKISTAN

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Abstract:

The article examines the issues of improving the efficiency of export activities of fruit and vegetable clusters in the Republic of Uzbekistan. The role of the cluster model in the development of the agricultural sector and the expansion of the country's export potential is considered. An analysis of the current state of production and export of fruit and vegetable products is carried out, and the factors influencing the competitiveness of these products in global markets are identified. The research employs methods of economic and statistical analysis, comparative analysis, econometric modeling, and forecasting. The results of the study demonstrate that the introduction of innovative technologies, the improvement of logistics infrastructure, and the development of digital platforms contribute to increasing the efficiency of export activities of clusters. Practical recommendations for the development of the export potential of fruit and vegetable clusters are proposed.

Keywords: fruit and vegetable clusters, export, agribusiness, efficiency, competitiveness, agricultural sector, Uzbekistan.

1. Introduction.

The development of the export potential of agriculture is one of the priority directions of the economic policy of the Republic of Uzbekistan. The fruit and vegetable sector plays an important role in ensuring the country’s food security and generating export revenues. Favorable natural and climatic conditions allow for the production of a wide range of fruits and vegetables that are in high demand in global markets.

In recent years, Uzbekistan has been actively implementing a cluster-based model for the development of the agricultural sector, which involves the integration of agricultural producers, processing enterprises, logistics centers, and export companies. Such a model contributes to increasing production efficiency, improving product quality, and expanding export potential.

Despite positive trends, the export of fruit and vegetable products faces a number of challenges:

- insufficient development of logistics infrastructure;
- high transportation costs;
- inadequate processing of products;
- non-compliance with international quality standards;
- limited access to foreign markets.

In this context, the study of ways to improve the efficiency of export activities of fruit and vegetable clusters is particularly relevant.

The purpose of the study is to develop scientifically grounded proposals for enhancing the efficiency of export activities of fruit and vegetable clusters in the Republic of Uzbekistan.

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Research objectives:

- to analyze the current state of fruit and vegetable clusters;

- to assess the dynamics of fruit and vegetable exports;

- to identify factors affecting the efficiency of export activities;

- to develop recommendations for the development of the export potential of clusters.

2. Materials and Methods.

The study uses statistical data from the Ministry of Agriculture of the Republic of Uzbekistan, the State Statistics Agency, as well as international organizations.

The following research methods were applied:

Economic and statistical analysis: allows for the assessment of the dynamics of fruit and vegetable production and exports.

Comparative analysis: used to compare indicators of export efficiency across different regions.

Econometric modeling: to identify factors influencing the export efficiency of clusters, the following model was employed:

$$Export = \beta_0 + \beta_1 Prodaction + \beta_2 Investment + \beta_3 Logistics + \beta_4 Technologi + \varepsilon$$

where:

Export – export volume of products;

Production – production volume;

Investment – cluster investment;

Logistics – development of logistics infrastructure;

Technology – level of implementation of innovative technologies.

Forecasting methods: for forecasting export indicators, a linear trend model was used:

$$Y_t = a + bt$$

Results.

1. Development of Fruit and Vegetable Clusters

In recent years, agro-industrial clusters have been actively formed in Uzbekistan. They bring together farms, processing enterprises, logistics centers, and export companies.

The main advantages of the cluster model include:

- increased labor productivity;
- implementation of innovative technologies;

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- reduction of production costs;
- improvement of product quality.

As a result of the implementation of the cluster model, there has been an increase in the production of fruit and vegetable products.

2. Analysis of Export Activities

The export of fruit and vegetable products from Uzbekistan has shown steady growth. The main export markets include Russia, Kazakhstan, China, countries of the Middle East, and the European Union. The main exported products are grapes, apricots, cherries, tomatoes, onions, and peppers.

An important factor in improving export efficiency is the development of product processing. Processed products have higher added value and greater competitiveness in international markets.

3. Forecast of Export Efficiency

Based on trend analysis, a forecast of yield and profit growth for fruit and vegetable clusters has been obtained (Table 1).

Table 1

Forecast of growth in export efficiency indicators

Years	Forecast Yield (centners/ha)	Forecast Profit (million sum/ha)
2025	57,96	25,41
2026	59,99	26,68
2027	62,09	28,01
2028	64,26	29,42
2029	66,51	30,89
2030	68,84	32,43

***Source:** Compiled by the author based on econometric modeling.

The results obtained indicate a stable upward trend in production efficiency.

Discussion.

The results of the study confirm that the cluster model is an effective tool for developing the export potential of the agricultural sector. The main factors contributing to the improvement of export efficiency include:

1. Development of logistics infrastructure – establishment of modern logistics centers, cold storage facilities, and transport corridors.

2. Implementation of innovative technologies – use of digital technologies, precision farming systems, and production automation.

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3. Expansion of sales markets – access to new international markets and diversification of export directions.

4. Product certification – compliance with international quality standards (GlobalGAP, ISO, HACCP).

5. Development of processing – increasing the share of processed products in the export structure.

The implementation of these measures will enhance the competitiveness of Uzbek fruit and vegetable products in global markets.

Conclusion.

he study demonstrated that the development of fruit and vegetable clusters is an important factor in enhancing the export potential of Uzbekistan's agricultural sector. The cluster model contributes to increasing production efficiency, improving product quality, and expanding access to international markets.

For the further development of export activities, it is necessary to:

- improve logistics infrastructure;
- implement innovative agrotechnologies;
- develop agricultural product processing;
- expand international cooperation;
- adopt international quality standards.

The implementation of these measures will significantly increase the export of fruit and vegetable products and enhance the competitiveness of Uzbekistan's agricultural sector in the global market.

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