



Analysis of the Current State of the Economy of Fruit and Vegetable Clusters in Uzbekistan

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Abstract

The article examines the formation of fruit and vegetable clusters in Uzbekistan. The indicators of the area of land, production, processing, storage, sale of fruit and vegetable clusters operating in the regions are analyzed. The area of land and production indicators are analyzed in the directions of formation of fruit and vegetable clusters in the regions. Conclusions and recommendations are developed on the basis of conducted research.

Keywords: *Fruit and Vegetable Cluster; Regions; Location; Competitiveness; Provision; Production; Processing*

Introduction

There are various theories of the formation and development of competitiveness. Studies show that in the development practice of the most competitive companies, industries, regions and countries - the most effective form of economic growth is the cluster mechanism. It is based on a group of the most efficient and interdependent types of economic activity, a group based on effective competition of interconnected enterprises; the concept of “cluster”, which is integrated with the state economic system and ensures the competitive position of the industry in national and international markets (Urdushev Kh., 2020; Urdushev X.). Therefore, the study of practical experience in agriculture in our country over the years, the necessary knowledge and available resources, and most importantly, the study of world experience in production and the competitive market, has led to the implementation and implementation of clustering policy in the country. Undoubtedly, this is the result of strong economic reforms carried out in our country in recent years. The formation of 97 cotton and textile clusters, more than 147 fruit and vegetable clusters and 65 grain clusters in 2017-2020 will prove our opinion.

The Main Findings and Results

Fruit and vegetable growing plays a leading role in the economy of Uzbekistan. For example, in 2020, 1 million 485 thousand tons of fruits and vegetables worth \$ 1008.6 million were exported. The share of fruits and vegetables in the country's total exports was 6.7%. In the structure of fruit and vegetable exports, vegetables, fruits, fresh and dried grapes occupy a leading position. For example, in 2020, 768.3 thousand tons of vegetables worth \$ 400 million and 402.3 thousand tons of fruits worth \$ 353.9 million were exported. The figure was \$ 90.7 million for fresh and dried grapes.

For example, 1,485,000 tons of fruits and vegetables worth \$ 1,008.6 million were exported. Its share in the country's exports is 6.7%.

Materials and Methods

Decrees, resolutions of the President of the Republic of Uzbekistan (UP-5388; UP-5853; PP-4549), Analysis of scientific research of foreign and domestic scientists on the formation and development of "fruit and vegetable" clusters in agriculture (Eshankulov S., 2020; Krupskiy, 2016). Modern innovative cluster approaches to fruit and vegetable growing the study of theoretical, methodological and practical issues of development and increase efficiency on the basis of represents the purpose of this article.

Research methodology, on the other hand, includes methods such as theoretical, practical, and statistical analysis.

Research Results

Concentration according to geographical and territorial location, self-formation, sectoral organization, structure, inter-sectoral features, uniqueness, dependence on science and research, innovation are the main features of the agricultural cluster (Khukhrin, 2017).

In 2019, 56 fruit and vegetable clusters operated in the country. Projects and proposals for the establishment of another 86 such clusters have been developed and gradually implemented (Urdushev, 2020).

It is known that Tashkent, Samarkand and Andijan regions are leaders in the cultivation, processing and export of fruits and vegetables.

There are 7 fruit and vegetable clusters in Kibray district of Tashkent region, 5 in Parkent district, 3 in Zangiota, Tashkent, Yukori Chirchik districts, 1 in Bostanlyk, Akhangaron and Yangiyul districts. Fruit and vegetable clusters have been established in Urgut, Taylak and Samarkand districts of Samarkand region, 3 in Bulungur (2), Jambay (1) and Akdarya (1) districts. Fruit and vegetable clusters are being formed mainly in 55 fruit and vegetable growing districts, as well as in fruit and vegetable growing districts.

The area of existing fruit and vegetable crops in the districts of the republic where fruit and vegetable clusters have been established is 306,253 hectares; 116024 hectares or 37.9 per cent of it are attached to clusters. 30,500 hectares or 26.3% of the areas attached to the clusters belong directly to the

clusters, and the remaining 85,524 hectares belong to 10,033 fruit and vegetable farms attached to the clusters.

Samarkand (21581 hectares), Jizzakh (15237), Tashkent (15131) and Namangan (14774) regions lead in terms of land area attached to fruit and vegetable clusters (Table). The total area of fruits and vegetables in the clustered areas of Fergana region is 26,144 hectares; of which 12,541 hectares or 48.0% are covered by clusters.

The level of cluster coverage of fruit and vegetable areas in the regions with developed fruits and vegetables is 20.4-62.1%.

Table 1 Indicators of fruit and vegetable clusters of Uzbekistan by land area (2020)

№	Provinces	Total area of fruits and vegetables in clustered areas, ha	Land area attached to clusters, ha	Including weight in total area, %	Cluster area, ha	Including weight in total area, %
1	Tashkent	57053	15131	26,5	6039	10,6
2	Samarkand	41289	21581	52,3	2940	7,1
3	Namangan	39030	14774	37,9	4330	11,1
4	Andijon	34657	12182	35,2	1530	4,4
5	Jizzakh	28823	15237	52,9	5037	17,5
6	Fergana	26144	12541	48,0	2060	7,9
7	Surkhondaryo	18426	6047	32,8	1740	9,4
8	Kashkadarya	18085	3688	20,4	663	3,7
9	Karakalpakstan	14767	5652	38,3	2739	18,5
10	Bukharo	10213	2738	26,8	1003	9,8
11	Navoi	8811	3053	34,6	925	10,5
12	Syrdaryo	6412	1820	28,4	1480	23,1
13	Khorezm	2543	1580	62,1	14	0,6
	Across the country	306253	116024	37,9	30500	10,0

In Kashkadarya region, 18,085 hectares of fruit and vegetables were covered by 3,688 hectares or 20.4% of 6 fruit and vegetable clusters, while in Khorezm region, these figures were 2,543; 1580; 3 and 62.1 percent, respectively. There are 24 fruit and vegetable clusters on 15,131 hectares of 57,053 hectares of fruit and vegetable fields in Tashkent region. These clusters cover 26.5 percent of fruit and vegetable areas.

The ongoing agricultural reforms in the country envisage the specialization of 55 districts specializing in fruit and vegetables, the effective organization of the activities of fruit and vegetable agricultural associations and fruit and vegetable clusters.

The fruit and vegetable cluster is divided into single-branch (one of the directions of horticulture, viticulture, vegetable or greenhouse complexes) and multi-branch (having more than one direction) specializations.

For the rapid and innovative development of fruit and vegetable growing in Uzbekistan, a fruit and vegetable cluster is being established in two directions [1]:

- the first direction: cluster of organization of production of fruit and vegetable products within a single or interconnected group of enterprises, which independently carries out the established process from production to sale of fruit and vegetable products;

- the second direction: planting material for agricultural producers to organize agricultural work; agricultural producers who provide advance payments and purchase their products at agreed prices; cluster of fruit and vegetable production organization forming a continuous chain on the principle of “seed - seedlings - production - preparation - storage - processing - transportation - delivery to the market” on the basis of guaranteed contracts between producers, processors, exporters.

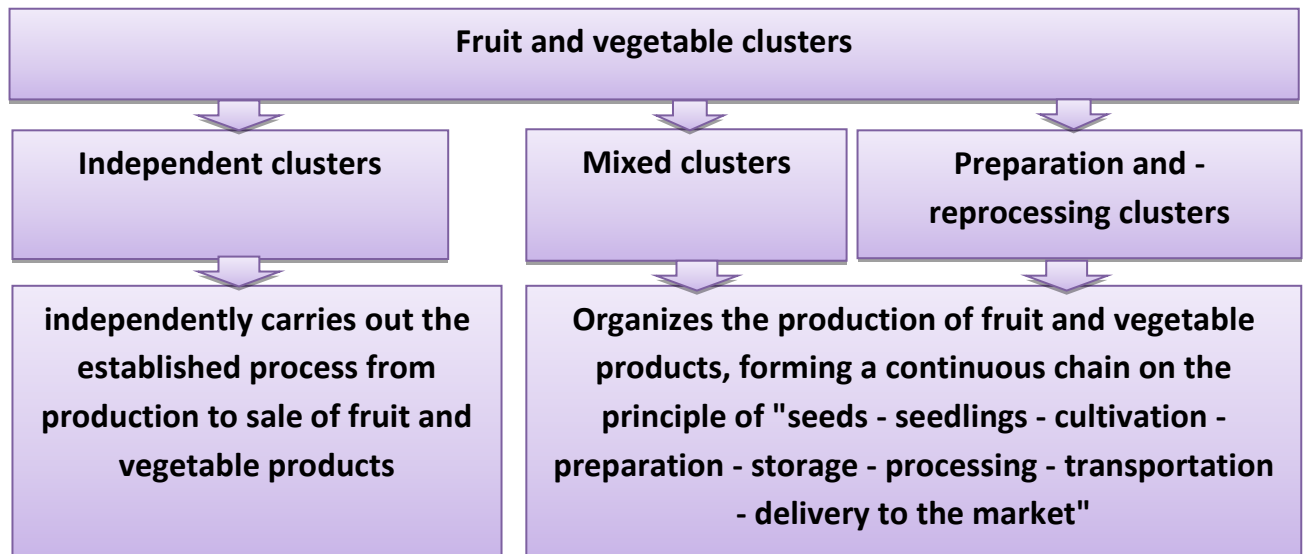


Fig. 1 Forms of activity of fruit and vegetable clusters

Studies show that fruit and vegetable clusters in Uzbekistan are organized in independent (first direction), processing and mixed forms (second direction) (Fig. 1).

The cluster includes the following functions [8]:

- Deep specialization in the cultivation, storage, processing and sale of fruits and vegetables;
- Introduction of new innovative technologies in the cultivation, reception, cleaning, sorting, drying and processing of fruits and vegetables;
- Land use: efficient and effective use of allocated land, placement of high-quality, world-class export-oriented fruit, grape and vegetable crops, gradual placement of fruit, grape and vegetable crops instead of inefficient and unpromising agricultural crops;
- Study of advanced foreign experience in fruit and vegetable growing, their widespread use in regional and territorial conditions, the involvement of foreign experts in the field of fruit and vegetable growing;
- Cultivation of export-oriented agricultural products, their selection and development in the cluster areas, development of cooperation, establishment of cooperation with research institutions;

- Formation of a system that fully covers the process of planting, growing, storage, processing and sale of high-yielding fruits, grapes and vegetables, as well as the introduction of modern innovative, resource-saving technologies in the cultivation of fruits and vegetables;
- Creation of new qualified jobs.

At present, there are 11 independent, 16 mixed and 120 preparation and processing clusters in the country.

Independent clusters will have the infrastructure on their allotted land plots: a set of buildings, structures, equipment and other facilities necessary for the cultivation, preparation, processing, storage, sorting and transportation of agricultural products, sales and production of finished products.

The total land area allocated to independent clusters in the country is 7,309 hectares. They cover 15.1% of the fruit and vegetable areas in the areas where they are located.

In Tashkent region, 2826 hectares of land are covered by 3 independent clusters. These indicators are 2 and 1501 hectares in Jizzakh region, 3 and 1165 hectares in Syrdarya region, respectively; In the Republic of Karakalpakstan it is 1 and 1000 hectares, in Namangan region 1 and 561 hectares and in Samarkand region 1 and 256 hectares. In Mirzaabad district of Syrdarya region, the area of fruit and vegetables is 1231 hectares, of which 551 hectares or 44.8% are covered by JV "Bek Cluster". Oqoltin district of the same region covers 1,042 hectares of fruit and vegetable fields with 614 hectares or 58.9% of "Suv-Dry" LLC and "Food Agro City" clusters.

Independent fruit and vegetable clusters have a land area of 256-1806 hectares. For example: "Fayz Bashirbek Yuksalish" LLC (Kattakurgan district) - 256 hectares, "Bek Cluster" LLC JV (Mizaabad) - 551 hectares, clusters of "Ellikkala Sakhovati" LLC (Ellikkala) and "Vinium Asia" LLC (Parkent) - 1000 hectares Sag Agro "LLC (Gallaorol) - 1201, "Bostanliq Potato Center" LLC (Bostanliq) - 1806 hectares of land.

The total land area of independent clusters is 7309 hectares; the share of fruit and vegetable clusters in the total area is 24.0%. On average, one cluster has 664.5 hectares of land. Independent fruit and vegetable clusters cover 6-45 percent of the available fruit and vegetable areas in their areas.

Fruit and vegetable clusters are organized and operate in horticulture, viticulture, vegetable growing, greenhouses (complexes) and multidisciplinary areas. For example, "Bek Cluster" is a multi-sectoral cluster developed in crop production, animal husbandry, poultry, agricultural products, cotton processing, lemon growing, medical industry, textile industry, greenhouse complexes. Of the 1,231 hectares of fruit and vegetable area in Mirzaabad district, 551 hectares or 44.8% belong to Beck Cluster. Beck Cluster produced 12,973 tons of fruit and vegetables in 2020, of which 11,230 tons or 86.6 percent were exported and the rest to the domestic consumer market.

Independent clusters produced 71,888 tons of agricultural products in 2020, of which 26,599 tons or 37.0% were directed to domestic consumption, 28,697 tons or 39.9% to processing and 16,592 tons or 23.0% to exports.

Preparation - fruit and vegetable clusters operating in the form of processing. Typically, they are clusters that do not have their own land area. They mainly carry out procurement, processing and sale of fruit and vegetable products produced by farmers and dehqan farms on a contractual basis. In addition to farms of fruit and vegetable clusters operating in the form of processing, the purchase of fruit and vegetable products grown on a contract basis in cooperatives, agro-firms, farms (landowners) and other agricultural enterprises is being introduced.

In accordance with the established procedures, the attachment of fruit and vegetable and grape growers to fruit and vegetable clusters is carried out through voluntary supply contracts concluded between them, processing and exporting organizations and the district administration.

In 2020, 16 fruit and vegetable clusters operated in the country in the form of procurement and processing. In 2020, these clusters purchased 193,569 tons of fruits and vegetables grown on 2,076 farms with a total area of 18,600 hectares of land on a contract basis and 62,225 (or 32.1%) tons, whether wet or processed, were exported to the domestic market, 86,997 (44.9%) tons for processing and 34,609 (17.9%) tons for export. The coverage of existing fruit and vegetable areas in the areas (districts) where there are fruit and vegetable clusters operating in the form of processing is 8-100%.

One preparation-processing cluster covers an average of 1162.5 hectares of land.

For example, the cluster of “Namangan Logistic Trans” LLC fully covers 2,500 hectares of fruit and vegetable fields in the district. “Do'stlik Agroexport” LLC covers 54% of the 7,400 hectares of fruit and vegetable area in Dustlik district, and “Agromir” JV covers 40% of the 8,800 hectares of fruit and vegetable area in Samarkand district. At “Pet Agro Oil” JV in Taylak district, this figure is 4,430 hectares and 41%, respectively.

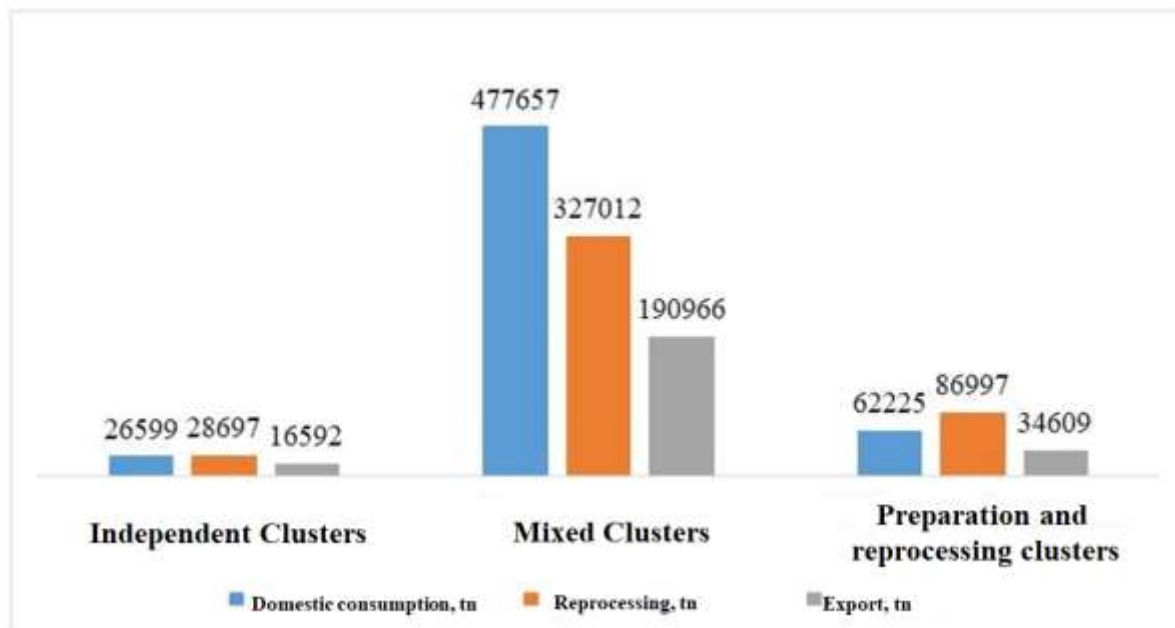


Fig. 2 Distribution of agricultural products produced in fruit and vegetable clusters

Mixed fruit and vegetable clusters. The mixed cluster carries out on a contractual basis the purchase, production, processing, storage, processing and sale of fruits and vegetables grown on its own land and on farms; dehqan farms (cooperatives, agro-firms, and other agricultural enterprises).

In 2020, 996,560 tons of agricultural products were grown in mixed fruit and vegetable clusters, of which 477,657 tons or 47.9% were directed to domestic consumption, 327,012 tons or 32.8% to processing, 190,966 tons or 19.3% to exports.

Of the 147 fruit and vegetable clusters in the country, 120 or 81.6% have a mixed production-processing-sales process. They purchase products grown on their land and on fruit and vegetable farms on a contractual basis; activities are carried out on the basis of production - processing - sales chain.

The average fruit and vegetable cluster in the country is 789.3 hectares (2020). This figure is 1,660.1 hectares in Samarkand region, 1,269.8 hectares in Jizzakh region and 1,136.5 hectares in Namangan region. Tashkent (6039 hectares), Jizzakh (5037), Namangan (4330) and Samarkand (2940) regions are leading in the country in terms of the area of fruit and vegetable crops belonging to the direct cluster.

Conclusions and Suggestions

1. In the process of forming a competitive and innovative economy in the regions of Uzbekistan, it is necessary to take into account the natural conditions and geographical features, traditional mechanisms of effective management, existing infrastructure and historically formed industries, which are the basis of socio-economic development.

2. The competitive advantages of agricultural enterprises, which are part of the fruit and vegetable cluster, will be formed, and most importantly, flexibility and ability to respond quickly to all changes in the market will increase. Clustering of agricultural sectors will increase the flow of capital and technology, direct investment, resulting in new innovative technologies, intellectual resources, management skills, in addition to financial resources to the region.

3. Studies 147 fruit and vegetable clusters operating in mixed form clusters land area, production of products; the level of coverage of areas where fruit and vegetable clusters are located; number of attached farms; domestic consumption of manufactured products; shows that the volume of processing and export-oriented is higher than that of independent and preparatory processing clusters. Mixed clusters - 57.8% of the total land area allocated to fruit and vegetable clusters; 79.0% of the total fruit and vegetable production. Mixed clusters provide 84.3% of the total agricultural output of domestic fruit and vegetable clusters of the republic. Correspondingly, these figures are 73.9 percent in processing and 78.9 percent in exports. It is known that agricultural products grown by fruit and vegetable clusters are exported to foreign countries in fresh and processed form. In 2020, 54.3% of total agricultural products grown in fruit and vegetable clusters will be processed and exported. This indicates that there are opportunities to increase the export of fresh, dried, stored and processed products of fruit and vegetable clusters abroad.

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