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ISSUES OF EFFECTIVE ORGANIZATION OF ACTIVITIES OF FRUIT VEGETABLE CLUSTERS IN UZBEKISTAN

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Abstract: The article highlights the importance of clusters, which are specialized in the cultivation, storage and deep processing of fruit and vegetable products in the development of the economy. The role of agro-industrial clusters in the field of fruit and vegetable production in our country, its peculiarities and opportunities for development are scientifically and practically justified.

Keywords: cluster, agro-industrial cluster, economy, agriculture, processing industry, fruit and vegetable clusters, storage, export, technology, diversification, integration, competitiveness

Introduction

Currently, numerous reforms are being carried out in the field of agriculture, which, in turn, is one of the main points of our economy. This, of course, gives us the opportunity to compete with them in the field of Agriculture, taking a step forward and studying the experience of foreign countries. A number of laws and decrees have been adopted on the development of this sphere. In particular, in the resolutions of the president of the Republic of Uzbekistan “on additional measures for the deep processing of agricultural products and further development of the food industry” dated July 29, 2019 PP-4406 and “On further development of the fruit and vegetable and viticulture network” dated December 11, 2019 PP-4549, additional measures for the creation of the value-added chain in, in the system of processing and sales, a number of activities related to the creation of the value-added chain have been defined. In addition, in the address of the president of the Republic of Uzbekistan to the Oliy Majlis of Yanvar in 2020 24, it was said, that in other sectors, such as fruit and vegetables, rice, livestock, silk, will continue to create clusters that meet today's requirements. Besides it was noted that in 7 years it is necessary to take measures to sharply increase production in order to export 3-4 times more fruits and vegetables [1].

Literature review

What is the concept of cluster and what is its essence? The study of scientific literature suggests that there are different approaches in this regard. In particular, the English word “cluster ” is translated as a bunch of swans, team, traffic jams, concentration, group (for example, people, things) or a bunch of bees [2].

That is, the so – called “cluster” has a lot of interpretations in different languages, but the peculiarity of its essence is to combine individual elements (components) into a single whole to perform a certain function or achieve a specific goal. Alternatively, the “cluster” is represented as a method of selective research.

The study of the theory of “cluster” is rapidly gaining popularity in the world community, and its application in practice is becoming the main direction of national and regional economic development.

The complex nature of the theory of “cluster” caused the formation of different theoretical approaches to it. The basis of the theory of “cluster” according to Alfred Marshall's book “Principles of Economics”, written at the end of the XIX century (1890), the cluster is the harmonization of specialized network areas in separate regions.

According to his scientific conclusions, the territorial harmonization of specialized subjects is manifested in the following:

availability of qualification labor resources;

growth of supplier and additional industries;

to the existence of specialization of different firms into different parts of the production process [3].

Although the term “cluster” in economic literature began to be widely used in the last decade of the twentieth century, when industrial complexes (clusters) fell into the period when industrial capitalism in European civilization.

It can also be met in the work of scholars on the economy of agglomeration such A.Tyunen and V. Leonhardt. On the theoretical basis of the concept of cluster, they studied the geographic location of the enterprise and its economic space, taking into account the sources of raw materials and sales markets created at the beginning of the XX century, as well as the impact on it. [4].

French scientists I. Tolenado and D. Sollier narrowly interpreted the cluster. According to them, the formation of enterprises was explained by the need to establish technological links between industries and sectors of the economy in order to realize their potential advantages [5, 6].

The cluster approach has also been studied by E. Dahmen in order to identify and study the interactions of large Swedish transnational corporations.

According to E. Dahmen, clusters are formed in “development blocks” and “the basis for the development of competitive success is the existence of a link between the development capability of one sector and the provision of development in another area” [7].

After 1980 years, we can see the achievements of 3 important (American, British and Scandinavian) scientific schools in the development of the “Cluster theory”. In particular, American Scientists M.Porter “Theory of competitive advantage”, M. Enreyt, S. Rezenfeld, P. Maskell and M. Laurens ' Regional Clusters Consortium, A.Marshall “theory of industrial zones”, P.Bekatin “Theories of Italian industrial districts”, and M.Storper created theories of “Ideal territorial cluster”.

Developing the competitiveness of countries and regions in the opinion of Michael Porter, the founder of the idea of applying the cluster theory, “cluster is a group of interrelated companies (manufacturers, suppliers of products, etc.), as well as organizations operating in a certain area, providing services related to them (educational institutions, public administration offices, infrastructure companies), or “cluster” – production enterprises are communities that form a single technological chain of interconnected networks, creating opportunities for an increase in competitiveness [8].

So, proceeding from this, we can say that the formation of cluster theories involves the following 4 stages.

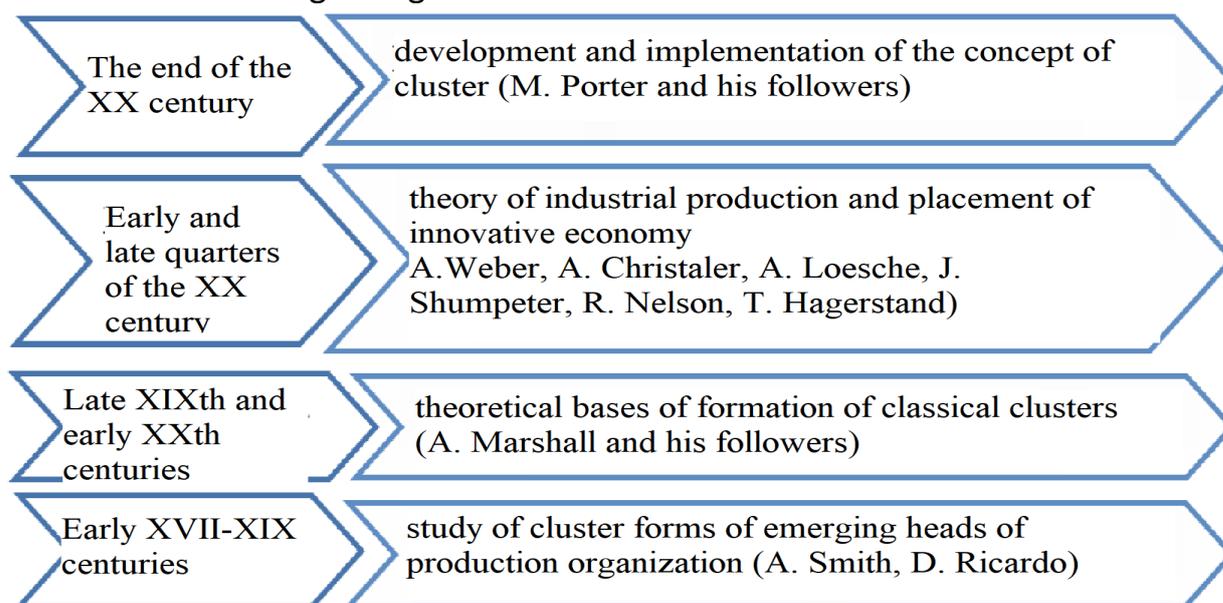


Figure 1. Formation of cluster theories

Source: Author's development based on the literature

Research on the development of agriculture and neighboring sectors in our country by agro-cluster method is in a beginning stage. In particular, in this regard M.S.Yusupov, Ch.Muradov, Sh.Hasanov, I.Ganiev and M.Muradova's research can be highlighted [9, 10].

Analysis and results

On the basis of comparative analysis of the above-mentioned literature, we propose that the definition of the term “cluster” fully explains its essence and features as follows: “cluster means a system of organized enterprises with a certain specialization and division of labor, as well as a single goal, in the technological chain of production of some kind of product. In the case of usage in relation to the agro-industrial complex, “agro cluster” refers to the unified structure of the agricultural and peasant farms, enterprises of the processing industry, storage, logistics and sales infrastructure operating in an organized manner in the technological system of cultivation, processing, storage and sale of agricultural products”.

Although there is an atmosphere of mutual competition between enterprises entering the cluster, at the same time there is also a high level of cooperation between them. Because, the process of production is divided into certain stages, and for each of them a certain firm is responsible. It is worth noting that in such a specialization, enterprises are inextricably linked to each other, but this does not mean that they are interdependent. On the contrary, full independence is ensured in the directions of production and the choice of partners. Each enterprise is engaged in one stage of the production process, which cannot operate without each other. The importance of the distribution of the production process among multistage firms ensures the achievement of a high level of specialization in the stages of mutually complementary production.

The advantages of cluster-based enterprises in the competitive struggle are important in three aspects:

- specialization;
- cooperative cooperation;
- quick adaptability to market changes.

Specialization also makes it possible to effectively solve problems associated with product quality control. If the firm is engaged in the same type of activity, it must be able to work diligently in the same direction and be in constant search. For example, the Chungdo Palm cluster (Chungdo Persimmon Cluster) of South Korea was founded in 2009 on the initiative of farmers. In place of information, it should be said that Korea produces 12 percent of the Persimmon grown in the world. In this region, 65% of the seedless Persimmon in Korea is grown. Established and managed on the initiative of farmers, this cluster is intended for the production of fresh, semi-dried, dried, fermented, palm oil, palm wine, color and other products from dates throughout the year.

Persimmon cluster:

Persimmon is focused on the cultivation-processing-storage-marketing and advertising development. This cluster is once again a joint movement of “Business University-Scientific Research – State” in agro cluster and the main emphasis on scientific research in the bun. It can be seen that the income that farmers receive as a result of their inclusion in this cluster has sharply increased on the account of the addition of other sectors [10].

At present, the cluster is a way of forming a new system of Economic Conduct in the economy of countries, including enterprises and organizations that produce mutually advantageous products and are geographically close to each other. The goal of forming clusters is to create competitive goods on the basis of the organization of innovation production – the harmonization of educational, scientific, engineering, consulting, standardization, certification and other services of adjacent enterprises located within the city, district and region and being in a single technological chain with them.

Indeed, world experience shows that the method of creating agro clusters, enterprises specializing in a certain direction, is of great importance for existing regions. Clusters play a huge role in strengthening the economic independence of territories. This approach makes it possible to identify priority sectors and projects economically. Clustering covers 60 percent of the economies of the leading countries, and it is considered as a new development of the world economic system.

Moreover, cluster approach is one of the modern methods of studying the competitive processes and legalities that give enterprises the opportunity to mobilize their forces to maintain and strengthen their positions in the market in the fight against competition.

In recent years, local and foreign experts have been saying that the regions in which clusters are formed become the leaders of the national economy and their foreign economic relations, and non-cluster regions experience significant social and economic crises from time to time, losing their competitive position [11].

This clustering strategy in the EU countries and the US is widely used. Clusters in the agro-industrial sector on a global scale can bring the USA (380 units), Italy (206 units), Great Britain (168 units), India (106 units), France (96 units) and others as the most common countries.

According to the data, the Integration Research Center of the analytical Affairs Directorate of the Eurasian Development Bank presented its report on the "status of cluster development in the participating states of the Eurasian Development Bank (HTB)". It is noted that in all countries participating in the YTB, cluster development is to some extent included in the state agenda, and none of these countries is among the top 50 countries in the world in terms of cluster development. Armenia ranks 72 in the rating on the organization of clusters, Kazakhstan ranks 120, Kyrgyzstan ranks 135, Russia ranks 95 and Tajikistan ranks 100 [12]. The report shows that with a competent approach to their formation, clusters can become a means of facilitating the unified economic development of countries and increasing competitiveness by creating new centers of economic growth.

Scientific and practical work on clusters in our country began with the adoption of the "Strategy of action on five priority directions of development of the Republic of Uzbekistan in 2017-2021".

In the "Conception of the development strategy of the Republic of Uzbekistan until 2035" it is envisaged to carry out the following tasks in achieving the goal set for the development of agriculture:

- creation of regional agricultural clusters;
- export orientation of finished products with high added value;
- rational use of water resources for agricultural needs;
- create Centers for the storage, sorting and processing of agricultural products;

- adopting international quality standards and so on.

There are clusters of fruits and vegetables in our country on the territory and types of product production are organized in the following forms:

* **independent** - a fruit and vegetable cluster with large land plots (plantations), allocated to it in accordance with the established procedure for carrying out activities in the full cycle (cultivation, storage, processing, sale of fruit and vegetable products;

* **preparation** - processing-a cluster of fruit and vegetable products purchased only under a contract from other producers of fruit and vegetable products (farmer, farmer, agribusiness, cooperative, etc.) for the purpose of export to the HUL or re;

* **mixed** - a cluster of fruit and vegetable purchasers (Farmers, Farmers, Agribusiness, cooperatives, etc.) who have land plots (plantations) allocated to them in accordance with the established procedure for the cultivation of products and at the same time on a contractual basis.

The fruit and vegetable cluster can be organized in the following directions by Network specialization

- gardening;
- vegetable production;
- diversified;
- greenhouse;
- viticulture.

According to the Ministry of Agriculture of the Republic of Uzbekistan, 86 fruit and vegetable clusters were established in the regions of our country in 2020 (Table 1).

Table 1

Indicators of fruit and vegetable cluster formation in the Republic of Uzbekistan, (2020)

Regions	Number of clusters	Total fruit and vegetable area, hectares	Including clustered, hectare	From that			Coverage of the total land area, in%
				In the cluster itself	On farms		
					Number	area, hectares	
The Republic of Karakalpakstan	3	8 547	1 959	787	101	1 172	22,9
Andijan	8	25 767	9 652	1 145	1 094	8 507	37,5
Bukhara	4	6 306	2 385	821	119	1 564	37,8
Jizzakh	5	17 355	7 930	2 595	729	5 335	45,7
Kashkadarya	2	8 757	1 554	582	53	972	17,7
Navai	2	7 594	1 037	537	17	500	13,6
Namangan	13	40 969	12 529	2 096	1 170	10 433	30,6
Samarkand	13	45 777	16 727	2 990	2 573	13 737	36,5
Surkhandarya	7	12 448	4 375	1 325	241	3 050	35,1

Sirdarya	4	5 181	1 915	1 459	79	456	37,0
Tashkent	9	52 468	9 677	3 535	546	6 143	18,4
Fergana	13	25 665	7 520	436	904	7 084	29,3
Khorezm	3	3 149	1 580	14	225	1 566	50,2
Total	86	259 983	78 841	18 322	7 851	60 519	30,3

Source: Based on information from the Ministry of Agriculture of the Republic of Uzbekistan.

In the republic in 2019, 78841 hectares of existing 259 983 hectares of fruit and vegetable area or 30,3% of them are attached to clusters. When analyzing the regions of the Republic in 2020, the number of fruit and vegetable clusters established in Namangan (13 units), Samarkand (13 units), Fergana (13 units), Tashkent (9 units) and Andijan (8 units), Tashkent (52 468 units), Samarkand (45 777 units), Namangan (40 969 units), Andijan (25 767 units), total fruit and vegetables in terms of coverage of the land area Khorezm (50.2%), Jizzakh (45.7 the regions of Bukhara (37,8%), Andijan (37,5%), Syrdarya (37,0%) and Samarkand (36,5 %) are the leaders.

By the decree of the President of the Republic of Uzbekistan dated October 23, 2019 № PF-5853 “Strategy of development of Agriculture of the Republic of Uzbekistan for 2020-2030 years”, the tasks of ensuring mutual cooperation with agricultural associations, enterprises of the processing industry of farmer and peasant farms (including clusters) are defined. The following 2 tables show the indicators of production, processing and export by clusters of fruits and vegetables of the Republic.

Table 2

Indicators of production, processing and export of products by fruit and vegetable clusters of the Republic

№	Name of regions	Unit of measurement	Amount
1.	Total product production capacity	tons	1 313 871
	Including:		
-	domestic consumption	tons	553 001
-	recycle	tons	451 024
-	to export	tons	309 847
2.	Available processing capacity:		
-	number	unity	46
-	power	tons	819 200
3.	Available refrigerators:		
-	number	unity	42
-	power	tons	76 300
4.	Additional power required:		
-	processing	tons	173 047
-	refrigerator compartment	tons	235 970

Source: Based on information from the Ministry of Agriculture of the Republic of Uzbekistan

According to the Ministry of Agriculture of the Republic of Uzbekistan, 86 fruit and vegetable clusters established in our republic in 2020 will produce 1 313,87 thousand tons of fruit and vegetable products, 553,0 thousand tons of which will be directed to domestic consumption, 451,02 thousand tons to processing and 309,85 thousand tons to export. Today, they have 819,2 thousand tons of product processing capacity, 76,3 tons capacity refrigerated cameras. There is also a need for a refrigerator with a processing capacity of 173,04 thousand tons and a capacity of 253,97 thousand tons.

From the information provided, it can be concluded that from the cultivation of agricultural products, the awareness of the processes of their storage, deep processing and delivery to the final consumer to a single system on the basis of clusters makes an important contribution not only to the strengthening of food security, but also to the growth of the country's economy by

Research has shown that today there are the following problems in the development of fruit and vegetable clusters:

- in some regions, the cluster members are forced to join, not on a voluntary basis, that is, they do not have the opportunity to freely select the cluster;
- sometimes there are cases of forcing all farmer farms in one region to enter into a contract with a single cluster, and, naturally, this situation can lead to the transformation of the cluster into a monopoly in this region;
- periods of transfer of money for the harvest grown by clusters to farmers are unreasonably prolonged;
- clusters limit the farm freedom of farmers to some extent.

Conclusion and recommendations

In support of clusters in fruit and vegetable production, we consider it necessary to further simplify the allocation of bank loans and state subsidies for farms in the purchase of modern agricultural machinery, as well as to take measures to attract foreign investment, promote the creation of local brands, provide our products to foreign markets through management companies, promote the state to increase As a result, it is possible to increase the level of agricultural production, timely and qualitative conduct of agro technical activities, increase productivity. It is also necessary to further improve the current legislation on the field and the practice of law enforcement, which in turn creates a legal basis in all respects in the development of the fruit and vegetable system on the basis of clusters.

Based on the study of the experiences of countries such as Italy and South Korea on the organization of agro clusters, the following conclusions can be drawn:

- agro clusters ensure the parties commitment to control and increase the quality and competitiveness of products by combining the technological processes of production–storage– processing – sale of fruit and vegetable products into a single integrated system;
- the division of labor in agro clusters, regional and economic specialization and labor cooperation are strongly developed, which makes it possible to increase production efficiency;
- agro clusters make it possible to effectively use the historical and national traditions of rural areas formed over the centuries and passed down from generation to generation, knowledge, skills and experience in the field of agricultural products cultivation, to preserve them for future generations;
- as a result of the cooperation of state – higher educational institutions - scientific research institutions – farmer farms – processing enterprises – preparation and sale structures in agro clusters, the work on improving the skills of farmers on a regular basis, the introduction of high-performance modern technologies and innovations into production is accelerated;
- agro clusters have a positive effect on the strengthening of export potential of fruit and vegetable products.

Apart from these, the advantages of the cluster of production and processing of agricultural products from other production structures are as follows:

- unified technological chain in a set of unified enterprises;
- a link containing different layers of the population;
- deepening the integration of Science, Education and production, rapid introduction of new innovative technologies into practice;
- after passing through the whole stage of processing raw materials, the good becomes a finished product.

From the experience of the organization of “cluster districts” on the basis of the accumulation of micro firms and small enterprises supplying raw materials around the enterprise (customer) producing the final products of clusters of Italian small enterprises, in a number of districts of our country, such as Bakhmal and Jomboy, apple, grapes in Parkent, Sariasia and Samarkand region, vegetables in districts of Tashkent, In accordance with the purpose of using in the organization of agroclusters for the cultivation, processing and export of pomegranate in the Dashnabad districts of Kitab and Surkhondarya region of Kashkadarya region.

In our opinion, the economic relations between farmer farms and processing clusters of fruit and vegetable growers should be conducted on the basis of equality and mutual respect and in accordance with the following conditions:

- independent solution of the issue of membership in clusters and which cluster to choose;
- to carry out the payment of Bud (60% of the yield value) and the last calculation at the end of the year (the remaining 40%) through the conclusion of “futures contracts” in advance for the future harvest grown;

- never allow a single cluster to occupy a monopoly position in a single region.

To conclude, we can say that the above-mentioned points, proposals and recommendations serve for further improvement of the cluster system in the development of the fruit and vegetable system in the conditions of diversification of the economy.

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