Impact of services provided in Uzbekistan on the added value of dekhkan farms

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Abstract. This scientific article focuses on agricultural development, with special consideration given to the specialization of crop types for farmers, dekhkan farms, and landowners. The research emphasizes the significance of providing plant protection products and mineral fertilizers to enhance crop productivity and quality. Moreover, the study highlights the importance of expanding zoo-veterinary centers and artificial insemination centers for cattle, aiming to improve animal health and breeding practices. In the pursuit of agricultural advancement, it is crucial to cater to the specific needs of different agricultural entities, including individual farmers, dekhkan farms (small agricultural cooperatives), and landowners. By tailoring crop specialization to suit their respective capacities and preferences, the study aims to optimize agricultural output and foster sustainable growth. Furthermore, the research emphasizes the crucial role of plant protection products and mineral fertilizers in ensuring healthy and high-yielding crops. By promoting the use of appropriate agrochemicals and fertilizers, the study aims to enhance agricultural efficiency and contribute to food security. In addition to crop-related measures, the article underscores the need to strengthen livestock farming. Expanding zoo-veterinary centers can bolster animal health and welfare, while artificial insemination centers for cattle can lead to improved breeding outcomes and the development of superior livestock breeds. By combining these efforts, the research aims to enrich the range and quality of services offered to agricultural stakeholders. Through these interventions, the study seeks to foster agricultural progress, enhance agricultural productivity, and contribute to the overall economic development of the agricultural sector.

Keywords. Dekhkan farms, added value, service services, transportation, storage, processing, sales, packaging, technical service.

1 Introduction

It should be noted that in the next three years, specialization of agricultural industries in our republic based on regional conditions, establishment of high-yield crops, perennial orchards and vineyards, placement of their new varieties, diversification of production activities of economic entities and systematic implementation of these processes promising decrees and

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decisions have been adopted by the leadership and government of our country regarding the formation and effective operation of service service entities related to [1-3].

However, according to the analysis, the services provided to agricultural enterprises, especially dekhkan farms and homestead land owners, do not fully meet their requirements in terms of volume, prices, and quality [4-6]. Therefore, in our opinion, it is appropriate to create a coherent and efficient system of service provision.

It is especially important to provide services related to the system of transportation, storage, processing and sale of products in order to ensure the continuity and efficiency of the production of agricultural products, which are directly related to the natural and climatic conditions, soil type and fertility of the land, and their delivery to consumers at the required level and quality plays a role [7-9]. According to the analysis, today in our country, the system of providing all kinds of services to farms producing agricultural products, including dekhkan farms, has been established by the entities that are part of the chain of added value creation [10].

It should be noted separately that in accordance with the programs of harmonious formation of this system, its modernization and diversification, in all regions and districts, taking into account their conditions and specialization in terms of crop types [11], the supply of plant protection products and mineral fertilizers, the expansion of zoo-veterinary centers and artificial insemination centers for cattle, increasing the types and quality of services provided, reducing their prices, and the rapid development of services such as the sale of high-quality goods through auctions creates the basis for a stable increase in the volume of goods and added value in dekhkan farms.

2 Materials and methods

Abstract-logical thinking, monographic observation, statistical-economic and comparative analysis, statistical grouping, social survey and other similar methods were used in the article. It is desirable to consistently implement the following measures in order to create a coherent and efficient system of servis services. Including:

- organization of infrastructure entities in places where they are highly effective and there is a need for their operation.
- provision of services in an acceptable period, quantity and quality for each agricultural enterprise, including dekhkan farms, on the basis of diversification of activities of service providers, regardless of territorial location and the structural structure of networks.
- involving dekhkan farms in the system of working on the basis of the contract with the relevant service provider, as well as ensuring its reliability, the guarantee of the fulfillment of the tasks agreed on by the clauses within the specified periods.
- organization and improvement of the system of introduction of methods of economic stimulation and preferential economic mechanisms for entities providing timely and quality services to dekhkan farms.
- organization of compact agricultural cooperatives in rural areas where dekhkan farms and landowners are mutually integrated, capable of providing all services related to their production activities, protecting their rights and having the authority to enter into various relations with other subjects on their behalf.
- in the structural structure of cooperatives of dekhkan farms and landowners, to establish a financial and accounting center equipped with information and communication tools connected to the Internet, with the possibility of constant exchange of information with other entities, and in it to collect and analyze information specific to each founding entity, to create added value implementation of the functions of accounting for their respective shares in the

added value created in the activities of entities participating in the chain links, as well as in the technological stages after product production, and so on.

Especially in the future, in order to sustainably increase the efficiency of the added value chain in dekhkan farms. Therefore, it is appropriate to dwell on the analysis of the following main types of services and directions, which create the basis for increasing the added value of these dekhkan farms, but are not developed at the level of current requirements (Figure 1).

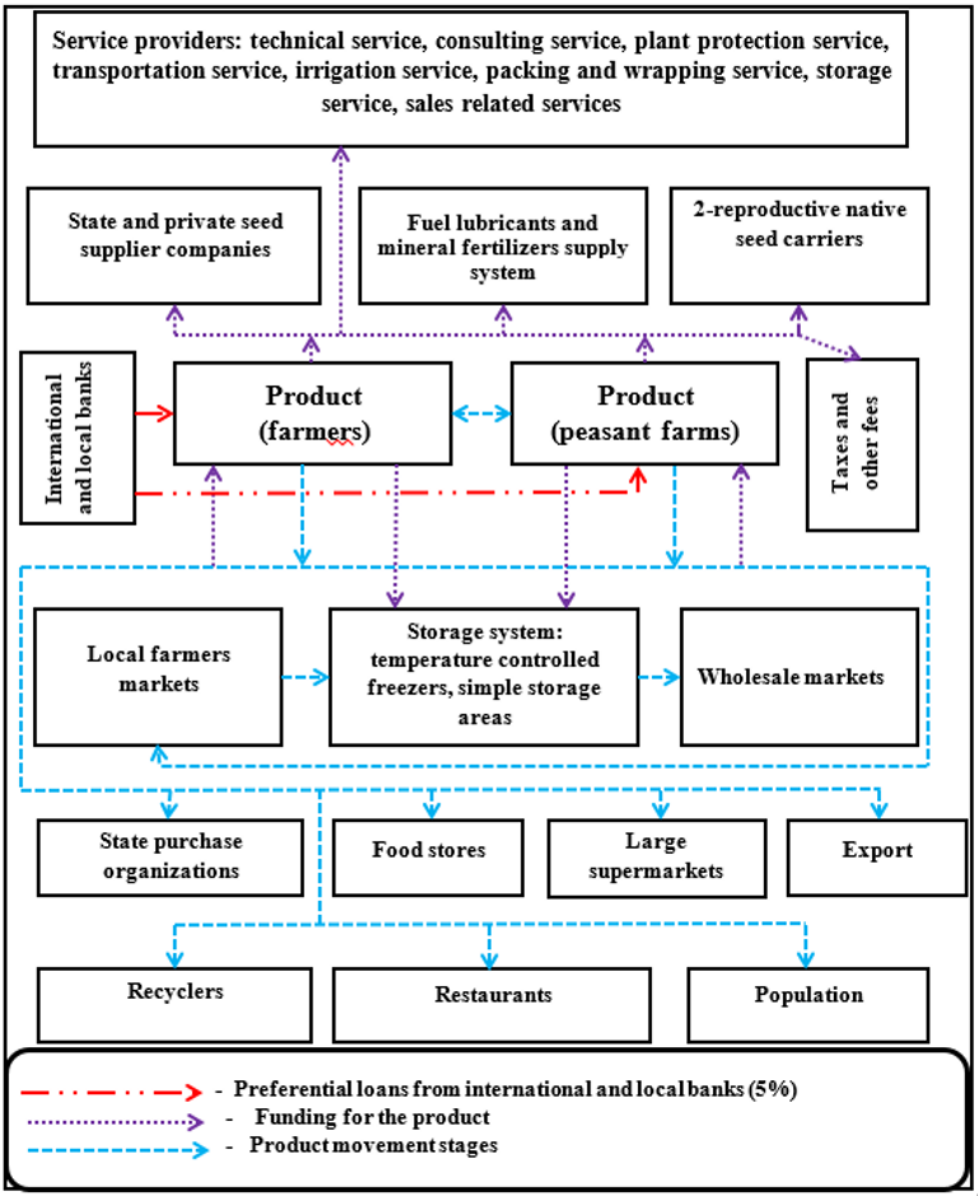

Figure 1. Stages and entities of the value added chain in the processes of production and delivery of agricultural products to consumers.

First of all, there is no integrated system for on-site preparation of farm products, and the services provided in this direction are carried out by informal intermediaries who are interested in purchasing at low prices, and in most cases, seasonal activities. This situation is considered to be one of the service lines that naturally leads to a decrease in the amount of added value created on farms.

Second, farmers, especially those who do not have legal status, face difficulties in using credit lines to expand and diversify production. As a result, due to financial weakness, they cannot fully use their existing production potential because they cannot purchase the necessary resources (quality seeds, seedlings, mineral fertilizers, plant protection products, etc.) in time. Therefore, in order to eliminate such negative situations, in our opinion, it is appropriate to support them by providing subsidies, subvention mechanisms, as well as incentives in tax and price systems.

Thirdly, as one of the important services, in our opinion, it is necessary to organize relations between farmers and trade organizations through futures contracts in a mutually beneficial manner. This system creates an opportunity for them to have financial opportunities before the production of products, to get the maximum added value based on the guaranteed sale of their goods in the agreed period, and to use it in the expansion of subsequent production activities.

Fourthly, in the future, it is important to form and develop commercial skills in the farmers' heads and workers for their effective operation in the conditions of market relations. For this reason, they apply marketing and consulting services in their activities to get acquainted with the main directions and tasks of various infrastructure entities, and for this purpose it is appropriate to establish a system of education in business schools and training courses in the regions.

3 Results and discussion

The increase in the number of farms in our country and their role and share in gross product production, in turn, requires the rapid development of infrastructure entities serving them. In particular, the analysis of the dynamics of the development of infrastructure entities operating in Kashkadarya region shows that in 2015 there were 184 alternative machine tractor parks (MMTP) in the region, and in 2021 there were 196 (increased by 12). The number of branches providing services also amounted to 198 in 2021, which decreased by 61 compared to 2015, and the number of organizations (agrofirms) purchasing agricultural products increased by 2 compared to 2015, and made 55 in 2021 (Table 1).

Based on the data of table 1, it should be noted that in 2021, compared to 2015, at the regional level, the number of branches selling mineral fertilizers, ATMs, and providing veterinary services decreased by 28.6 percent, 90.9 percent, and 23.6 percent, respectively. It is natural that this situation causes great problems, among other things, for a large number of dekhkan farms. However, in the course of the research, it was also revealed that currently infrastructure entities are mainly serving cotton and grain producing farms. Because in our republic there is a guaranteed market only for cotton and grain growers, that is, agricultural enterprises sell the cotton and grain products grown to specific processing enterprises. However, due to the incomplete formation of specific market segments for other types of products, for example, farmers are selling their products, as mentioned earlier, mainly to various informal intermediary entrepreneurs at low prices.

It is known that it is important to use vehicles in agriculture, to increase the fleet of special transport equipment for different types of products and to use them efficiently. However, the

research shows that the existing problems in the service sector are currently leading to an increase in the cost of products. According to calculations, it is permissible to admit that the share of transportation costs in the cost of grain products is 26 percent, and 15 percent in the cost of corn.

Table 1. Dynamics of changes in the number of infrastructure entities serving agricultural sectors in Kashkadarya region, Uzbekistan.

Name of entities by types of services	Years:				2021 Compared to 2015, percent
	2015	2019	2020	2021	
Alternative tractor fleets	184	184	184	196	106.5
Associations of water consumers	151	151	152	151	100.0
Fuel and lubricant sales outlets	185	185	185	343	185.4
Mineral fertilizer sales outlets	126	126	126	90	71.4
Minibanks	121	1326	121	11	9.1
Information and consulting services	43	43	46	x	x
Zooveterinary branches	259	259	259	198	76.4
Transport service stations	6	7	8	6	100.0
Tare, container and packaging material supply stations	15	22	25	28	186.7
Agricultural companies	12	12	12	13	108.3
Departments for purchasing agricultural products	53	53	53	55	103.8

Source: Calculated based on the data of the General Directorate of Economy of Kashkadarya Region, Uzbekistan

Also, if the information and consulting service centers of the market infrastructure work in places with low efficiency, in some places, even many farmers do not know that this organization works. The main reason for this is the lack of adequate provision of qualified personnel, special means of communication, and propaganda work. It is natural that this is a partial obstacle to the application of innovative achievements in their production activities.

Value-added opportunities on farms depend on many factors, which determine the intensity and amount of value-added creation. These factors include the following:

- the presence of infrastructure facilities in the territorial section for the provision of services in the directions related to agricultural activities of dekhkan farms;
- compatibility of the service quality and prices of infrastructure objects related to the provision of services in the directions related to the agricultural network to the ability of dekhkan farms to pay;
- it is possible to purchase technical equipment that allows dekhkan farms to carry out activities related to storage, processing, and transportation of agricultural products;
- the existence of regulatory and legal frameworks related to the development and promotion of the system of storage, processing and sale of agricultural products;
- production, transportation, storage, processing, packaging and the effect of such factors as increasing knowledge related to sales, the degree of creation of opportunities to use advice

in these directions is significant.

At the same time, under the influence of the above factors, the possibilities of creating added value in the system of production of various agricultural products (fruits, vegetables, pulse crops, potatoes, meat, milk production) are formed in different ways.

Considering the above, it is important to know the coefficients of added value creation for the listed types of products for dekhkan farms. In this case, it is recommended to determine the "Coefficient of added value creation by type of crop in dekhkan farms " through a comparative assessment of the possibilities of creating added value within the framework of agricultural products grown on dekhkan farms in separate regions.

Calculation of coefficients will have a regional character. Because the factors affecting the formation of added value have different levels of influence in different regions, and as a result, the coefficients change.

Coefficients are calculated in relation to the main products grown by dekhkan farms (in terms of agricultural products grown in the republic, the weight of farms is high). It is recommended to determine these coefficients as follows (Table 2).

Table 2. Coefficients of added value creation by types of crops in dekhkan farms.

#	The main types of agricultural products grown on dekhkan farms	*The average selling price of a unit of agricultural products within the relevant area and the coefficients determined on this basis (soums/kg as of 2021)*						
		Sell fresh	Selling with storage	Initial processing	Deep processing	Export		Coefficient of added value creation (K)
						fresh	Recycled	
		a	*b*	*c*	*d*	*e*	*f*	$K = \frac{f,d,e}{a}$
1	**Fruits**	5000	10000	12000	15000	20000	25000	**5.5**
Coefficient of added value creation		***0.0***	***2.0***	***2.4***	***3.0***	***4.0***	***5.5***	
2	**Vegetables**	3000	4500	6500	8000	15000	28000	**9.3**
Coefficient of added value creation		***0.0***	***1.5***	***2.2***	***2.7***	***5.0***	***9.3***	
3	**Potatoes**	2000	4000	4500	6000	0.0	0,0	**3.0**
Coefficient of added value creation		***0.0***	***2.0***	***2.3***	***3.0***	***0.0***	***0.0***	
4	**Field**	2000	4000	5000	0.0	8000	0,0	**4.0**
Coefficient of added value creation		***0.0***	***2.0***	***2.5***	***0.0***	***4.0***	***0.0***	
5	**Grapes**	3000	6000	9000	14000	16000	20000	**6.7**
Coefficient of added value creation		***0.0***	***2.0***	***3.0***	***4.7***	***5.3***	***6.7***	
6	**Meat**	45000	0	60000	100000	0	0	**2.2**

Coefficient of added value creation		***0.0***	***0.0***	***1.3***	***2.2***	***0.0***	***0.0***	
7	**Milk**	3000	0	5000	8000	0	0	**2.7**
Coefficient of added value creation		***0.0***	***0.0***	***1.7***	***2.7***	***0.0***	***0.0***	

As can be seen from the table data, at the level of today's technical capabilities, knowledge and acquired practical experience, as well as the average prices of agricultural products, vegetable crops have a leading position in the agricultural production system and are evaluated with the highest coefficient of 9.3.

The cultivation of grapes focused on the possibility of its export has a coefficient of 6.7 and takes the second place. Along with this, opportunities to create added value on farms the lowest indicator is observed in meat and milk production. In this regard, it is worth noting that, first of all, due to the specific characteristics of livestock products, the extremely low capacity of processing and selling livestock products in dekhkan farms has a great impact.

In our opinion, the above-mentioned directions related to the development of the service system to increase the economic and production efficiency of the activities of dekhkan farms and landowners in the future will be the basis for solving the following problems, in particular:

- requires extensive use of innovative products and developments to specialize, diversify the activities of service infrastructure entities and increase their labor productivity, and as a result, creates the basis for an increase in the quality and efficiency of services;
- expansion of the scope of services of infrastructure entities, as well as agricultural cooperatives at the expense of dekhkan farms and homestead landowners, the establishment of mutual relations on the basis of a contract will have a positive effect on further increasing the income of participants;
- existing and newly established infrastructure entities specialize in serving not only farmers, but also dekhkan farms, homestead owners and other household entities, thus expanding the value-added opportunities for these small commodity producers.

4 Conclusions

In order to increase the added value in dekhkan farms, it is advisable to solve the following organizational-structural, economic and social-legal problems:

- harmonious organization of animal husbandry and farming in dekhkan farms, introduction of crop rotation system and periodic supply of profitable new plant varieties (seeds, seedlings) and purebred livestock;
- diversification of agricultural production activities taking into account internal and external consumption needs, and in the process of introducing measures to increase the knowledge and skills of family members;
- the establishment of agricultural cooperatives that include all types of service systems in the cooperation (foundation) of farms in regions or specific rural areas with a dense population, because they effectively participate in relations with other subjects on a large scale compared to one farm, added value have opportunities to increase creation;
- in our opinion, it is reasonable to organize cooperatives on the basis of multi-branch farms that regularly operate effectively in a certain area, export their products not only to domestic, but also to foreign market segments, and have great opportunities for creating added value, due to the contributions made by dekhkan farms and landowners. ;

- it is necessary to organize entities that are adapted to carry out appropriate agrotechnical activities on small plots of land of dekhkan farms and create a competitive environment in the supply system.

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