



Gradual Diversification of the Agricultural System in the Regions

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Annotation: *This article focuses on providing the domestic market with quality products by increasing the volume of food production in Uzbekistan and increasing the country's export potential, specialization of districts in fruit and vegetable growing, merging producers into fruit and vegetable clusters and cooperatives.*

Keywords: *food industry, agriculture, diversification, clustering, modernization.*

In recent years, Uzbekistan has significantly expanded its arable land in order to provide the domestic market with quality products and increase the country's export potential by increasing food production. Practical measures are also being taken to specialize the districts in fruit and vegetable growing, to unite producers into fruit and vegetable clusters and cooperatives.

Therefore, at the initial stage, 55 districts of the country were specialized in fruit and vegetable growing. However, despite the work being done in this direction, the system of effective use of the potential of the regions has not been established. [1].

An analysis of the literature on the subject shows that currently 50 percent of the total crop area is accounted for by high-yielding major grain crops, which leads to a significant shift in crop production to grain-based farming, leading to a low level of diversification. Although this situation is changing, the area under so-called crops (non-food crops) has doubled since the 1960s and now accounts for half of the area under food crops. [2]. The experience of different developing countries confirms the key role of diversification in agricultural development and sustainability [3], [4], [5], [6],[7], but many researchers have a different opinion on the matter. For example, [8], and considers diversification as a strategy of farming systems based on feeding [9]. Therefore, it is important to understand the impact of diversification on production and productivity in this process, as they may or may not always be positively correlated.[10]

It shows that specialization of regions is the right way to grow competitive agricultural products that can meet the requirements of world markets. How the United Nations Food and Agriculture Organization (FAO) needs to change agricultural systems on a regional and global scale in order to make them more sustainable and integrated. The European Regional Conference of the Food and Agriculture Organization of the United Nations (FAO) is open to all members of the organization in Europe and Central Asia. The region of Uzbekistan, which stretches from Namangan to Karakalpakstan and from Tashkent region to Termez, the border with Afghanistan, is vast and diverse, with significantly different food systems. Even before the COVID-19 pandemic, the sustainability of agricultural food systems was at stake. This is due to an increase in obesity among the population (about 23% of the adult population in Europe and 18% in Central Asia), an increase in non-communicable diseases, as well as an increase in malnutrition and micronutrient deficiencies in some countries.

The pandemic in the world has had a major impact on the overall state of nutrition. While food shortages have not been observed, the economic downturn and job cuts are increasingly hampering people’s ability to eat well and lead healthy lives.

Regional food supply networks are working well thanks to the efforts of farmers who have put a lot of effort into continuing food production and collection despite the pandemic and anti-pandemic measures. In Europe and Central Asia, many farms and ranchers reported that they paid their expenses from their own livelihoods using their own funds, and 85 percent of them said their survival depended on the government’s continued support to cover costs.

In this context, appropriate policies and a public-private partnership program are needed to meet the needs of food producers and improve the sustainability of agricultural food systems. Today, relevant issues such as food security, biodiversity conservation and digital innovation are topical processes at the regional level. Digital technologies such as satellite imagery, remote sensors, mobile and blockchain applications have revolutionized science for small farmers and consumers. They can help optimize food networks, increase access to markets, reduce food waste and waste, improve water management, and fight pests and diseases.

Has invaluable knowledge and experience to promote sustainable development around the world. Prior to COVID-19, in 2019, nearly 690 million people worldwide were malnourished. Recent estimates by the Food and Agriculture Organization of the United Nations (FAO) suggest that the pandemic could add up to another 132 million people worldwide. In addition, about 4.5 billion people are connected to the agricultural system to support themselves and their families.

The pandemic has shown the key principle of the 2030 Agenda for Sustainable Development - the importance of not neglecting anyone. Governments, international organizations, the private sector, civil society, academia and other relevant groups need to work together more closely than ever to address challenges and overcome challenges.

Strong cooperation is the cornerstone of the Food and Agriculture Organization of the United Nations (FAO) initiatives to develop sustainable agricultural systems and ultimately end hunger and poverty. Through a new private sector involvement strategy, the Food and Agriculture Organization of the United Nations (FAO) will develop data to support and expand innovation, encourage investment, mobilize scientific expertise, and monitor Sustainable Development Goals based on shared resources, sectors, knowledge and technology. aims to cooperate with the private sector. The Food and Agriculture Organization of the United Nations (FAO) also works closely with parliaments around the world as strategic partners in improving the legal framework, establishing appropriate policies and allocating resources to implement these policies in the food and agriculture sectors. Prior to the pandemic, the Food and Agriculture Organization of the United Nations (FAO) launched the Hand in Hand Initiative, which aims to bring together donor and recipient countries to promote innovation, investment, institutional change, agricultural transformation and sustainable rural development. data-driven support. The initiative is based on modern technologies, such as a geographic platform that delivers basic data and non-traditional data sources, statistical innovations that combine big data with the use of artificial intelligence and decision-making in the Data Lab. Already 29 countries are participants in the initiative, and as many more have expressed interest in joining in the coming months.

Table 1.

Stages of diversification of the agricultural system

№	Name of event	Note
1.	The goal of sustainable development	Complete eradication of all forms of poverty around the world:

2.	Eliminate hunger	Eliminating hunger to ensure food security and nutrition and to promote sustainable agricultural development:
3.	Health and well-being	Ensuring a healthy lifestyle and health for the entire population
4.	Coping with climate change	Take urgent action to combat climate change and its consequences
5.	Responsible consumption and production	Transition to rational consumption and production models
6.	Cooperation for sustainable development	Development of international cooperation for sustainable development

In response to the pandemic, the Food and Agriculture Organization of the United Nations (FAO) has developed a comprehensive and integrated COVID-19 control and rescue program to make a global, regional and national impact. The program is in line with the UN’s “Build for Change” approach and aims to mitigate direct socio-economic impacts while strengthening the long-term sustainability of food systems and lifestyles in close collaboration with various stakeholders. If we want to recover faster after the COVID-19 pandemic and achieve the Sustainable Development Goals, we need to preserve biodiversity, produce food, and make the necessary changes in our interactions with nature.

Phases of Agricultural Diversification and Modernization The Food and Agriculture Organization of the United Nations (FAO) is committed to maintaining food value chains, stressing that the crisis can only be overcome if countries cooperate and trade freely. Many countries in the region are working to improve their agricultural food trade policies.

The directions for these goals are a great responsibility, which strengthens the commitment to ensure the supply of nutritious food for all and to eradicate hunger altogether. The Food and Agriculture Organization of the United Nations (FAO) is an important step in fulfilling this commitment. New ideas are strong partnerships and new ways of working towards production, nutrition, the environment and common goals in life.

Table 2.

The main indicators of the feasibility study of "Diversification and modernization of agriculture."¹

T/ p	Projects	Unit of measurement	TOTAL	Andijon	Namangan	Fergana
COMPONENT I: Financing of agricultural diversification						
1.	Intensive gardens	hectare	1 050	338	347	365
2.	Greenhouses	hectare	41	10	13	18
3.	Refrigerated warehouses	tons	24 500	8 000	10 000	6 500
4.	Processing capacity	tons	27 000	9 000	9 000	9 000
5.	Livestock development	head of cattle	3 820	1 290	1 270	1 260

¹ From the Resolution of the President of the Republic of Uzbekistan dated September 15, 2020 No PP-4830 "On additional measures for the implementation of the project" Diversification and modernization of agriculture "with the participation of the International Fund for Agricultural Development"

COMPONENT II: Modernization of irrigation systems						
6.	Irrigation canals	km	50	15	15	20
7.	Irrigation wells	pieces	15	5	5	5
8.	Electric pump channels	pieces	15	5	5	5
9.	Electric pump channels	pieces	15	5	5	5
10.	Agrometeorological station	pieces	3	1	1	1
11.	Vertical well systems	pieces	36	12	12	12
COMPONENT III: Development of the system of knowledge, innovation and agro-services in agriculture						
12.	Entrepreneur training	number of entrepreneurs	1 000	330	340	330
13.	Introduction of Organic and Global GAP standards (per year)	number of enterprises	15	5	5	5
14.	Exhibition areas	hectare	15	5	5	5
15.	Veterinary clinics (including mobile clinics)	pieces	4	1	2	1

In conclusion, in the diversification and modernization of agriculture in Uzbekistan, it would be expedient to do the following:

- Supporting the diversification of activities to promote cooperation between agricultural producers:
- Development of small business in agriculture:
- Allocation of guarantees and compensation to fruit and vegetable clusters and cooperatives in the region:
- Creation of clusters in the food network in regional agro-service centers and support their activities.

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