Economic Geographical Aspects of Agriculture, Forestry and Fishing Development of Andizhan Region

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Abstract: the article provides information on the development and systematic implementation of the agricultural sector in the Andijan region, issues of cultivation, increasing the efficiency of agricultural production, the importance of grown products in meeting the needs of the population, as well as in saturating domestic and foreign markets.

The article expresses the opinion about four agrochemical zoning of the territory of the region for the proper effective development of agriculture in the region, which is one of the most important factors in the development of the industry.

Keywords: agriculture, industry, intensive, product, yield, agro-climate, zoning, vegetation, relief, heat, light, humidity, soil, animal husbandry, hunting.

Introduction. Although Andijan region accounts for only 1% of the country's land area (4.3 thousand km²), it is one of the leading regions in the country with intensive agricultural development.

The agricultural sector is a developed economic sector of the country, including Andijan region. Agriculture is primarily a food source, the main source of production, the main basis for meeting the demand for food in this area is grain, vegetable oil, meat, dairy products, eggs, poultry, fish, honey, potatoes, vegetables, melons, berries, fruits, grapes, fodder for livestock, fodder, pharmaceuticals, cultivation of medicinal plants for pharmacology, development of forestry.

Agriculture serves as a raw material base for many industries. In particular, it is a raw material base for the development of the chemical-biochemical industry of cotton ginning, spinning, textile, clothing through the supply of fiber products such as cotton, cocoons, flax, hemp to the light industry.

Research results. In order to develop and systematically implement the agricultural sector in the region, to increase the efficiency and productivity of agricultural products, the territory of the region is planned agro-climatic zoning, depending on the characteristics of crops, climatic resources.

The first is called the Central District Group, which includes the western part of Ulugnor district, Mingbulak, and the areas where fisheries are located;

The second is the group of Northeast (Andijan) districts, which includes the north-east of Ulugnor district, north of Boston, north, north-east of Shahrikhan, north of Asaka, Balikchi, Altynkul, Izbaskan, Pakhtaabad, Andijan districts, South of Jalal-Abad, Jalal-Abad. upper part, east of Qurghonteppa, north-eastern parts.

The third is the group of Southern (Fergana) districts, which includes the south-western part of Ulugnor district and Mingchinor districts.

The fourth is a group of south-eastern districts, which includes the south-eastern part of Ulugnor.
district, Akaltin, all parts of Boston except the north, the center and south of Shahrihan, the south-western part of Asaka, all territories of Marhamat district, Bulakbashi, south of Shahrihansay valley of Khojaabad district. It includes the Karasuv areas of Gurghonteppa.

From the point of view of the development of the agricultural sector of Andijan region, the reason for such agro-climatic zoning is based on the hydrothermal and vegetation temperatures of the growing season. Such zoning differences are a clear manifestation of the fact that the vegetation period of plants changes from west to east of the region.

First of all, air temperature is important in differentiating the growing season. The agro-climatic zoning of the region takes into account the natural geographical conditions of the area, including the topography, climatic indicators, heat, light, humidity, soil characteristics.

In 2020, Andijan region produced agricultural, forestry and fishery products worth 27.117.1 billion soums, which is 102.9% more than in 2019, including agriculture and livestock, hunting and services in these areas amounted to 26346.6 billion soums (102.9%), forestry 641.0 billion soums (102.5%), fisheries - 129.3 billion soums. Soums (117.2%). Andijan region accounts for 10.1% of the country's agricultural, forestry and fisheries production

The growth rates of agricultural production and services in agriculture and fisheries in the region over the past period, including: agriculture and livestock, hunting and services in these areas - 102.9%, forestry - 102.5%, fisheries - 117.2%. The satisfaction of the population's demand for these products is higher than the national average.

If we study the share of the region in these areas by cities and districts, then the activities of rural, forestry and fisheries between cities and districts differ significantly, because of course there are differences in the development of these industries in the regions and the factors that cause these differences.

Including: production and services in billion soums 135.6 in Khanabad, 751.7 in Andijan, districts Ulugnor 1435.5, Bulakbashi 1436.2, Boston 1445.1, Andijan 1553.0, Khojaabad 1555.8, Izboskan 1559.2, Altynkul 1636.4, Baliqat.08, 1938, Marhamat 193.8. In Pakhtaobod 2109.0, Jalal-Abad 2533.6, Asaka 2625.1, Shahrihan districts products and services worth 2626.0 billion soums were developed and services were provided. Among the districts of the region, the highest level of production of agricultural, forestry and fishery products and services in this area fell to Shahrihan, Asaka, Jalal-Abad districts, the lowest to Ulugnor and Bulakbashi districts.

The agricultural products of the region are distinguished from other regions of the country by their high productivity, productivity, high product quality, low cost, purchase on the world market, low labor costs and high income.Шаҳар ва туманлар кесимида қишлоқ, ўрмон ва балиқчилик хўжалиги маҳсулот (хизмат)ларининг ҳажми(млрд. сўмда)

The total amount of agricultural, forestry and fishery products grown in the region in 2018 amounted to 20183.9 billion soums, this figure reached 24314.9 billion soums in 2019 and 26142.8 billion soums in 2020. indicates that the biological, physical, chemical composition of the soil is positive.

The production of agricultural products in the region in 2020 compared to 2019 amounted to 102.7%, including agricultural products 16839.9 billion soums or 102.9%, livestock products 9302.8 billion soums 102.3%.

Andijan region is second only to Samarkand region in the field of agriculture, forestry and fisheries, the lowest rate in this area is in the Republic of Karakalpakstan, which in 2018 produced 6995.5 billion soums, and in 2019 - 8769.3 billion soums.

The highest rates in the field of agriculture, forestry and fisheries are mainly in Samarkand, Andijan, Tashkent, Bukhara, Fergana and Surkhandarya regions.

In the field of agriculture, agriculture occupies a special place in the region. In particular, 13106.5 billion soums worth of products were grown in 2018, 15926.3 billion soums in 2019.
which is 16839.9 billion soums in 2020, which is 102.9% of the total volume of agricultural production in the region. High yields are achieved in corn, legumes, cotton, potatoes, vegetables, melons, horticulture, viticulture.

One of the most important sectors of the agricultural sector, animal husbandry is also becoming a multi-sectoral sector. Meat, meat-milk, milk, dairy-meat cattle-breeding is a sector of special importance.

Breeding in the field of breeding cattle is also well established, and today the region provides livestock farms with the needs of breeding calves. In addition to cattle breeding, sheep breeding and goat breeding are also developing sectors, and breeding sheep and goats are being imported and bred. As a result, wool, meat, diet meat, medicinal goat's milk are produced to meet the needs of the population in these products.

6499.8 billion in 2018, 7760.4 billion in 2019 and 9302.8 billion in 2020 in the region. The main sector is the production of meat, milk, wool and leather products to meet the needs of the population in meat and dairy products, as well as the processing of wool and leather products and the supply of raw materials for the production of textiles and leather shoes. Of these, 64.4% are agricultural products and 35.6% are livestock products.

The distribution of products in this sector by regions (cities and districts) is as follows

Table №1. Agricultural products grown in the region by districts
(as a percentage by industry)

<table>
<thead>
<tr>
<th>Regions</th>
<th>In% of agricultural products</th>
<th>Livestock products in%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shakhrikhon</td>
<td>64.0</td>
<td>36.0</td>
</tr>
<tr>
<td>Pakhtaobod</td>
<td>65.3</td>
<td>34.7</td>
</tr>
<tr>
<td>Andijan</td>
<td>60.1</td>
<td>39.9</td>
</tr>
<tr>
<td>Ulugnor</td>
<td>53.7</td>
<td>46.3</td>
</tr>
<tr>
<td>Asaka</td>
<td>62.4</td>
<td>37.6</td>
</tr>
<tr>
<td>Oltinkul</td>
<td>63.9</td>
<td>36.1</td>
</tr>
<tr>
<td>Bulokboshi</td>
<td>60.2</td>
<td>39.8</td>
</tr>
<tr>
<td>Jalakuduk</td>
<td>66.5</td>
<td>33.5</td>
</tr>
<tr>
<td>Balikchi</td>
<td>70.9</td>
<td>29.1</td>
</tr>
<tr>
<td>Markhamat</td>
<td>69.3</td>
<td>30.7</td>
</tr>
<tr>
<td>Khujaobod</td>
<td>78.8</td>
<td>21.2</td>
</tr>
<tr>
<td>Buston</td>
<td>68.4</td>
<td>31.6</td>
</tr>
<tr>
<td>Izboskan</td>
<td>63.5</td>
<td>36.5</td>
</tr>
<tr>
<td>Kurgontepa</td>
<td>62.4</td>
<td>37.6</td>
</tr>
<tr>
<td>Andijan</td>
<td>40.4</td>
<td>59.6</td>
</tr>
<tr>
<td>Khonabod</td>
<td>23.4</td>
<td>76.6</td>
</tr>
</tbody>
</table>

From the data of this table it can be seen that the cultivation of crops in the cities and districts of the region in agriculture and animal husbandry, which are the main branches of agriculture, differs slightly, although production does not differ sharply between districts. This is due to factors such as the geographical location of the regions, their specialization, availability of machinery and technology, quality indicators of labor resources, the size of arable land for agriculture, its quality, availability of pastures for livestock, fodder base. 64.9% of agricultural production is accounted for by dehkan (personal assistant) farms, 32.6% - by farms, and 2.5% - by organizations engaged in agricultural activities.
In the volume of agricultural production
the share of organizations engaged in agricultural activities, in %

The highest share of farms in the structure of agricultural production in the region is 45.6% in Balikchi district, the largest share of dehkan (personal assistant) farms is in Khanabad 100%, the highest share of agricultural organizations is in Kurgantepa district.

In contrast, the lowest share of farms is 23.6% in Altynkul district, the lowest share of dehkan (personal assistant) farms is 49.4% in Boston district, and the lowest share of agricultural organizations is in Balikchi district - 0.2%.

The total area under crops in Andijan region is 217.3 thousand hectares, including 85.8 thousand hectares of grain crops, 80.7 thousand hectares of technical crops, 79.1 thousand hectares of cotton, 33.0 thousand hectares of potatoes and 17.8 thousand hectares of fodder crops. 620.1 thousand tons of grain, including 479.8 thousand tons of wheat, 258.1 thousand tons of cotton, 369.1 thousand tons of potatoes and many other types of agricultural products are grown in the region. The agricultural sector in the region is very well developed, and the Republic is achieving the highest rates in agriculture. The volume of agricultural products in 2020 amounted to 19839.9 billion soums, or 102.9% compared to 2019. The share of agricultural products in the total volume of agricultural production was 64.4%.

In 2020, a total of 561.0 thousand tons of grain was grown in the region, of which 53.1 thousand tons fell to dehkan (personal assistant) farms, 37.5 thousand tons fell to agricultural organizations. The growth rate of grain production was 113.3% in farms, 101.5% in dehkan (personal assistant) farms, and 148.1% in agricultural organizations.

In terms of productivity of agricultural products grown in the region, it is much higher than in the Republic and other regions. For example, the yield in the country was 42.6 quintals of grain, including 46.3 quintals of wheat, 25.6 quintals of cotton and 227.3 quintals of potatoes, while in Andijan region the yield was 61.8 quintals of grain, 62.9 quintals of wheat, 32.6 quintals of cotton and 254.3 quintals of potatoes. This indicator indicates that the agricultural sector in the region is well developed, the introduction of new technologies, the efficient use of land, mineral and local fertilizers. The yield of cotton is 180% higher than in Kashkadarya region, 150% higher than in Surkhandarya, and more than 200% higher than in the Republic of Karakalpakstan. Samarkand is the third largest producer of potatoes after Navoi.
The vegetable growing sector is also well developed in the region. In 2019, 1596.9 thousand tons of vegetables, 174.2 thousand tons of melons, 633.4 thousand tons of fruits, 77.6 thousand tons of grapes were grown in the region, in 2020 1611 thousand tons of vegetables were grown. For example, 38.0% of farms in the region, 61.0% of dehka (personal assistant) farms, and 1.0% of agricultural organizations grew vegetables.

**Vegetables**

**Size, thousand ton**

<table>
<thead>
<tr>
<th></th>
<th>Farms</th>
<th>Personal Assistant Farms</th>
<th>Organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>612.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>983.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.2</td>
<td></td>
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</tbody>
</table>

**Growth rate**

<table>
<thead>
<tr>
<th></th>
<th>Farms</th>
<th>Personal Assistant Farms</th>
<th>Organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>98.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>101.4%</td>
<td></td>
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</tbody>
</table>

Figure 4. In the volume of grain production

Although Andijan region does not specialize in potato growing, in 2020, 376.6 thousand tons of potatoes were grown in all categories of farms in the region, which is 0.2% more than in 2019. 75.6% of potato production is accounted for by dehkan (personal assistant) farms, 23.8% by farms and 0.6% by agricultural organizations. Dehkan (personal assistant) farms grew 284.6 thousand tons of potatoes, the growth rate was 101.9%, while farms grew 89.2 thousand tons of this important agricultural product and achieved a growth rate of 100.2%. Agricultural organizations have contributed to the cultivation of potatoes in the region, growing a total of 203 thousand tons of potatoes.

Jalal-Abad, Kurgantepa, Shahrihan, Pakhtaabad, Asaka and Balikchi districts are leading in the cultivation of potatoes in the region with 32.8-38.9 thousand tons of potatoes, while in Ulugnor, Andijan and Bulakbashi districts 6.4-17.8 thousand tons of potatoes are grown. Prevents high productivity. Due to the fact that potatoes are an important product in meeting the food needs of the population, special attention is paid to the cultivation of potatoes in the region.

Figure 5. The share of organizations engaged in agricultural activities in the volume of vegetable production.
Andijan region is the third largest producer of potatoes after Samarkand and Navoi regions, with a yield of 254.3 quintals per hectare.

In 2020, 169.5 thousand tons of melons were grown in all categories of farms in the region, with farms producing 114.3 thousand tons, dehkan (personal assistant) farms 54.5 thousand tons, and agricultural organizations 0.7 thousand tons. The growth rate of productivity in this area was 96.6% in farms, 98.8% in dehkan (personal assistant) farms, and 92.7% in organizations engaged in agricultural activities.

Balikchi, Ulugnor, Shahrihan, Boston districts lead the region in the production of melons, up to 20.8-34.3 thousand tons, and in Izbaskan, Andijan, Bulakbashi districts - 1.8-3.3 thousand tons. The main reason for this difference in regions is the lack of arable land in Balikchi, Ulugnor, Shahrihan, Boston districts compared to the following districts, sown and harvested in large quantities.
Andijan has long been a land of gardeners and viticulturists, specializing in horticulture and viticulture.

Hazrat Zahiriddin Muhammad Babur says in his famous work "Boburnoma": The harvest will be good, the fruit will be abundant, and the melons and grapes will be good. It is not uncommon to sell melons at the beginning of the melon season. There is no better noshpot than Andijan noshpot."

In today's developing society, Andijan region, like other regions of the country, is a leader in many areas. In particular, the region is achieving good results in the cultivation, storage and processing of fruits and berries. In 2019, 633.4 thousand tons of fruits and berries were grown in all economic entities of the region, this figure increased to 666.9 thousand tons in 2020, an increase of 5.3% compared to 2019. 70.4% of fruits and berries are grown on dehkan (personal assistant) farms.

**Figure 7.** The share of organizations engaged in agricultural activities in the volume of production of melons
Figure 8. The share of organizations engaged in agricultural activities in the production of fruits and berries.

469.2 thousand tons of fruits and berries grown in the region belong to dehkan (personal assistant) farms, 191.1 thousand tons to farms, and 6.5 thousand tons to agricultural organizations. The growth rate in this sector also differs sharply from each other in terms of economic categories of products produced. This figure was 113.3% in farms, 101.5% in dehkan (personal assistant) farms, and 2.8% in organizations engaged in agricultural activities.

The volume of cultivation of fruits and berries grown in the region by region is as follows. Asaka, Khojaabad, 68.8, Jalaquduk, 66.7, 62.9 thousand tons, Ulugnor, 13.3, Boston, 24.2, Bulakboshi, 28.6 and Qurghontepa districts produced the most fruits and berries. This figure was 3.3 and 13.2 thousand tons in the farms around the cities of Khanabad and Andijan. The low level of fruit and berry production in Ulugnor, Boston, Bulakbashi and Kurgantepa districts is due to the lack of arable land and relatively poor soil and natural conditions, as well as the lack of specialists in the field.

Andijan viticulture should be associated with the period of human activity in the region. Because in many regions of the country a lot has been achieved in the field of viticulture, and today it is famous for growing grapes. For example, the achievements in viticulture in Parkent, Urgut, Margilan, Aliyark, Besharik, Kuva districts deserve special mention. However, the grapes grown in Asaka, especially Kungrad, Bulakbashi, Khojaabad, Marhamat, Jalakuduk districts of
Andijan are world-famous for their juiciness, glucose content and high quality. In Andijan, the famous "Husseini", "Kelinbarmok", "Kizil Darayi", "Ketmonsopi", "Charos", "Crimea" and new varieties of grapes "Mersades" are grown. In 2017, when determining the sugar content of grapes grown in the world in terms of sweetness, Hussein took the first place in terms of excess sugar in grapes grown in Andijan.

In conclusion, although the area of the region is small, it is clear from the above analyzes that soil fertility and favorable climatic conditions affect the high productivity of all agricultural products. The distribution of labor resources is very high in Andijan, Shahrikhan districts, and in Boston and Ulugnor districts, where the area of arable land is large, and the imbalance does not allow for the efficient use of agricultural land. In the case of intensification, it is recommended to classify relatively low (livestock, grain) and labor-intensive (horticulture, vegetables) agricultural products by type of production.

References:
5. Андижон вилоятининг иктисодий хариталари. – Тошкент, 2015.
7. Ўзбекистон Республикаси Давлат статистика кўмитаси, Андижон вилояти статистика бошқармаси тўпламлари. Андижон, 2021.
8. Z.M.Bobur."Boburnoma”.Toshkent."Sharq” nashriyoti-matbaa aksiyadorlik kompaniyasi bosh taxririyiati. 2002.34-b