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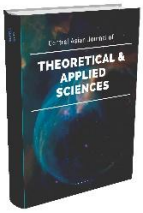

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Using Agroclimate Resources in Fergana Valley

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Annotation: *Ensuring the sustainable development of the country on the basis of constant reform of agriculture, the involvement of new, mainly environmentally friendly technologies climate, rational use of agroclimate resources and on this basis the placement of agricultural crops was considered an urgent task.*

Key words*: agroclimate, resources, Fergana valley, temperature.*

INTRODUCTION

The global change in climate, which is currently being observed, is due to the different components of the environment and their impact on individual characteristics and socio-economic sectors. Accordingly, in 2017-2021, developed on the initiative of the president of the Republic of Uzbekistan Shavkat Mirziyoyev, "the strategy of actions adopted on the five priority directions of development of the Republic of Uzbekistan is of particular importance in this regard, in which it was indicated the need to develop and introduce effective systematic measures to mitigate the negative impact of global climate

As in Uzbekistan, agroclimate resuscitators serve as the main factor in the development of Agriculture in the Fergana Valley. The Fergana Valley also has specific climatic features, and its geographical location in its formation, the distance from the ocean, the surrounding area is surrounded by high mountain formations, radiasion and circulatory processes play an important role. As a result, a very continental climate is decided on the territory, and the climatic condition of the incomplete desert region is evident. The climate of the Fergana Valley arose as a result of its geographical location and, in connection with it, the influence of the sun, atmospheric circulation, release, the condition of the Earth's surface and plants, the climate of human economic activity under certain conditions. Among the factors that make up the valley climate, one of the most important is its geographic location and the associated solar location. Solar radiation is the energy negation of all natural processes. It, in turn, is connected with the geographical width of the place, the openness of the air and the period when the sun shines.

The climate of the Fergana Valley is dry, persistent, summer is hot, winter is temperate. Cold air, blowing from the mountains surrounding the Valley, accumulates in the central part of the Fergana wreck in winter, as a result of which the average temperature of January is -3°C. Some years the cold air mass blowing from the North and North-East passes through the mountains, and the temperature of the district decreases greatly. At such times, the lowest temperature drops to -3,0, -31°C. But in winter, along with

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frosts, sometimes + 15°C stands out as warm days. In the Fergana Valley, spring is short and the weather is often changing, the heater cools down. If the temperature sometimes rises to 27, +36°C in April, it can sometimes drop to -3, -5°C. From the second half of May, the air warms up, the amount of precipitation sharply decreases, a real warm, dry summer begins. The average temperature in January is -2,3° in Kokand, -4,8° in Kampirravot. Lowest temperature in Kokand -27,9°, in Kampirravot -32°. In summer (in July), the average temperature is 26,3° in Fergana, Andijan, Namangan, 27,5° in Kokand. (Diagram-4.3.1.) The highest temperature rises to 40-44°C in these regions. The sum of the positive harnesses is 4000-4800°. The vegetation period is 235-240 days. The amount of precipitation is 80-100 mm to the West, 150-200 mm to the East, 74 mm to the South-west, and 200-300 mm to the North. Most of the precipitation falls in the spring, in the summer it almost does not fall. It stands for strong winds ("Kokand" and "Bekabad" winds).

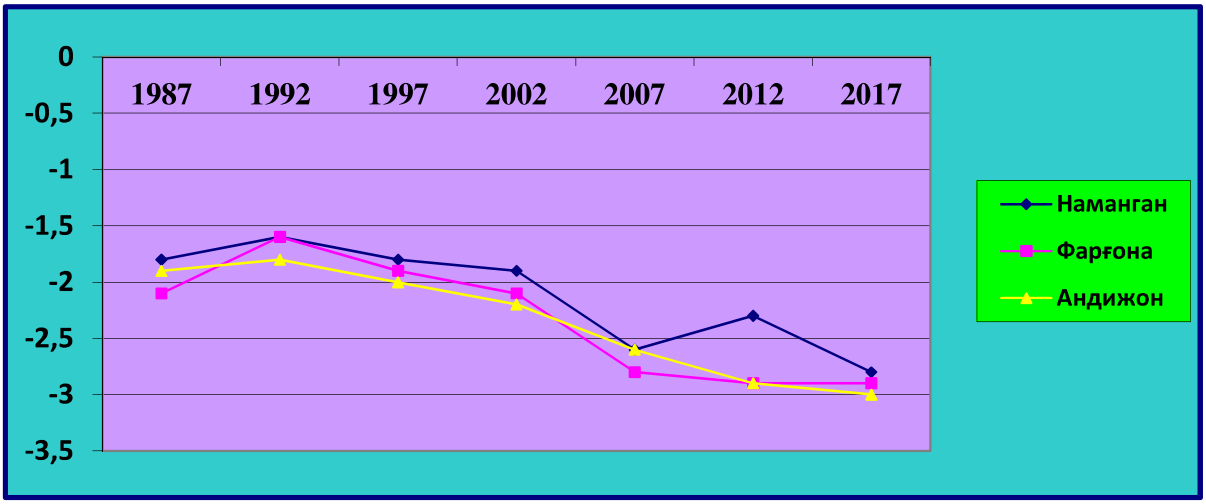

Diagram-4.3.1. Average temperature indicators observed in January in the Fergana Valley (1987-2017 years)

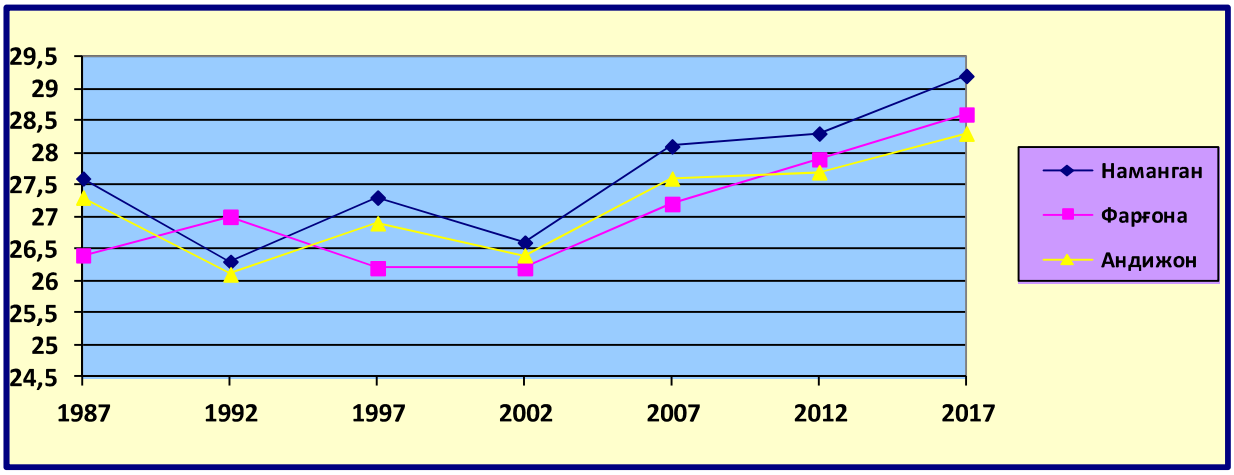

Diagram-4.3.2. Average temperature indicators observed in July in the Fergana Valley (1987-2017 years)

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In the formation of specific features of the valley climate, Arctic air flows from the north and tropical air flows moving from the south are involved. These air currents are often blocked by high mountain formations, but high air flows freely penetrate into the territory of the Valley and form the main precipitation.

Especially in autumn and winter, the penetration of Arctic air masses is affected by a sharp decrease in air temperature, while the wet air masses of the Atlantic ocean are affected by an increase in precipitation. In summer, moderate and tropical air currents ensure that the climate of the region is dry and warm.

In the region of the adiris, adirorti and foothill plains, the climate varies significantly from West to East and from south to north (Kosonsoy st.). Daily and annual air temperatures fluctuate to some extent, as well as a very continental feature is characteristic. The average temperature of January is -6-8°C, the lowest temperature is -29-30°C, the average temperature of July is +26+28°C, the highest temperature reaches +43+44°C.

In the valley, the average speed of the wind blowing from the north is 1-3 m/sec, and the recurrence process is 30-80 percent. North-west winds are also often repeated. The main place in the Fergana Valley are the mountain-valley winds, they move at night, along the shadow valleys. This can be cited as an example of the mountain-valley wind, which received the name "Kosonobod" on the territory of Namangan region.

In the specialization and development of the agricultural sector, the resources of the relief, climate, soil, water and natural spring play an important role. Existing agroclimatic features and socio-economic factors lead to the development of a cotton-industrial complex in the Fergana Valley (which includes the stages of cultivation, preparation, processing of cotton), horticulture, viticulture, vegetable-gardening, potato farming (relief, soil and climatic characteristics), livestock farming (on the basis of cotton-alfalfa swapping planting and natural Sagittarius).

The sum of air temperatures above air +10°C in the valley area is 4700° at 500-550 m above sea level, 4400° at 550-750 m and 4100° at 750 m. In the plains of the valley cotton and rice growing are well developed. These regions belong to the continental climate, the average temperature in January is 0.2-2.4°C, and in July it is 20+28°C. Annual precipitation is 150-180 mm, the growing season is 230-240 days. The sum of temperatures above +10°C is 5000-4600°C. The open air causes the fruits to be juicy and the diseases that occur in them to be reduced. In the northern, eastern and southern hills of the Fergana Valley, the average annual temperature is 20+25°C (maximum temperature 40+41°C), and the January temperature is -1.5-4°C (minimum temperature -20-28°C). , the growing season is 220-230 days, a little more precipitation than in the plains. Until recently, the hills were used in agriculture mainly as spring and partly as summer pastures. Since the 1970s, the intensive development of the hills, the construction of irrigation facilities and pump irrigation, and the establishment of a number of specialized farms have led to the expansion of cotton fields.

The climate of the foothills of the valley is a bit cold, the average temperature in January is -2-4°C, in July +20+21°C, the annual precipitation is 250-500 mm. Vegetation period is 180-200 days. Agro-climatic features allow the development of arable farming, horticulture, viticulture, fodder crops, livestock

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in the foothills. Under the influence of favorable agro-climatic and socio-economic factors, a unique agricultural production was formed in the Fergana Valley. The valley is characterized by specialization in the cultivation of cotton, various fruit and vegetable crops. The total sown area is 780,000 hectares, of which 42% is occupied by cotton, 42% by grain, 8% by vegetables, 4% by fodder crops, and 4% by other crops. The soil and climatic conditions of the Fergana Valley are very favorable for growing vegetables and melons. Diagram - 4.3.3.

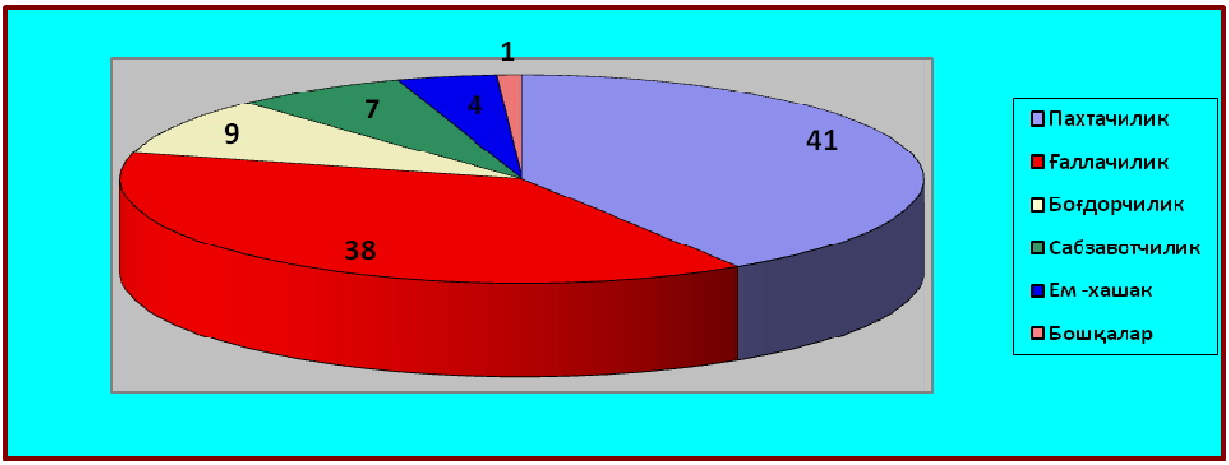

Diagram - 4.3.3. The structure of the network of arable lands in the Fergana Valley

But hail and heavy rains (especially in the northern region) also cause great economic damage to crops. In order to prevent these incidents, a militarized anti-hail unit service was established in 1969. However, despite the measures taken, heavy rains and hail continue. In addition, the memorized silver powder is causing rain and poisoning of fruit and vegetable crops, leading to an increase in various diseases, which suggests that in the future it is advisable to abandon military service against hail in the most densely populated Fergana Valley. The territory of the Fergana Valley has favorable agro-climatic features, as well as favorable conditions for the development of greenhouses. Greenhouse farms play an important role in meeting the needs of the population for fresh vegetables in winter and spring.

According to the classification of L.N.Babushkin, N.A.Kogay, Sh.S.Zokirov (1985), the territory of the Fergana Valley can be divided into the following agro-climatic zones:

1) Warm (5000-45000C),

2) Moderate, hot and dry (4500 -40000C),

3) Hot and cold (4000-30000C),

4) Cool and humid (3000-10000C). According to this classification, the allocated agro-climatic zones in the region have their own characteristics and are distributed differently in the valley districts. In particular, the territory of Mingbulak, Namangan, Turakurgan, Uychi, Narin, Furkat, Buvayda, Kushtepa, Izbaskan, Andijan, Jalalquduq, Ulugnor districts and the southern parts of Pop, Chust, Chartak districts are hot, the hills and plains of Pop, Chust, Kosonsoy, Turakurgan, Chartak, Yangikurgan, Kuva, Rishtan and Fergana districts temperate are hot and dry, the foothills of the region are warm and temperate, and the high mountains (Chatkal, Qurama) are cool and humid agro-climatic zones.

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