



CLIMATE CONDITIONS OF SURKHANDARYA PROVINCE, RESEARCH OBJECT AND METHODS

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Article history:	Abstract:
Received: September 6 th 2022 Accepted: October 6 th 2022 Published: November 11 th 2022	This article is written about the climatic conditions of Surkhandarya region, research object and methods. So, it is quite long from north to south. The province is surrounded by mountains on three sides, its border is open to the south, and its border with the country of Afghanistan through the Amudarya valley in the south is extremely curved according to the river bed. High mountains located on the western and north-western borders of Surkhandarya are factors that create special climatic conditions in the region.
Keywords: Surkhandarya, climate, sharoi, research, object, method, north, south, mountain.	

INTRODUCTION. Surkhandarya region is located in the southernmost part of our country. At the same time, it is located in the southern part of Central Asia, and its territory corresponds to the dry subtropical climatic region. The territory of Uzbekistan is divided into two parts - the main part consists of plains, and the lower part consists of mountains and intermountain depressions. The land surface of our republic gradually rises from the west and north-west to the east and south-east[1]. The lower part of Uzbekistan is 60-100 m above the ocean level and is located around the lower part of Amudarya and the Aral Sea. The eastern and southeastern parts of the republic are covered by the branches of the Tianshan and Pamir Aloy ranges, the highest mountains of Central Asia.

ANALYSIS AND RESULTS. These mountains decrease to the west and north-west, and in the east and south-east their height reaches 7495 m above sea level. The north-western part of Uzbekistan is occupied by the central part of the Turan plain. About 70% of the territory of Uzbekistan is plain, and the remaining 30% is occupied by mountains. The borders of these parts are extremely crooked, some mountain ranges have pushed into the plains, and in some places the plains have entered in the form of an arm between the mountain ranges. The highest point of Uzbekistan - Hazrat Sultan peak on the Hisar mountain range - 4648 m. The lowest point of Uzbekistan - Mingbulok depression in the Qizilkum desert -12 m. Uzbekistan is located on the Asian continent, between its two major rivers, Amudarya and Syrdarya, and includes the Turanian plain in the west and mountainous regions in the east[2]. The nature of the republic is rich and diverse. A large part of the territory of Uzbekistan is occupied by deserts and deserts, there are sky-high mountains in the eastern part, and wonderful valleys

around the rivers. The remote (at the same time, southern geographical) location of Surkhandarya region required that it border more foreign countries than other regions. It is bordered by foreign countries Tajikistan to the north, northeast and east[3], Turkmenistan to the west, and Afghanistan to the south through the Amudarya basin. Also, the region borders with the Kashkadarya region of our country through high mountains in the west. The boundary line of this border corresponds to the edges of the Hisar ridge, the highest mountain of our republic. The mountain ranges of Hisar, which belong to the Pamir Mountains, known as "the sky of the world", are stretched in the form of a mighty wall: Kushtang (its highest peak in the region is 3723 m above sea level), Ketmonchopti (3168), Sarimas (1890 m), Waterless Mountain (2122 m), Kulbatog (2130 m), this border is well separated. The territory of the province resembles a curved triangle[4].

Its dimensions: 220-250 km from north to south, and 150-170 km from west to east. The geographic location of Surkhandarya region, i.e., its location in the inner part of the Central Asian landmass, cold and warm air masses from the oceans and precipitation, the direct sunlight falling on the region, one of the factors that create climate from three sides is the mountain. surrounded by 's and the openness of the southern part affects its nature and economy. Surkhandarya region is the only subtropical region of Uzbekistan. The climatic condition of the oasis is dry, sharp (continental), rich in sunlight, daily and annual air temperature varies sharply, and rainfall is low. The dryness of the climate increases from the north-west to the south-east of the region. In this direction, the summer air temperature rises, and in the winter it falls, such a change that occurs between seasons is connected with the change of the surface structure (relief) of the place[5]. A sharp



change in climatic conditions is observed especially in mountainous regions. The air and soil surface temperatures are high in the flat part of the region. Summer lasts up to 6 months. Surkhandarya is the hottest region of our country, but there are very few cloudy days here. Open days in Termiz reach 166 days in a year. There are many open days, especially from June to October. Long periods of cloudlessness and absolute maximum air temperature of our country in this region cause soil drought. Different high indicators of air temperature and especially useful indicators of air temperature above the level ensured that the duration of vegetation was different in a number of geographical points of the region (Table 8). Based on long-term meteorological data, we can see that the period of useful air temperature indicator is extended in the flat areas of the region, where agricultural production is intensive. The delay of autumn and spring soil surface freezing in the region has led to longer warm days compared to other regions of the country. The warm period in the region lasts from 226 to 266 days[6].

On average, 180-200 days are required for late ripening fiber cotton to fully ripen. The combination of long days without cold, high positive and useful indicators of air temperature required the regionalization of all late-ripening cotton varieties and valuable crops typical of southern countries in the region. Certain differences in climatic conditions, especially the differences in average annual air temperature and positive and beneficial air temperature, required the correct placement and development of early, medium and late ripening varieties of plants in different agricultural regions of the region. . In this respect, Surkhandarya is divided into two: the south of the province. The temperature here is relatively high[7],

the vegetation period is long. Positive and beneficial indicators of air temperature are very favorable for thin-fiber cotton varieties that require a long growing season. North of the province. Here, all indicators of air temperature are low compared to its south, the number of useful degrees is low. In this part of the region, where the average winter temperatures are somewhat mild, there are great opportunities for planting and growing subtropical citrus plants. The amount of precipitation and its variation from place to place is a natural law characteristic of the Central Asian countries, and it differs sharply between seasons: it falls little in autumn, and summer passes almost without rain. According to the data of the Termiz meteorological station, annual precipitation falls in spring - 44.3%, in winter - 45.9%, in autumn -

9.0%, and in summer - 0.8%. Annual rainfall varies from 131 mm to 625 mm in some regions of the region. In its plain part, especially in the south, annual rainfall falls 4-5 times less than in the northern regions[8]. According to the long-term data of the weather stations, the annual amount of precipitation is 133 mm in Termez, 164 mm in Kumkurgan, 228 mm in Termez, 360 mm in Denov, 490 mm in Sarijo, 577 mm in Dashnabad. . Vertical in the distribution of precipitation

the law of regionalization also prevails. As the height of the region increases above the sea level, the amount of precipitation also increases. Widespread in the transitional zone of barren soil and gray soil[9].

These soils are distinguished by the weight of their granulometric composition and the appearance of a flat surface relief. The surface layer of baldness is usually dense, a waterproof layer is formed. This affects the development of the plant.

These saline soils have little humus (about 0.40-1.03%). Barren gray soil alternates with pale gray soil. Light gray soil is widespread in the plains of the region. Its geographical distribution ranges from 300 meters above sea level to 500-700 meters. The main part of the humus is in the arable layer, and it is steep downwards decreases[10]. The typical gray soil is spread over the flat mountains and their slopes, and some of the irrigated farming areas[17]. This soil is widespread at altitudes from 700 m to 1100-1200 m above sea level. The working layer of the soil is very fertile. The area of gray soil in the region is about 300-340 thousand ha. Part of it is irrigated, and the rest is rainfed. Dark gray soil is generally located in mountainous and high mountain zones of the region at a height of 1100-1200 m above sea level[18]. Their content is 2.5 times lower than that of light colored soils, and 1.5 times lower in humus than typical gray soil. It is composed of 20-60 m (sometimes more) thick layers of loess and loess (siltstone) porous bedrocks of the Quaternary period, the slope is 15-20 degrees in most places, the climate is dry and warm, oil The lack of hair and its uneven distribution, the frequent occurrence of local winds, the sparseness of the vegetation cover and the rapid opening of the earth's surface (with the drying of the vegetation), that is, the "bare mountain" characteristic of Central Asia "Lic" conditions and other geographical factors have led to extensive development of soil erosion. Ferula assafoetida plant was taken as a research object[11].

Our experiments were conducted on the Ferula assafoetida plant in Uzun district, Surkhandarya region. The collection of materials was studied during



2017-2018. The natural distribution of *Ferula assafoetida* was studied based on literature sources. The natural climatic conditions of the researched area were studied based on the data of the weather observation center of Uzbekistan and Termiz weather observation centers in 2017. As mentioned above, carpet glue-tar has been prepared and used in Iran, Afghanistan, Pakistan and India since ancient times[12]. Neighboring republics, especially Tajikistan, have been preparing for several years. In our republic, the production of carpet glue officially started in 2006. Along with the state forest farms, farms and some private entrepreneurs are active in this[16]. It should be noted that in order to obtain tar-glue from the carpet, first of all, it is necessary to determine the natural biological and operational reserves of the carpet, make a large-scale map, and create an opportunity for the plant to regenerate in natural conditions without harming the nature, divide the natural areas into plots. - year, it is necessary to prepare glue and tar alternately. One of the main ways to prevent the depletion of natural stocks of carpets is to plant them in the natural conditions where carpets grow. For this purpose, it is recommended to make 5-10 cm pits in the area where the carpet grows under natural conditions in the autumn, and put 3-5 seeds in each pit and cover it with soil. Such a recommendation is offered to forestry workers, farmers and private entrepreneurs based on the biological characteristics of the carpet plant, because the carpet grows in a wide area by multiplying from the seeds planted in natural conditions[13].

In the future, specialists will study the bioecological properties of the carpet under natural conditions, and solving the problem of their cultural reproduction and cultivation is one of the main tasks of our science. In scientific medicine, carpet resin is used as a painkiller and sedative in the form of powder, emulsion and alcohol tincture under the name "Asafoetida" and is used in many countries, including Iran, Germany, Sweden, Pakistan, China, USA, Included in the Portuguese Pharmacopoeia. In countries such as India, Pakistan and Afghanistan, the roots and glue of the carpet are used in confectionery, as well as in the production of cosmetics. Plant organs containing biologically active substances that have a positive effect on the human body are used in the treatment. Roots, leaves, bark, flowers, fruits and other parts of plants are usually used as medicinal products. Mainly glue - resin - juice extracted from the roots of the kovrak plant is used in medicine. In medicine, carpet glue-resin - assafoetida is used as a

powder, emulsion and alcohol tincture, as well as pain reliever and sedative[14].

CONCLUSION. From the countries of the East, in Iran, Pakistan, India and Afghanistan, its glue and roots are used as a spice in cooking, and in the production of attortion products in the cosmetics industry. According to our grandfather Ibn Sina, if you drink a decoction of 50 grams three times, mother's milk will increase. If eaten with fig juice, it cures jaundice. Adding pepper and vinegar to the paste and applying it to bad-quality wounds is beneficial. It is also very useful for hair loss. Also, cures brain, sclerosis, bronchitis, asthma, hepatitis, whooping cough, diabetes, stops bleeding. Appetite. The root cures dribbling urine and kidney pain. It is beneficial to drink 30 grams of the decoction three times a day[15]. Decoction of root relieves all pains. It relieves suffocation and relieves pain. In order to collect the glue-tar of the carpet in the specified order, the inspection of the protection and control over the use of biodiversity and protected natural areas of the Republic of Uzbekistan allocates a quota every year, and on this basis, the necessary raw materials are prepared. However, citizens are not using the established guidelines for collecting plant tar. The composition of glue - tar used in medicine consists of essential oils, organic sulfides, pinene, coumarins and other compounds that give it a garlic smell. In folk medicine, the resin of the bark is used to treat varicose veins, pulmonary tuberculosis, plague, wounds, whooping cough, toothache, nerves and other diseases, as well as tonic, expectorant. It is used as a dewormer and anthelmintic. Depending on its life form, the saksik korub blooms and bears fruit once every 8-9 years, and then dies. The area of this type of plant is decreasing year by year due to its careless use. Today, carpet gardens are preserved only in the mountainous areas.

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