



“CAUSES OF SOIL SALINITY IN KASHKADARYA REGION”

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ABSTRACT. Soil salinization poses a serious problem for agriculture in the Kashkadaria region, which is characterized by an arid and semi-arid climate. This abstract examines the main causes of soil salinization in this area, combining natural and anthropogenic factors. Geological formations, including salt-bearing rocks, contribute to inherent soil salinity. The region's climate, characterized by low precipitation and high temperatures, accelerates the accumulation of salts through the process of evaporation.

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Key words: Salinity, ecology, irrigated agriculture, desertification, productivity, relief, natural, thermostat, agrophysics.

INTRODUCTION.

The availability of land in irrigated agriculture limits the possibilities of increasing soil fertility and yield of cotton and other crops. The implementation of large-scale reclamation works is unable to stop the process of soil salinization.

Most of the saline areas in Kashkadarya region are located in Karshi, Nishon, Mubarak, Kasbi, Mirishkor, Koson and other districts. Of course, in such lands, it is difficult to get a good harvest from this or that crop, and a lot of effort and money is spent in vain. World agriculture, especially our people, has accumulated a lot of experience in preventing this and obtaining higher yields from saline land. Land reclamation has become a very serious problem at the present time, the reason for this is that, firstly, it is necessary to provide food and other agricultural products to the ever-increasing population of Kurram, and secondly, human reclamation due to the development of industry while increasing its capacity, it was felt that there is a need to develop many new lands, to expand the cultivated areas and to improve the reclamation of irrigated lands [5].

MATERIALS AND METHODS.

In terms of geographical location, the territory of Kashkadarya region is at the same geographical latitude as the Atrek-Sumbar valley of the Republic of Turkmenistan, the Lenkoran lowland of Azerbaijan, the Republic of Armenia and the middle region of Turkey, Greece, Italy and Spain, the middle parts of the United States of America and Japan. lies The relief of the plain includes the Karshi sloping plain and the Kitab-

Shahrisabz depression in the hypsometric range between 280-650 meters, and occupies the main part of the region in terms of area. The opposite sloping plain is the South-Eastern edge of Kyzylkum, and Sandikli sand desert is about 1.3 million km long. Three different reliefs are spread over the hectare area.

RESULTS AND DISCUSSION.

The existence of almost all types of minerals has been found on the Kashkadarya soil. After all, the mineral wealth, which is the result of various geological periods and processes, is related to the geological development characteristics of a certain place. It is known that until the Neogene period, the plains of the region were the eastern part of the warm sea. Therefore, it can be said that the territory of the region was part of the large oil and gas basin in the current Turan lowland. Today, the natural gas produced in the regional mines meets not only the cities and villages of our republic, but also the needs of other neighboring republics. Gas, gas condensate and oil are obtained mainly from cracks and collectors of corallite limestones, fossilized coral polyps, between the first marine deposits of the Jurassic period, at a depth of 1.5-3.5 thousand meters. The climatic characteristics of the city of Karshi depend on its geographical location, that is, in the center of the natural geographical region of Central Asia, which is far from the ocean basins in the interior of the huge Eurasian continent, and also in relatively low latitudes. These features of the geographical location cause the region's climate to become sharply continental, arid conditions that allow the development of desert landscapes due to intensive radiation.

Chemical composition of gray soils

Layer	Depth, cm	SiO ₂	Fe ₂ O ₃	Al ₂ O ₃	CaO	MgO	K ₂ O	Na ₂ O	SiO ₂	P ₂ O ₅
Pale gray soil										
A ₁	0-5	72-14	5-02	14-52	0-29	2-9	2-31	1-79	7,0	
A ₂	5-15	70-24	5-25	14-59	0-84	2-12	2-68	1-75	6,6	
B ₁	20-30	69-72	4-75	15-15	1-52	2-75	2-53	1-87	6,5	
B ₂	55-65	70-61	5-06	14-61	0-88	3-09	2-33	1-87	6,8	
C	170-180	71-75	4-55	14-54	0-25	3-32	2-37	2-09	7,1	
A ₁	0-5	67-95	6-12	14-52	1-26	3-16	3-04	1-76	6,3	
A ₂	6-16	67-50	5-89	14-36	1-49	3-42	2-95	1-69	6,3	
B ₁	20-30	65-78	6-31	14-40	3-91	1-74	3-13	1-67	6,1	
B ₂	45-55	70-37	5-98	15-06	2-23	2-73	3-02	1-81	6,3	
C	195-205	68-12	5-86	14-66	0-09	4-42	2-87	2-01	6,3	

Humus content is very low in pale gray soils, 1.2-1.4% in layer A. Typical gray soils contain between 1.5 and 4%, and dark gray soils contain up to 4.5%. Accordingly, the humus reserve in 1 m of soil thickness reaches 50-60 tons in light gray soils, and 140-160 tons in dark gray soils. The absorption capacity of gray soils is also small, which is directly related to the low humus condition of the soil. 80-90% of absorbed cations correspond to calcium and 10-15% to magnesium cations.

CONCLUSION.

In conclusion, the main crops that determine the agriculture of our country and its potential are grown on gray soils. That is, cotton growing, grain growing, vegetable growing, horticulture, grape growing, and oil fields are gray soil lands. An important feature of this soil zone is that it is mainly specialized in irrigated agriculture. But it should not be forgotten that the soils of very large arid lands also belong to this type. In the Karshi desert, light-colored gray soils, desert brown soil, and barren soils are distributed, which are fundamentally different from each other in terms of their genesis, mechanical, water-physical, and chemical properties. is different. Before the water came to the desert, its geomorphology and hydrogeology, land reclamation status, fertility level were sufficiently studied, but it became known that the fact that the region belongs to the impermeable zone was not paid much attention.

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