



## CAUSES OF SOIL DEGRADATION IN BUKHARA REGION AND FACTORS TO PREVENT IT (ON THE EXAMPLE OF SHAFIRKAN DISTRICT)

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### Annotation

As noted in the Decree of the President of the Republic of Uzbekistan dated April 17, 2019 on measures to improve the system of public administration in agriculture, the development of agriculture and increase its competitiveness, the well-being of more than 60% of the country's population is becoming an important factor in raising the level. Improving the productivity of low-yielding lands, the formation of a modern system of preparation, use and export of seeds of agricultural crops, ensuring the implementation of systemic measures for agrochemical services and soil protection are among the urgent tasks is one.

### Introduction

Agriculture is important in all countries of the world, including Uzbekistan, as 99% of all food consumed by humans is grown on land. About 60% of them are rice, corn and other cereals. Due to the irrational use of land, their productivity is deteriorating, productivity is declining sharply, there is a sharp shortage of food, which can lead to disruption of the sustainable development of any society.

For monitoring of soils of Bukhara region, all farms of the region were loaded with soil materials by periods and the relevant tables were filled in. humus, phosphorus, potassium content, irrigation period and other dominant soils.

Soil materials of Shafirkan district up to 1971 were analyzed. Bobur Shirkat Farm of the district 2-Coastal terrace of Zarafshan river consisting of alluvial agroirrigation deposits Irrigated meadow soils (ES OT OOT / 0-1) Low salinity as medium sandy at -30 cm, medium sandy at 30-100 cm, stony and medium sandy at 100-200 cm. The 6-9 plot of land is 580 hectares for the farm and 3,400 hectares for the district.

Prior to 1971, the Shafirkan Company's farm consisted of alluvial deposits. , meadow soil, light at 0-30 cm, medium and light sand at 30-100 cm, medium and light sand at 100-200 cm, slightly saline. The area of 4-5 plots of land is 561 hectares for the farm, and 2548 hectares for the district.



Due to the varied climatic conditions, the root system of shrubs, semi-shrubs, perennial grasses, and the vegetation of ephemeral plants often coincide with the spring season. Of course, natural moisture resources are not enough for good plant growth. This year, pasture cover is averaged, with an average of one feed unit. The vegetation cover that affects the soils of the study area was also studied during the research. The relief of the farm consists of flat areas. In some parts of the farm it is located in sparsely sloping plains. The soils of Shafirkan district are not the same. hand soils occur. is a place with a harsh continental climate, the climate of which is generally similar to that of the desert. Desert summers are hot and dry, with many sunny days, and winters are cold and sharply continental. The Jongeldi meteorological station, located 207 meters above sea level in the northern part of the farm, was used to describe the farm's climate. The average winter temperature in the farm is -15.6 degrees, and the average summer temperature is +44 degrees. The average rainfall is 2.6 mm in winter and spring. There is almost no precipitation in summer and the average humidity is 48%. Soil materials of Shafirkan district up to 1971 were analyzed. "Bobur massivi" farm of the district 2 shore terraces of Zarafshan river, consisting of alluvial agroirrigation deposits. Low salinity as medium sandy at -30 cm, medium sandy at 30-100 cm, stony and medium sandy at 100-200 cm. The 6-9 plot of land is 580 hectares for the farm and 3,400 hectares for the district.

In the period from 1981 to 2006, the Babur massif consisted of alluvial agroirrigation deposits. 'salty soils, medium sandy at 0-30cm, medium sandy at 30-100cm, stony at 100-200cm and low salinity at medium sandy 5-8 area on the farm It covers an area of 507 hectares, while the district occupies an area of 3250 hectares.

The amount of humus was examined by the tyurine method and it was found that not only the amount of salt in the soil but also the amount of humus changed compared to the results of previous years.

Agrochemical properties of soils of "Ibrahim Muminov" massif of Shafirkan district of Bukhara region

cut	Depth, cm	alkalinity	Cl	SO <sub>4</sub>	Ca	Mg	Anion	Kation	Dry residue	The sum of the salts
		General HCO <sub>3</sub> m.e	Milli gr. ekvival	Milli gr. ekvival	Milli gr. ekvival	Milli gr. ekvival				
	A- layer	0.62	0,49	1,44	0,90	0,79	2,55	1,69	0.178	0.153
	B- layer	0.56	0,39	1,19	0,75	0,64	2,14	1,39	0.142	0.128
	B <sub>1</sub> - layer	0.52	0,49	1,19	0,80	0,79	2,20	1,59	0.148	0.130
	C- layer	0.50	0,39	1,19	0,75	0,79	2,08	1,54	0.142	0.123

Cut	Depth, cm	Humus %	P <sub>2</sub> O <sub>5</sub> mg/kg	K <sub>2</sub> O mg/kg
1	A- layer	0,5962	103,0	127,6
	B- layer	0,4336	86,0	106,0
	B <sub>1</sub> - layer	0,3752	14,0	103,5
	C- layer	0,3252	9,0	101,1

The data presented in the table show that the agrochemical properties of the soils of the Ibrahim Muminov massif of Shafirkan district tend to decrease with the depth of cuts.

In conclusion, it should be noted that the mechanical degradation of the soil is caused by: Mechanical degradation of soils is determined by the release of fine colloidal particles from the upper genetic layers of soils. The release of colloidal particles from the topsoil can be caused by wind or groundwater runoff. In addition, mechanical degradation of soils occurs during mining, deforestation, timber transportation and forest burning, laying gas and oil pipelines, during agricultural activities, grazing and plowing. will be.

Among the types of degradation, chemical degradation is the most dangerous in terms of its impact on soil properties, in which the composition of the soil changes and its recovery is also carried out at great economic cost in the long run.

The processes of soil degradation as a result of soil erosion are characterized by the loss of the fertile layer of the soil, which occurs in the form of water or wind deflation processes.

Desertification is a process characterized by a decrease in soil moisture and loss of plant cover in the soil, which includes deflation, depth of groundwater, high levels of solar radiation, high air temperature, soil salinity, soil erosion. It occurs under the influence of a number of factors, such as the use of settings.



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