Features Of Soil Formation On Mount Nurata And In The Foothills

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Journal Website:
<http://usajournalshub.com/index.php/tajabe>

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ABSTRACT

There are features of soil formation on Mount Nurata and in the foothills, although the types of soils distributed in this region are called the names of the types of soils common in all regions of the republic, but they are specific to these soils. includes special traits that differ from all genetically-morphological, agrochemical and agrophysical traits. There are several reasons for this, which are described below.

KEYWORDS

Evolution of ground, typical-light serozem, irrigations, relief, geomorphological, ground water, alluvial sediment.

INTRODUCTION

The Republic of Uzbekistan has various soil and climatic regions. The first thing to note here is the distribution of soils according to horizontal and vertical laws. The first lower limit of the distribution of soils on the territory of the republic according to vertical laws begins with light gray soils, typical and dark gray, mountain brown, alpine steppe (alpine and subalpine zone) and Permanent Mountain

soils. Glaciers. Horizontal structures, the starting point of which is light gray, then transform into sandy deserts, brownish-brown, barren soils and sands [4, 2, 1]. Such patterns of soil distribution can be seen in some regions of the country. In particular, we see the distribution of soils on the territory of the Kashkadarya region according to horizontal and vertical laws [5]. Such a pattern

can be seen in the example of the less complete Nurata district [3]. On the territory of the Nurata region, sandy desert soils are horizontal patterns of a short (beginning) shape; → vertical patterns in the form of light gray → typical gray → dark gray → mountain brown soils. In such a chain, we see that the horizontal pattern does not have brownish-brown bald soils, and the vertical pattern does not have high mountain steppes and permanent mountain glaciers. Although the soils of the Nurata region are located on the basis of horizontal and vertical laws, these soils are distributed in other regions of the country in accordance with geographic and climatic conditions. Differs in many morpholithogenetic features, such as the thickness of the fine-grained layer.

In particular, all types of soils in the Nurata region are characterized by low humus content, low vegetation cover, and, finally, all types of soils are located above sea level.

MATERIALS AND METHODS

Due to the fact that Uzbekistan occupies a large area, it has a number of soil types, subtypes and types. But they all came from different soil and climatic conditions. There are specific features of soil formation in the mountains and foothills of Nurata, although the types of soils distributed in this area are called the names of soil types that are common in all regions of the country, but they do not apply to these soils. includes special traits that differ from all genetically-morphological, agrochemical and agrophysical traits. There are several reasons for this, and we would like to point out the following:

First of all, Mount Nurata is a group of low mountains in the mountain system of Uzbekistan. Expenses; The second reason is how poorly the mountain slopes are covered

with species of trees, shrubs, hemispheres and grasses; thirdly, the fact that Mount Nurata and the foothills are directly connected with the desert region of the republic; fourthly, the region is characterized not only by a very dry climate, but also by the prevalence of wind erosion. The following types of soils, formed in the natural conditions of the region and continuing their development, are common in the Nurata Mountains and foothills.

1. Mountain brown soils are located at an altitude of 1500 meters above sea level. without the formation of an area, but in the form of small rings, islands, very thin fine soil, but very skeletal, light brown, 3-5 cm thick. consists of a layer of grass, and at the bottom there is a layer of grass, the color of the soil mass consists of an accumulation of particles brownish brown particles (mixed with dust). Carbonate compounds are located at a distance of 50-70 cm from the profile, which quickly transforms into a superluvial-proluvial bedrock or bedrock. The soil profile is not thick (40-50, sometimes up to 70 cm), very stony, mechanically heavy sandy. The humus content in the grass layer of these soils is -2.35-2.65%, in the grass layer - 1.40-1.65%, in the subsequent layers - from 0.5 to 1.4%.
2. Gray soils - dark gray at an altitude of 900 m above sea level, 500 (700) - 900 m typical, 250-700 m light gray soils. As a rule, dark gray soils develop on low mountain and mountain slopes (slopes 50-100) on medium-stony, deluvial-proluvial deposits with a low level of fine soil. The profile of dark gray soils is also short (a layer of grass 3-5 cm, a layer of grass 4-7 cm), the humus in these layers is 2.0-2.5%, and the texture is medium and

partly medium sandy. Typical and light gray soils develop in the foothill proluvial plains. In protected conditions, this is a very short 3-5 cm, but not very strong layer of grass, usually medium sandy, while light gray soils are weakly sandy, with a low humus content (1.1-2.2%), characterized by the presence of small stones on the soil surface. In these soils, the carbonate layers are well pronounced, especially in typical gray soils. It should be noted that the complete formation of genetic layers in the profile of typical and light gray soils depends on the relief in which they develop. In fact, on flat undulating, low-slope proluvial plains, the genetic layers of these soils are well-defined, with a thick layer of fine earth (100–150 cm). They have distinct morphogenetic features. If these soils develop in low mountainous, loamy or rugged terrain, they are short, highly skeletal and gravelly.

3. Desert sandy soils - developed in flat terrain, which is directly connected with the vast Nurata plains and the vast Kyzylkum region. The flora consists mainly of pollen and brooms, with very few weeds. The genetic layers in these soils make up 0.4-0.6% of humus in the almost unrepresented layer of grass and grass, but the texture is sandy and subject to wind erosion, therefore, the soil surface is probably fine gravel. Typically, these soils are used as grazing land for livestock from scattered areas. Based on the data presented, it can be noted that the soils of the mountain and foothill plains of Nurata differ from all soils of the same name in Uzbekistan, first of all, by their morphogenetic development in very dry conditions, low

humus content and small size of this layer. characterized by the presence of specific territorial features, such as the absence of vegetation, stony texture, water, especially wind erosion, as well as the tendency of saline soils to salinity. In general, the typical gray soils that are common on farms in the Nurata District are considered suitable for agriculture. These soils can be widely used for irrigated agriculture if water sources are available. Light gray soils are also suitable for irrigated agriculture, but development work needs to be organized taking into account the possibility of high salinity.

RESULT AND DISCUSSION

Analysis of the literature and the collected scientific data shows that the soil cover of Mount Nurata, foothills and even bordering countries has been poorly studied.

Mount Nurata and the foothills have a very complex geomorphological structure, where the lithology of erosion products - alluvial, deluvial, proluvial, alluvial deposits is characterized by extreme roughness.

Due to the low annual rainfall in the Nurata mountains and foothills, a large number of plant species during the year, the number of plant species is small and few, i.e. only 40-60% of the soil surface. cover. The mountainous area also lacks forests, bushes and rich vegetation. This, of course, leads to the formation of a kind of soil cover.

In the Nurata mountains and foothills, the following soil types are formed: sandy desert, light, typical and dark gray, mountain brown soils. For these soil types, a very short (just beginning) horizontal zoning - vertical distribution of soils with sandy desert soils - light gray - typical gray - dark gray - mountain

brown. Vertical regionalism is also not fully reflected here. Thus, while there is horizontal and vertical zoning in the soil cover, they are not fully expressed.

Based on an in-depth analysis of the genetic and morphological characteristics of the main soil types, the brevity of the soil profile, an incomplete sod layer and their insufficient thickness, degradation of aggregates, compaction, hardness, superficiality of carbonate layers, and lightness of the texture were identified. Although these traits are also present in the soils of the same name, which are widespread in our country, the evolution of the soil cover in this country leads to the formation of specific traits due to arid conditions.

All studied soil types are characterized by light to medium sandy, and in some cases (mountain brown soils) heavy texture. In the mechanical composition, particles of sand and coarse-grained dust predominate along the entire profile. At the same time, all mechanical components are characterized by their rigidity. In the soil profile, the accumulation of soil particles is usually 20-80 cm, depending on the type of soil. The predominance of large mechanical particles in the mechanical composition indicates that the process of irradiation in these types of soils continues. Depending on the distribution of humus, other nutrients change in the same way.

Humus All types of soils, which are widespread in the Nurata mountains and foothills, are characterized by a low humus content. In particular, the average humus content in sandy loam soils is 0.27% in its upper layers, 0.65% in light gray soils, 1.1% in typical gray soils, dark gray soils.

1.6%, 2.3% in mountain brown soils. Due to the low content and low mechanical content of

soil particles, the absorption capacity is not high for all studied soil types (7-14 mg / equation), but they are saturated with bivalent bases.

CONCLUSION

The sandy desert, light and typical gray soils in the foothills of the Nurata Mountains are currently not saline, but evidence suggests that these soils are susceptible to salinization. In addition, these soils are subject to severe wind erosion.

Based on the analysis of humus reserves in the soils of the Nurata mountains, which are common in the mountainous regions of the country, it was concluded that the amount of humus in the soil profile, its reserves, depends on the geographic location and climatic conditions of the country shown in the figure.

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