

# THE SOILS OF THE DESERT ZONE AND THE PROSPECTS OF THEIR USE

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**Annotation:** *The article presents the results of scientific research on the morphology, biology, and use of the deserts and semi-desert soils of the Kashkadarya region with pale gray soils, and this information is enriched through literature analysis.*

**Key words:** *deserts, semi-deserts, soil morphology, biological activity, use, priority, halophyte plants.*

**Relevance of the topic.** After the independence of Uzbekistan, the relations to land and water issues have changed and reforms are being carried out in this regard. Depending on the natural fertility of desert zone soils and soil climate conditions, people can change them according to their needs.

Today, the soils of the desert zone are a great reserve for agriculture, most of the mother rock composition of the desert zone soils contains carbonates and easily soluble salts in water. The water-physical properties of the soil are good, but the biomass accumulated by the plants is also due to the roots (about 1 ton).

That's why increasing vegetation cover in desert conditions, improving water physical properties of soil is the next urgent task of increasing the productivity of desert soils.

As a result of consistent work on agricultural reform, optimization of land plots attached to farms, increase in purchase prices of cotton and grain, structural quality changes are taking place in the agrarian sector of our economy.

**Research results.** Barren soils differ from other soils of the desert region by their heavy mechanical composition. Geologists, geographers and botanists also named the upper and surface part of barren soils as "desert clays" because they are formed from specific clay fractions. Barren soils are divided into the following types: 1. barren, 2. barren, 3. barren, 4. barren-barren. They differ from each other by their

morphological structure, physical, chemical characteristics, properties, water-salt and biological regimes. Because various soil-forming processes are involved in their formation and development. Barren soils include the following types: barren, barren and barren. The mechanical composition of barren soils is heavy sand and clay. The surface 0-14 cm layer of barren soils is composed of peculiar polygonal cracks, besides being muddy.

As mentioned above, the mechanical composition of barren soils consists of heavy sand and clay fractions.

Therefore, their relative weight, volume weight, porosity and other properties are sharply different from other soils distributed in the desert zone.

### **Agrochemical indicators of barren soils.**

*Table*

| <b>Layer depth, cm</b> | <b>Gross, %</b> |                 | <b>S:N</b> | <b>Phosphorus</b> |                      |
|------------------------|-----------------|-----------------|------------|-------------------|----------------------|
|                        | <b>humus</b>    | <b>nitrogen</b> |            | <b>Gross, %</b>   | <b>Active, mg/kg</b> |
| <i>Section</i>         |                 |                 |            |                   |                      |
| 0-4                    | 1,38            | 0,094           | 8,3        | 0,137             | 78,2                 |
| 4-14                   | 0,32            | 0,046           | 3,7        | 0,093             | 7,5                  |
| 20-30                  | 0,35            | 0,052           | 3,8        | 0,116             | -                    |
| 70-80                  | 0,24            | 0,044           | 3,1        | 0,105             | -                    |

The amount of humus is 0.9-1.38% (Table 2), and it is considered one of the most humus-rich and fertile soils of the desert region. The newly formed first and second fractions of humic acids occupy the main place in humus.

High absorption capacity is one of the characteristics of barren soils. Saturation with bases, tendency to salinization and salinization are among the characteristics of barren soils, and in some places they are not saline.

The lower layers of bald patches develop in dry conditions. On hot summer days, the surface of the barrens dries up and turns into flat areas made up of

polygonal ridges of various shapes. These polygonal folds are preserved in some barrens even during the winter-spring wetting period. In these wetlands, wet periods create favorable conditions for lichens and algae to live and multiply. Soil formation processes develop as a result of their biochemical activity. In the upper 15-20 cm layer of the soil, a genetic layer characteristic of barrens is formed. This leads to the formation of barrens and their separation as a separate soil type.

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