

salinization and salinization processes , erosion and deflation and ^{137}Cs pollution covered respectively 7.7, 4.2 and 2.9% of the total area of arable land. Based on indicators of territorial distribution, intensity of manifestation and coefficients of severity of degradation processes, a summary indicator of soil cover degradation is determined.

Sod-slightly podzolic soils are characterized by a strong degradation of the upper genetic horizon by humus. According to the acidity of the soil solution and the density of the composition, the degree of degradation is estimated as average with an indicator of pH_{KCl} of 4.6 and 1.33 g/cm^3 .

The degree of agrochemical degradation of these soils is assessed as weak in terms of compounds of easily hydrolyzed nitrogen and medium in terms of potassium.

The gray podizolized soil is more fertile than the previous one, but according to the humus content, it is estimated as moderately degraded with a decrease of 10.8% compared to the standard, and according to the acidity of the soil solution and the potassium content, it is rated as slightly degraded.

The chernozem is gold-plated - according to the humus content, the degree of its degradation is estimated as weak - 4.2%, and according to the density of composition - average. The content of mobile phosphorus and exchangeable potassium (according to Chirikov) in these soils is of increased importance.

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CHARACTERISTICS OF THE SOILS OF SOUTH-EAST UKRAINE

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The southern part of the territory of Donetsk region belongs to the chernozem-steppe semi-arid and arid province of the steppe subzone of the chernozem zone.

The soil cover is mainly represented by ordinary medium- and low-humus chernozems, ordinary low-humus low-strength chernozems of various degrees of erosion. The variety of soil cover increases due to chernozems developed on dense clays, sandy deposits, eluvium of melomergal and carbonate-free dense rocks, as well as semi-hydromorphic and hydromorphic soils. In the valleys of the rivers, meadow-chernozem soils are developed, represented most often by saline and saltmarshes, as well as meadow, meadow-swamp, swamp and peat-swamp soils. A large range of meadow-chernozem deep saline soils is located in the valley of the Kazenny Torets river and its tributary Sukhy Torets south of Slovyansk. Sod-slightly podzolic sandy and clayey-sandy soils are common under the forest massifs. To the south of the forest massifs, there are complexes of ordinary chernozems with chernozems on heavy clays and complexes of chernozems and sod-carbonate soils developed on the eluvium of carbonate rocks (marls, chalk, limestones).

The results of recent studies on agrochemical certification of land indicate deterioration of soil fertility. Since 1965, 8 rounds of agrochemical soil survey have been conducted. The results indicate noticeable changes in the availability of humus in the soil. The average content of mobile phosphorus decreased by 5.4%. The concentration of exchangeable potassium fell by 4.3%.

According to the index of total soil pollution, the least polluted soils are in Barvinkivskyi and Izyumsky districts, the most polluted - in Kramatorsk, Slovyanskyi and Kostyantynivskyi districts.

The largest exceedances of MPC for the content of pesticides in urban soils were registered in Artemivsk and Druzhkivka, and the smallest - in Chervonoarmiysk. In rural areas, the highest degree of soil contamination with pesticides was noted in the Mariinsky and Yasynuvatsky districts, and the lowest - in the Oleksandrivsky and Krasnolymansky districts.

The concentration of mercury in soils does not exceed hygienic standards, despite its high content in urban soils. In all cities of the Donetsk region, the content of lead in the soil exceeds the standards.