MORPHOLOGY OF SOILS-AS EXTERNAL EXPRESSION OF PROCESSES OF THEIR SHAPINGS

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Abstract: this article presents morphogenetic features of typical serozem (gray)-earth soils formed in loess and tertiary sediments, specific morphological features and soil properties characteristic of slopes.

Key words: Morphology, typical serozem soils, mechanical structura, carbonat, erosion

The object of the study. The studied territory is located in the Chirchik-Keles interfluve of the Tashkent region, occupies the foothill plains of the Western Tien Shan and is located in the right-bank part of the valley of the middle course of the Chirchik River, where soils formed on tertiary Neogene deposits and loess deposits are widespread.

The purpose of the work was: The aim of the work was to study morphological signs in typical serozem soils, taking into account their soil-forming rocks and their susceptibility to erosion processes.

Subtropical climate. The climate is subtropical. The annual precipitation is 399-422 mm, a lot of precipitation falls in autumn, winter and early spring. The growing season for plants is 204-234 days. In summer, in July + 39.7 + 45.8 degrees Celsius, in December and January-11.3-11.7 degrees below zero. The effective amount of heat is 2220-2450^0 C [1,2].

Research results. Morphological features of soils generated on tertiary adjournment and soils on loesses. The researches have shown, that typical serozem on loesses is covered with bushy vegetation the upper horizon serozem (gray) with brownish nuance to bottom, on a structure yellow-jonquil. The upper horizon pasked (multiplexed) from top to bottom of additions becomes less dense. A boiling from HCL rough. From 50-60 cm there is a maximum congestion of carbonate and minimum quantity counter foils [1,2].

Plaster on depth of 1,5-2,0 m. on mechanical structure-average clayey soil. Extent of work over the soil done by bloodworms is deep. The structure of virgin soils generated on tertiary red colored adjournment, is characterized: the surface is poorly covered with vegetation, the upper horizons have light brown color with a reddish nuance, from top to bottom on a structure the addition dense is red-brown, from 30-40cm there is a maximum congestion of carbonates, the plaster occurs from depth 135 cm. In the upper horizons there are radicals of plants, bloodworm courses and caprolits. Mechanical structure-heavy loamy, soil, clay [1,2,3].

As a whole soils generated tertiary red colored, adjournment, on a morphological structure differ serozem on loeses: by reddish coloring, denseness and coalescence, heavy mechanical structure, smaller contents of turf-covering and smaller potency of humus horizon, less

heavily manifestation activity shrews, large contents of carbon profile in a structure closer to a surface of horizon of a congestion carbonates and plaster, smaller contenta micro-agregates, less clear manifestation of a various kind organic addition.

Morphological indications of soils, generated on tertiary adjournment,on elements of a slope. The researched soils develop on tertiary red colored adjournment, of which are characteristic-increased contents of a colloidal-slimy fraction, high denseness, large contents carbons and small capacity of exchange of cations. These properties of tertiary clay are largely saved and in explicating on them soils, in many respects determining their properties.The contour also introduces the certain modifications to properties of virgin soils.

In table 1, the morphological indications of in verstigated soils on elements of a slope are resulted. In soils of a slope on a comparison with placor conditions the depth humus painting in less, the boundaries of a congestion of carbonates and plaster are approximate to a surface, mechanical structure a little wainghted, the denseness in increased. The soils of a loop were supjected to more deep modifications on a comparision soils with placor conditions and especially, with soils of slopes: here has taken place considerably of accumulation with humus, a upper bound of carbonates a little was lowered (omitted), plaster, the moisture content is increased.

Some magnification of oozy particles on a slope is characteristic of process which is connected with clayness soil creating breeds. The main features of soil type are quite expressed in upper divide part of a structure. Here potency of humus horizon (A_{nd}+A_1+A_2) is equal to 65 cm.The potency of humus horizon for want of slope 5,5 is equal to an average part of a slope 43cm. For want of it some more smaller there was a potency of humus horizon in the most steep part of a slope-up to 30 see. The reduction of a potency of humus horizon, in main, happened at the expense of horizons A_{nd} +A_1. The soils on a slope have the close boundary of a visible congestion of carbonates [4,5,6].

The soils of pasture of a slope differ a little from water-parting soils, and especially large differences are observed from soils of a steep part of a slope. All these quantitative parameters to some extent are marked in other soil structures, but the qualitative regularity (a little bit smaller alleviation on slopes and large at pasture, than in placor conditions) nevertheless is saved (table 1).

The diversity, so characteristic and practically important, is insufficiently reflected in large-scale soil maps and in the notes.

The researches have shown that the soil structures of northern expositions differ from soils of a southern exposition a little. In soils of northern exposition was observed (on a comparison with soils of a southern exposition), some accumulation of humus, the upper bound of carbonate, plaster was lowered (omitted) the moisture content is increased, water-permeability was slightly increased.

For want of large-scale of soil mapping insolating of slopes should be referred to low quality class and to most subject to erosion. The soils of loops will be best, on the second place-ground of northern slopes and placor conditions[7,8,9,10].

Morphological indications of dry and irrigating soils.

In table 1, the modifications of morphological indications are indicated.

Table 1.

Morphological features of soils generated on tertiary adjournment, virgin, dry, irrigating-on elements of a slope.

Index	Virgin			Dry			Irrigating		
	Watershed 0^0	Slope 4-6^0	Train 0^0	Water-shed 0^0	Slope 3-5^0	Train 0^0	Water-shed 0^0	Slope 3-5^0	Train 0^0
1.Power of humus,cm ($A_{nd}+B_1+B_2$)	65	48	71	64-68	35-37	85-90	68	43-45	74
2.Top border of carbonates, cm, - psevdomizility -carbonates	22 40	5-10 18-21	25 46	15-18 18-20	3-7 5-10	20-23 39-48	26 44	7-14 14-16	28 40
3.Top border of paster,cm	135	120	138	138	112	149	138	125	149-152
4.Color	Dun with reddish tint	Brownish with reddish tint	Light brown with reddish tint	Grayish with brown reddish tint	Dun with reddish tint	Light brown with reddish tint	Grayish with redly brow-nish tint	Grayish brown with reddish	Dun with brownish red-dish tint

Dry soils under influence of erosion. To understand in consequences abrasion, called (caused) with spring and winter settlings the ambassador after ploughing upup the virgin soils, it is necessary to compare morphological indications of virgin and dry structures, but for want of it aslo it is necessary to remember availability of rather broad variations in a potency of horizons in conditions of an erosive contour[10,11].

Comparing potencies of humus horizon, I see, that on virgin soils in placor conditions reaches (achieves) 65 cm, and on dry 64-68cm.Comparing potencies of horizons $A_{nd}+A_1+A_2$ on dry and virgin soil located on a middle of a slope, for want of slope 4-6 AB AB_1, that general (common); the potency of humus horizons on dry soils is equal 35 cm, and on virgin 45-48cm.Here truncation happens at the expense of a diminution of a potency A_1 and partially even for account A_2.The visible boundary of carbonates on dry land finds out from 5-10 cm, and on virgin 18-21 cm.

Under influence of abrasion on a surface of dry soil were derivated superficial fluid gully's (grooves, dug by water). In the field of a loop of a slope the of the soil, washed off from a slope, is putted aside and new soil residual-called washed soil will be derivated. If on a virgin soil in this place the potency of horizons $A_{nd}+A_1+A_2$ is equal 70-75 cm, on dry land she (it) reaches (achieves) 85-90 cm. In distribution of carbonates of such sharp separation is not observed. The boundary of a congestion of carbonates on a virgin soil on depth of 40-46 cm, and on dry 46-50 cm [5,11].

Thus, in conditions of dry in an outcome and erosion, connected to it, (her), the differentiation of soils on elements of a contour has amplified. All this promoted shaping on dry soils of a different degree of erosion and washing. Their genesis is connected in main to economic activity of the person and is stipulated by the natural factors.

In conditions of irrigating soils the of the person has an ever more heavily character. For want of study of morphological indications of irrigating soils, it becomes clear, that the potency of humus horizon of these soils on a slope under influence of irrigative erosion, was reduced the same as on dry, carbonate and the plaster at a maximum in eroded soils of slopes is formed as in conditions of dry, is closer to a surface, than on a virgin soil (table 1) arable horizon is characterized by grayish color in the upper horizons, from top to bottom color becomes dark gray with a reddish nuance, the mechanical structure is facilitated for account (invoice) a little of irrigation, the bottom of a structure even more is condensed.

Conclusion: Plaster on depth of 1,5-2,0 m. on mechanical structure-average clayey soil. Here potency of humus horizon is equal to 65 cm. The boundary of a congestion of carbonates on a virgin soil on depth of 40-46 cm.

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