

ORGANIC MATTER CONTENT AND PHYSICO-CHEMICAL PROPERTIES OF SPodosOL WITH HEAVY TEXTURE

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Aim of the study was to evaluate the humus-level and the nitrogen enrichment of soils under different land use. The data on the total Corg content in the soil profiles as well as on the soil water-soluble nitrogen and acidity are presented. The samples were collected from 21 soil pit in Vologda region. Land use treatments included arable soil, allotment, lay, grassland, pasture and forest. It was shown that the plant type was responsible for the quality and quantity of soil organic matter particularly in the top soil. The gradient of soil organic matter decrease in the soil profiles was calculated. The gradient values were showing that the elluvial and illuvial processes of soil formation, as well as of water-soluble migration and pedoturbation are common for the studied soils. It was shown that the land use affects the soils' humus content, the level of nitrogen enrichment and soil acidity. Maximum levels of humus and nitrogen contents were measured in arable soils and the soils of allotment.

Key words: Spodosol, soil organic matter, gradient of soil organic matter decrease, water-soluble nitrogen, soil acidity.