Utjecaj načina korištenja zemljišta na količinu i sastav humusa kod pseudogleja

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Sažetak

Cilj rada je utvrditi utjecaj načina korištenja zemljišta (šumsko – poljoprivredno) na količinu i sastav humusa u površinskom sloju pseudogleja na zaravni. U tu svrhu analizirane su 3 lokacije: Pavlovac u blizini Bjelovara, Križevci i Donji Dragonožec u blizini Zagreba. Na svakoj lokaciji je tijekom 2009. godine uzeto 5 prosječnih uzoraka tla u šumi i isto toliko na oraničnoj površini, AZO 2008. U ukupno 30 uzoraka određena je količina humusa (modificirana metoda Walkley-Black), te grupni sastav humusa (Kononova i Bjelčikova, 1963.). Odnos optičkih gustoća humusnih kiselina (E_4:E_6) izračunat je iz omjera A465/A665 nm. Količina humusa u šumskim tlima varira od 3.10 do 3.52 %, dok su u oraničnom tlu utvrđene očekivano signifikantno niže vrijednosti u rasponu 2.52 – 3.08 %. Pri oba načina korištenja zemljišta, utvrđen je veći sadržaj fulvo kiselina u odnosu na huminske. U šumskim tlima se % C u huminskim kiselinama kreće od 12.2 do 14.5, a u fulvo kiselinama od 31.1 – 35.2. Istovremeno su u oraničnim tlima utvrđeni rasponi 15.4 – 16.3 % C u huminskim, odnosno 27.6 – 29.2 u fulvo kiselinama. To je potvrđeno odnosom E_4:E_6 koji se kod šumskih tala kretao od 7.23 do 7.49, a kod oraničnih 6.23 do 6.33. Manji sadržaj humusa, kao i promjenjen sastav, potvrda su antropogenog utjecaja u smislu intenzivnije mineralizacije.

Ključne riječi: način korištenja, humus, pseudoglej

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Effect of land use upon the quantity and composition of humus in pseudogley

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Abstract

The object of the study is to determine the effect of land use (forest – agriculture) upon the quantity and composition of humus in the topsoil of pseudogley of mesoelevations. For this purpose, three locations were analyzed: Pavlovac by Bjelovar, Križevci and Donji Dragonožec in the vicinity of Zagreb. Five average samples of forest and as many samples of arable soil were taken from each location in the course of 2009, AZO 2008. Humus content was determined in thirty samples (modified Walkley-Black method) as well as group composition of humus (Kononova and Bjelčikova, 1963.). Ratio of optical densities of humic substances (E_4:E_6) was calculated from the ratio A465/A665 nm. Humus content of forest soils ranged from 3.10 to 3.52 % while, as expected, significantly lower values were measured in the plough-layer, ranging from 2.52 – 3.08 %. Higher content of fulvic acids compared to humic acids was found for both types of land use. In forest soils, % C in humic acids ranged from 12.2 to 14.5, and from 31.1 to 35.2 in fulvic acids. In arable soil, % C in humic acids ranged from 15.4 to 16.3, and from 27.6 to 29.2 in fulvic acids. This was corroborated by the E_4:E_6 ratio, which ranged from 7.23 to 7.49 in forest soils, and from 6.23 to 6.33 in arable soil. Lower humus content, as well as its altered composition, confirm the anthropogenic influence in terms of more intensive mineralization.

Key words: land use, humus, pseudogley

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