Regulation of Humusprofiles by Ca-, Fe- and Al-Chemistry in Mollic Haplaquents. (S05-hoosbeek021112-Poster)

Authors:

- M.R.Hoosbeek - *Wageningen University*

Abstract:

Drainage and acidification changed the humus profile of Mollic Haplaquents from a base-rich Mull to an acidic Mor type. Decreasing base saturation caused a decrease of soil faunal activity which hampered mixing of litter into the soil and slowed down litter decomposition and mineralization of plant nutrients. As a result plant species diversity decreases dramatically (degradation of Cirsio-Molinietum vegetation communities). Restoration measures (increasing discharge by decreasing infiltration of rainwater) have had no effect after nine years. The loss of s hypothesized to obstruct restoration of the base saturation. In that situation reduction of iron oxides no longer strips protons from the exchange sites allowing Ca ions to be adsorbed. At pH<4 Al may irreversibly be adsorbed by SOM, causing the apparent CEC at higher pH (during restoration) to be lower.

Corresponding Author Information:

Marcel Hoosbeek
Wageningen University
P.O. Box 37
Wageningen 6700 AA
Netherlands

phone: +31 317 484109
fax: +31 317 482419
e-mail: marcel.hoosbeek@bodeco.beng.wag-ur.nl

Presentation Information:

Presentation Date: Monday, November 11, 2002
Presentation Time: 9:00-11:00 am
Poster Board Number: 2123

Keywords:

humusprofile dynamics, base saturation, carbon sequestration, pedology