Humus conditions of stands with different proportion of Douglas fir in the Hůrky Training Forest District and Křtiny Training Forest Enterprise

L. Menšík, J. Kulhavý, P. Kantor, M. Remeš

https://doi.org/10.17221/9/2009-JFS

Citation: Menšík L., Kulhavý J., Kantor P., Remeš M. (2009): Humus conditions of stands with different proportion of Douglas fir in the Hůrky Training Forest District and Křtiny Training Forest Enterprise. J. For. Sci., 55: 345-356.

download PDF

The paper presented evaluates reserves and chemical composition of forest floor of three stands of Douglas fir, spruce and spruce with beech at acid sites (3K) in the Hůrky Training Forest District (TFD) and at a meso-trophic site (4H) in the Křtiny Training Forest Enterprise (TFE). The aim of the study was to evaluate: (i) reserves of forest floor, (ii) soil reaction, (iii) total content of carbon and nitrogen for the forest floor layers, iv) C/N ratio, and (v) the content of dissolved organic carbon (DOC). The lowest reserve occurs in the Douglas fir stand at a mesotrophic site (25.0 t/ha), the highest accumulation occurs in the spruce stand and in the spruce/beech stand at an acid site (79.4–79.6 t/ha). The soil reaction is strongly acid to acid. The most favourable values of pH for forest floor and soil at acid (4.6 ± 0.4) and mesotrophic sites (5.2 ± 0.4) occur in the Douglas fir stand. It also corresponds to C/N ratio (23–26). The highest reserve of carbon in forest floor occurs at the acid site 34.7 t/ha (1.3 t/ha nitrogen). The lowest reserve of carbon in forest floor at the mesotrophic site amounts to 8.5 t/ha (0.4 t/ha nitrogen). The higher content of DOC in stands at acid sites can result in a higher risk of soil acidification. Keywords: spe

Keywords:

species composition; soil; forest floor reserves; pH; carbon and nitrogen; C/N ratio; DOC

download PDF

SJR (SCImago Journal Rank – SCOPUS)

2017: 0.206 – Q4 (Forestry)

Referred to in

– Agrindex of AGRIS/FAO database
– CAB Abstracts
– CNKI
– Czech Agricultural and Food Bibliography
– DOAJ (Directory of Open Access Journals)
– Elsevier's Bibliographic Databases
– Google Scholar
– J-Gate
– SCOPUS
– TOXLINE PLUS
– Web of Science (BIOSIS Citation Index)

Contact

Mgr. Petra Kolářová
Executive Editor
phone: + 420 227 010 355
e-mail: jfs@cazv.cz

Address

Journal of Forest Science
Czech Academy of Agricultural Sciences

Slezská 7, 120 00 Praha 2, Czech Republic