

STANOVENIE MNOŽSTVA BÁZICKÝCH KATIÓNOV UVOLNENÝCH ZVETRÁVANÍM V LESNÝCH PÔDACH AKO JEDEN ZO ZÁKLADNÝCH PARAMETROV PRI VÝPOČTE KRITICKÝCH ZÁŤAŽÍ

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ABSTRACT

Kunca V. Determination of base cations amount released by weathering in forest soils as the one of main parameters in critical loads calculations

This paper reflects the topical demand for describing the processes included in buffering of soil acidification at the level of ecosystems. Calculations with the steady-state model Profile were used to determine weathering rate values of base cations release at four forest sites in Poľana Mountains. These values ranged from 669 to 1195 eq.ha⁻¹.yr⁻¹ at sites formed of volcanic soil materials. This process can play a very important role in the buffering of acid atmospheric deposition input in many soils. Comparisons with values of Steady-stay mass balance (SSMB) approach for weathering assessment were done. The values differ for individual tree species with their root systems and for the site – crystalline and volcanic rocks – and atmospheric deposition conditions.

Key words: base cations, weathering, forest soils, critical loads, acidification