

# **Forest soil acidification in the Czech republic and analysis of differences between spruce and beech stands**

## **Abstract**

Acidification of forest soils is the process which considerably affected soil chemistry in the 2<sup>nd</sup> half of the last century. The aim of this paper is to give comprehensive review about the soil acidification, especially with focus on differences between forest species Norway spruce (*Picea abies*) and beech (*Fagus sylvatica*). The work also provides information about acidification mechanisms and its historical development in the Czech Republic. In the practical part the soil conditions under the beech and spruce stands from 5 mountainous and upland sites are compared.

The results showed better soil conditions under the beech stands, where higher pH values and concentrations of base cations were measured. However there were observed lower concentrations of toxic Al<sup>3+</sup> in deeper horizons under the spruce stands, although the difference was insignificant.

key words: soil acidification, spruce stands, beech stands, Czech Republic