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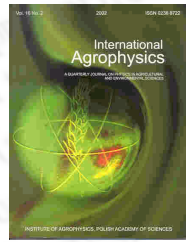
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Characteristics of aeration properties of selected soil profiles from Europe

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abstract The purpose of this paper was to characterise soil structure from the view of its aeration properties and to verify applicability of some methods for the determination of different properties related to aeration. The studies were conducted on 15 representative soil samples from Austria, Czech Republic, Hungary, and Slovakia. The paper presents results of measurements of different soil aeration properties such as oxygen diffusion rate (ODR), redox potential (Eh), redox potential diffusion coefficient (D/Do), air permeability (k), air-filled porosity (Eg) and air-filled porosity at different depths. The activity of dehydrogenase and catalase was also measured. All the aeration parameters such as D/Do, ODR, Eh, k, Eg and air-filled porosity at different depths were correlated with soil water content, air-filled porosity, bulk density and p