

# Agricultural and Food Science - abstract



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**The soil quality concept and its importance in the study of Finnish arable soils**

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## Abstract

Arable soil is a functional unit whose condition is vital to crop production, but also to ecosystems at large owing to the significant role of soil in global nutrient cycles and the soil quality concept recognises the concern for the sustainability of current arable land use practices. It integrates soil chemical, physical and biological properties, and takes account of the interaction of soil with water and air. This paper reviews the soil quality concept and its applications and discusses the importance of the concept for the assessment of Finland. Many aspects of the chemical quality of arable soil are already well known in Finland. In contrast, follow-up of the physical and biological soil components, which are important features of soil quality, is rudimentary. For monitoring of the soil quality at different scales – field, regional, national and global – a suitable set of indicators need to be developed. In this paper particular attention is paid to the potential importance and usefulness of selected biological indicators. It is clear that more basic research is needed to provide soil quality advisors with a solid basis for transmitting reliable information on soil quality. While the soil quality concept has been justifiably criticised, it has clear merits in the integrated approach to soil quality and in highlighting the environmental aspects of arable soil quality.

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