

iSQAPER PhD Student Research Information

Research Title

Restoration of soil physical-mechanical properties through changes in agricultural land use

Abstract

Agricultural soils quality is evaluated often only by its nutrient status and less attention is paid on soil porosity and other physical properties which affects substantially soil functionality. The main objective is to study how different land management practices such crop rotations, fertilization (mineral and organic) and tillage impact on soil physical properties. The main attention is paid on changes in soil water stable aggregates. The study bases on 3 long-term field experiments in Estonia.

Objectives of the research

How different grass species and fertilization affects soil structural stability in long term (50 yr) period

How winter cover crops effect soil structural stability in organic farming in 5-yr. crop rotation

How long term (over 20 yr) mineral and organic fertilization affects soil porosity and structural stability in 3-yr. crop rotation

iSQAPER Study Site / Work Package

Tartu, Estonia / WP3

Partners in this research

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