

SoildiverAgro project

Adoption of new management practices to increase crop production and quality



THE WHAT AND WHY

Indicators used by the Estonian farmers to assess their soil quality

The decline in the soil health due to unsustainable management practices is a considerable concern in the EU. Soil quality determines how well it can provide nutrients, retain water and air, and support plant growth. To select the most suitable soil cultivation practices to match their needs, it is crucial that the farmers understand their soil properties and its health and how to assess it. Soil quality can be evaluated on the basis of different physical, chemical, and biological indicators.

A questionnaire survey of farmers conducted in the SoilDiverAgro project studied soil management practices, farmers' attitudes, and socioeconomic factors impacting those. 276 responses were collected from the Estonian farmers in the Nemoral region. The average size of the arable land was 347 ha, and the most common soil types were loam and sandy loam soils.

The farmers were asked about what indicators they use to assess their soil quality. The farmers gave the highest priority to a mix of physical and chemical indicators. The most important indicators were the crop yield (70%) and soil structure (69%), followed by the soil pH (63%) and organic matter content (54%). The least used indicators were color of soil, erosion, and smothering, as less than 20% of farmers used those to evaluate their soil health.

The selection of indicators was connected with the size of the farm, as respondents in larger farms were more likely to pay more attention to the use of chemical indicators such as phosphorus, potassium, and nitrogen content, but also to other indicators such as ease of cultivation or soil compaction.



1. Cover crop in SoilDiverAgro CS12 in Estonia, Nemoral region. Photo: Shanskiy, M.

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