

SoildiverAgro project

Adoption of new management practices to increase crop production and quality



THE WHAT AND WHY

The profitability of tillage and no-tillage in organic and conventional fields in Nemoral region

Gross margin analysis helps farmers determine the financial profitability of different types of management practices and crops by comparing revenue and input costs per hectare, and helps them understand different trade-offs in making production decisions. The evaluation helps the farmers optimise their resources and understand the effects of price and yield variability on their economic performance. The gross margin analysis in the Nemoral regions compared the economic results of different crop rotations in three farming systems: no-tillage under conventional farming; conventional tillage under organic farming; and conventional tillage under conventional farming from 2021 to 2023. The crop rotation for organic treatment was winter rapeseed, winter wheat, and alfalfa. The crop rotation for no-tillage and conventional tillage under conventional farming treatment was winter wheat, spring wheat, and alfalfa; and winter wheat and peas, respectively.

The period was characterised not only by high yields and a rapid increase in producer prices but also highly volatile input prices. While the revenues were higher for winter wheat in the case of no-till, their input use was also considerably more intense, resulting in a lower gross margin (900 €/ha) in comparison with conventional tillage for winter wheat (1160 €/ha) in 2021. The organic wheat production had a higher gross margin than conventional wheat in 2022. The organic tillage-based production had the highest gross margin for its 2021 to 2023 crop rotation of winter rapeseed, winter wheat, and alfalfa. It was followed by no tillage under conventional farming with the rotation of winter wheat, spring wheat and alfalfa.



1. No-tillage field in Tartu county, Estonia.
Photo Sutri, M.

KEYWORDS

Gross margin, no tillage, organic farming, production costs

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