Soil Carbon in the Ecological Transition
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Carbon Farming practices verified by Rock-Eval soil analysis

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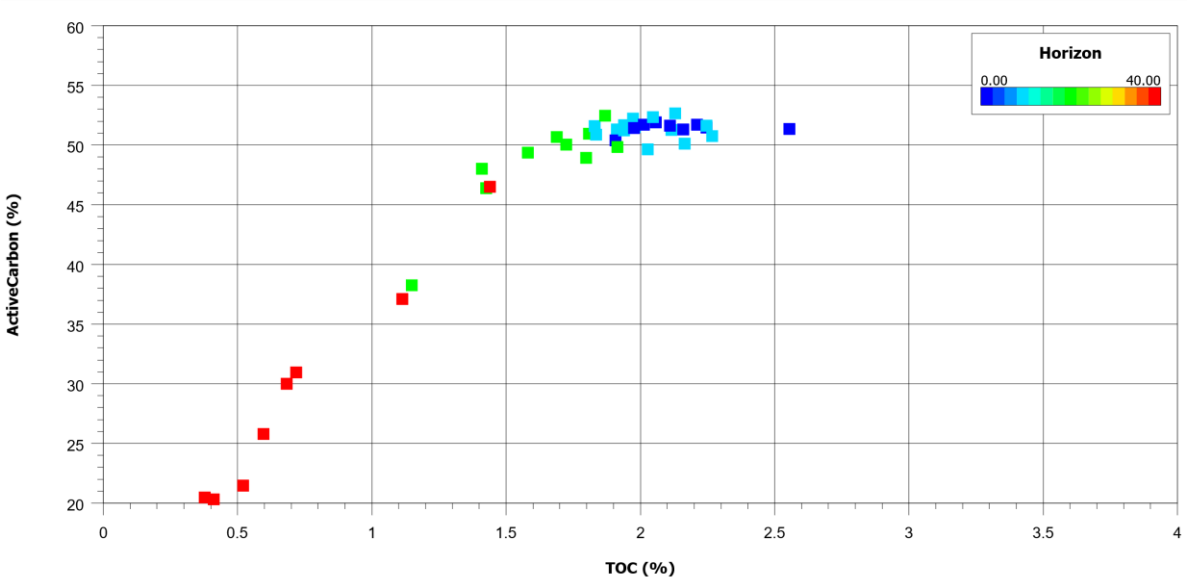
The Terrasolis experimental farm is located on a limestone plateau, historically a land without any agriculture (a moor or heath).

Total Organic Carbon (TOC) measurements indicate relatively typical values for large-scale farming plots, ranging from 0.5% to 2.5%. However, PartySoc data reveals that stable carbon content is not as high as the 60-65% found in traditional large-scale crop cultivation soils, but rather only 50%. This suggests that the original land has been recently converted for farming, a hypothesis confirmed by historical aerial views.

The natural tendency of soils to exhibit lower TOC values with increasing depth is observed throughout the Terrasolis farm, across all plots. Similarly, Total Inorganic Carbon (TIC) increases with depth as it approaches the bedrock. Furthermore, as soil horizons are deeper, the organic matter gets more oxidized, due to life activity, resulting in increased stability.

Furthermore, Rock-Eval measurements reveal significant differences between various plots. These differences are already known to the farmers and corroborate previous pedological and resistivity measurements. This study highlights the usefulness of carbon fractions content as a reliable proxy for other soils parameters, as already reported by the Microbioterre project.

Monitoring the evolution of the Terrasolis farm's soils over time will be an interesting endeavor.


Horizon
0.00
40.00
ActiveCarbon (%)
TOC (%)
60
55
50
45
40
35
30
25
20
0
0.5
1
1.5
2
2.5
3
3.5
4