

Long term effect of plant diversity on soil micro-scale physics and its implications for O₂ supply and N₂O production

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- High plant diversity increases carbon storage, microbial activity, soil aggregate stability, and porosity.
- Different soil physical characteristics in diversity levels might lead to varying soil O₂ supply and N₂O production.
- We investigated pore size and organic matter distribution in diversity gradient (CE1, 7, 8, 9, 10, and 12) using X-ray μ CT scanning, and O₂ and N₂O levels in pores using micro-sensors.
- Preliminary results show that the volume of organic matter and pore fraction were greater in high diversity plots.

