



Nature Based Solutions Innovation and Metrics

23.03.2026, Vienna Soil Dialog
Alfred Grand, GRAND FARM

VERMIGRAND

Naturprodukte GmbH





GRAND FARM

GRAND FARM for research and demonstration: 90 ha regenerative organic farm, Absdorf, Austria





GRAND GARTEN



GRAND FARM

Nature Based Solutions:

Earthworms and plant roots in subsoil



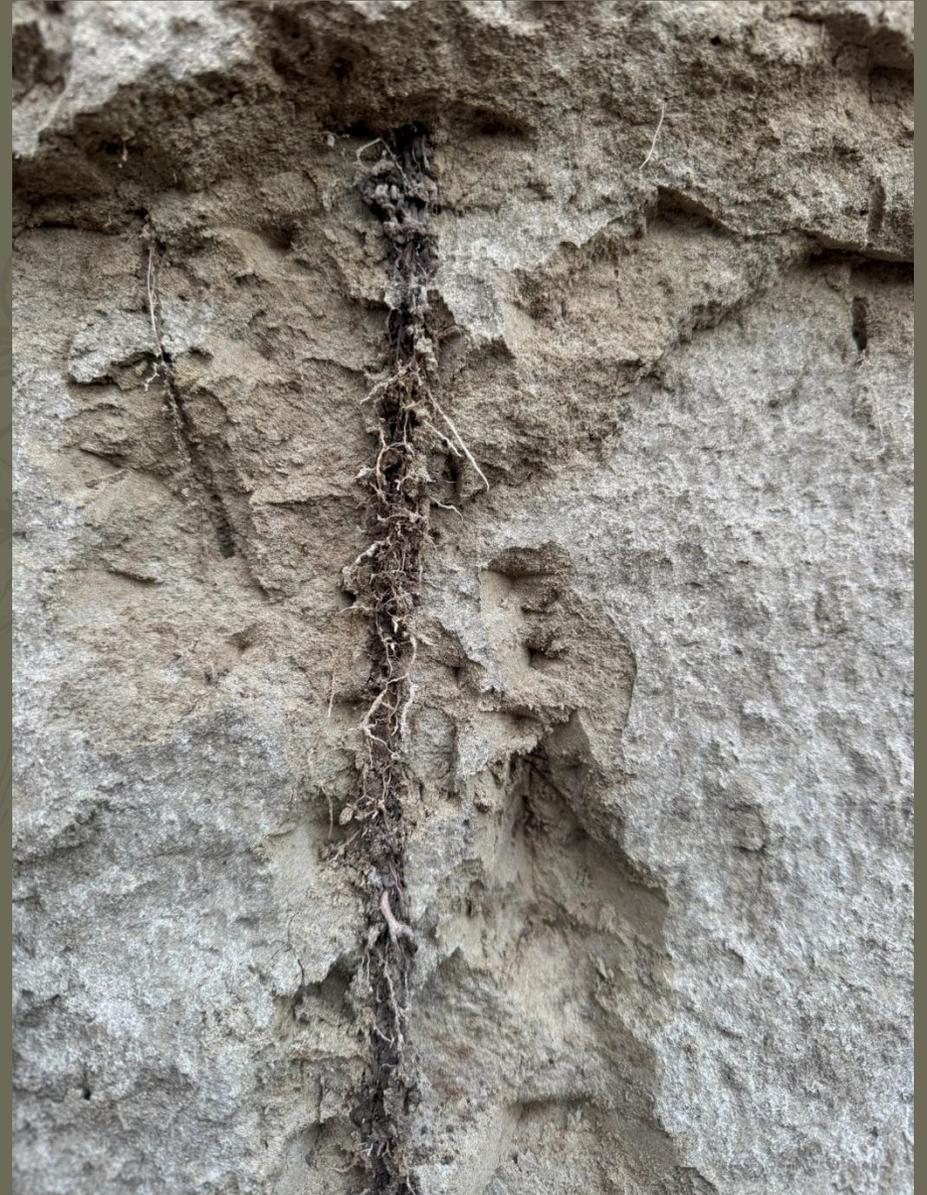


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Nature Based Solutions:

In the subsoil roots find
RECOURCES in
earthworm burrows:

- Room to grow
- Nutrients
- Microbes
- Phytohormones
- Humic substances
- Water





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Nature Based Solutions:

No earthworm burrows

No roots



Appendix 2

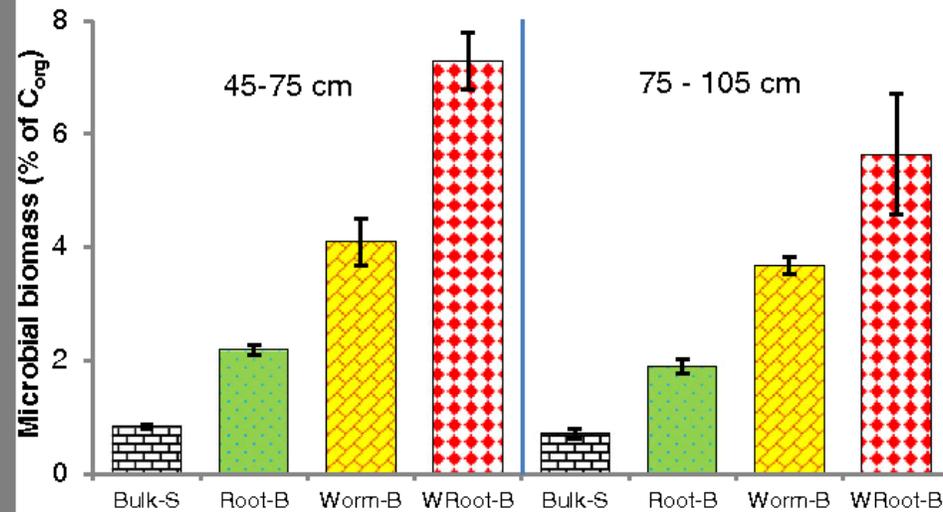


Fig. 8. The percentage of C_{org} presented as C_{org} at the two soil depths

Influence of the encapsulated microbiomes on seed germination and seedling development

Vermicompost Beads

Peat Beads

Soil Beads

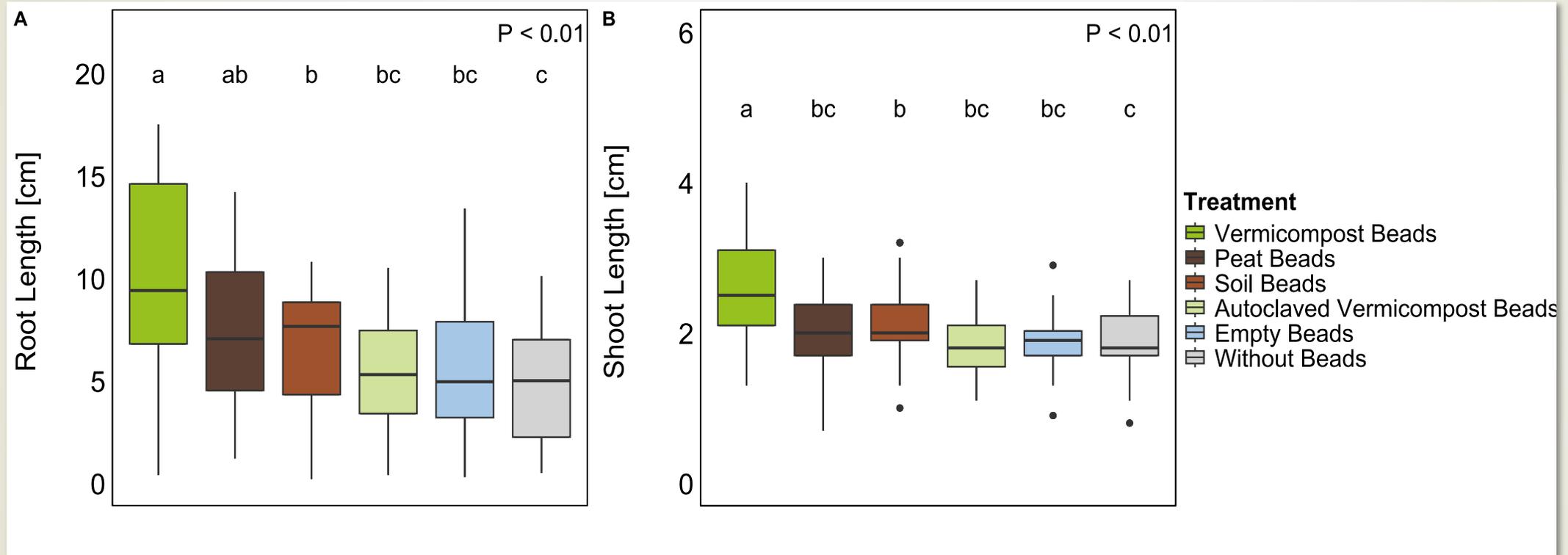
Autoclaved
vermicompost
microbiome
Beads

Empty Beads

Without Beads

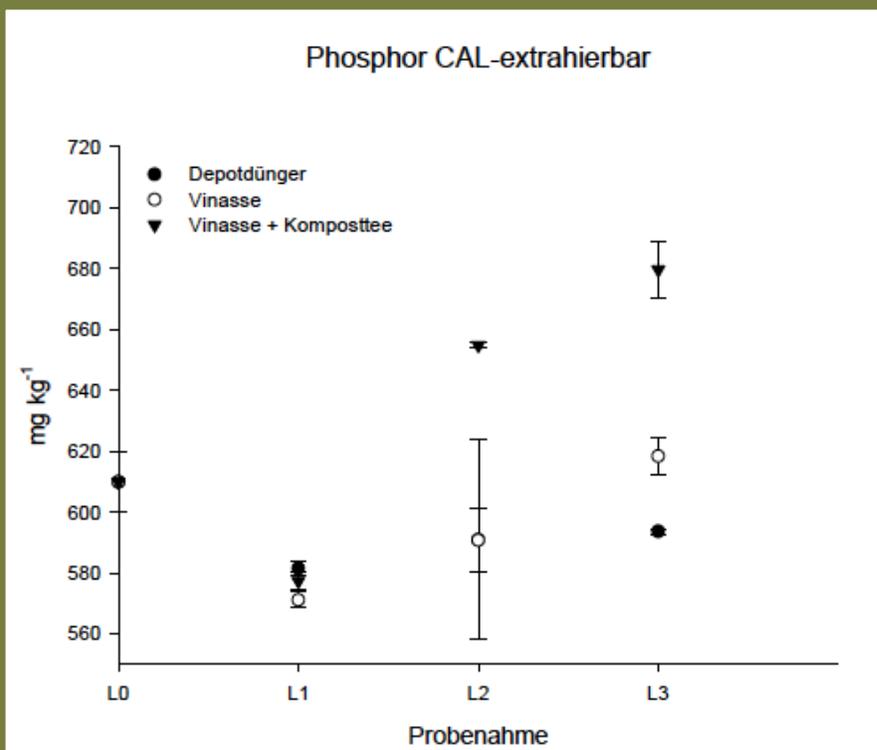


Influence of the encapsulated microbiomes on seed germination and seedling development

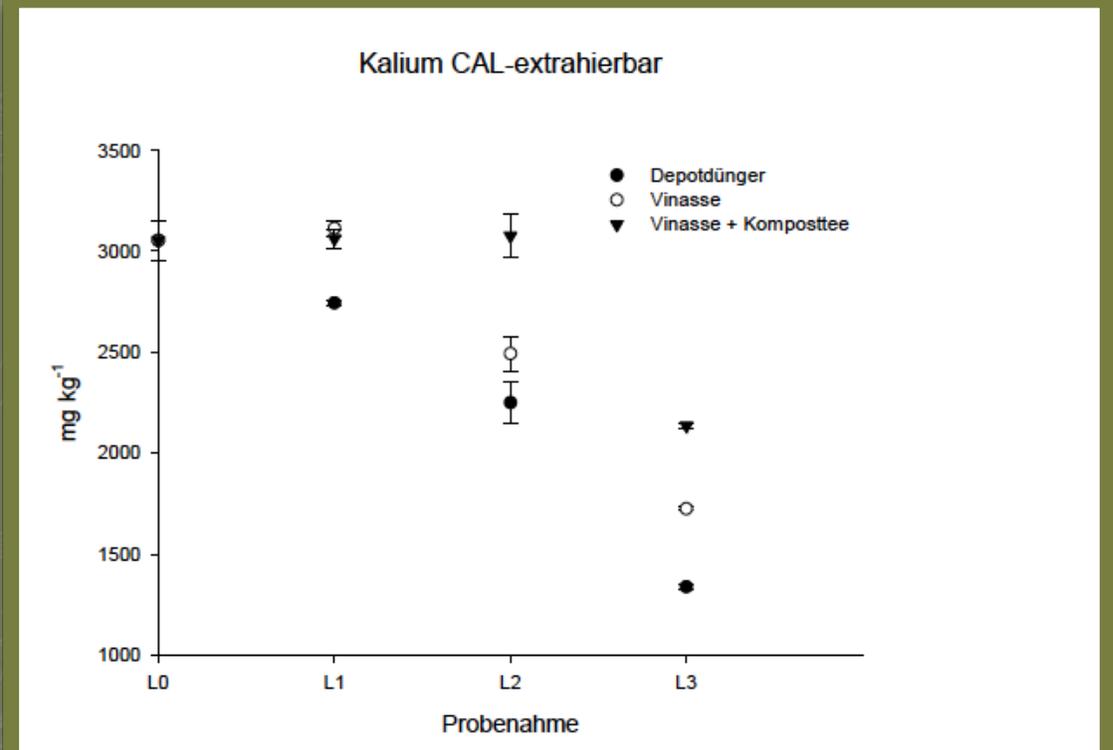


Through treatment with the encapsulated vermicompost microbiome, the root and shoot length of tomato seedlings was significantly increased.

Plant availability of P and K



Grafik 2: Vergleich der CAL-Extrahierbarkeit von Phosphor in den Düngevarianten 1, 4 und 5. L0, L1, L2 und L3 bezeichnen die Probenahmen. Die Fehlerbalken bezeichnen den Standardfehler.



Grafik 1: Vergleich der CAL-Extrahierbarkeit von Kalium in den Düngevarianten 1, 4 und 5. L0, L1, L2 und L3 bezeichnen die Probenahmen. Die Fehlerbalken bezeichnen den Standardfehler.

Master thesis, Lea Wellinger, BOKU

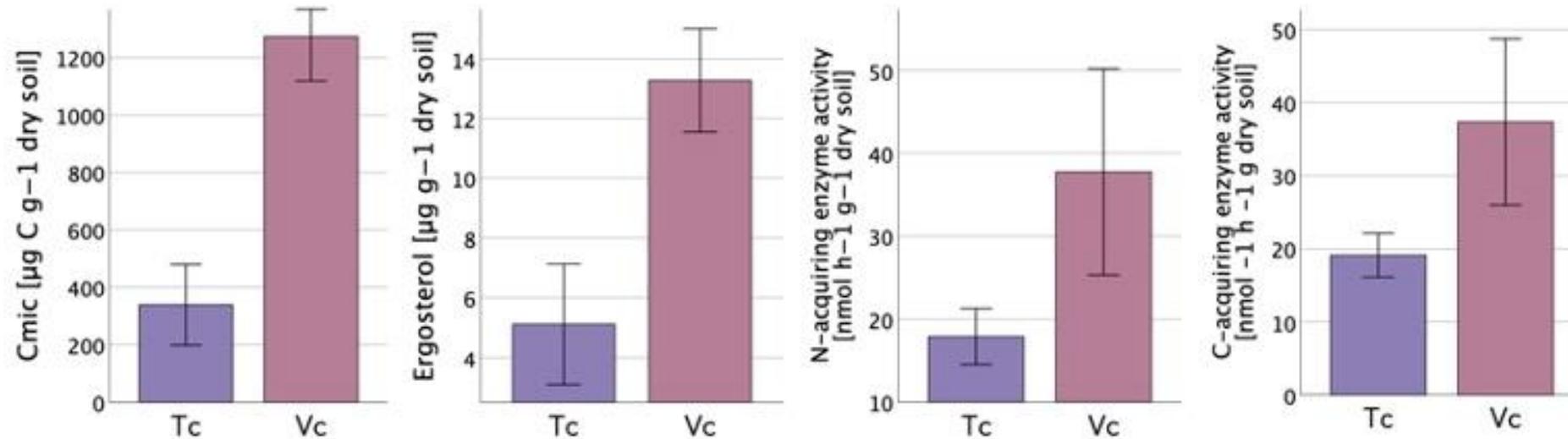


Figure 4. Microbial biomass carbon (a), fungal biomass (b) N-acquiring enzyme activity (c) and C-acquiring enzyme activity (d) of the thermal compost (Tc) and vermicompost (Vc). Error bars represent ± 1 SD. Letters indicate significant differences ($p < 0.05$).



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SEED COATING with VERMICOMPOST:

- **Instead of 10.000 liter of compost per hectare**
- **1 liter of vermicompost per hectare**

Results:

- **Reduce amount of mineral fertilizer**
- **Reduce amount of pesticides**
- **Reduce costs, environmental impact, climate change**
- **Increase profit, resilience, soil health, stabilize yields**

A photograph showing a person's hands and legs as they apply straw mulch to a garden bed. The person is wearing shorts and hiking boots. The garden bed is filled with green plants, and the straw is being spread over the soil. The background is a bright, sunny outdoor setting.

Mulch application:

- **Earthworm support**
- **Reduced evaporation**
- **Increased water infiltration**
- **Reduced soil temperature in summer**
- **Increased aggregate stability**
- **Increased nutrient availability**



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Fragestellung: Mulchvarianten (ohne/Luzerne/Hanf)



Hanf



Luzerne

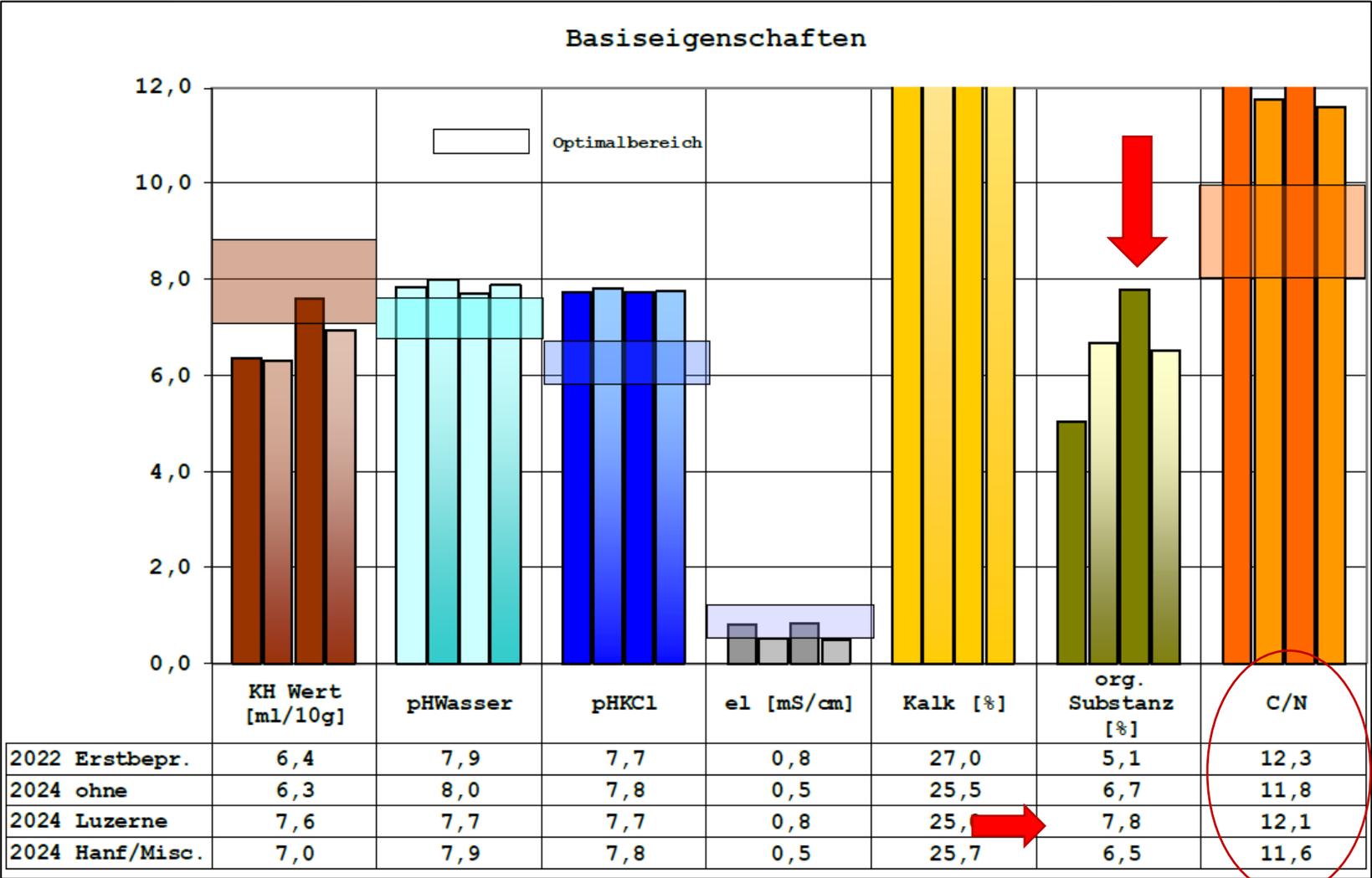


ohne

4

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Results: Lucerne eL, Org.Sub., C/N





Visual assessment:



Visual assessment:



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Innovation • Research • Demonstration

**Interested?
Feel free to
contact us :-)!**

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