



Enhanced silicate weathering as climate change solution

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How does enhanced weathering work?

1

Application of ground silicates on agricultural soils



2

During the weathering process

- CO_2 is captured
- nutrients are released

CO_2



HCO_3^-

CO_2



HCO_3^-

CO_2



HCO_3^-

What is the aim of this thesis?

1

Quantify CO_2 capture of enhance weathering in an experiment with maize plants

2

Study interactions between enhanced weathering and soil biota:

- Plant roots
- Mycorrhizae fungi
- Plant growth promoting bacteria (*Bacillus subtilis*)

3

Other ideas/interests? – Contact us!



How are those aims reached?

Experimental work is finished → mostly lab work

- Determination of root biomass
- Evaluation of hyphal length density and root colonization of mycorrhizal fungi
- Sequential extraction to determine weathering rates and carbon capture
- Investigation of soil CO₂ effluxes of different treatments
- ...

