

# **LET'S TALK ABOUT SOIL!**

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soil, land, earth,  
terra (Lat), Erde (D), föld (Hu)...

- Symbol, mystery (ground of living, source of eating, property, homeland, etc)
- Natural resource
- Pedosphere: outermost, fertile layer of Earth, „skin of Earth”
- under formation or in steady-state condition
- Solid, liquid, gas phases + living organisms – a hidden world
- very diverse: each soil is unique (→terroir)
- ‚Cultura’ comes from soil in its original meaning

In contrary, for most children:

- Something brown under our feet that makes us dirty
- Even a source of problem for many school gardeners...



# Anthropogenic or technogenic soils





# Soil as a danger – or a hidden empire?

- [https://youtu.be/c2CPcEUsa\\_4](https://youtu.be/c2CPcEUsa_4)



Soiless pot mix?





# An excellent school garden sustainability topic!

But, one might ask, what does soil have to do with education? For us, *living soil* serves as a relevant entry point to engage the discourse on sustainability. First, we offer a critique of the modernist paradigm within which the sustainability discourse is situated. Next, a metaphoric discussion of living soil serves as a prelude to the five principles of sustainability education that

manner. Through our mutual and individual experiences with learning gardens, we have found *living soil* to be a potent metaphorical lens through which to begin a formulation of ecologically grounded principles for sustainability education. We recognize that this framework is somewhat

Soil is also intimately connected to culture, as is the history of soil with the history of humanity<sup>1</sup> (Hyams, 1976; Montgomery, 2007). Human beings have had a spiritual, cultural, and sensual relationship and attachment to soil (Kumar, 2002; Shiva, 2008). Diverse spiritual teachings remind us that we arise from the soil and to the soil we eventually return: whether it is the Hindu Vedas or the Christian Bible, soil serves as reference point for teaching about the sacredness of life, for our daily bread reaches us not by providence but through the nurturing interactions of soil and people.



## Living Soil Regenerates Education

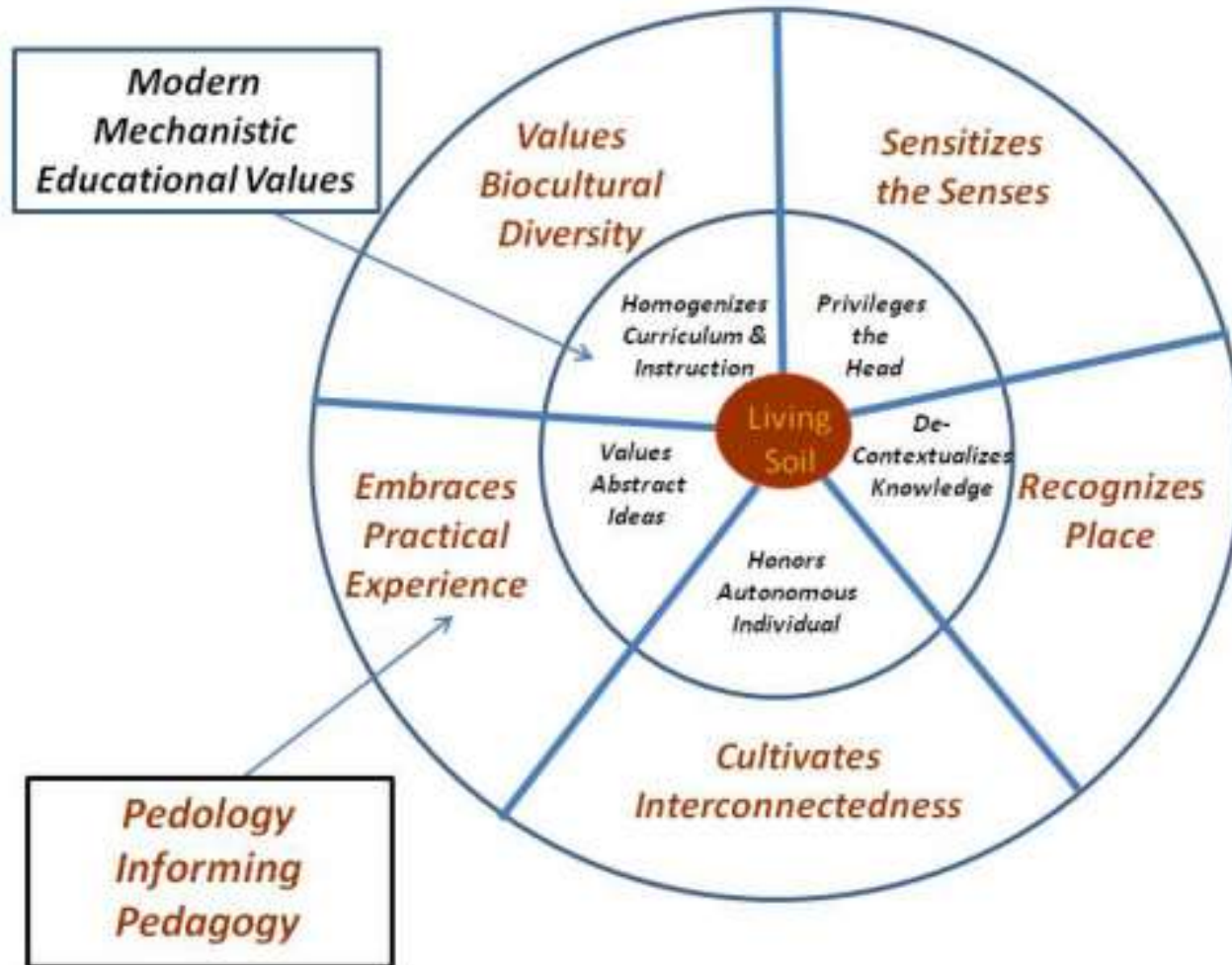


Figure 3: Principles Linking Pedagogy and Pedology









Slate

Schiefer





# Soil collection, experiment





# DIY DYE









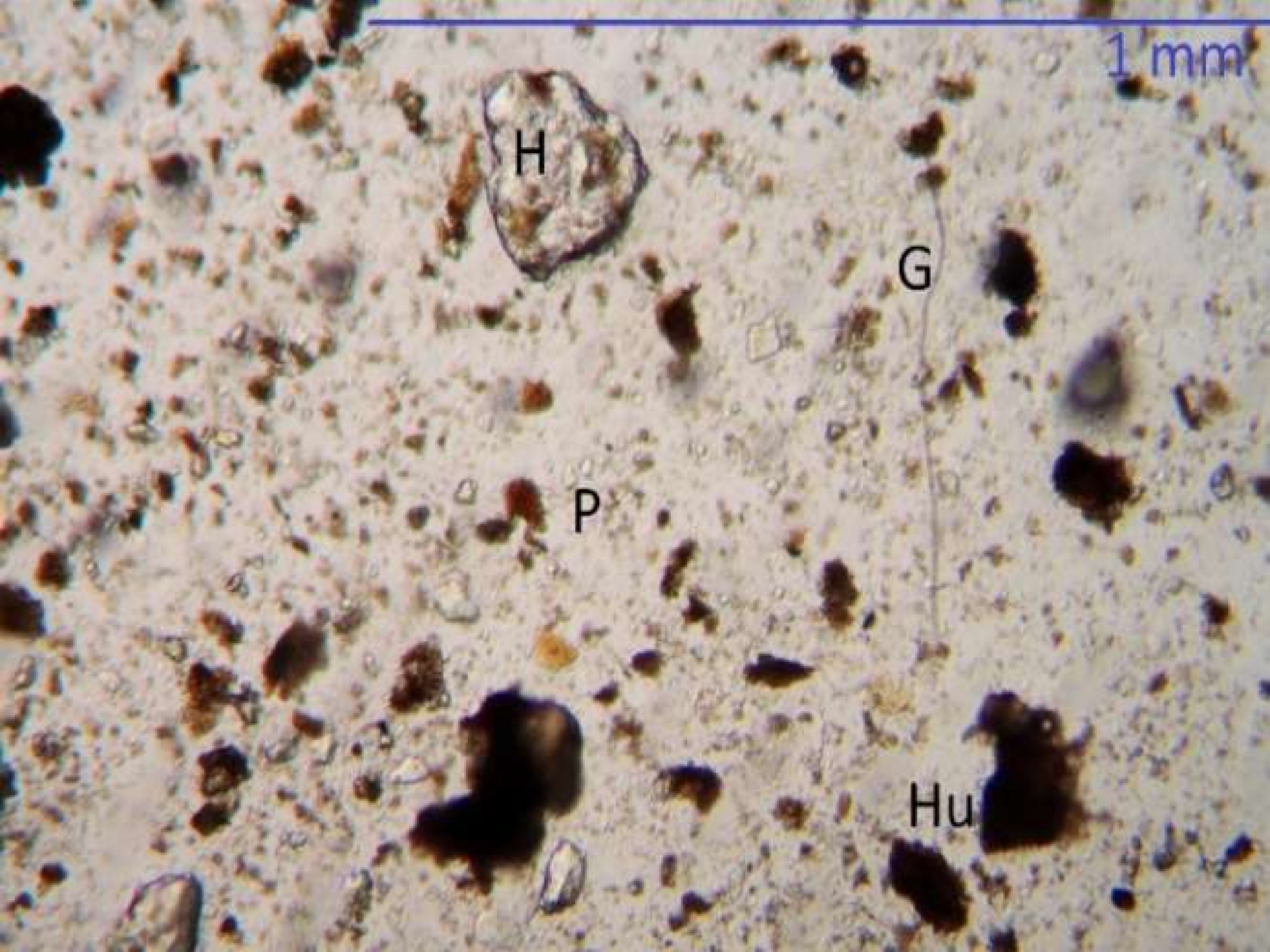
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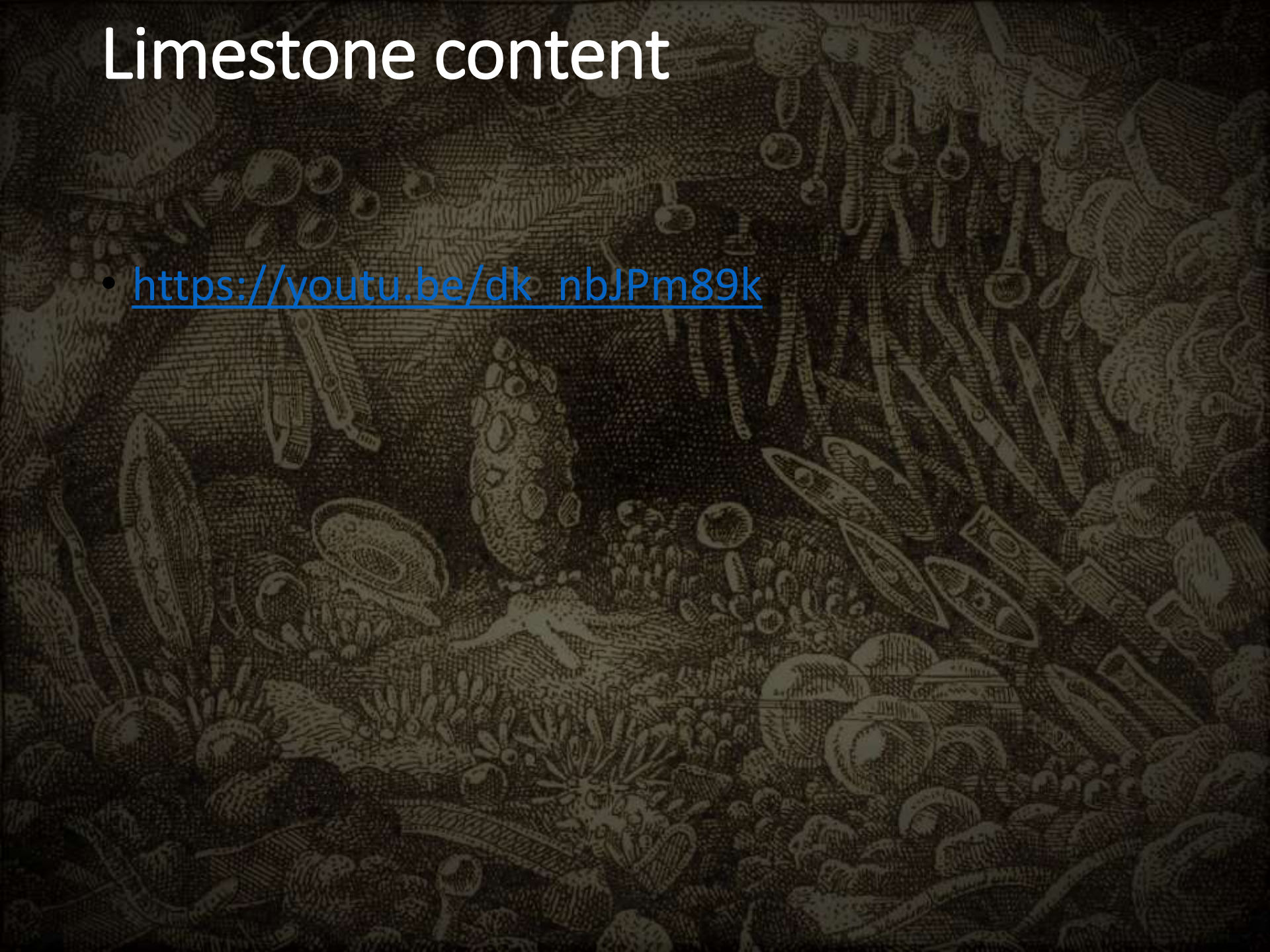
Hu





# Limestone content

- [https://youtu.be/dk\\_nbJPm89k](https://youtu.be/dk_nbJPm89k)





# Soil humidity in time





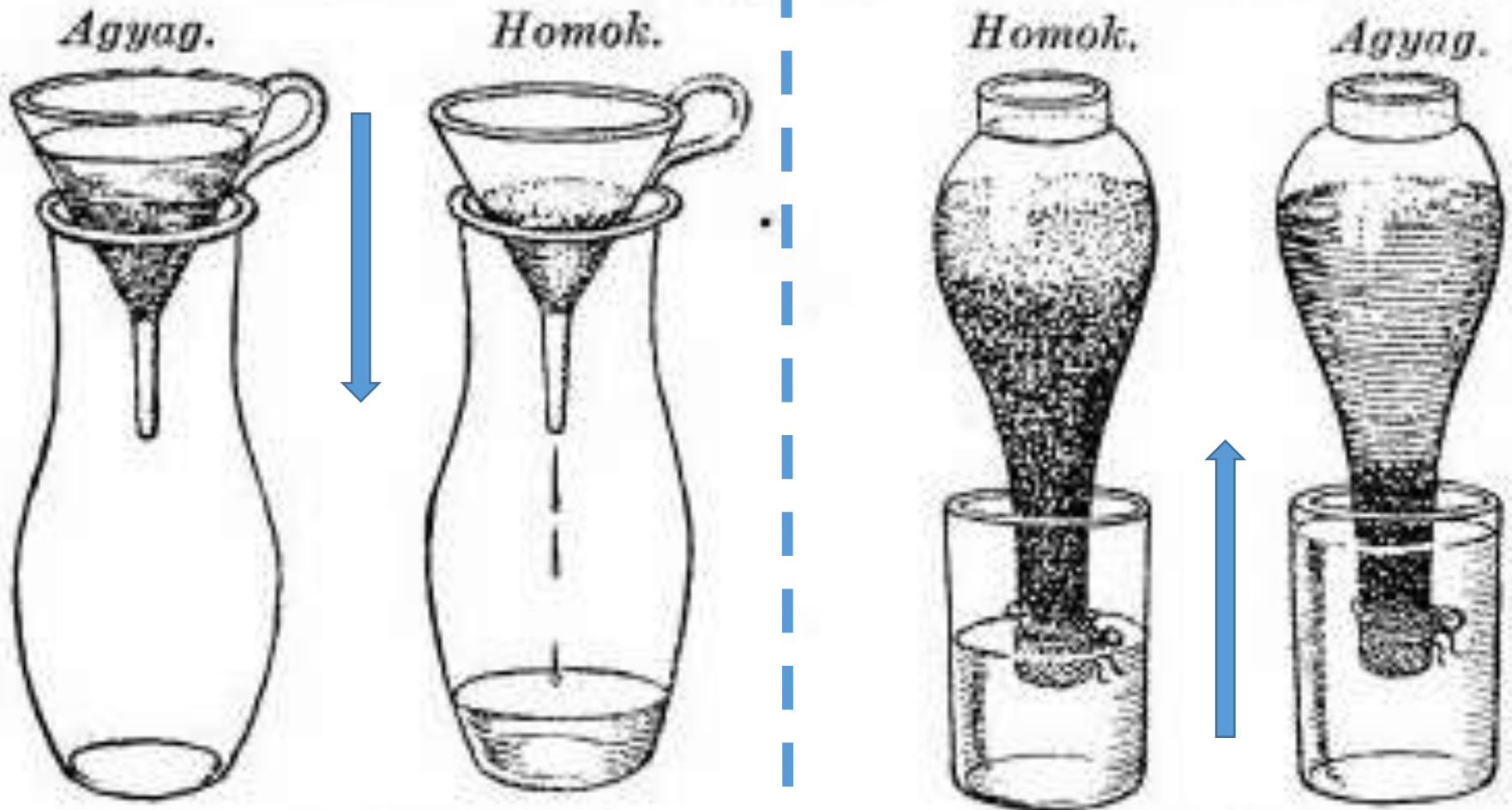
# Soil humidity in space

- <https://youtu.be/T0pPwqbpndo>

Dry/ Nor(mal) /wet



Let's learn some Hungarian from an 1920' textbook!



- Which is sand, which is clay (loam)?
- Welcher ist der Sand und welcher ist der Lehm?



Soil water  
infiltration  
through a plexiglass





Skin to skin





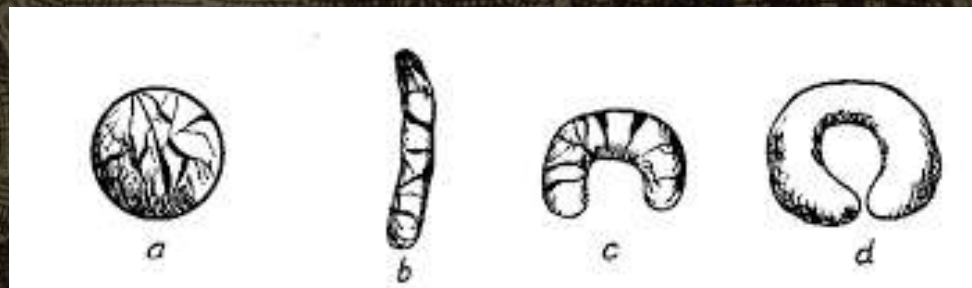
# No till/soil loosening by broadfork

- <https://youtu.be/Caf4NSvKE8s>











# An easy worm box





Even  
indoors!





# Two alternatives of composting

- Vermicomposting
- Bokashi





# Soil formation via sheet mulching/lasagne garden

## HOW TO BUILD A RAISED LASAGNA GARDEN BED





# Soil formation via sheet mulching/lasagne garden





# Under foil or politunnel













# Biochar

– a soil carbon additive



[https://youtu.be/xsbXLik1\\_jo](https://youtu.be/xsbXLik1_jo)



# Crop rotation

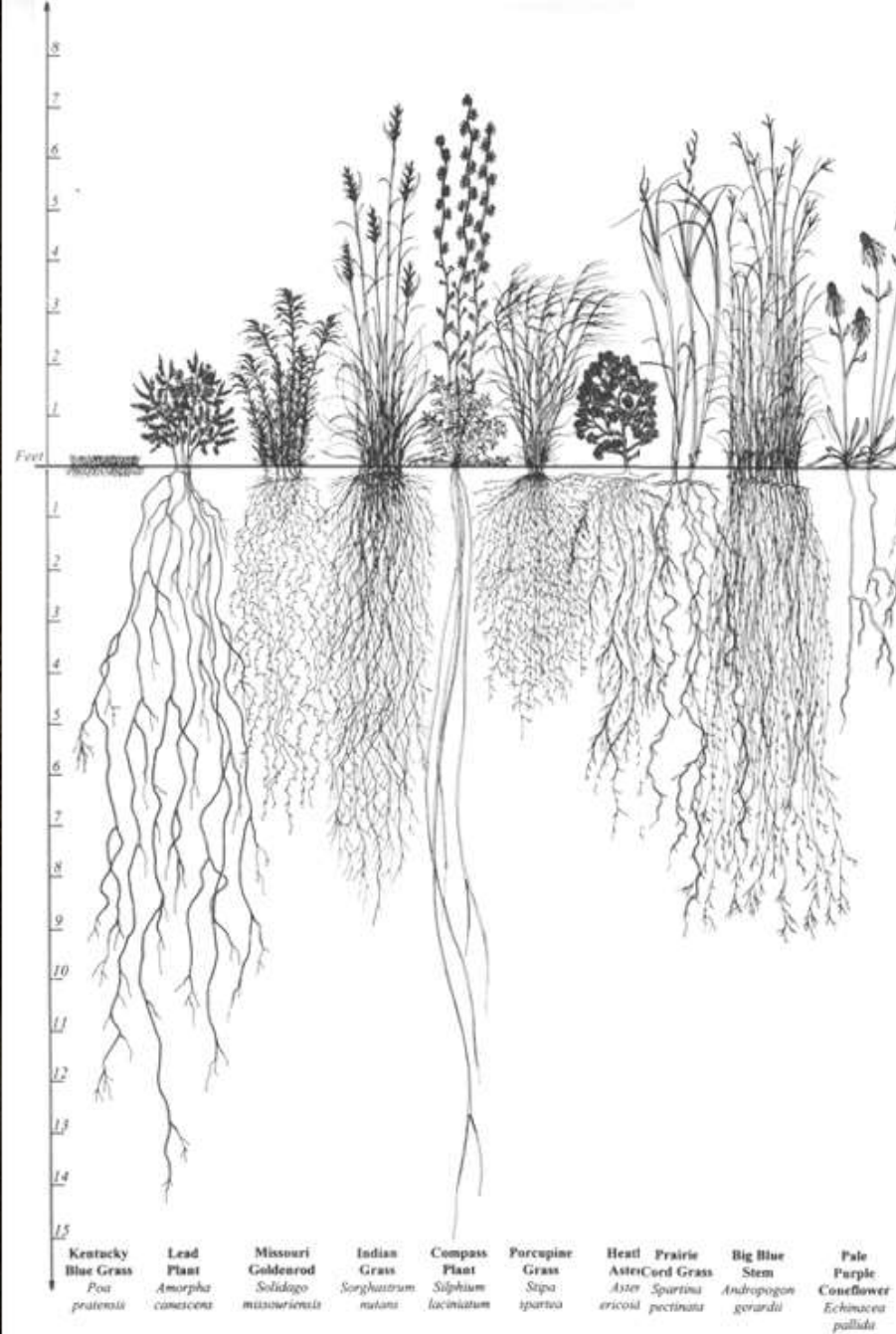




# Crop rotation

- <https://youtu.be/ywEKv4pRgeM>





Root Systems of Prairie Plants

Shallow Rooting 12" - 18"	Medium Rooting 18" - 24"	Deep Rooting 24" - 36"+
Arugula	Beans, dry	Artichokes
Broccoli	Beans, pole	Asparagus
Brussels sprouts	Beans, snap	Beans, lima
Cabbage	Beets	Okra
Cauliflower	Canteloupe	Parsnips
Celery	Carrots	Pumpkins
Chinese cabbage	Chard	Rhubarb
Corn	Cucumber	Squash, winter
Endive	Eggplant	Sweet potatoes
Garlic	Kale	Tomatoes
Kohlrabi, Bok Choy	Peas	Watermelon
Lettuce	Peppers	
Onions, Leeks, Chives	Rutabagas	
Potatoes	Squash, summer	
Radishes	Turnips	
Spinach		
Strawberries		

## Root Depth Requirements

Schwester  
Christas  
Mischkultur

Die Mischung aus den besten Pflanzen





After working with soil, wash your hands!

