

# Healthy soil for storing carbon and retaining water and nutrients: Experiences from a Carbon Action farmer.



Sirkku Puumala - Verkatakkila farm, Finland  
GRASS 2019, Warsaw





We care about our soils!



# Towards healthy soil – holistic perspective



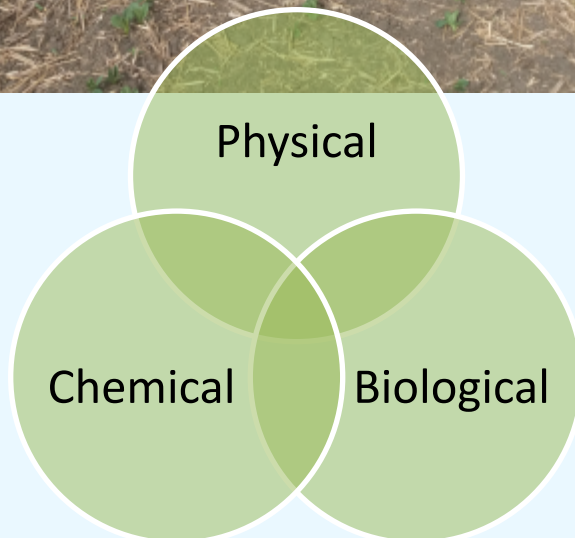
Learn to know your fields

- observe
- dig holes
- ask questions

Ask: 5x why

All senses to use

Shovel & other equipment





# Towards healthy soil – starting from the basics

- Water management
- Soil structure
- Soil samples: Ph & Nutrient levels, including micronutrients





# Tilling – Machines & Nature



What is needed?  
Pros and Cons of tilling

Minimizing bare soil:  
Plant residue  
and living plants provide  
armour to the soil



Nature = outstanding soil structure architect

# Towards healthy soil - Crop rotation

## More green weeks and more diversity

	Year 1			Year 2			Year 3			Year 4			Year 5			Year 6		
Harvested Crop																		
Covercrops																		
	Planting Caraway			1. crop of Caraway + covercrops			2. crop of Caraway + covercrops			Winter rye + covercrops			Fava bean + covercrops			Malting barley + covercrops		



Left: 6.10.2016 white clover after spring wheat

Middle: 25.8.2016 multispecies grassland right after harvest

Right: 30.8.2017 first years caraway crop harvested and next years plants are growing well 4 weeks after harvest



# Healthy soil

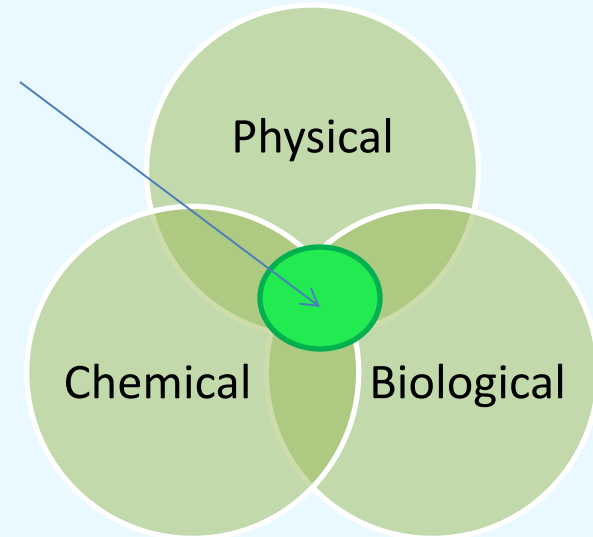
Easy to cultivate + more resilient

Better capacity in retaining water and nutrients

→ better yields with less costs and less environmental impact.

Key to sustainable food production .

Potential to mitigate climate change by storing carbon is enormous.





Unique platform

Bringing together scientists, farmers  
and businesses

Developing and researching methods  
for carbon sequestration

Verifying the results scientifically

Educating Finnish farms about climate  
friendly, regenerative farming  
practices

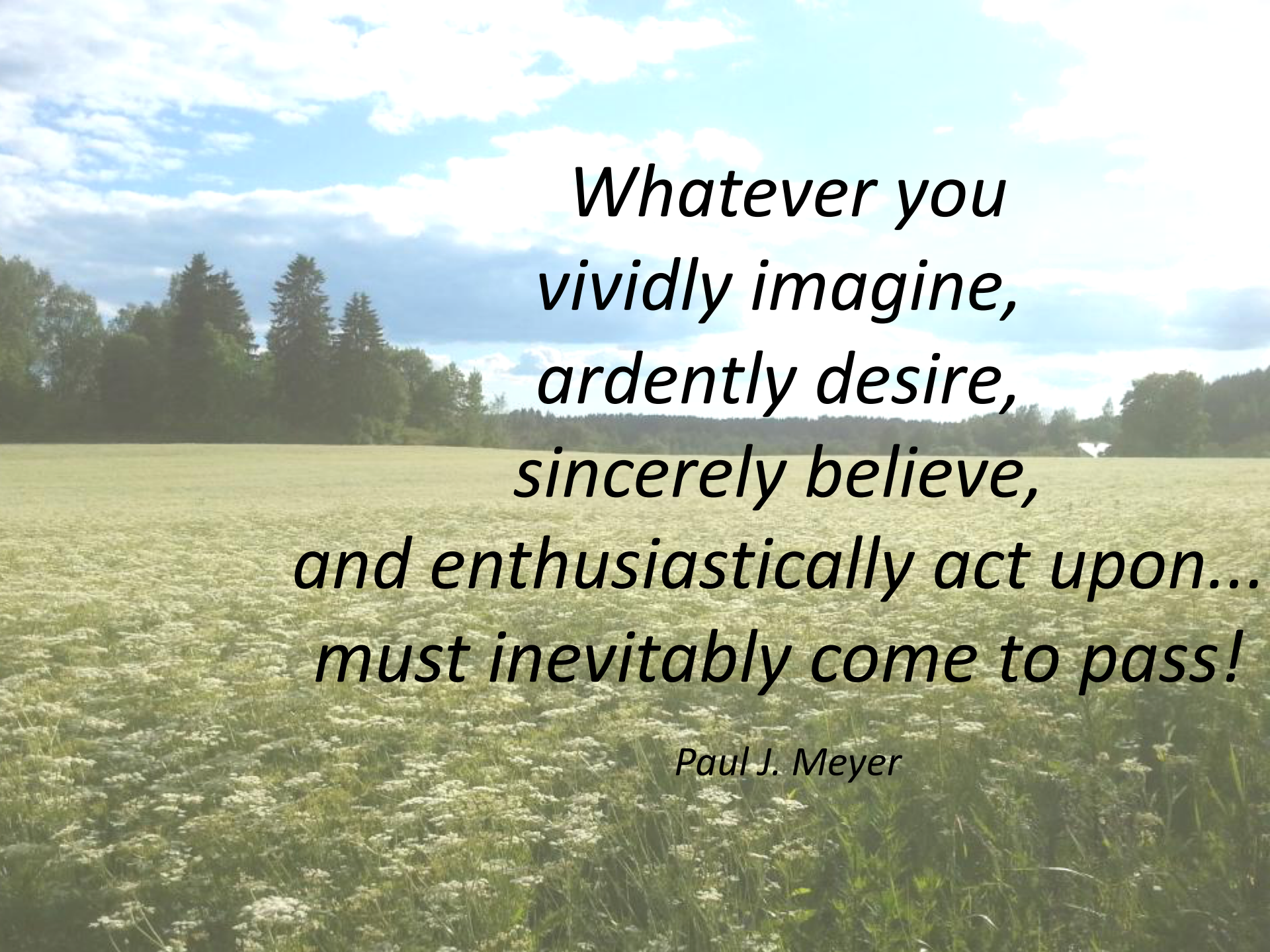
Over 100 different kinds of farms &  
trial fields involved

<https://carbonaction.org/front-page/>



FINNISH METEOROLOGICAL INSTITUTE





*Whatever you  
vividly imagine,  
ardently desire,  
sincerely believe,  
and enthusiastically act upon...  
must inevitably come to pass!*

*Paul J. Meyer*