

# Farming for the future

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In the slide show...

- Regenerative farming
- Soil cultivation

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Ash & Elm Horticulture



# What is regenerative farming

- It is about building carbon in the soil
- Building top soil
  - Which helps retain water, nutrients

# Ploughing can we do without it?



Read this report and discuss:

<https://agricology.co.uk/blog/soil-cultivations-ploughing-non-inversion-tillage-and-soil-quality/>

# 6 Core Principles of **REGENERATIVE AGRICULTURE**



Question who is using the term  
Often systems are using herbicide instead of tillage

# Understanding Soil Cultivation

## Digging

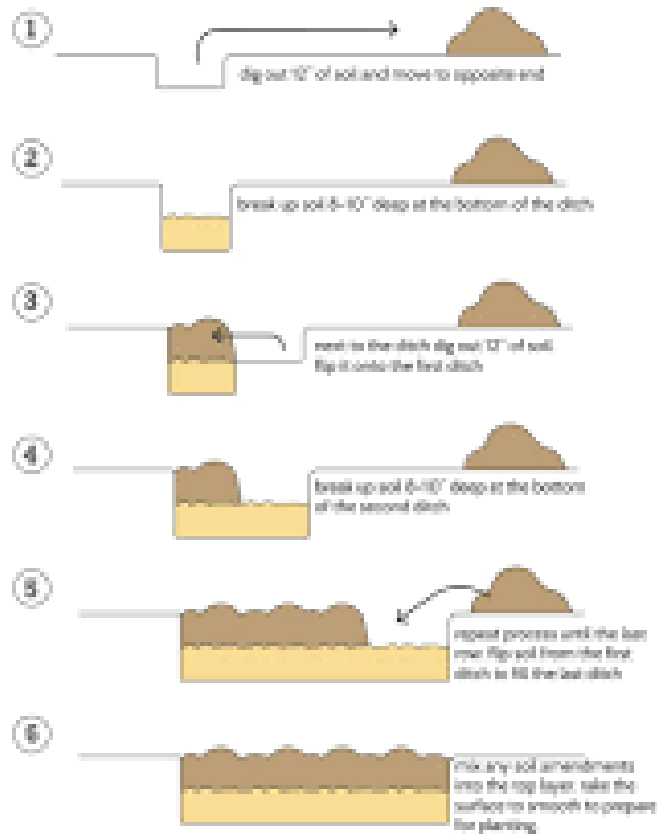
- Breaks up clods & compacted soil
- Aerates the soil
- Weeds are buried or removed
- Brings stones to surface
- Brings weed seeds to the surface
- Disturbs soil living matter
- Releases carbon

## No Dig

- Relies on plants to break up compaction
- Worms aerate the soil
- Doesn't bring weed seeds to surface
- Doesn't interfere with soil structure
- Doesn't disturb soil life
- Retains living root
- Leaves carbon in the ground

# Double digging explained

Traditionally used on allotments to open compacted soil



**double digging**  
thisnaturaldream.com

- Why?
  - Breaks up deep compaction
  - Improves drainage
- Never mix subsoil with topsoil
  - Topsoil is full of living organisms
- Deep digging or deep ploughing can upset soil structure and soil life
- Alternatives to double digging are:
  - Sub soiling
  - Planting deep rooted plants e.g. alfalfa
  - Broad forking

# Time saving hand tools



Broad Forks



<https://reagtools.co.uk/>

# Bed forming and mulch laying



# Regenerative soils



- Mulching
  - Retains moisture & nutrients
  - Warms the soil increase activity
  - Minimum disturbance of the soil web
  - Reduces erosion
  - Improves water filtration
- Living root (avoiding bare soil)
  - Increases carbon storage
  - Keeps soil life alive

# Minimum till

## Principles

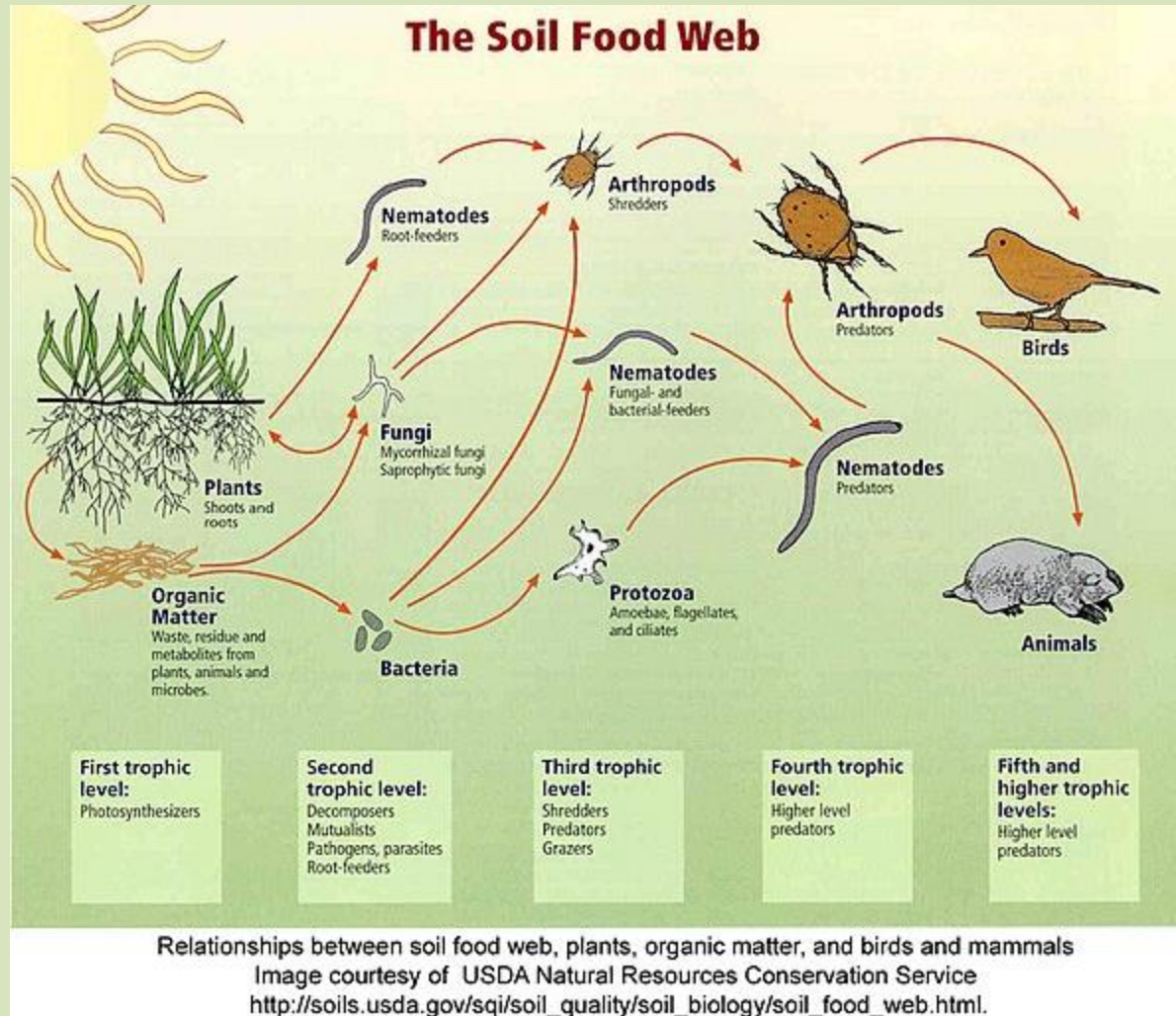
- Reduces losses
  - Soil structure
  - Carbon release
  - Soil life
- Often uses herbicide to kill off plants
- Organic farm trials into over sowing
  - Mulching with plant brash
  - New machinery being developed



# No Dig gardening

- Charles Dowding
  - <https://charlesdowding.co.uk>
- Richard Perkins
  - <https://www.richardperkins.co/>
- Lots of organic inputs
- Be careful of obese soils

# Soil is a living organism



Dr. Elaine Ingham video. 11.55mins

<https://www.youtube.com/watch?v=8ugaL6wsXME&t=5s>

# Emma Maxwell



<http://www.ashandelm.co.uk>