

PINECREST



PERMACULTURE LLC
DESIGN AND CONSULTING

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- What Is Permaculture
- What is Soil
- How to build soil in your own backyard

A FEW POINTS

- I don't like boxes
- Cheap and lazy
- Know your farmer
- Barter
- Work in/with a community



WHAT IS PERMACULTURE

“The conscious design and maintenance of agriculturally productive systems which have the diversity, stability, and resilience of natural ecosystems. It is the harmonious integration of the landscape with people providing their food, energy, shelter and other material and non-material needs in a sustainable way.”

– Bill Mollison

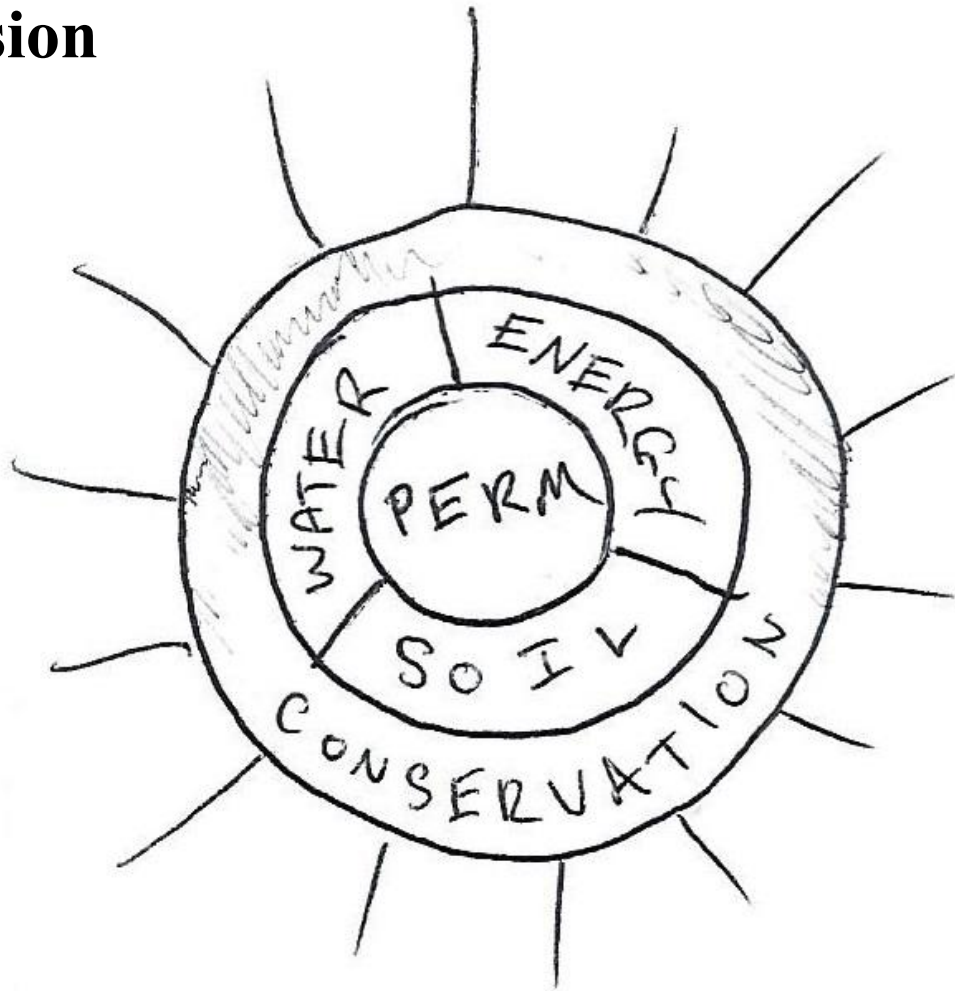
WHAT IS PERMACULTURE

Homescape, landscape, farmscape and wildscape
design based on observations of natural ecosystems.

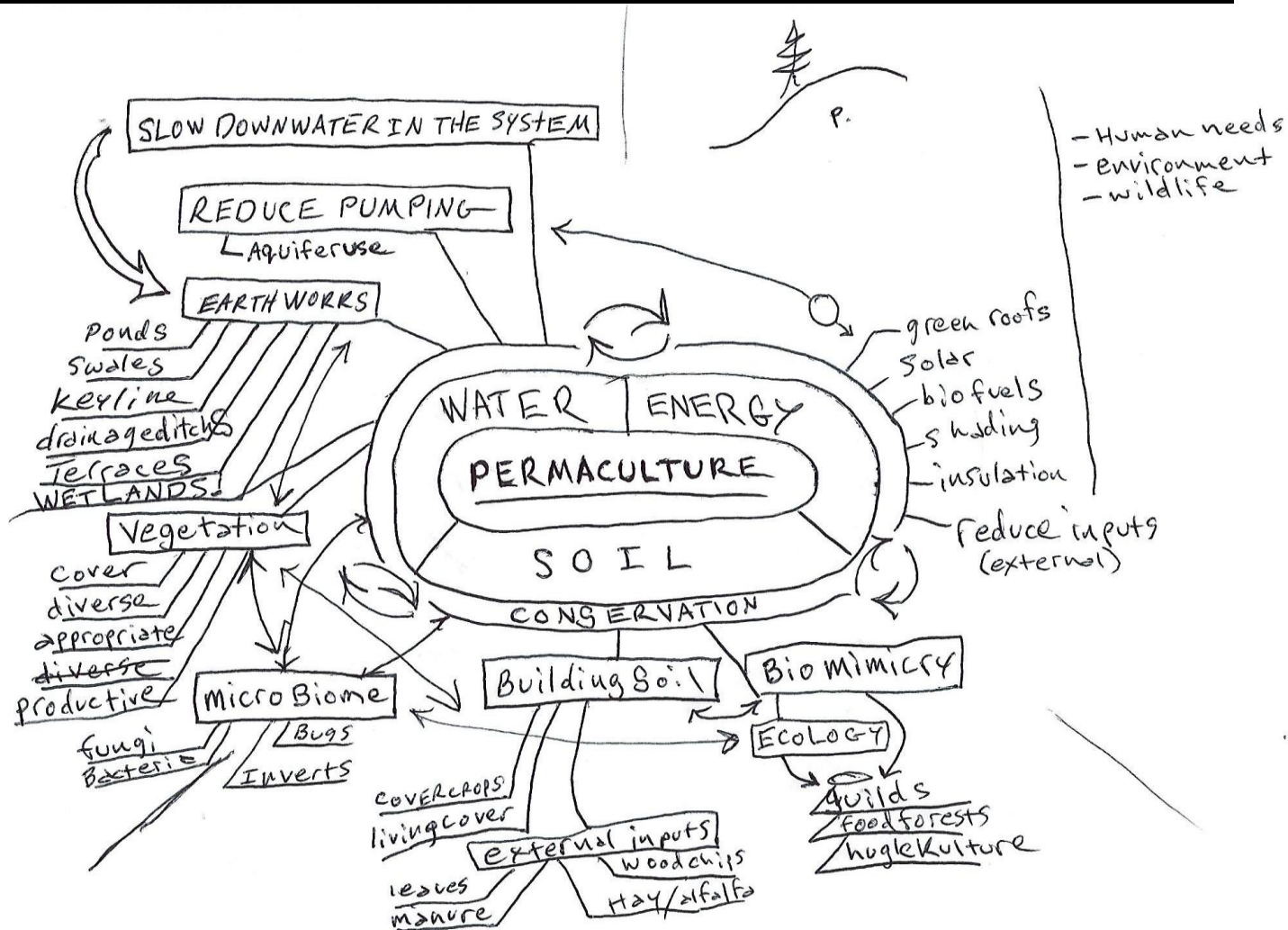
- Me, Patrick Rahilly

WHAT IS PERMACULTURE

Short version



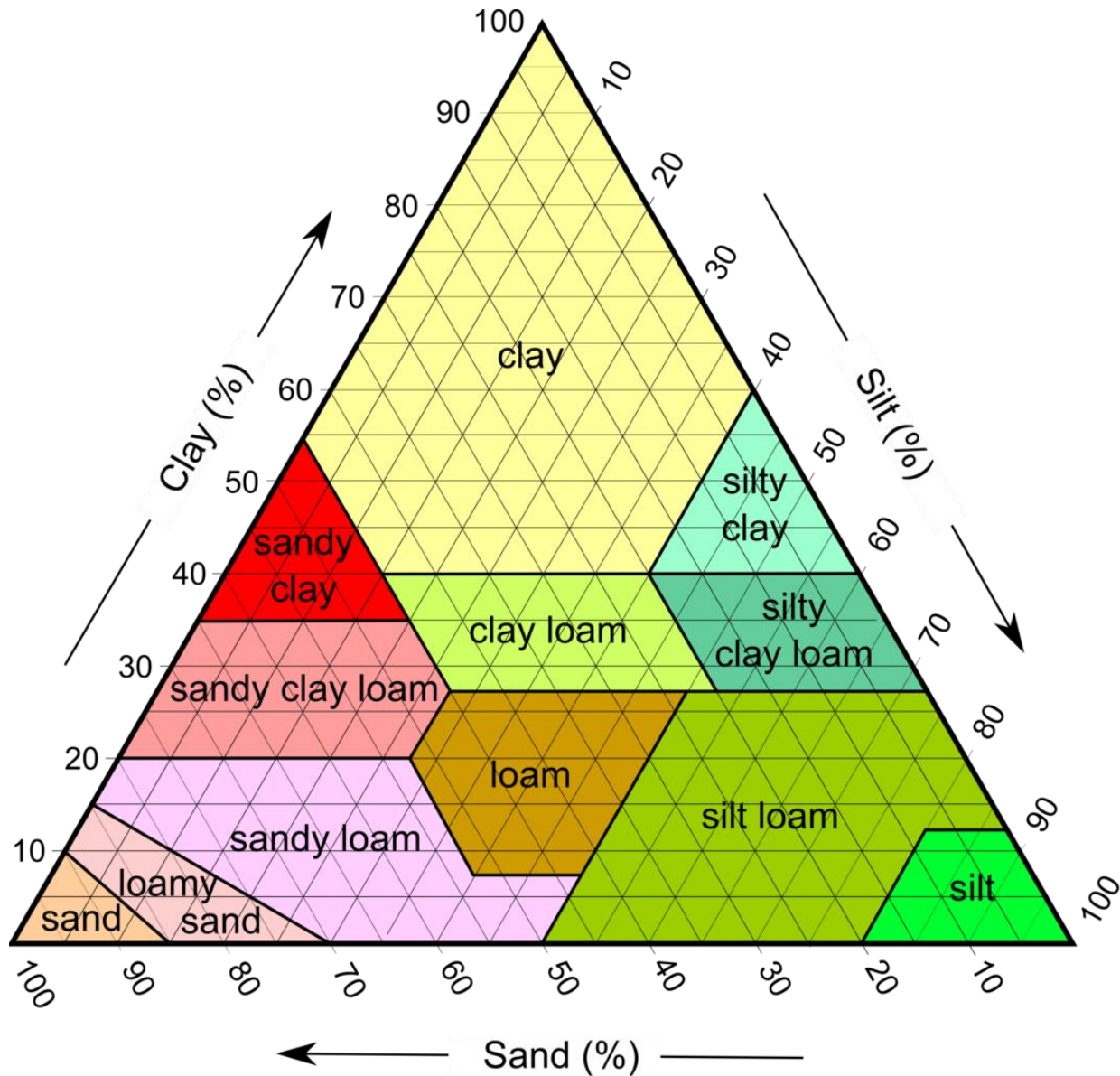
WHAT IS PERMACULTURE



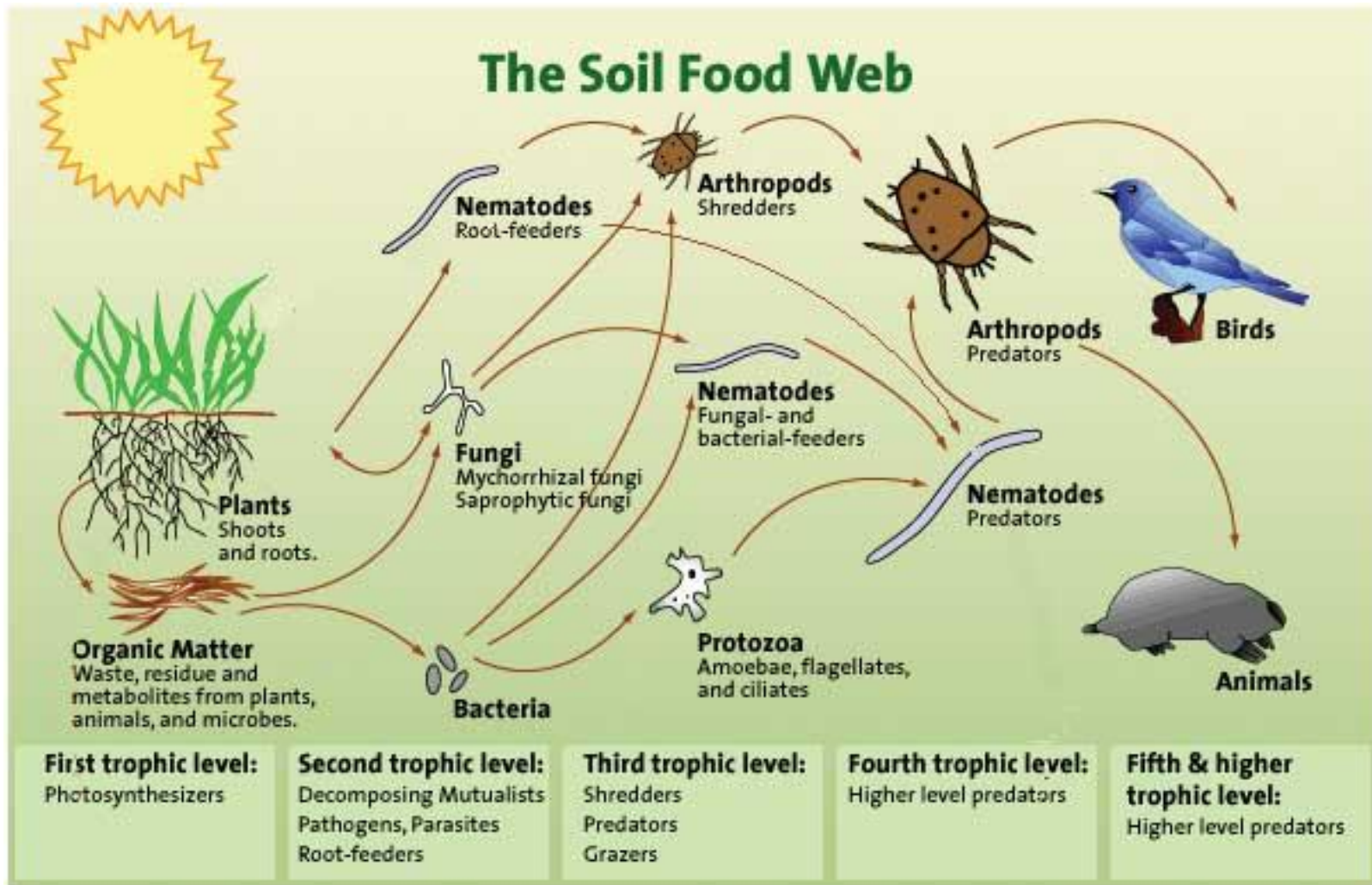
WHAT IS SOIL

...?

WHAT IS SOIL



WHAT IS SOIL



<https://www.soilfoodweb.com.au/about-our-organisation/benefits-of-a-healthy-soil-food-web>

- Dr. Elaine Ingham

WHAT IS SOIL

Five (5) Soil Forming Factors

CLORPT

- Cl – climate
- O – organisms
- R – relief
- P – parent material
- T – time



HOW TO BUILD SOIL

...?

HOW TO BUILD SOIL

...In your own backyard.

Why it is important to build your soils

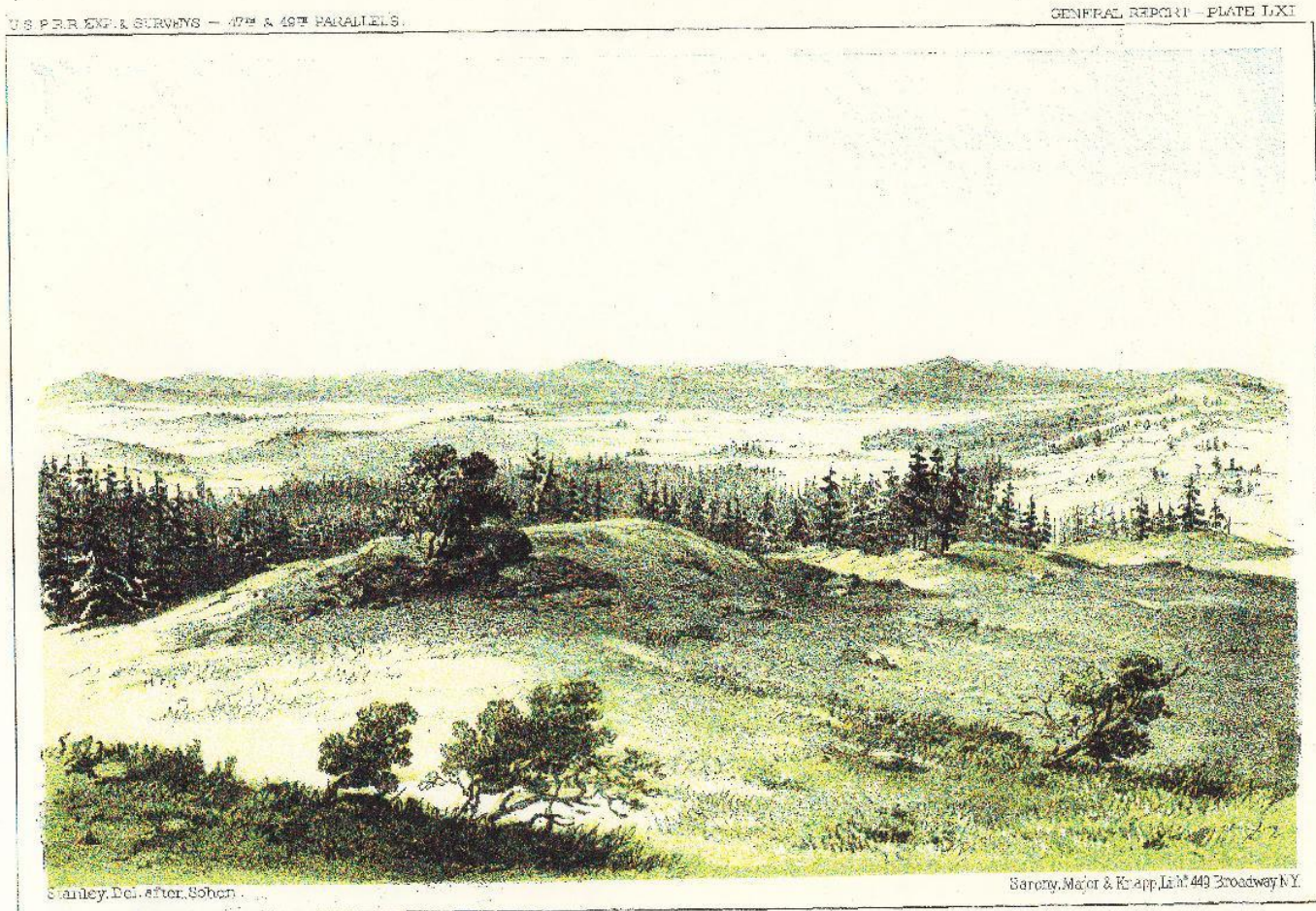
Healthy soils:

- reduced water usage,
- increased soil water holding capacity
- reduce water runoff due to increased infiltration and percolation
- Increase plant health

There are various means on how to accomplish this.

HOW TO BUILD SOIL

Soils on the Palouse (<http://www.palouseprairie.org>)



SOURCE OF THE PELUSE.

HOW TO BUILD SOIL

Soil Organic Matter

- organic matter, Organic Matter, ORGANIC MATTER!!!
- Lots of potential amendments and mulching:
 - Free underutilized materials
 - Compost
 - Manures
 - Cover Crops
- Test your amendments before adding – germination tests.
- Earthworks

HOW TO BUILD SOIL

Under utilized (free) materials

- Fall Leaves
- Grass Clippings
- Wood Chips



HOW TO BUILD SOIL

Mulches

- Hay
- Alfalfa
- Straw

**Know
Your
Farmer!**



HOW TO BUILD SOIL

Manures

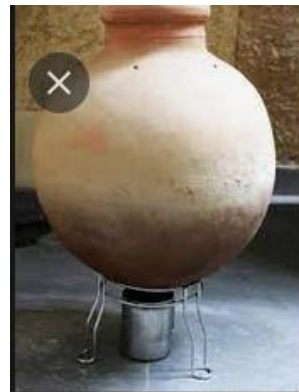
- Not all made the same
- Know Your farmer
- pH



HOW TO BUILD SOIL

Compost

- Home Made:
not a big fan
- Vermiculture
 - Outdoor earthen pots
- Know the Source



Doing my bit: Vermicompos...
team-bhp.com



Terracotta Home Composte...
instructables.com



4 Ways to Compost Kitchen...
in.pinterest.com



Traditional forms of cookin...
economictimes.indiatimes.com



Home Composting - YouTube
youtube.com



A family in Varanasi is turni...



Clay Hand Building Terraco...
indiamart.com

HOW TO BUILD SOIL

Cover Crops

- Green manure
- Chop and drop
- Warm weather cover –vs- cold weather
- Keep a living soil
- Where to buy seeds!?!
... Be creative in you seed choices



HOW TO BUILD SOIL

Test Your Inputs

- Seed germination test
 - Dicots and monocots; corn, wheat, peas, beans, radishes, buckwheat... a mix of fast sprouting seeds.
 - 50/50 mix of outside material with your native soil
 - See what grows
 - Jar proof: sprout some of your seeds in a wet paper towel in a jar to test germination rate.



WATER CONSERVATION

- Building soil
- Cover
- Mulching
- Living soils
- Reduced ET
- Happy plants
- Happy Aquifer



<https://www.maximumyield.com/>

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