

Soil Building Checklist

www.permacultureapprentice.com

If you want to bring your soil to life, these are the steps to take for the three most common situations you'll be faced with on your farm: annual gardens, grasslands and food forests.

Annual Gardens/Market Gardens

✓ Don't disturb the subsoil and encourage biological tillage

Don't till deep as you don't want to disturb the soil structure. Let earthworms, microbes and other soil organisms perform much of the tillage needed to create and maintain loose, fertile soils.

✓ Bring your soil to life with compost

Use compost to supply both the organic matter for soil building and the fertilizer for the crops and, most importantly, you'll bring soil organisms that trigger biological activity.

✓ Maintain organic matter with mulch

Use lawn grass clippings, leaves, straw or cover crops and, of course, compost and leave it on the surface to decompose.

✓ Use crop rotation to mimic diversity

Alternate crops so you can allow soil to keep producing without being drained of its nutrients.

Grasslands – Pasture/Cropland

✓ Don't disturb the soil – ensure the lowest level of mechanical disturbance possible

Aim for no till, no compaction and lowest possible mechanical disturbance to enable biological tillage but to also take advantage of the mycorrhizal fungi which form symbiotic relationships with the roots, extending the plant's root network.

✓ Always keep your soil covered with perennial cover crops

Get your soil under perennial cover, this acts like armor for the soil. Use cover crops to build and hold soil and to smother weeds.

✓ Plant diverse perennial cover crops

Cover crops they should be seeded as multi-species combinations addressing whatever specific concerns you may have.

✓ Planned disturbance in a form of animal impact and planned grazing

Use high-density animal herds to graze your paddock for one day and move them to the next paddock. Allow the first paddock to recover before disturbing it again.

Food Forests/Permaculture Orchards

✓ **Improve your soil with green manures and transitional ground-covers**

Allow for a year of cover cropping and woody mulching to build organic matter and correct fertility imbalances but, most importantly, accelerate fungal dominance.

✓ **Inoculate your soil with mycorrhizal fungi**

Encourage mycorrhizal associations through inoculation with fungi by bringing fungi spores.

✓ **Use woody mulch to feed the fungi**

Mulch with wood chips and chop and drop woody plant material on the ground to help mycorrhizae fungi thrive

✓ **Create self-sustaining fertility with nitrogen fixing trees and dynamic accumulator plants**

Use nitrogen-fixing plants along with other plants like comfrey that are particularly good at raising nutrients from the subsoil.

Notes:
