Vermiculture = Worms
Worm Bin Benches & the Worm Pit

Compost Education Center, Victoria, BC
Leaves for improving soil tilth
Animal Manures

Manures are hot and full of nitrogen. Most manures will kill plants if applied directly to the garden.
Winter Wheat

Cover Crops for Improving Soil Tilth & Green Manures

Winter Rye

Alfalfa

Pictures Credit: Robert Kourik, Understanding Roots
Fava Beans:
good cover crop for nitrogen fixation,
good tilth, and tasty too!
Austrian Field Peas

Other Nitrogen Fixing Cover Crops:
* Red Clover
* Sweet Clover
* Crimson Clover
* Vetch
Dynamic Accumulators - provide nutrients & mulch, fleshy stalks, lots of biomass
Hugelkultur

Holzer's methods of gardening and cultivation

First principles in permaculture and agro-forestry by Holzer

There are no pest plants, no vermin and no bad locations, but only incapable people who instead of understanding our creation and nature, fight against it. An overpopulation of plants and animals, “weeds” and vermin, is only the result of mankind’s wrong guidance.

Above grow vegetables:
Potatoes, topinambur, radish, carrots, etc.

Heat rises

Raised beds
Inside the beds soil organisms provide fertilizer and heat

Rotting branches, roots, trunks, straw, leaves, covered with soil.

Earthworms, mites, fungi, bacteria

Damp soil, concentration of nutrients

Stones store the heat

60-60 cm

Warm + dry

Cool + damp

nutrients slide to valley

Main wind direction

Sun

Picture Credit: https://permaculturenews.org/2012/01/04/hugelkultur-composting-whole-trees-with-ease/
Mulch: Happiness is Bulk Materials
Sheet Mulch

2 inches of straw, leaves, or other seedless mulch

1 to 2 inches of compost

8 to 12 inches of hay, stable bedding, or other bulk organic matter

- Thin layer (¼ to 1 inch) of manure or other nitrogen-rich material
- Newspaper (¼ to ½ inch) or cardboard
- Thin layer of manure
- Soil amendments (lime, rock dust, greensand, etc.)
- Slashed vegetation
- Soil surface
- Roots, cracks, moistened soil

The ultimate sheet mulch. Sheet mulch can be as simple as cardboard topped with a foot of straw, or it can be a more elaborate stack of soil-building layers, as shown here.

Weeds + grass
Cut or rolled down, don't remove

1) Concentrated compost, manures

2) Weed barrier well overlapped, no light

3 + 4) Top mulch must be weed/seed free
Two young trees, one grown with mycorrhizae, one without. Mycorrhizae on plant roots.
In Your Garden:
~ Fungi convert nutrients into an available form for plants
~ Fungi enhances the water storage capacity
~ Mycelium repel saline water
~ Fungi counteract disease rot fungi
My Next Workshop:
Tuesday, April 11:
**Cole Crops, Greens & Soil Building**
*(part of the Grow Your Own Produce workshop series)*
People’s Food Coop, Portland, OR

**Next Plant Sale:**
Saturday, April 14, 11 am – 3 pm

Thank You!
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