Soil Amendments

Nutrient sources, organic matter, composting, mulch, green manures, cover crops, manure teas, compost teas, effective microorganisms.

Questions to ask and answer during the apprenticeship:

- What nutrients do plants need?
- Where can these nutrients come from?
- How are powdered organic fertilisers different from chemical fertilisers?
- What is organic matter? How and when is it useful?
- What is so great about compost? Is it necessary?
- What are the different techniques of making compost? (Turning, inputs, shapes, and temperature)
- Which materials do you use and why? Which materials are not recommended? What is the "brown to green" ratio?
- What are your sources for materials? Other potential sources?
- How often and when do you make and use compost?
- How do the seasons affect compost decomposition and application?
- What are different qualities and kinds of compost, how to tell good compost?
- How do you use green manures and cover crops?
- How do green manures compare to animal manures or compost?
- Which cover crops do you use and why? When can they be grown?
- What is the benefit of mulching? What are the best materials and processes?
- What is compost tea, manure tea? Do you use them? How do they work?
- What are effective microorganisms? How are then used?
- What downfalls do these techniques have? Where are they most useful? Why don't you use them?
- Do you use any of these soil amendments: Perlite, Vermiculite, Earthworm Castings, Gypsum, Greensand. Kelp Meal, Oak Leaf Mold, Charcoal, Seaweed, Shellfish, Coco, Peat/Sphagnum Moss, Coir Fiber, Dolomite Lime, Hydrated Lime, Iron Sulphate?
- *Which amendments are recommended, regulated, or prohibited by your certifying organization and/or OMRI? What is OMRI?*

Activities for teaching/ learning.

- Make a compost pile, turn a compost pile, monitor the temperature, feel different compost types, observe and compare results if possible.
- Sow cover crops of different types to compare growth at different times of year.
- Find similarities between mulching and natural ecosystems (forest floor).
- Start some seeds using different soil amendments or potting mixes, let them grow until differences are visible.
- Investigate the history of different pieces of land, try to interpolate the effect of different practices.

- Start a compost tea brewer. Directions available on the internet at www.soilfoodweb.com.
- Sort through a cup of compost and observe the number of different creatures you find.

References (books, magazines, websites, organisations, etc)

- The Fertile Soil by Robert Parnes
- The Rodale Guide to Composting, Minnich, Hunt et al. 1979 Rodale Press
- Culture and Horticulture, Storl. 1979 Biodynamic Literature
- The Organic Method Primer, Rateaver, Bargyla and Gylver.1973
- Start with the Soil Grace Gershuny. Rodale Press.
- Compost Education Centre 1216 North Park, Victoria BC
- www.soilfoodweb.com
- Secrets to Great Soil Storey Publishing
- Improving your SOIL Written by Stu Campbell. A Country Wisdom Bulletin.
- Gardening in Clay Soil Sara Pitzer. A Country Wisdom Bulletin.
- Gardening in Sandy Soil C. L. Fornari. A Country Wisdom Bulletin.
- Composting Council of Canada www.compost.org
- www.gardenguides.com
- http://forums2.gardenweb.com/forums/soil/
- www.ext.vt.edu/departments/envirohort/factsheets2/landsmaint/jul94pr5.html
- www.ces.ncsu.edu/depts/hort/consumer/factsheets/trees-new/text/muching.html