

Course: ORG 101F – Organic Soil
Management Field Training
Student Guide



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This Field Training Module complements the following courses:

ORG 101 - Introduction to Organic Soil Management and Nutrient Cycles
ORG 102 - Organic Soil Management Practices and Transitioning to Organic Methods

OVERALL GOALS

The field training will be successful if it achieves the following:

1. Provides varied opportunities for students to physically try out and/or view first-hand the key concepts, principles and practices covered in the online courses.
2. Allows students to begin building or add to their own peer learning community.
3. Encourages students to think more holistically and methodically about their soil.
4. Allows students to solidify and deepen the learning done in the online courses.
5. Add some fun and social interaction to the course experience.

MATERIALS REQUIRED

- Soil Test Kits.
- Basic hand tools.
- Clipboards, writing materials.

PROPOSED AGENDA

DAY 1 Agenda	Start Time	Duration	Notes
Welcome, Introductions, Outline of the day	8:30	30 min	Meet at Farm 1
“Walkabout” Farmer briefly describes crops, soil management practices, rationale for practices, which were specific to a crop, how soil has changed under management practices, problems and assets of soil.	9:00	60 min	Students record their observations such as soil growth cover, feel of soil when walked on (springy, compacted, loose, rocky etc), condition of crops, slope, signs of erosion, etc.
BREAK / REFRESHMENTS	10:00	15 min	
Soil & foliage assessment and testing In different parts of farm, groups: <ol style="list-style-type: none"> 1. Dig holes and examine soil profile. 2. Take soil samples. 3. Do simple on site soil tests with field kit and interpret the results. 4. Collect foliage samples for nutrient testing. 5. Try out the Rope Test to determine soil type. 6. Experiment with erosion. 	10:15	120 min	<ul style="list-style-type: none"> • Break students into 3-4 smaller groups (ideally, each group has one “instructor” with them). • Farmer directs groups to various parts of farm – should choose areas with different properties.
LUNCH	12:15	60 min	Prizes awarded to students with highest scores in online course
Compare findings/notes from pre-lunch work <ul style="list-style-type: none"> • Site evaluation • Soil types and properties • Test results • Best practices for this farm 	1:15	45 min	Large group.

DAY 1 Agenda	Start Time	Duration	Notes
Soil and Water In groups, students: <ol style="list-style-type: none"> 1. Make a sedimentator, and do the Jar Test. 2. Experiment with soil as a filter, and infiltration capacity. 3. Experiment with water-holding capacity and colloidal complex. 4. Analyze the Cation Exchange Capacity of various samples of soil (if equipment available). 	2:00	60 min	
Compare findings/notes from post-lunch work <ul style="list-style-type: none"> • Surprises/revelations • Recall of key notions from online course • Practical implications of day's training • Changes needed in own practices 	3:00	60 min	
Debrief, evening suggestions	4:00		
END	4:15		

DAY 2 Agenda	Start Time	Duration	Notes
Welcome, Outline of the day	8:30	30 min	Meet at Farm 2
"Walkabout" Farmer briefly describe crops, soil management practices, rationale for practices, which were specific to a crop, how soil has changed under management practices, problems and assets of soil.	9:00	60 min	Students record their observations such as soil growth cover, feel of soil when walked on (springy, compacted, loose, rocky etc), condition of crops, slope, signs of erosion, etc.
BREAK / REFRESHMENTS	10:00	15 min	

DAY 2 Agenda	Start Time	Duration	Notes
Cultivation As a group, students view/discuss: <ol style="list-style-type: none"> 1. Types of cultivation 2. Why cultivate? 3. When to cultivate? 4. Why not cultivate? 5. Possible effect of cultivation on nutrient cycle 6. Basic tools, techniques, appropriate tools for different conditions, hand and mechanized. 	10:15	105 min	
LUNCH	12:15	45 min	
Green manure crops <ul style="list-style-type: none"> • Fall sown • Spring sown • As part of crop rotation • As a permanent cover in a perennial crop • Observe plant roots for rhizobia, biomass. • Match GM crop type to soil, cultivation, etc. 	1:00	120 min	Large group.
Cover crop plan In small groups, students prepare a plan for this site.	3:00	60 min	
Debrief, evening plans	4:00		
END	4:15		

DAY 3 Agenda	Start Time	Duration	Notes
Welcome, Outline of the day	8:30	30 min	Meet at Farm 3
“Walkabout” Farmer briefly describe crops, soil management practices, rationale for practices, which were specific to a crop, how soil has changed under management practices, problems and assets of soil.	9:00	60 min	Students record their observations such as soil growth cover, feel of soil when walked on (springy, compacted, loose, rocky etc), condition of crops, slope, signs of erosion, etc.

DAY 3 Agenda	Start Time	Duration	Notes
BREAK / REFRESHMENTS	10:00	15 min	
Composting As a group, students view/discuss: <ol style="list-style-type: none"> 1. Farmer's overview of his methods 2. Composting system used 3. Compost ingredients 4. 'Feel' of the compost, 5. Take internal temperature 6. Compare compost piles of different ages. 7. Spreading the compost 8. Perhaps demonstrate turning a pile. 	10:15	120 min	Students record observations. (Ideally at least two approaches to composting should be examined by students. This could be at different farms.)
LUNCH	12:15	60 min	
Applying acceptable inputs <ul style="list-style-type: none"> • Applying lime, Sulphur, other soil amendments to field. 	1:15	30 min	Large group.
Ste-specific crop plan Using the knowledge they have gained about soils and nutrient cycles, students prepare a site specific crop plan for one of the farms they have visited. This may be a perennial crop such as orchard or vines, livestock, or vegetables. The crop plan should explain why they think the soil is best suited to their choices.	1:45	75 min	
Roundtable <ul style="list-style-type: none"> • Brief presentations of crop plans. • Discussion and refinement of crop choices. • Debrief of overall learnings. 	3:00	60 min	
OFIBC news, other courses, etc.	4:00	15 min	
END	4:15		Group Dinner in evening