



Course: Soils and Nutrient Cycles
Unit: Introduction to Organic Soil
Management
Module: Course Overview

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SOILS AND NUTRIENT CYCLES

This is the first course that most OFIBC students will take. It provides an overview of organic soil management principles and practices, as well as the basic knowledge underlying these practices, related to the nature of soil, nutrient cycles and other key topics.

The essential notion and practice of **soil building using natural methods** will be emphasized throughout the course.

COURSE INSTRUCTOR

The instructor for this course is **Lee McFadyen**. Co Founder and operator of Mariposa Organic Farm (established in 1962), Lee has many years of practical experience applying the science of organic principles to everyday farm management. She was a Founding Member, first secretary of the Similkameen Okanagan Organic Producers Association's (SOOPA) and chaired its first Standards Committee. Lee's experience led to her authoring and developing the first continuing education course on organic farming given at the Keremeos and Penticton Campus of Okanagan College. She sat as a member of the Certified Organic Association of British Columbia's Board of Directors, (COABC) and during this time chaired the COABC Standards Review Committee. While a member of the COABC Organic Advisory Committee, Lee traveled to diverse farming communities throughout B.C. advising new farmers, farmers transitioning to organic methods and farmers who simply wanted a better understanding of their site, soil, and potential. During 2003-2004 she participated in the South Asia Canada Dialogue on the Future of Agriculture, which culminated in traveling to India and Nepal to discuss the role organic principles play in the future of farming. Currently, Lee sits on the UBC Farm Advisory Committee.

INTENDED AUDIENCE

As with all current or future OFIBC courses, this course is primarily intended for current and prospective farmers. As this course is also OFIBC's "foundation" course, it is for you if you are :

- A grower **already using organic production methods**, and you want to improve your understanding of organic principles (particularly as they relate to soil management) and get better at applying them successfully in your operation.
- Planning to or engaged in the launch of a **new organic growing operation**.
- Currently operating a conventional farm and are considering or planning a **transition to organic production methods**.

Depending on your situation, other OFIBC courses will likely be relevant for you as well, but this *Soils and Nutrient Cycles* course is expected to be the first course taken by the great majority of OFIBC students.

This course may also be for you if you are:

- A current **student in an Agricultural Science** or related program in a post-secondary learning institution.
- A **researcher, consultant or other professional** working in agriculture, sustainability or a related field, and you require a more solid foundation in organic principles.

COURSE “ROADMAP”

The following chart provides a high-level overview of the topics covered by the course, and how they’re linked together.

Unit 1 – Introduction to Organic Soil Management				
Course Overview and Preparation		Principles of Organic Soil Management		
Unit 2– Basic Knowledge and Skills				
Basic Plant and Soil Chemistry	Soil Formation, Properties and Types	Soil Organic Matter and Biodiversity	Nutrients , Plant Growth and Nutrient Cycles	Site Evaluation, Soil pH and Soil Testing
Unit 3 – Soil Management Practices on the Organic Farm				
Basic Soil Cultivation Techniques	Using Green Manure Crops to Build and Maintain Soil Fertility	Using Compost and Manures to Improve Soil Structure, Water Retention and Organic Matter	Applying Acceptable Mineral and Organic Inputs to Address Soil Problems	
Unit 4 – Field Training				
Review of the “Basics”	Basic Soil Cultivation Techniques	Using Green Manure Crops	Using Compost and Manures	Applying Other Acceptable Mineral and Organic Inputs

COURSE FORMAT AND EXPECTATIONS

FORMAT, DURATION AND “PACING” OF THE COURSE

This course includes both online and field training components. Overall, the online part of the course should require between **35 and 45 hours** of effort, and the field training should require about **15 to 20 hours**.

Online learning modules

As OFIBC grows, students will be able to take the online portion of the course as part of a group following about the same schedule. In this “start-up” phase, however, students will follow their own pace with the help of the course instructor.

As you saw in the course “roadmap”, there are 11 online modules in the course. They’re not all the same size, but on average, **each module should require about 3 to 4 hours** of your time to complete.

But we include links to quite a number of “extra” resources, so people who want to learn more may choose to invest more time. (These resources include recommended reading, organizations providing help to growers, and web sites for further learning.)

If you’re able to invest 7 to 10 hours of learning time per week on the course, you should be able to complete the online modules in about 6 weeks. If you take longer than that, that’s fine too!

Field training modules

There are 5 field training modules in this course. These will all take place over one weekend in the Similkameen valley during the summer of 2009 (specific dates to be determined).

The field training will enrich, complete and reinforce the learning you do online.

TECHNICAL REQUIREMENTS

- **Computer with an Internet connection:** Although you will be able to view and use online course materials without it, a high-speed Internet connection will make your online experience much better.
- **Speakers or a headset:** Much of the online course content is narrated, and video capsules are included as well. If you are using a computer with other people present (who might be disturbed by the sound), a headset is recommended.

- **Basic computer skills:** The Moodle course management interface and the online course materials themselves are quite easy to use, but some basic computer skills are assumed, such as:
 - Doing research and searches on the Internet.
 - Using *Microsoft Word* or other word processing software.
 - Managing files (e.g., renaming files, uploading and downloading files from the Internet, etc.).
 - Basic manipulation of digital images.

This first module of the course also includes some basic training on the Moodle course management system and the interactive materials you'll be using. **Please be sure to complete this, as this will make the rest of the course go much more smoothly for you!**

LEARNING ACTIVITIES AND RESOURCES

As you have already seen in the course Roadmap, each online Unit is divided up into a number of modules. Each of these modules includes a number of activities and resources, which are listed under the module title on the Moodle site.

We recommend that you complete these items in the order they are presented, but the order is up to you. As long as you meet the course completion requirements (e.g., assignments, quizzes, etc.), you are free to do the course in whatever sequence makes sense to you.

The following types of activities and resources are included in each module:

- **Interactive lessons:** These are engaging 15 to 30-minute lessons that present and allow you to interact with the module's content in a fun and dynamic way. A variety of approaches are used, such as short video presentations, graphical animations, interactive images, "discovery" and review questions, short learning games and so on.
- **Lesson PDF's:** This is a printable version of each module/lesson. It includes all of most of the content presented in the Interactive lessons, but of course, without the rich media and interactions! Many learners will find the "lesson PDF" useful for reinforcing what you learned online, especially when you're away from your computer.
- **Assignments:** Each module includes at least one assignment for you to complete. We've done our best to make the assignments interesting, practical and fun.
- **Quizzes:** There are also a number of quizzes (tests) to complete at several stages in the course. Unlike the various exercises and questions embedded in the interactive lessons

(which are intended to help you check your own learning and are NOT graded), these quizzes ARE graded and are intended to make sure you've mastered the basic content of the lesson or module.

- **Information resources:** Each module includes a “database” of extra, high-quality learning resources, that we've gathered for you from various reputable sources. Some of these will be used in assignments, but mostly these are for your own further learning and research.
- **Practical tools:** Since we pride ourselves on providing training that is relevant for farmers, most modules also include some practical information tools that you can use on the farm. These include specific procedures for carrying out techniques covered in the course, planning templates, and so on.
- **Course Glossary:** There is also a convenient glossary that includes all the key terms covered in the course.

STUDENT EXPECTATIONS

Since you are paying for this course and are investing a significant amount of time in it, it is important that you complete all lessons, assignments, etc. to ensure that your investment truly pays off in terms of productive farming practices and success.

All students are expected to have completed the online portion of the course a maximum of **12 weeks after they have enrolled**. Exceptions can be made in the case of special circumstances.

Since this course represents the launch of OFIBC's online learning activities, we also hope that students will be willing and able to provide feedback on the course and on their experience. This may take the form of brief telephone interviews, surveys and so on.

HOW YOUR WORK WILL BE EVALUATED

- Assignments: 60%
- Quizzes: 25%
- On-time completion of modules and the overall course: 15%

WHAT YOU CAN EXPECT FROM US

Let's face it. There are very real and significant benefits from organic farming, but in terms of required knowledge and expertise, organic farming is more difficult than conventional or "industrial" farming.

There are countless sources of information out there about organic farming, as well as a smaller (but increasing) number of sources of training and education about organic farming. What OFIBC is hoping to do is to provide farmers with:

- An excellent **knowledge foundation** that will allow you to understand why good organic farmers do what they do. (This will also allow you to "cut through" all the organic farming information available, so you can make good use of good information and do away with the rest!)
- Well-structured and easy-to-use information and resources on **best practices** in organic farming that you can put to use directly in your current or future growing operation.
- Expertly-designed **online learning and field training activities** that will ensure that your valuable time is not wasted, and that what you learn here will actually "stick" with you and be applied consistently in your farming.