



Project Planning

Project Planning

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Creating a Class Outline or Syllabus / Your On-Farm Teaching Plan

The first step in preparing for having an on-farm Intern is working out the learning objectives. Start out by making a list your farm activities over the year. The purpose of making this list is to assist the planning process as well as help you to think about the practicalities of what you can accomplish and share with your interns. This process will also help you decide what should be in the Course Outline or Syllabus for your on-farm Intern.

For example, at our farm, the first item on the list of objectives or goals is planning the market garden. When we think about planning the garden for the season, we can add to the list of things to think about:

- 1) Where to begin? Identifying marketing strategies, garden layout & mapping, companion planting, and season extension.
- 2) What to grow? Seed inventory, seed selection, and ordering seed.
- 3) How much seed to buy? Direct seed or transplanting, succession planting,
- 4) When to plant? Creating a planting schedule and so on. We need to think about the time line of these projects. What time of year are we going through this process? Think about approximate dates and the amount of time invested in the process. The Farm Activities spreadsheet on the following pages will help set up timelines for specific projects on the farm.

We want to develop interest and provide a base of concepts and skills that will facilitate additional learning and thinking. By listing projects and activities involved with the day-to-day tasks on your farm, you can develop an outline for your intern.

We have found that by identifying the farm activities over the year, it makes it easier to come up with a project list for interns. It is also a tool you can use to tie into suggested reading assignments prior to specific tasks on the farm. If the intern has the opportunity to read about a topic prior to the hands-on event, they are much more likely to learn the utmost from the experience.

For example, I might suggest that an intern read chapter 12 on Transplanting in the *New Organic Grower* by Eliot Coleman, as well as the Transplanting Chapter in *The Encyclopedia of Organic Gardening* prior to scheduled days of transplanting in the fields.

See RESOURCES section in this training manual for list of reading materials that may be relevant to your operation; create your own resource list from your personal library.

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Creating a Class Outline or Syllabus / Your On-Farm Teaching Plan

You have made your list of what you think might be desirable as topics or learning objectives for your intern. The list you have come up with is a rough course outline.

Now you need to determine how to distribute time to be given to each of these subjects. There are many variables and more than likely, circumstances will arise that will make it advisable to deviate from the time schedule. Your schedule should be flexible to take advantage of the students' own awareness of how they can best learn, and how the particular circumstances are at your farming operation. Flexibility is one key to success!

If you do not maintain a current daily diary of your ongoing on farm projects, now is a good time to do so. Noting approximate hours dedicated to specific tasks will help you create an outline for your interns. Even if you only make notes on a daily calendar, this will help you later on.

Farm Activities over the Year

Tracking the farm activities that are ongoing over the growing season is an excellent way to evaluate ways to create a step-by-step syllabus. The more information you have written down as an outlined syllabus, the more effectively you can combine teaching with your daily chores.

The following pages are samples of a blank form for tracking your farm activities over the year as well as a sample page from Greentree Naturals organic farm. We suggest that you have a few blank copies available and hang them somewhere that you will use them often like on the refrigerator or at your desk.



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Overview of the Farmer Mentor Curriculum

The Farmer mentor curriculum development involves a three step process...

Step 1 - Calendar of Farm Activities over the Year: This calendar will help you create a graphic representation of your farm activities throughout the year. These activities can then be divided into major topics that the student needs to know. These topics or Lessons will become part of your farm syllabus.

Step 2 – Create Farm Syllabus (what will be taught and when)
Using the major lesson topics gleaned from your farm calendar, you can now complete your farm syllabus. The table provided will serve as guideline to follow in outlining major lessons.

The number of lessons you plan to cover will depend on your farm. Most farmers will have at least ten lessons. Examples for a vegetable farm might include: pre-season planning, seed starting, direct seeding and transplanting, soil fertility, crop rotation, pest management, harvesting, marketing, etc. Examples for a livestock farm might include: pasture management, nutrition requirements, health issues, buildings and fencing, etc.

Within each broad lesson, there will be several related lecture sub-topics to be covered. For example if 'Pruning' is the main lesson, the lecture topics might include: 1) when to prune and why, 2) how to prune, and 3) pruning tools.

For each lesson topic: 1) briefly state the sub-topics to be covered, 2) your preferred date or month to teach, and 3) the number of hours you anticipate will be required to discuss and demonstrate topic with interns.

For academic students, the number of hours required per topic is important for two reasons. It is helpful for the farmer to think through the discussion/demonstration process to help you allocate enough time for teaching. It is also necessary for allocating student credits; we need to know the approximate number of hours allocated to direct instructor/student discussion and demonstration.

Step 3 – Develop the lesson plan for each major topic
Each lesson plan begins with a description of what will be covered. Lesson plans often include student-learning objectives. This helps the instructor prioritize the content and provides a way to assess student progress.

The example provided shows an outline for covering each lesson including the individual topics, associated activities, time allocations (determined in Step 2) and a list of required or suggested readings.

The goal in creating this step-by-step process is to help farmers who have never created a lesson plan. It is our goal to encourage as many farmers as possible to become certified as instructors so they can take on interns through the Cultivating Success Program. The farmers must be certified in order for the students to receive accreditation for their internship.

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Example: Greentree Naturals Farm Activities for the Year

Required Farm Activities	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Inventory seed & supplies; draft garden plan and determine seed needs; order seeds; develop seeding calendar.	X	X										
Fill seed trays and sow seeds following seeding calendar outline for greenhouse and field planting; Daily care / maintenance of seedlings		X	X	X	X	X	X	X		X Plant Garlic		
Plan garden layout using previous years garden maps for crop rotation		X	X									
Transplant seedlings into larger containers as needed for resale and transplanting into gardens		X	X	X	X							
Marketing: Develop season workshop plans, update brochures, send out letters to CSA, Fresh Flowers and local restaurant customers			X	X	X							
Rototill garden (as permitted by soil conditions) and plant succession spinach and lettuce; harden off seedlings for transplanting into field.			X	X	X	X						
Put up Hoop houses for season extension; plant peas, shallots, potatoes; transplant leeks, onions, broccoli, cauliflower, cabbage, assorted lettuces etc.				X	X							
Lay out garden watering system hoses, lay weed mat wherever needed				X	X	X						
Fertilize / foliar feed seedlings that have been transplanted into garden and maintain fertilization schedule				X	X	X	X	X	X			
Hand weeding throughout gardens; Mowing and weed whacking between rows as needed				X	X	X	X	X	X			
Prepare assorted beds for direct seed and transplanting			X	X	X	X						
Inventory market needs for Farmers Market & restaurant sales; start up and continue sales season			X	X	X	X	X	X	X	X		

Developed by: Diane Green

Date: 11- 2003

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OVERVIEW GREENTREE NATURALS SYLLABUS 2002

Season Extension

April – September

When considering the possibilities for extending the growing season, we should think about options other than moving south or building a greenhouse. Learn how to construct a simple cost-effective 'hoop house' structure, cold frames, and other methods used for extending the season. Learn how to keep cool season plants growing during the heat of the summer using shade cloth and assess a variety of methods for early planting and longer production.

Pest Management

May – September

Assess pro-active pest control practices on the farm such as companion planting, observation, and identification, use of beneficial insects, catch-cropping, natural pest formulas and plant-pest relationships for natural pest control.

Natural Weed Control

May – September

In this production system, we only use physical control such as weed mat, mulch or cultivation. There are an assortment of hand tools for cultivation and control. Hand and body position is important for endurance and overall physical well being when working in the garden setting. Since weed control is an ongoing process, we are able to clearly define the benefits of weed control and different ways to manage the production system.

Harvesting and Post Harvest Handling

May – September

Harvesting is a very important aspect of being a successful grower. Specific crops have particular harvest requirements for optimum yields. A good harvesting system involves more than just getting the crops out of the field. It must also focus on preserving the quality of the produce until it reaches the customer.

Additional topics may include:

Seed Saving, Flower Production, Garlic as a cash crop, Poultry and egg production

Small Farm Marketing - Selling at Farmers Markets, Community Supported Agriculture (produce subscriptions) and Selling to Restaurants.

For additional information on Syllabus topics, feel free to contact me! Inquiries are welcome.

-Diane Green

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For more information about our farm visit our website: www.greentreenaturals.com



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Example: Lecture Topics Spreadsheet Greentree Naturals Lesson Plan #1, Planning the Market Garden

Lecture Topics	Description	Time	Associated Activity and/or reading	Time
Identifying your market	Describe the process involved to determine the prospective customers, the products of interest and determine quantitative needs for each customer by the week, by the month and for the season.	1 hour		
Garden layout and design	Discuss factors involved in determining garden layout, based on size of production area, area needed for specific crops, crop rotation and companion planting.	1 hour	Review farmer's current product list, previous years records and maps. Using the reference book 'Carrots Love Tomatoes' and the crop rotation guide, design a potential garden layout for the present production year for crop rotation and companion planting.	1.5 hours
Seed selection, variety and quantity	Discuss process involved in determining the length of rows, spacing requirements and amount of seed needed for production area by variety of vegetable, herbs and flowers.	1 hour	Refer to previous years records, Johnny's seed catalog, and the Encyclopedia of Organic Gardening for reference to spacing requirements. Determine amount of seed needed for production area by variety of vegetable, herbs and flowers.	1 hour
Planting methods	Discuss factors or process to ascertain needs for direct seed or transplanting, planning for succession planting and developing a planting schedule and seeding calendar.	45 minutes	Go through each seed packet or variety and determine its specific production needs. Review the farmer's previous years records to see what plants are typically started early for transplanting out and which are typically direct seeded. Set up a planting calendar for seeding schedules.	1 hour
Techniques to extend the harvest season	Discuss practical ways to use season extension in order to improve and extend harvest. Review the ways the farm is utilizing season extension and note materials used.	45 minutes	Help assemble a hoop house (optional)	

Developed by:

Diane Green

Date: 5-13-2002

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Lecture Topics Spreadsheet

Lecture Topics	Description	Time	Associated Activity and/or reading	Time

Developed by:
Lesson Plan #:

Date:

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Example: Greentree Naturals Learning Objectives for Lesson Plan #1:
Planning the Market Garden

Learning Objectives

- 1) Gain an understanding of the importance of identifying your market.
- 2) Gain an understanding of the process for planning the garden layout and design.
- 3) Gain hands-on experience of planning a garden layout by incorporating:
 - i) Aspects of crop selection and rotations
 - ii) Succession and companion planting
 - iii) Planting techniques and timing
- 4) Gain an understanding about the process of determining the quantity of seed or transplants needed to produce expected amount to meet market demand.

Timetable for Teaching

Teaching hours for farmer estimated at 3.5 hours.

Estimated time for assignments (reading, journal writing, or activity) is 6 hours.

On farm work experience related to this lesson would be about 4 hours.

Total time (in days or weeks) to cover this lesson: 3 days+

Preferred time of year (or season) to teach this lesson: February - March

Reading Resources for Lesson 1 - Planning the Market Garden:

- The Encyclopedia of Organic Gardening, Rodale Press, Chapters on: Planting Dates, Companion Planting, Seed, Seeds & Seedlings, Transplanting
- Carrots Love Tomatoes by Louise Riotte
- The New Farmers' Market - Corum, Rosenzweig & Gibson, Chapter on Getting Ready for Market pages 5 – 30.
- Selling Produce to Restaurants, by Diane Green, Chapter pages 1 - 28

Farm Name: Greentree Naturals
Date: 5-13-2002

Developed by: Diane Green

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Learning Objectives

- 1) Gain an understanding of the importance ...
- 2) Gain an understanding of the process ...
- 3) Gain hands-on experience ...
- 4) Explore ...

Complete the above sentences that apply to your topic or make up your own. Start with an action verb. List 3-5 objectives per lesson.

Timetable for Teaching

Teaching hours for farmer estimated at _____ hours.

Please provide the hours you determine that you would need to provide lecture or explanation related to this lesson.

Estimated time for assignments (reading, journal writing, or activity) is ___ hours.

This includes student's assignments or activities they do after work hours.

On farm work experience related to this lesson would be about _____ hours.

This is an estimate of time the student would need to work to learn a technique or task. For example, after a lecture on pruning, how much practice time is needed to learn the task or technique? You can always have them work more hours than that on the task.

Total time (in days or weeks) to cover this lesson: _____

We are assuming most lessons are divided into several lecture topics. For example insect management might be divided into cultural control for prevention, biological control methods and insect identification. It might take three weeks to cover the lecture topics when you are only lecturing 1-2 hours per week.

Preferred time of year (or season) to teach this lesson: _____

Reading Resources for Lesson 1 –Title:

➤ List names of books, authors and pertinent chapters or pages, if applicable.
List URL for pertinent web sites, if applicable

Farm Name:

Developed by:

Date:

Example: Greentree Naturals Lesson Plan #1:
Planning the Market Garden

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OBJECTIVES: Planning the market garden involves many detailed steps. The first step is to plan the procedure out in detail. The market, climate, and the size of the production area will determine which vegetable and flower varieties to plant. We begin with identifying the market and mapping the garden using companion planting and crop rotation as guides. Finding quality seed and determining seed quantity needs is another important step along with creating a planting calendar to identify direct seed or transplanting needs, as well as scheduling for succession planting.

LECTURE TOPICS AND DISCUSSION

1. Identifying your market
 - a. Discuss the process involved to determine the prospective customers, the products of interest from past years records and market surveys. Time: (1 hour)
 - b. Activity: Review farmer's customer list and market surveys; calculate estimated quantitative needs for each customer outlet by the week, by the month and total for the season on a calendar. Read 'What to Grow' in Selling Produce to Restaurants. Time: (1.5 hour)

2. Garden mapping for crop rotation and companion planting
 - a. Determine size of production area and design garden map using companion planting and crop rotation. Time: (1 hour)
 - b. Activity: Refer to Greentree Naturals current produce list, previous years records, and maps to identify production areas of specific crops. Use Carrots Love Tomatoes for companion planting and crop rotations. Create new garden map. Time: (2.5 hours)

3. Create planting calendar and determine seed needs
 - a. Ascertain needs for direct seed or transplanting. Review previous years records to see what plants are typically started early for transplanting out, and which are typically direct seeded into the garden. Time: (1 hour)
 - b. Activity: By completion of exercise two, you will have identified what varieties Greentree will be planting. Use Johnnies Seed Catalog for reference to spacing requirements. Go through planting culture for each seed variety and determine its specific production needs. Use previous years garden records and map to determine amount of seed needed for production area by variety of vegetables, herbs, and flowers. Develop a seeding and planting calendar for seeding schedules. Time: (2.5 hours)

READING ASSIGNMENTS:

Selling Produce to Restaurants Written by Diane Green
Carrots Love Tomatoes \ Written by Louise Riotte
Johnnies Seed Catalog
Greentree Naturals Garden Records