

Farming 101: Introduction to Small-scale Regenerative Farming

Dates	Topic	Homework Due
<p>Week 1</p> <p>Sat. Lab 9AM to 2PM</p>	<p>Mandatory Orientation: Welcome, Course Scope, Introductions <i>Lecture: In the Spirit of Organics; Tour of Wild Willow Farm</i></p> <p>Distinction between different agricultural models: (industrial, conventional, transitional, organic, sustainable, regenerative); ethical farming; regenerative farming practices; food miles; benefits of locally produced food; reduction of purchased inputs.</p>	
<p>Week 2</p> <p>Wed. Lecture 6PM to 8PM</p> <p>Sat. Lab 9AM to 4PM</p>	<p>It Starts with the Soil <i>Making & using compost, mulching, sheet composting, cover cropping.</i></p> <p>Compost is proof that there is life after death. Students will be introduced to the benefits and use of compost, and will understand that composting is the cornerstone to soil, plant, and human health. Working in our Living Lab, students explore aerobic high-temperature, active, and static composting techniques, while building a compost pile. The farm's "recipe for success" is emphasized, including greens & browns (Nitrogen & Carbon), water, air, and volume. Vermiculture, and the use of compost tea is also introduced.</p>	Intro and Ch. 1, 2, 7
<p>Week 3</p> <p>Wed. Lecture 6PM to 8PM</p> <p>Sat. Lab 9AM to 4PM</p>	<p>Growing Fertile Soil <i>Farm tools — proper use and care; evaluating soil texture and moisture; bed preparation; mechanical and manual tillage; compost tea and extract.</i></p> <p>"Feed the soil to feed the plant." This class emphasizes the importance of building and maintaining fertile soil to ensure healthy plants. Topics covered include building fertile soil through the use of organic matter and low-till practices, and understanding the role that the microbiology of the soil and plants have on soil fertility. Students will examine soil and evaluate texture and moisture, as well as soil type. The Living Lab will teach proper bed-preparation techniques with the least amount of soil disturbance. Wild Willow Farm's Complete Organic Fertilizer recipe will be shared, as students prepare the mixture out of locally available products such as animal feeds. Focus will also be on the description of farm tools used in small-scale and handcrafted farming, that leans towards a goal of no-till farming methods.</p>	Ch. 3
<p>Week 4</p> <p>Wed. Lecture 6PM to 8PM</p> <p>Sat. Lab 9AM to 4PM</p>	<p>Propagation & Planting Techniques <i>Direct sowing and transplanting; starting seeds; planting practice.</i></p> <p>Getting plants off to a healthy start is critical to successful crop production. Students will learn the fundamental concepts and practices used in propagating crops from seed. In the Living Lab, students will practice mixing potting soil and potting up plants, while understanding how to use a propagation nursery and green house. Also highlighted is how to grow and determine high quality starts, and growing starts from cuttings and divisions. Students will discover different direct sowing methods, proper seed bed preparation for different varieties of crops, and inoculants necessary for living soil. Planting practice with seeds and from plant starts will include proper depth, spacing, and maintenance for good crop establishment.</p>	Ch. 4, 5
<p>Week 5</p> <p>Wed. Lecture 6PM to 8PM</p> <p>Sat. Lab 9AM to 4PM</p>	<p>How Water Moves Through The Soil <i>Efficient irrigation practices.</i></p> <p>The best place to store water is in the soil. This class addresses the quantitative and qualitative approaches to delivering water efficiently and effectively through an irrigation system. Students will experience the water situation in Southern California and determine sources of water in an arid climate. Topics will include how water moves through soil, the mechanics of an irrigation system and how it</p>	Ch. 6

	operates, how regenerative farming methods increase the water retention capabilities of soil, and water conservation techniques through building organic matter in the soil and appropriate plant spacing. The Living Lab will tour students through the irrigation systems at Wild Willow Farm. Students will learn to put together automatic irrigation valves, install drip irrigation systems, learn irrigation design concepts, and identify effective repair and maintenance strategies.	
<p>Week 6</p> <p>Wed. Lecture 6PM to 8PM</p> <p>Sat. Lab 9AM to 4PM</p>	<p>Integrated Pest Management <i>Identifying pests and pathogens and beneficials.</i></p> <p>Increasing biodiversity is key to the health of any garden ecosystem. Students will become aware of the principles of Integrated Pest Management, and understand the delicate balance of microbes and insects for plant health. The class will high-light a plant-positive approach to pest control, to host both beneficial and predatory insects, and students will learn how to create a habitat for beneficials to thrive. Students will take part in a Living Lab farm walk to identify pests on crops, and also beneficials that are on or around crops. Mammalian pest management methods of exclusion will be emphasized, and the proper use of gopher traps. Students will also be introduced to the fundamental concepts and basic skills needed to prevent, identify, and manage plant pathogens.</p>	Ch. 8
<p>Week 7</p> <p>Wed. Lecture 6PM to 8PM</p> <p>Sat. Lab 9AM to 4PM</p>	<p>Building Resiliency into Your Farm <i>Exploring permaculture practices, holistic farm observation, plus a visit to our beehives. Pizza party and class photo!</i></p> <p>A more resilient agricultural system is needed, especially in the face of climate change. We explore principles small farmers have established to be more resilient, as in the ability to bounce back quickly from a disruption, permaculture practices, rain harvesting methods, establishing reasonable expectations of your farm, realizing your resources, and holistic farm management that pertains to animal husbandry. Future farmers have the opportunity to research their local market and business model, and students are introduced to the array of landholding models such as sole proprietorship, partnership, LLC, nonprofit, or cooperative. The culminating Living Lab experience will showcase a tour of Wild Willow Farm's bee hives and honey harvesting. We end our time together with Mel's famous brick oven pizzas for lunch, a class photo, and a final group check in and recap.</p>	