

Whole Farm Management for Hmong Farmers



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Curriculum

This course is taught as part of the *Cultivating Success* Sustainable Small Farming Education Program, developed collaboratively by Washington State University, University of Idaho and Rural Roots. More information on Cultivating Success can be found at <http://cultivatingsuccess.org>

Curriculum originally developed by Cinda Williams, University of Idaho, and the Cultivating Success Management Team. Adapted for use with Hmong Farmers by Charlie Chang, Marcy Ostrom, Dave Muelheisen, and Malaquias Flores, WSU Small Farms Program with funding provided by RMA



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- Course is taught as a 10-12 part weekly series of two hours each.
- Nearly all of these classes can take place on local farms that provide a good teaching site for the current topic.
- All classes are taught in Hmong or with Hmong translation.
- Farmers receive a certificate for attending at least 3/4 of the classes.
- Instructor should plan time for following up one-on-one with each student on their own farm.
- Instructor will need “Cultivating Success Instructor Manual: Sustainable Small Farming and Ranching” to use as a reference guide: www.cultivatinguccess.org

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Instructor Resource List

Whole Farm Planning Template

Whole Farm Management for Hmong Farmers

Learning Objectives

- Introduce the whole farm planning concept and why it matters
- Become familiar with process and template for developing a whole farm plan
- Learn how and why to assess your personal interests and strengths
- Learn how to develop a farm goals statement

1. Whole Farm Planning

Getting the Class Started

- Introductions
- Discuss reasons for class
- Get input from class on format, schedule, and locations
- Organize a system of taking turns for bringing snacks
- Talk about whether there are transportation or childcare issues
- Give out student handouts and farm planning template
- Discussion about primary language to use in class—Hmong, English, or both? Try to informally assess language and reading skills. Is there someone in the family who reads and writes in English who could help with writing the farm plan? Could they come to class as well?

Instructor Presentation

Introduce the idea of Whole Farm Management and Planning

- Discuss Whole Farm Planning Concepts
- Introduce the idea of developing Whole Farm Goals (Instructor can read Lesson 2 in *Cultivating Success Farming and Ranching Handbook* for background).
- Lead a discussion about students' personal interests in farming and discuss their short and long-term goals for their farm enterprise
- Introduce framework for developing whole farm plan and go through the different categories on the whole farm planning template
- Show how each part of course series will help with a different section of the whole farm planning template (final assignment).

Break (10 min.)

Class Activities

- **Sustainable Producer Profile:** Hold class out on a model sustainable farm (Hmong or English speaking with translation) and ask farmer to describe their farm goals, history, and long-term management plan as they walk with the students around their farm.
- If time permits allow time for students to discuss their own farming goals.

Optional: Watch DVD produced by University of Wisconsin Extension in Hmong called *STORIES FROM THE FIELDS: FRESH MARKET FRUITS & VEGETABLES* – it describes the benefits of sustainable agriculture to you and your farm.

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Learning Objectives

- Learn how to assess available farm and business resources
- Gain an idea of how many people you can count on to help you
- Assess the financial capital you have available
- Assess current situation with physical assets such as land, water, buildings, and equipment
- Assess current market outlets

2. Evaluation of Resources What are the possibilities?

Instructor Presentation

Resource Evaluation. Discuss importance of students evaluating what they currently have **before** they decide on what type of enterprise will fit their situation and their future needs.

Introduction to the concept of “resources” and the different kinds of resources that exist.

- Assessing the people that can help work on your farm and farm stand, (i.e., family members, friends, hiring help)
- Assessing available land and water resources
- Assessing buildings or equipment that is available to use.
- Where can you sell what you grow? Are there local markets available?
- Assess available financial capital and ways of raising additional funds if needed.
- Describe the ways that family, friends, neighbors, clan members, or organizations such as non-profits and government agencies might be available to help you as a resource.

Break (15 min.)

Class Activity

Ideally, this class should be held on a farm. As part of the course the farmer can provide a tour of their farm and describe its operations and markets. This farm can then be used as a case study to examine the concept of resource assessment.

- Working together, the students can assess the resource base available to this farmer, working through all of the different kinds of resources from human to physical.
- Then the discussion can be moved to the students' farms
- How would you describe the land you farm on? What type of soil? What kind of water supply? What kind of labor do they have available? What kind of equipment do they own? What kind of markets do they use?
- Make maps of their farms
- Study resource sections of Farm Planning Template

Whole Farm Management for Hmong Farmers

Learning Objectives

- Learn different crop production methods such as organic and greenhouse production.
 - Learn common sustainable practices for crop production on small acreage farms
 - Be able to participate in a class discussion on how you might apply practices to your farm operation.
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3. Sustainable Crop Production on a Small Acreage

Instructor Presentation:

Description of different plant production systems – Diversified Organic and Sustainable (If there is sufficient interest organic production could be covered in its own section: Include certification details and contact information)

Any combination of the following as time and interest allows.

- How to plan and plant farm fields or gardens
- How to develop a Crop rotation
- How to put Cover crops/green manures into your growing schedule
- How to develop a Nutrient Management plan
- Water source and irrigation
- Harvesting and post harvest handling
- Equipment and facilities

This presentation can ideally be made while touring a farm that can serve as a model for the different discussion topics.

Break (10 min.)

Class Activities

- Play and Discuss CD-ROM from the University of Wisconsin Extension **GARDENING INFORMATION FOR THE HMONG**
- Have a class discussion about the differences between growing food in the US and growing food in Laos. What practices worked best in the past and what works best here?
- Provide students with a scenario of a crop production challenges related to crop rotations on a limited acreage. Ask groups of students discuss alternative methods of solving the problem and present their ideas to the class.
- Ask students about the main issues they face on their farms.

Closing

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Learning Objectives

- Become aware of the soil as a living, biological complex.
- Learn ways to manage soils that create an environment that encourages soil microbial growth and plant growth.
- Learn how to take a soil sample for testing.
- Be able to determine soil texture by feel method.
- Learn how to determine soil pH
- Learn use and benefits of compost and other soil amendments

4. Ecological Soil Management

Instructor Presentaton (Ideally this lesson could take place over two class periods)
Introduction to soil quality and its importance for plant growth.

Invite WSU Soil Scientist as Guest Speaker. As them to cover the following topics:

- Soil physical attributes
- Soil chemical
- Soil biological factors
- Practices and how they affect soil health and subsequent plant growth.
- Composting
- Use of compost and manure

Break (15 min.)

Class Activities

Meet at one of the students' farms:

- Have students take soil samples for a laboratory soil test.
- Discuss and observe what soil test result tells them about their soil and simple calculations for adding fertilizer.
- Have students do an in field soil pH and percolation test
- Have students determine the makeup of the soil using their hands
- While walking around the farm discuss aspects of site assessment and practices for managing nutrients and soil quality.

Assignment:

- Determine the make-up of the soil at your farm.
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Closing

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Learning Objectives

- Learn basics of integrated pest management (IPM)
- Understand IPM concepts and strategies; preventative methods, increasing beneficial insects, scouting and determining action levels, etc.
- Learn common alternative weed management practices
- Develop ideas about pest management practices adaptable to your farm operation

5. Integrated Pest and Weed Management

(We suggest taking 2-3 class sessions to work on pest management because this topic is of strong interest to many Hmong producers)

Instructor Presentation

Instructor provides introduction to the concept of *integrated* pest and weed management and ties this back to the whole farm planning worksheet.

First Class Session: Guest Speaker

An invited pest management specialist (with translation) covers the basics of Integrated Pest Management of insects, weeds and disease including:

- Cultural, biological, physical and chemical control methods
- Principles of IPM, including strategies for prevention and assessment of damage
- Alternative methods of weed control using:
 - Cultural methods: planting dates, spacing, and crop rotation
 - Mechanical methods: by hand, mowing, cultivating equipment, flaming
 - Biological: weeding with farm animals
 - Physical: mulches
- Pesticide safety and handling

The importance of knowing the pest and monitoring the situation should be stressed in this lesson.

Second Class Session: Guest Speaker

Have a pest management specialist make a presentation based on the materials already developed by the University of Massachusetts on Managing Flea Beetles which is translated into Hmong and English (Ruth Hazzard et al.) Fact sheets and photographs have already been developed for this presentation. This can be paired up with an introduction to insect identification by a WSU specialist, with pre-existing WSU insect guides.

Break (10 minutes)

Optional Sustainable Farmer Profile and Interview (allow at least 45 minutes)

Guest Speaker, Michael Blakely pest management and the use of weeds for plant diversity.

Class Activities

- Have students bring in insects and weeds from their farms.
- Lead a discussion of how to develop pest management strategies for the insects or weeds that the students bring in.

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- Instructor should bring in samples and photos of insects or weeds for identification and description of alternative management techniques.
- Instructor should provide WSU insect guides.
- Fill out the *Pest and Weed Management Chart* in the whole farm plan as a group.
- Tour a farm and practice scouting and monitoring for pests.
- Tour a farm and observe different pest and disease management techniques.

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Learning Objectives

- Identify equipment and irrigation needs
 - Learn about different kinds of equipment that is available for small farms
 - Learn how to use a tractor
 - Learn how to calibrate a manure spreader
 - Discuss alternatives to buying equipment
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6. Equipment for small farms

Instructor Topics (60 min.):

Meet at WSU Puyallup Teaching Farm:

Instructor and Guest Expert lead students through the Small Farm Program's equipment inventory and irrigation set-up, discussing the pros and cons of various pieces of equipment.

- Students can practice driving an Allis Chambers model G tractor, how to use it to seed a field, and how to calibrate seeding rates.
- Practice using and calibrating a manure spreader
- Available equipment for weed control
- Where you can get new and used equipment
- Where you can lease equipment
- Equipment repair and maintenance
- An overview of hand equipment
- Irrigation options

Break (15 min.)

Additional Class Activity

Go inside and view a powerpoint presentation on various pieces of power and hand equipment
Go over calculations for calibrating a manure spreader, Planet Jr. seed planter and backpack sprayer (and review basic math needed for this).

Closing

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Learning Objectives

- Learn methods of animal production for small acreage farms
- Understand the principles of sustainable animal production
- Learn how to make a chicken tractor
- Learn how to integrate animals into a vegetable/flower production system

7. Sustainable Livestock and Poultry Production on a Small Acreage

Instructor or guest speaker presentation

Instructor or other guest speaker will provide some of the basic sustainable animal production practices and requirements. The following topics are provided as a guide for what to cover to enhance and/or explain presentations by farmer/ranchers.

- Animal production methods for small acreage producers
- Supplemental Feeds
- Animal health
- Breeding and reproduction
- Facilities and fencing
- Discussion of different animals (beef, pork, sheep, poultry goats, etc.)
- Value added products – wool, milk, eggs, meat, value-added, etc.

Break: (10 min.)

Optional Sustainable Farmer Profile (allow about 45 minutes)

We will meet on a farm that is utilizing animals in a small-acreage production system, i.e. Michael Blakely or Grant Gibbs, to address: integration and sustainability of pork production; pastured poultry; cattle; or sheep and goats.

Suggested Activities (30 min.):

- Class discussion of current livestock production issue for small acreage producers. Brainstorming session on how to utilize animal more efficiently into a production system. How did your grandparents do it?
- Look at powerpoint slides of different farm operations.
- Discuss legal aspects of livestock production and marketing.

Closing