



GoFarm Hawaii: Developing an Online Curriculum to Train Beginning Farmers Statewide

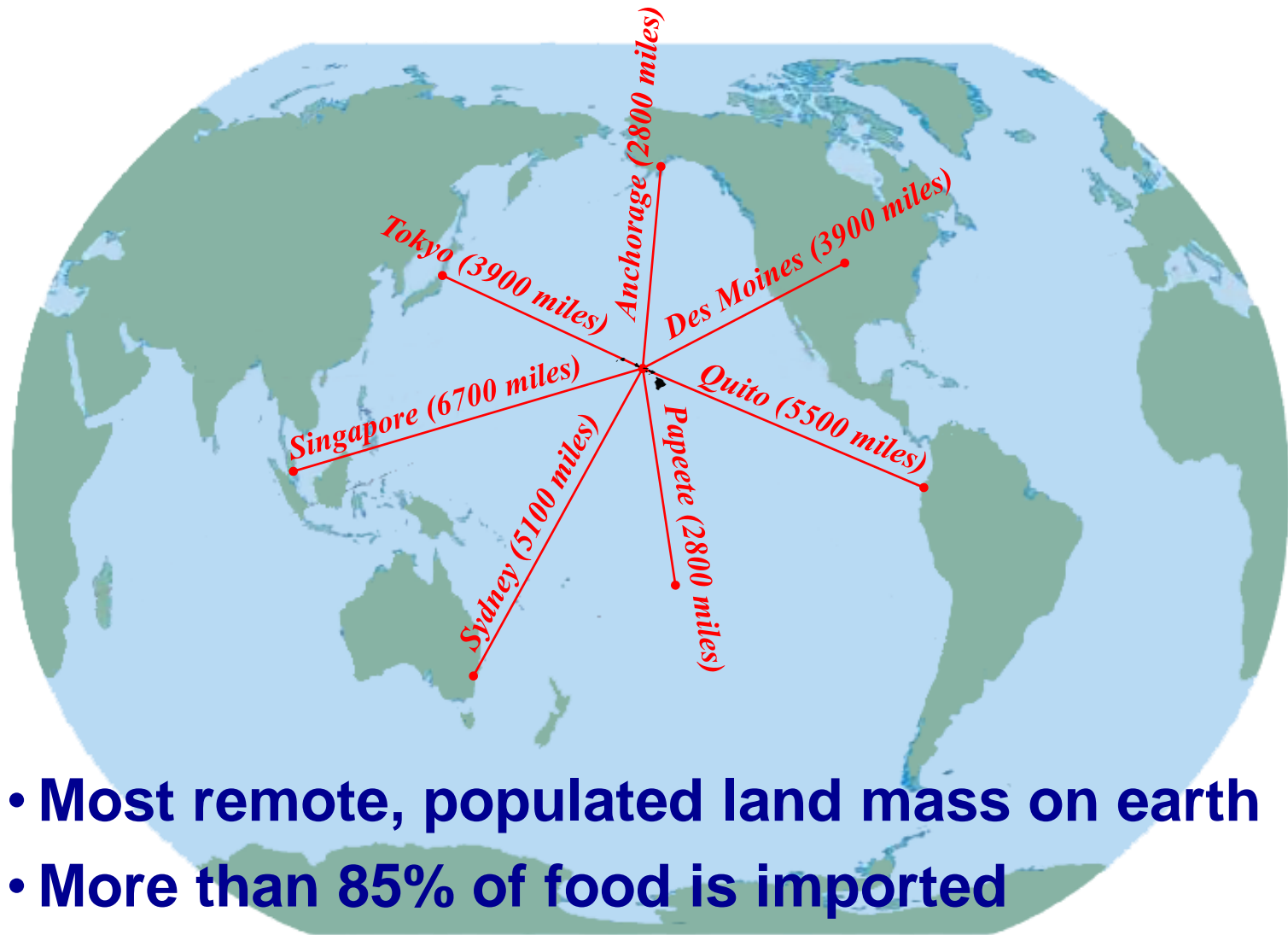
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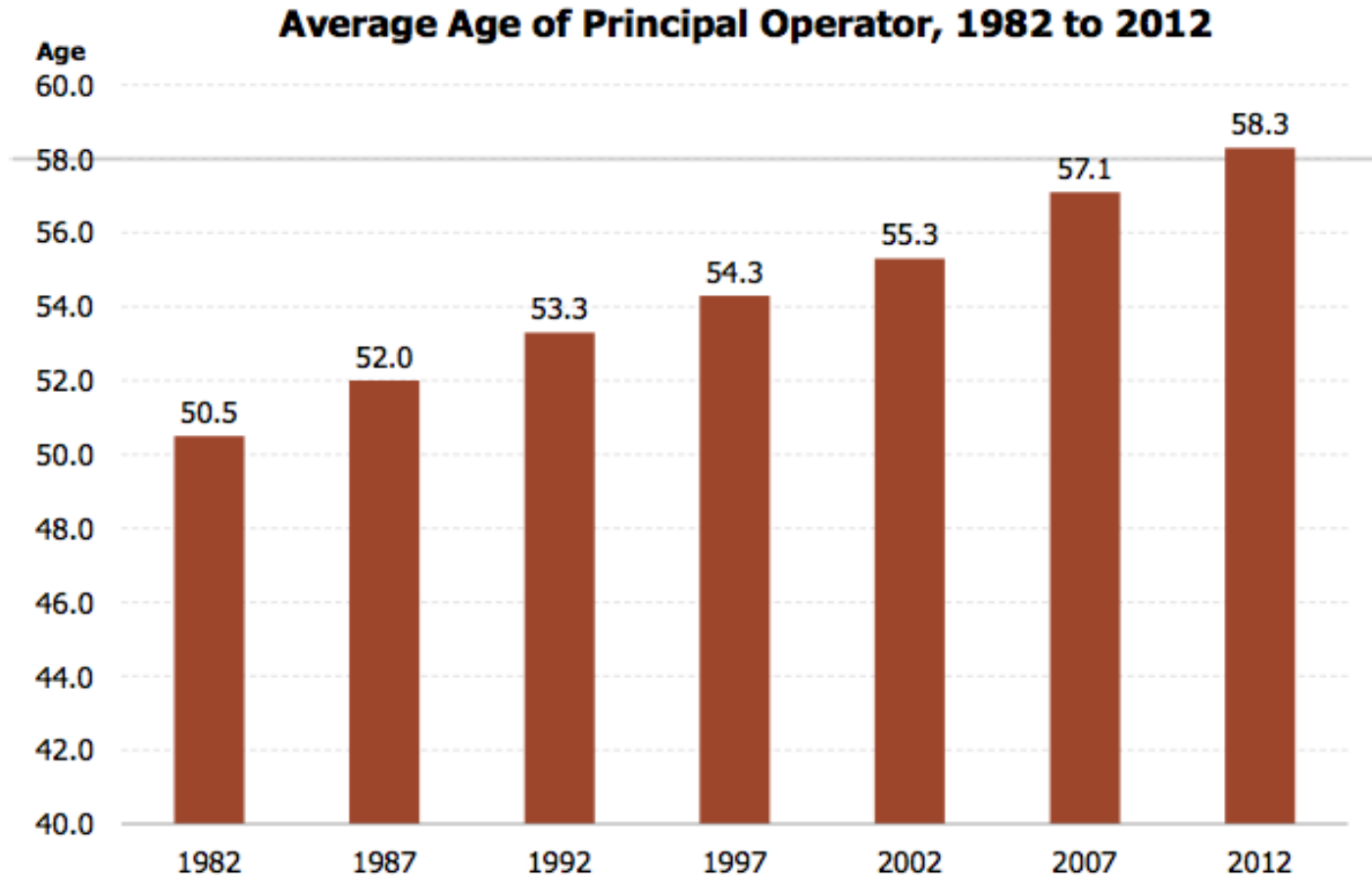
Food (in)Security in Hawai'i



- Most remote, populated land mass on earth
- More than 85% of food is imported



The Graying of Hawaii's Farmers



2012 CENSUS OF AGRICULTURE
YOUR VOICE. YOUR FUTURE. YOUR RESPONSIBILITY.

Source:
<http://sustainableagriculture.net/wp-content/uploads/2014/05/increase-age.png>



GoFarm Hawai'i

- **Hawaii's premier beginning farmer development program**
- **Established in 2012**
- **Available to all committed trainees**
- **Includes science-based curriculum and incorporates rigorous hands-on and business training**



GOFARM
HAWAI'I



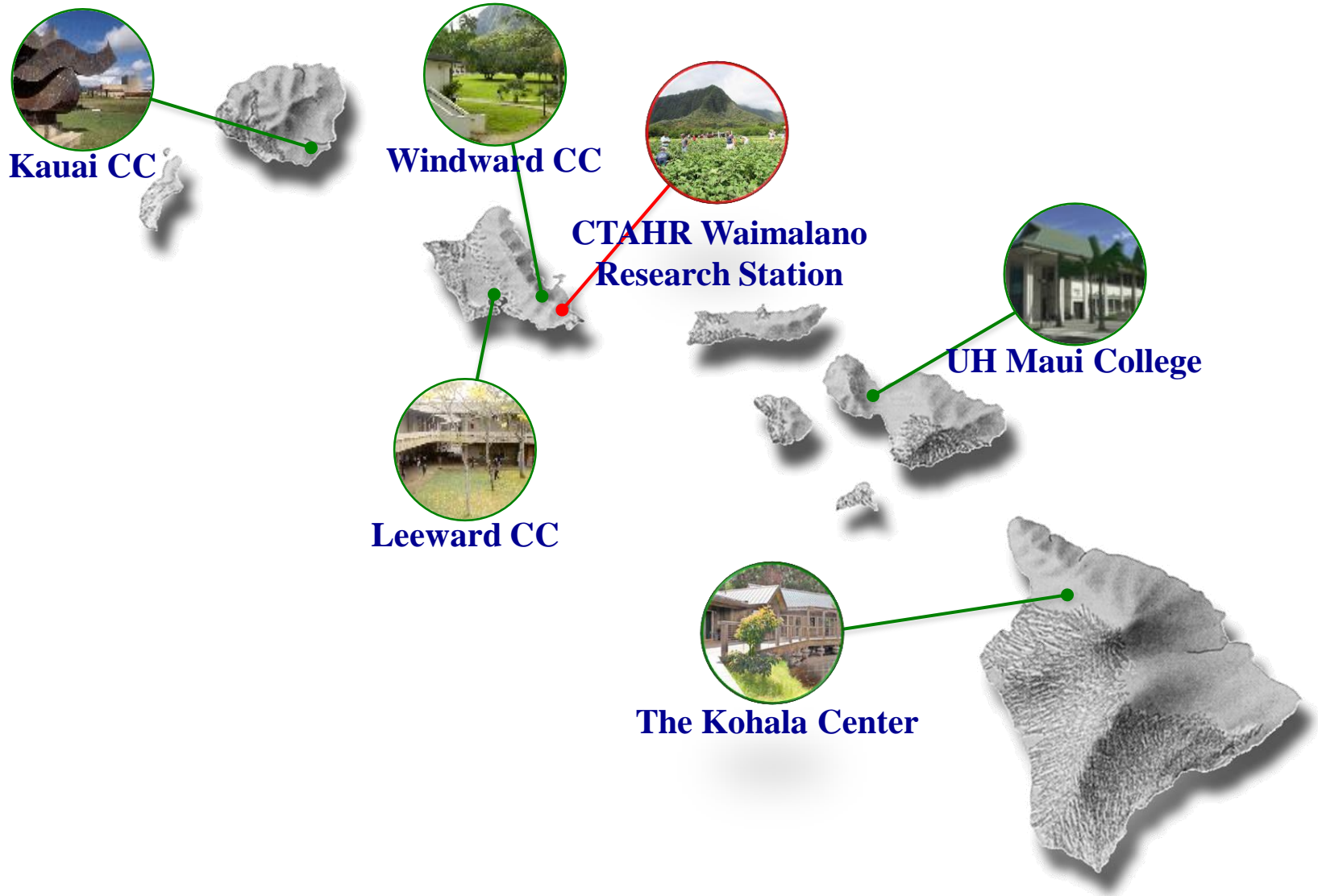
The GoFarm Hawai'i Model



Ag-Producer



GoFarm Locations



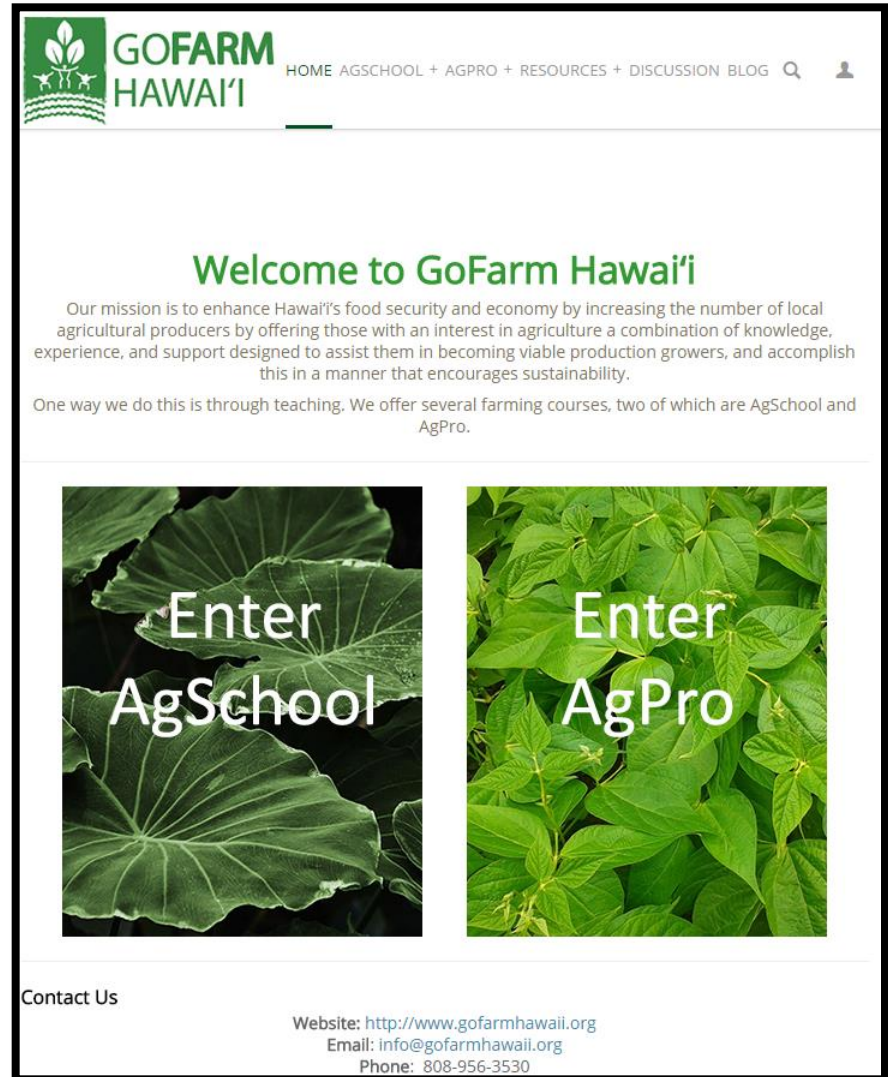
GoFarm's Online Curriculum

AgSchool-4 months

AgPro-6 months

Modules include

- **Field Preparation**
- **Maintenance & Management**
- **Post Harvest**
- **Business (AgPro)**
- **Advanced Topics (AgPro)**



The screenshot shows the GoFarm Hawaii website homepage. At the top left is the logo for GoFarm Hawaii, featuring a stylized plant and the text "GOFARM HAWAII". To the right of the logo is a navigation menu with links for "HOME", "AGSCHOOL", "AGPRO", "RESOURCES", "DISCUSSION", and "BLOG", along with a search icon and a user profile icon. Below the navigation is a large green heading that says "Welcome to GoFarm Hawaii". Underneath this heading is a paragraph of text explaining the organization's mission: "Our mission is to enhance Hawaii's food security and economy by increasing the number of local agricultural producers by offering those with an interest in agriculture a combination of knowledge, experience, and support designed to assist them in becoming viable production growers, and accomplish this in a manner that encourages sustainability." Below the mission statement is another paragraph: "One way we do this is through teaching. We offer several farming courses, two of which are AgSchool and AgPro." At the bottom of the page, there are two large images. The left image shows a close-up of a green leaf with the text "Enter AgSchool" overlaid. The right image shows a close-up of green foliage with the text "Enter AgPro" overlaid. At the very bottom of the page, there is a "Contact Us" section with the following information: "Website: <http://www.gofarmhawaii.org>", "Email: info@gofarmhawaii.org", and "Phone: 808-956-3530".




Online Modules – Benefits

- Complement face-to-face sessions
- Compatible with flipped-classroom
- Quizzes identify areas of weakness
- Ensures uniformity and builds community across GoFarm sites and cohorts
- Facilitates expansion to new GoFarm sites

Handouts
Hawai'i Crop Trials
Tractor & BCS Study Guide
Videos >


Hawai'i Crop Trials

Use the resources on this webpage to help you determine which crops would be best suited for your farm's particular composition. These crop trials are particularly helpful because they were all performed locally in Hawai'i.



Broccoli

- Using Clovers as Living Mulches To Boost Yields, Suppress Pests, and Augment Spiders in a Broccoli Agroecosystem



Cabbage

- Head Cabbage Variety Trial Poamoho Spring 2005
- Waimānalo Cabbage Variety Trial
- Cabbage Flavor
- Greenhouse Screening and Field Evaluation for Weed Tolerance in *Brassica Oleraceae* Genotypes



Online Modules – Features

- Video library of GoFarm coaches and experts – UH faculty and UH Extension Agents
- Discussion Board facilitates interaction by students and coaches
- Innovative educational materials
- Includes additional topics of interest for students
- *Future: Wiki-style content enhancement by participants*

The screenshot displays a web interface for the GoFarm Hawaii website. On the left is a navigation menu with the following items: Handouts, Hawai'i Crop Trials, Tractor & BCS Study Guide, Videos (highlighted in blue), Field Demonstrations, Lectures, Agroecology Sustainability - Albie Miles, Crop Nutrition - Jensen Uyeda, Crop Selection - Glenn Teves (highlighted in blue), Food Safety - Albert Louie, and Insect Pest Management - Dr. Mark Wright. The main content area features a video player for 'Crop Selection: Crop Origins'. The video title is in green. Below the title is a short bio of Glenn Teves, a County Extension Agent on Moloka'i. The video description explains that Glenn Teves discusses the processes for selecting the best crops for individual farms, covering topics like seasons, daylength, temperatures, wind conditions, and soil temperature. Below the text is a video thumbnail with a green background, a white leaf logo, and the text 'GOFARM HAWAII'. To the right of the thumbnail, the video title 'Crop Selection ~Crop Origins~' is displayed in green, followed by 'with Glenn Teves' and 'Part 1'.



Architecture of Modules

Field Preparation	▼
Agroecosystems in Hawaii	
Cover Crops	
Crop Planning	
Direct Seeding & Transplanting	
Hand Tools & Maintenance	
Intro to Soils	
Irrigation	
Plant Anatomy & Physiology	
Plant Taxonomy	
Small-Scale Machinery & Maintenance	
Soil and Crop Nutrition	
Maintenance & Management	>
Post-Harvest	>



General Overview

Soil health is the foundation of productive farming practices. The soil provides water, nutrients, oxygen, and provides a medium to hold their essential nutrients to plants. Important physical characteristics of soil include infiltration, roots to explore, and biota to thrive. Diverse and active biota cycle nutrients at rates to meet plant needs.

This module will consist of an introduction to soil components that result in healthy, high quality soil.

Student Learning Outcomes

Students will be able to..

- describe the process of soil development and formation
- demonstrate and describe qualities of soil texture and structure
- describe the effects of pH on soil and crop health
- propose ways to change pH to optimize crop production
- evaluate the pros and cons of till, no-till, and minimum till approaches

Weekly Quiz

All AgSchool quizzes are administered through Laulima. If you are unable to access Laulima, contact your instructor.

- [Sample Soils Quiz with answers](#)

Lecture Content

Please go over the following resources before class. These will help you understand the concepts covered in the lecture.

Readings

- Introduction and Chapter 2 from *Building Soils for Better Crops*
- Pages 97-102 from *Gardening at the Dragon's Gate* by Wendy Jones
- Fact Sheet 18: Record Keeping by New Entry Sustainable Farming System

Recommended Videos

- [Introduction to Soils by Jay Bost](#)
- [Understanding and Managing Soils for a Healthy and Productive Landscape by Dr. Jonathan Deenik](#)
- [Symphony of the Soils](#). [Click here to view the trailer on Youtube.](#)

Study Guide

- [Introduction to Soils](#)
- [Student Workbook](#)
- [Glossary](#)

Modules include:

• Brief Overview

• Learning Outcomes

• Recommended Reading

• Websites, Videos

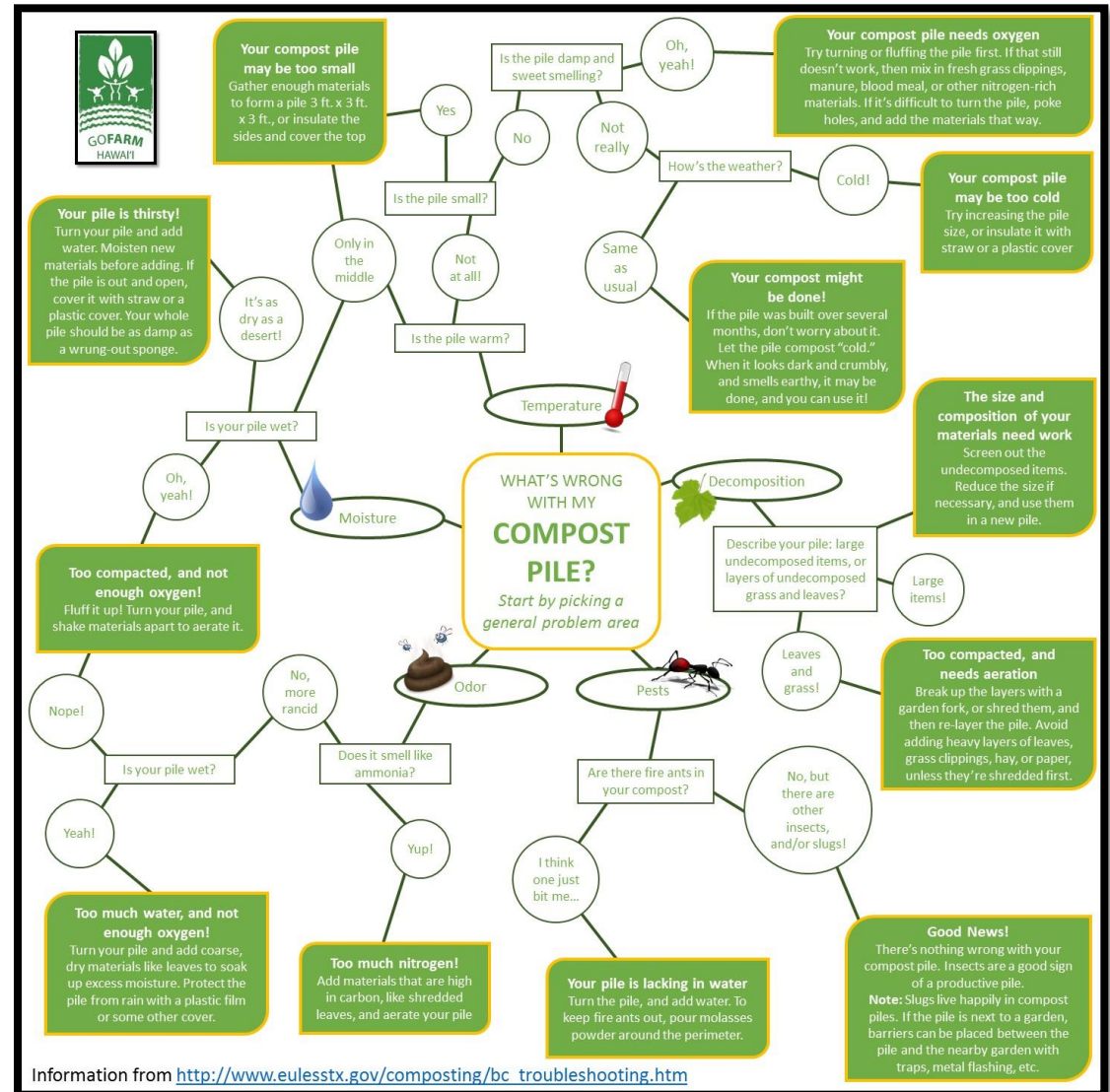
• Self-check Quiz

• Study Guide



Example – Compost Diagnosis Flowchart

- Provides diagnostic pathway that students can follow
- Suggests possible causes and actions to remedy problems



Information from http://www.eulesstx.gov/composting/bc_troubleshooting.htm



Example – IPM Activity

Learning is scaffold for students

- Review information
- Guided practice identifying plants
- Feedback
- Self Check

The screenshot shows a web application titled "Diagnosis Practice". At the top, there are three small images of plant problems, each with a magnifying glass icon: a field of yellowing plants, a cluster of white fruits with brown spots, and a close-up of soil. Below these images are three large, colorful buckets: a purple bucket labeled "Nutrient Deficiency", a green bucket labeled "Fungus", and a yellow bucket labeled "Bacteria". A "Submit" button is located in the bottom right corner of the application area. At the bottom of the screenshot, there are two logos: "GOFARM HAWAII" on the left and a house icon on the right.



Mahalo!



Acknowledgements

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- **UH Manoa, CTAHR**
- **UH, Windward Community College**
- **UH, Leeward Community College**
- **UH, Kauai Community College**
- **UH, Agribusiness Incubator Program**

