



Module 4: Plant Growth, Management & Pest Control

Think Pair Share Activity B: Building an IPM Plan

Lesson B

Grouping: Pairs or small groups (3–4)

Time: 25-30 minutes

Materials:

- Printed IPM worksheet
- UC IPM crop list
 - [Agriculture: Pest Management Guidelines / UC Statewide IPM Program \(UC IPM\)](#)
- Laptop
- Colored pens or markers

Objective:

Design a complete IPM strategy for a selected crop by choosing **at least one** tactic from each of the four IPM tiers.

Instructions:

1. Choose a crop from the UC IPM crop list
2. Use prior knowledge, class materials, or a quick web search to identify 1–2 major pests that typically affect your chosen crop.
 - a. *Example: Tomatoes are often affected by whiteflies and hornworms.*
3. Fill in the pyramid with one tactic per tier (research)
 - a. Cultural
 - b. Mechanical/physical
 - c. Biological
 - d. Chemical
4. Include one monitoring method (for example sticky traps, scouting, threshold evaluation)
5. Use colors or labels to highlight how your chosen actions support **sustainability** (e.g., reduce chemical use, protect pollinators, save money).

Then, write a **1–2 sentence explanation** for each tier answering:

 - Why did we choose this tactic?
 - How does it reduce harm or waste?

Your Task:

Create a sustainable pest management plan that uses a systems approach to reduce environmental impact while protecting the crop.

| | |
|--|--|
| <p>Step 1: Choose a Crop <u>UCR IPM Crop List</u></p> <p>Crop:</p> <hr/> | <p>Step 2: Identify a Pest or Disease Problem (e.g., aphids, HLB, mildew)</p> <p>Pest/Disease:</p> <hr/> |
|--|--|

Step 3: Draw an IPM Pyramid – Fill in One Tactic Per Tier

Step 4: Monitoring Method (e.g., sticky traps, scouting)

Method:

Step 5: Visual Sustainability Highlight

Use colored pens/markers to show how each tactic:

- Reduces pesticide use
- Improves timing
- Closes feedback loops

Skills You'll Use:

- Systems thinking
- Strategic planning
- Research and synthesis
- Collaboration
- Communication

Example:

Crop: Tomato

Key:

- **Prevention with no chemical input**
- **Non-invasive or selective method**
- **Judicious/limited chemical use**
 - Cultural: Plant a resistant tomato cultivar
 - Biological: Release *Encarsia formosa* wasps
 - Physical / Mechanical: Use yellow sticky traps
 - Chemical: Apply insecticidal soap if needed

(Optional) Essential Question:

How does integrating all four IPM tiers create a more sustainable and resilient farming system?

| IPM Tier | Environmental Benefit | Economic Benefit | Health/Social Benefit | Synergy Notes |
|----------|-----------------------|------------------|-----------------------|---------------|
|----------|-----------------------|------------------|-----------------------|---------------|

| | | | | |
|--------------------------|--|--|--|--|
| Cultural | | | | |
| Mechanical / Physical | | | | |
| Biological | | | | |
| Chemical (targeted) | | | | |