Integrated Pest Management
Oahu Master Gardener Training
25 April 2013

A. What is IPM
1. Protecting plants
2. Keeping pest populations low
3. Minimizing environmental damage
4. Efficient and cost-effective

Integrated: uses a variety of methods, science-based
Pest: living organism that cause injury, are unwanted, a nuisance, etc.
Management: planned, systematic, acceptable pest levels

B. History
C. Pesticide Misuse
1. Environmental contamination
2. Pesticide resistance
3. Secondary pests
4. Natural enemies killed, pest resurgence
5. Pesticide treadmill

D. Economic (Action) Threshold, Economic Injury Level
E. Management Methods
1. Exclusion
    a. Quarantine: international, national (government)
    b. Quarantine: local (personal actions)
    c. Limits of quarantine
2. Eradication
    a. Difficult to achieve
    b. Pesticides, physical destruction (burning, burying, etc.)
3. Avoidance
    a. Don't plant where the pest is
    b. Plant resistant or non-host plants
    c. Alter planting/harvest times
4. Protection
    a. Cultural/Physical/Mechanical Control
        1) Barriers and mulches
        2) Traps, trap crops, attractants
        3) Plant nutrition, modify soil pH
        4) Heat, water management, flooding
        5) Rouging, hoeing, plowing
        6) (Rotation, fallow)
    b. Biological Control
        1) Parasites, hyperparasites, predators
        2) Altering flora and fauna
            a) Crop rotation, fallow, suppressive soils
            b) Green manure, compost, teas, soil pH
        3) Resistant hybrids
            a) Traditional plant breeding
            b) Genetic engineering
    c. Chemical control

F. Key Concepts

Science-based, **correct pest identification**, **planned**, **monitored**, **Action Threshold**, **practical**, **various approaches**, **chemicals used appropriately**

Fred Brooks, 22 April 2013