

# The “Other” Pests

**Weeds**  
**Snails**  
**Birds**  
**Gophers**



# http://ipm.ucanr.edu



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- New pest in California: [Bacterial spot on Almonds](#)
- Pest Notes: [Eye Gnats](#) added, [Fungus Gnats](#), [Conenose Bugs](#) and [Pitch Moth](#) revised
- Agricultural Pest Management: [Citrus](#), [Alfalfa](#), [Asparagus](#), [Carrot](#), [Cucurbits](#) updated
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## Home, Garden, Turf & Landscape Pests



## Agricultural Pests



## Natural Environment Pests



## Exotic & Invasive Pests



## UC IPM Definition

Integrated pest management (IPM) is an ecosystem-based strategy that focuses on **long-term prevention** of pests or their damage through a **combination** of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Pesticides are used only after **monitoring** indicates they are needed according to established **guidelines**, and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and nontarget organisms, and the environment.



IPM is **site-specific** - Individual tactics are determined by the particular plant-pest-environment scenario

# Prevention: The first line of defense

## Tactics:

- using pest-free transplants
- Correct fertilization, irrigation, mowing
- preventing weeds from reproducing
- cleaning equipment



## Look at the long term:

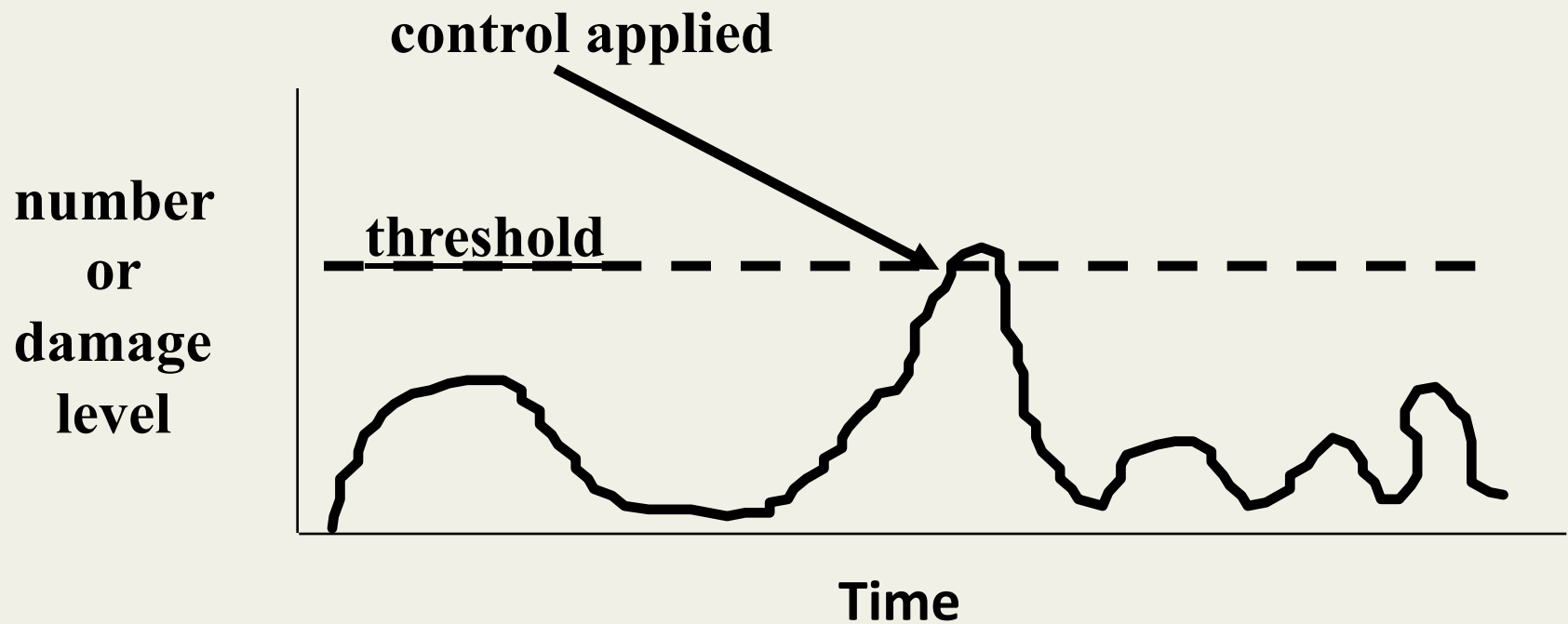
- Biological controls; preserve biological diversity
- Use resistant varieties
- Sanitation
- Site selection

# IPM

- **regular monitoring**
- **employs**
  - **physical**
  - **cultural**
  - **mechanical**
  - **biological**
  - **chemical**
- tactics**

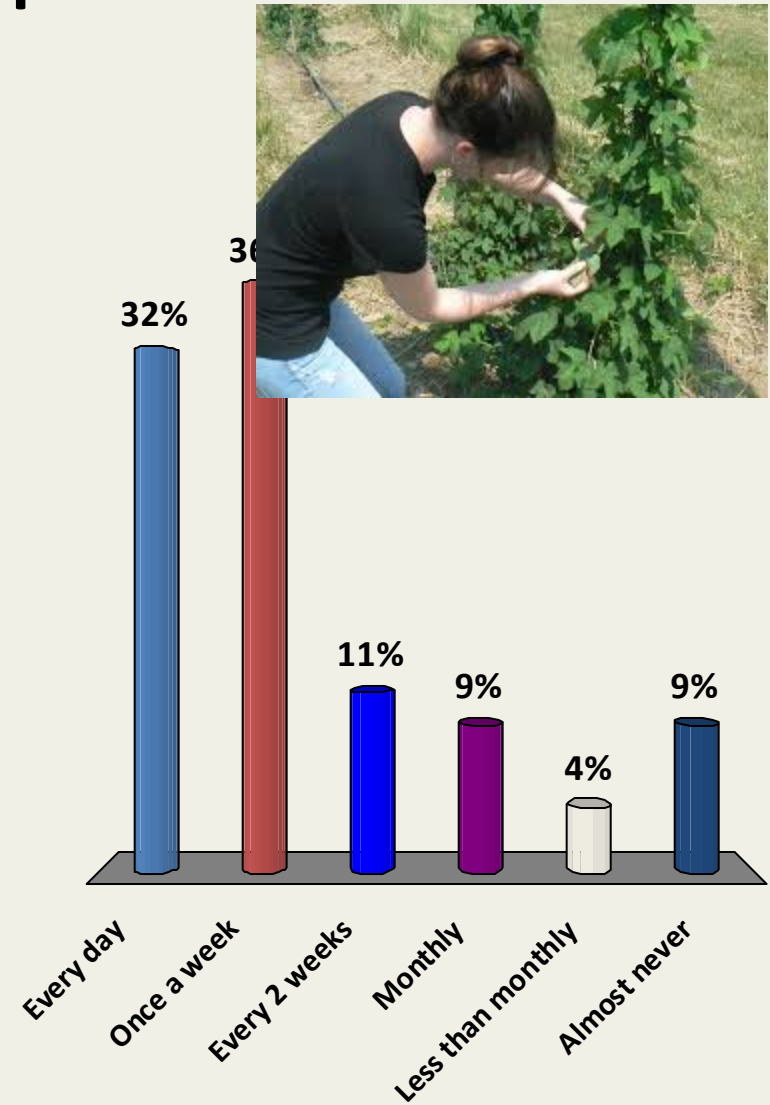


# What's tolerable?



# I check for pests

- A. Every day
- B. Once a week
- C. Every 2 weeks
- D. Monthly
- E. Less than monthly
- F. Almost never



# Identification and Monitoring

- Determine key problem
  - Monitor, Scout
  - Identify/Diagnose Pest
    - Insect, Disease, or Weed vs. Abiotic



# Slugs and Snails

- Hermaphrodites
  - all have the potential to lay eggs
- Brown Snail:
  - Takes two years to mature
  - Lays eggs up to six times/year, 10-80 eggs in soil
  - Bright white then brown



# Cool, damp, and dark or shady environments

- Usually feed at night or when cloudy or foggy
- During cold weather, snails hibernate in the topsoil
  - southern coastal locations, snails can be active throughout the year
- During hot, dry periods: seal themselves off and often attach themselves to tree trunks, fences (estivation).

## **Snail and Slug Products – 36 registered**

**Metoldehyde –most common**

**Metarex, Deadline M-Ps (minipellets) 4%**

**Iron Phosphate –**

**Sluggo Bait 1% (Monterey)**

**Worry Free Slug and Snail Bait 1%**

**Ferric Sodium EDTA –lower use rates**

**Iron Fist**

**Ferroxx**

**New Corry's Slug and Snail Killer**

# Copper screen barriers



A. Hara

# Hydrated Lime + Copper Sulfate

- Bordeaux mix
- Paint lower 1-2 feet of trunk



## **10-10-100**

pounds of copper sulfate :  
pounds of dry hydrated lime :  
gallons of water.

1-gallon mixture:

3 1/3 tablespoons of copper  
sulfate + 10 tablespoons of dry  
hydrated lime in 1 gallon of  
water.

# Other Controls

- Board traps
- Diatomaceous earth
  - Easily washed away
- Beer/yeast
  - Ok but need to check and gets stinky
- Decollate snails
  - Non-selective
- Chicken/geese



# WEEDS

- Mulch
- Cultivation
- Mowing
- Herbicides

-Rodents

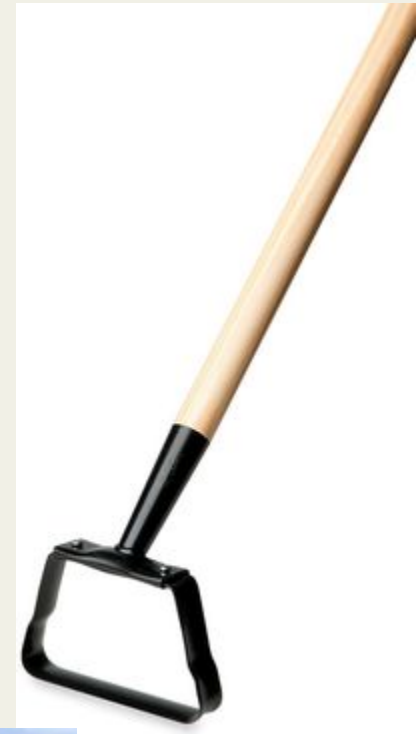
+Beneficial insects (sometimes)

# Mulch

- Row mulcher
- Side throw
- Weeds suppressed close to stem

# Cultivation

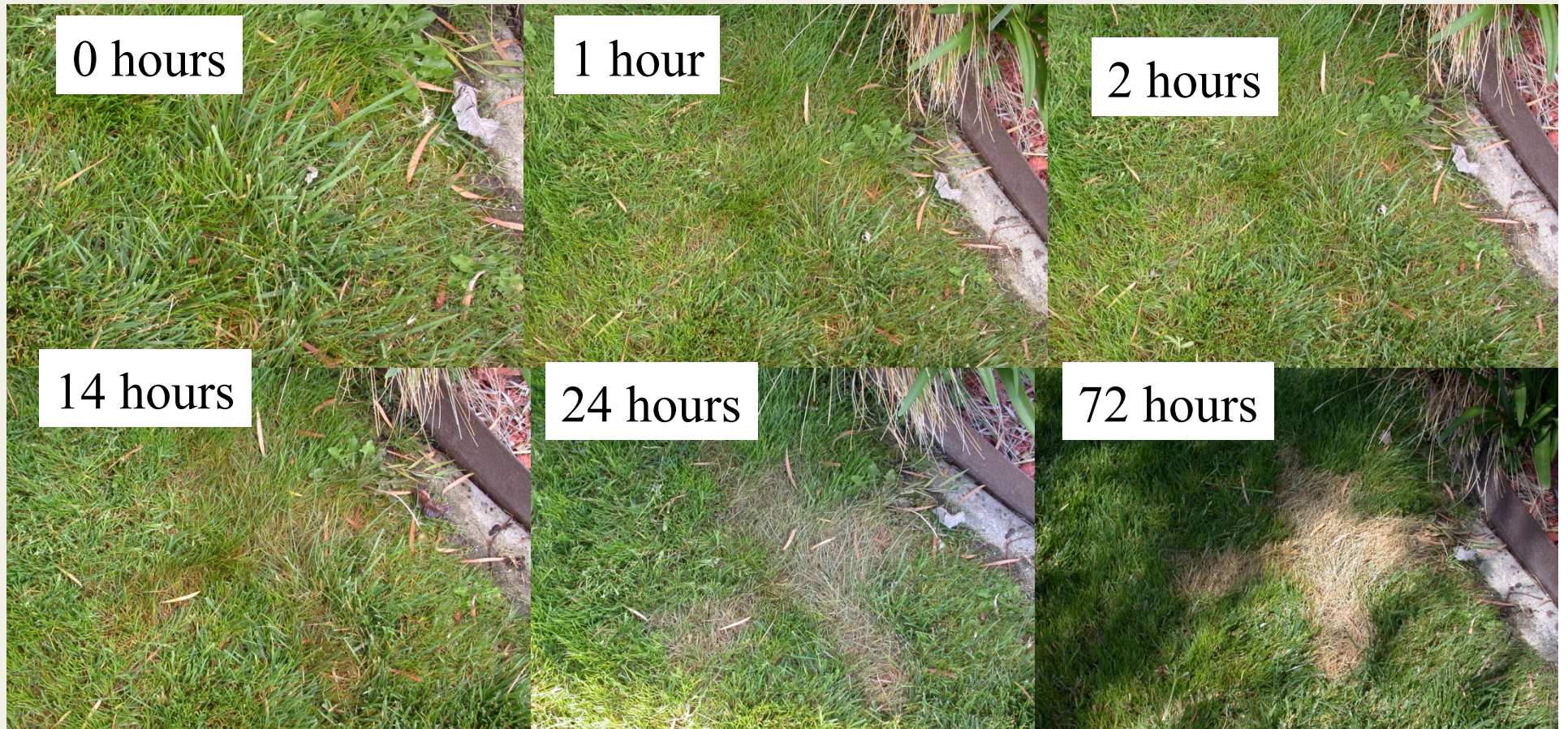
- Protect the trunk!
- Row middles



# Herbicides

- Fast
- Longer Term
- Pre / Post
- Some organic herbicides

# Bioganic Herbicide (Eugenol 12.5%)



# Organic Herbicides

- Good spray coverage is essential - 70 GPA
- Work better in warm weather (80°F)
- Surfactants improve weed control
- Treat when weeds are small
- Repeat applications are needed for larger weeds

21 Days after treatment



Untreated

Matran

Roundup Pro

# Birds

## Netting

~\$1300-\$4,000/A

### Premium PollyNet

Item#	Description	Price
Netting 50	14' x 50' Premium PollyNet	\$125.95
Netting 100	14' x 100' Premium PollyNet	\$210.95
Netting 250	14' x 250' Premium PollyNet	\$499.95
Netting 3000	14' x 3,000' Premium PollyNet Bulk Roll	\$3,895.00

### Lightweight PollyNet

Use when low visibility and economy are more important than durability.

Item#	Description	Price
Lnetting 50	17' x 50' Lightweight PollyNet	\$65.95
Lnetting 100	17' x 100' Lightweight PollyNet	\$110.95
Lnetting 250	17' x 250' Lightweight PollyNet	\$225.95
Lnetting Roll	17' x 5,000' Lightweight PollyNet Bulk Roll	\$2,595.00