

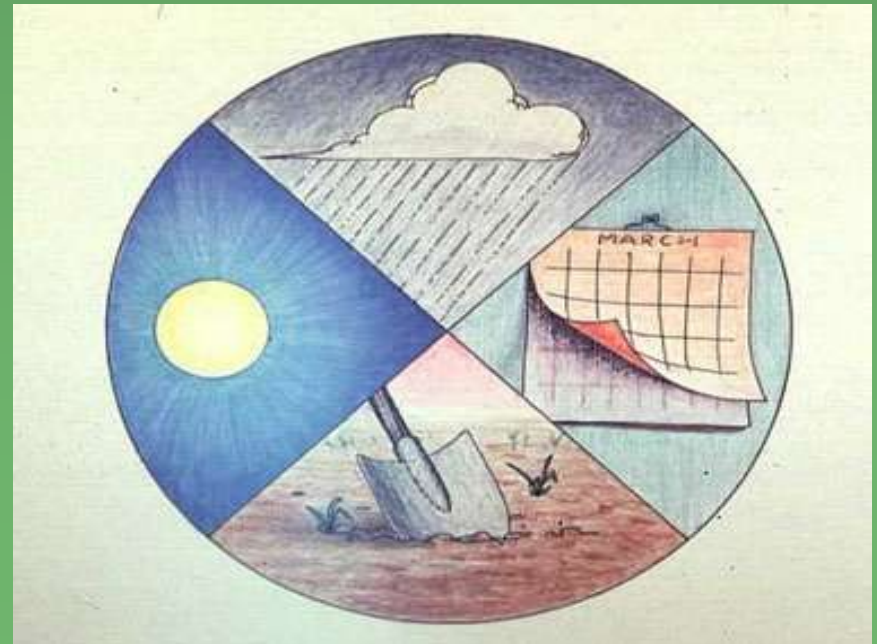
The background of the slide is a solid green color with a faint, stylized pattern of overlapping leaves and branches in a slightly darker shade of green. The text is centered and reads:

# **Maintaining Your Florida-Friendly Landscape**

# Fertilizer

Fertilize:

- When you expect a desired result
- During growing seasons
- At signs of nutrient deficiencies



# Fertilization might not be required:

- If the appearance is healthy
- If plants are established
- If plants are flowering or fruiting





# Fertilization

Too Much



- Excess growth
- Pests
- Wastes time, labor, money
- Non-point source pollution



# Cultural Practices

- Mulching
- Pruning
- Pest Management



# Landscape Mulches

- Any material applied to the soil surface to protect or improve the area covered
- Organic
  - Pine Bark
  - Eucalyptus
  - Melaleuca
  - Pine straw
  - Leaves
  - Recycled Utility

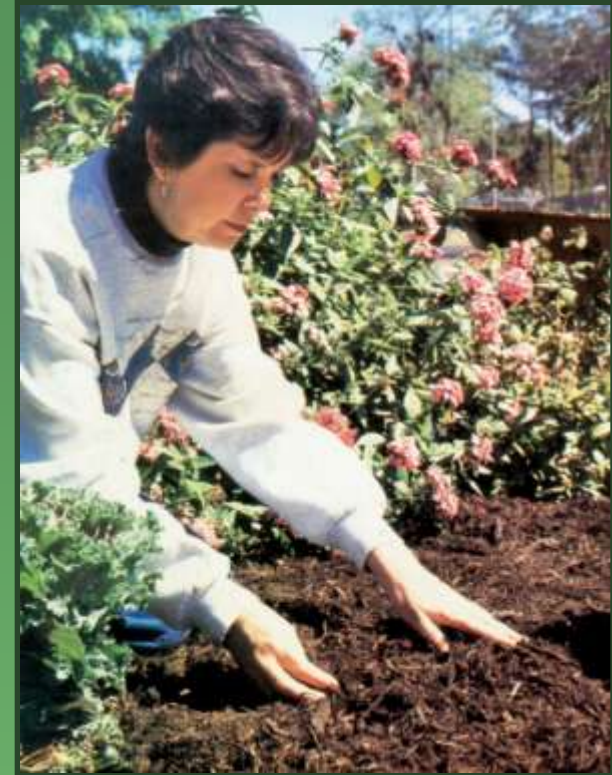




# Mulch

## ■ Benefits

- Water Conservation
- Moderates soil temperature
- Helps in weed control
- Aesthetic
- Adds organic matter to the soil
- Promotes beneficial microbes
- Decreases soil compaction
- Protects trees or shrubs planted in lawn areas from mechanical damage



# Tips for Mulching

- Use recycled materials when possible
- Do not pile mulch against tree or shrub trunks
- Keep 2 -3 inches away from base of plant
- Apply mulch deep enough to suppress weeds, 2-3 inches
- No need to remove old mulch when applying new





# Pruning

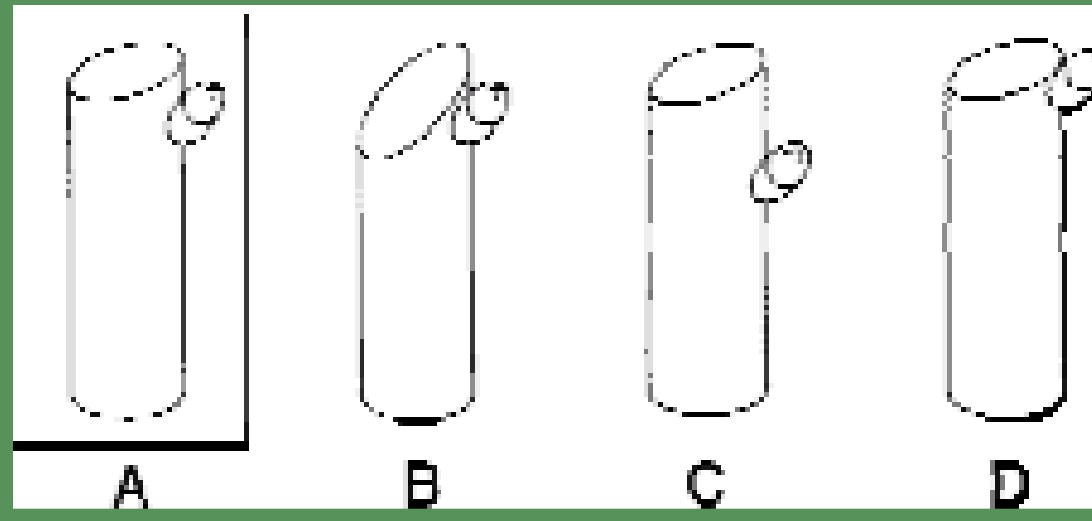
- is the selective removal of shoots and branches
- is done with a clearly defined objective
- should be timed according to the needs of the plant
- can be reduced by correct plant selection

# Why Prune?

- Train young plants
- Control size and form
- Maintain or improve vigor or appearance
- Influence flower and fruit production
- Safety
- Rejuvenation
- **At transplanting? –not recommended**

# Techniques

Pruning Cuts – small branches, stems & twigs



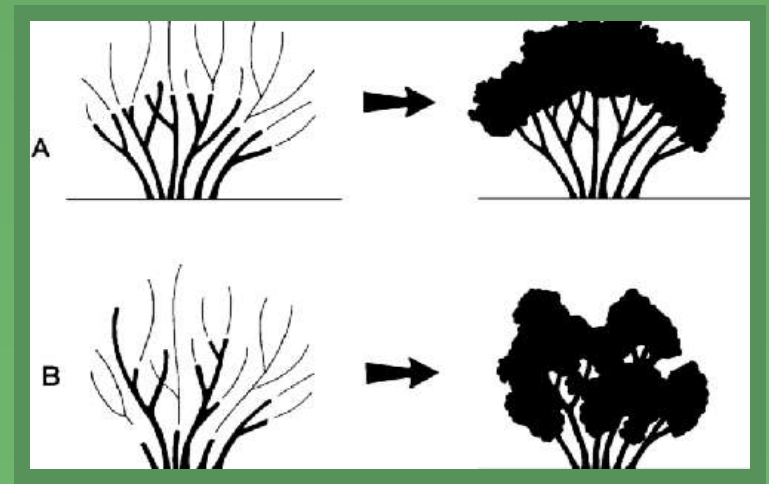
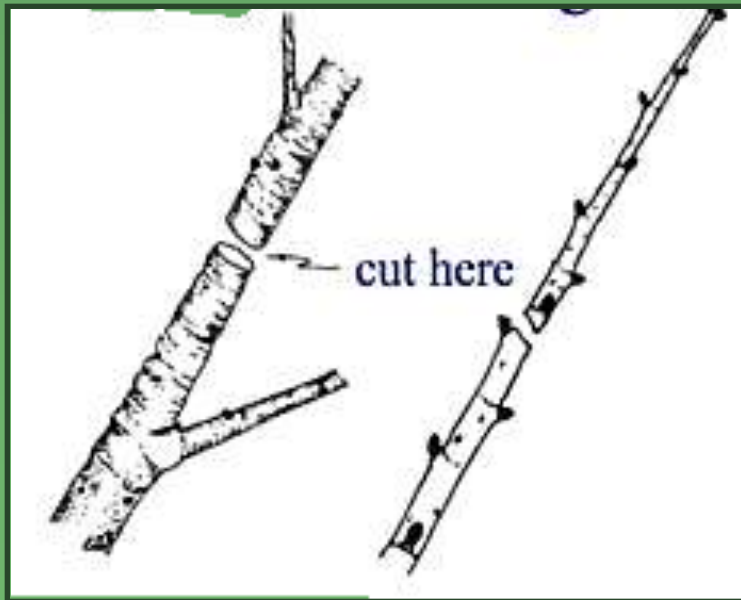
**"A" correct** "B" too slanted "C" too far from bud "D" too close to the bud



# Techniques

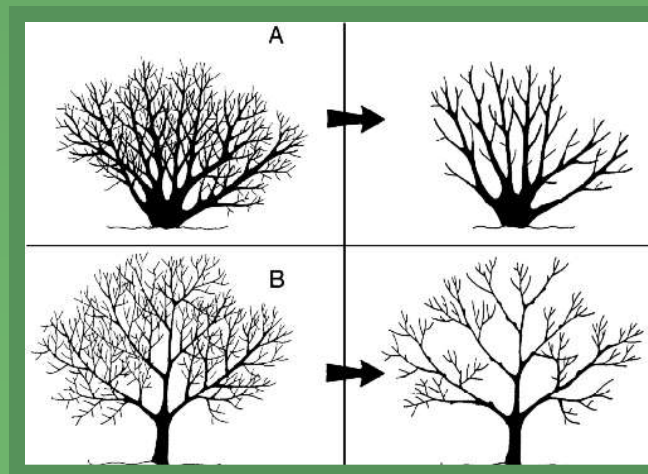
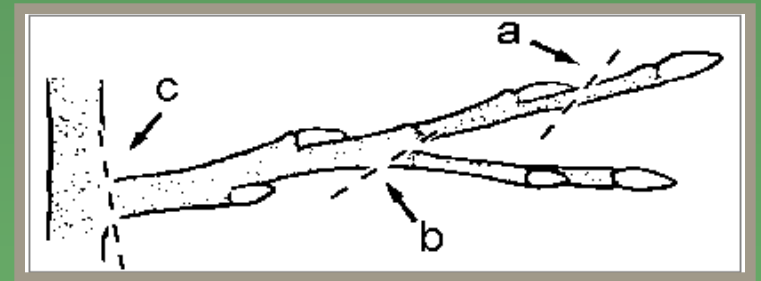
- Heading— cutting terminal ends of branches to axillary bud – encourages bushy growth
  - Shrubs – vary levels

## Heading Cut



# Techniques

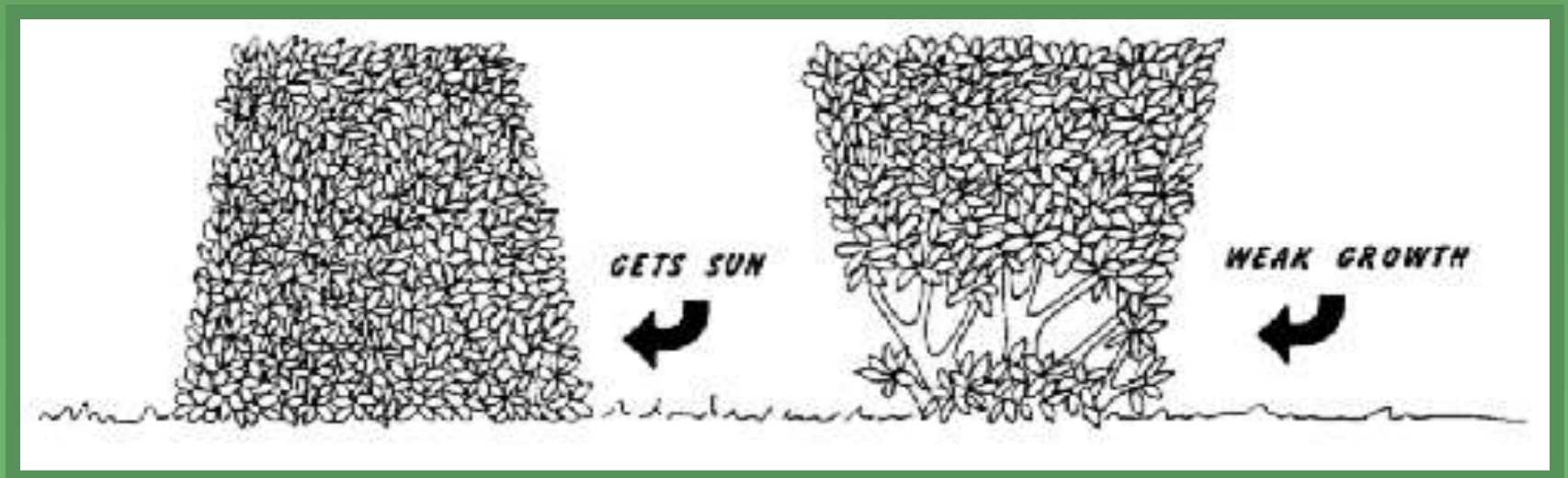
- Thinning –removal of branches to:
  - Lateral branch (b)
  - Main trunk (c)
- (a) is a heading cut



# Techniques

## Shearing or Hedging

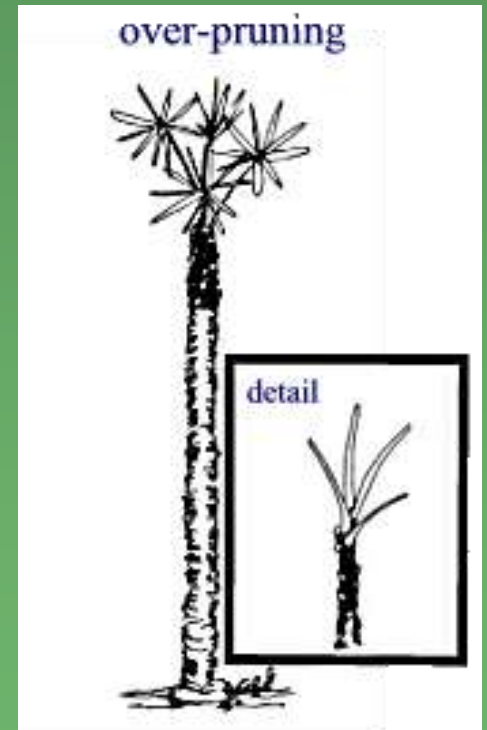
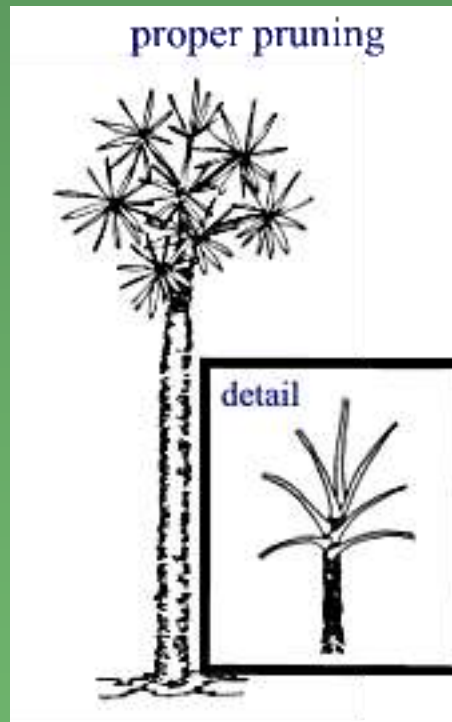
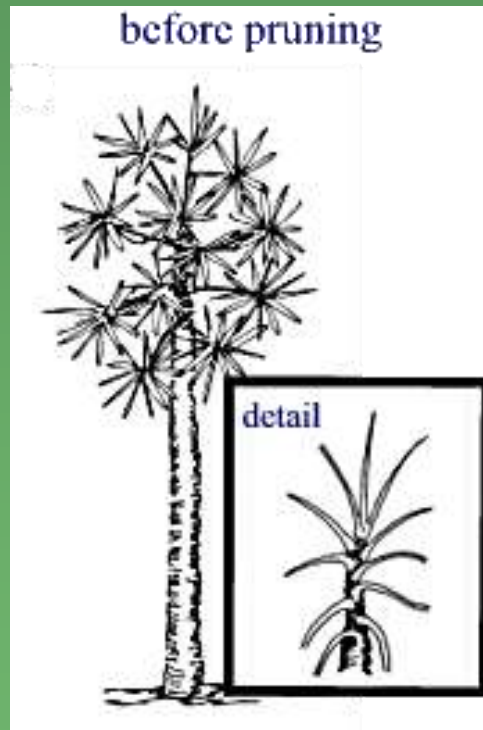
- ▮ Creates dense thick new growth
- ▮ Keep top narrower than base
- ▮ Best for evergreen shrubs





# Techniques

## Pruning Palms



# Timing

- Light pruning anytime
  - Remove dead branches
  - Lightly shape
- After flowering
  - Flowers on last seasons growth
- Late winter or early spring before growth flush
  - Flowers on new growth

# Timing

- After flowering
  - Azaleas
  - Camellias
  - Most Hydrangea
  - Indian Hawthorn



- Magnolia
- Gardenia
- Banana Shrub
- Blueberries





# Timing

**Late winter early spring before growth flush**

- Crape myrtle
- Bougainvillea
- Some Hydrangea
  - Endless Summer
  - Summer Beauty
- Plumbago
- Perennial flowers
- Hibiscus
- Oleander
- Rose
- Golden dew drop
- Cassia

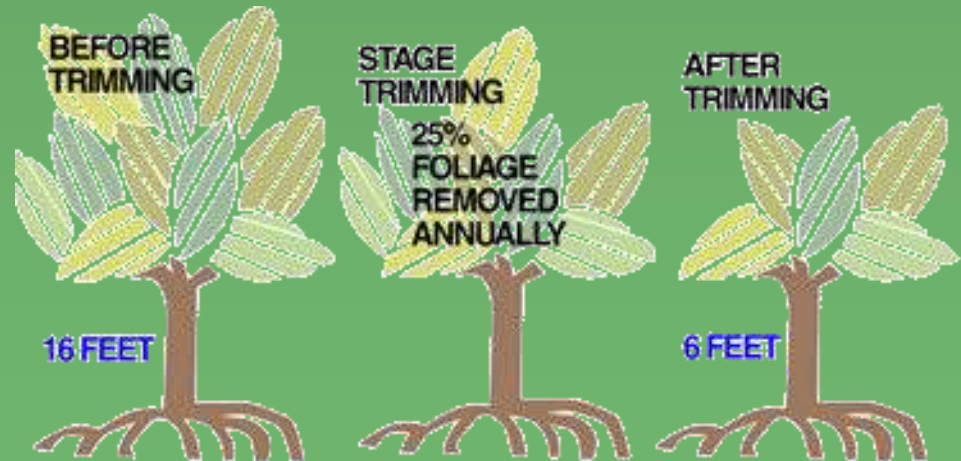


# Timing

- Dormant period or just after growth flush
  - Large shade trees
- Most evergreens
  - Anytime
- For rapid growth
  - Just prior to first spring growth flush - March
- For maximum dwarfing
  - Just after a growth flush

# Mangroves

- 1996 Mangrove Trimming and Preservation Act
  - Defines difference between trimming & alteration
  - May not reduce height below 6 feet from substrate
  - Mangrove roots may not be trimmed
  - Under certain conditions a professional mangrove trimmer must be employed





# Integrated Pest Management Involves:

- Providing proper cultural practices
- Genetics – plants resistant to pests
- Scouting/Identifying/Monitoring
- Asking the right questions
- Choosing a method of control
- Protecting beneficial organisms and the environment



# Scouting:

- Look for damage to plant:
  - Distorted new growth
  - Yellow stippling on leaves
  - Webs around leaves
  - Notched or chewed leaves
  - Black sooty mold



# Identify:

- Is damage due to insect pest, disease or cultural practices?
- If you see insects, are they helpful, harmful or harmless?
- If the insects are harmful, do you see evidence of beneficial insects?



# Harmful Pests with Piercing, Sucking Mouthparts

- Aphids
- Scales
- Mealybugs
- Spider mites
- Whiteflies
- Lace bugs







- Found on new plant growth and/or flowers
- Damage: leaf curling or deformed flowers
- Sooty mold & ants
- **Heavy population control:**
  - Sharp spray from hose
  - Horticultural oil (Neem, Organocide)
  - Beneficial insects



# Scales: Soft & Armored

- Found on stems and underside of leaves
- Sooty mold
- Heavy infestations cause poor growth and decline of plant
- **Control:**
  - Horticultural oil (Neem, Organocide)
  - Chemical pesticides
  - Beneficial insects



# Mealybugs

- Found on leaves, twigs and roots
- Bodies covered in white wax coating
- Sooty mold and ants
- **Control can be difficult**
  - Horticultural oil (Neem, Organocide)
  - Insecticidal soap
  - Beneficial insects





# Spider mites

- Relatives of spiders – eight legs
- Found on lower leaf surfaces and fruits
- Webs sometimes present
- Stippling on leaf surface
- Hot, dry weather
- **Control:**
  - Sharp spray from hose
  - Horticultural oil (Neem)
  - Insecticidal soap
  - Beneficial insects
  - Chemical miticides





# Whiteflies

- Found on undersides of leaves
  - Adults look like white gnats
  - Larvae stationary on leaves
- Leaves pale or spotted
- Sooty mold
- **Control:**
  - Yellow sticky cards
  - Horticultural oil (Neem)
  - Insecticidal soap
  - Beneficial Insects



# Harmful Pests that Chew:

- Caterpillars
- Chinch Bugs
- Weevils
- Grubs
- Leafminers
- Lubber grasshoppers
- Slugs
- Thrips



# Control of Chewers:

Controlled best if pest is very young

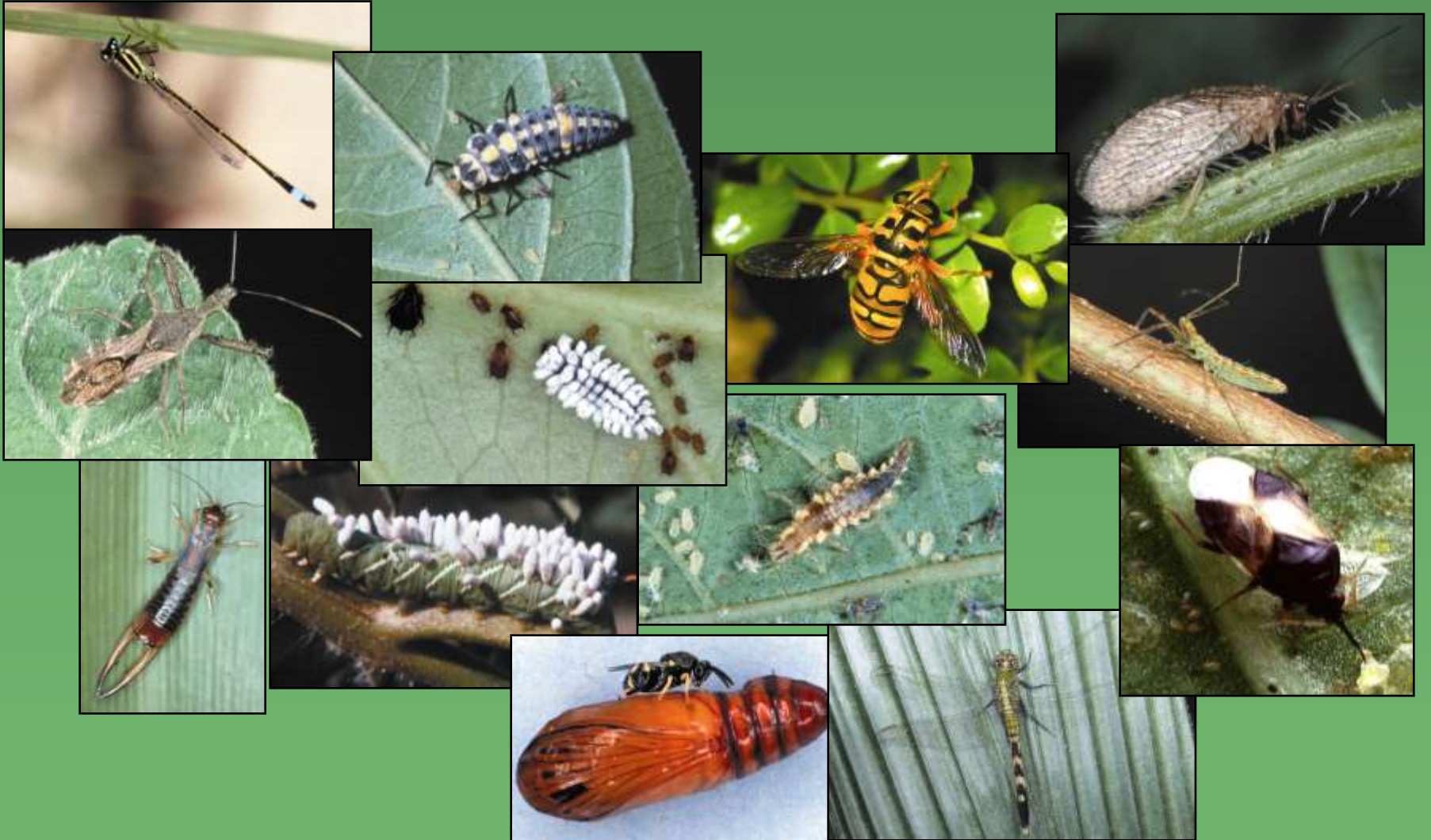
- **Bt (*Bacillus thuringiensis*)**
- **Beneficial insects**
- **Chemical pesticides**
- **Mechanical removal**

Remember – butterfly larvae are caterpillars. If you want butterflies, be careful where you use pesticides, including Bt.





# Learn to Recognize Helpers:





# More of the Good Guys



# Pesticides

- Insecticidal soaps
  - Potassium salts of fatty acids
- Horticultural oils
  - Organocide
  - Neem
  - Paraffin based or light horticultural oil
- Chemical pesticides
  - Sevin, Malathion, Bifenthrin, etc.
  - Imidacloprid (systemic)
  - Iron Phosphate – safe slug and snail bait

**Questions??**