

# Caring for the Garden

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# Caring for the Garden

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- Irrigation
- Weed Control
- Integrated Pest Management

# Irrigation

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1. Consistent Watering
2. Water only the Soil
3. Do not Over Water
4. Watch for Runoff



# Drip Irrigation

Micro and drip irrigation is typically at least 90 percent efficient compared to traditional sprinkler irrigation (50 to 70 percent) because it applies water only where it is needed and slowly enough to minimize runoff and evaporation loss. It also reduces salinity damage and disease on foliage by keeping the water and soil splash off the plants' leaves. A wide variety of products and kits are available, as are many internet resources that offer guidance on installation.



In-line drip tubing releases water slowly, reducing water loss to evaporation and runoff.



# Drip Irrigation Benefits:

- No wet leaves
- Not watering weeds (mostly)
- Use less water
- Don't have to move hoses around





# Weed Control

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1. Mechanical
2. Cultural
3. Biological
4. Chemical

# Mechanical Control

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|-----------------|-------------|
| a. Cultivation  | d. Flooding |
| b. Mulching     | e. Flaming  |
| c. Solarization | f. Mowing   |



# Cultural Control

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- a. Smother Crops
- b. Competitive Crops
- c. Crop Rotation



## d. Mulch

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In a good garden, you should not see any bare soil.

If you do not want to deal with weeds, mulching is paramount.

# Straw Mulch





# Mulching with Cardboard





Gravel as a mulch?





# Biological Control

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- a. **Allelopathy** - is a survival mechanism that allows certain plants to compete with and often destroy nearby plants by inhibiting seed sprouting, root development, or nutrient uptake. Many turf grasses and cover crops have allelopathic properties that improve their weed suppression.
- b. **Biological** - the biocontrol agent can be an insect species, a fungus, or grazing animals.

# Chemical Weed Control

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- Success is determined by:
  - How well label is read
  - How well the 'use pattern' is followed



# THE FOUR 'P's of Pests

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1. Prevent
2. Pinpoint
3. Pest Control
4. Protect

# Prevent

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- Bring home healthy pest-free plants
- Choose varieties that are resistant to pests
- Grown plants in areas they will thrive
- Avoid over/under irrigation & fertilization
- Practice regular garden sanitation
- Remove & destroy heavily infested plants
- Consider physical exclusion barriers
- Don't plant the same vegetables in the same place every year



# Pinpoint

- Monitor the plants carefully
  - Turn the leaves over
- If you see evidence of a bug, identify the bug
- Is it a good bug or bad bug i.e. a pest?
  - They tell me that Most bugs are good – in fact only about 5% are bad
  - Scary looking bugs can be good bugs
- Understand the Lifecycle of the bug
  - Has all the damage been done by the bug in the larva stage and you are just now seeing it?
- Lastly, is it hurting anything?
  - Many crops can tolerate a certain amount of damage from pests
  - Is it just aesthetic damage?

# Pest Control

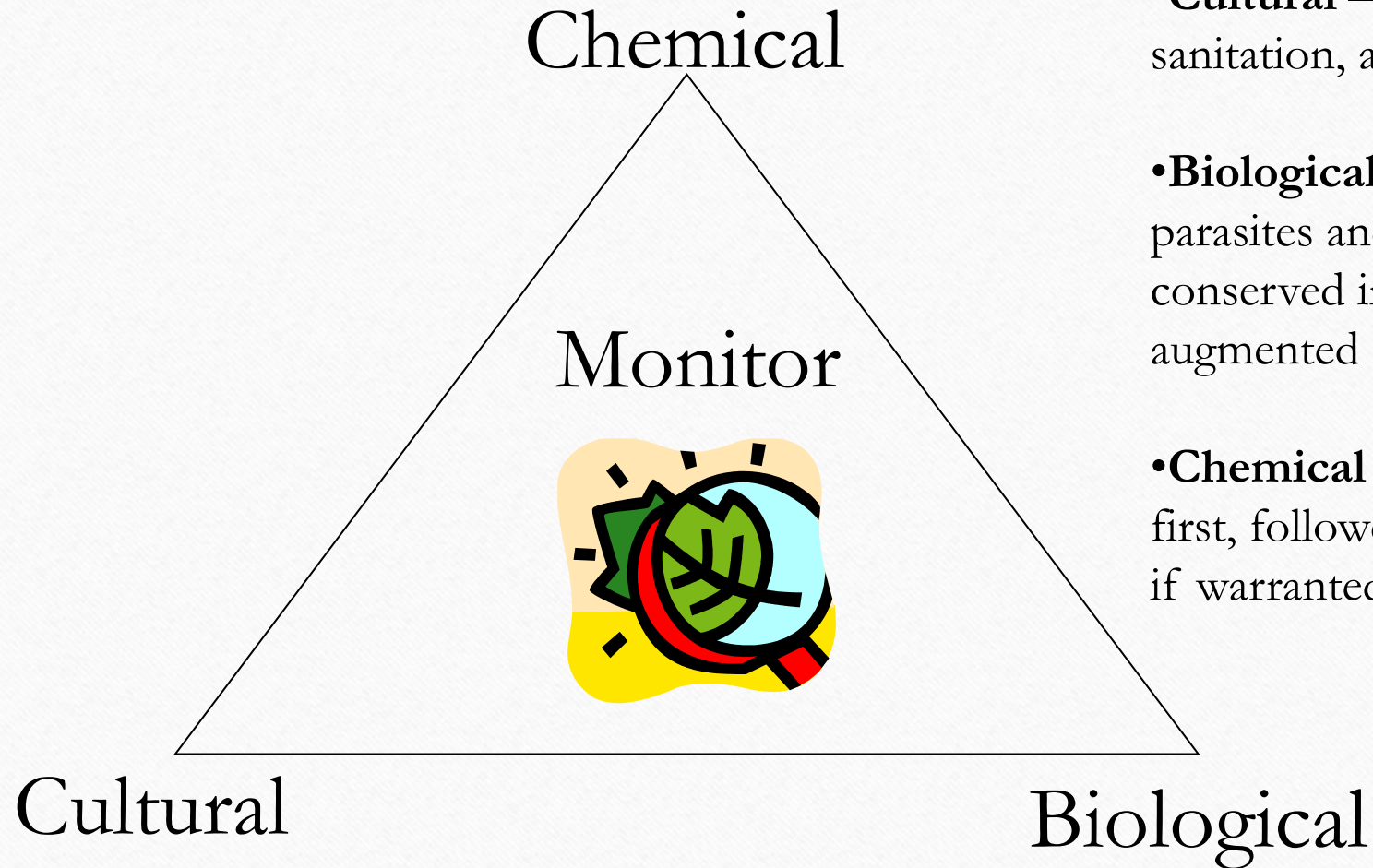
- Is there a natural enemy?
- Target your response to the specific pest
  - If you kill a beneficial bug, then you take over its job
- No single method will be completely successful
- Use the least toxic product for the task
- Insecticidal soaps – remove waxy layer of exoskeleton
  - Horticultural oils – ALL insects unable to breathe
  - Low toxicity inorganics – physical or stomach poison ex: DE or Sulphur
  - Microbes
  - Baits – low percentage active ingredients
  - Botanicals – derived from plants
  - Synthetic organics
- **DO NOT MAKE YOUR OWN PESTICIDES**



# Protect

- **READ THE LABEL.....EVERYTIME THE PRODUCT IS USED**
- **THE LABEL IS THE LAW**
- **Wear protective clothing**
- **Be aware of weather conditions**
  - **High temperatures**
  - **High wind**
- **Use the least toxic product for the job**
- **When opening liquids, keep your face away from the container**
- **Mix or prepare sprays outdoors or in a well-ventilated area**
- **Avoid any contact with the skin; wash exposed skin with soap and water**
- **Don't "double up" the product rate**
- **Don't apply more often than the label states**

# The IPM Triangle



- **Cultural** – crop rotation, resistance, sanitation, attracting birds and bats, etc.

- **Biological** – reliance on predators, parasites and pathogens, which may be conserved in the landscape or populations augmented

- **Chemical** – the use of “soft” pesticides first, followed by more toxic measures, if warranted



# A Quick Word About the Summer of 2022

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- As of July 25 Abilene's total rainfall was 4.72 inches
- As of July 25 Abilene had 56 days over 100 degrees
- SO, DO NOT BE DISCOURAGED IF YOUR GARDEN LOOKS BAD!
- Just try and keep your spring garden alive for the fall
- Remember gardening can be almost year round! Plan your fall garden!
- Don't forget the smaller gardens! herbs, seed sprouting, and succulants!
- This year particularly – I have to remind myself that gardening is supposed to be fun!!!!



# THANK YOU!!

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Any Questions??