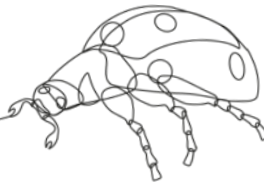




# Steps in implementing an IPM program

## preventative and rescue treatments

Rachel Sporer | 03-17-2022



# AGENDA



**Why IPM?**

**Getting Started**

**Case Study: Roses**

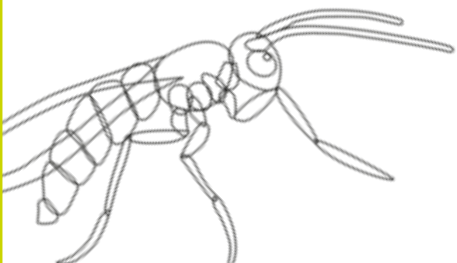
**Key Takeaways – preventative vs. curative, challenges & solutions**

**Q&A**

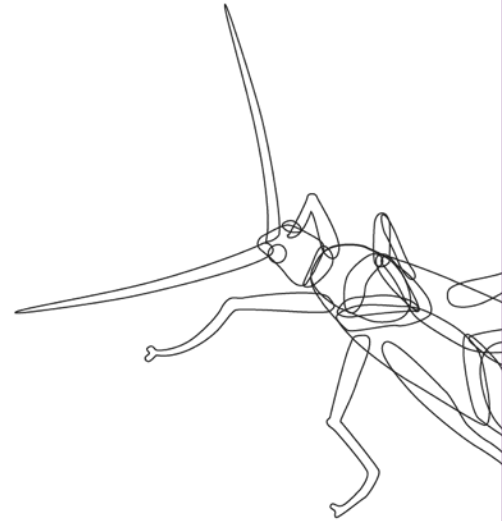
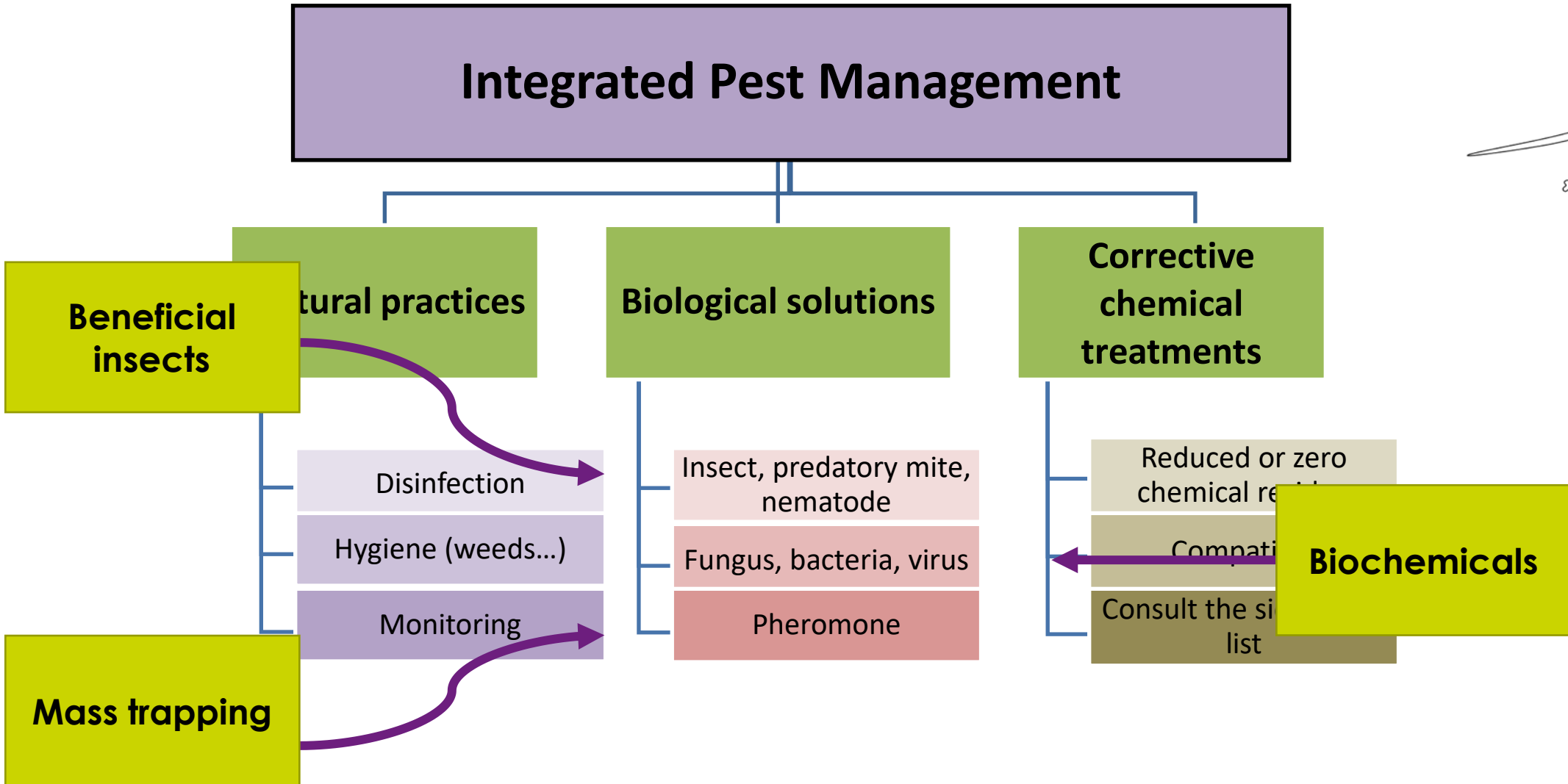
# Why IPM?

## Healthier plants, produce, and people

- ❖ Balance sprays, cultural practices, and beneficial insects
- ❖ Allow use of bumblebees, reduce harm to native pollinators = healthier produce
- ❖ Happier employees, less labor & PPE costs
- ❖ Other reasons?



# Getting Started: Where do Bio-controls fit in?



## Getting started: simple steps

### Review

- Review pests & pesticide use in past seasons
- Identify what success means

### Start clean

- Dip plugs/ transplants
- Apply bios preventatively & early

### Evaluation

- Scout for early signs of pest (damage, eggs)
- Sticky cards & mass trapping

### Response

- Bios as first line of defense- curative release
- Biochemicals if needed



# Scouting/Monitoring

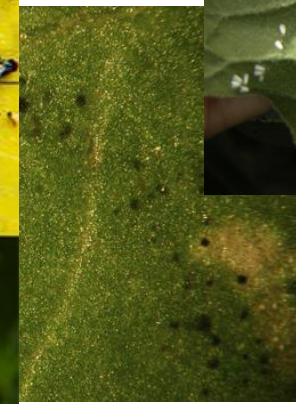
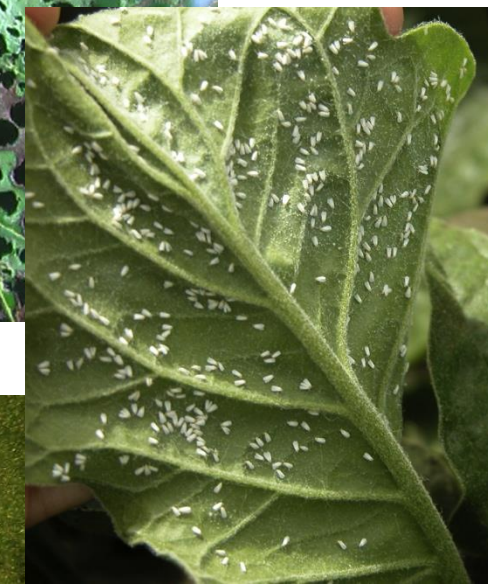
## Key Components

### ❖ Done Weekly

- Same person
- pre-determined thresholds

### ❖ Sticky cards

- Same day evaluation
- Quantitative
- discretion
- Easily recorded



CROP-SCANNER

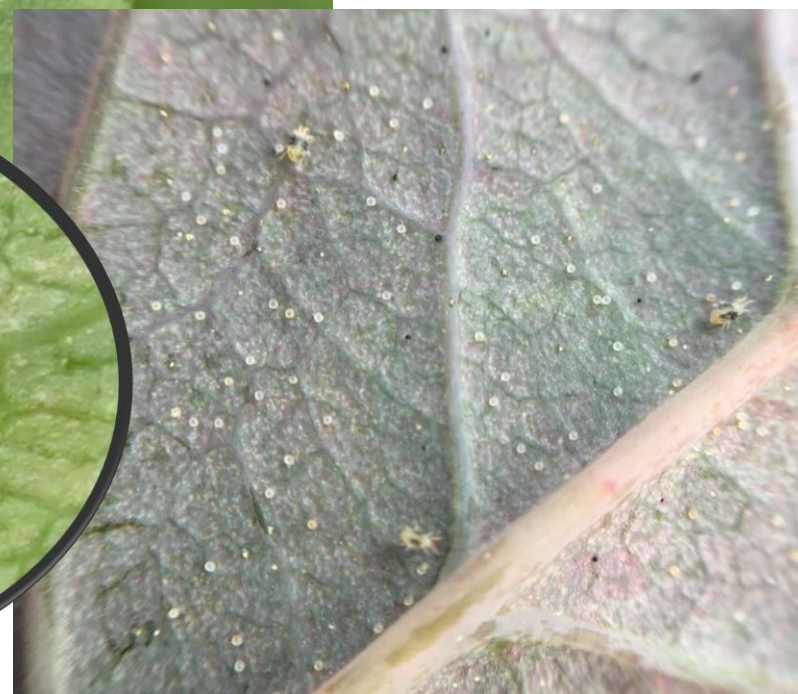


# Case Study: Rose Pests



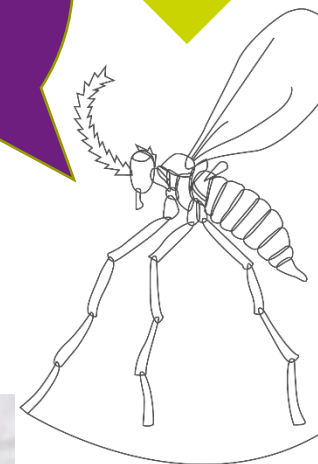


# Early detection – check undersides of older leaves



What pest is this?

Evaluation

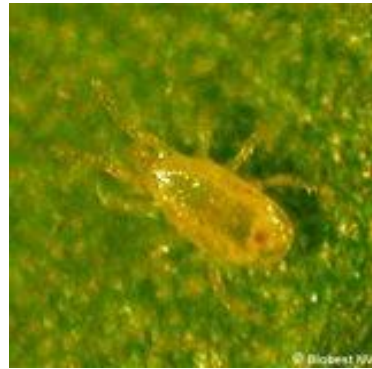




# Spider Mites on Strawberries: Beneficial Insect Solutions at/before Early Detection



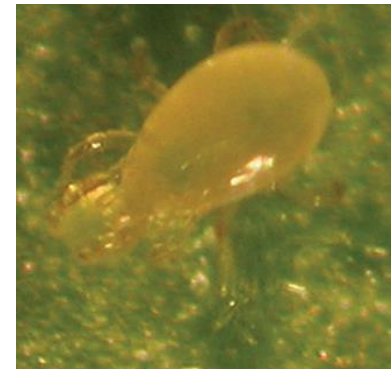
*P. persimilis*



*A. californicus*



*A. swirskii*



*A. andersoni*



**Two spotted  
spidermite  
Carmine mite**

Two spotted  
spidermite  
**Broad mite  
Cyclamen mite  
Lewis mite**

Two spotted  
spidermite  
**Tarsonoid mites**  
Whitefly  
Thrips

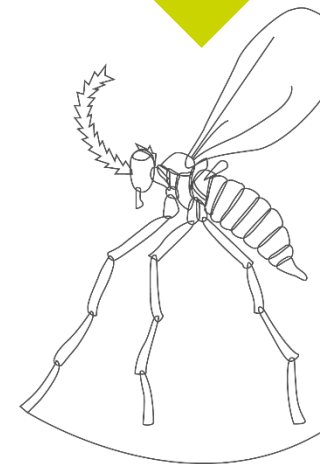
Two spotted spidermite  
Broad mite  
Cyclamen mite  
Lewis mite  
European red mite  
**Russet mite  
Gall mite**

Specific

Generalist

# Late detection – high population

Evaluation





# Spider mites on Roses: Spray Options at Late Detection

## Coverage is Key with spider mites, especially!

- ❖ SuffOil-X
  - Or other horticultural oil or soap
  - Other sprays/rotations based on other pests present
- ❖ Biochemicals allow for immediate Phytoseiulus release
- ❖ Some chemicals may have longer residual effect on bios, work with rep to re-start program



Start clean

Response







# Case Study: Rose Diseases



# Case Study: Powdery Mildew on Roses



# Rose Disease Control Options



Start clean

## Cultural/Preventative

- ❖ Sanitation (pots, equipment)
- ❖ Airflow
- ❖ Drench soil/dip plugs (Asperello)
- ❖ Cease (spray)

Response

## Curative/Corrective

- ❖ Biochemical sprays
  - Cease, milstop
- ❖ Remove damaged plants



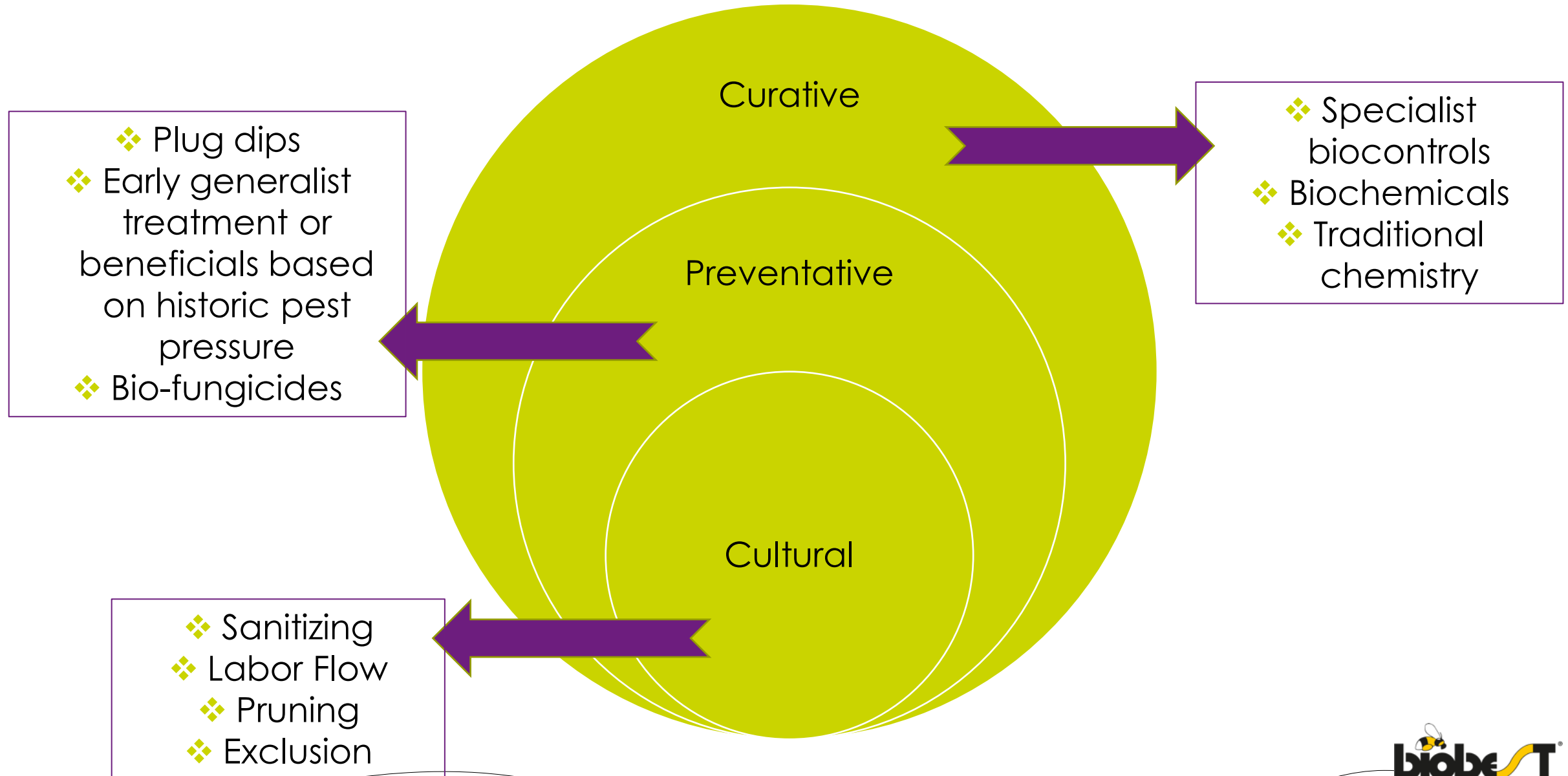




# Key Takeaways

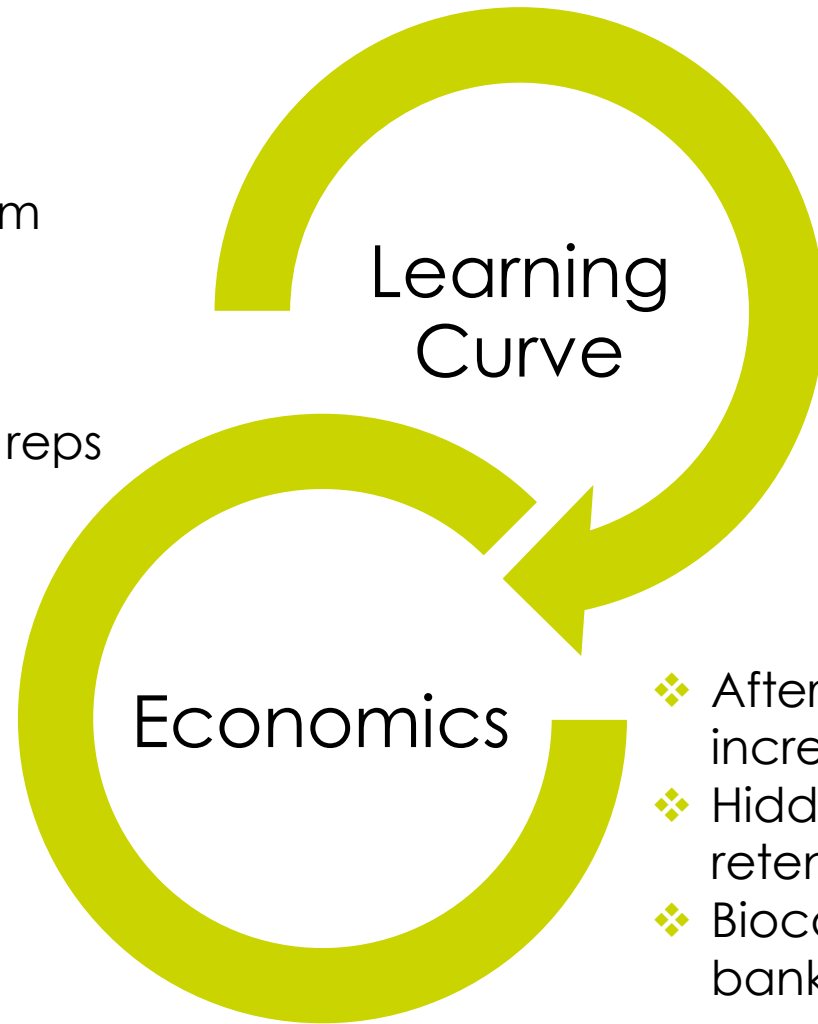


# Preventative vs. Curative

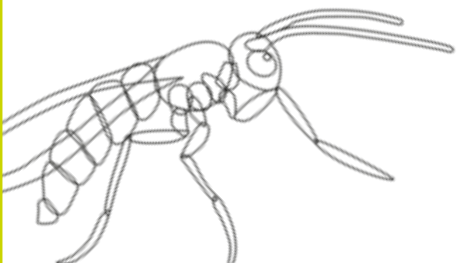


# Challenges & Solutions

- ❖ Empowering an employee to manage the Biocontrol program
  - ❖ Building skills to manage program, consistency with scouting
- ❖ Working closely with company reps & Extension/researchers



- ❖ After learning curve efficiency increases
- ❖ Hidden savings (PPE, employee retention)
- ❖ Biocontrol food supplements, banker plants







**Rachel Sporer**

Outside Sales  
BioBest Sustainable  
Crop Management



Thank you!

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