# Prepping for a Healthy Fruit Harvest

Marion Murray
USU IPM Program

EXTENSION
UtahStateUniversity

# Fruit Production Questions

**Pruning**

**Fertilization**

**Thinning**

**Irrigation**

**Fruit Varieties**

**Harvesting**

## Contact:

- County Extension Office

- Dr. Teryl Roper (Fruit Extension Specialist, Logan, UT) – teryl.roper@usu.edu

# Pest Advisories: pestadvisories.usu.edu

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MAIN | FRUIT | VEGETABLE | LANDSCAPE | TURF | SUBSCRIBE

# PEST ADVISORIES

Timely Integrated Pest Management Alerts for Fruits, Vegetables, Landscape Ornamentals, Turf, and Urban Areas

## Fruit

FRUIT IPM ADVISORY • 2018- FRUIT

**Backyard: Prepping for a Healthy Fruit Harvest**

March 12, 2018

FRUIT IPM ADVISORY • 2017- FRUIT

**Fall Orchard Chores**

October 12, 2017

## Vegetable

VEGETABLE IPM ADVISORY • 2017- VEG

**Post-Harvest Cleanup, Tomato Russet Mites, and Diseases**

September 26, 2017

VEGETABLE IPM ADVISORY • 2017- VEG

**Sunburn/Sunscald, Squash Diseases, and Spider Mites**

August 31, 2017

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## APPLE, PEAR

- green apple aphid
- rosy apple aphid
- blister mites
- San Jose scale
- iron chlorosis
- fire blight
- codling moth
- woolly apple aphid
- powdery mildew
- spider mites
- flatheaded borers
- stink bugs
- leafhopper
- leafroller
- pear slug

## PEACH, NECTARINE, PLUM, APRICOT

- green peach aphid
- leafcurl plum aphid
- peach twig borer
- cytospora canker
- iron chlorosis
- greater peachtree borer
- coryneum blight
- peach powdery mildew
- apple powdery mildew

## CHERRY

- black cherry aphid
- iron chlorosis
- western cherry fruit fly
- bacterial canker
- powdery mildew
- shothole borer
- spider mite
- leafhopper
- coryneum blight

# Dormant – Delayed Dormant

## March 2018

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|---|---|---|---|---|---|---|
| | | | | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |

## April 2018

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | | | | | |

# Dormant Timing – Buds Tightly Closed

**APPLE, PEAR** – Prune 15-20% last year's growth to let light in

- also remove dead and diseased branches

**TART CHERRY** – Prune crossing, dead, and over-extended limbs

# “Delayed Dormant” Timing – What is This?

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## Apples: swollen bud - 1/2”

| Silver Tip | Green Tip | Half-Inch Green |
|---|---|---|

## Pears: swollen bud – green cluster

| Swollen Bud (Scale Separation) | Bud Burst (Blossom Buds Exposed) | Green Cluster (Tight Cluster) |
|---|---|---|

# Delayed Dormant – What is This?

## Peaches and Nectarines:  swollen bud – first pink

Swollen Bud
(First Swell)

Calyx Green

Quarter-Inch Green
(Calyx Red)

Pink
(First Pink)

# Delayed Dormant – What is This?

## Cherries: swollen bud – tight cluster

Swollen Bud (First Swell)

Bud Burst (Green Tip)

Tight Cluster

## Apricot: swollen bud

First Swell (Bud Swell)

Tip Separation (Swollen Bud)

# Delayed Dormant – What is This?

## Plum:  swollen bud – green cluster

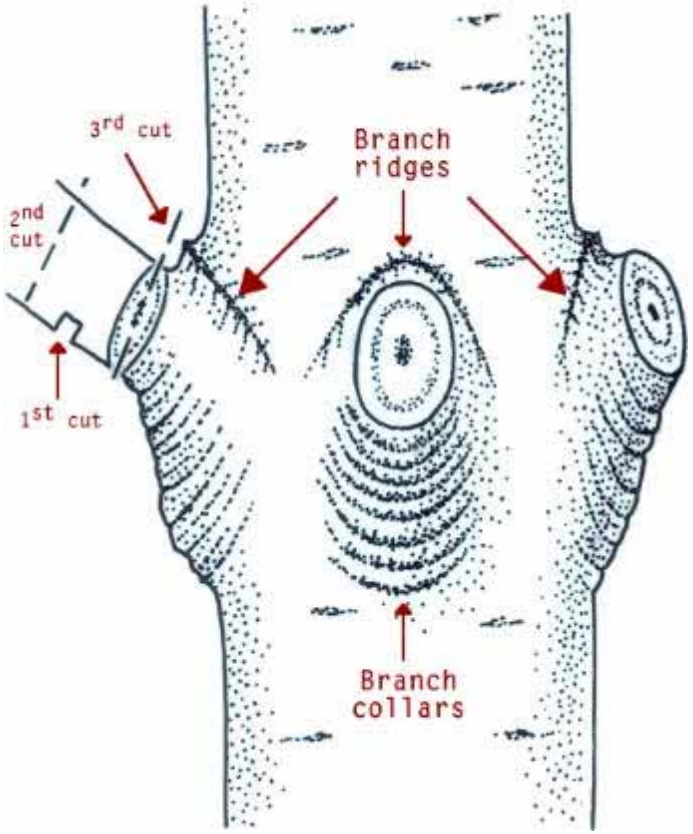
Swollen Bud

Bud Burst

Green Cluster

# Delayed Dormant Timing – Bud Swell and Beyond

- **1. PEACH, NECTARINE, APRICOT, PLUM, SWEET CHERRY**: prune for light and fruit production



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# Pruning Stone Fruit Trees

To PREVENT - Cytospora Canker that causes gumming

Prune 4
inches
beyond
dead tissue

Kills Cold & Flu Viruses
CLOROX
Disinfecting
Wipes

# Delayed Dormant Timing – Bud Swell and Beyond

1. PEACH, NECTARINE, APRICOT, PLUM, SWEET CHERRY: prune for light and fruit production

2. **ALL FRUIT TREES**: Spray application to target certain insects and diseases (if they were present the prior year)

# Delayed Dormant Timing – Targeted Pests

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## APPLE, PEAR

green apple aphid
rosy apple aphid

blister mites

San Jose scale

fire blight

## PEACH, NECTARINE, PLUM, APRICOT

green peach aphid
leafcurl plum aphid

peach twig borer

## CHERRY

black cherry aphid

# Delayed Dormant – Pest Management

## ALL FRUITS - Aphids

Green apple aphid

Rosy apple aphid

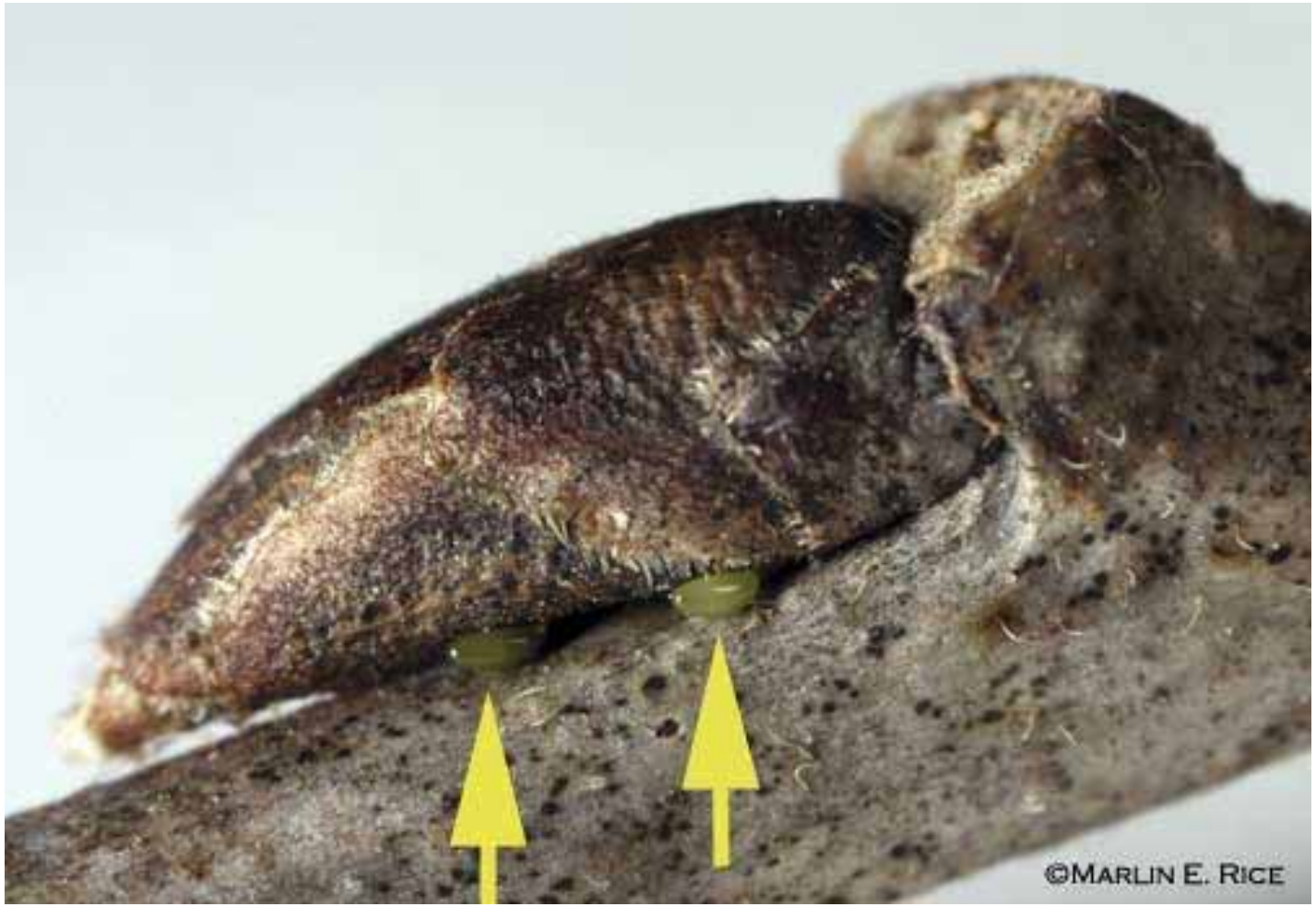
Green peach aphid

Black Cherry Aphid

Mealy plum aphid

# ALL FRUITS - Aphids

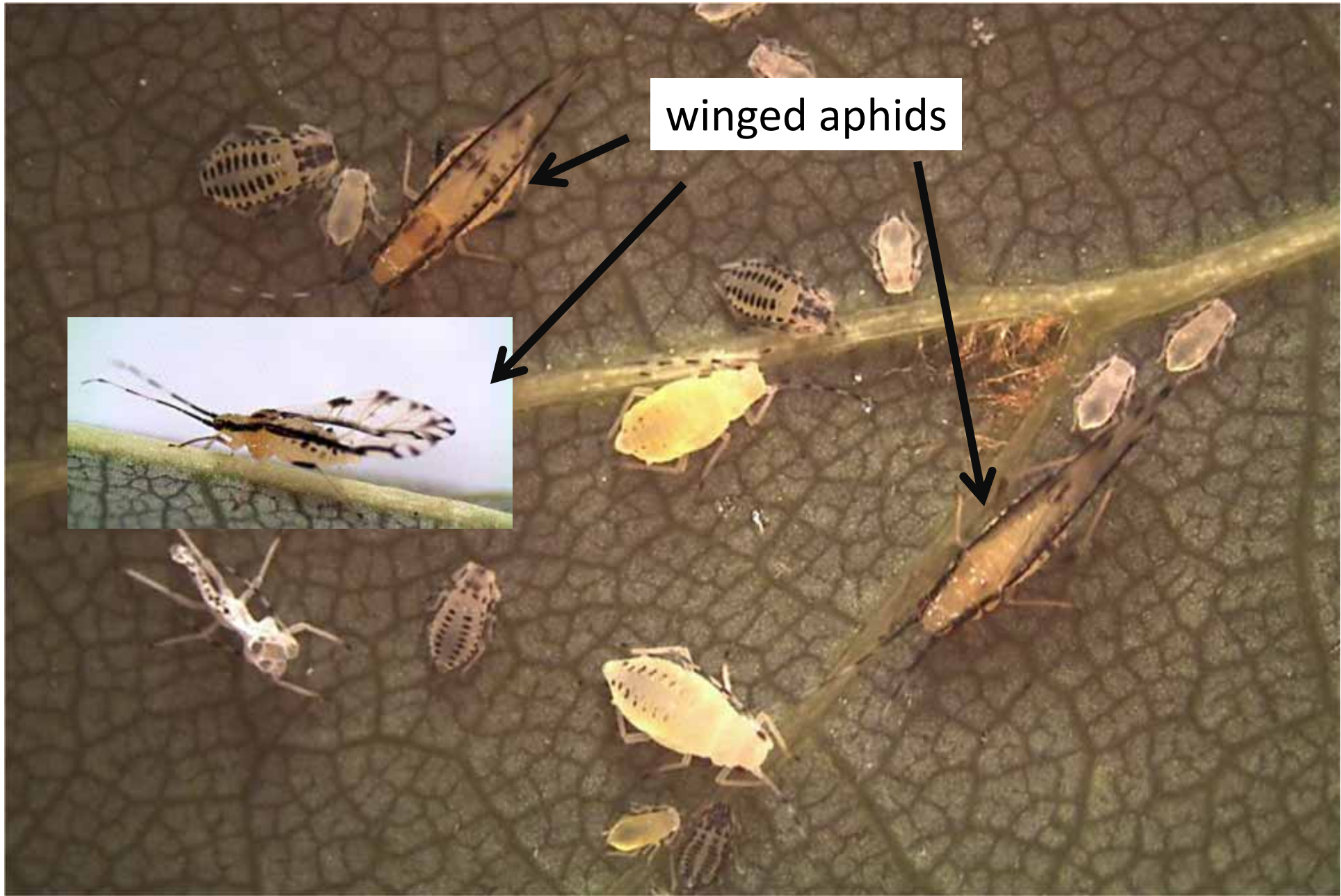
Overwinter as eggs



# ALL FRUITS - Aphids

Eggs hatch in spring

# ALL FRUITS - Aphids



# ALL FRUITS - Aphids

Most aphids leave fruit trees by early June for weeds and vegetable hosts for the summer

Also, they provide food for beneficial insects

By June, curled leaves will be empty of aphids

## Delayed Dormant – Pest Management

# APPLE, PEAR - Blister mites

Tiny eriophyid mites that feed within leaf blisters all season long

Blister mite symptoms on apple early season (top) and late season (bottom)

Blister mite symptoms on pear

Mites overwinter in bud scales
and start emerging at bud swell

## Delayed Dormant – Pest Management

# APPLE, PEAR - San Jose Scale

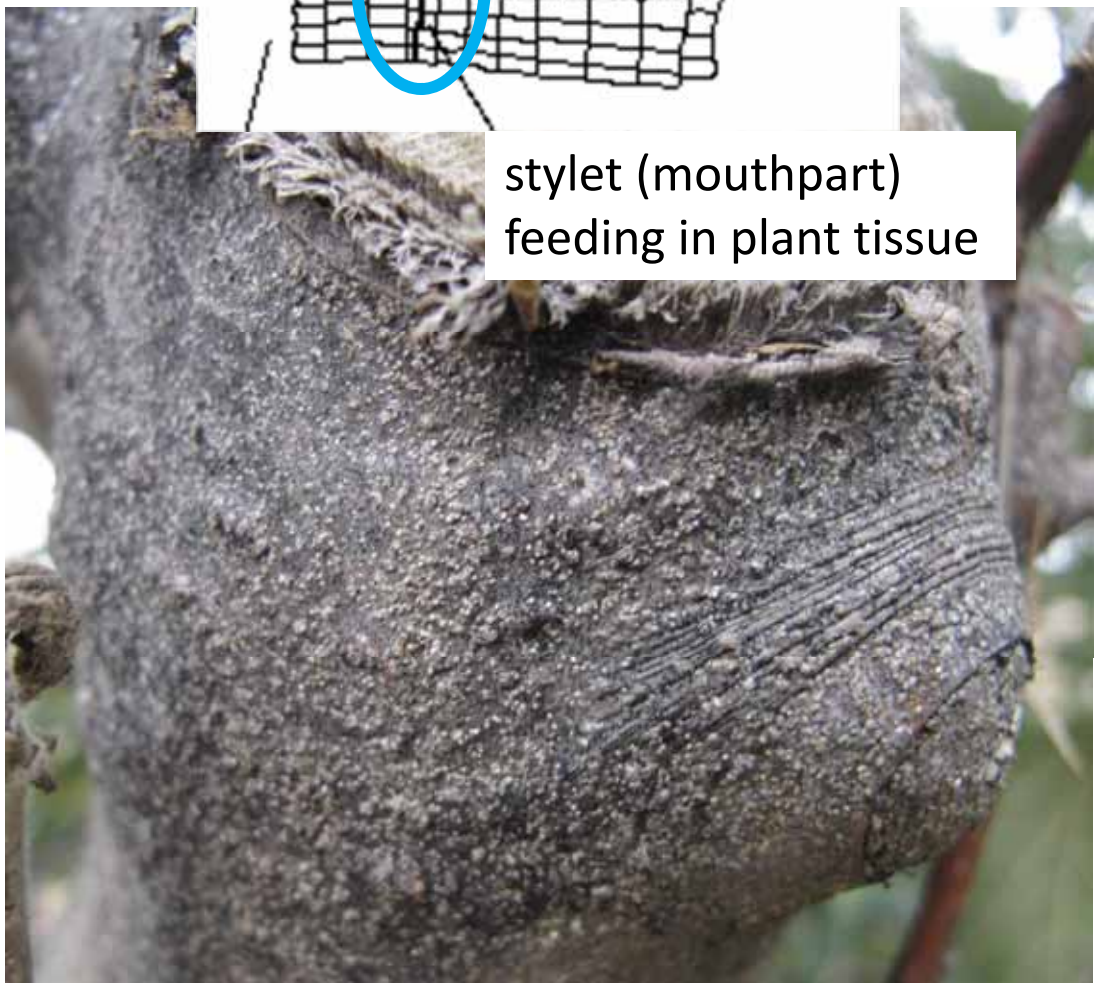
Immobile insect that feeds on twigs, limbs, and fruit

Large infestations weaken trees and kill limbs

# APPLE, PEAR - San Jose Scale

Overwinter on tree bark

Over 200 crawlers hatch from each female in June



stylet (mouthpart) feeding in plant tissue

# PEACH, NECTARINE, APRICOT - Peach Twig Borer

Larvae feed inside ripening fruit

## Delayed Dormant – Pest Management

# PEACH, NECTARINE, APRICOT - Peach Twig Borer

Overwinters as a larva in protected sites in the tree

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# ALL FRUIT TREES - Oil Spray

**Horticultural oil**: 2% mixture 5 TBS oil per gal water

- Spray entire tree (full coverage of buds, etc.)
- Only use when temps > 45F
- Do not use not within 24 hr of frost
- Do not use within 24 hr of rain

Paraffinic oil

Mineral oil

Canola oil

## Delayed Dormant – Pest Management

# APPLE, PEAR - Fire Blight

Caused by a bacterium – *Erwinia amylovora*

Bacteria overwinter in old infections

Bacteria becomes active in early spring

## Delayed Dormant – Pest Management

# APPLE, PEAR - Copper Spray

Works by preventing fire blight bacteria from multiplying

Thorough coverage of bark and areas of infection

<u>Can be mixed with oil spray</u>

# Delayed Dormant Timing – Bud Swell and Beyond

1. PEACH, NECTARINE, APRICOT, PLUM, SWEET CHERRY: prune for light and fruit production

2. ALL FRUIT TREES: Spray application to target some insects and diseases (if they were present the prior year)

3. **ALL FRUIT TREES:** Soil application of chelated iron to prevent iron chlorosis (at bud swell)

# Delayed Dormant Timing – Bud Swell and Beyond

1. PEACH, NECTARINE, APRICOT, PLUM, SWEET CHERRY: prune for light and fruit production

2. ALL FRUIT TREES: Spray application to target some insects and diseases (if they were present the prior year)

3. ALL FRUIT TREES: Soil application of chelated iron to prevent iron chlorosis

4. **APPLE and new fruit trees**: Apply nitrogen fertilizer
   Yearly or every other year

   Collect soil for nutrient analysis from Utah State University Analytical Lab (usual.usu.edu)

# Summary: Dormant – Delayed Dormant

## DORMANT

APPLES, PEARS - prune

## DELAYED DORMANT

PEACH, NECTARINE, APRICOT, PLUM, SWEET CHERRRY: prune

ALL FRUITS: oil spray (if insects present last year)

APPLE, PEAR: oil spray plus copper (if fire blight present last year)

ALL FRUITS:

Apply chelated iron (if necessary)

Determine fertilizer needs

# Spring

## May 2018

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | 31 | | |

## June 2018

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|---|---|---|---|---|---|---|
| | | | | | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
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# Spring

1. APPLE, PEAR (some), PEACH, NECTARINE, APRICOT, PLUM: **thin fruit**

2. **Pest management**

# Spring - Fruit Thinning

APPLE at bloom:

hand-remove all flowers except king bloom

APPLE, PEAR (some) at ½ - 1-inch diameter:

space clusters to 6 inches apart

thin remaining clusters to a single large fruit

PEACH, NECTARINE, APRICOT, PLUM when fruits are ¾ - 1-inch diameter:

space fruit 6-8”

# Spring

1. APPLE, PEAR (some), PEACH, NECTARINE, APRICOT, PLUM: thin fruit

2. **Pest management**

   APPLE, PEAR: powdery mildew, fire blight, codling moth, woolly apple aphid

   PEACH, NECTARINE, APRICOT: peach twig borer, coryneum blight

   CHERRY: western cherry fruit fly

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# APPLE:  Apple Powdery Mildew

Caused by a fungus:  each host tree has its own species

Overwinters in terminal buds and on twigs

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# APPLE - Powdery Mildew Management

Monitor by looking for fuzzy whitish patches.

Fungicides

- Apply at “open cluster” stage
- Repeat every 7 – 14 days two to three times

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# APPLE, PEAR – Powdery Mildew Products

EFFECTIVENESS

| Ingredient | Brand | Residual (days) | Type | Comments |
|---|---|---|---|---|
| myclobutanil | Spectracide Immunox | 14 | conventional | |
| potassium bicarbonate | Monterey Bi-Carb | 5-7 | organic | |
| sulfur | many products | 7 | organic | do not use in temps above 85F |
| sulfur + pyrethrin | Bonide Citrus, Fruit and Nut Orchard Spray; Nature's Care 3-in-1 | 7 | organic | do not use in temps above 85F |
| sulfur + insecticidal soap | Safer 3-in-1 | 7 | organic | do not use in temps above 85F |
| neem oil | many products | 5 | organic | do not use in temps above 85F |

# APPLE, PEAR - Fire Blight

Highly susceptible varieties:

- Fuji, Gala, Gingergold, Granny Smith, Honeycrisp, Jonathon, Jonagold, Idared
- Asian pears, Bosc, D ’Anjou

Primary infections occur through **open blossoms**

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# APPLE, PEAR - Fire Blight Management

Copper application at delayed dormant timing

Prevent infections with <u>streptomycin fire blight spray</u> *only during bloom*

- Use only when temperatures over a 4-day period are above 75F AND moisture is present (rain, irrigation water)

AND / OR

<u>Monitor for new infections</u> starting 2 weeks after bloom, and prune them out immediately

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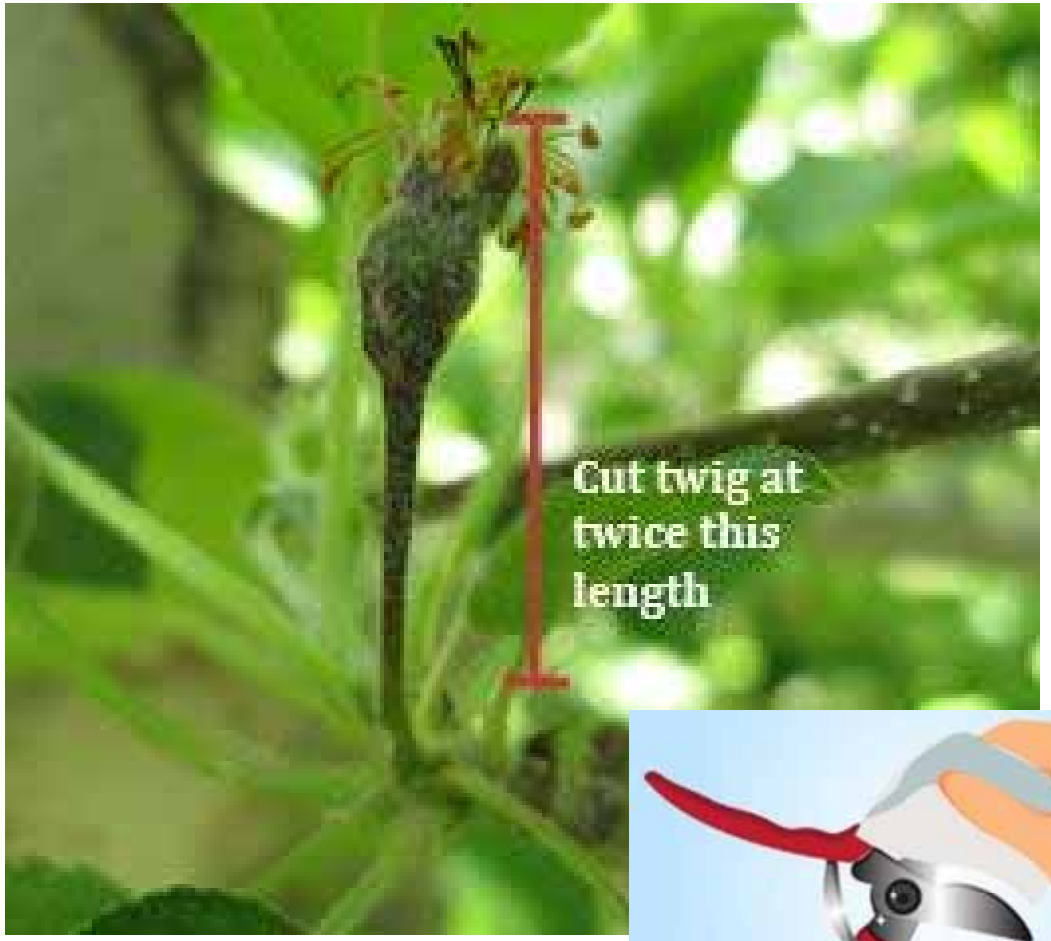
# APPLE, PEAR - Fire Blight Management



## Spring – Pest Management

# APPLE, PEAR - Codling Moth

Larvae burrow into the fruit to feed on seeds

Can infest 100% of the fruit on a tree

# Codling Moth Life Cycle

1. overwintering larvae pupate into moths in spring

2. moths lay eggs on fruit mid spring

3. eggs hatch and bore into fruit

4. mature larvae pupate to adults; begins another generation

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# APPLE, PEAR - Codling Moth Management

Thin fruit to one apple/ cluster

Clean and mow or remove all unharvested or dropped fruit all season

Remove unmanaged trees

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# APPLE, PEAR - Codling Moths: Fruit Bagging

Bag during thinning

Remove any fruit that you don't bag

Options

- Japanese 2-ply apple bags
- waxed paper or clear plastic sandwich bags
- white or tan paper sacks
- clear poly bags with drawstring closures
- disposable nylon foot socks

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# APPLE, PEAR - Codling Moth Management

Extension hangs monitoring traps to help determine when to make first spray

First spray of the season is applied by recommended date

Re-apply for each generation

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# APPLE, PEAR - Codling Moth Management

PDF document linked within Fruit IPM Pest Advisory message

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## Tree Fruit IPM Advisory

UTAH PESTS

Orchard Pest Update, Utah State University Extension, **May 12, 2017**

### Codling Moth Spray Timing Information, First Generation

Choose either Option A or B when starting your codling moth sprays.

- ***Option A*** is what most people will do. Apply insecticide at the recommended date, and repeat.
- ***Option B*** is an alternative that may help to reduce sprays. Liberally apply horticultural oil (1%) on the first date, and then apply your regular insecticide on the later date. The oil kills eggs that have been laid on fruit up to that point.

Apply treatments, spaced 7-21 days apart (depending on material) to protect fruit up to the end of the first generation egg hatch (dates not yet known). Make sure fruit is protected during the "period of greatest egg hatch."

| County | Location | Option A | Option B | | Period of Greatest Egg Hatch |
|---|---|---|---|---|---|
| | | Apply first spray | Apply oil | Apply first insecticide | |
| **Box Elder** | Perry | May 25 | May 23 | June 5 | June 3 - unknown |
| | Tremonton | May 26 | May 24 | June 5 | June 4 - unknown |
| **Cache** | Logan Airport | May 29 | May 28 | June 10 | June 9 - unknown |
| | River Heights | May 26 | May 27 | June 6 | June 6 - unknown |
| **Carbon** | Price Airport | May 26 | May 25 | not yet known | unknown |
| **Davis** | Kaysville | May 18 | May 15 | May 29 | May 28 - unknown |
| | Farmington | passed | passed | May 23 | May 22 - June 12 |
| **Grand** | Moab | passed | passed | May 12 | May 12 - May 29 |
| **Iron** | Cedar City Airport | May 27 | May 25 | June 6 | June 6 - unknown |
| **Juab** | Tintic | May 30 | May 28 | June 11 | June 10 - unknown |

# APPLE, PEAR - Codling Moth Management

PDF document linked within Fruit IPM Pest Advisory message

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Orchard Pest Update, Utah State University Extension, **May 12, 2017**

UTAH PESTS

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# APPLE, PEAR - Codling Moth Management

PDF document linked within Fruit IPM Pest Advisory message

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Orchard Pest Update, Utah State University Extension, **May 12, 2017**

UTAH PESTS

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# APPLE, PEAR - Codling Moth Conventional Products

EFFECTIVENESS

| Ingredient | Brand | Residual (days) | Comments |
|---|---|---|---|
| acetamiprid | Ortho Fruit & Veg | 14 | max 4 applications |
| gamma-cyhalothrin | Spectracide Triazicide | 14-17 | wait 21 days to harvest |
| carbaryl | Sevin | 14 | |
| permethrin | Bonide Eight | 14 | pears only |
| malathion | Bonide Malathion | 5-7 | max 2 sprays |
| malathion | Hi-Yield 55% Malathion; Ortho Malathion | 5-7 | pears only; max 2 sprays |

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# APPLE, PEAR - Codling Moth Organic Products

EFFECTIVENESS ↓

| Ingredient | Brand | Residual (days) | Comments |
|---|---|---|---|
| azadirachtin | Safer BioNeem | 7-10 | |
| spinosad | Ferti-lome / Monterey / Natural Guard | 7-10 | |
| oil | All Seasons Oil; EcoSmart; neem products; Natria Multi-Insect | 3 | Use 1% in water; apply at start of each generation |
| pyrethrin plus soap and neem | Safer End All plus Neem | 5-7 | |
| pyrethrin plus neem or canola oil | Ferti-lome Fruit Tree Spray; Monterey Take Down; Nature's Care Insect Control | 3-5 | |
| pyrethrin | Ortho Fruit Spray; Fertilome Fruit Tree Spray; Monterey Bug Buster-O | 3-5 | |
| kaolin clay | Surround | 7 | produces protective barrier |

# Pesticide Pre-Mixes (Labeled for Insects and Diseases)

Products containing *non-organic* fungicide + insecticide—**Not Recommended**

- applying these products means that you may be using a fungicide when it is not necessary, or vice-versa
- if used repeatedly, there is greater risk for resistance

Products with organic insect and disease control—**OK**

- products containing sulfur plus pyrethrin
- products containing neem oil plus pyrethrin
- no risk of resisance

# APPLE - Woolly Apple Aphid

Feeding causes galls on stems and roots that cause reduced tree vigor or even death of young trees.

Life cycle:

- Overwinter on roots or in the tree.
- Individuals become active in **late spring**.

# Woolly Apple Aphid Damage

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# APPLE - Woolly Apple Aphid Management

Monitor starting in mid May for aphid presence

Insecticides

- insecticidal soap
- 1% oil

- Bonide Malathion

→

must contact insect

apply to dripping

do not apply when temps > 85F

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# PEACH, NECTARINE, APRICOT – Peach Twig Borer Management

## Delayed dormant oil application

One application of *Bacillus thuringiensis* or spinosad before or after bloom

| Ingredient | Brand |
|---|---|
| *Bacillus thuringiensis* | Natural Guard Caterpillar Spray<br>Bonide Captain Jack's<br>Monterey Bt<br>others |
| spinosad | Ferti-lome Spinosad<br>Monterey Spinosad<br>Natural Guard Spinosad<br>others |

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# PEACH, NECTARINE, APRICOT, PLUM - Coryneum Blight

Caused by a fungus

Infections occur on new growth in spring

Later, fruit becomes infected

Early infections on peach and apricot

Spring infections later turn scabby

Summer infections render fruit inedible

Occur during heavy rains close to harvest

## Spring – Pest Management

# PEACH, NECTARINE, APRICOT, PLUM - Coryneum Blight

Prevent wetting of foliage with irrigation

Fungicide at **shuck split**; repeat all season as necessary (after 4+ hour rainfalls)

*Conventional*:

- **Daconil** (chlorothalonil): don't use after shuck split
- **Spectracide Immunox** (myclobutanil): can be used all season
- **Captan** (captan): can be used all season (not as effective)

*Organic*:

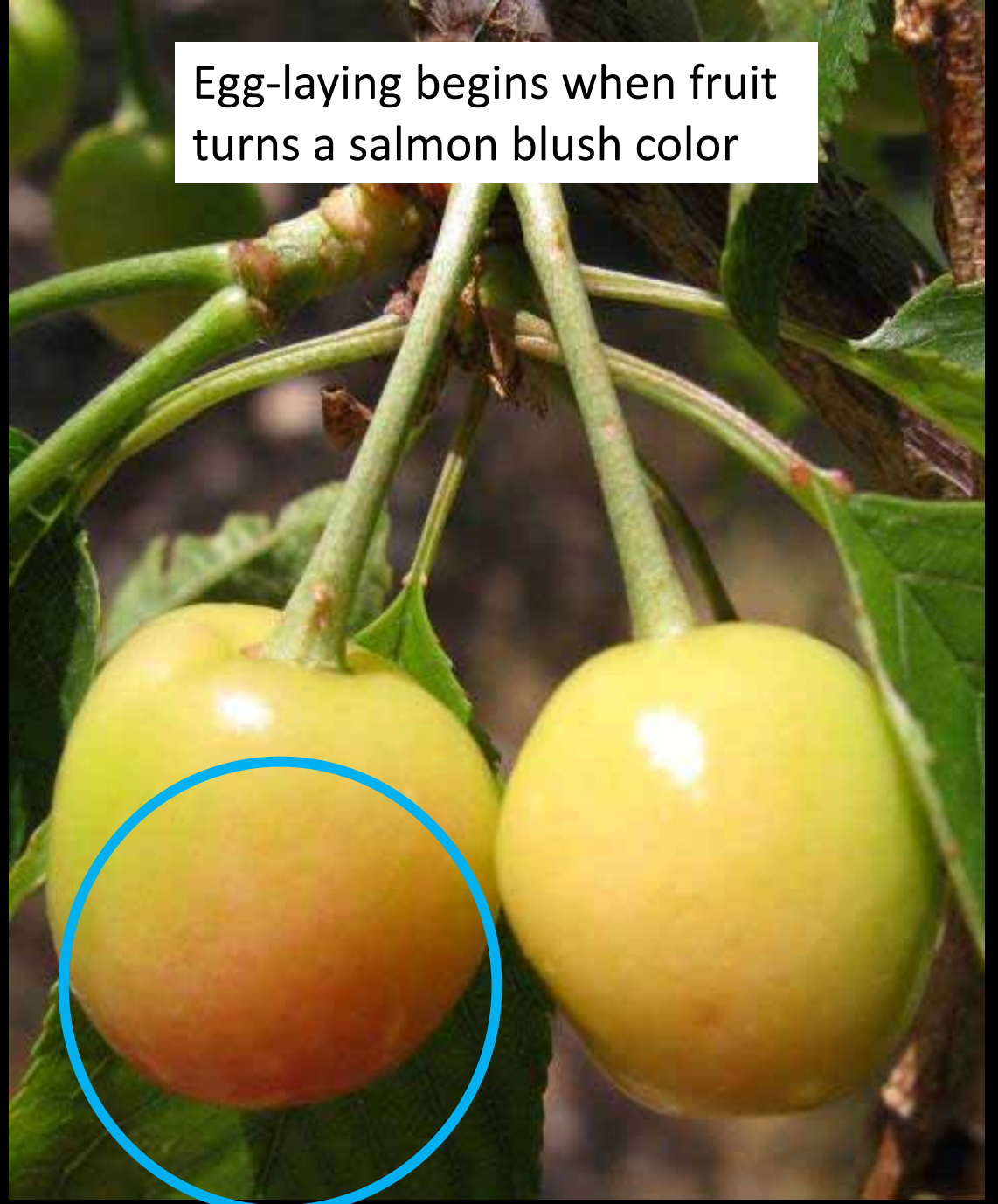
- Natural Guard Copper Soap

# CHERRY - Western Cherry Fruit Fly

A maggot pest of tart and sweet cherries; one infested cherry can ruin an entire commercial crop

Overwinters as pupa in the soil

Adults begin to emerge in May, and lays up to 200 eggs under the skin of fruit until harvest



Egg-laying begins when fruit turns a salmon blush color

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# CHERRY - Western Cherry Fruit Fly Management

Add tarp under tree

Remove dropped fruit

Remove all unharvested fruit

Net entire tree

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# CHERRY – Western Cherry Fruit Fly Pesticide Products

EFFECTIVENESS

| Ingredient | Residual (days) | Type | Comments |
|---|---|---|---|
| Ortho Fruit & Veg (acetamiprid) | 14 | conventional | max 4 applications |
| Hi-Yield 55% Malathion; Ortho Malathion; Bonide Malathion | 5-7 | conventional | max 2 - 4 sprays |
| Spectracide Triazicide (gamma-cyhalothrin) | 14-17 | conventional | wait 21 days to harvest |
| Monterey / Ferti-lome / Natural Guard Spinosad | 7 | organic | |
| Sevin (carbaryl) | 14 | conventional | |
| (pyrethrin) Ortho Fruit Spray; Fertilome Fruit Tree Spray; Monterey Bug Buster-O | 3-5 | organic | |

# Spring - Summary

1. APPLE, PEAR (some), PEACH, NECTARINE, APRICOT, PLUM: **thin fruit**

2. **Pest management**

   APPLE, PEAR: powdery mildew, fire blight, codling moth, woolly apple aphid

   PEACH, NECTARINE, APRICOT: peach twig borer, coryneum blight

   CHERRY: western cherry fruit fly

# Summer

## July 2018

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | | | | |

## August 2018

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 | |

## September 2018

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| | | | | | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |

# Summer

1. July - Get **foliar nutrition analysis** (if necessary)
   Collect foliage for nutrient analysis from Utah State University Analytical Lab (usual.usu.edu)

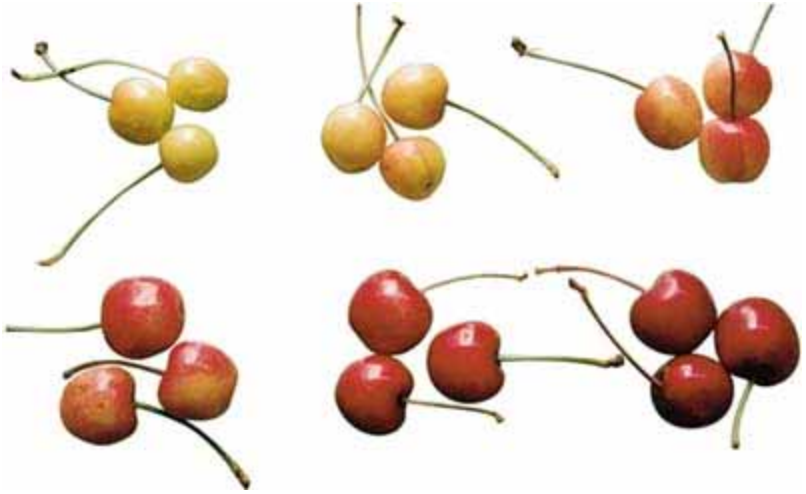
2. **Proper irrigation**

# Summer - Irrigation

Especially important during

- fruit maturation
- dry periods in August (flower bud formation)

Reduce amount by late August



# Summer

1. July - Get foliar nutrition analysis (if necessary)

2. Proper irrigation

3. Pest management

APPLE, PEAR:

- continue to prune out fire blight infections
- continue sprays to prevent codling moth until Sept 15

CHERRY:

- continue western cherry fruit fly until harvest
- bird control

PEACH, NECTARINE, PLUM:

- **greater peachtree borer**

## Summer – Pest Management

# PEACH, NECTARINE, PLUM - Greater Peachtree Borer

A clearwing moth that attacks the trunk at soil level

Threats:

- kills young trees
- pre-disposes older trees to other injuries

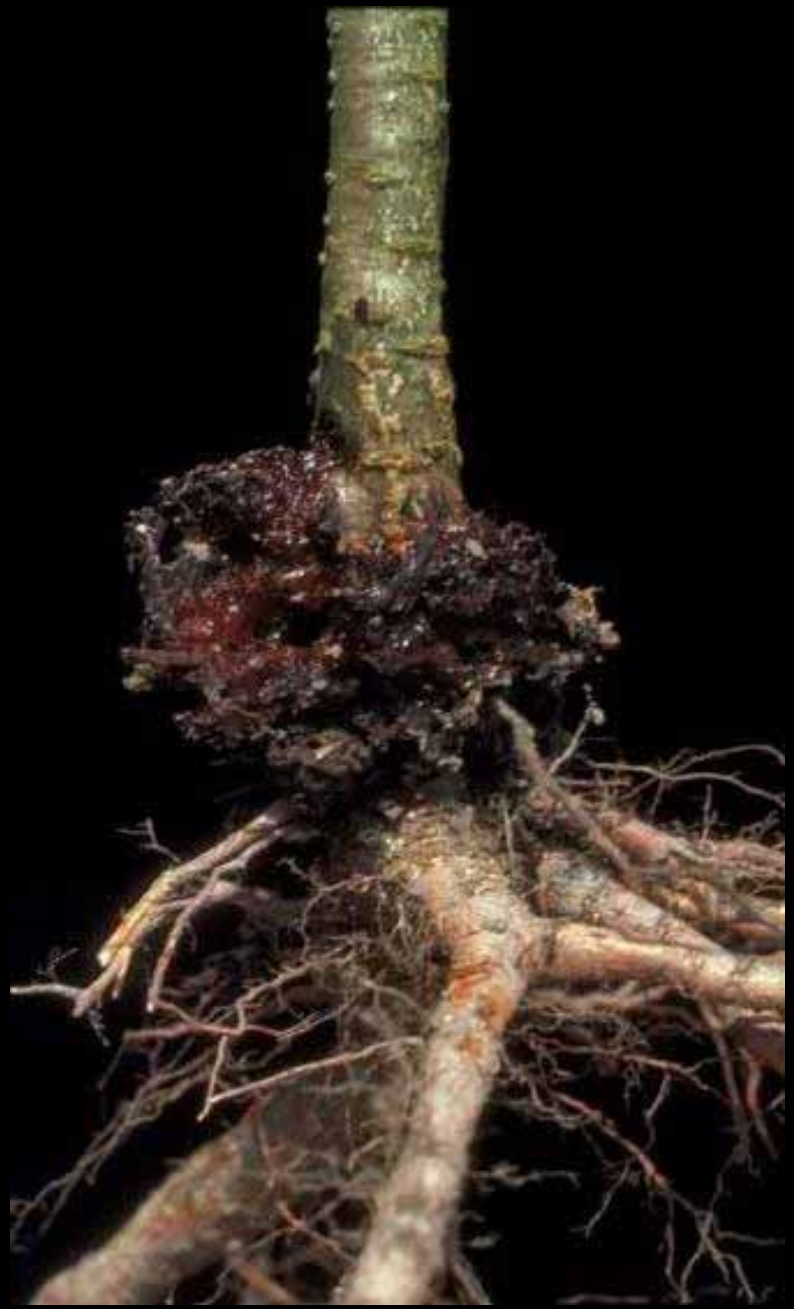
# Greater Peachtree Borer Life Cycle

1. overwintering larvae start feeding in spring

2. larvae pupate to adults starting in mid June

3. adults lay eggs on bark from July through September

4. eggs hatch and immediately bore into lower crown and roots



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# PEACH, NECTARINE, PLUM - Greater Peachtree Borer Organic Control

Remove all weeds and mulch from touching the bark

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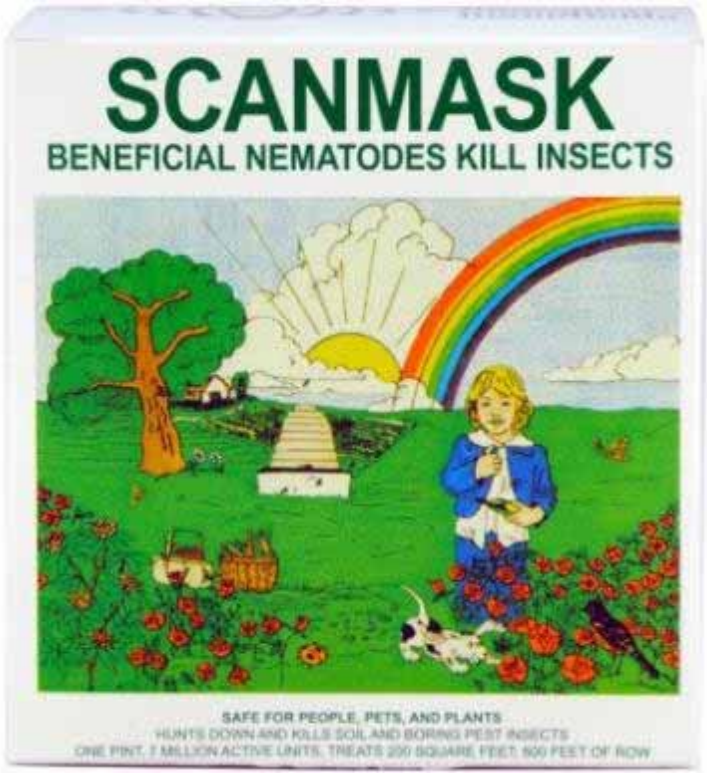
# PEACH, NECTARINE, PLUM - Greater Peachtree Borer Organic Control

Expose and kill larvae in gum

# PEACH, NECTARINE, PLUM - Greater Peachtree Borer Organic Control

Nematodes

*Steinernema carpocapsae*



EXTENSION
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# PEACH – Greater Peachtree Borer Products

Mid June through September

EFFECTIVENESS

| Ingredient | Brand | Residual (days) | Comments |
|---|---|---|---|
| permethrin | Hi-Yield Lawn, Garden, Pet<br>Bonide Eight | 30 | peach only |
| esfenvalerate | Monterey Bug Buster II | 30 | |
| spinosad | Monterey / Ferti-lome / Natural Guard Spinosad products | 5-7 | |

# Summer - Summary

1. July - Get foliar nutrition analysis (if necessary)

2. Proper irrigation

3. Pest management

APPLE, PEAR:

- continue to prune out fire blight infections
- continue sprays to prevent codling moth until Sept 15

CHERRY:

- continue western cherry fruit fly until harvest
- bird control

PEACH, NECTARINE, PLUM:

- greater peachtree borer – protect lower trunk from **late July through September**

# Fall

## September 2018

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| | | | | | | |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |

## October 2018

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | | | | |

## November 2018

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | | |

# Fall

1. **Irrigate** before ground freezes

2. Pest management
   PEACH, NECTARINE, PLUM:  coryneum blight

# PEACH, NECTARINE, APRICOT, PLUM - Coryneum Blight

Shuck split fungicide and repeat through summer as necessary

Apply Copper Fungicide in fall at 50% leaf drop

- good coverage to protect leaf scars

# Fall

1. **Irrigate** before ground freezes

2. Pest management

3. NEW TREES:
   - Paint trunks with latex paint
   - OR
   - Apply white tree wrap to trunks from Dec - March

Flatheaded borers
Cytospora canker

# White Tree Wrap

# Paint Trunks White

latex paint and water

1:1 ratio

# Fall - Summary

1. **Irrigate** before ground freezes

2. Pest management

   PEACH, NECTARINE, PLUM: coryneum blight

3. NEW TREES:

   Paint trunks with latex paint
   OR
   Apply white tree wrap to trunks from Dec - March

# For CEU Credits

**Send email to**: marion.murray@usu.edu

**Subject line**: Fruit Webinar CEU Credits

**Include in the email message**:

- Full Name
- City, State (including Nevada)
- Applicator's License Number
- Your Email Address


## Marion Murray

IPM Project Leader

Utah State University
Logan, UT

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435-797-0776


EXTENSION

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# Other products to use

Insecticidal Soap

- aphids, mites, leafhopper, thrips

Spinosad

- for thrips, apply at petal fall