



Utah Commercial Orchard Insect and Mite Management Guide – Cherry

By Diane Alston, Entomologist, Utah State University
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Preplant

Prionus root borer

~Prionus root borer is a sporadic, but increasing pest problem in Utah, especially on sweet cherry planted in lighter soils

~Management options in bearing orchards are very limited, so avoidance and prevention are the best strategies

Cultural controls:

- Avoid planting cherry trees into a site infested with Prionus
- Fallow an infested field for 2 or more years before replanting into an orchard crop; plant annual crops that will be tilled under each year

Chemicals:

- Fumigate soil before planting (efficacy unproven and cost effectiveness questionable)

Green Tip to Tight Cluster

European red mite

~Overwinter as eggs on limbs

~Look for dark red eggs; cause dark red staining when eggs are crushed

~Treat if egg densities are high and/or ERM was abundant the previous season

Chemicals:

- Superior or Supreme horticultural oil

Cultural:

- Prune out infested limbs

San Jose scale

~Overwinter as immature scale on limbs

~Treat if densities are high and/or scale was abundant on limbs and fruit in the previous season

Chemicals:

- Superior or Supreme horticultural oil +
- Supracide or

- Lorsban

Cultural:

- Prune out infested limbs

Black cherry aphid

~Overwinter as eggs on limbs

~Look for black eggs; usually eggs are concentrated on undersides of limbs

~Treat if egg densities are high and/or aphids were abundant in the previous season

Chemicals:

- Superior or Supreme horticultural oil +
- Lorsban

Tight Cluster to Open Cluster

Cutworms

~Climbing cutworms will enter the trees and can cause heavy feeding injury to lower limbs

~Feeding can damage buds and new growth

~Look for symptoms of feeding injury and presence of cutworm caterpillars

~Apply insecticides to lower trunk and ground vegetation with a handgun

Chemicals:

- Bacillus thuringiensis (Bts are stomach poisons so thorough coverage is critical, apply 2-3 times on warm days)
- Success or Entrust
- Thiodan
- Lorsban (caution is advised on sweets, Lorsban can defoliate sweets if too much green leaf tissue is open)

Shothole borer & Ambrosia beetle

~Adults are active when daily maximum temperatures exceed 65°F

~Treat if numerous small, round holes present in limbs

~Typically a secondary pest that attacks stressed trees

~Treat to control active adults if trees are at risk (already infested, near infested trees, or trees are under severe stress from other factors and borers are in the vicinity)

Chemicals:

- Thiodan
- Sevin

Cultural:

- Prevent tree stress
- Prune out infested limbs

First Bloom (Popcorn)

Black cherry aphid

~Alternative treatment timing to delayed dormant (green tip to tight cluster)

Chemicals:

- Provado (don't use when bees are present)
- Actara
- Asana
- Thiodan
- Diazinon

Cultural:

- Weed control (aphids will move to alternative plant hosts)

Petal Fall

Speckled green and pyramidal fruitworms

~The larvae hatch from egg masses during cherry petal fall and begin feeding on buds, flowers, leaves, and young fruit

~Fruitworms generally does not cause serious damage, though high densities can cause localized defoliation and fruit injury

Chemicals:

- Bacillus thuringiensis (Bts are stomach poisons so thorough coverage is critical, apply 2-3 times on warm days)
- Success or Entrust

Fruittree Leafroller

~Look for larvae feeding on and rolling leaves

Chemicals:

- Bacillus thuringiensis (Bts are stomach poisons so thorough coverage is critical, apply 2-3 times on warm days)
- Success or Entrust
- Thiodan

Black cherry aphid

~If earlier sprays are missed

Chemicals:

- Provado
- Actara
- Diazinon
- Thiodan

Cultural:

- Weed control (aphids will move to alternative plant hosts)

Shuck Fall

Black cherry aphid

~If earlier sprays are missed

Chemicals:

- Provado
- Actara
- Diazinon

- Thiodan
- Insecticidal soap

Cultural:

- Weed control (aphids will move to alternative plant hosts)

White apple leafhopper

~Heavy leafhopper feeding causes a reduction in photosynthesis and stress to the tree
 ~Treat when mid-aged nymphs (3rd to 4th instars) are present on the undersides of leaves
 ~Don't wait for nymphs to develop into adults as adults are more difficult to control

Chemicals:

- Sevin
- Thiodan

Late Spring and Summer

Spider mites

~Don't let spider mite populations build to high densities or they can cause severe injury near harvest when control options are limited
 ~Protect and conserve predaceous mites
 ~Treatment threshold: ≥ 10 spider mites per leaf and < 1 predator mite per leaf

Chemicals:

- Horticultural mineral oil ($\leq 1\%$ v/v; apply when population is mostly composed of eggs and before population increases rapidly)
- Apollo
- Vendex (resistance in spider mites a problem and harsh on predators)

Biological control:

- Avoid non-selective chemicals to conserve predators

San Jose scale

~If scale infestation is severe enough to warrant further clean up, or if delayed dormant control was missed, insecticides can be time with crawler activity based on male catch in pheromone traps or crawler catch on sticky tape

Chemicals:

- Esteem
- Diazinon

Biological control:

- Avoid non-selective chemicals to conserve predators

Western cherry fruit fly

~Cherry fruit fly is the most severe fruit-attacking insect pest of cherry
 ~Zero tolerance for wormy fruit in tarts; low to zero tolerance in sweets depending on market
 ~Adult is the main target to prevent eggs from being laid in fruit

Chemicals:

- GF-120 NF (spinosad) (apply with 4-wheeler sprayer to alternate rows and with a large spray droplet size; reapply after rain and no more than every 7 days; excellent adulticide)
- Provado (moderate adulticide, but excellent larvicide and can kill small larvae inside fruit; reapply every 14 days; watch for mite flare-up with repeated use)
- Success and Entrust (reapply every 7 days)
- Guthion (reapply every 14 days; 15 day PHI)
- Sevin (reapply every 7 days; watch for mite flare-up with repeated use)
- Diazinon (reapply every 7-10 days; 21 day PHI)
- Malathion (reapply every 3 days; watch for mite flare-up with repeated use)

Cherry slug (sawfly)

~A sporadic pest and rarely an economic problem, but can cause defoliation

~Often controlled with fruit fly sprays if using a broad-spectrum insecticide

Chemicals:

- Diazinon
- Guthion

Prionus root borer

~Larvae feed on the roots (small and large) and crown and can cause severe root pruning and loss of root function

~Adults begin to emerge in mid to late July in northern Utah, they fly at night in search of mates, and lay eggs at the soil surface near host trees (fairly wide tree host range)

~Light traps can be used to monitor adults

~Broad-spectrum insecticides may kill some adults and reduce egg-laying

Chemicals:

- Lorsban (not registered post-bloom on bearing trees; apply to trunks and soil surface, avoid contacting leaves)
- Sevin

Cultural controls:

- Avoid tree stress

Post Harvest

Spider mites

~If populations increase during and after harvest, treat to prevent early defoliation and tree stress that can result in winter injury if followed by a severe winter

Chemicals:

- Omite
- Pyramite
- Vendex

Western cherry fruit fly

~Treat as a late season clean up, especially if populations were high before harvest

Chemicals:

- Dimethoate

- Guthion
- Provado

Shothole borer and Ambrosia beetle

~Target adult flight in late September to early October

~Adults are active when daily maximum temperatures exceed 65°F

~Treat if numerous small, round holes present in limbs

~Typically a secondary pest that attacks stressed trees

~Treat to control active adults if trees are at risk (already infested, near infested trees, or trees are under severe stress from other factors and borers are in the vicinity)

Chemicals:

- Thiodan
- Sevin

Cultural:

- Prevent tree stress (irrigate into the autumn if little rainfall)

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