



POP Cherry Scouting Guide

CHERRY PLANT DISEASES

BACTERIAL CANKER



- Bacterial condition from *Pseudomonas syringae*
- Symptoms include limb dieback, loss of fruit spurs, amber-colored gum, "dead bud", and leaf spotting
- Inner bark may be brown, fermented and sour-smelling
- Young trees most affected
- Spread by splashing rain, favored by high moisture and low spring temperatures
- Overwinters in cankers and systemically infected branches and buds



BROWN ROT



- Fungal infection from *Monilinia fructicola*
- First sign of infection is brown, wilted blossoms
- Dark, sunken spots develop on new shoots and limbs
- Fruit develops fuzzy tan/grey spores on fruit surface
- Fruit mummies turned shriveled and dark can cause recontamination if left
- Overwinters in twig cankers and mummified fruit on the ground and in tree



BLACK KNOT



- Fungal infection from *Apiosporina morbosa*
- Originates in spring growth - producing small, light brown swellings that rupture
- Young knots are soft, and velvety, olive-green and become hard, brittle, rough and black by autumn
- Fungus overwinters in knot and worsens from year to year
- Tips of branches can die back and severe cases can kill whole limbs



CHERRY PLANT DISEASES

POWDERY MILDEW



- Fungal infection from *Podosphaera clandestina*
- Attacks leaves, twigs, and fruit
- Produces whitish powdery mildew
- Infected leaves curl upward and new leaf and shoot growth is stunted
- Overwinters in twigs and fallen leaves
- Spread via wind through dry summers with high humidity that produce morning fog or dew

CHERRY LEAF SPOT



- Fungal infection from *Blumeriella jaapii*
- Overwinters in dead leaves on the ground and spreads in early spring during rainy weather
- Produces purplish, red, black, brown spots on leaves which yellow and fall
- Tree's can become defoliated during humid summers, becoming more prone to winter injury, poor fruiting bud formation, and slow spring growth

OTHER CHERRY PROBLEMS

BIRD PREDATION



- Birds can sometimes cause considerable crop losses for sweet cherries, sometimes stripping trees of fruit entirely
- Major bird offenders: American robins, common grackles, cedar waxwings, sparrows, and crows.
- Birds appear in groups, feeding on ripe fruit quickly, then moving on - making control challenging
- Birds often feed heaviest on early-ripening fruit as it may be the only early food source available

FRUIT CRACKING



- Fruit cracking occurs from exposure to too much water either in the soil or on the fruit surface
- Prolonged exposure of water on the fruit surface can lead to fruit absorbing that water, expanding and cracking
- Fruit can also crack during heavy rains and prolonged wet soil conditions coupled with low evapotranspiration.
- Poor drainage, heavy rains, and prolonged cloudy conditions can contribute to this



CHERRY PEST AND INSECT DAMAGE

BLACK CHERRY APHIDS



- Black cherry aphid *Myzus cerasi* attacks mostly sweet cherries
- Overwinters as an egg on branches and hatches at bud break to eat young tissue
- Stunts terminal growth and curls leaves and as aphids suck the tree's fluids
- Produce honeydew, a sticky substance that attracts ants and produces a sooty mold
- Adults are 1/8" shiny black winged or wingless and lay eggs in fall
- 2-3 generations occur by early July

CHERRY FRUIT FLY



- *Rhagoletis indifferens* feeds on tart, sweet and wild cherries
- Fly's larvae develops in ripening cherries
- Larva is creamy white legless maggot, which exits cherry to pupate leaving holes
- Differentiated from *Drosophila* fruit fly (attack cracked fruit) by larva's posterior enlarged with three horizontal black lines
- Adult has black body with white line markings on abdomen
- One generation per year
- Pupae overwinters in the soil

ORIENTAL FRUIT MOTH



- Eggs appear as white flat ovals on the undersides of the leaves
- 1st generation larvae bore into growing shoots, causing terminal wilt and die back of new growth in spring, flagging
- Some 2nd, and most 3rd and 4th generation larvae attack fruit leaving a hole found in the side of the fruit with brown goo and powdery substance nearby
- Overwinters as a fully grown larva protected within a silk cocoon located in tree crevices or in orchard ground cover.

PEAR SLUGS



- Yes they attack cherries too!
- Not a true slug, but a sawfly with a slug-like larva body
- Adults emerge late spring to lay eggs
- Eggs on leaves appear as small blisters
- Larva passes through 5 instar stages to adulthood, in which it turns into a glossy black wasp 1/5"
- The slug-like larva feeds on the leaves of pear trees, skeletonizing them
- Leaves turn brown, wither and drop on heavily infested trees
- Overwinters in cocoon 2-3" under soil



CHERRY PEST INSECTS

LESSER PEACH TREE BORER



- Yes they attack cherries too!
- Day flying adults resemble wasps
- 2-3 generations per season with first flight May-June, second August-September
- Adults lays eggs in cracks of bark
- Attacks entire tree
- Larva immediately burrow into bark, feed on inner bark and cambium,
- Wounds ooze gum, frass and wood bits

GREATER PEACH TREE BORER



- Yes they attack cherries too!
- Black moth that resembles a wasp
- Adults lay eggs in cracks of bark
- Larva immediately tunnel and feed on the sapwood of lower trunk and major roots
- 1 generation per season
- Overwinters beneath bark underground
- Injury emits jelly like sap mixed with frass and bits of wood at the base of the trunk

SAN JOSE SCALE



- Sucking insect injects toxins into plant that causes reddish blisters and purplish-red halos on young bark
- Winged males and wingless females emerge in spring, crawlers appear on whole plant
- After settling down, crawlers excrete a permanent waxy barrier to protect themselves from pesticides - female scales
- Results in reduced vigor, thin foliage, and cracked or dying branches
- Immature scales overwinter predominantly in black cap stage

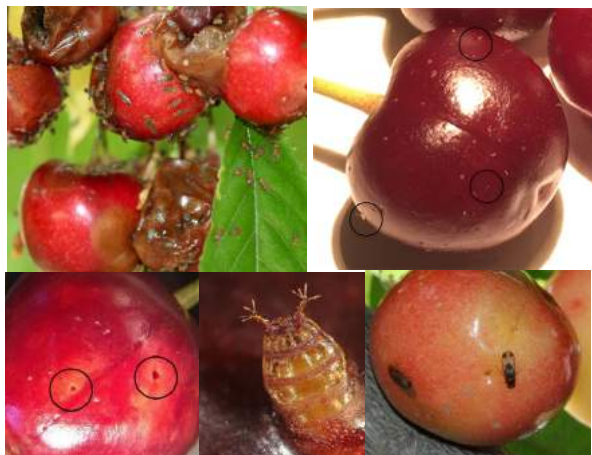
PLUM CURCULIO



- Yes they attack cherries too!
- 1/4" long dark brown beetle with white patches and four humps on its back
- Appear in orchards during bloom
- Adults make crescent-moon shaped punctures on the fruit to lay eggs and feed
- Pearly white eggs laid in cavity of crescent flap hatch in 7 days and feed on buds, petals and blossoms
- Can cause deformed fruit and premature drop
- Overwinter in nearby brush and soil



SPOTTED WING DROSOPHILA



- A fly that constantly attacks all soft fruit
- Adults are small (2-3 mm) flies with red eyes, a pale brown body and black stripes
- Adult males have a black spot on wing tips.
- Adult females have serrated ovipositors that pierce fruit skin to lay eggs
- Eggs have two breathing tubes often visible
- Larvae are tiny (up to 3.5 mm), white cylindrical maggots that feed in the fruit
- Larvae partly or completely exit to pupate.
- They are most active at 68°F; activity reduces at temperatures above 86°F
- Affected fruit can turn brown and soft or look bruised; sunken areas leak liquids.
- Populations can grow quickly
- May overwinter as adults, be reintroduced from shipments of infected fruit or migrate north every summer.

SHOTHOLE BORER



- Beetle that makes holes in bark, burrows underneath, and feeds on phloem tissue.
- They form galleries in which both adults and larvae live and feed on an ambrosia fungus, which they cultivate.
- When mature, they burrow their way out through holes in the bark
- Tends to show up in neglected trees, trees recently been pulled out, or in wood piles.
- Healthy cherry trees will try to bleed out the pest, creating shothole "pigtailed."
- Often attacks the bases of shoots
- Other evidence includes weakened trees, flagging branches, and buds not breaking
- Spreads relatively slowly from tree to tree
- Overwinters as adult inside tree or logs
- Adult female finds new host after winter and releases a pheromone attracting others

SPECKLED GREEN FRUITWORM



- Most common of several green fruitworm pests in orchards
- Larvae feed on a variety of deciduous shade, forest, and fruit trees like apple, pear, and cherry.
- Adults are night-fliers whose flight period closely parallels apple bud development.
- Newly hatched larvae are ¼ inch long and have a grayish body, brown head and thoracic shield.
- Mature larvae are 1 ½ inches long light green bodied with narrow white stripes and speckles
- Older larvae damage flower clusters during bloom and continue to feed on developing fruit and leaves for 2 to 3 weeks after petal fall. They drop to the ground, to pupate in soil over winter
- Most flower buds, blossoms, and fruitlets damaged by larvae abort. Some, however, remain at harvest and exhibit deep corky scars and indentations.