

Flowering Ornamental Fruit Trees

	November 21-30	November 11-20	November 1-10	October 21-31	October 11-20	October 1-10	September 21-30	September 11-20	September 1-10	August 21-31	August 11-20	August 1-10	July 21-31	July 11-20	July 1-10	June 21-30	June 11-20	June 1-10	May 21-31	May 11-20	May 1-10	April 21-30	April 11-20	April 1-10	March 21-31	March 11-20	March 1-10	
Plant Problem																												
Leaf Crumpler																												
Leaf Curl																												
Leafhoppers																												
Leafroller, Fruittree																												
Mite, European Red																												
Powdery Mildew																												
Sawfly, Pear ("Pearslug")																												
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Spider Mite, Twospotted																												
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Tussock Caterpillars																												
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Yellownecked Caterpillar																												
Fire Blight																												
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Crown Rot																												
Aphid, Woolly																												
Borer, Flatheaded Appletree																												
Borer, Peachtree																												
Borer, Roundheaded Appletree																												
Cankers																												

KEY: fruit (red), flower (pink), branches (teal), leaves (light green), trunk (brown), crown (tan), roots (dark brown)

Flowering Ornamental Fruit Trees

Plant Problem

Signs/Symptoms

Treatment

Cedar-Quince Rust



Infects only the fruit not the leaves. Slightly raised purplish area on the calyx end of the fruit. On mature fruit, lesions are sunken and dark green or purple. Powdery, fluorescent orange spores.

Plant resistant varieties. Apply foliar fungicide at pink stage of the blossom and repeat according to label instructions.

Green Fruitworm



Flower buds or developing fruit is completely devoured or partially damaged by chewing injury. Pale green worms with thin white lines and fine speckling on the skin may be present.

There is only one generation per season with fruitworm activity in May to early July. Worms may grow to a length of 1½" long. Locate and remove worms, or apply a microbial insecticide when worms are much smaller. Usually, green fruitworms are of little importance.

Blossom Rot & Twig Blight



Flower parts turn light brown. Petals may look water soaked; areas of buff-colored or gray spores. Flowers adhere through harvest or even winter. Twigs may become girdled. Profuse gumming on necrotic twigs. Fruit has small, dark lesions that enlarge rapidly.

Sanitation. Plant resistant varieties. Apply foliar fungicide at full bloom and repeat according to label instructions.

Cedar-Apple Rust



Small, yellow to orange lesions on upper leaf surface; black dots appear in the lesions. Tiny orange-colored tubes form on lower leaf surface opposite of the lesions.

Plant resistant varieties. Apply foliar fungicide at pink stage of the blossom and repeat according to label instructions.

Cedar-Hawthorn Rust



Symptoms can be on leaves, fruits, flowers and seeds. Chlorotic or yellow areas appear, often in ring patterns. Overall fruit quality, size and quantity are adversely affected.

Plant resistant varieties. Apply foliar fungicide at pink stage of the blossom and repeat according to label instructions.

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Scab



Olive green lesions appear on leaves; lesions are often concentrated around leaf veins which are discolored. Leaf growth is distorted. Brown to black lesions on foliage, fruit and stems; fruit have rough “scabby” areas.

Sanitation. Plant resistant varieties. Apply foliar fungicide at green tip growth stage and repeat according to label instructions.

Black Knot



Abnormal growth of bark and wood tissue forming small, light-brown swellings that enlarge and rupture. In summer, the knots turn darker and elongate. In fall knots become hard, brittle, rough and black. Eventually knots enlarge and encircle the entire twig or branch.

Sanitation. Prune out affected areas before bud break. Apply foliar fungicide at white bud and repeat according to label instructions.

Oriental Fruit Moth



New shoots in the spring are infested with dirty-white larvae and die back at the tips. Fruits are infested in summer. Generally a pest of stone fruits, apple and cotoneaster.

Control not so much needed in ornamental fruit trees as it is with orchard trees. Once shoots have become damaged, insecticidal sprays are not able to kill the boring larvae, which later emerge to feed on fruits. Scheduled fruit tree sprays are needed for orchards.

Scale, Oystershell



Small, brownish, oystershell shaped scales are crowded on branches and may cover the bark completely. Infested branches suffering dieback. Newly hatched nymphs are white.

Prune out heavily infested branches, as appropriate. Dormant oils are not effective, as scales are in the egg stage beneath female shells. Monitor in June to detect newly hatched nymphs and apply oil spray, insecticidal soap or insecticide.

Scale, Scurfy



Small, flat, pear shaped, dirty-white scales crowded on branches; heavy infestations look crusty. Plants are weakened, and dieback of twigs or branches may be evident.

Prune out heavily infested branches, as appropriate. Dormant-season oil sprays not as effective as treating newly hatched nymphs (“crawlers”) in June. Monitor to detect crawlers and apply an oil spray, insecticidal soap or insecticide.

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Twig Pruner Borer



Larger twigs break off and fall to the ground in late summer. Inspection shows the twig is cleanly cut from within by a mature larva. Bark remains on the cut when the twig breaks.

Gather and destroy broken twigs, as they contain mature larvae. This species attacks only dead or severely weakened trees, so there is little justification for insecticidal control. A related species, the oak twig pruner, attacks healthy red oaks and should be monitored.

Bacterial Shot Hole



Small circular to somewhat irregular shaped leaf lesions; pale green to almost white lesions on lower leaf surface. Lesions enlarge to angular purple, brown to black; light yellowish-green halos. Center of lesions drop out, giving the leaf a ragged, shot hole appearance.

Improve air circulation. Plant resistant varieties.

Bagworm



Early in the season the bags are quite small and foliage appears desiccated and riddled with small holes. In late summer, bags are large, and severe defoliation occurs around them.

Remove the previous year's bags on the host before May 1. Treat larvae while bags are small, before July 1. Use *Bt* or appropriate insecticides to conserve natural enemies. Later in the season, treat hosts with thorough coverage, but effectiveness may be poor.

Cankerworms, Spring and Fall



Ragged holes in leaves; only veins may remain. These "inchworms" are greenish, brown or black and move in a looping fashion. Some may hang from silken threads when disturbed.

Only adult beetles damage host plants. Monitor for damage about mid-May when beetles are expected to emerge. Treat foliage in the evening with a persistent insecticide, spray or dust, to discourage feeding or to kill adults. Repeat as needed and allowed by the label.

Frogeye Leaf Spot (Black Rot)



Circular leaf lesions with irregular purple margins. Lesions eventually become brown with defined margins; enlarged and defined margins give a "frogeye" appearance.

Sanitation. Prune out affected areas. Increase air circulation. Apply foliar fungicide at petal fall and repeat according to label instructions.

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Treatment

Japanese Beetle



Leaves are skeletonized, have ragged holes, or are completely eaten. Metallic green scarab beetles with copper wings actively feed in clusters during the day.

Pick off beetles in the early morning and drown in a bucket of soapy water. Spray foliage with neem oil as a deterrent. Capture beetles with a Japanese Beetle pheromone trap through the season. Spray beetles and foliage with an insecticide.

Leaf Beetle, Rhabdopterus



Leaves have narrow linear, checkmarked or V shaped slots chewed into them. Adults are bronzy red-brown, less than a quarter-inch long, and active at night.

Healthy trees tolerate considerable defoliation; treat only if severe and when cankerworms are abundant and small. Microbial insecticides are effective and safe alternatives to chemical insecticides, especially in situations where drift is a concern.

Leaf Crumpler



Leaves are skeletonized or have holes and are matted tightly together by webbing. Tough, horn shaped silken retreats are attached to stems, in which greenish larvae hide during the day.

Monitor continually through the season, as there are two generations. Treat infested foliage repeatedly as needed with a microbial insecticide when caterpillars are young. Damage is more severe in late summer. Use a systemic foliar spray for larger caterpillars.

Leaf Curl



Leaves are deformed and display a variety of colors ranging from light green and yellow to shades of red and purple. Leaves become wrinkled, puckered and curled. As leaves mature, they may appear dusty in appearance due to the spores being produced. Leaves turn brown, shrivel and drop.

Sanitation. Plant resistant varieties. Apply foliar fungicide after leaves drop in the fall and again as flower buds begin to swell in the spring; repeat according to label directions.

Leafhoppers



Leaves develop pale flecks, which in time spread densely over leaf surfaces. Leaves may turn yellow. Wedge shaped adults, nymphs and fecal spots are present on leaf undersides.

Nymphs cannot fly and are more easily controlled. A strong stream of slightly soapy water from a hose-end sprayer will dislodge and kill many. Other options include a horticultural spray oil, insecticidal soap, conventional insecticide, or systemic insecticide.

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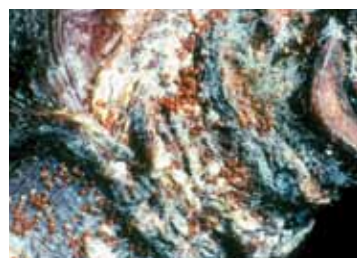
Leafroller, Fruittree



Buds with holes, webbing and frass. Leaves rolled together with webbing and skeletonized or devoured. These green worms with shiny black heads wriggle violently when disturbed.

Rarely justifiable to control, as infestations tend to be spotty, and healthy trees tolerate even extensive defoliation. Should control be warranted, make several applications of a microbial insecticide, such as a product containing *Bacillus thuringiensis* or spinosad.

Mite, European Red



Leaves are stippled, bronzed or completely brown, due to feeding by this small, dark red mite. Eggs are red and flattened, and they can be found on leaves, or attached to bark in winter.

Apply a dormant oil spray in late winter or early spring to kill eggs on bark. Monitor in spring to summer for active colonies and treat with an insecticidal soap, horticultural spray oil, neem oil, or an insecticide/miticide if mites are present and causing serious injury.

Powdery Mildew



Leaves, twigs and fruit covered with a powdery white to gray-colored fungal growth (mycelium). New leaves eventually roll upward, pucker, blister and drop. Infected shoots are stunted.

Sanitation. Improve air circulation. Avoid planting in shady areas in the landscape. Apply foliar fungicides at disease onset.

Sawfly, Pear ("Pearslug")



Leaves are partially or completely skeletonized. The slug-like, slimy, greenish-brown sawfly larvae are swollen in front and appear to have no legs. They often feed in groups.

Two generations; most severe injury occurs in late summer, but is not so much detrimental as unsightly. Slug sawfly larvae can easily be dislodged from foliage by a strong spray of water or killed with an application of carbaryl or a desiccating/abrasive powder.

Shothole (*Coryneum Blight*)



Small circular to somewhat irregular, pale green to almost white spots. Spots enlarge becoming angular and purple, brown to black. Centers may drop out of lesion. On the fruit, small circular brown spots.

Avoid overhead irrigation. Prune out affected twigs. Apply foliar fungicide in the fall at 50% leaf fall, spring application at shuck fall and repeat according to label instructions.

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Signs/Symptoms

Treatment

Spider Mite, Twospotted



Leaves stippled or yellow with fine webbing on undersides of leaves. Tiny greenish mites moving beneath webbing. When foliage turns brown, mites may mass together at tips of stems.

Populations explode during prolonged hot, dry weather. Monitor in late July, checking undersides of leaves. Keep host plants well-watered. Dislodge colonies with a strong spray of water. Apply an insecticide/miticide if infestations become serious; repeat in 10 days.

Tent Caterpillar, Eastern/Prairie



In spring, a dense tent of webbing is built at branch junctions and continues to enlarge. The colorful, hairy caterpillars rest inside and crawl out at night to feed on foliage.

Monitor trees in March and April for small tents in tree crotches. Destroy tents and scatter caterpillars for birds to eat. Or, apply a microbial insecticide to foliage adjacent to tents to kill foraging caterpillars. Or, spray tents and foliage directly with an insecticide.

Tussock Caterpillars



Ragged holes in leaves, or large portions consumed. Caterpillars are densely hairy with longer, dense tufts in rows along the top of the body, or protruding from the front or rear.

Generally, tussock caterpillars only cause spotty damage and rarely reach numbers to justify control. Young caterpillars are easily controlled with microbial insecticides (*Bt* and spinosad) or IGR's, and many insecticides work as well for all larval stages.

Uglynest Caterpillar



Dense webbing covers branches and mats leaves together. Nests contain greenish caterpillars, damaged leaves and unsightly fecal pellets. Mature caterpillars are about $\frac{3}{4}$ inch long.

Monitor for nests in May and June. Prune out and destroy isolated nests. Treat infested foliage repeatedly as needed with a microbial insecticide when caterpillars are young. Spot-treat older caterpillars by thoroughly spraying with a residual insecticide.

Unicorn Caterpillar



Colorful caterpillars, not hairy, but with enlarged bumps on top of body behind a large head. Young caterpillars feed in groups. Leaves have ragged holes.

Infestations often spotty and not harmful to overall tree health. Groups of young caterpillars are easily controlled with a microbial insecticide, a horticultural oil or an insecticidal soap. Do not treat when caterpillars are nearly mature, well over an inch long.

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Treatment

Webworm, Fall



A nest of webbing covers several leaves initially, then later envelops entire branches as caterpillars grow. Fuzzy, yellowish or brown caterpillars feed on leaves inside webbing.

Rake out nests, or dislodge with a powerful jet of soapy water from a power washer. Apply a microbial insecticide to control young caterpillars in small nests; larger nests are almost impenetrable with insecticidal sprays. Damage is more unsightly than serious.

Yellownecked Caterpillar



Caterpillars have narrow, black and white stripes along the body and an orange-yellow "neck" behind the head. They feed in groups and raise their bodies up when disturbed.

Infestations are seldom serious, however, small trees and entire branches can be defoliated. Young caterpillars can be controlled with a microbial insecticide, a horticultural oil or an insecticidal soap. Do not treat mature caterpillars, as they soon cease feeding.

Fire Blight



Blighting of flowers expanding to twigs and leaves. Blighted area appears black to brown. Diseased twigs curl downward forming a shepherd's crook.

Sanitation. Prune out affected area a minimum of 8 inches below visible injury. Avoid overfertilization. Use resistant varieties.

Verticillium Wilt



Small, yellow foliage. Leaf scorch. Slow growth. Dieback of shoots and branches. Sudden wilting and collapse of tree. Streaking of vascular tissue of wood.

Sanitation. Avoid root injury. Avoid water stress. Replace with non-susceptible host.

Crown Rot



Delayed bud break. Leaf discoloration. Twig dieback. Fruit remain small and color prematurely; premature leaf coloration and drop. Partial/complete girdling of the trunk. Roots are reddish-brown. Water-soaked areas of necrotic tissue at the root base; wood first appears orange to red-brown and eventually turns dark brown.

Sanitation. Improve soil drainage. Use resistant rootstocks. Drench fungicide application.

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Treatment

Aphid, Woolly



Dense, cottony masses on twigs and branches, which on closer examination are aphids that secrete waxy filaments. Winged adults often present. Honeydew can be a nuisance.

Infestations develop during the latter half of the summer and pose little threat. Where aphids are a nuisance and accessible for treatment, dislodge colonies with strong, vigorous sprays of water or soapy water as needed.

Borer, Flatheaded Appletree



Loose bark with shallow, serpentine tunnels beneath, packed tightly with fine sawdust. Oval exit holes evident on trunk and branches. Tree is stressed or with dead branches.

Monitor trees for exit holes beginning in May and through the summer. Keep especially younger trees healthy, with regular watering if needed. Treat the trunk and major branches of infested trees with an insecticide, and treat regularly thereafter as per label directions.

Borers, Peachtree



Small, round holes with gummy secretions at base of tree, usually with pupal skins hanging out. Trees may be stressed or dying, or branches may decline and die.

The lesser peachtree borer affects branches, while the peachtree borer infests trunks at the base. Adults are dark, wasp-like clearwinged moths that can be monitored with pheromone traps. Apply a borer spray to trunk and branches when adults are active.

Borer, Roundheaded Appletree



Round holes at base of trunk and on major branches. Coarse sawdust apparent on bark or at tree base. Galleries beneath bark and into heartwood. Plant stressed. Branch dieback evident.

If new exit holes appear, treat lower portions of tree, especially at soil line, with a borer spray in June and thereafter until August. This will help prevent egg-laying by adults. Prune out heavily damaged and dead branches to remove borer larvae tunneling within.

Cankers



Dead twigs and dieback. Leaves droop. Leaves discolor through shades of green to various shades of brown; remain attached. Cankers are dark and depressed areas; margins are sharp and distinct. Young cankers exude gummy sap at the margins and may have a sour, sap odor. Wood is discolored.

Prune out affected area.