

## Pest management schedule for backyard apple trees in Eastern Oregon

The table below outlines a suggested management schedule for the most common insect pests and diseases of apple trees in Eastern Oregon. Product availability may vary by location. Always read and follow label instructions. For more detailed information on home fruit tree care, reference the OSU Extension publication *Managing diseases and insects in home orchards* (EC 631) or contact your local Oregon State University Extension office.

Growth Stage	Timing	Target	Standard	Organic*	Notes
Dormant and delayed dormant	January – March	pruning	Proper pruning will open up the tree canopy and maintain quality fruit production. Burn or dispose of visibly infected branches. Copper may be applied if cankers are found and have been pruned out.		Early pruning in January will allow wounds to benefit from later spray applications.
		aphids, mites, scale	horticultural oil (e.g., Monterey Horticultural Oil, Bonide All Seasons Horticultural Oil)		Apply in January and/or February. Spray when temperatures are above freezing and under dry conditions.
Pre-bloom	½" green tips and pink unopened blossoms	powdery mildew	myclobutanil (e.g., Spectracide IMMUNOX Multi-Purpose Fungicide)	horticultural oil, sulfur (e.g., Safer Brand Fungicide), potassium bicarbonate, neem oil (e.g., AzaMax), <i>Bacillus subtilis</i> (e.g., CEASE Biological Fungicide), insecticidal soap	For sulfur, apply at green tip stage and again at pink unopened blossom stage. Do not apply oil within two weeks of sulfur when leaves are present. Remove shoot tips with visible mildew.
		scab	captan, myclobutanil	sulfur	Treat if scab was found previously.
Bloom	<b>Avoid pesticide use during bloom.</b> Otherwise, apply in early morning or late afternoon and use pesticides with low pollinator toxicity.				
Petal fall through late spring	7 – 10 days after petal fall <sup>b</sup>	codling moth	acetamiprid, carbaryl, esfenvalerate, gamma-cyhalothrin, lambda-cyhalothrin, malathion (e.g., Ortho MAX Malathion), pyrethrins (e.g., Bonide Pyrethrin)	horticultural oil, granulosis virus (e.g., CYD-X), kaolin clay (e.g., Surround WP), spinosad (e.g., Bonide Captain Jack's DeadBug Brew), bagging fruit	Spray every 7 – 14 days when fruit is present. For bagging, use mesh or paper bags; remove a few weeks before harvest for red varieties.

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Trade-name products are mentioned as illustrations only. The Oregon State University Extension Service neither endorses these products nor intends to discriminate against products and services not mentioned.



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Growth Stage	Timing	Target	Standard	Organic <sup>a</sup>	Notes
Petal fall through late spring	April – May	aphids	malathion, permethrin, pyrethrins	neem oil, <i>Beauveria bassiana</i> (e.g., Naturalis-O, Mycotrol WPO), insecticidal soap	Monitor for aphid populations, especially at shoot tips.
	April – June	fire blight	Monitor for fire blight symptoms and prune out blighted stems at least 12” below blighted tissue. Some cultivars and rootstocks are more susceptible.		
Late spring through summer	post-fruit set (~1” fruit)	fruit thinning	Removing excess fruit improves ease of insect monitoring, reduces insect targets, and maintains proper reproductive balance. Consider keeping only one apple per cluster.		
	whenever fruit are present <sup>b</sup>	codling moth	acetamiprid, carbaryl, esfenvalerate, gamma-cyhalothrin, lambda-cyhalothrin, malathion, pyrethrins	granulosis virus, kaolin clay, spinosad, bagging fruit	See above. Some products for codling moth will also control apple maggot and brown marmorated stink bug.
	when pest is present	aphids	malathion, permethrin, pyrethrins	neem oil, <i>Beauveria bassiana</i> , insecticidal soap	Monitor for aphid populations, especially at shoot tips.
		mites, scale	neem oil, horticultural oil, insecticidal soap		Do not apply horticultural oil above 90 °F.
Harvest and postharvest	July – November	windfalls	Remove all fallen apples from orchard floor. “Windfalls” should be destroyed, composted, or otherwise disposed of offsite.		
	November	anthracnose, fire blight, scab	remove and dispose of fallen leaves, copper (e.g., Bonide Copper Fungicide, Monterey Liquid Copper Fungicide)		Remove and destroy cankered branches before fall rains. Apply copper when leaves fall.

<sup>a</sup> Some formulations of these products may be approved for organic use.

<sup>b</sup> Insect trapping or degree day monitoring can be used to time codling moth sprays. Contact your local Extension office for more information.

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