



## BACKYARD APPLE & PEAR PEST MANAGEMENT CHART

### For Central Washington

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*Pests listed here do not necessarily require control each and every year. Fruit tree pest history and monitoring your tree's health & fruit quality are better indicators of the need to control. Choose non-chemical management as your first choice. Some pests may require pesticide sprays to provide supplemental control. Homeowners must refer to the pesticide label before they purchase & apply a pesticide to confirm that the product may be applied to backyard fruit trees.*

PEST PROBLEM	CROPS	PRODUCTS*	MANAGEMENT GUIDELINES AND APPLICATION TIMINGS
<p><b>Spider or Red Mites</b> Mite populations can build up by late spring or summer. Mite feeding on the leaf surface can cause yellowing and premature leaf drop. Webbing may be present on leaves and shoots.</p>	Apple, Pear	Horticulture/ Petroleum oils -or- Insecticidal soaps -or- Azadirachtin	<p>In most seasons, mites are controlled by natural enemies such as predatory mites. If mite damage was experienced in the previous season, apply horticultural oils at the dormant to delayed dormant (February &amp; March) to control overwintering European red mite eggs.</p> <p>During the growing season, conserve natural enemies by avoiding broad-spectrum insecticides. Insecticidal soaps may require multiple applications and thorough coverage especially on undersides of leaves. Avoid tree stress, especially improper irrigation. Mites may be washed off trees by heavy rains or with several applications of a strong stream of water.</p>
<p><b>Aphids</b> Aphid populations can build up throughout spring. Aphid feeding results in sticky honeydew, leaf curling, shoot malformation and even tree stunting.</p>	Apple, Pear	Horticultural/ Petroleum oils -or- Insecticidal soaps, Azadirachtin, or Malathion  -or- Imidacloprid	<p>Aphid may be associated with vigorous growth on young trees. If aphids were a problem in previous season, apply horticultural oils at the dormant to delayed-dormant to control overwintering aphid eggs.</p> <p>Aphids are controlled by natural enemies like lady beetles and lacewings. Conserve natural enemies by avoiding broad spectrum insecticides. Most aphid species leave fruit trees for summer plant hosts. Homeowners can prune out heavily infested shoots and water sprouts. Homeowners can wash aphids from tree with strong stream of water. For best results, apply products before infested leaves curl up.</p> <p>This systemic product is applied to the ground around the base of the tree. Best applied in the autumn if aphids become a problem during the growing season. One application provides 12-month control.</p>
<p><b>Scale Insects</b> Scale insect feeding results in sticky honeydew and can devitalize and kill twigs and branches. Scales may attach to fruit surface causing blemishes.</p>	Apple, Pear	Horticultural/ Petroleum oils + Sulfur product  -or- Imidacloprid	<p>Scale insect populations can take years to build to damaging levels. If scale problems are experienced in previous season, apply horticultural oils at the dormant season (with or without sulfur products) to control any overwintering scale insect on fruit tree.</p> <p>This systemic product is applied to the ground around the base of the tree. Best applied in the autumn if scales become a problem during the growing season. One application provides 12-month control.</p>
<p><b>Codling Moth</b>  <b>This is the key insect pest in apples and pears in Central Washington.</b>  The immature stage of codling moth is the worm in the apple and can be distinguished from other "worms" by its habit of boring directly to, and feeding on, the seeds at the core of the apple or pear.</p>	Apple, Pear	Acetamiprid -or- Malathion -or- Esfenvalerate -or- Spinosad  -or- Kaolin clay	<p>Codling moth is highly mobile and will establish itself annually on untreated backyard apples. Homeowners need to routinely (weekly) scout apples on trees for signs of worm infestation. Remove and destroy infested fruit. Control can be achieved by enclosing young fruit in wax-coated white bags or small brown bags right on the tree to protect them from the codling moth. See <i>Codling Moth and Your Backyard Fruit Tree</i> FS120E. <a href="http://cru.cahe.wsu.edu/CEPublications/FS120E/FS120E.pdf">http://cru.cahe.wsu.edu/CEPublications/FS120E/FS120E.pdf</a></p> <p>For Acetamiprid, Malathion, Esfenvalerate and Spinosad, apply 7 to 10 days after all flower petals have fallen from the tree, then reapply throughout the summer following product label directions.</p> <p>Kaolin Clay acts as a repellent. Apply at petal fall and keep foliage/fruit coated. Require reapplication every 7–10 days until harvest. The white coating can be washed off with water and a soft brush.</p>

<p><b>Pearleaf Blister Mite</b> By early summer, blister mite feeding results in pale green to reddish blisters forming on the leaf surfaces, premature leaf drop and scars on fruit surfaces.</p>	Pear	Horticultural/ Petroleum oils + Sulfur product -or- Sulfur Products	<p>In most seasons, blister mites are controlled by natural enemies or by dormant applications for other pests; however, they can cause damage in unsprayed or neglected young trees. If blister mites were a problem in the previous season, apply oil, with or without, a lime sulfur product in the spring prior to bud swell.</p> <p>During the growing season other sulfur products can manage this mite, but applications may russet fruit.</p>
<p><b>Pear Psylla</b> Psylla is an annual pest in pear. Psylla feeding results in copious amounts of honeydew, can cause leaf burning, defoliate trees, fruit drop and stunt tree growth.</p>	Pear	Horticultural/ Petroleum oils -or- Kaolin clay -or- Insecticidal soaps or Azadirachtin	<p>Psylla is highly mobile and will find backyard trees in regions where commercial pear production occurs. Apply oils at the dormant stage as buds begin to swell and again at delayed dormant, just as buds start to open. Apply Kaolin a few days in advance of bud swell and delayed dormant so that the white coating covers branches and twigs where egg-laying occurs.</p> <p>There are many predators and parasites that will control low infestations of pear psylla. When possible, avoid stimulating flushes of growth (prune lightly, proper fertility). Remove water sprouts and suckers. Apply these products as needed. Add Horticultural oil to Azadirachtin for improved psylla control.</p>
<p><b>Powdery Mildew</b> A gray-white fungus that colonizes fruit and leaf buds, leaves and even entire shoots. Leaves may curl, distort, become brittle, brown and die. Mildew also causes fruit surface russetting.</p>	Apple	Sulfur Products -or- Myclobutanil	<p>Homeowners can plant less susceptible apple varieties. Homeowners should prune and destroy the whitish infected buds and shoots early in spring to prevent fruit infection. Apply sulfur fungicides at bud cluster when buds start to open and at the pink stage just before blossoms open.</p>
<p><b>Fire Blight</b> A disease where infected leaves, shoots and fruit develop a water-soaked appearance. Shoots, twigs and branches wilt, darken and die. Leaves die, but remain attached to branches.</p>	Apple, Pear	There are no effective products for homeowners	<p>Fireblight is the most destructive disease of pears and many of the newer apple varieties. Most likely to be a problem during very warm and wet spring conditions during tree bloom. Blight resistant or tolerant varieties exist. Homeowners must recognize and immediately remove diseased branches in late spring and early summer. Cut branches 15-18” below visible symptoms of blight and sanitize pruning tools between cuts.</p>
<p><b>Apple Maggot (Fruit Fly)</b> The immature stage, the maggot, tunnels within the flesh of the apple often just beneath the apple skin.</p>	Apple	Acetamprid -or- Kaolin clay -or- Esfenvalerate -or- Spinosad	<p>This pest is an invading pest in Western Washington and is not commonly encountered in Central Washington. Homeowners who suspect they have Apple Maggot should contact their Extension Office immediately for confirmation. For more information, refer to <a href="#">EB1928</a> on <i>Protecting Backyard Apple Trees From Apple Maggot</i>. <a href="http://cru.cahe.wsu.edu/CEPublications/eb1928/EB1928.pdf">http://cru.cahe.wsu.edu/CEPublications/eb1928/EB1928.pdf</a></p> <p>Apply Kaolin by mid-June and keep foliage and fruit coated. This may require reapplication every 7 – 10 days until harvest. The white coating on the fruit can be washed off with water and a soft brush. Excellent control can be achieved by enclosing young fruit in wax-coated white bags or small brown bags right on the tree to protect them from the Apple Maggot.</p> <p>Apply Spinosad, Acetamprid or Esfenvalerate every 10 days starting in mid-June &amp; continue to harvest.</p>
<p>*All products are listed as active ingredients; often there are multiple trade names for each active ingredient so homeowners must refer to product label. For a listing of trade name products available to homeowners in Washington State, consult your Master Gardener volunteers, or visit this website: <a href="http://pep.wsu.edu/hortsense/">http://pep.wsu.edu/hortsense/</a>.</p>			

*Please note that in the State of Washington, homeowners are legally responsible for controlling the spread of horticultural pests and diseases, particularly if commercial orchards are found in your neighborhood. If you are unable or unwilling to accept this responsibility, please consider replacing fruit trees with other tree and plant varieties.*

*For further information on Home Orchard Pest Management, do not hesitate to contact your local Master Gardener Program at your WSU Extension Office.*

*For Benton/Franklin County, call (509) 735-3551 or 736-2726. For Yakima County call 509-574-1600*