A Beginner’s Guide to Ripening, Harvesting, & Tree Care for Pome Fruits

Apples, Asian Pears, European Pears, Quince

One of the main goals of Portland Fruit Tree Project’s Fruit Tree Stewardship Program is to empower tree owners with the knowledge and skills to care for their fruit trees themselves. This first section provides a general overview of fruit tree care basics. Later in this document, you will find tips and info specific to fruit trees that are classified as pome fruits.

We provide this information free of charge to the general public. However, if you have found this document useful, consider supporting the work of the Portland Fruit Tree Project (PFTP) by donating through the “Support Us” tab on our website (www.portlandfruit.org). Also, please keep in mind that we have created this reference with PFTP-registered tree owners as our target audience. If your fruit tree is not registered with us and you would like to do so, please click on the “Tree Registration” tab on the homepage of our website.

PFTP also offers hands-on workshops on all of the tree care topics mentioned below. As a PFTP-registered tree owner, you may attend our Tree Care Workshops free-of-charge. Upcoming workshops are posted on our website and sent out in our monthly e-newsletter. If you are not already subscribed and would like to receive to our e-newsletter, please contact us to sign up.

YOUNG FRUIT TREES: SELECTION, PLANTING, & CARE
This resource is designed to educate owners of older, established fruit trees. In the future, this section will be expanded to include further information on fruit tree selection & planting. One important thing for owners of older trees to understand is that the variety and rootstock that was initially selected, the location where it was planted, how the tree was planted, and how it was cared for and trained while developing in its first five years, have all factored into the current health & productivity of your fruit tree(s).

WATERING
If your tree is still young (under 5 years), summer watering is very important. Here in Portland, it is generally a good idea to water young trees 10 gallons per week (a single, deep watering) between early June and late September. If your tree is older than 5 years, summer watering is not necessary but is recommended if your tree is planted in a parking strip (the area between the street and the sidewalk) or other location where it has limited access to water infiltration.
Watering is also recommended if the weather has been especially hot and dry for more than a week.

**PRUNING**

*Pruning is most easily learned through hands-on demonstration. For this reason, we strongly recommend that you attend a pruning workshop before attempting to prune on your own. PFTP offers hands-on pruning workshops in winter and summer.*

**Why prune?** Pruning is important for fruit tree health and productivity. Proper pruning can:
- Reduce tree size – so that fruit is reachable
- Improve structural strength
- Induce branching (when that is desired)
- Improve air flow – to decrease fungal susceptibility
- Increase light penetration - to increase fruit production and fruit ripening
- Prevent branches from breaking by decreasing weight on the lateral branches
- Concentrate the tree’s energy into growing and ripening its fruit.
- Improve the aesthetic/beauty of the tree

**When to prune?**

*Winter Pruning* is performed when the above-ground portion of the tree is dormant. This is a time for large “renovation” cuts and for invigorating the tree’s growth. January & February are the months when you can expect the greatest beneficial response from your winter pruning cuts. Early to mid-March is still good but the beneficial response is somewhat reduced.

*Summer Pruning* is a time for smaller detail pruning of water sprouts, suckers, tip die-back, etc. The benefits of summer pruning will be greatest between June 21st & mid-August.

**How to prune?**

1) A good approach for those new to pruning is to focus on removing the 3 D’s: Dead, Diseased, or Disoriented branches. Dead branches show no signs of growth or leaves. Diseased branches have unusual growths or mal-formed leaves. Remove dead & diseased wood first. Then ‘disoriented’ branches, which include branches that are crossing, growing inward toward the center of the tree, or at an angle that might cause the branch to snap when loaded with fruit.

2) There are 2 main kinds of pruning cuts: Heading cuts shorten a branch; Thinning cuts remove a branch entirely. Heading cuts are made just above a bud, and thinning cuts are made at the branch collar. To learn more about pruning cuts, please attend a PFTP pruning workshop.

3) It’s best not to remove more than 1/3 of the tree in a single year.

4) Make sure that your blades are sharp, so that your cuts go straight through. Using dull tools can create rough wounds that are difficult for the tree to heal, and more prone to pests & disease.

5) Sanitize the blades of your pruning tools between trees, to avoid spreading disease. We recommend using a simple rubbing alcohol solution, applied with a clean rag or spray bottle.
PEST & DISEASE MANAGEMENT

Keeping your tree healthy is your first line of defense against pests and disease, because healthy trees are naturally more resistance to pests & disease. Later in this document, you will find pest and disease information specific to your type of fruit tree(s). Here are some general tips that apply to all fruit trees:

**Spring Pest & Disease control:** Spring is a good time of year to focus energy on soil health and managing existing pest & disease factors. Here are some basic tips.

- Remove grasses and other weeds in a 2-3 foot radius around the base of the trunk, so that they will not compete with your tree for water & nutrients.
- Apply organic mulch (straw, woodchips, compost) within that 2-3 foot radius, up to 10” thick. Leave 6” of space between the mulch and the base of the trunk to discourage crown rot.
- Traps can be set in the spring to reduce pests specific to your tree. More specific recommendations may be listed under the particular tree types, later in this document.
- Spraying may be necessary if your tree has severe pest or disease issues. Depending on your specific tree type, we may offer suggestions of organic options later in this document.

**Fall Pest & Disease assessment & prevention:** During and just after harvest season is a great time to assess the pest & disease situation of your tree and to get your tree off to a healthy start for the following year. A few things you might want to consider:

- *Clean up all fallen fruit.* This is very important for breaking (or preventing) the life-cycle of pests & diseases. Any fruit that isn’t harvested should be raked up and hot-composted away from the tree, or put in your yard waste bin for removal.
- *Try to identify your pest & disease issues.* If your fruit show signs of pests or disease, Fall is a great time to get that diagnosed so you can take appropriate steps to address it. Please see the Tree Care Resources page on our website for a list of books, websites, and other local organizations that may be able to help you with this. In addition, PFTP offers a Fall Tree Care workshop each year.

**FRUIT THINNING**

For several species of fruit trees, thinning out some of the young fruit during May & June is recommended. Later in this document, you can see if this is suggested for your particular type of fruit tree. Fruit thinning provides the following benefits:

- Larger, sweeter fruit! Thinning concentrates the tree’s energy on producing a smaller number of high quality fruit, rather than a large number of small, lower quality fruit.
- Increased air flow between the fruit, reducing susceptibility to disease and limiting pests ability to infest multiple fruit
- Reduced load of fruit on each branch, decreasing the chance of broken limbs from fruit weight.
Harvesting & Ripening

- Apples should be picked when they are fully ripe. To determine ripeness, taste is the best indicator. If it tastes good to you then it’s ready to harvest!
- Also, if the fruit has reached its full coloration – this is a good indicator of ripeness.
- If you want PFTP to harvest your tree, it is a good time to give us 2 weeks’ notice when about 33% of the fruit has reached full size and coloration.
- When you think the fruit is ready to harvest, lift the fruit gently upwards. They’ll be ready to pick when the stem pulls easily away from the branch. If you need to pull hard on the fruit then it may not be ready to pick.
- When harvesting, be careful not to break the stem off of the fruit. If broken, this will act as a wound on the apple and reduce the amount of time that the fruit will last on the shelf/in storage.

Tree Care

In addition to the General Fruit Tree Care tips provided in Part II, here are some specific tips for Apple trees.

Pruning

- Apples are pome fruits so it is appropriate to prune them during the winter.
- Apples can be grown in a wide variety of training systems (e.g. central leader, open center, etc.)

Pest & Disease Management

Codling moth is one of the two most common pests that affect Apples in Portland

- Codling moths are small, ½ inch long, mottled gray moths. When you find a worm in your apple, it is usually a codling moth larva.
- Moths become active in late April and begin mating when sunset temperatures reach 62 degrees.
- Eggs are deposited on fruit or nearby leaves. After the eggs hatch, larvae seek out and bore into developing fruit. They leave brown-colored holes in the fruit that are filled with frass (excrement.)
- Codling moths are difficult to manage so combining a number of techniques is important for achieving positive results.
- Trapping, fruit barriers (e.g. paper baggies or nylon footies,) fruit thinning, and cleaning up fallen fruit are all practices that can help to reduce codling moth damage.
- You can make cheap, organic traps for your trees by wrapping corrugated cardboard around the trunk and large branches or by hanging plastic containers filled with a mixture of 1/3 cup molasses, 1 cup cider vinegar, 1/8 teaspoon ammonia, and enough water to make one ½ quart of liquid.

**Apple maggot** is the other most common pest that affects Apples in Portland
- Also known as the Cherry Fruit Fly, adults have a black head and characteristic black “zig-zag” pattern on their wings.
- Apple maggots first emerge in July and are active through September.
- The fly lays eggs under the skin of the fruit. Once hatched, larva burrows into flesh and leaves behind brown tunnels. A small pin-point sting can be visible on the surface of the fruit.
- Trapping, spraying Kaolin clay (which is non-toxic) to mask the fruit, fruit barriers (e.g. paper baggies or nylon footies,) fruit thinning, and cleaning up fallen fruit are all practices that can help to reduce apple maggot damage.

**Apple scab** is the most common disease that affects Apples in Portland
- Apple Scab overwinters on decaying leaves and fruit on the ground so cleaning up fallen fruit and leaves, from your tree, is important.
- Apply lime in the fall to raise soil pH for less favorable scab conditions
- Proper pruning to thin foliage is also recommended.

**Fruit Thinning**
It is a good idea to check on your tree’s fruit set in mid-May to mid-June and thin out the developing fruit to one apple per cluster. This helps prevent apple maggot & codling moth by reducing the number of preferred egg-laying sites.

**Sources:**
2. Karen Tillou’s class outlines for the “Fruit Tree Short Course” at Clackamas County CC (Jan 2010) – [http://depts.clackamas.edu/hort](http://depts.clackamas.edu/hort)
Portland Fruit Tree Project  
Ripening, Harvesting, & Tree Care Guide  
Fruit Type: **ASIAN PEAR**  
*Pyrus serotina*  
Common varieties include: Hosui, Shinseiki, Fujitsu  

Harvesting & Ripening

- Asian Pears should be picked when they are fully ripe. To determine ripeness, taste is the best indicator. If it tastes good to you then it’s ready to harvest!
- Also, if the fruit has reached its full coloration – this is a good indicator of ripeness.
- If you want PFTP to harvest your tree, it is a good time to give us 2 weeks’ notice when about 33% of the fruit has reached full size and coloration.
- When you think the fruit is ready to harvest, lift the fruit gently upwards. They’ll be ready to pick when the stem pulls easily away from the branch. If you need to pull hard on the fruit then it may not be ready to pick.
- When harvesting, be careful not to break the stem off of the fruit. If broken, this will act as a wound on the Asian pear and reduce the amount of time that the fruit will last on the shelf/in storage.

Tree Care

In addition to the General Fruit Tree Care tips provided in Part II, here are some specific tips for Asian pear trees.

Pruning

- Asian Pears are pome fruits so it is appropriate to prune them during the winter.
- Asian Pears benefit from moderate to heavy pruning each year.
- Asian Pears can be grown in several training systems (e.g. modified leader, open center, etc.)

Pest & Disease Management

**Codling moth** is the most common pest that affects Asian Pears in Portland

- Codling moths are small, ½ inch long, mottled gray moths. When you find a worm in your Asian pear it is usually a codling moth larva.
- Moths become active in late April and begin mating when sunset temperatures reach 62 degrees.
Eggs are deposited on fruit or nearby leaves. After the eggs hatch, larvae seek out and bore into developing fruit. They leave brown-colored holes in the fruit that are filled with frass (excrement.)

Codling moths are difficult to manage so combining a number of techniques is important for achieving positive results.

Trapping, fruit barriers (e.g. paper baggies or nylon footies,) fruit thinning, and cleaning up fallen fruit are all practices that can help to reduce codling moth damage.

You can make cheap, organic traps for your trees by wrapping corrugated cardboard around the trunk and large branches or by hanging plastic containers filled with a mixture of 1/3 cup molasses, 1 cup cider vinegar, 1/8 teaspoon ammonia, and enough water to make one ½ quart of liquid.

Fire Blight is the disease that Asian Pears are most susceptible to.

- The first evidence of infection can be a watery, tan bacterial ooze that seeps out of cankers on the tree’s branches, twigs, or trunk during early spring.
- Young branches that are infected will dry out and blacken and the tip of the branch will often curl so that it resembles a shepherd’s crook.
- If your tree has fire blight, you should prune out any diseased branches as soon as possible – making sure to cut the infected branches 8 to 12 inches below the visibly diseased portion of the tree.
- Disinfect all tools after they have come in contact with a fire blight-infected tree. Be sure to remove all prunings from your site.

Fruit Thinning

It is a good idea to check on your tree’s fruit set in mid-May to mid-June and thin out the developing fruit to one Asian pear per cluster. This helps prevent codling moth by reducing the number of preferred egg-laying sites.

Sources:
1. The Home Orchard, a University of California Agriculture & Natural Resources Publication (2007) – also mostly available online at http://homeorchard.ucdavis.edu/
2. Karen Tillou’s class outlines for the “Fruit Tree Short Course” at Clackamas County CC (Jan 2010) – http://depts.clackamas.edu/hort
Harvesting & Ripening

- European pears should be picked when they are full-size but still hard and have not reached their final coloration. They are best ripened off the tree.
- If you want PFTP to harvest your tree, it is a good time to give us 2 weeks’ notice when about 33% of the fruit has reached full size and has started to gain partial coloration.
- Pears ripen from the inside out. The flesh on the top of the pear, right around the stem, is the first part of the outside of the pear to soften. This is a good place to test for ripeness.
- If allowed to fully ripen on the tree, the fruit will often have a “mealy” texture.
- When you think the fruit is ready to harvest, lift the fruit gently upwards. They’ll be ready to pick when the stem pulls easily away from the branch. If you need to pull hard on the fruit then it may not be ready to pick.
- When harvesting, be careful not to break the stem off of the fruit. If broken, this will act as a wound on the pear and reduce the amount of time that the fruit will last on the shelf/in storage.

Tree Care

In addition to the General Fruit Tree Care tips provided in Part II, here are some specific tips for European Pear trees.

Pruning
- Pears are pome fruits so it is appropriate to prune them during the winter.
- Pears can be grown in a wide variety of training systems (e.g. central leader, open center, etc.)

Pest & Disease Management

Codling moth is the most common pest that affects European Pears in Portland
- Codling moths are small, ½ inch long, mottled gray moths. Most worms found inside of pears are codling moth larvae.
Moths become active in late April and begin mating when sunset temperatures reach 62 degrees.

Eggs are deposited on fruit or nearby leaves. After the eggs hatch, larvae seek out and bore into developing fruit. They leave brown-colored holes in the fruit that are filled with frass (excrement.)

Codling moths are difficult to manage so combining a number of techniques is important for achieving positive results.

Trapping, fruit barriers (e.g. paper baggies or nylon footies,) fruit thinning, and cleaning up fallen fruit are all practices that can help to reduce codling moth damage.

You can make cheap, organic traps for your trees by wrapping corrugated cardboard around the trunk and large branches or by hanging plastic containers filled with a mixture of 1/3 cup molasses, 1 cup cider vinegar, 1/8 teaspoon ammonia, and enough water to make one ½ quart of liquid.

**Apple scab** is the most common disease that affects European Pears in Portland

- Apple Scab overwinters on decaying leaves and fruit on the ground so cleaning up fallen fruit and leaves from your tree is important.
- Apply lime in the fall to raise soil pH for less favorable scab conditions
- Proper pruning to thin foliage is also recommended.

**Fruit Thinning**

It is a good idea to check on your tree’s fruit set in mid-May to mid-June and thin out the developing fruit to one pear per cluster. This helps prevent codling moth by reducing the number of preferred egg-laying sites.

**Sources:**

2. Karen Tillou’s class outlines for the “Fruit Tree Short Course” at Clackamas County CC (Jan 2010) – [http://depts.clackamas.edu/hort](http://depts.clackamas.edu/hort)
Harvesting & Ripening

- Quince should be picked when they are full-size and have reached their final coloration.
- If you want PFTP to harvest your tree, it is a good time to give us 2 weeks’ notice when at least 33% of the fruit has reached full size and coloration.
- When you think the fruit is ready to harvest, lift the fruit gently upwards. They’ll be ready to pick when the stem pulls easily away from the branch. If you need to pull hard on the fruit then it may not be ready to pick.
- When harvesting, be careful not to break the stem off of the fruit. If broken, this will act as a wound on the quince and reduce the amount of time that the fruit will last on the shelf/in storage.

Tree Care

In addition to the General Fruit Tree Care tips provided in Part II, here are some specific tips for Quince trees.

Pruning
- Quince are pome fruits so it is appropriate to prune them during the winter.
- Quince are generally grown in the open center or modified central leader training system.

Pest & Disease Management

Codling moth is the most common pest that affects Quince in Portland
- Codling moths are small, ½ inch long, mottled gray moths. Most worms found inside of quince are codling moth larvae.
- Moths become active in late April and begin mating when sunset temperatures reach 62 degrees.
- Eggs are deposited on fruit or nearby leaves. After the eggs hatch, larvae seek out and bore into developing fruit. They leave brown-colored holes in the fruit that are filled with frass (excrement.)
- Codling moths are difficult to manage so combining a number of techniques is important for achieving positive results.
- Trapping, fruit barriers (e.g. paper baggies or nylon footies,) fruit thinning, and cleaning up fallen fruit are all practices that can help to reduce codling moth damage.
- You can make cheap, organic traps for your trees by wrapping corrugated cardboard around the trunk and large branches or by hanging plastic containers filled with a mixture of 1/3 cup molasses, 1 cup cider vinegar, 1/8 teaspoon ammonia, and enough water to make one ½ quart of liquid.

**Apple scab** is the most common disease that affects Quince in Portland
- Apple Scab overwinters on decaying leaves and fruit on the ground so cleaning up fallen fruit and leaves from your tree is important.
- Apply lime in the fall to raise soil pH for less favorable scab conditions
- Proper pruning to thin foliage is also recommended.
- Most quince have a fuzzy, protective layer that may develop scab lesions but will be easily brushed/flaked off at harvest time.

**Fruit Thinning**
Quince do not require fruit thinning.

**Sources:**
2. Karen Tillou’s class outlines for the “Fruit Tree Short Course” at Clackamas County CC (Jan 2010) – [http://depts.clackamas.edu/hort](http://depts.clackamas.edu/hort)