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Growing Pears in the Home Garden

Pears will grow well in all but the colder areas of New Hampshire. Popular varieties such as Bartlett and Bosc are reasonably winter hardy where temperatures seldom fall below -25°F. Pears bloom several days earlier than apples. Late spring frost may damage developing buds, flowers, or fruit on frost-prone sites.

Figure 1. From The Pears of New York by Ulysses Prentiss Hedrick. 1921

What about dwarf pear trees?

Pear trees, like other tree fruits, are produced by grafting the desired variety (such as Bartlett) onto a rootstock. Pear seedlings are commonly used as rootstocks and produce trees that are reasonably winter hardy and vigorous. They are normally spaced 15 to 20 feet apart in the home garden. Trees grafted onto seedling rootstocks can be quite tall. Pear trees are upright.

Dwarf pear trees are produced by grafting pear varieties onto selected dwarfing rootstocks. Quince roots have traditionally been used to create dwarf pear trees. The result is a tree approximately half the size of seedling-rootstock trees. Quince roots aren't as winter hardy as seedling roots and don't tolerate either excessive soil moisture or drought well. In addition, quince roots are very susceptible to the bacterial disease fire blight. Dwarf pear trees are planted eight feet apart.

Newer semi-dwarfing rootstocks are available for pear. Pear varieties grafted onto these semi-dwarfing rootstocks should produce trees about 2/3 the size of standard trees. In addition, these semi-dwarf pear trees will produce fruit earlier in life. These semi-dwarf rootstocks are named OHxF 40, OHxF 333 and OHxF 87. Some fruit tree catalogs will give you the option of selecting both the variety and the rootstock on which it is grafted. These are equally good choices. Space semi-dwarf pear trees 12 feet apart in the home orchard.

Purchasing nursery stock

Purchase trees from a reputable garden dealer or nursery. Tree quality should be the major consideration when purchasing trees. Heavily branched, one-year-old trees usually grow better than smaller ones.

Planting

Pear trees will do reasonably well in a wide range of soil types, although they will not tolerate poorly drained soils with a high water table. Pear trees require full sunlight all day long.

Proper soil preparation is an important first step. Have the soil tested through UNH Cooperative Extension, and add lime as recommended to raise the pH to 6.5. Complete eradication of perennial weeds, particularly quackgrass, is also necessary to ensure success.
Plant pears trees in early spring—early to mid-May is ideal. If the planting site isn't ready when the trees arrive from the nursery, unwrap the trees and "heel-in" the roots in moist soil in a shady spot. Plant the trees before growth begins.

Planting the tree

If the planting site is especially gravelly or sandy it might be useful to incorporate organic matter from green manure crops or surface-applied sources such as compost. The plant debris or surface-applied organic matter should be mixed thoroughly with soil before digging the planting hole.

Dig a hole large enough to allow the roots to be spread out completely. This usually will require a hole that's much wider than it is deep. Back-fill the planting hole using topsoil. Don't use sod to fill the hole.

Plant dwarf and semi-dwarf pear trees so the graft unions are two or three inches above the soil surface. The graft union is the point where the variety was grafted onto the rootstock. Backfill the hole two-thirds full, soak in two gallons of water and finish backfilling. Don't leave a depression or water catching basin around the tree. Remove any tags or labels attached to the trees, as they may girdle the trunks after growth begins.

Don't add fertilizer to the planting hole. Trees may be fertilized after rain has thoroughly settled the soil around the roots (two to three weeks after planting) with one-quarter pound of 10-10-10 or an equivalent amount of compost by spreading it lightly in a wide circle 16 to 20 inches from the tree trunk.

Pruning at planting

Cut back one-year-old whips (unbranched trees) to 33 to 36 inches above the ground. Trees less than 36 inches tall don't need heading back. If the trees you received from the nursery are well branched, leave as many well-positioned branches in the tree as possible to aid growth. Remove branches with crotch angles narrower than 60° and those lower than 18 inches from the ground.

Figure 2 - Pear tree before pruning.
Photo: W. Lord

Training the young pear tree

Young pear trees should be trained to the central-leader system (Fig. 4) used in training apple trees. Because of their more upright growth habit, young pear trees may appear too dense; however, once they begin to fruit, the branches will spread naturally. Limit pruning of young trees to those cuts necessary to maintain the dominance of the central leader. To promote fruiting at an earlier age, position lateral branches to achieve a branch angle or 60 o to 75o from the trunk or leader. Properly positioned branches will grow and fruit well without competing with the trunk of the tree for dominance. . This can be done by bending the branch to proper position and securing it with heavy twine tied to a stake driven into the ground or to an anchor. A gallon milk jug filled with water makes a good anchor. Insure that the twine does not girdle the branch.

Figure 3 - Pear tree after pruning. Excess limbs, over-sized limbs, and water sprouts were removed. Photo: W. Lord

Pruning the mature pear tree

Because of their susceptibility to fireblight, pear trees are pruned less severely than apple trees. Pruning is often limited to removing suckers and those branches that are excessively large compared to its neighbors. It may be necessary to do some thinning out of smaller branches to allow better light and spray penetration and to improve size and color of the fruit. Almost always the best course of action is to remove a problem branch entirely. The optimum height of a mature standard pear tree is between 15 and 18 feet. This height can be maintained by cutting the central leader back to a weaker, up-right growing side branch every 2 or 3 years.

Fertilizing pear trees

Pear trees growing too vigorously are more susceptible to fire-blight infection than those making moderate growth. Fertilize young pear trees with up to a pound of a general garden fertilizer such as 10-10-10 or its equivalent. Older trees that are growing well (more than 10 inches of new growth each year) need no fertilizer.

Varieties

Bartlett is the standard for flavor. It ripens in early September in NH. ***Bosc*** is a good pollinator for Bartlett. It ripens about October 1. ***Clapp's Favorite*** is a late summer pear, very large with good flavor. Like Bartlett and Bosc, it is susceptible to an important bacterial disease called *fire blight*. ***Seckel*** is a small, sweet, firm pear that may be partially self-fruitful.

For Coos County and other colder locations ***Flemish Beauty***, ***Harrow Delight***, ***Nova*** and ***Luscious*** are more hardy choices.

Magness, Potomac and ***Moonglow*** offer excellent fire-blight resistance and fruit quality. ***Honeysweet***, ***Seckel*** and ***Luscious*** also offer good fire-blight resistance.

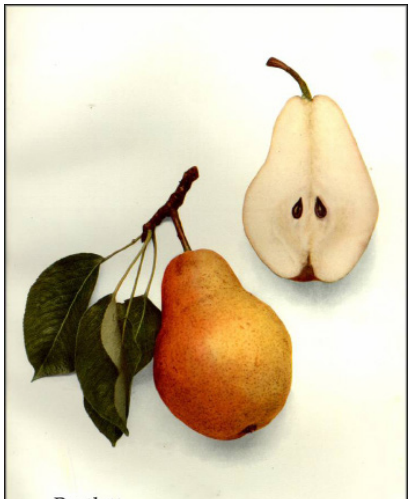

Figure 4. From The Pears of New York by Ulysses Prentiss Hedrick. 1921

Pollination requirements

Pears are pollinated by insects. Honey bees and many native pollinators including several species of solitary bees serve as effective pollinators. Cross pollination is required. That means that you'll need to plant at least two pear varieties to ensure cross pollination if you want your trees to produce fruit. Bartlett and Seckel won't pollinate each other (they are incompatible).

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