



Dwarf Apple Trees for Home Gardens

Dwarf apple trees offer real advantages over standard (also called *seedling*) apple trees. They require less space in the garden. Their reduced size makes it easier to prune and spray the trees and harvest fruit. In addition, dwarf trees bear fruit earlier than their standard-sized counterparts, often just 3-4 years from planting, as compared with 7-10 years for the average standard tree.

What is a Dwarf Apple Tree?

All apple trees are grafted, because apples don't reproduce true from seed. Dwarf apple trees are produced by grafting a variety (such as McIntosh) onto a specific rootstock that has been selected for its dwarfing character.

The most common dwarfing rootstock recommended and used in New Hampshire is M.26 although others such as M.7 and Bud.9 are also used. The degree of dwarfing varies among these rootstocks. A proper spacing guide is provided in Table 1 below. When a larger tree is desired, use M.7 for all varieties.

Purchasing Nursery Stock

Purchase trees (dormant trees are preferred) from a reputable garden dealer or nursery. Request the specific rootstock you need for your situation.

For example, if garden space is limited, you may want to purchase dwarf trees with Bud.9 rootstock (see Table 1). If space isn't a real concern, trees grafted onto M.26 rootstock may be more appropriate.

Tree quality rather than price should be the major consideration when purchasing trees. One year-old, feathered (having several branches) trees, 4 to 6 feet high and at least 5/8 inches in diameter usually grow better than smaller grades.

When ordering trees, plan for the pollination needs of the varieties you choose. Most apple varieties are self-unfruitful and require pollen from a different variety (cross-pollination) to set a crop. Several varieties won't serve as pollinators. These include Mutsu, Gravenstein and Jonagold. A listing of fruit tree varieties recommended for New Hampshire is available from UNH Cooperative Extension.

Table 1. Apple tree spacing guide for the home orchard

Rootstock	Between Rows	Between Trees in Row	Approx. Mature Tree Height
Standard (seedling)	25'	35'	25'
M.7	15'	24'	16'
M.26	8'	16'	11'
Bud. 9	7'	13'	8'

Planting

Apple trees will do reasonably well in a wide range of soil types; however, they won't tolerate poorly drained soils with a high water table.

Proper soil preparation is an important first step. Have a soil test through UNH Cooperative Extension, and apply lime as recommended to raise the pH to 6.5. Complete eradication of perennial weed species, particularly quackgrass, is also necessary to ensure success. Fruit trees require full sunlight and shouldn't be planted in the shade of a building or large tree.

All fruit trees, including apple, should be planted in very early spring, as soon as the soil is dry enough to work (mid-April through May). If the planting site isn't ready when the trees arrive from the nursery, unwrap the trees and "heel in" the roots by covering them with moist soil in a shady spot. Plant trees while they are still dormant (before the leaf buds open).

Planting the Tree

1. Dig a hole large enough to allow the roots to be spread out completely. This usually requires a hole that is much wider than it is deep.
2. Back-fill the planting hole with topsoil. Backfill the hole 2/3 full, soak in 1-2 gallons of water, and finish backfilling. Don't leave a depression or water-catching basin around the tree.
3. Plant the tree so the graft union is 1 to 2 inches *above* the soil surface. The graft union is the point where the variety was grafted onto the rootstock. A small crook in the trunk is usually present at that point.
4. Remove any tags or labels attached to the trees, as they may girdle the trunks after growth begins. Make a map of the planting or place stakes with variety names by each tree so you can evaluate how each variety does at your location.
5. As a rule, all desirable branches on the tree at planting should be left unpruned. An exception would be when a tree has one branch much larger than other branches. This larger branch should be removed because it may cause one-sided development of the tree.

Whips (nursery trees lacking feathers) should be cut back to a height of 33 to 36 inches. More detailed information on pruning and training young apple trees is available from

UNH Cooperative Extension. In addition, county Extension offices offer fruit-tree pruning workshops. These are generally held in late winter or early spring, the correct time for pruning.

6. Stake trees on M.7, Bud.9 and M.26 soon after planting, as staking will greatly increase success with these trees. Electrical conduit pipe (1-inch diameter) is the most common stake in use today. Use 10-foot lengths, with up to 3 feet sunk into the soil a few inches from the trees. Then tie the trees loosely to these supports with black plastic electrical tape, chain ties, or soft twine.
7. Dwarf apple trees will need protection from deer as most of the tree will be within the browse line of deer.
8. Put a vole guard around each tree. Orchard mice (voles) cause severe damage to apple trees. Most of the injury (girdling) occurs under the cover of snow, when feed isn't plentiful and the bark of the apple tree becomes a food source for the mice. Prevent girdling by setting wire mouse guards around the base of young trees.

Use 1/2 inch or finer mesh hardware cloth to construct wire cylinders and place a cylinder around the tree trunk. Embed the mouse guards 1 inch into the soil and make them should at least 18 inches high, so they will be above the snow level.

9. Don't add fertilizer to the planting hole. Fertilize trees after rain has thoroughly settled the soil around the roots. Apply 1/4 pound of 10-10-10 or an equivalent amount of compost by spreading it in a wide circle 16-20 inches from the tree trunk.

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