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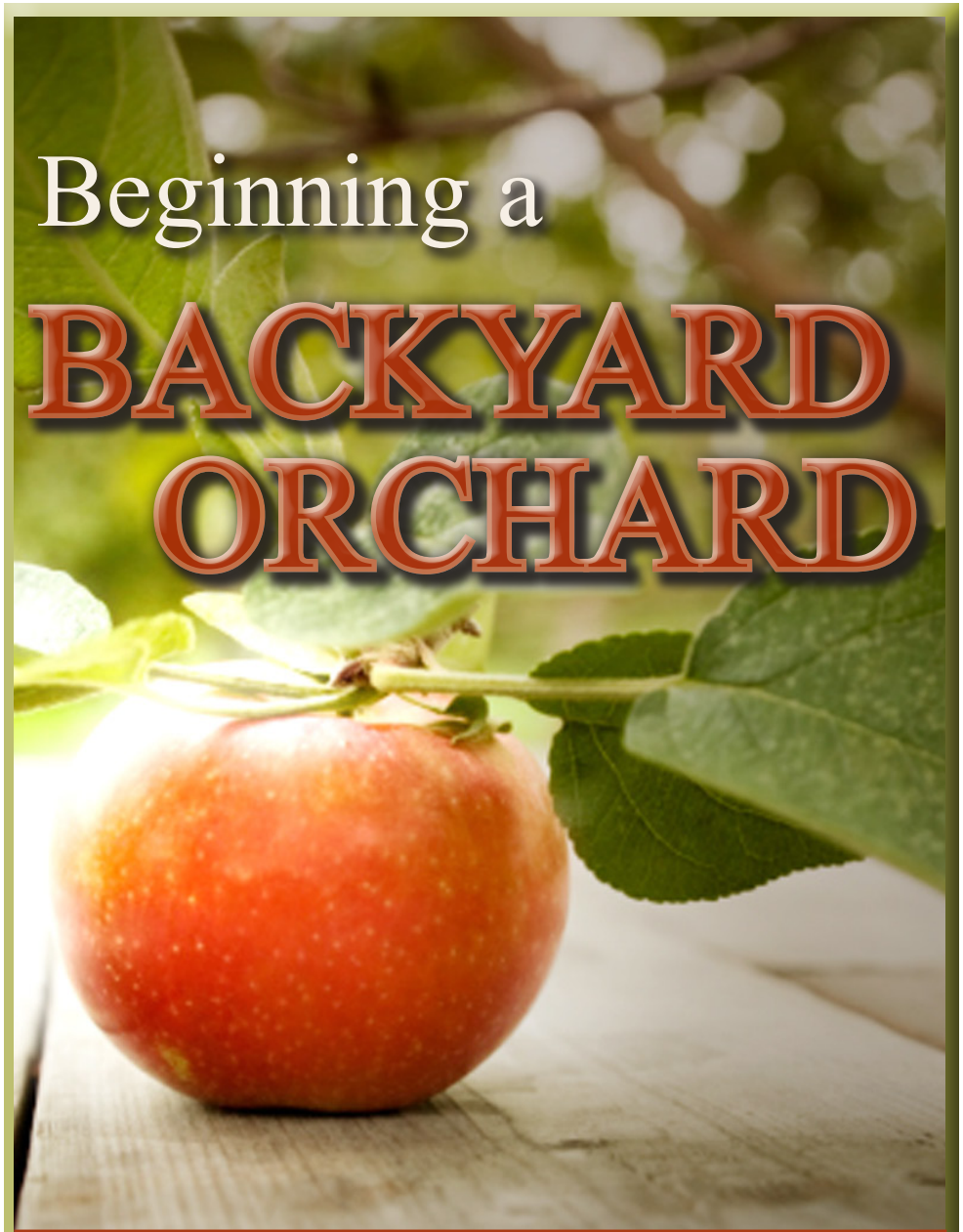
Beginning a BACKYARD ORCHARD



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Beginning a Backyard Orchard

The development of dwarf and semi-dwarf trees has made it possible for anyone – even those who live on small city lots – to enjoy the thrill of picking juicy, tree-ripened fruit from their own orchard.

Apples, peaches, pears, plums and cherries are now all available either as dwarfs, semi-dwarfs, or both. These new small-sized trees can also be used to replace flowering shrubs and hedge plants in a landscape plan. In West Virginia they produce a double dividend of beautiful flowers in the spring and luscious fruits in the fall.

Fruit Tree Types

Fruit trees should be reproduced by grafting material (scions) from proven varieties onto seedlings or seedling rootstocks (clones). This results in a regular or standard-sized tree, 18-25 feet or taller. Fruit trees can also be reproduced from seed but are seldom as productive as the parent tree; the quality of the fruit is rarely as high.

Dwarf and semi-dwarf trees can be produced by grafting scions from a proven parent tree onto specially developed dwarfing rootstocks. The size of a dwarf fruit tree is determined by the rootstock to which the variety has been grafted.

The smallest trees, called dwarf or true dwarf, have been grafted onto East Malling No. 9 rootstocks. Such trees are 7-10 feet tall at maturity and bear fruit in two to three years. Do not plant dwarf trees in light soils. Dwarf trees should be staked for support or they will bend to the ground under the weight of their fruit. Wooden posts 3 inches in diameter, with about 4 feet extending above the ground, will suffice. A six-tree orchard of dwarf trees can be planted in a space about 36x24 feet.

Semi-dwarf trees are usually grafted onto East Malling No. 7 rootstock and are 12-15 feet tall at maturity. These trees require less care, seldom need support, and do better in poorer soil. Plant them about 20 feet apart. Semi-dwarfs are the best producers.

Site Selection

Fruit trees do well only in fertile, well-drained soil. They need lots of sunshine and are very susceptible to frost and freezes. They should not be planted where buildings or other trees will shade them, in depressions or on the uphill side of buildings, in wooded areas or other obstacles which can “dam” the cold air and create a frost pocket, or in soils that have a tendency to become waterlogged.

Planting

Tree root development begins when the soil warms to a temperature of about 45°F. For this reason, West Virginia fruit trees should be planted as soon as the frost is out of the ground in early spring. Although they can be planted in the fall, spring-planted trees grow about as well as if they had been planted in late fall or early winter. Spring-planted trees are also less likely to suffer winter injury.

To plant the tree, dig the hole deeper and wider than the root system. Trim any broken or injured roots and set the tree at approximately the same height as if it was grown in the nursery. (This is very important because if dwarf and semi-dwarf varieties are not planted with the graft at least 2-3 inches above the soil line, the scion often develops roots. This results in the tree growing to standard size.) Place enough good rock-free soil in the hole to fill it to a depth necessary to obtain the correct planting height for the tree. Then place the tree in the hole and firmly pack soil around the roots to ground level. Thoroughly soak the soil around the tree with water.

Contact Information

Plant Industries Division
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Regulatory & Environmental Affairs
Phone: 558-2208
Fax: 558-3594
Pesticide Regulatory Programs Unit
Phone: 558-2209
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Communications Division
Market Bulletin
Phone: 558-3708
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Walt Helmick
Commissioner of Agriculture

Tree Guards

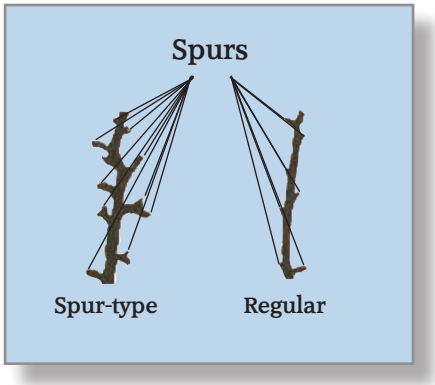
These wraps *(pictured above)* also help to prevent sun scald. Either type of trunk protection prevents accidental skinning by lawn equipment.

The chemicals recommended for home fruit growers have a low toxicity to humans and pets, but nevertheless they must be handled carefully. Be certain to read the label and follow all directions and precautions. The novice home orchardist usually uses the fruit tree spray combinations sold in most garden supply stores. If a special problem occurs or if you prefer to mix your own materials, seek up-to-date information from a county extension agent or the West Virginia Department of Agriculture *(see contacts on page 6)*.

Variety Selection

Most home orchardists begin with apples and then add peaches, pears, plums and cherries as they develop orchard experience.

Most nurseries now offer an assortment of early-to-late ripening trees, providing the home orchardist with fresh fruit throughout the season. The specific characteristics of each type of tree are usually well detailed in their catalogs. If you have a choice, it is best to purchase a "spur" type tree over the "regular" type, because each "spur" bears a flower cluster which results in more fruit per tree *(see illustration below)*.



Pruning

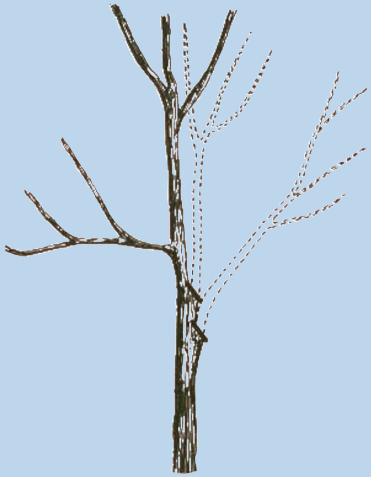
A properly pruned and trained tree lives longer and produces larger yields of better quality fruit. As a general rule, pruning should be done before the tree blooms in early spring when all danger of frost is past. An exception is sweet cherry trees, which are usually pruned in August because there is less danger of bacterial infection.

Fruit trees can be trained to either an "open center" or to a "central leader" *(see illustration on page 3)*. Fully dwarfed apples, standard and dwarf pear trees should be trained to a central leader. Semi-dwarf apple trees may be trained to either a central leader or an open-center crown. Standard apples, sweet cherries, peaches and plum trees should all be trained to the open-center system.

One-year-old apple trees are usually unbranched whips. Prune the top at planting to the height at which the lowest limbs are wanted, usually about 30 inches. Pruning the top stimulates the growth of side branches.

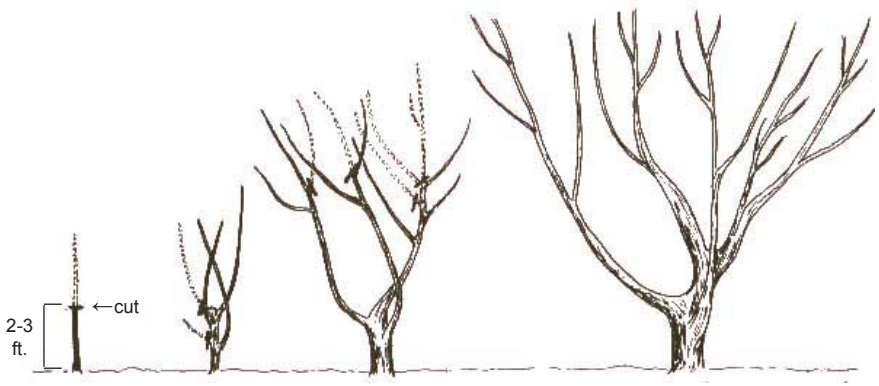
Two-year-old apple trees often have several side branches. Prune them to a central leader and cut back the side branches to about one-half of their original length. Remove any broken branches and any that form an angel less than 45 degrees with the trunk. To increase production, keep the pruning as light as possible the first few years. Two-year-old trees often have large limbs growing low on the trunk. When these are removed, the tree is essentially girdled. Thus, it is a good procedure to reduce the branch to a 4-6 inch "stub"; remove the stubs a year or two later.

Maintenance the first few years after planting includes the removal of diseased, broken, or insect-injured branches and any "water sprouts" not needed to replace other limbs.



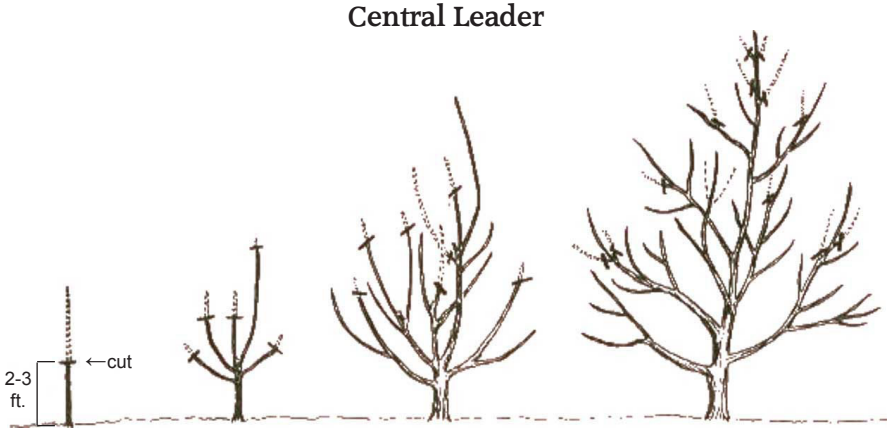
Remove branches which make very narrow angles with the main trunk while the tree is young. If allowed to grow to a productive age, such limbs usually break out, often splitting the entire tree. *(WSU Extension Bulletin)*

Open Center



To train trees to an open center, choose two, three, or four shoots to form main scaffold branches the first winter. Remove or severely head all others. Choose one or two more the second season. Scaffold branches should be at least 8 inches apart on the trunk for a strong tree structure. Four main scaffold limbs evenly distributed around the trunk are enough; a fifth limb crowds. *(Washington State University Extension Bulletin)*

Central Leader



To train trees to a central leader, choose a vigorous shoot high on the tree the first winter after planting. Cut off the top inch to stimulate branching if it is 2 feet long or longer. Head all other vigorous shoots more severely. Repeat the process in the following two seasons so that no side branches become vigorous enough to compete with the central leader. *(Washington State University Extension Bulletin)*

When large limbs are to be removed, first reduce them to a 6-8 inch stub and then remove the stub. Make the first cut about one-half way through the underside of the limb and approximately 8 inches from the main trunk. Complete the cut from the top side (about 6 inches from the trunk) and then remove the stub by sawing it flush with the trunk from the top side. It is not necessary to use wound dressings on any size wounds. In fact, recent research indicates that such dressings are often more harmful than beneficial.

Thin out more shoots toward the end of a well-pruned branch in a mature tree. This will increase fruit size and quality on the remaining shoots. *(Washington State University Extension Bulletin)*

To maintain fruitfulness of lower limbs, cut upper limbs back to more upright branches. *(Washington State University Extension Bulletin)*

Pest Control

Insects and Plant Diseases: It is nearly impossible to get a reasonable yield of unblemished fruit without resorting to a regular, well-timed pesticide spray schedule. The type of equipment depends upon the number and size of the trees. For spraying trees up to 10-12 feet high, a simple 2-gallon, hand-pumped, compressed-air sprayer is sufficient *(pictured above right)*.

Rodents: Mice and rabbits often girdle fruit trees by gnawing away the bark at ground level or just below. Mice can be controlled by poison baits. The most satisfactory way to control rabbits is to place a hardware-cloth tube around the tree or to use the plastic wraps or guards that are sold by nurseries and garden supply houses *(see illustration below)*.

Rabbit Control Galvanized Cloth Guard