

Pruning Apple Trees

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The general purpose of pruning fruit trees is to regulate growth, improve fruit size and quality, control tree size, and reduce production costs. Ideally most pruning is done during the dormant season just before active growth begins in the spring. For maximum yield of high-quality fruit, prune only as necessary to establish a tree capable of supporting heavy crops annually without damage and to allow penetration of sunlight, air, and spray material for good fruit development and pest control.

Training should be emphasized in the development of young trees, with pruning used as a tool in the training process to redirect limbs, stimulate branching when desired, or to remove growth that is in an undesirable location. Future pruning of an apple tree is greatly affected by early training. Young, nonbearing apple trees (and stone fruits) should not be pruned until after February 1.

An integral part of a tree-training program is limb-spreading. As limbs are oriented away from vertical, they exhibit reduced vigor of shoots near the apex, more uniform branching along the shoot, and favor development of fruiting spurs. A limb orientation around 60 degrees from vertical is desired. Horizontal orientation greater than 60 degrees should be avoided. Spreaders, made of steel wire about 1/8" thick or wooden strips with finishing nails in each end, are inserted between the selected scaffold limb and the main trunk of the tree.

Relative tree shape is critical in successful apple production. Good fruiting wood requires moderate vigor and exposure to good light levels. In all trees, an outside zone of leaves and fruit receives a high proportion of direct light; a second zone receives adequate light exposure; and a third, inner zone receives inadequate light exposure and is unproductive. Trees should be cone-shaped, or larger at the bottom than the top, to maximize adequate light exposure.

Pruning should be done on a regular basis and consist of moderate cuts made throughout the tree to distribute vigor and provide good light penetration. Heading cuts should only be used where branching is desired or in areas where vigor is low. Drooping or low-hanging branches should be removed or pruned to a lateral that is positioned above horizontal. Remove crossing, dead, or damaged limbs. Watersprouts should be removed unless one is needed for the development of new bearing surface. Without regular annual pruning, trees often become unproductive. Spray penetration is reduced, and problems such as scale may develop in the dense areas of the tree.

For more detailed information contact your local Extension office.