

Growing Dwarf Fruit Trees On Wires

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Most dwarf fruit trees require substantial support. Without it, they are liable to blow over or to break at the graft-union. This applies particularly to apple on Malling IX and pear on quince. Each tree can be supported on a wire or wooden fence. If there is more than one tree in the planting the fence system is preferable. Experience has shown that even the best wooden post does not last indefinitely and, when it does break off, the tree invariably goes with it, breaking at or below the graft-union. Then too, even if the post remains upright; there is still the danger of breakage of ties unless they are inspected frequently. On the other hand, if the trees are on a fence, the chances of more than one post breaking at a time is rather remote. If only one breaks, the fence will go over only part way and there is a fair chance that the tree will not break off.

Posting and Wiring

The fence, or trellis, should be put up before the trees are planted. Put in afterwards there is danger of injury to tops or roots. At Vineland a planting distance of 12 feet in the row and 10 feet between rows seems to be satisfactory for apple on Malling IX and pear on Quince A (Angers). If the planting distance in the row is 12 feet, the posts should be placed 24 feet apart,

i.e., allowing for two trees between adjacent posts. The posts should be treated with a wood preservative. Place them at a depth of $2\frac{1}{2}$ to 3 feet and anchor the end posts well so they will not be pulled from the vertical position. Four No. 9 galvanized wires are recommended, placing them at approximate heights of 2, 3, 4, and 5 feet from the ground. It is claimed that wavy or "spring" wire stays tight better than ordinary straight wire. Each wire should be stapled at each post. The staples should not be driven in all of the way since this would make it impossible to tighten the wires at the anchor posts when required.

Planting

As a rule, two-year and older trees are preferable to one-year whips. The trees are taller and have more reserve food to get the tree away to a good start in the first season. The purchaser will have to pay more for these older and larger trees but they are worth more. If trees five foot in height are available so much the better. They will be at the top wire at planting time.

The trees should be planted about three inches from the wire line, preferably on the side from which the strongest winds come. Because dwarf trees root readily from above the graft-union and thus may become standard-sized trees on their own roots, it is very important that the union be kept continuously above soil level. This means that the tree should be planted shallow, with

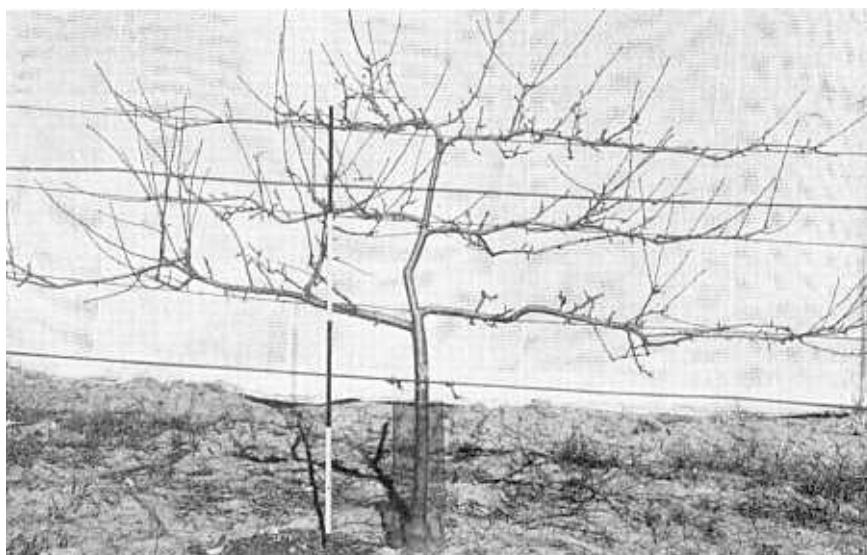
the union at least three inches above ground level.

Training

It is very unusual to get a nursery tree with ready-made "arms" for placing each way along a four-wire system. More likely it will be necessary to discard a high proportion of the top which grew in the nursery, the branches being crowded together in one area along the trunk. In this case, any extension of the leader above the five-foot height should be pruned off and all laterals should be removed, except those from which permanent arms are desired. These selected ones should be cut back to two buds each. If given this drastic pruning, the tree will develop more laterals high on the leader. Most pear varieties and some of the apples will naturally develop a good branching system all along the central leader from

which to make a selection a year later.

Some apple varieties, such as Northern Spy and Delicious, tend to have "bare" areas on the leader. With these varieties it is possible to make fairly certain of arms where required by disbudding methods. Shortly after planting, when the buds are beginning to burst, remove all but eight buds, two at each wire. Preferably, these selected buds should be on the sides of the tree so that the new shoots will grow more or less along the wires. For a few weeks after disbudding has been done, extra precautions should be taken against the breakage of the selected shoots — and they are easily broken off at this stage of growth. Throughout the first summer any unwanted shoots coming from new buds on the main trunk should be removed, all of the sap being forced to go into the eight chosen arms.



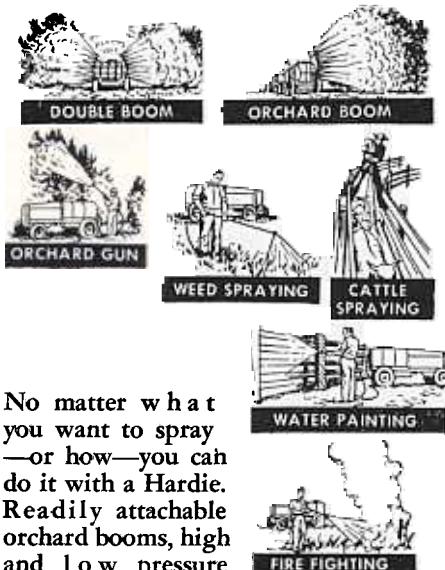
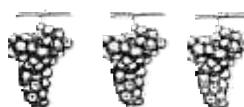
Cox Orange apple on Malling IX rootstock after eight years in the garden. In this case the top wire was added in the seventh year but might better have been in place and ready for use at planting time.

Tying

As soon as the tree is planted and pruned it should be tied with weather-resistant twine, the twine loop being sufficiently loose to allow for the season's growth without causing a constriction at this point. Each spring thereafter up to four or five years, as soon as pruning is completed, replace the tie when required and fasten the arms loosely to the wires. After the tree is a few years old it becomes so interlocked to the wire system that tying is required only at the extremities of the arms.

Pruning

In European countries, summer pruning is very generally practised for trained dwarf trees. At Vineland, all pruning has been done in the dormant season with fairly satisfactory results. In the early years pruning should be very light, branches being removed only when in undesirable positions or for the purpose of dwarfing an arm which is getting far in the lead of any of the others. As the trees come into bearing the branches may become crowded in some areas, resulting in weak wood. A moderate thinning out at these points is justified. It is unnecessary to reduce each arm to a single stem since two or three branches can be tied along the wire in each area. Some pruning should be done every year but if error is to be made in pruning it should be too little, not too much.



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