

Two-Dimensional Fruit Trees for the Small Yard

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Growing fruit trees in small spaces can be challenging. One way is to transform the three-dimensional structure of the tree into a two-dimensional flat form by removing all branches except those in a single plane. The remaining branches are trained to grow in certain, predetermined directions by tying them to a support structure.

A south or southwest facing wall or fence makes an ideal location for two-dimensional trees, providing both shelter and support. Install training wires at 2, 4 and 6 feet above the soil level on the wall or fence.

Use fruit trees grafted onto dwarfing rootstock to limit plant height. Be sure to plant more than one variety if the fruit tree requires a cross-pollinator.

Three flat forms can be adapted to the small garden: single cordon, fan-trained and the horizontal espalier.

The single cordon

A single cordon has a main stem (called the central leader) and severely pruned side shoots which bear fruit. Plant cordons at a 45 degree angle to the ground and tie the central leader to the training wires. Maintain the central leader at a height 4- to 6-inches beyond the 6-foot training wire. Each summer, shorten all side shoots to three leaves beyond the cluster of leaves at the base of the shoot.

Use the single cordon method for pears and apples. If planting more than one single cordon in a row, plant them 6- to 8-feet apart.

The fan

In the fan, the tree is allowed to form multiple lower side branches which are trained in a single plane like a lady's fan. Summer pruning of new growth is required to regulate side shoot development. After two seasons the central leader is removed to accentuate the fan shape.

The fan works well for apples, pears, plums, apricots, peaches, nectarines and cherries. If training more than one tree using this form, plant them 8- to 10-feet apart.

The horizontal espalier

In the horizontal espalier, the tree is again trained in a single plane with branches, usually in three tiers, coming off the central leader at right angles. It resembles a series of “T’s” sitting on top of one another. In the first year, two strong side shoots growing in opposite directions are selected and tied to the 2-foot training wire. The central leader is pruned a few inches above the 4-foot wire to encourage side shoots. All other branches are removed. The process is repeated for the next two years until you have two horizontal limbs running in opposite directions on the 2, 4 and 6-foot training wires. The central leader is then topped off and maintained just above the 6-foot wire. This system can crop heavily and needs summer pruning to keep it in check.

The horizontal espalier works well for apples and pears. If training more than one tree using this form, plant them 8- to 10-feet apart.

It can take five or more years to achieve a desired flat form. With this approach, however, you can grow good quantities of fruit at an easy-to-pick height in a small amount of yard space.

Espaliered apple trees in the Holtrop family garden in Sequim

