

# Beth Young

G A R D E N D E S I G N

Info Sheet #1

## Fruit Espaliers

Espalier, the French word adapted from the old Italian *spallieria* (“something to lean against”) applies to any plant grown in a flat, vertical pattern.

Fruit espaliers are the perfect way to produce enough fruit for an entire family, without taking up much space. In fact, espaliers originated in Europe’s walled medieval towns, where there was a pressing need to feed many people with little space. Today, espaliered trees are still a good idea--and not only for the space that they save.

### Why Espalier?

Espaliered trees grown against a south-facing wall or fence produce larger, better-quality, and earlier fruit due to the reflected heat and wind protection provided by the wall or fence. Also, the espaliering process of selective pruning opens up the entire tree to more sunlight and air circulation, thus promoting fruit production and avoiding disease. Because espaliering often involves bending branches downward, the tree’s growth is slowed so energy is channeled into the production of bigger fruit. Espaliers, usually not exceeding 6’, allow easy access for pruning, spraying and picking--which is why they are used commercially. And, with their geometric patterns (especially evident in the winter), espaliers add a welcome landscape element to the garden.

### Choosing the fruit tree

*Which variety would work in my climate?*

Most apples, pears, cherries, apricots, peaches and nectarines have a three-month chilling requirement--with temperatures of 45 degrees or less--in order to blossom and set fruit. However, there are some newer varieties that have shorter chilling requirements--consult your local nursery or the *Sunset Western Garden Book* to find the variety that works best for your climate and family’s needs.

If you are limited in space, or wish to keep your espalier low, there are many varieties available on dwarf rootstock which can easily be kept lower than six feet.

When purchasing your tree, be aware that you may need to buy two. This is because most fruit trees, in order to produce fruit, require another tree of the same type--a pollinator--to be in the vicinity. Ask at your local nursery if your tree needs a pollinator. A good mail-order catalogue will give you that information as well.

Fruit trees are available as bare-root “whips” (unbranched young trees), or in containers. Purchasing bare-root gives you the most flexibility in achieving the espalier pattern of your choice. These are sold (and should be planted) in mid-winter, when the plant is dormant. Container plants, available year-round, offer self-pollinating varieties, as well as trees that have already been espaliered--a convenient choice for a quick effect. In mild-winter climates such as the Willamette Valley, container plants are best planted in the fall--look for 50%-off sales at the local nurseries.

### Locating and preparing for the espalier

Fruit-bearing espaliers need at least six hours of sunlight a day during the growing season in order to blossom and set fruit. When planting along a fence or wall, trellises or support wires should be at least 6 inches from the fence to promote air circulation, reduce chances of rot and allow room to tying, pruning and fruit formation. If the fence or wall is light-colored or south-facing, the espalier structure should be 12 inches from the wall to prevent damage from reflected sunlight.

### Soil Preparation

Soil should be neutral to slightly alkaline, with a pH of 6 to 6.5. If your soil is too acidic, add lime (dolomitic limestone) to the root zone every three years.

### Planting

If you have purchased a bare-root whip (young tree), soak the roots for one or two hours before planting. If you can't plant right away, make sure the roots are moist in their packing, and place in a cool place out of the sun, such as an unheated garage.

Dig a generous hole, at least 1-1/2 times the diameter of the root mass and place the whip in it. The plant should sit at the same level it was growing at the nursery. Once it is at the correct height, gently spread out its roots and fill in around them with soil, working the soil with your hands to make sure no air pockets remain. Bareroot plants can receive a little 5-10-5 fertilizer, but be careful not to over-fertilize (read the label). Container-grown trees should not be fertilized at all within the first six months of purchase. Water deeply, adding soil if necessary to reach the level of the adjacent soil. Create a basin around each tree to retain water. Cover with 2" of mulch, keeping the mulch a few inches away from the trunk to prevent rot.

Most fruit trees are grafted onto roots of another variety. You will see a thick, scarred area at the base of the trunk--the graft. If you are planting grafted rootstock, make sure that the graft is 2 inches above the soil, and keep mulch away. If the graft gets near soil or mulch, it will send out roots from the trunk, and you will end up with roots that are not disease-resistant and/or a full-sized tree instead of the dwarf that you purchased.

### Pruning

Generally, espaliers are pruned and/or bent throughout the growing season in order to achieve the desired pattern. During the first Spring,

1. Decide on an espalier pattern. A good resource is the book *Living Fences* by Ogden Tanner.
2. Remove all crossing, diseased or misshapen branches, if any. Remove any branches that stick out of the flat pattern or do not otherwise contribute to the design that you have chosen.
3. Keep buds, shoots or branches that are growing in the direction that you want a branch to go. To encourage bud growth in this direction, prune the branch ¼-inch above the bud.

During the growing season (each year)

- When a shoot forms that is not in keeping with the overall pattern, cut that shoot to its base.
- Once a branch has reached the desired length, maintain that length by periodically cutting it.
- If you have chose a pattern that involves bending of branches, wait until the branch is slightly thicker than a pencil and has grown a foot or more beyond the bend. Bend it to the desired position, tying it to a stake if necessary.
- If the variety of plant has woody branches, such as apple or pears, you may have to train it in gradual stages. If you are trying to make a vertical branch horizontal, start by tying the shoot to a stake set at a 45-degree angle from the vertical. When it has grown to 2 or 3 feet, bend the stake (and branch) down to 30 degrees, eventually bending the stake (and branch) to the horizontal. Eventually, you can remove the stake.
- Always remove dead, broken, diseased or crossing branches. Be careful not to cut spurs (twiglets less than six inches long that produce fat flower buds followed by fruit) on apple or pear trees.
- In colder climates, do not prune after Labor Day, or you will stimulate new growth that will die in early frosts. Wait until the tree is dormant.