

EUROPEAN BEECH CULTIVARS HAVE ADVANTAGE OVER AMERICAN

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American or European Beech can be an exciting addition to the landscape if used in the correct situation or with compatible plants.

American Beech (*Fagus grandifolia*), a native climax forest tree, is often found associated with Sugar Maple. It thrives in well-drained, fertile soil with a high water table (within two feet of the surface). *Fagus grandifolia* is found near lakes, ponds, flood plains, or slightly upland sites. This giant native reaches 50 to 70 feet in height in the landscape with some in the wild reaching 100 feet in height. American Beech, at maturity, has an oval habit in the forest, but when grown as a specimen, its lower branches are somewhat descending.

The foliage is a silver-green when in new growth, changing to a dark, rich green throughout the summer, with exciting fall color. The fall color can vary to yellow, orange, or brown on the same tree with brown predominating. The fall color is unique as many of the upper leaves fall off, giving the tree a "skirted" look to the lower portion. Further, the lower leaves remain on the tree for much of the winter, becoming a translucent pale brown, giving the plant a ghostlike appearance.

The clear gray bark is outstanding throughout the year, adding color and texture to the "woody" landscape. A group of old trees gives one the feeling of a herd of elephants.

American Beech is a sensitive native aristocrat. This plant should be used in natural park situations, not golf courses, the home landscape, or areas of active recreation. It is so sensitive that slight changes in grade (two to three inches), wounds (a lawn mower), or pruning will result in decline or death. American Beech can be pruned when young (cuts under one inch in diameter) during March or before dormancy breaks. Pruning at other times of the year or larger wounds often result in heartwood rot. This plant is a poor compartmentalizer. Insect problems are many, but rarely damage the tree, with the exception of borers. Borers are an indicator that the plant is no longer in good vigor and usually contribute to the death of the tree. Presently, cultivars of *Fagus grandifolia* haven't been developed. One desirable characteristic for a cultivar would be a plant that has isolated or compartmentalized wounds.

European Beech (*Fagus sylvatica*), although related to our aristocratic native, is more adaptable for the landscape and has many interesting cultivars. *Fagus sylvatica* is relatively easy to transplant and becomes established within a year. Ultimately, it attains 80 to 90 feet in height. The oval, mature habit is accented with dense branching to the ground. In fact, European Beech is so dense that grass is unable to grow underneath it. The lower branches, which add to its gracefulness, should be left on. The leaves of European Beech have a smooth margin as contrasted to the coarsely serrated margin of the American Beech. The leaf color is a bright green when new, becoming a rich

dark green as summer progresses. Fall color is slow to develop or non-existent most years.

European Beech will tolerate shade, as does American Beech, but thrives in full sun. It can be used in large area landscapes, e.g. parks, institutional grounds, or estates, as a specimen tree. European Beech can be planted in rich, well-drained soil with a high water table, as with American Beech. In fact, if the water table isn't within two feet of the surface, one should consider supplemental irrigation. *Fagus sylvatica* can be pruned, but heartwood rot is still a problem. Wounds from lawn mowers or large limb pruning will close faster than *Fagus grandifolia*, but compartmentalization is still a problem. Optimally, pruning would be limited to early spring (March through dormancy break) on two-inch or smaller branches. Generally, European Beech can tolerate difficult environmental conditions more than the sensitive native American Beech.

'Fern-Leaf' European Beech (*Fagus sylvatica* 'Asplenifolia') has a habit similar to European Beech, e.g. 90 feet in height, being a perfect oval. The deep-cut leaves give a fern-like or delicate feeling. This tree seldom needs pruning when grown as a specimen. It can be used effectively in parks, large estates, or institutional grounds. To add to its gracefulness and excitement, one should leave the lower branches clear to the ground. This reduces maintenance and the possibility of wounds.

Columnar European Beech (*Fagus s. 'Fastigiata'*) is a narrow, upright plant which is exciting when used in mass plantings or as a hedge. Its ultimate width is 20 to 25 feet with a height of 40 to 50 feet.

'Purple-Leaf' European Beech (*Fagus s. 'Atropunicea'*) is the most readily available cultivar. This tree's leaf is dark purple in early spring, becoming a rich, dark green in early summer, analogous to 'Schwedleri' Norway Maple. The rate of growth of this plant is 12 to 18 inches in height annually, after establishment.

Weeping European Beech (*Fagus s. 'Pendula'*) is one of the truly exciting pendulous trees. Staking is required until the tree reaches 60 to 80 feet in height. This tree, from the underside, looks like a spiraling ladder, ascending to the sky. From the outside, it is a mass of foliage, with pendulous branches - interesting in all seasons. It establishes slowly, growing six to eight inches annually in height. If there is an outstanding cultivar of European Beech, *Fagus s. 'Pendula'* is probably it.

Copper Leaf European Beech (*Fagus s. 'Riversii'*) holds its reddish foliage throughout the growing season. When its leaves first unfold, they are a vivid red, turning a deep purple early in the summer. This is the most exciting and easily transplanted cultivar of the copper or purple-leaf forms.

'Tricolor' European Beech (*Fagus s. 'Roseo-marginata'*) is a tree adapted to the Central

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Range of beech. It is dependably hardy as far north as Detroit, yet thrives further south, e.g. Cincinnati. The foliage is usually purple leaves with light pink surroundings and a white margin. This handsome specimen adds unique interest to formal or inner city park areas.

American Beech should be strictly limited to naturalistic areas where lawn mowers and/or pruning shears never touch its bark. American Beech is an exciting native tree which doesn't tolerate man and his manipulations of the landscape. European Beech and its cultivars are far more diverse and adaptable to the American landscape scene. European Beech transplants easier, establishes more rapidly, responds well to light pruning, and can be an exciting specimen plant when used in large landscapes, e.g. institutional grounds, parks, or golf courses. **WTT**

The outstanding cultivar of European Beech *Fagus sylvatica Pendula*, (left) is interesting in all seasons. However, it establishes slowly and must be staked until it reaches 60 to 80 feet in height.

Fern-Leaf European Beech *Fagus s. Asplenifolia* (below) seldom needs pruning and can be used effectively in parks, large estates, and institutional grounds. Lower branches eliminate turf care underneath.

