USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

Plant Fact Sheet

GRAY BIRCH

Betula populifolia Marsh.

Plant Symbol = BEPO

Contributed by: USDA NRCS New York State Office

Robert H. Mohlenbrock
USDA NRCS. 1995. Northeast Wetland Flora
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Uses

Riparian buffers: Gray birch can add visual interest and diversity to buffer installations, except where water tables are at or near the surface.

Wildlife: Birds, especially goldfinches and other small-seed eaters, feed heavily on ripe gray birch seed.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status (e.g. threatened or endangered species, state noxious status, and wetland indicator values).

Description

Betula populifolia Marsh., gray birch, is a pioneer species typically found on disturbed sites with exposed, well drained soils. Gray birch is a moderate sized tree with fast growth (2-5 ft/yr) on sites with nutrient availability. The bark of sapling and pole aged plants is white, but not as bright or as papery as that of paper birch. Beyond the pole stage of growth the bark quickly develops black and rough patches, with white remaining between them. Gray birch has strong terminal growth and is typically well-formed with relatively small diameter branches. The leaves of gray birch are narrowly triangular with larger serrations along the edge than paper birch. The fall color of gray birch is a bright yellow. In eastern Pennsylvania where the ranges of gray and river birch overlap, the salmon colored bark and wider leaves distinguish the river birch.

Adaptation and Distribution

Gray birch is adapted to soils with poor and excessive drainage. However, it is much more common on dry, disturbed soils throughout much of its range. Gray birch is native to eastern Pennsylvania, New Jersey, and New York (roughly the I-81 corridor) to the Canadian Maritime Provinces. It is often in association with conifers such as white pine and scotch pine where seed sources exist. It is often the first tree species to invade disturbed droughty sites and tends to inhibit other vegetation by utilizing the available soil moisture and nutrients. Gray birch, as a pioneer species, prefers sites with ample sunlight and is shade intolerant. It is not tolerant of flooding of any significant duration.

For a current distribution map, please consult the Plant Profile page for this species on the PLANTS Website.

Establishment

As noted above, gray birch is a rapid invader on disturbed sites when local seed sources exist. With mature trees in the vicinity there is little need to plant gray birch. Seedlings of the species, whether wild or nursery grown, are easily transplanted and are widely adapted to soil conditions. Due to their rapid growth in the nursery, stock is outplanted as 1 yr or 2 yr field grown bareroot seedlings. Gray birch, like all seedlings, requires protection from competing vegetation and weeds to achieve acceptable growth rates.

Planting dates for trees and shrubs vary depending upon their classification as conifers or deciduous. Gray birch can be planted in the spring or fall after the leaves have turned color. The seedlings will respond best if planted as early in the spring as possible, or as soon as the plants are dormant in the fall. Both situations allow for root growth and settling of the soil before leaf-out or cold drying winds increase moisture stress.

In the nursery seed can be planted without stratification. Seed must be planted very shallowly to allow for light to help trigger germination.

Management
Maintaining suppression of grasses and weeds is the key to success with woody plantings. On sites where gray birch seeds in from surrounding mature trees, the birch may have to be controlled to avoid too much competition with other desirable species.

Soil amendments are generally not needed for acceptable growth of this species.

Pests and Potential Problems
Gray birch is more resistant than paper birch to the bronze birch borer, and is seldom killed by it. Likewise, chinch bugs infest the young catkins and leaves, but the tree seems to tolerate them.

Cultivars, Improved, and Selected Materials (and area of origin)
There may be cultivars of gray birch in the horticultural trade, for instance "weeping" or variegated selections. These should be avoided for conservation plantings as they frequently require exceptional care to maintain and are not as likely to withstand environmental stress. Regional seed sources are highly preferred for planting stock.

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Edited: 01Feb2002 JLK; 31may06jsp

For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS Web site<http://plants.usda.gov> or the Plant Materials Program Web site <http://Plant-Materials.nrcs.usda.gov>