



***Acer rubrum 'Autumn Flame'* 'Autumn Flame' Red Maple¹**

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INTRODUCTION

This cultivar of Red Maple has an round shape and is a fast grower with strong wood, reaching a height of 45 to 50 feet (Fig. 1). The crown is denser and more uniform than the species. Unless irrigated or on a wet site, red maple is best used north of USDA hardiness zone 9. Trees are often shorter in the southern part of its range unless growing next to a stream or on a wet site. This tree is preferred over Silver Maple or Boxelder when a fast growing maple is needed. The newly emerging leaves and red flowers and fruits signal that spring has come. They appear in December and January in Florida, later in the northern part of its range. The seeds of Red Maple are quite popular with squirrels and birds.

GENERAL INFORMATION

Scientific name: *Acer rubrum 'Autumn Flame'*

Pronunciation: AY-ser ROO-brum

Common name(s): 'Autumn Flame' Red Maple

Family: Aceraceae

USDA hardiness zones: 4 through 8 (Fig. 2)

Origin: native to North America

Uses: Bonsai; wide tree lawns (>6 feet wide); medium-sized tree lawns (4-6 feet wide); recommended for buffer strips around parking lots or for median strip plantings in the highway; near a deck or patio; reclamation plant; screen; shade tree; specimen; residential street tree

Availability: somewhat available, may have to go out of the region to find the tree

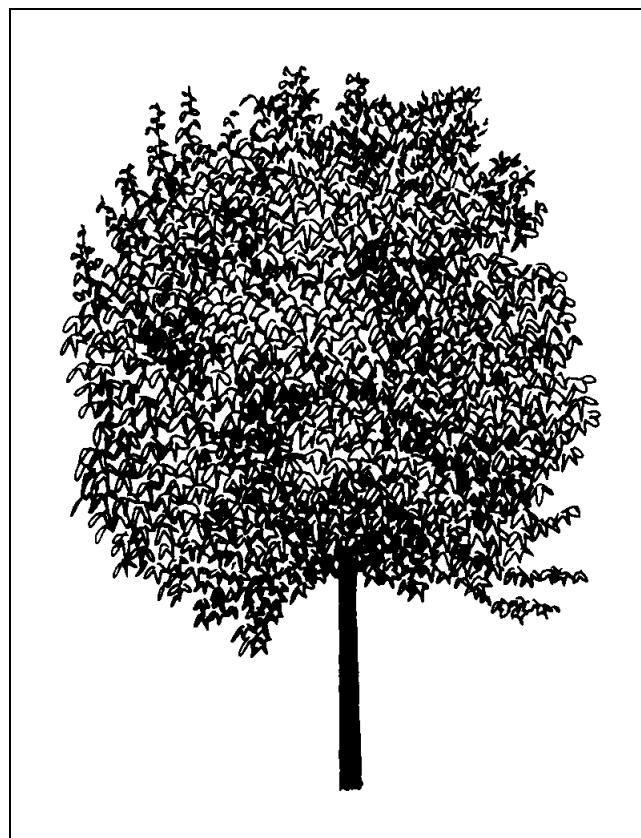


Figure 1. Middle-aged 'Autumn Flame' Red Maple.

DESCRIPTION

Height: 45 to 50 feet

Spread: 35 to 50 feet

Crown uniformity: symmetrical canopy with a regular (or smooth) outline, and individuals have more or less identical crown forms

Crown shape: round

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Figure 2. Shaded area represents potential planting range.

Crown density: dense

Growth rate: medium

Texture: medium

Foliage

Leaf arrangement: opposite/subopposite (Fig. 3)

Leaf type: simple

Leaf margin: lobed; incised; serrate

Leaf shape: star-shaped

Leaf venation: palmate

Leaf type and persistence: deciduous

Leaf blade length: 2 to 4 inches

Leaf color: green

Fall color: red; yellow

Fall characteristic: showy

Flower

Flower color: red

Flower characteristics: showy; spring flowering; winter flowering

Fruit

There is no fruit on this tree.

Trunk and Branches

Trunk/bark/branches: bark is thin and easily damaged from mechanical impact; droop as the tree grows, and will require pruning for vehicular or pedestrian clearance beneath the canopy; not particularly showy; should be grown with a single leader; no thorns

Pruning requirement: needs little pruning to develop a strong structure

Breakage: resistant

Current year twig color: gray; reddish

Current year twig thickness: medium

Wood specific gravity: 0.54

Culture

Light requirement: tree grows in part shade/part sun; tree grows in full sun

Soil tolerances: clay; loam; sand; acidic; extended flooding; well-drained

Drought tolerance: moderate

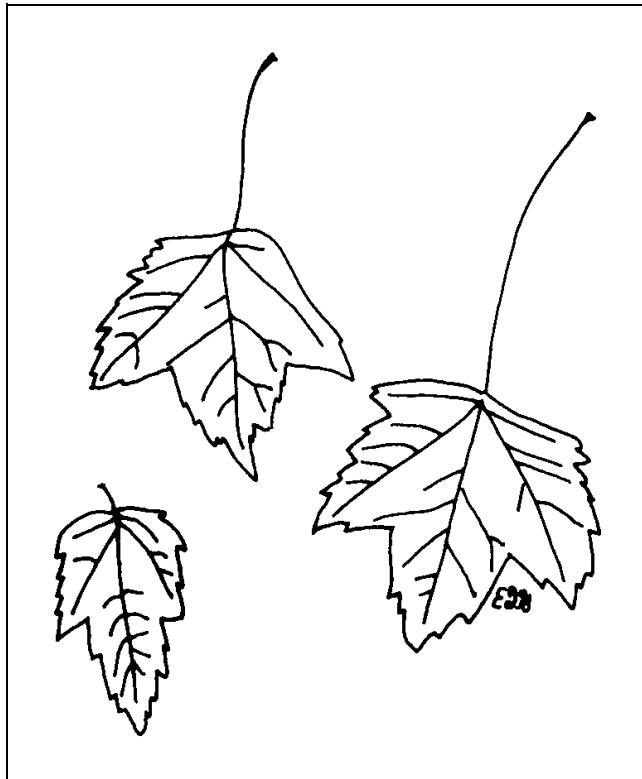


Figure 3. Foliage of 'Autumn Flame' Red Maple.

Aerosol salt tolerance: low

Soil salt tolerance: poor

Other

Roots: surface roots can lift sidewalks or interfere with mowing

Winter interest: tree has winter interest due to unusual form, nice persistent fruits, showy winter trunk, or winter flowers

Outstanding tree: tree has outstanding ornamental features and could be planted more

Invasive potential: little, if any, potential at this time

Verticillium wilt susceptibility: susceptible

Pest resistance: long-term health usually not affected by pests

USE AND MANAGEMENT

The outstanding ornamental characteristic of this cultivar of Red Maple is the consistently good red to yellow fall color lasting several weeks. It is often one of the first trees to color up in autumn, and it puts on one of the most brilliant displays of any tree. Leaves persist longer than the species.

The tree makes the best growth in wet places and has no other particular soil preference except chlorosis

may develop on alkaline soil where it also grows poorly. It is well-suited as a street tree in northern and mid-south climates in residential and other suburban areas but the bark is thin and easily damaged by mowers. Irrigation is often needed to support street tree plantings in well-drained soil in the south. Roots can raise sidewalks as silver maples can but they have a less aggressive root system and so they make a good street tree. Surface roots beneath the canopy can make mowing difficult.

Red Maple is easily transplanted and usually develops surface roots in soil ranging from well-drained sand to clay. It is not especially drought-tolerant, particularly in the southern part of the range, but selected individual trees can be found growing on dry sites. This trait shows the wide range of genetic diversity in the species. Branches often grow upright through the crown forming poor attachments to the trunk. These should be removed in the nursery or after planting in the landscape to help prevent branch failure in older trees during storms. Select branches with a wide angle from the trunk and prevent branches from growing larger than half the diameter of the trunk. This will help reduce storm damage.

A number of other cultivars are listed. Due to graft-incompatibility problems which cause the tree to break apart, preference should be given to cultivars produced on their own roots. In the northern and southern end of the range, choose cultivars with regional adaptation. The cultivars are: 'Armstrong' - upright growth habit, almost columnar, somewhat prone to splitting branches due to tight crotches, 50 feet tall; 'Bowhall' - upright growth habit, branches form embedded bark, graft incompatibility on grafted trees; 'Gerling' - densely branched, broadly pyramidal, about 35 feet tall when mature; 'October Glory' - above average fall color, excellent tree, retains leaves late, 60 feet tall; 'Red Sunset' - above average orange to red fall color, does well in the south in USDA hardiness zone 8, probably the best cultivar for the deep south, oval, 50 feet tall; 'Scanlon' - upright growth habit; 'Schlesinger' - good fall color, rapid growth rate; 'Tilford' - globe-shaped crown. Variety *drummondii* suitable in USDA hardiness zone 8.

Pests

Aphids infest maples, usually Norway Maple, and may be numerous at times. High populations can cause leaf drop. Another sign of heavy aphid infestation is honey dew on lower leaves and objects beneath the tree. Aphids are controlled by spraying or

they may be left alone. If not sprayed, predatory insects will bring the aphid population under control.

Scales are an occasional problem on maples. Perhaps the most common is cottony maple scale. The insect forms a cottony mass on the lower sides of branches. Scales are usually controlled with horticultural oil sprays. Scales may also be controlled with well-timed sprays to kill the crawlers. Oyster shell scale is also common.

If borers become a problem it is an indication the tree is not growing well. Controlling borers involves keeping trees healthy. Chemical controls of existing infestations are more difficult. Proper control involves identification of the borer infesting the tree then applying insecticides at the proper time.

Diseases

Verticillium wilt symptoms are wilting and death of branches. Infected sapwood will be stained a dark or olive green but staining can't always be found. If staining can not be found do not assume the problem is not verticillium wilt. Severely infected trees probably can't be saved. Lightly infected trees showing only a few wilted branches may be pulled through. Fertilize and prune lightly infected trees. This treatment will not cure the problem but may allow the tree to outgrow the infection. Girdling roots will cause symptoms which mimic verticillium wilt.

Scorch may occur during periods of high temperatures accompanied by wind. Trees with diseased or inadequate root systems will also show scorching. When trees do not get enough water they scorch. Scorch symptoms are light brown or tan dead areas between leaf veins. The symptoms are on all parts of the tree or only on the side exposed to sun and wind. Scorching due to dry soil may be overcome by watering. If scorching is due to an inadequate or diseased root system, watering may have no effect.

Nutrient deficiency symptoms are yellow or yellowish-green leaves with darker green veins. The most commonly deficient nutrient on maple is manganese. Implanting capsules containing a manganese source in the trunk will alleviate the symptoms. Test soil samples to determine if the soil pH is too high for best manganese availability. Plants exposed to weed killers may also show similar symptoms.

Tar spot and a variety of leaf spots cause some concern among homeowners but are rarely serious enough for control.