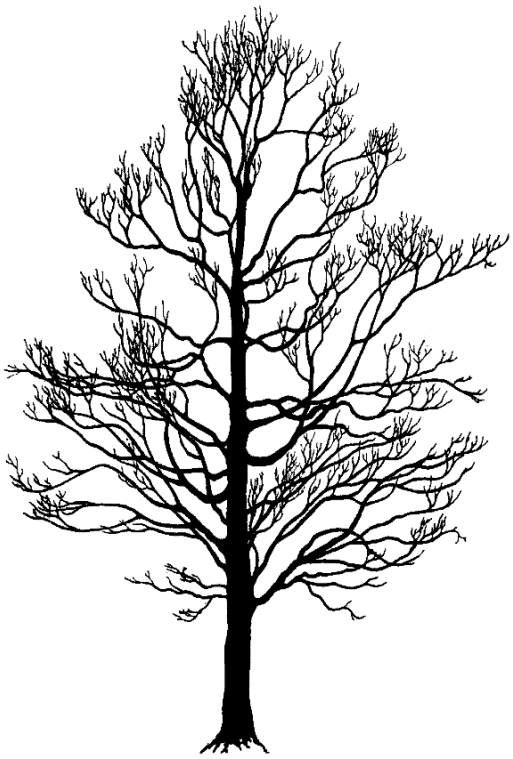
BARTLETT TREE EXPERTS
SCIENTIFIC TREE CARE SINCE 1907

Plant Health Care Recommendations for Sugar Maple

Sugar maple (*Acer saccharum)* is a large growing, highly desirable shade tree for many northern landscapes. During the summer it has medium green leaves which change to brilliant yellow, orange and red in the fall. Sugar maple will grow to a height of 60 to 80 feet in the landscape and has a rounded crown typically 2/3 of the height wide. Maple syrup is produced primarily from sugar maple. Trees are tapped in February or March to extract the sap; 40 gallons of sap are required to produce one gallon of syrup.



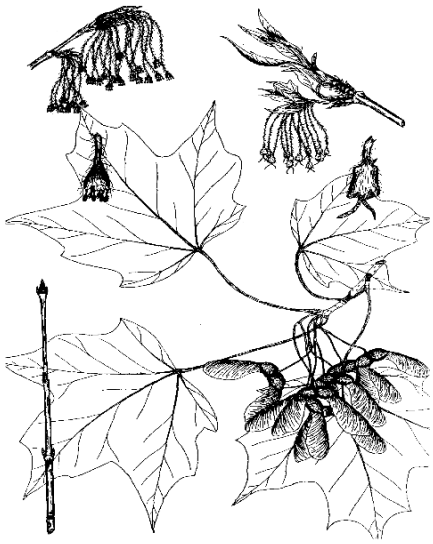
While sugar maple grows well as a yard tree, it does not do as well in restricted urban sites. It requires a large area with noncompacted, fertile, moderately moist, well drained, slightly acidic soils with a pH of 5.5 to 6.8 and adequate levels of organic matter (>3.5%). Growth is fastest in full sun; however, the tree will tolerate shade when it is young. It can not tolerate extreme soil moisture; soils that are either wet or dry will cause problems with tree development.

Yellowing between the veins of leaves, interveinal chlorosis, is a symptom of manganese deficiency. This problem occurs on soils with high pH, low manganese levels and/or poor drainage. Trees with root disorders are more prone to nutrient deficiency. When soil pH is greater than 6.8, manganese is converted to forms which are not available to the plant which increases the probability of chlorosis.

Sugar maple is susceptible to a number of leaf spot diseases that may disfigure leaves and cause early defoliation. Cankers, diseases of the bark, occur mainly after severe winters or extended droughts. They cause limb dieback and can kill the tree if they progress into the stem. Root and wilt diseases caused by *Verticillium, Phytophthora, Armillaria* and nematodes can cause dieback of the crown and eventual death. Sugar maple is susceptible to several important decay fungi that attack the wood. These fungi enter through improper pruning cuts and other injuries to the trunk and limbs. Decay can structurally weaken the trunk, increasing the potential for tree failure.

There are numerous insects and mites that may attack maples. Leaf feeding caterpillars include gypsy moth (*Lymantria dispar*), tent caterpillar (*Malacosoma distria*) and cankerworms. White coatings on twigs is caused by the cottony maple scale (*Pulvinaria innumerabilis*), less visible scales include gloomy, maple phenacoccus, and maple leaf. Aphids and scale can also cause sooty mold, a blackening of leaves, and reduced vigor.

Sapsuckers, deer and squirrels attack sugar maples to eat or drink the sweet sap. These wounds may girdle the trunk or provide entry for canker fungi.



Any limitation to water uptake can severely damage trees. Salt in the soil or in spray form traffic or the ocean salt water will result in dieback or twigs, marginal necrosis, and a general decline of the tree. Drought also leads to decline and occasionally physiological leaf scorch, which appears as marginally browning during the summer. Mulching trees, especially when young will aid in conserving soil moisture and modifying the soil pH and organic matter levels to better suit the tree needs.

The Florida maple (*Acer floridanum)* and southern sugar maple (*Acer barbatum*) are genetically very similar to sugar maple and preform much better in southern states. Many varieties of sugar maple are available to fit site needs. These varieties have improved fall color; drought resistance columnar, conical or compact shape.

Recommended Monitoring for Sugar Maple

Timing	**Treatment**
Winter	Corrective prune to remove dead, dying, diseased and needed. Young trees may need protection from deer feeding and sunscald if in exposed sites.
Mid spring	Apply anthracnose and leaf spot suppression treatment, if there is a history of disease or excessive rain. Trunk inject manganese, if needed.
Late spring	Monitor leaf feeding and scale insects. Repeat soil and leaf disease treatments as needed.
Early summer	Monitor leaf feeding and scale insects. Repeat leaf disease treatment if needed.
Summer	Monitor soil moisture, especially on newly planted trees.
Fall	Continue with soil treatments for pH problems. Fertilize as needed. Begin deer repellent treatments on young trees if needed. Soil -inject systemic insecticide if sucking insects are a problem.