

## Niagara College Greenhouse & Nursery Success Sheet No. 46

# Tough Trees for Harsh Conditions

### Choice of a Tree

Many people have trouble growing trees because the trees they choose are not adapted to the environmental conditions in their area. Some environmental conditions will not sustain many types of trees.

Harsh conditions such as high moisture or excessive drought, sandy soil or clay soil, extreme heat or cold, acidic soils or basic soils, high winds, pests, air pollution and road salts can hinder the growth of many cultivars of trees. Under harsh environmental conditions, you must choose a tree that is tough and durable.

### *Acer campestre*

The hedge maple (25 to 35' high and wide) is a tree that will thrive in most places in southern Ontario. It adapts well after transplanting regardless of the soil type or pH and is an excellent tree for residential areas because it's tolerant of dry, compacted soil and air pollution.

The hedge maple is a slow-growing tree producing strong wood capable of withstanding high winds. Overall, it's an appealing tree pruned or left to grow naturally.

### *Ailanthus altissima*

The tree of heaven (40 to 60' high, two thirds as wide) is probably the most adaptable and pollution-tolerant tree grown in southern Ontario. It will grow in any type of soil and can germinate even in a sidewalk crack. This tree appears unaffected when grown in areas of high pollution.

Some diseases and pests may affect the tree of heaven, but none are substantial.

*Ailanthus altissima* will grow almost

anywhere and thrive, but its fast growth rate results in weak wood.

### *Ginkgo biloba*

The ginkgo (50 to 80' high and 30 to 40' wide) is one of the hardiest trees on earth. It will establish itself easily in almost any type of soil, regardless of pH. This ability makes it a great city tree since it will withstand pollution very well and will tolerate high air temperatures and salt in the soil. Not only is this tree durable, but also it is unusual and attractive.

### *Ulmus parvifolia*

The lacebark elm ((40 to 50' high and wide) is a very tough and durable tree. It readily adapts to the extremes of soils and soil pH. This tree seems very tolerant of soil and air pollution in urban settings. The wood is quite strong due to the tree's medium growth rate and can withstand severe ice storms. The lacebark elm is not affected by Dutch elm disease and has no serious pests or diseases.

### *Acer ginnala*

The amur maple (15 to 18' high and at least as wide) is a hardy little tree. It will adapt to a wide range of soil types and pH ranges. The amur maple is relatively free of pest and disease problems. It will grow in full sun or in shade. This tree is also an optimal choice for an area with restricted root zone, such as raised planters.

### The Right Tree

If you have trouble growing trees, try to match the growing conditions to one of these five trees. Good luck.

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