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Trees for home grounds

(below 6,000 feet elevation)

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Quick Facts

No single species of tree is suited to all conditions.

Trees should be selected according to space availability, soil and other site conditions, growth rate and crotch angle.

Growth rate of trees usually is described as fast, more than 24 inches (61 centimeters) of growth per year; medium, 12 to 24 inches (30.5 to 61 cm) of growth per year, and slow, less than 12 inches (30.5 cm) of growth per year.

(EDITOR'S NOTE: For a selection of trees adapted to elevations above 6,000 feet, refer to Service in Action sheet 7.408, Trees for mountain communities.

Research and experience have shown that no single species of tree is suited to all conditions in the home landscape. Each has certain advantages and disadvantages.

When selecting a tree the following points should be considered:

Space available for the planting is important. Height is not as important as ultimate spread of branches unless the planting is near utility lines or other overhead structures. Some trees, while tall, have a narrow, upright growth habit and can be used in small areas.

Soil and other site conditions where the trees are to be planted also must be considered. Most trees perform best in a well-drained soil. Surface runoff is less important than water movement through the subsoil. A heavy clay soil, even on a steep slope, is poorly drained because the small pore spaces reduce movement of water.

Growth rate and crotch angle determine a tree's durability. Generally, the faster growing species are weak-wooded and more subject to storm damage. Generally, it also is true that species of varieties which habitually produce narrow crotch angles, as in a narrow upright tree, are subjected more to storm breakage than those with wide crotches. Trees having brittle branches should not be placed near dwellings or along streets.

Growth rate normally is described as fast, medium or slow. A fast growing tree is considered as one having more than 24 inches (61 centimeters) of growth per year. Medium growth is between 12 and 24 inches (30.5 to 61 cm) per year and slow growth less than 12 inches (30.5 cm) per year. Usually, the growth rate becomes slower as the tree ages.

Table 2 lists trees that are considered medium to small in ultimate height or less than 40 feet (12 meters) tall and may be used where taller types would interfere with utility lines or obstruct a desirable view. They are not necessarily suited to small areas, however, since some will require nearly the same space as the taller species.

Home gardeners in this region have a wide selection of both native and introduced species of evergreens (see Tables 3 and 4). They provide year-round green and add to the attractiveness of a home landscape when blended with nonevergreen trees. Almost all evergreens need well-drained soils. Most pines do poorly in very heavy clay soils. Few tolerate dense shade, becoming thin and straggly when insufficient sunlight is provided. Winter watering is very important for evergreens in this area. (See 7.211, *Winter watering*.)

Trees can be a valuable investment for the landscape. Before making a final decision on the trees for the site, the homeowner should check to see whether there is enough space available and whether the soil conditions, including drainage are adequate for the tree desired.

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Table 1: Large deciduous trees for lawn and shade.

Plant name	Growth rate	40-year height (feet)†	Spread (feet)†
Ash, green (<i>Fraxinus pennsylvanica lanceolata</i>)	medium	35	30
Catalpa, northern (<i>Catalpa speciosa</i>)	slow to medium	30	15
Coffeetree, Kentucky (<i>Gymnocladus dioicus</i>)	slow to medium	35	20
Cottonwood, cottonless (<i>Populus sargentii</i> , male selection)	fast	45	30
Hackberry (<i>Celtis occidentalis</i>)	slow to medium	30	25
Honeylocust (thornless) (<i>Gleditsia triacanthos inermis</i>)	medium	40	25
Horsechestnut (<i>Aesculus hippocastanum</i>)	slow	30	20
Linden, American (<i>Tilia americana</i>)	medium	35	20
Maple, Norway (<i>Acer platanoides</i>)	slow	35	25
*Maple, soft (silver) (<i>Acer saccharinum</i>)	fast	50	35
Maple, sugar (<i>Acer saccharum</i>)	slow	30	20
Oak bur (<i>Quercus macrocarpa</i>)	slow	25	20
Oak, English (<i>Quercus robur</i>)	medium	30	20-25
Oak, red (<i>Quercus rubra</i>)	medium	40	40

*Tends to be brittle and subject to storm damage.

Table 2: Medium to small deciduous trees.

Plant name	Growth rate	40-year height (feet)†	Spread (feet)†
Aspen quaking (<i>Populus tremuloides</i>)	fast	30	15
Birch, European weeping (<i>Betula pendula gracilis</i>)	medium	35	20
Bradford Pear (<i>Pyrus calleryana "Bradford"</i>)	medium	35	20
Crabapples (<i>Malus</i> spp.)	medium to fast	varies, depending upon variety	
*Golden rain-tree (<i>Koelreuteria paniculata</i>)	fast	15	10
Hawthorns (<i>Crataegus</i> spp.)	medium	25	15-20
Linden, littleleaf (<i>Tilia cordata</i>)	medium	35	15-20
Maple, amur (<i>Acer ginnala</i>)	slow to medium	20	25
Ash, mountain (<i>Sorbus aucuparia</i>)	medium	25	15-20
Plum, newport (<i>Prunus 'Newport'</i>)	medium	25	20
Red bud (<i>Cercis canadensis</i>)	medium	20	15-20
*Russian-olive (<i>Elaeagnus angustifolia</i>)	fast	30	25

*Tends to be brittle and subject to storm damage.

Table 3: Tall evergreens.

Plant name	20-year height (feet)†
Austrian pine (<i>Pinus nigra</i>)	45
Colorado spruce (<i>Picea pungens</i>)	45
Concolor fir (<i>Abies concolor</i>)	45
Douglas-fir (<i>Pseudotsuga menziesi</i>)	50

†To convert to metrics, use the following conversion: 1 foot = .3 meter.

Table 4: Medium height evergreens.

Plant name	20-year height (feet)†
Bristlecone pine (<i>Pinus aristata</i>)	25
Eastern red-cedar (<i>Juniperus virginiana</i>)	15
One-seed juniper (<i>Juniperus monosperma</i>)	15-20
Pinyon pine (<i>Pinus cembroides edulis</i>)	20
Scopulorum juniper (<i>Juniperus scopulorum</i>)	20-30