General Guidelines For Trees

What is a tree?

The rules of dendrology (the study of trees) state that a tree may be defined as a woody plant that at maturity is 13 ft in height, with a single trunk at least 3 inches in diameter at breast height (4½ feet), unbranched for at least several feet above the ground and having a more or less definite crown. Shrubs, in contrast, are smaller and usually exhibit several erect, spreading, or prostrate stems with a general bushy appearance. There are exceptions.

Trees listed in this guide are recommended by the Lander Urban Forest Council. Recommendations are based upon first hand experience with trees that have lived or are currently living and doing well in the area. Some trees shown are not recommended, but do well in Lander. The problems with these trees are listed in the text.

Experimentation with uncommon species is encouraged, though be aware of the limitations of the species planted as well as the planting area.

The Lander Urban Forest Council is interested in hearing of trees or shrubs that are doing well in Fremont County and are not listed in this guide. Contact an Urban Forest Council Member if you know of such trees or shrubs. A council member can be contacted at the Lander Parks and Recreation office at 332-4647.

Growth rate, height and spread estimates often assume growth in ideal conditions. Many of the tree and shrub species included here are from milder climates and may not attain the growth rates, heights and spreads listed.

Because “litter-free” landscapes are now highly desired, trees, shrubs, and ground covers that do not make a “mess” are preferred. These seedless, fruitless, or cottonless plants are typically asexually propagated male clones. Virtually all of the dioecious plants (species that have male and
female flowers on separate plants) are primarily wind-pollinated, and with almost all of these, the male trees produce copious amounts of allergenic, airborne pollen. This has become of great concern to the medical world. The instances of pollen caused allergies has increased dramatically in the past few years. Give serious thought to NOT planting “cotton-less cottonwood” “seedless ash” etc. The worst offenders are: cottonwood, Russian–olive, juniper (several varieties) and willows.

Varieties and cultivars are too numerous to include in this publication. Consult your local Master Gardeners and nurseries for information on varieties and cultivars suited to this area.

Only the most common insect and disease problems known to be associated with locally grown tree and shrub species are mentioned here. Consult local Extension Agents or Master Gardeners for further information on insect and disease problems.

This guide has attempted to include as many “native” species as possible. “Native” is loosely defined, in this guide, as a species known to grow wild in Fremont County or surrounding Wyoming counties.

According to the USDA we are rated zone 4. For practical purposes most plants rated at zone 4 can be grown in our area if appropriate soils are provided. In some areas of Lander plants rated as zone 5 and occasionally those rated higher will survive. 

Because of altitude variations within the city, proximity of large masses that retain heat, areas protected from or exposed to the wind and directional exposure (i.e. southern or northern), significant microclimates exist in and around our area. Also, because of our topography, temperature inversions do occur in the area. While in the lowest (frostiest) areas of Lander, we can generally expect 100+ days of growing season, frost can and has occurred every month of the year.

In this booklet we have tried to identify those trees and shrubs that may only grow in the most temperate microclimates in the area. To identify whether or not you are located in one of those areas, ask your neighbors about their experience with plants.
Chapter 2—Conifer Trees

**Douglas-fir**  
Pseudotsuga menziesii var. glauca

Height: 50' - 100'  
Growth Rate: Slow to moderate

Shape: Pyramidal  
Hardiness Zone: 3-6

Span: 15' - 25'  
Light: Full Sun

Wyoming native. Large, long-lived tree of ornamental value. Shaped similar to a Colorado Blue Spruce. Bushy growth, needles bluish-green. Red-brown hanging cones to 4". Best in well-drained, deep loamy, slightly acid soils. Tree pictured is at 711 South 3rd Street. Be sure you plant only the Inland Variety. The coast variety is not as cold tolerant and will not withstand our winters. Seeds are eaten by many species of birds. Provides excellent nesting and roosting.

**Eastern Redcedar**  
Juniperus virginiana

Height: 40' - 50'  
Growth Rate: Moderate

Shape: Pyramidal  
Hardiness Zone: 2-9

Span: 10' - 20'  
Light: Full Sun

Appearance nearly identical to that of Rocky Mountain Juniper. A spreading to upright evergreen that is useful in windbreaks, shelter belts and hedges. It can be very attractive as a single landscape tree. Medium green summer foliage turns dusty-green to russet in winter. Tolerates a wide range of soils and climatic conditions. The berry like cones are eaten by many species of birds.
**Fir, White**  
*Abies concolor*

- Height: 30' - 50'
- Shape: Conical
- Span: 15' - 30'
- Growth Rate: Moderate
- Hardiness Zone: 3-7'
- Light: Shade Tolerant

Beautiful foliage with 1½" to 2½" long soft bluish-green needles. Does not perform well in heavy or clay soils. Produces a cylindrical upright cone 4" long. No serious insect or disease problems. Full sun to part shade. There was a tree in the Capital Hill area that was doing very well, but was removed for house remodeling. It is believed that this tree will do well in Lander.

**Juniper, Rocky Mountain**  
*Juniperus scopulorum*

- Height: 20' - 35'
- Shape: Pyramidal
- Span: 10' - 15'
- Growth rate: Slow
- Hardiness Zone: 3-7
- Light: Full Sun

Native. Can be either a tree or a shrub. Does well in our soils. A close relative to Eastern Redcedar. Tree is located at 670 Evergreen.
Chapter 2—Conifer Trees

### Larch, Western

**Larix occidentalis**

- **Height:** 75' - 100'
- **Growth Rate:** Moderate
- **Shape:** Conical
- **Hardiness Zone:** 4-7
- **Span:** 10' - 30'
- **Light:** Full Sun

A deciduous conifer. Needles are soft and 1 to 2 inches long turning golden in the fall. Cones are 1 to 2 inches long. Bark thick, reddish brown and in elongated plates. It prefers moist mountain slopes but will grow in dry soils. Picture at 525 Parks.

### Pine, Austrian

**Pinus nigra**

- **Height:** 40' - 50'
- **Growth Rate:** Moderate
- **Shape:** Broad Pyramidal
- **Hardiness Zone:** 3-7
- **Span:** 25' - 35'
- **Light:** Full Sun

Austrian pine is native to western Europe. Introduced to this country in mid 1800's, it has been planted extensively as an ornamental and conservation plant. Has dark-green needles, to 6 inches long, two in a bundle. Bark with dark brown furrows, usually with gray-brown ridges. Appearance similar to ponderosa pine. Several fine examples in Lander.
Pine, Bristlecone  
*Pinus aristata*

Height: 20’ - 60’  
Growth Rate: low

Shape: Round  
Hardiness Zone: 4-6

Span: 8’ - 12’  
Light: Full Sun

Native of Colorado, Utah, Arizona, Nevada, and California. Needles are 1 to 2 inches long in bundles of 5. Cone scales are tipped with a long, incurved prickle. A variety of this tree (*P. aristata longaeva*) in the mountains of eastern California is from 4,000 to 4,600 years old and is the longest living thing on earth. Provides nesting and seeds for birds. Picture is in Dillon Park.

Pine, Limber  
*Pinus flexilis*

Height: 30’ - 50’  
Growth Rate: Slow

Shape: Pyramidal to Broad  
Hardiness Zone: 3-7

Span: 15’ - 35’  
Light: Full Sun or Partial Shade

Pine, Lodgepole  
*Pinus contorta var. latifolia*

- **Height:** 75' - 80'
- **Shape:** Narrow-crown to Round
- **Span:** 15' - 30'
- **Growth Rate:** Slow
- **Hardiness Zone:** 2-5.
- **Light:** Full Sun

Native. Latifolia is the variety in our area. Other varieties will not be hardy here. Two forms include tall straight and short stubby. A long lived tree that grows in soils that are gravelly and rocky, does best in well-drained soils. Susceptible to dwarf mistletoe, a parasitic plant that causes witches'-broom, cankers, swellings and other abnormalities on the trunk and branches. Other pests include mountain pine beetle and the pine engraver beetle. Tree located in Sinks Canyon.

Pine, Ponderosa  
*Pinus ponderosa scopulorum*

- **Height:** 60' - 100'
- **Shape:** Pyramidal
- **Span:** 25' - 30'
- **Growth Rate:** Moderate
- **Hardiness Zone:** 3-7
- **Light:** Full Sun to Part Shade

Wyoming native. Drought tolerant tree. Saline (salt) and alkaline tolerant. Very long lived (over 300 years). Medium green to yellow-green needles in bundles of two and three. Prefers areas with good drainage. Can be difficult to transplant successfully unless 3 ft or under. Diseases include western gall rust, shoestring root rot and needle cast fungus. Pests include mountain pine beetle, and pine engraver beetle. Tree located at 670 Evergreen Lane.
**Pine, Scotch (Scots Pine)**  
*Pinus sylvestris*

- Height: 30’ - 60’
- Shape: Pyramidal
- Span: 30’ - 40’
- Growth Rate: Slow to moderate
- Hardiness Zone: 2-8
- Light: Full Sun

Pyramidal in youth becoming irregular with age. Stiff blue-green 1½” - 3” long needles and gray to reddish-brown cones. Bark orange-brown, thin, peeling off in papery flakes; thicker towards the base. Grows on poor, dry sites in a variety of soils but prefers well-drained slightly acid. One of the most popular Christmas trees. Tree pictured is at 1310 Bridger.

**Spruce, Colorado Blue**  
*Picea pungens*

- Height: 40’ - 80’
- Shape: Pyramidal
- Span: 10’ - 20’
- Growth Rate: Slow to moderate
- Hardiness Zone: 2-7
- Light: Full Sun

Very symmetrical, pyramidal evergreen. Sharp, stiff needles. Needle color may vary from bluish to green to silvery to dark green. Likes moist soil. Some consider this tree overused. Pests include spruce gall aphid, spider mite, and spruce bud worm. Prune to maintain single terminal leader. A double leader (or forked top) can be a hazard as the tree matures. Many fine examples in all areas of Lander. Tree pictured is at 260 Bridger.
Spruce, Engelmann  *Picea engelmannii*

**Height:** 100' - 125'  
**Growth Rate:** Moderate  
**Shape:** Pyramidal  
**Hardiness Zone:** 3-7  
**Span:** 20' - 40'  
**Light:** Full Sun

Native. Similar in form to Blue Spruce but with much softer needles. Cones 1 to 2½ inches long are light chestnut brown. Tolerates a wide range of soils and climatic conditions. Trees pictured are at 690 Evergreen Lane and are over 100 years old.

Spruce, Norway  *Picea abies*

**Height:** 40’ - 100’  
**Growth Rate:** Moderate  
**Shape:** Pyramidal  
**Hardiness Zone:** 3-6  
**Span:** 25’ - 30’  
**Light:** Full Sun or Light Shade

Introduced from Europe and planted in the U.S. and Canada; many varieties. Needles are 0.5 to 0.8 inches long. Cones brown, 4 to 7 inches long. Bark brown. Several fine examples in Lander. Tree pictured is on Country Garden Lane.
Pine, Mugo

Pinus mugo

Height: 6' - 15'  
Growth Rate: Slow  
Shape: Broad Rounded  
Hardiness Zone 2 - 7  
Span: 6' - 15'  
Light: Full Sun

Imported from Europe, this can be a tree or a shrub. Most observed in Lander are of the shrub form. Multi-stemmed evergreen with upright branches. Stiff, dark green needles. Cones 1 to 2 inches long. Prefers deep moist loam soil. Picture at 658 Buena Vista.

Conifer Shrubs

In the world of trees, both the evergreens and broadleaf trees, there are many varieties that are shrub form. Some are sprawling ground cover. This is caused by environmental and/or genetic conditions. Examples: Blue spruce, *Picea pungens* - over twenty varieties. Rocky Mountain Juniper, *Juniperus scopulorum* - over ten varieties. Norway Spruce, *Picea abies* - over twenty varieties. Northern white-cedar *Thuja occidentalis* - over twenty varieties. White Spruce, *Picea glauca* - over ten varieties. Pictured below are five examples we know of in Lander.

Norway Spruce Shrub

946 South 7th Street
**Chapter 3—Conifer Shrubs**

- **Northern white-cedar Shrub**
  685 South 4th Street

- **Alberta Spruce**
  946 South 7th Street

- **Blue Spruce Shrub**
  225 Christina Drive

- **Globe Blue Spruce Shrub**
  225 Christina Drive
Trees are the tallest, most massive, longest-lived organisms ever to grow on earth.
Ash, Green

Fraxinus pennsylvanica

Height: 50’ - 60’
Shape: Oval
Span: 25’ - 30’
Growth rate: Moderate
Hardiness Zone: 2-9
Light: Full Sun

Native to NE Wyoming. Tolerant of alkaline soils. Some varieties susceptible to ash borer, ash bark beetles and scales. Many lovely trees in all areas of Lander. Tree pictured is at 950 Dabich Street.

Ash, Mountain

Sorbus americana

Height: 10’ - 30’
Shape: Round
Span: 10’ - 20’
Growth Rate: Moderate
Hardiness Zone: 3-6
Light: Full Sun

Bark is light grey-brown and the leaves dark green. Leaves may be a dull red or bright yellow in the fall offering a colorful contrast to the bright red fruits. Fruits are eaten by birds. Tree pictured at 685 South 4th.
Aspen, Quaking

**Populus tremuloides**

Height: 30’ - 50’
Shape: Oval
Span: 10’ - 30’
Growth Rate: Rapid
Hardiness Zone: 2-6
Light: Full Sun

Native. The bark is whitish, smooth, then becoming gray on older trunks. Leaves are shiny above and dull green underneath, yellow in fall. Usually planted in clumps. Roots produce suckers. Hypoxylon and cytospora cankers are a few of the many diseases common to Aspen. They do not do well in heavy clay soils. They are stressed in these soils and are more subject to disease and insect attack. Some authorities say that the tree is best left in the mountains. The trees pictured are at 956 Cascade.

Birch, European White

**Betula pendula**

Height: 40’ - 50’
Shape: Pyramidal to Oval
Span: 20’ - 35’
Growth Rate: Moderate
Hardiness Zone: 2-6
Light: Full Sun

Imported from Europe. Numerous varieties. This birch has thin white bark, developing dark rugged cracks at the base with age. Pendulous branching. This tree is the most susceptible to the bronze birch borer of any of the birch trees. Nice yard tree. Many fine examples in Lander. Requires winter watering before the ground freezes.
**Birch, Paper**  
*Betula papyrifera*

- Height: 50' - 70'
- Growth Rate: Moderate-Rapid
- Shape: Rounded-Oval
- Hardiness Zone: 2-6
- Span: 25' - 45'
- Light: Full Sun to Part Shade.

Native. Adapted to colder climates. Susceptible to bronze birch borer which can lead to the death of the tree. Branches are close to the ground unless limbed up. Single or multi-stemmed. The bark is white, peeling in thin layers. Flowers in early spring with catkins. Prefers moist, well-drained, slightly acidic soils. Requires winter watering before ground freezes. Does best in cool, moist north exposure. Tree pictured is at 340 Christina.

**Boxelder (Manitoba Maple)**  
*Acer negundo*

- Height: 45' - 60'
- Growth Rate: Rapid
- Shape: Spreading Irregular
- Hardiness Zone: 2-9
- Span: 45' - 60'
- Light: Full Sun

Native, very hardy, short-lived tree. Flowers are yellow-green hanging tassel like clusters in spring before or with leaves in early spring. There are seedless male clones that do not attract the boxelder bug. Stem decay is a problem. Grows rapidly for the first 15 to 20 years, then slows down. Older trees are good wildlife den trees. Very susceptible to broadleaf weed herbicides used in lawns. Tolerant of alkaline soils. Full sun. Tree located at 690 Evergreen.
Chapter 5—Broadleaf Trees

Cottonwood, Lanceleaf

*Populus acuminata*

Height: To 100'
Shape: Spreading, Broad Round
Span: To 45'

Growth Rate: Rapid
Hardiness Zone: 2-6
Light: Full Sun

The name “Lanceleaf” is given to three trees that are crosses with the Narrow Leaf cottonwood, such as the Narrow Leaf crossed with Plains Cottonwood, or Narrow Leaf crossed with Balsam Poplar, or Narrow Leaf crossed with Fremont Cottonwood.

These trees are native to the Rocky Mountain region. The tree pictured is at 370 Wood Street and is over 90' tall with a spread of fifty plus feet. It has a trunk diameter of 46 inches. This tree has been entered in the Wyoming list of champion trees for it’s species. It lives, at the address given, with three companions which are about as large.

Cottonwood, Narrow Leaf

*Populus angustifolia*

Height: 50' - 60'
Shape: Pyramidal
Span: 20' - 40'

Growth Rate: Rapid
Hardiness Zone: 2-8
Light: Full Sun

Cottonwood, Plains  
*Populus deltoides var. occidentalis*
*Populus sargentii (in Wyoming)*

- **Height:** 60' - 90'
- **Shape:** Spreading, Broad round.
- **Span:** 30' - 45'
- **Growth Rate:** Rapid
- **Hardiness Zone:** 2-9
- **Light:** Full Sun

Wyoming’s State Tree. Native. Prefers moist soil but tolerates slightly to moderately dry and saline conditions. It is a short-lived tree (declines after 70 years). It can be susceptible to canker, wet wood and winter kill. Considered somewhat messy because of dropped leaves, cotton, and branches during winds. Deep and wide-spreading roots. Requires ample room for growth. There are cottonless varieties available but these are male trees and are not recommended because many people are allergic to the pollen. Picture shown at 7th and Washakie.

Elm, American  
*Ulmus americana*

- **Height:** 50' - 80'
- **Shape:** Vase-shaped
- **Span:** 30' - 50'
- **Growth Rate:** Moderate - Rapid
- **Hardiness Zone:** 2-9
- **Light:** Full Sun

Not recommended due to its susceptibility to Dutch elm disease. Disease resistant strains are being developed and are available. Pictured tree at 466 Cascade.
Chapter 5—Broadleaf Trees

Elm, Siberian

Height: 50’ - 70’
Shape: Spreading
Span: 40’ - 60’

Growth Rate: Rapid
Hardiness Zone: 3
Light: Full Sun

Often confused with Chinese Elm which is not hardy in our climate. Very susceptible to disease and elm leaf beetle. Very susceptible to broadleaf weed herbicides used on lawns. Not recommended for a shade tree, but can be used in harsh environments where other trees won’t grow. Picture shown at 880 Hobson.

Hackberry

Height: 40’ - 60’
Shape: Round
Span: 40’ - 60’

Growth Rate: Moderate
Hardiness Zone: 2-9
Light: Full Sun

Native hardy shade tree with dense foliage. It has good drought resistance. It is susceptible to hackberry nipple-gall, but this is not harmful to the tree. Bark is gray and smooth in young trees, becoming furrowed and corky with age. Flowers in spring producing a rounded orange-red to purple berry in late summer that are a great bird attractant. Tolerant of a variety of soil conditions including heavy soils. Nursery stock derived from trees in more southern areas may not do well here. Protect from deer until limbs grow out of reach. Tree shown at 579 South 4th Street.
**Linden, American**  
*Tilia americana*

- **Height:** 45’ - 75’  
- **Growth Rate:** Moderate  
- **Shape:** Pyramidal to Round  
- **Hardiness Zone:** 2-8  
- **Span:** 25’ - 50’  
- **Light:** Full Sun or Partial Shade


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**Linden, Little Leaf**  
*Tilia cordata*

- **Height:** 60’ - 70’  
- **Growth Rate:** Moderate  
- **Shape:** Pyramidal  
- **Hardiness Zone:** 3-7  
- **Span:** 30’ - 40’  
- **Light:** Full Sun

Much smaller leaves than the American Linden. Bark is gray and smooth when young, becoming gray-brown and furrowed with age. Flowers in midsummer with fragrant pale yellow flowers. Excellent tree for lawn, parks, streets, and planters. Alkaline tolerant. pH tolerant. ‘Greenspire’ is a common cultivar though many others exist. Tree shown at 685 South 4th Street.
## Locust, Black

*Robinia pseudoacacia*

<table>
<thead>
<tr>
<th>Height: 30' - 50'</th>
<th>Growth Rate: Rapid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shape: Oval to spreading</td>
<td>Hardiness Zone: 3-8</td>
</tr>
<tr>
<td>Span: 20' - 35'</td>
<td>Light: Full Sun</td>
</tr>
</tbody>
</table>

Spines on branches. Bark is thick, deeply furrowed into long, rough, forking ridges. Flowers with white petals in late spring, very fragrant. Fruit is 2'' - 4'' dark brown pods. Spreads by sprouts. Transplants easily. Extremely adaptable to varied soils and climates. Not a good yard tree. Susceptible to borers. Has a place in difficult areas. Tree pictured is a young tree at the Forest Service building.

## Honeylocust

*Gleditsia triacanthos*

<table>
<thead>
<tr>
<th>Height: 30' - 70'</th>
<th>Growth Rate: Rapid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shape: Spreading</td>
<td>Hardiness Zone: 3-9</td>
</tr>
<tr>
<td>Span: 30' - 70'</td>
<td>Light: Full Sun only</td>
</tr>
</tbody>
</table>

Lacy foliage. Drought resistant. There are podless and thornless varieties. Thin bark. Care needs to be taken when mowing close to the tree. Susceptible to some diseases and insects. Adapted to a wide variety of Alkaline soils. Alkaline and saline (salt) tolerant. Tree shown at 560 W. Brodie.
**Maple, Norway**  
*Acer platanoides*

Height: 50' - 60'  
Shape: Oval  
Span: 2/3 or equal to height  
Growth Rate: Moderate  
Hardiness Zone: 3-7  
Light: Full Sun


**Maple, Red**  
*Acer rubrum*

Height: 75' - 80'  
Shape: Round  
Span: 75' - 80'  
Growth Rate: Moderate  
Hardiness Zone: 2-8  
Light: Full Sun

The tree pictured is at 745 Bellevue. It was brought to Lander by the owner and is from a wild stand in Northern Minnesota. It has received exceptional care and has done well here. Leaves turn scarlet in autumn.
### Maple, Silver

- **Acer saccharinum**
- **Height:** 50’ - 70’
- **Shape:** Spreading to Oval
- **Span:** 2/3 of Height
- **Growth Rate:** Rapid
- **Hardiness Zone:** 3-7
- **Light:** Full Sun

Fast growing large wide branching tree. Requires ample water. Bark is gray and smooth when young then usually breaks into long, out-curve plates with age. Light green leaves have five lobes that turn yellow in autumn. Will cause sidewalks to buckle because of vigorous root systems. Transplants well. Cultivated trees will do well in dry soils. Prefers acid soil. Not adapted to alkaline (salt) soils. Tree shown at 612 South 6th Street.

### Oak, Bur

- **Quercus macrocarpa**
- **Height:** 70’ - 80’
- **Shape:** Oval
- **Span:** Can be equal to height
- **Growth Rate:** Slow
- **Hardiness Zone:** 2-8
- **Light:** Full Sun

Native. Acorns important food for deer, squirrels, turkeys and rabbits. Young trees planted locally appear to be doing well. Difficult to transplant due to long tap root. Durable, long-lived tree capable of growing in a wide range of soils. Limestone soils are favored. Does well even in dry, clay soils. Drought tolerant. Tree shown at 550 Cliff Street.
**Poplar, Lombardy**  *Populus nigra var. italica*

- **Height:** 30' - 50'
- **Shape:** Columnar
- **Span:** 10' - 15'
- **Growth Rate:** Rapid
- **Hardiness Zone:** 3-9
- **Light:** Full Sun

Generally short-lived. Susceptible to oystershell scale. Not recommended for street or yard tree. Used as a screen tree. Requires plenty of water. *Dothichiza populea* is a devastating disease which starts in the upper branches of the tree; it also infects Balsam and Eastern Cottonwoods. Subject to winter kill. Due to the short life and many problems, this tree is generally not recommended. The pictured tree is at 4th and Wood St. is the healthiest example we found in Lander. This tree has received exceptional care.

**Poplar, White**  *Populus alba*

- **Height:** 40' - 70'
- **Shape:** Spreading, Broad
- **Span:** 40' - 70'
- **Growth Rate:** Rapid
- **Hardiness Zone:** 3-8
- **Light:** Full Sun

**Russian-olive**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Elaeagnus angustifolia</th>
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</thead>
<tbody>
<tr>
<td>Height</td>
<td>12' - 20'</td>
</tr>
<tr>
<td>Shape</td>
<td>Irregular</td>
</tr>
<tr>
<td>Span</td>
<td>12' - 20'</td>
</tr>
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</table>


**Walnut, Black**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Juglans nigra</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>50' - 75'</td>
</tr>
<tr>
<td>Shape</td>
<td>Round</td>
</tr>
<tr>
<td>Span</td>
<td>50' - 75'</td>
</tr>
</tbody>
</table>

Nice ornamental tree with deeply fissured brown bark and dark green leaves. Rich edible nuts, prized for candies and baked goods, ripen in the fall and may create a mess. Black Walnut is a prized source of hardwood. Tap rooting tree. Attracts birds and squirrels. Roots and decaying plant parts release a toxic compound (juglone) which inhibits growth of some other plants. Tree located at 235 Cascade.
Willows

The genus *Salix* numbers about 400 species worldwide, primarily in the Northern Hemisphere. About 100 species occur in North America. Only about 30 of them attain tree size. Willows readily hybridize with other willow species. Some hybrids have been created by man. Native to Wyoming are about 7 species as seen below.

**Willow, Bebb**  
*Salix babbiana*

A shrub or small bushy tree, to 25’ tall and 6 to 8 inches in diameter. Bebb Willow has a rounded crown of slender, reddish-brown branches. The bark is greenish gray fringed with red. Plant in full sun.

**Willow, Mackenzie**  
*Salix mackenzieiana*

The leaves are light green above and pale green below, with small rounded marginal teeth. A shrub or small tree, 15 to 20’ tall and 6 inches in diameter. The Mackenzie Willow has a narrow crown of slender, upright yellowish to lustrous reddish-brown branches. Bark grey. Plant in full sun.

**Willow, Peachleaf**  
*Salix amygdaloides*

Peachleaf Willow grows 10 to 60 feet tall, 12 to 15 inches in diameter, and has a crown of ascending branches. Bark of large trunks is black, ridged, and furrowed. It is commonly found along prairie water-courses. Plant in full sun.
**Willow, Sandbar**  
*Salix exigua*

Sandbar Willow is commonly shrubby, often forming dense, riverside thickets. Occasionally it grows to 30 feet tall and 3 to 6 inches in diameter, with short, slender, orange to purplish-red erect branches. Plant in full sun.

**Willow, Pacific**  
*Salix lasiandra*

Leaves are gray-green on the underside. Twigs of the current year are yellow. Grows 15' - 50' tall and 12 to 14 inches in diameter with an irregular crown of ascending, spreading branches. Plant in full sun.

**Willow, Pussy**  
*Salix discolor*

Pussy Willow may be a shrub or small tree, to 25 feet tall and 6 inches in diameter, with an open rounded crown of stout branches. Plant in full sun.

**Willow, Scouler**  
*Salix scouleriana*

Leaves are dark yellow-green above and usually hairy below. Leaves are 1 to 4 inches long and 0.5 to 1.5 inches wide. One of the “pussy willows”. Scouler Willow grows 50 feet tall and 12 to 14 inches in diameter or is a large shrub. Plant in full sun.
**Willow, Weeping**  
*Salix babylonica*

Height: 30' - 40'  
Shape: Round Weeping  
Span: 30' - 40'

A native of China but is now planted throughout the world. A beautiful landscape tree. Can be prone to oyster shell scale. Picture at City Park.

**Willow, Golden**  
*Salix alba x vitellina*

Height: 40' - 50'  
Shape: Round  
Span: 30' - 40'

Growth Rate: Rapid  
Hardiness Zone: 2-7  
Light: Full Sun

Naturalized and widespread from planting of cuttings. Medium green slender leaves and golden bark that is showy in winter. Branches are drooping. Yellow fall color. Fibrous root system. High maintenance tree, susceptible to oystershell scale and winter kill. Sheds branches in wind. Aphids can be a serious problem on all willows. Prefers moist soils. Many fine examples in Lander.
<table>
<thead>
<tr>
<th><strong>Barberry, Red Leaf Japanese</strong></th>
<th><strong>Berberis thunbergii</strong></th>
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<tbody>
<tr>
<td><strong>Height:</strong> 3’ - 6’</td>
<td><strong>Growth Rate:</strong> Moderate</td>
</tr>
<tr>
<td><strong>Shape:</strong> Rounded</td>
<td><strong>Hardiness Zone:</strong> 4-8</td>
</tr>
<tr>
<td><strong>Span:</strong> 4’ - 7’</td>
<td><strong>Light:</strong> Sun</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th><strong>Buffaloberry, Silver</strong></th>
<th><strong>Shepherdia argentea</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Height:</strong> 8’ - 12’</td>
<td><strong>Growth Rate:</strong> Rapid</td>
</tr>
<tr>
<td><strong>Shape:</strong> Upright</td>
<td><strong>Hardiness Zone:</strong> 2</td>
</tr>
<tr>
<td><strong>Span:</strong> 6’ - 12’</td>
<td><strong>Light:</strong> Full Sun</td>
</tr>
</tbody>
</table>

Native. Tree like shrub with silvery foliage. Yellowish-white flower. Branch tips are generally thorny. Its edible orange-red berries can be used to make jelly or left as a treat for the birds. Fruit becomes sweeter after first frost. Needs male and female plants to produce fruit. *S. canadensis*, another native does not have thorns and is a smaller bush. Subject to canker diseases. Shrub shown at Game and Fish Building.
Caragana (Siberian Peashrub)  
**Caragana arborescens**

| Height: | 15' - 20' | Growth Rate: | Rapid |
| Shape: | Upright | Hardiness Zone: | 2-7 |
| Span: | 12' - 18' | Light: | Shade Tolerant |

Has bright green leaves emerge on copper-green branches in spring. Showy yellow pea-like flowers appear in spring followed by pea-like pods. Excellent as screen, hedge or windbreak, but will become open at base as plant ages. Tolerant of a wide range of soil types. Shrub shown at 320 Cliff Street.

---

Cinquefoil

**Potentilla spp.**

| Height: | 2' - 5' | Growth Rate: | Slow |
| Shape: | Round | Hardiness Zone: | 3-7 |
| Span: | 2' - 5' | Light: | Full Sun or Partial Shade |

Deciduous shrub that does well in Lander's clay soil. Has few disease and insect problems but tends to mildew if evenings are wet. Spider mites can be troublesome. The roots are noninvasive. Many fine examples in Lander.
### Cotoneaster

**Cotoneaster actifolia**

- **Height:** 3’ - 7’
- **Growth Rate:** Moderate
- **Shape:** Upright, spreading
- **Hardiness Zone:** 2-5
- **Span:** 3’ - 6’
- **Light:** Full Sun or Partial Shade

Ornamental shrub with arching branches. Summer leaf color is an attractive, glossy dark green. Fall color can be a striking combination of yellow, orange, and red. Small pink flowers are hidden behind leaves in late spring. Black fruit. Useful as a screen or large hedge. Can be pruned for a more formal look. Liked by birds. Browsed by deer. Shrub shown at 581 Cascade.

### Hawthorn, Black

**Crataegus douglasii**

- **Height:** 15’ - 20’
- **Growth Rate:** Slow to moderate
- **Shape:** Round, Low-branched
- **Hardiness Zone:** 3-7
- **Span:** 2/3 of height
- **Light:** Full Sun

There are numerous varieties of hawthorn. Most will do well in our environment. It has clusters of showy white flowers. The Black Hawthorn has shiny black fruit which is eaten by many species of birds. The plants pictured are at 770 South 5th.
### Honeysuckle Hedge  
*Lonicera dioica*

<table>
<thead>
<tr>
<th>Height</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shape</td>
<td>Twining shrub</td>
</tr>
<tr>
<td>Span</td>
<td>Variable</td>
</tr>
<tr>
<td>Light</td>
<td>Full Sun or Partial Shade</td>
</tr>
</tbody>
</table>

Native. Scrambling shrub. Leaves simple. Stem appears to pass through leaf at base of leaf. Flower yellow, purplish or reddish. Fruit red. Shrub shown at 600 Park Street.

### Hydrangea, Annabelle  
*Hydrangea arborescens*

<table>
<thead>
<tr>
<th>Height</th>
<th>3' - 5'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shape</td>
<td>Low rounded</td>
</tr>
<tr>
<td>Span</td>
<td>3' - 5'</td>
</tr>
<tr>
<td>Light</td>
<td>Full Sun or Partial Shade</td>
</tr>
</tbody>
</table>

Dense, dark green leaves. Large globe-shaped white flower clusters July through September. Generally dies to the ground and should be pruned just above the soil in late fall or early spring. Lightly fertilize in spring. pH adaptable. Fibrous rooted. Roots well with cuttings. Prefers well-drained soil. Shrub shown at 470 Cascade.
### Lilac, Common

<table>
<thead>
<tr>
<th>Syringa vulgaris</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Height:</strong> 8'-15'</td>
</tr>
<tr>
<td><strong>Shape:</strong> Broad Rounded</td>
</tr>
<tr>
<td><strong>Span:</strong> 6'-12'</td>
</tr>
<tr>
<td><strong>Growth Rate:</strong> Moderate</td>
</tr>
<tr>
<td><strong>Hardiness Zone:</strong> 2-7</td>
</tr>
<tr>
<td><strong>Light:</strong> Full Sun</td>
</tr>
</tbody>
</table>

Hardy, easy to grow. Showy purple flowers in May or early June. Old flowers should be cut off as soon as flowers fade. Great for an informal hedge or screen. Susceptible to the lilac borer. A suggested cultivar is the Persian (Syringa x persica) which reaches 8’-10’ in height with a spread of 5’-10’. Foliage is dark green. Good plant for shrub border. There are endless lilac cultivars. Contact a nursery or Master Gardener for further information. Tolerant of alkaline soil and drought conditions. There are numerous examples in Lander.

### Lilac, French

<table>
<thead>
<tr>
<th>Syringa spp.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Height:</strong> 6’-10’</td>
</tr>
<tr>
<td><strong>Shape:</strong> Round</td>
</tr>
<tr>
<td><strong>Span:</strong> 6’-10’</td>
</tr>
<tr>
<td><strong>Growth Rate:</strong> Moderate</td>
</tr>
<tr>
<td><strong>Hardiness Zone:</strong> 4-8</td>
</tr>
<tr>
<td><strong>Light:</strong> Full Sun</td>
</tr>
</tbody>
</table>

French hybrids number in the hundreds. They generally flower a little later than other species and have larger clusters of single or double flowers in wide range of colors. Singles are often as showy as doubles, sometimes more so. All lilacs require 2-3 years to settle down and produce flowers of full size and true color. Lilac pictured is at 229 Christina.
**Maple, Amur**

Acer ginnala  

- Height: 15' - 20'
- Shape: Small tree or shrub
- Span: 15' - 20'
- Growth Rate: Moderate-Rapid
- Hardiness Zone: 2 - 6
- Light: Full Sun

Smooth, grayish-brown bark. Fall color can be bright yellow-green to red. Cultivars ‘Flame’ and ‘Red Wing’ produce consistent fall color and red samaras (winged fruit) respectively. Does well in a wide variety of soils but prefers moist, well-drained soils. May become chlorotic on highly alkaline sites. Tree shown at 799 South 2nd Street.

**Mockorange**

Philadelphus spp.

- Height: 5' to 10'
- Shape: Broadly Upright
- Span: 5' - 10'
- Growth Rate: Unknown
- Hardiness Zone: 3-8
- Light: Full Sun or Partial Shade

<table>
<thead>
<tr>
<th><strong>Rose, Austrian Copper</strong></th>
<th><strong>Rosa foetida ‘bicolor’</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Height: 4’ - 6’</td>
<td>Growth Rate: Unknown</td>
</tr>
<tr>
<td>Shape: Upright spreading</td>
<td>Hardiness Zone: 4</td>
</tr>
<tr>
<td>Span: 4’ - 6’</td>
<td>Light: Full Sun</td>
</tr>
</tbody>
</table>

Common bright-yellow and/or red-copper flowered rose found in plantings throughout Lander. Developed in an Austrian Monastery garden in 1540. Blooms in June.

When you buy a high quality tree, plant it correctly, and treat it properly, you and your tree will benefit greatly in many ways for many years.
### Sage, Russian
*Perovskia atriplicifolia*

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>3’ - 5’</td>
</tr>
<tr>
<td>Shape</td>
<td>Round</td>
</tr>
<tr>
<td>Span</td>
<td>3’ - 5’</td>
</tr>
<tr>
<td>Growth Rate</td>
<td>Moderate</td>
</tr>
<tr>
<td>Hardiness Zone</td>
<td>4-9</td>
</tr>
<tr>
<td>Light</td>
<td>Full Sun</td>
</tr>
</tbody>
</table>

Enjoy delicate clouds of long-lasting violet-blue flowers from mid-summer until early fall. Long-lasting Russian Sage is still blooming when many others are fading. Silvery foliage. Ideal for borders and rock gardens. Many plants in Lander flower gardens.

### Sagebrush, Big Mountain
*Artemisia tridentata*

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>3—6’</td>
</tr>
<tr>
<td>Shape</td>
<td>Irregular</td>
</tr>
<tr>
<td>Span</td>
<td>Variable</td>
</tr>
<tr>
<td>Growth Rate</td>
<td>Unknown</td>
</tr>
<tr>
<td>Hardiness Zone</td>
<td>2-4</td>
</tr>
<tr>
<td>Light</td>
<td>Full Sun</td>
</tr>
</tbody>
</table>

Native. Long-lived (up to 100 years by one report). Leaves have a silvery-gray color. Leaves 1 inch long with 3 shallow lobes. Aromatic. Yellow flowers in late August. Trunks with brown stringy bark. May be difficult to transplant. Browsed by deer. Picture shown at 1355 Buena Vista.
### Snowball, Common

**Viburnum opulus 'Roseum'**

<table>
<thead>
<tr>
<th>Height</th>
<th>Growth Rate</th>
<th>Shape</th>
<th>Hardiness Zone</th>
<th>Span</th>
<th>Light</th>
</tr>
</thead>
<tbody>
<tr>
<td>4' - 8'</td>
<td>Moderate</td>
<td>Round</td>
<td>4</td>
<td>Variable</td>
<td>Full Sun or Partial Shade</td>
</tr>
</tbody>
</table>

Deciduous. Well-known, very hardy shrub, producing masses of round “snowballs” in May and June. Has good fall color. Many viburnums do well in Lander. Picture at 646 Parks.

### Spiraea

**Spiraea spp.**

<table>
<thead>
<tr>
<th>Height</th>
<th>Growth Rate</th>
<th>Shape</th>
<th>Hardiness Zone</th>
<th>Span</th>
<th>Light</th>
</tr>
</thead>
<tbody>
<tr>
<td>2' - 8'</td>
<td>Moderate</td>
<td>Rounded, mounded</td>
<td>3-8</td>
<td>Variable by variety</td>
<td>Full Sun or Partial Shade</td>
</tr>
</tbody>
</table>

Native species include: *S. alba* and *S. betulifolia* (white flowers), and *S. densiflora* (pink or rose flowers). Very large group of shrubs that produce showy flowers. Some good nursery varieties include: *S. bumalda* (pink or red flowers), *S. thunbergii* and *S. vanhouttei* (white flowers). May become chlorotic in alkaline soils. Many examples of various spireas in Lander.
### Sumac, Staghorn

**Rhus typhina**

<table>
<thead>
<tr>
<th>Height</th>
<th>15’ - 20’</th>
<th>Growth Rate:</th>
<th>Moderate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shape</td>
<td>Upright Spreading</td>
<td>Hardiness Zone:</td>
<td>4-8</td>
</tr>
<tr>
<td>Span</td>
<td>Equal or greater than height</td>
<td>Light:</td>
<td>Full Sun</td>
</tr>
</tbody>
</table>

Large compound leaves give this plant a tropical look. Clusters of velvet crimson fruits appear in late August and persist into winter. Branches are covered with dense velvety hair. Fall color is a brilliant red. Spreads aggressively by suckers. Full Sun. Picture shown at 808 Tweed Lane.

### Yucca, Soaptree

**Yucca elata**

<table>
<thead>
<tr>
<th>Height</th>
<th>2’ - 3’</th>
<th>Growth Rate:</th>
<th>Slow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shape</td>
<td>Upright clump</td>
<td>Hardiness Zone:</td>
<td>4-8</td>
</tr>
<tr>
<td>Span</td>
<td>Equal to or greater than height</td>
<td>Light:</td>
<td>Full Sun</td>
</tr>
</tbody>
</table>

This plant can grow to 20’ but probably not in Lander. It is a perennial. Its natural range is much to the south of us but it has been introduced to Wyoming possibly by birds. It is a plant which makes a good addition to flower beds. The picture was taken on the north side of West Main Street in the 800 block.
### Apricot

**Prunus spp.**

<table>
<thead>
<tr>
<th>Height: 10’</th>
<th>Growth Rate: Slow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruit: Normal Apricot</td>
<td>Hardiness Zone: 4-5</td>
</tr>
<tr>
<td>Span: Variable</td>
<td>Light: Full Sun</td>
</tr>
</tbody>
</table>

This is a very pretty tree with apricot flowers. Because of our climate, fruit production is poor. Tree shown at 230 Washington.
Chapter 7—Fruit Trees

Wolf River

Yellow Transparent

Whitney
People in the Lander area have had good success with the following apple varieties: Haralred, Haralson, Red Baron, Honeygold, Lodi (a yellow transparent cultivar that is blight resistant), Fireside, Lowland Raspberry, and Wolf River.

Dolgo and Whitney are recommended crabs.

There are problems with all the apple trees, especially getting them started. So, whatever variety is chosen, it is very important that it be on a cold hardy root stock and be adapted for zone 2-4 (zone 5 is marginal until the tree is 10-15 years old).

Select trees to meet five major criteria (ranked in order of importance):

1. Fire blight resistance.
2. Time of fruit maturity (ripening is also related to storage ability).
   The later the fruit ripens the better it stores.
3. Culinary purpose: dessert (flavor), pies/sauce, baking, juice, etc.
4. Height and shape (standard vs. semi-dwarf. Dwarf trees are not hardy).
5. Usefulness as a pollinator (crabs), flowering/bearing cycle.
Pear  
**Pyrus, var**

- Height: 15’ - 25’
- Shape: Oval
- Span: 1/2 height
- Growth Rate: Unknown
- Hardiness Zone: 4-8
- Light: Full Sun

The owner of these trees, at 592 South 4th Street, has two varieties of pear trees. Summer Crisp and Gourmet. He has grafted, onto these trees, numerous other varieties of pears, He has had fruit about every year.

Even if I knew certainly the world would end tomorrow, I would plant an apple tree today.  

*Martin Luther*
Cherry, Nanking  
*Prunus tomentosa*

**Height:** 8’ - 10’  
**Growth Rate:** Rapid  
**Shape:** Round-topped  
**Hardiness Zone:** 2-5  
**Span:** Equal to height  
**Light:** Full Sun

Short-lived. Densely branched large shrub with dark green leaves. Showy pinkish-white flowers in late April are followed by edible red fruit that attracts birds. Bark is tan to red-brown.

Cherry, Western Sand  
*Prunus besseyi*

**Height:** 3’ - 6’  
**Growth Rate:** Moderate  
**Shape:** Round  
**Hardiness Zone:** 3-6  
**Span:** Equal to height  
**Light:** Full Sun to Partial Shade

This is a very hardy shrub. It withstands heat, cold, wind, and drought. Spring blooming white flowers are replaced with large, purplish, sweet cherries which are good for jams, jellies, and pies. Glossy foliage make it a nice ornamental. The cherries provide a great food source for many species of birds. Pictures at 670 Evergreen Lane. Several nice examples in Lander.
**Chokecherry**

<table>
<thead>
<tr>
<th><strong>Prunus virginiana</strong></th>
<th><strong>Height:</strong> 15 - 25'</th>
<th><strong>Growth Rate:</strong> Rapid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shape:</strong> Broad Oval</td>
<td><strong>Hardiness Zone:</strong> 2-7</td>
<td></td>
</tr>
<tr>
<td><strong>Span:</strong> Variable</td>
<td><strong>Light:</strong> Full Sun to Partial Shade</td>
<td></td>
</tr>
</tbody>
</table>

Native. Tall tree-like shrub that has bright green leaves that turn dark maroon as the leaves mature. Fragrant white long flower clusters appear in late May. The tart, but edible fruit ripens to black in late summer. Can be trained into tree. Requires maintenance to control suckering. Susceptible to tent caterpillar and black knot. “Canada Red” is a good cultivar. Excellent for wildlife. Pictured at 808 Tweed.
Chokecherry, Canada Red  *Prunus virginiana* var “Canada Red”  
**Height:** 15’ - 20’  
**Growth Rate:** Rapid  
**Shape:** Round or oval  
**Hardiness Zone:** 3-6  
**Span:** Variable  
**Light:** Full Sun  

Canada Red Chokecherry can be grown as a single or multi-stemmed small tree or large shrub. Plants available from nurseries are usually trained to tree form. The distinguishing feature of Canada Red Chokecherry is its purple foliage. New leaves emerge green and turn purple as they mature. The edible fruits are small, reddish-purple (similar to Common Chokecherry), and relished by birds. Plants naturally form many root suckers. Thus the plants develop into thickets if new suckers are not removed. Requires a well drained soil. Foliage color and plant form develop best in full sun. Mow around plants to eliminate root suckers unless a thicket is desired. Prune at an early age to develop into a single trunk tree if that form is desired. Subject to black knot disease which frequently disfigures many of the branches. Many fine examples in Lander.

---

Weed and feed fertilizers used on lawns are not friendly to trees and shrubs.
<table>
<thead>
<tr>
<th><strong>Gooseberry</strong></th>
<th><strong>Ribes invicta</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Height:</strong></td>
<td>1' - 5'</td>
</tr>
<tr>
<td><strong>Growth Rate:</strong></td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Shape:</strong></td>
<td>Irregular Shrub</td>
</tr>
<tr>
<td><strong>Hardiness Zone:</strong></td>
<td>1-2</td>
</tr>
<tr>
<td><strong>Span:</strong></td>
<td>Equal to height</td>
</tr>
<tr>
<td><strong>Light:</strong></td>
<td>Full Sun to Partial Shade</td>
</tr>
<tr>
<td>Foliage is bluish-green in summer, yellow in fall. Yellow flowers in spring. Fruit is a green to pink berry that ripens in mid-July with a spicy flavor. Good border shrub. Gooseberries have spines on stems. Currants have smooth stems.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Currant, Golden</strong></th>
<th><strong>Ribes aureum</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Height:</strong></td>
<td>5' - 6'</td>
</tr>
<tr>
<td><strong>Growth Rate:</strong></td>
<td>Unknown</td>
</tr>
<tr>
<td><strong>Shape:</strong></td>
<td>Rounded</td>
</tr>
<tr>
<td><strong>Hardiness Zone:</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Span:</strong></td>
<td>Equal to height</td>
</tr>
<tr>
<td><strong>Light:</strong></td>
<td>Full Sun</td>
</tr>
<tr>
<td>Native. Bright yellow flowers in spring, followed by edible red or black fruits in summer. No spines on stems. Leaves turn scarlet in fall. Likes moist sites.</td>
<td></td>
</tr>
</tbody>
</table>
Plum, American (Wild Plum)  
Prunus americana

Height: 8' - 12'  
Growth Rate: Rapid
Shape: Rounded, Spreading  
Hardiness Zone: 3-8
Span: 1/2 to 2/3 of height  
Light: Full Sun

Native. Very hardy shrub or small tree that grows in a variety of soils. Fragrant white or pink flowers open before the leaves and produce 1 inch diameter round edible fruit. Spine tipped branches. Good wild-life tree. Tree shown at 615 North 8th Street.

A man has made at least a start at understanding the meaning of life, when he plants a shade tree knowing he may never sit under it.

Elton Trueblood
DONT’T TOP TREES!

- Upsets tree’s ability to make food
- Destroys its defense system against insects and disease
- Disfigures and spoils original beauty of tree
- May kill the tree

PRUNE PROPERLY
Tree Placement

Trees have basic needs which differ with each species. Moisture and light requirements and soil characteristics must all be taken into consideration. Be familiar with the local tree ordinance and the location of underground utilities and overhead lines. Can you get water to it? Will the tree block a view? Will it cause a hazard at an intersection or turn a sunny room into a dark one?

Consider the mature size and shape of the tree. Large trees should never be topped to fit a space. Plant a smaller tree instead, particularly beneath utility lines. Check with the utility company before planting under a power line. Pyramidal trees such as spruce with branches at ground level should be planted well away from sidewalks and walls.

Consider the shade tolerance of evergreen trees. If it is shade tolerant it probably will not do well in Lander in the winter. If they are exposed to too much sun they will suffer from winter desiccation and winter burn. (see glossary.)

Trees provide different benefits and perform different functions. Select trees which are cold hardy to Zone 4 or below. Match the tree’s purpose (wind protection, shade, fall color, flowers, etc.) to its characteristics. Trees can have negative characteristics as well as positive ones. Consider such factors as susceptibility to disease, thorns, poor form or potential to “escape” and become a problem.

Trees and turf have different and often contrary needs. Lawn mowers, string trimmers and herbicides, while beneficial to lawns, have killed or damaged many trees. Mulching an area around each tree or group of trees is the single best thing a homeowner can do for a tree.
Mulch with weed barrier fabric and wood chips to retain soil moisture. It makes yard maintenance easier and reduces the competition from grass and weeds, thus a healthier tree.

Shallow, frequent watering is not appropriate for long term survival of trees which benefit from infrequent deep watering. Water your yard for the good health of the turf but give your trees a deep watering every two or three weeks.

**Planting**

Consult the planting directions in the next chapter. Most of a tree’s living processes take place just under the bark. Remove all tags, wires, twine and ropes. If in a windy site stake the tree (loosely) for the first year. Generally it is not recommended to fertilize the first year. Protect from damage by animals, lawn mowers and string trimmers. The best animal protection is a wire cage. Repellants help but only if you are persistent and apply them several times a year.

**Pruning**

Remove branches only where they join another branch or at the trunk. Make cut at the branch collar. Never leave a stub or make a flush cut. Remove all dead and diseased branches, crossed or rubbing branches, branches which join the trunk at acute angles and double leaders (forked tops).
Proper Tree Planting
The BEST Way

Preparing the Site
Check for underground and overhead utilities or obstructions. Be sure there will be sufficient clearance to sidewalks, driveways, buildings, etc. when the tree is of mature size. If you are planting along a street or near an intersection check with local authorities on any requirements or limitations on tree planting in these areas.

![Diagram of a tree planting site with measurements]

\[ A = 8-12 \text{ inches depth for prepared site (Minimum 3 x 'D')} \]
\[ B = \text{Height of rootball—DO NOT dig deeper than 'B'} \]
\[ D = \text{Diameter of the rootball} \]

At the tree planting site......

Remove the twine from the branches if it was used during transport.

Cut and remove the lower \( \frac{1}{3} \) of the wire basket.

Once the tree is at the site, remove the lower \( \frac{1}{3} \) of the wire basket before placing the tree into the planting site. Use wire or bolt cutters. If twine was used to tie up the branches during transport it should also be removed during this step.
Check to be sure the tree is straight.

Handling the tree by the rootball only and not the trunk, lower it into the center of the planting site. This may be accomplished by rolling the rootball rather than lifting the tree. Take care not to drop the tree because it can break the rootball and damage roots. Be sure the tree is upright and straight. You may need to add some soil at the base of the rootball to stabilize the tree.

Clip the sides of the wire basket; cut the twine; and remove both from the rootball. Be careful not to damage the trunk with your knife when cutting the twine or the basket as you remove it.
Fill hole ¼ to ½ with excavated soil.

Fill the hole ⅓ to ½ full with the excavated soil. Using a utility or pocket knife, cut away as much of the burlap as you can without having the rootball break apart. This may be only a few inches to a foot or more. Start at the top near the trunk and work down and around the side of the rootball. Remove the burlap from the hole.

Eliminate air pockets in the soil.

Add water and continue adding soil.

Add water as you continue to add soil in the hole. Continue adding soil and water until the soil is level with the surrounding soil and the original soil level of the rootball.
Mulch 3 to 4 inches deep except within 4 inches of the trunk.

Backfill to original soil level.

Add mulch to the surface of the area excavated or at least twice the diameter of the rootball. Mulch should be 3 to 4 inches deep except no mulch should be placed within 4 inches of the trunk of the tree. Synthetic or fabric mulches can also be used. The mulch helps reduce weeds and conserve moisture, and keeps lawn mowers and string trimmers away from the tree trunk.

* Remove stakes before the second growing season.

Use wide bands around the trunk with wire or twine through a grommet, and slack in the line to the stake.

Stake driven into undisturbed soil.

Stake only if the tree is in a windy area and the rootball needs to be stabilized during the first year. Stakes should be removed the next spring. Proper staking requires 1 or 2 inch wide material bands with holes or grommets in each end. Place the band around the tree and slide the wire or twine through the holes only… not around the tree. Two stakes driven into undisturbed soil on opposite sides of the tree should be sufficient for most trees. Run the wire or twine from the band to the stake and tie. DO NOT PULL TAUT. There should be a little slack to allow the top of the tree some movement. Remember to remove the materials the next spring.
Avoid the "Death Stomp!"
Packing the soil with your foot or planting tool severely compacts the soil and can damage the roots decreasing tree growth.

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High Quality Tree Characteristics:

- Adequate sized root ball

- A trunk free of mechanical wounds and wounds from incorrect pruning

- A strong form with well-spaced, firmly attached branches
Thank you to the following members of the Lander Urban Forest Council for their continued support for the beautification of Lander and the many hours spent on various educational projects, including this one.

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Local pictures by Lucy Osborne, Lenny Poitras, Bob Brunskill, and Jim Downham.

If you have any questions about trees or shrubs in Lander, contact any of the Lander Urban Forest Council members.
Glossary

Acid- Opposite of alkaline. pH reading is below 7.0

Alkaline- Opposite of acid. A measure of bicarbonates in the soil. pH reading is above 7.0

Asexual Propagation of plants by grafting, rooting cuttings, etc.

Browse- The feeding on plants by wildlife. Also used to describe a plant used by wildlife for food. Many of the broadleaf species and some conifers.

Calcareous- Containing calcium carbonate and/or magnesium carbonate. pH above 7.0

Chlorosis- Abnormal yellowing of the leaves due to nutrient deficiency. Most commonly caused by iron deficiency, which may be the result of high alkaline soils.

Compound leaf- A leaf consisting of two or more leaflets.

Cultivar- A cultivated variety, produced by horticultural techniques.

Dioecious- Plant having unisexual flowers or cones with only one sex per plant. Literally meaning "two houses."

Genus- Genus (sing.). Genera (pl.). A group of species possessing fundamental traits in common but differing in other lesser characteristics.

Heavy soil- A soil composed of small particles (Example: clays)
Hybrid- A product of a cross between two or more closely related plants that is similar to both parents, but unique unto itself.

Monoecious- Plant with both male and female flowers or cones; literally meaning "one house."

Species- (Sing. and pl.) The unit of classification below the genus.

spp. - One of many cultivars.

Transpiration- Process of water movement through a plant to the atmosphere as a result of evaporation of water from the leaves.

Winter burn- Type of cold injury to foliage. Foliage is warmed above freezing by the winter sun during the day (even though the air temperature is below freezing) then re-freezes after sunset. Injury usually occurs on the south and southwest side of the tree.

Winter desiccation- Type of foliage injury which occurs on warm days when the ground is frozen: actually a type of physiological drought caused by excessive transpiration when frozen soils prohibit water absorption.

Winter sun scald: Type of cold injury to tree bark. Bark is warmed above freezing by the winter sun during the day (even through air temperature is below freezing) then re-freezes after sunset. Injury usually occurs on the south and southwest side of the tree.

Witches’ broom- An abnormally bushy, local growth part of the branch on woody plants, characterized by shortening of the internodes and excessive proliferation (rapid production of new cells); generally pathogenic in origin from fungi.
Chapter 13 — References

References Used for Descriptions:


Chapter 13 — References

Trees & Shrubs for Weston County. Developed in Cooperation with: Newcastle Tree Board, city of Newcastle, Wyoming State Forestry Division and Weston County Natural Resources District.


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Attracting Song Birds and Wildlife to your Back Yard

1. **Provide Cover:** Birds and small animals need places for nesting and hiding. In a backyard setting, such places can be provided by:
   - Planting ground cover instead of lawn in several areas.
   - Planting shrubs and plants with overhanging branches.
   - Using prickly or thorny plants in a few areas.

2. **Create Variety:** Good variety in plant species and terrain will attract different species of wildlife.

3. **Provide Food:** Use plants that provide seeds or maintain a wildlife feeder. If you use a feeder, keep it supplied throughout the winter. The birds and animals you are feeding may not have any other food source.

4. **Provide Water:** No matter what their individual food preferences may be, birds and animals need a dependable source of water close by.

Information taken from Conservation Trees Booklet published by The National Arbor Day Foundation.
Put some life
in your future……
plant a tree.
Presented by the Lander Urban Forest Council

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