

Tree and Shrub Guide for Washakie County

Presented by the Washakie County Conservation District



*There are two great times to a plant tree:
The first was 20 years ago
.....the other is now!
-Anonymous*

This publication was funded by the Washakie County Conservation District and the Wyoming State Forestry Division, in cooperation with the USDA Forest Service.



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(Cover photo of the Big Horn River courtesy of Bill Grunkemeyer)

**TREE PLANTING IS A STEP
ANYONE CAN TAKE, TO
BECOMING A BETTER
STEWARD OF THE LAND.**



Acknowledgements

The following individuals were involved in the development of this booklet, which included financing, plant identification, researching, photography, typing, proofreading and editing the pages that follow.

Mark Hughes, Wyoming State Forestry Division
Victoria Dietz, Washakie County Conservation District
Caryn Agee, Washakie County Conservation District
René Lee, Serlkay Printing
Jane O'Connor, Worland Tree Board
Worland Tree Board Members
Gard Ferguson, Serlkay Printing
Jim Gill, Washakie County Cooperative Extension Service
Ray Gullion, Natural Resource Conservation Service

We also appreciate those of you who allowed us access onto your property to take photos of your trees and shrubs.

Photography was done by René Lee, Serlkay Printing

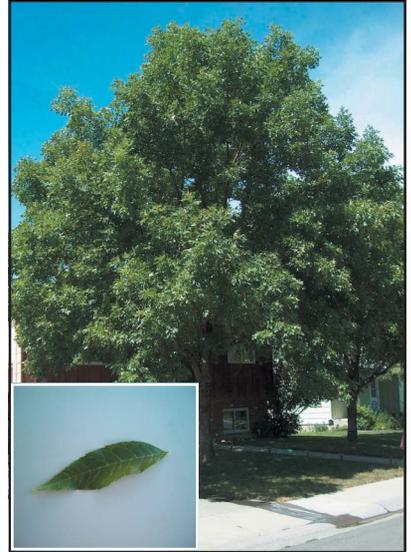
This publication was printed by
Serlkay Printing
124 So. 8th St. Worland, WY 82401
January, 2004



Ash, Green

Size: 35-65 feet high
30-40 foot spread
Growth Rate: moderate to rapid
Drought Resistance: excellent
Cold hardiness: excellent
Life Span: long
Soil Conditions: good alkaline tolerance
Possible Insect Problems: ash borer;
oyster shell scale; ash sawfly
Possible Disease Problems: powdery mildew
Wildlife Value: game and songbirds
Seasonal Color: golden-yellow fall foliage
Miscellany: native; does best in sandy,
loam soils; sturdy wood

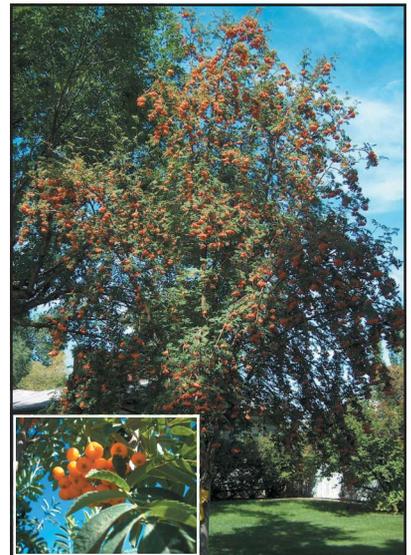
Fraxinus pennsylvanica



Ash, European Mountain

Size: 25-30 feet high
20-25 foot spread
Growth Rate: moderate
Drought Resistance: fair
Cold hardiness: zone 3
Light: full sun
Soil Conditions: doesn't tolerate alkaline soil
Possible Insect Problems: aphids and scales
Possible Disease Problems: susceptible to
fireblight and canker.
Wildlife Value: birds
Seasonal Color: bright orange-red fruits and
red fall leaf color
Miscellany: prefers well drained loam soils;
sunscald may occur on young, thin-barked
trees; good shade tree

Sorbus aucuparia





Aspen, Quaking

Size: 30-50 feet high

20-35 foot spread

Growth Rate: rapid

Drought Resistance: poor

Cold hardiness: excellent, zone 2-6

Life Span: moderate

Elevational Range: to 11,000 feet

Possible Insect Problems: poplar borer;

scale; tent caterpillar; twig gall fly

Possible Disease Problems: cytospora

canker; leaf spot; stem decay

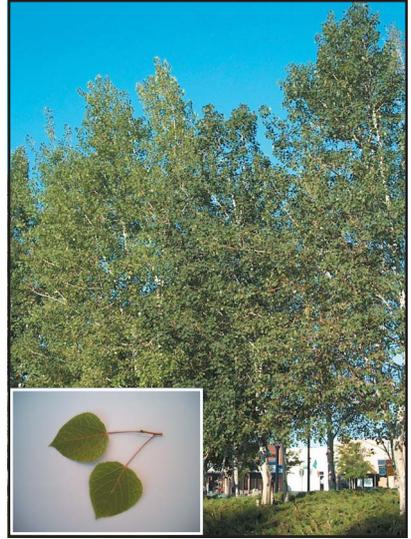
Wildlife Value: high; grouse and browsers

Seasonal Color: yellow fall foliage

Miscellany: native; usually planted in

clumps; doesn't do well in heavy clay soils.

Populus tremuloides



Birch, Weeping

Height: 50-60 feet high

Growth Rate: moderate to rapid

Cold hardiness: zone 2-6

Drought tolerance: poor

Life Span: medium

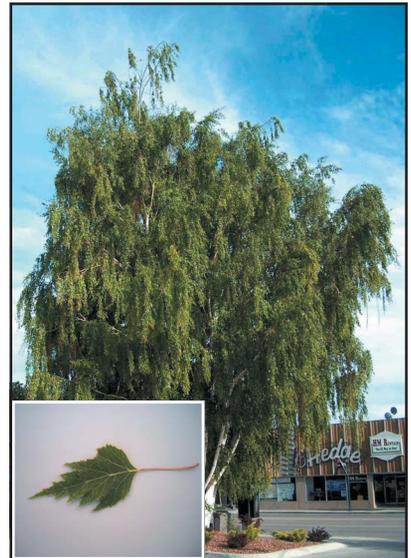
Soil Conditions: well drained, moist soils

Possible Disease Problems: bronze birch borer

Wildlife Value: birds and mammals

Miscellany: white bark

Betula pendula





Boxelder

Acer negundo

Size: 40-50 feet high
30-40 foot spread

Growth Rate: rapid

Cold hardiness: zone 3

Drought Tolerance: medium

Life Span: short

Soil Conditions: tolerates alkaline soil well;
does best on well-drained moist soils.

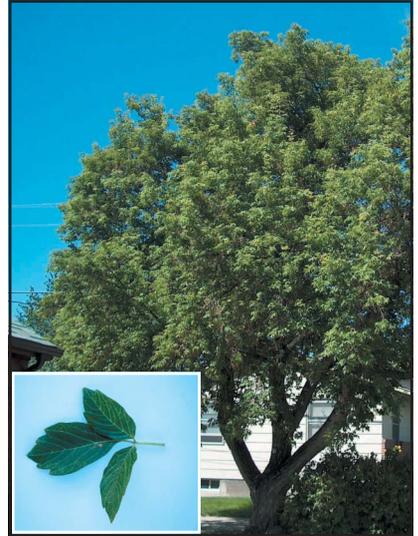
Elevation Range: to 8,000 feet

Possible Insect Problems: few

Possible Disease Problems: trunk and
stem decay

Wildlife Value: squirrels and birds

Miscellany: native; weak wood; seeds
from females are messy; seedless male
clones don't attract boxelder bugs



Catalpa, Northern

Catalpa speciosa

Height: 40-50 feet high

Growth Rate: rapid

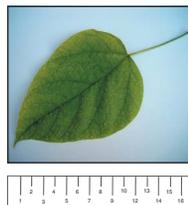
Drought Tolerance: fair

Soil Conditions: does well in most soil

Possible Insect Problems: few

Possible Disease Problems: few

Miscellany: large fragrant flowers;
long seed pods hang on tree all winter





Chokecherry, Canada Red

Prunus virginiana 'Canada Red'

Size: 15-25 feet high
20 foot spread

Growth Rate: moderate to rapid

Cold Hardiness: zone 3-6

Soil Conditions: tolerates most soil conditions

Possible Insect Problems: tent caterpillars;
leaf-feeding insects

Possible Disease Problems: black knot disease

Wildlife Value: berries relished by birds

Miscellany: green leaves turn to dark
maroon color; new leaves are green; may
become shrub if not pruned



Chokecherry, Common

Prunus virginiana

Size: 6-20 feet high
8-15 foot spread

Drought Resistance: good

Growth Rate: rapid

Cold Hardiness: excellent

Life Span: moderate

Elevation Range: to 9,000 feet

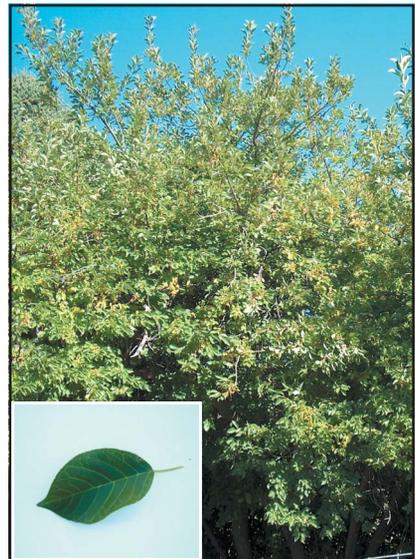
Soil Conditions: good alkaline soil tolerance;
well drained soils

Possible Insect Problems: poplar borers;
pear-slug sawfly; and tent caterpillar

Possible Disease Problems: black knot

Wildlife Value: high; song and ground
birds — good; small mammals and browse for deer

Miscellany: delicious edible fruit for jellies
and pies; native; can be poisonous to livestock





Cottonwood, Hybrid

Populus spp.

Size: 50-80 feet high

50-75 foot spread

Drought Resistance: poor

Growth Rate: rapid

Cold Hardiness: excellent

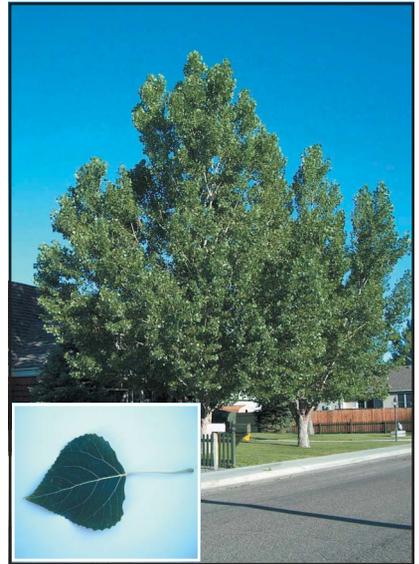
Life Span: moderate

Elevation Range: to 8,000 feet

Possible Insect Problems: leaf miners;
fall webworm; poplar borers; oyster shell scale

Possible Disease Problems: cytospora
canker; bacterial wetwood; marssonina leaf blight

Wildlife Value: fair; nesting and roosting cover



**There's nothing
that keeps its youth,
So far as I know,
but a tree and truth.
*Oliver Wendell Holmes***



Crabapples

Malus

Size: 15-25 feet high
15 foot spread

Growth Rate: moderate

Soil Conditions: well drained

Possible Disease Problems: fire blight

Elevational Range: to 7,500 feet

Wildlife Value: birds

Seasonal Color: showy flowers in the spring

Miscellany: These two photos show a red flowering crab and a white flowering crab tree. When selecting these trees, be sure to choose a cold hardy variety and consider the criteria below:

1. Fire blight resistance
2. Time of fruit maturity (the later the fruit ripens, the better it stores)
3. Standard vs. dwarf (dwarf are not hardy.)
4. Culinary purpose: dessert (flavor), pies/sauce, baking, juice, etc.
5. Usefulness as a pollinator

Crabapple trees need to be pruned so as not to become thick with branches.





Elm, Siberian

Ulmus pumila

Size: 20-50 feet high
30-40 foot spread

Growth Rate: rapid

Soil Conditions: tolerates alkaline soils well

Cold Hardiness: excellent

Drought Tolerant: excellent

Life Span: moderate

Elevational Range: to 8,000 feet

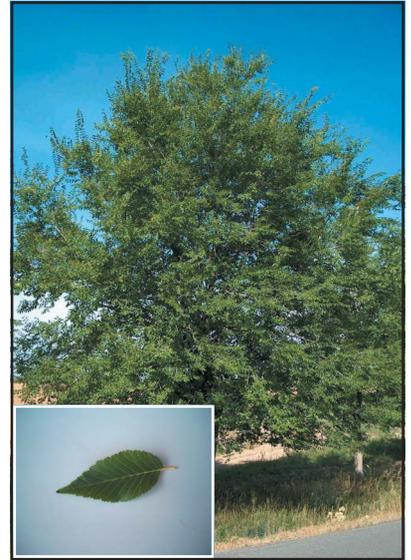
Possible Disease Problems: bacterial wetwood

Possible Insect Problems: elm leaf beetle

Wildlife Value: moderate; song & game birds

Miscellany: often confused with Chinese

Elm, which is not hardy in our climate



Foresteria, New Mexico (privet)

Forestiera neomexicana

Height: 10 feet high

Growth Rate: moderate

Soil Conditions: moist; alkaline soil tolerant

Cold Hardiness: good

Drought Tolerant: excellent

Life Span: long

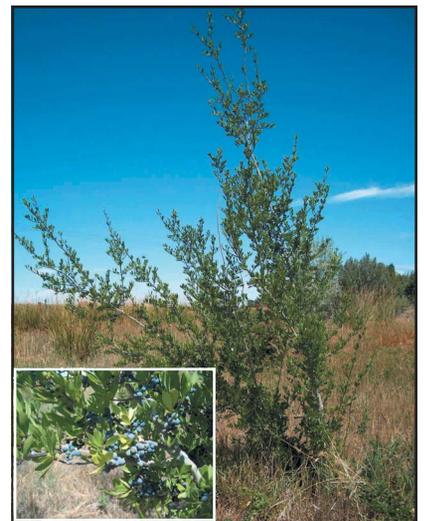
Elevational Range: to 7,500 feet

Possible Disease Problems: few

Possible Insect Problems: few

Wildlife Value: good; fruit valuable to quail and songbirds; excellent cover

Miscellany: native; bluish-black fruit; yellow flowers





Hackberry

Size: 40-60 feet high

40-60 foot spread

Growth Rate: rapid to moderate

Soil Conditions: tolerates alkaline soil well;
moderately salt tolerant

Cold Hardiness: very good

Drought Resistance: very good

Life Span: long

Elevational Range: to 7,000 feet

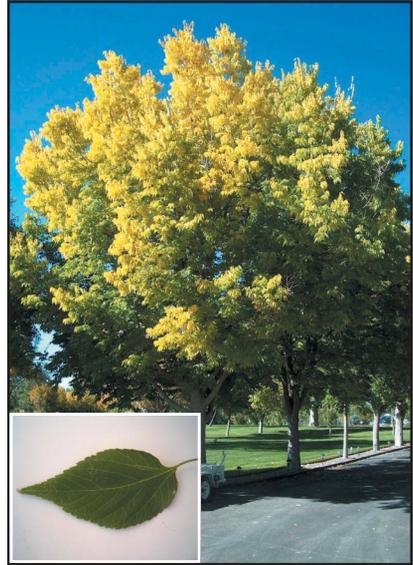
Possible Disease Problems: hackberry
witches'-broom

Possible Insect Problems: leaf gall psyllids;
spiny elm caterpillar; nipple gall often
present, but not harmful.

Wildlife Value: high; songbirds and small
mammals

Miscellany: native; wood of commercial value
(Picture shows golden fall colors.)

Celtis occidentalis



**“One generation
plants the trees;
another gets the shade.”
*Chinese proverb***



Juniper, Rocky Mountain

Size: 15-35 feet high
5-30 foot spread

Growth Rate: slow

Soil Conditions: excellent alkaline soil tolerance

Cold Hardiness: Zone 3-7

Drought Resistance: excellent

Life Span: long

Elevational Range: to 9,000 feet

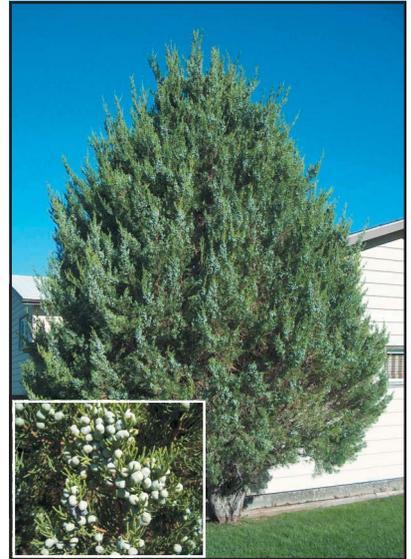
Possible Disease Problems: cedar apple
rust; juniper broom rust; juniper true
mistletoe; tip blight

Possible Insect Problems: spider mites; bark beetles

Wildlife Value: high; song and ground
birds and large browsing mammals

Miscellany: native

Juniperus scopulorum



Linden, Little Leaf

Height: 50-60 feet high

Growth Rate: moderate

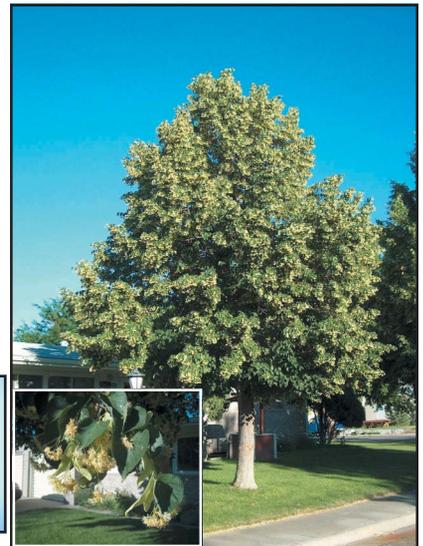
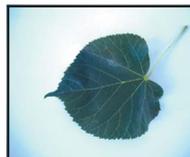
Soil Conditions: tolerates alkaline soil well;
well drained soils preferred

Possible Disease Problems: canker disease

Wildlife Value: roost for birds

Miscellany: blooms in midsummer with
fragrant pale yellow flowers; transplants well

Tilia cordata





Locust, Honey

Gleditsia triacanthos inermis

Size: 35-60 feet high

15-50 foot spread

Growth Rate: rapid

Cold Hardiness: very good

Drought Resistance: very good

Life Span: moderate to long

Elevational Range: to 7,500 feet

Possible Disease Problems: sunscald;

thyronectria canker; cytospora canker

Possible Insect Problems: pod gall midge;

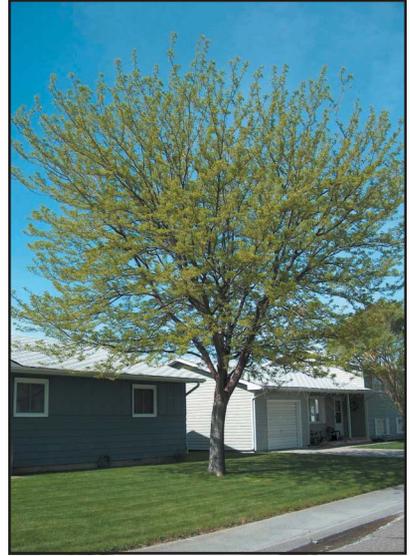
scale insects

Wildlife Value: low

Seasonal Color: green foliage; Sunburst

Honeylocust has golden leaves on new growth.

Miscellany: usually thornless



Locust, Sunburst Honey

Gleditsia triacanthos 'sunburst'





Maple, Silver

Acer saccharinum

Size: 40-65 feet high
50 foot spread

Growth Rate: rapid

Cold Hardiness: zone 3

Drought Resistance: poor

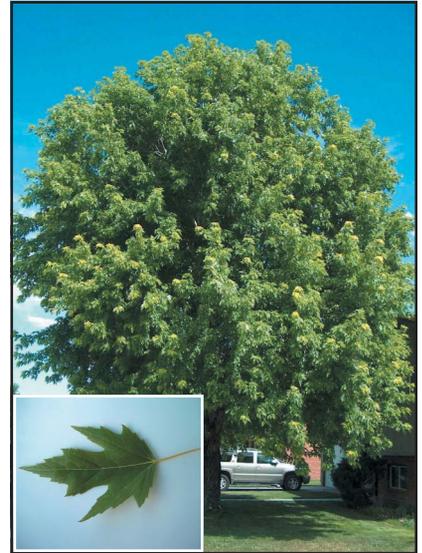
Life Span: moderate

Soil Conditions: not alkaline soil tolerant;
prefers acid soils

Wildlife Value: browsed by deer and rabbits;
seeds eaten by squirrels; fair for songbirds

Seasonal Color: light green on upper leaf
surface and silvery white underside

Miscellany: transplants well; vigorous root
system will cause sidewalks to buckle; weak wood



Oak, Bur

Quercus macrocarpa

Size: 40-70 feet high
35 foot spread

Growth Rate: slow

Cold Hardiness: excellent

Drought Resistance: excellent

Life Span: very long

Soil Conditions: tolerates alkaline soil well

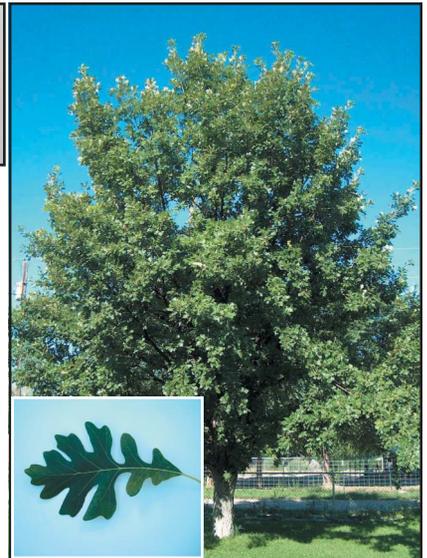
Elevational Range: to 7,000 feet

Possible Insect Problems: scales; gall wasps

Possible Disease Problems: leaf curl; stem decay

Wildlife Value: excellent; acorn food value
for birds and mammals

Miscellany: can live more than 200 years;
difficult to transplant due to long tap root; native





Pine, Austrian

Pinus nigra

Size: 30-40 feet high

25-30 foot spread

Growth Rate: slow-moderate

Cold Hardiness: fair; zone 3-7

Drought Resistance: excellent

Life Span: long

Elevational Range: to 7,000 feet

Soil Conditions: tolerates alkaline soil well

Possible Insect Problems: pine tip moth

Possible Disease Problems: fairly resistant

Wildlife Value: high; song and ground birds; food value from seeds

Seasonal Color: evergreen

Miscellany: forms a good screen



Pine, Lodgepole

Pinus contorta

Size: 15-80 feet high

15-30 foot spread

Growth Rate: slow to moderate

Cold Hardiness: excellent; zone 2-5

Drought Resistance: excellent

Life Span: long

Elevational Range: 6,000 to 11,000 feet

Soil Conditions: tolerates alkaline soil well

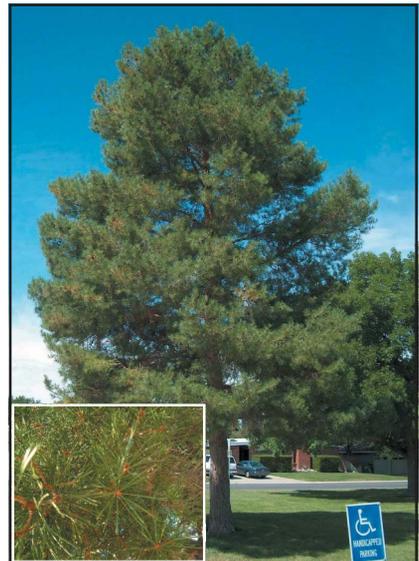
Possible Insect Problems: mountain pine beetle

Possible Disease Problems: mistletoe;
western gall rust

Wildlife Value: high; food value from seeds
for upland game and songbirds

Seasonal Color: evergreen

Miscellany: native; good conifer for high
altitude windbreaks

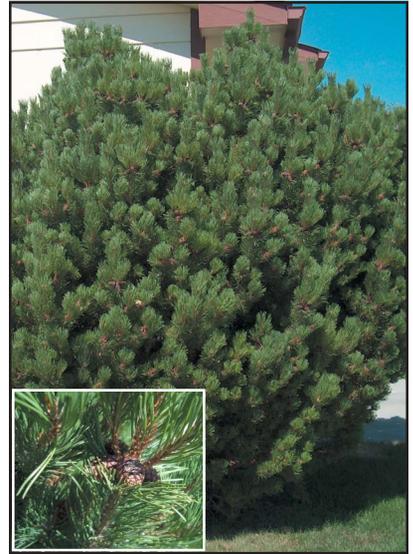




Pine, Pinon

Pinus edulis

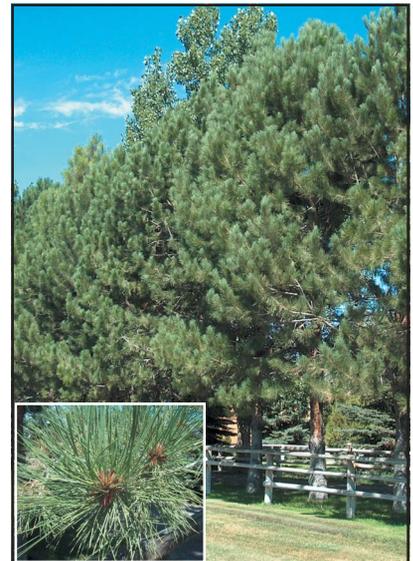
Size: 15-30 feet high
15-30 foot spread
Growth Rate: slow to moderate
Cold Hardiness: excellent
Drought Resistance: excellent
Life Span: long
Elevational Range: to 7,500 feet
Possible Insect Problems: pinon pitch borer;
ips beetle; spindle gall midge
Possible Disease Problems: black stain root
disease; mistletoe
Wildlife Value: high; food value from seeds
for upland game and songbirds
Seasonal Color: evergreen
Miscellany: native; does well in sandy soil



Pine, Ponderosa

Pinus ponderosa

Size: 40-100 feet high
15-60 foot spread
Growth Rate: moderate to rapid
Cold Hardiness: excellent; zone 3-7
Drought Resistance: excellent
Life Span: long
Elevational Range: to 9,000 feet
Soil Conditions: tolerates alkaline soil well
Possible Insect Problems: sawflies; bark
beetle; tip moth
Possible Disease Problems: western gall
rust; dwarf mistletoe; shoestring root rot
Wildlife Value: high; song and ground birds;
small mammals and browsers
Seasonal Color: evergreen; excellent for windbreak
Miscellany: native; needs well-drained soils





Pine, Scotch

Pinus sylvestris

Size: 40-65 feet high

20- 40 foot spread

Growth Rate: rapid to moderate

Cold Hardiness: very good; zone 2-8

Drought Resistance: very good

Life Span: long

Elevational Range: to 7,000 feet

Soil Conditions: tolerates alkaline soil

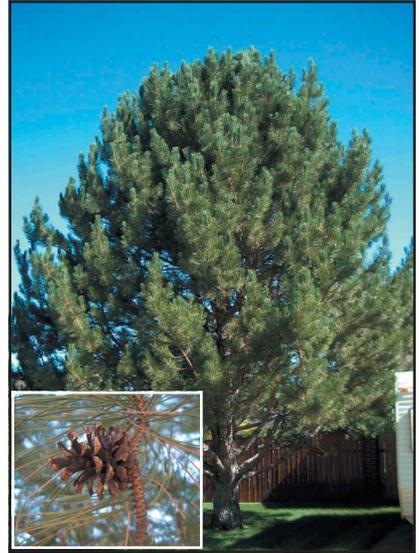
Possible Insect Problems: tip moths; ips beetles

Possible Disease Problems: fairly resistant

Wildlife Value: high; food value for upland game and songbirds

Seasonal Color: evergreen

Miscellany: makes excellent Christmas tree; prefers moist, well drained soils



Poplar, White

Populus alba

Size: 40-70 feet high

to 60 feet wide

Growth Rate: rapid

Cold Hardiness: zone 3-8

Drought Resistance: good

Soil Conditions: tolerates alkaline soil well; clay to sandy soils; moist soils

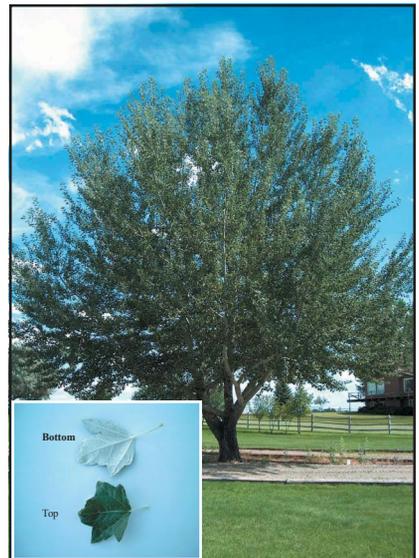
Possible Insect Problems: few

Possible Disease Problems: few

Wildlife Value: used for cover and habitat; buds provide food for grouse

Seasonal Color: dark green/silvery-white contrasting foliage

Miscellany: suckering roots; limbs break in storms; often mistaken for silverleaf maple





Redcedar, Eastern

Size: 15-20 feet high
10-20 foot spread
Growth Rate: slow to moderate
Cold Hardiness: excellent; zone 2-9
Drought Resistance: excellent
Life Span: long
Elevational Range: to 7,500 feet
Soil Conditions: tolerates alkaline soils and salts
Possible Insect Problems: spider mites
Possible Disease Problems: cedar apple rust;
tip blight
Wildlife Value: high; song and game birds and
hoofed browsers; good cover
Seasonal Color: rusty red
Miscellany: very adaptable to site conditions;
suited for windbreaks; don't plant near apple trees

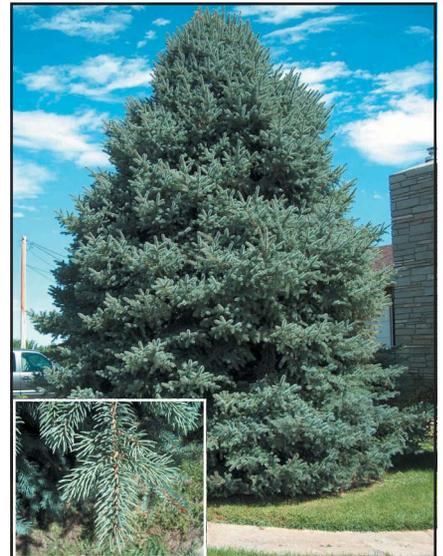
Juniperus virginiana



Spruce, Colorado Blue

Size: 50-80 feet high
20-35 foot spread
Growth Rate: slow
Cold Hardiness: excellent; zone 2-7
Drought Resistance: good
Life Span: long
Elevational Range: to 6,000 to 9,000 feet
Soil Conditions: moist, well-drained soils
Possible Insect Problems: spruce budworm
Possible Disease Problems: shoestring root
rot; Douglas-fir mistletoe; bacterial gall
Wildlife Value: high; food value for grouse,
songbirds and small mammals; browse for
deer and elk
Seasonal Color: evergreen
Miscellany: native

Picea pungens





Spruce, White

Picea glauca

Size: 30-50 feet high

15-20 foot spread

Growth Rate: slow to moderate

Drought Resistance: good

Soil Conditions: prefer rich, moist soils

Possible Insect Problems: spider mites; spruce needle miner; pine needle scale; aphids; spruce sawfly

Possible Disease Problems: needle blight

Wildlife Value: nesting; browse; good cover

Seasonal Color: evergreen

Miscellany: native; provides excellent wind protection



Willow, Golden

Salix alba vitellina

Size: to 35 feet high

to 35 foot spread

Growth Rate: rapid

Cold Hardiness: excellent; zone 2-7

Drought Resistance: poor

Life Span: moderate

Elevational Range: to 8,000 feet

Soil Conditions: tolerates alkaline soils and salts well; requires moist soil

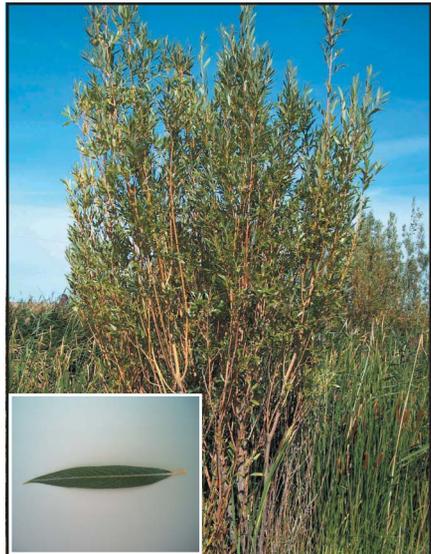
Possible Insect Problems: aphids

Possible Disease Problems: cytospora canker; bacterial wetwood

Wildlife Value: moderate; song and game birds; food value for buds and twigs

Seasonal Color: orange-yellow bark

Miscellany: native; branches shed easily





Willow, Weeping

Salix babylonica

Size: 30-40 feet high
to 40 foot spread

Growth Rate: rapid

Cold Hardiness: zone 2-8

Drought Resistance: poor

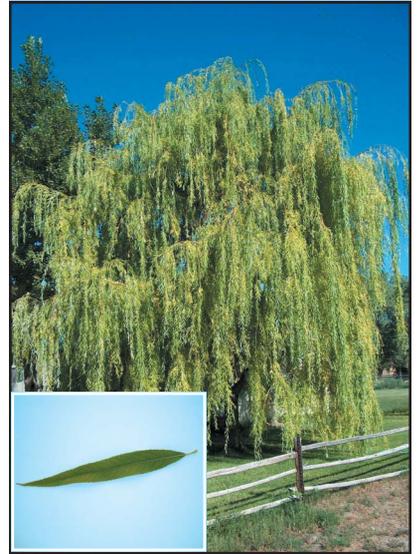
Life Span: moderate

Soil Conditions: moist soils; best in loam,
clay soils

Possible Disease Problems: oyster shell scale; galls

Seasonal Color: light green leaves in spring;
yellow leaves in the fall

Miscellany: well known for its distinctive
weeping foliage; first to leaf out in the spring
and last to drop leaves in the fall



**He that plants
trees loves others
besides himself.**

Dr. Thomas Fuller



Barberry, Red Leaf Japanese

Berberis thunbergii

Height: 3-6 feet high

Growth Rate: moderate

Cold Hardiness: zone 4-8

Drought Resistance: excellent

Soil Conditions: may develop chlorosis in alkaline soils

Wildlife Value: browsed by deer

Light: full sun

Seasonal Color: showy reddish-purple foliage; small yellow flowers in spring and red fruit that persists into winter

Miscellany: good hedge plant



Buffaloberry

Shepherdia argentea

Height: 10-12 feet high

Growth Rate: moderate to rapid

Cold Hardiness: excellent

Drought Resistance: good

Life Span: long

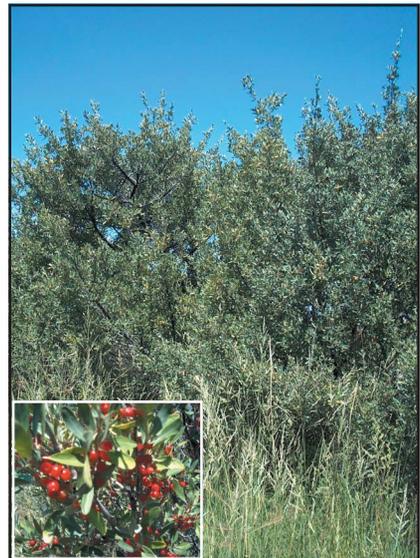
Elevational Range: to 7,500 feet

Possible Disease Problems: few

Possible Insect Problems: few

Wildlife Value: good food value; excellent cover for small game and songbird nesting

Miscellany: native; edible fruit for jellies; forms thickets; needs male and female plants to produce fruit; has thorns

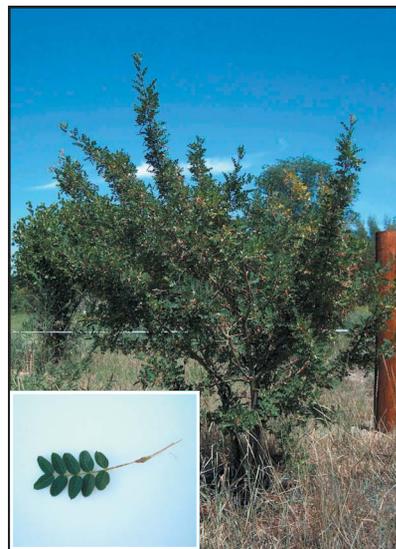




Caragana “Siberian Peashrub”

Caragana arborescens

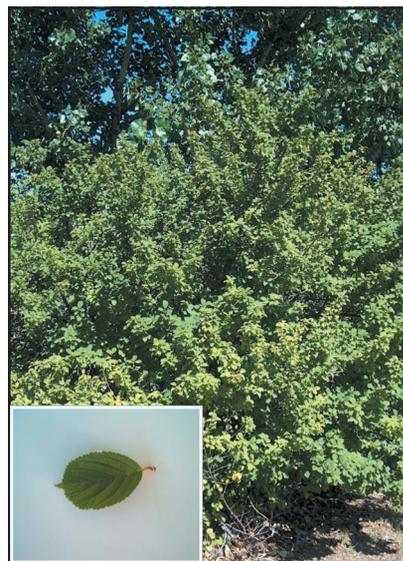
Size: 8-12 feet high
3-5 foot spread
Growth Rate: rapid
Cold Hardiness: excellent
Drought Resistance: excellent
Life Span: moderate
Elevational Range: to 9,500 feet
Soil Conditions: good alkaline soil and salt tolerance
Possible Insect Problems: aphids and grasshoppers
Wildlife Value: good; songbirds
Seasonal Color: yellow spring flowers
Miscellany: does well in poor soils



Cherry, Nanking

Prunus tomentosa

Size: to 8 feet high
to 8 foot spread
Growth Rate: rapid
Cold Hardiness: excellent; zone 2-5
Drought Resistance: good
Life Span: short to moderate
Elevational Range: to 8,000 feet
Soil Conditions: good alkaline soil tolerance
Possible Insect Problems: tent caterpillars; bark beetles
Possible Disease Problems: shot-hole leaf spot; black knot; branch cankers
Wildlife Value: high; song and game birds
Seasonal Color: pinkish-white flowers in spring
Miscellany: delicious edible fruit for jellies; blooms early

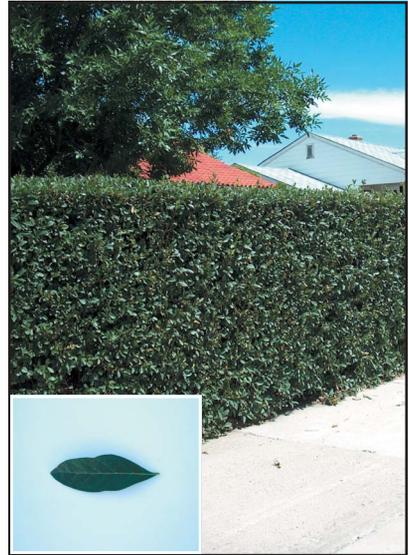




Cotoneaster

Size: 6-10 feet high
3-5 foot spread
Growth Rate: moderate to rapid
Cold Hardiness: excellent; zone 2-5
Drought Resistance: very good
Life Span: moderate
Elevational Range: to 9,500 feet
Soil Conditions: good alkaline soil tolerance
Possible Insect Problems: oyster shell scale;
pear slug
Possible Disease Problems: fireblight
Seasonal Color: brilliant red fall foliage
Wildlife Value: high; song and game birds
Miscellany: makes nice hedge; don't plant
near crabapple trees

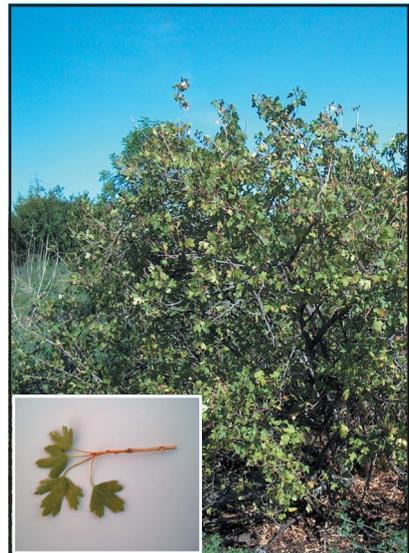
Cotoneaster acutifolia



Currant, Golden

Size: 5-8 feet high
3-8 foot spread
Growth Rate: rapid
Cold Hardiness: good; zone 2
Drought Resistance: good
Life Span: moderate
Elevational Range: to 8,000 feet
Soil Conditions: moist
Possible Insect Problems: imported current
worm; oyster shell scale
Possible Disease Problems: blister rust;
anthracnose; leafspots
Wildlife Value: good; food and browse
value; nesting cover
Seasonal Color: red to orange fall color;
showy yellow flowers
Miscellany: native; edible deep red fruit

Ribes aureum

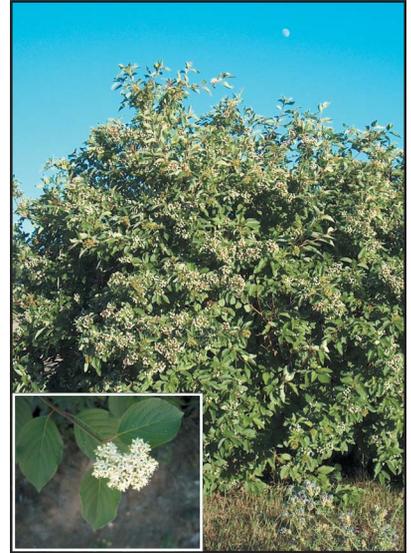




Dogwood, Red-Osier

Cornus sericea

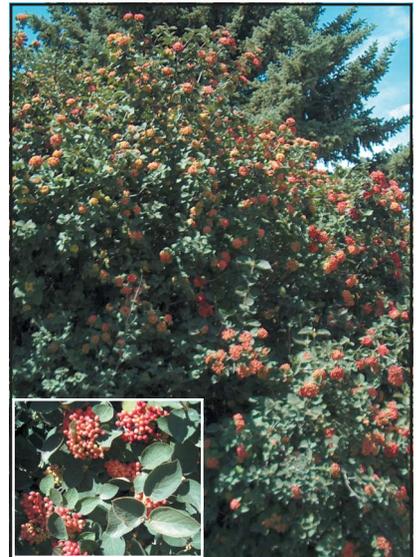
Size: to 8 feet high
to 6 foot spread
Growth Rate: rapid
Cold Hardiness: excellent
Drought Resistance: poor
Life Span: moderate
Elevational Range: to 11,000 feet
Soil Conditions: not suited for dense clays
Possible Insect Problems: dogwood sawfly;
polyphemus moth; oystershell scale
Possible Disease Problems: cytospora canker
Wildlife Value: excellent grouse; pheasant;
turkey; grosbeak; robin; cedar waxwing
Seasonal Color: vivid red fall foliage and
stems; showy white flowers and berries
Miscellany: for moist sites such as streamside
riparian areas



Doublefile viburnum

Viburnum plicatum

Height: 6-10 feet high
Growth Rate: moderate
Cold Hardiness: zone 5-8
Soil Conditions: moist, well-drained soil;
prefers slightly acid soil
Possible Insect Problems: viburnum aphid;
treehoppers; scale
Possible Disease Problems: leaf spot;
powdery mildew
Seasonal Color: dark green, turning wine
red to reddish purple in fall
Wildlife Vaules: berries very attractive to birds
Miscellany: bright red fruit drupes in large
clusters; ripens to black in late summer;
large, showy white flowers in May





Honeysuckle

Lonicera spp.

Size: 6-9 feet high

6-9 foot spread

Growth Rate: moderate to rapid

Cold Hardiness: excellent; zone 3-7

Drought Resistance: good

Life Span: moderate

Elevational Range: to 8,000 feet

Soil Conditions: good alkaline soil tolerance

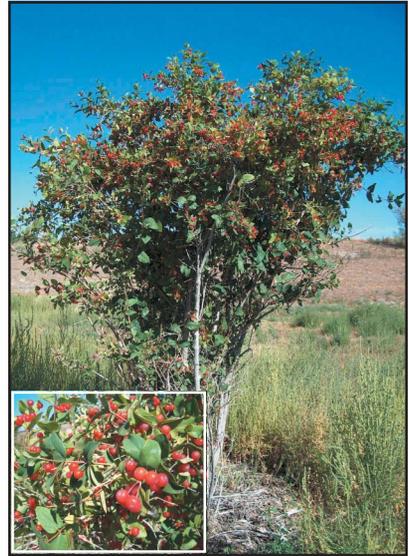
Possible Insect Problems: aphids

Possible Disease Problems: honeysuckle
witches'-broom

Wildlife Value: good; song and ground birds

Seasonal Color: pink flowers in spring

Miscellany: good for hedges



Juniper, Pfitzer

Juniperus chinensis

Size: 2-5 feet high

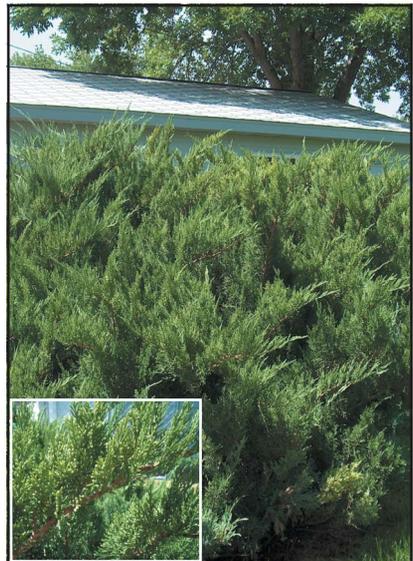
6-10 foot spread

Growth Rate: moderate

Cold Hardiness: zone 3-4

Drought Resistance: very good

Soil Conditions: prefers moist, well-drained soils





Lilac

Syringa spp.

Size: 8-10 feet high

8-12 foot spread

Growth Rate: moderate to rapid

Cold Hardiness: excellent; zone 2-7

Drought Resistance: very good

Soil Conditions: good alkaline soil tolerance

Life Span: moderate

Elevational Range: to 8,000 feet

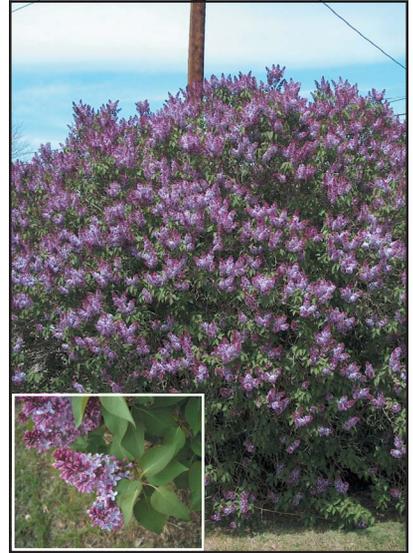
Possible Insect Problems: lilac borer; leaf miners; oyster shell scale

Possible Disease Problems: lilac leaf blotch; powdery mildew; some leaf spots

Wildlife Value: moderately high; songbirds; cover value

Seasonal Color: fragrant purple or white spring flowers

Miscellany: develops into a dense barrier



Pine, Mugo

Pinus mugo

Size: 5-15 feet high

10-30 feet wide

Growth Rate: rapid

Cold Hardiness: excellent; zone 2-7

Drought Resistance: excellent

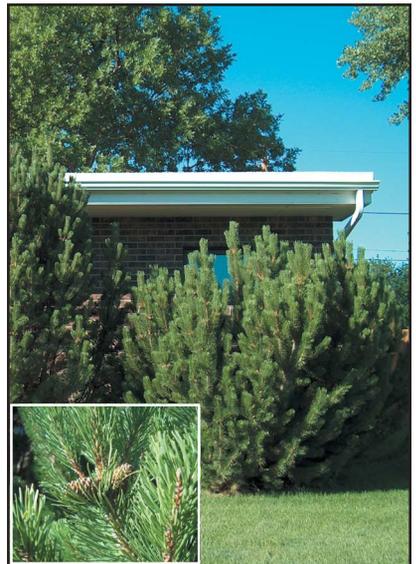
Soil Conditions: adapted to a variety of soils; prefers well drained soils

Wildlife Values: cover for some birds and mammals

Possible Insect Problems: pine sawfly; pine needle scale; pine beetles

Possible Disease Problems: diplodia tip blight; rusts

Miscellany: good for ornamental landscaping; dark green color year-round





**Character is like a tree and
reputation like its shadow.
The shadow is what we think
of it; the tree is the real thing.**
Abraham Lincoln

Plum, Native

Prunus americana

Size: to 15 feet high
to 8 foot spread

Growth Rate: rapid

Cold Hardiness: excellent

Drought Resistance: good

Soil Conditions: good alkaline soil tolerance

Life Span: moderate

Elevational Range: to 8,000 feet

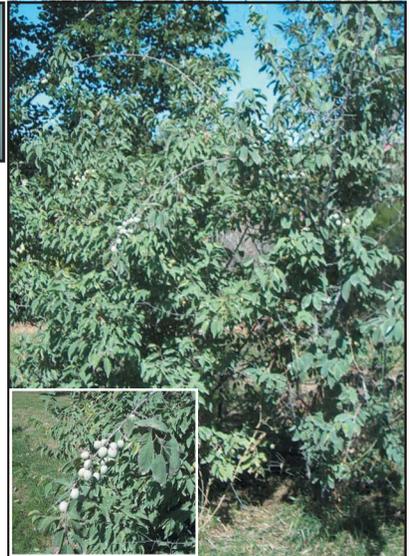
Possible Disease Problems: fireblight;
powdery mildew

Possible Insect Problems: pear-slug sawfly

Wildlife Value: excellent; hooved browsers;
nesting cover and food value

Seasonal Color: large white flowers in May

Miscellany: native; delicious edible fruit for
jellies and canning; forms a thicket





Rose, Wild

Rosa spp.

Height: 4 feet high, spreading

Growth Rate: rapid

Cold Hardiness: excellent

Drought Resistance: good

Soil Conditions: moist

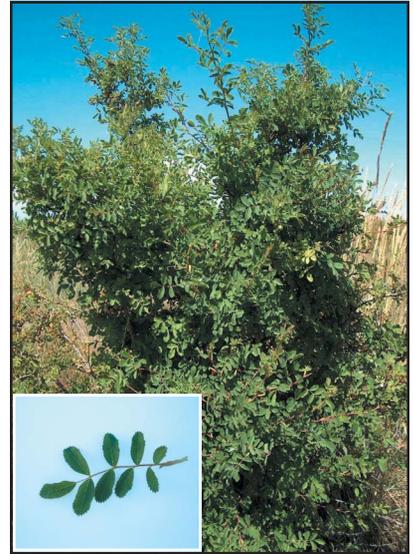
Life Span: moderate

Elevational Range: to 10,000 feet

Possible Insect Problems: leaf cutter bees

Wildlife Value: excellent; big game browse and food value; relished by grouse, turkey and pheasant

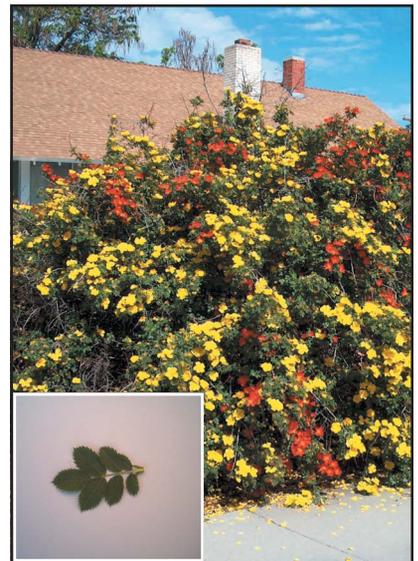
Miscellany: native; showy flowers; suckers and spreads



Rose, Austrian Copper

Rosa foetida bicolor

These are the most grown 'species' of rose in the world.





Sage, Russian

Size: 3-4 feet high

3-4 foot spread

Growth Rate: moderate

Cold Hardiness: zone 4-9

Drought Resistance: excellent

Soil Conditions: well-drained soils

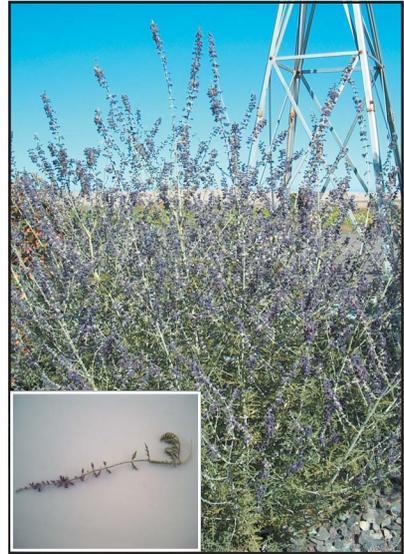
Life Span: long lived perennial

Possible Insect Problems: attracts bees

Seasonal Color: violet-blue flowers from mid-summer until early fall; silvery foliage

Miscellany: ideal for rock gardens; perennial

Perovskia atriplicifolia



Sandcherry, Purpleleaf

Size: 7-10 feet high

7-8 foot spread

Growth Rate: rapid

Cold Hardiness: zone 3-8

Drought Resistance: excellent

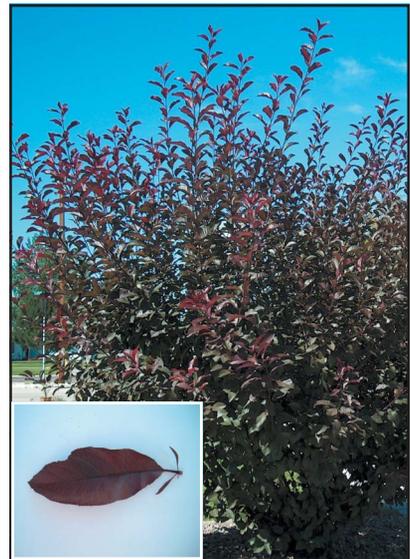
Soil Conditions: widely adaptable; prefers well-drained soils

Life Span: long lived

Seasonal Color: produces bright red leaves in spring and turns reddish purple in fall; white-pink flowers in April/May

Miscellany: makes wonderful hedge; very tolerant of urban conditions

Prunus x cistena





Spirea, Vanhoutte

Size: 2-8 feet high

4-8 feet spread

Growth Rate: moderate

Cold Hardiness: zone 3-8

Drought Resistance: good

Soil Conditions: adapted to a wide variety of soils; prefers well-drained soils

Light: full sun or light shade

Wildlife Value: excellent; fruit used as food for song and game birds; hoofed browsers may feed on leaves and twigs

Miscellany: sometimes referred to as Bridal-wreath Spirea because of its white flowers

Spiraea vanhouttei



Sumac, Skunkbush

Size: 3-6 feet high

4-8 foot spread

Growth Rate: slow to moderate

Cold Hardiness: excellent

Drought Resistance: excellent

Soil Conditions: excellent alkaline soil tolerance

Life Span: moderate

Elevational Range: to 8,000 feet

Possible Insect Problems: fairly resistant

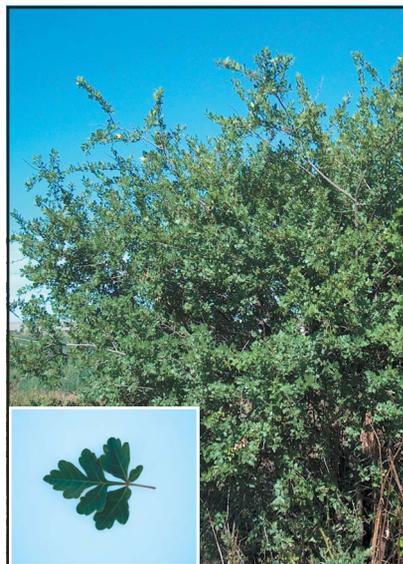
Possible Disease Problems: fusarium wilt

Wildlife Value: excellent; many birds

Seasonal Color: red-orange fall foliage

Miscellany: native; scented leaves; berries have slight lemon taste when rolled under tongue

Rhus trilobata





Planting Guidelines

Many factors must be considered in planning tree plantings, regardless of whether they are located in the mountains or plains, or whether they have been designed to benefit wildlife, control wind, or to be used for landscaping purposes. These factors include: location, elevation, soil type and alkalinity, prevailing wind direction, weed control, watering needs and availability, snow drifting, power lines, planting size, species selection, and site preparation. Spring and fall are the best seasons to plant trees.

Select the location - Choose a spot where the tree can reach its full size; note height and spread the species is expected to reach at maturity. Keep trees back from buildings and from beneath utility lines.

Dig a wide planting hole - The planting hole should be dug only as deep as the rootball and at least twice as wide. Rough up soils on the sides of the hole to facilitate a good bond with the rootball soil and aid root movement. Begin filling the hole with the original soil that was removed until it is about one-third full, then gently pack the soil around the base of the root ball. Continue back-filling the hole by adding a few inches of soil at a time, followed by water to eliminate drying air pockets, until the hole is filled to its original growing level. This level is indicated by a dark stain on the trunk, which marks the difference between root and trunk bark. Do not use your feet to tamp around the tree base as this compacts the soil and may inhibit the spread of roots. Rake a ridge of soil two to four inches high around the margin of the hole (outside the root area) to serve as a reservoir when watering.

Stake the tree, if necessary - Staking a tree can cause bark damage and reduces the development of strong roots and a tapered trunk. However, trees should be staked to avoid shifting during high winds. Stake very carefully with a broad, soft strapping material such as woven belt fabric. Drive one to three stakes into the ground just outside the perimeter of the rootball and into undisturbed soil, spacing them an equal distance apart.



Staking the Tree (continued)

Attach one end of the strapping material to the tree at the lowest practical level to maintain the tree upright. Fasten the other end to the stake while still leaving enough slack to allow for wind sway. Remove the staking material after the first year of growth.

Mulch the Base of the Tree - A two to three inch layer of mulch conserves soil moisture and protects newly planted tree roots from hot and cold temperatures, and also keeps weeds out. Keep mulch at least two inches away from the base of the trunk to reduce fungal growth and wood rot. Maintain a mulched, grass-free area around your tree (for its life) to reduce competition for water and nutrients and to protect the trunk from lawn-mower/trimmer damage.



Mulch Wide, Not Deep

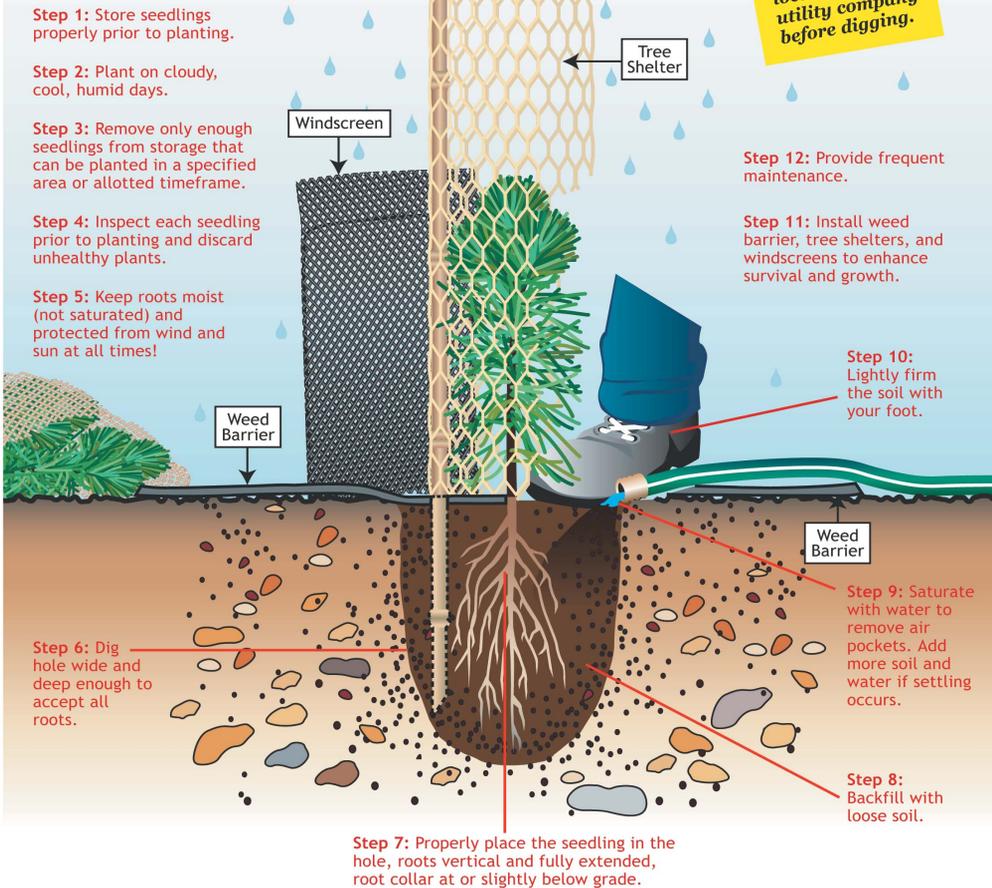


Hand-Planting Guidelines for Bareroot Trees and Shrubs

Bareroot plants are one- to three-year-old nursery stock that are dug, stored, and shipped without soil or potting mix surrounding their roots. Bareroot plants are inexpensive, easy to plant, and offer field grown hardiness. They are an excellent choice for many hardwoods and some conifers used in conservation applications such as windbreaks, shelterbelts, living snowfences, buffers, riparian channel stabilization projects, reforestation programs, wildlife habitat enhancement plantings,

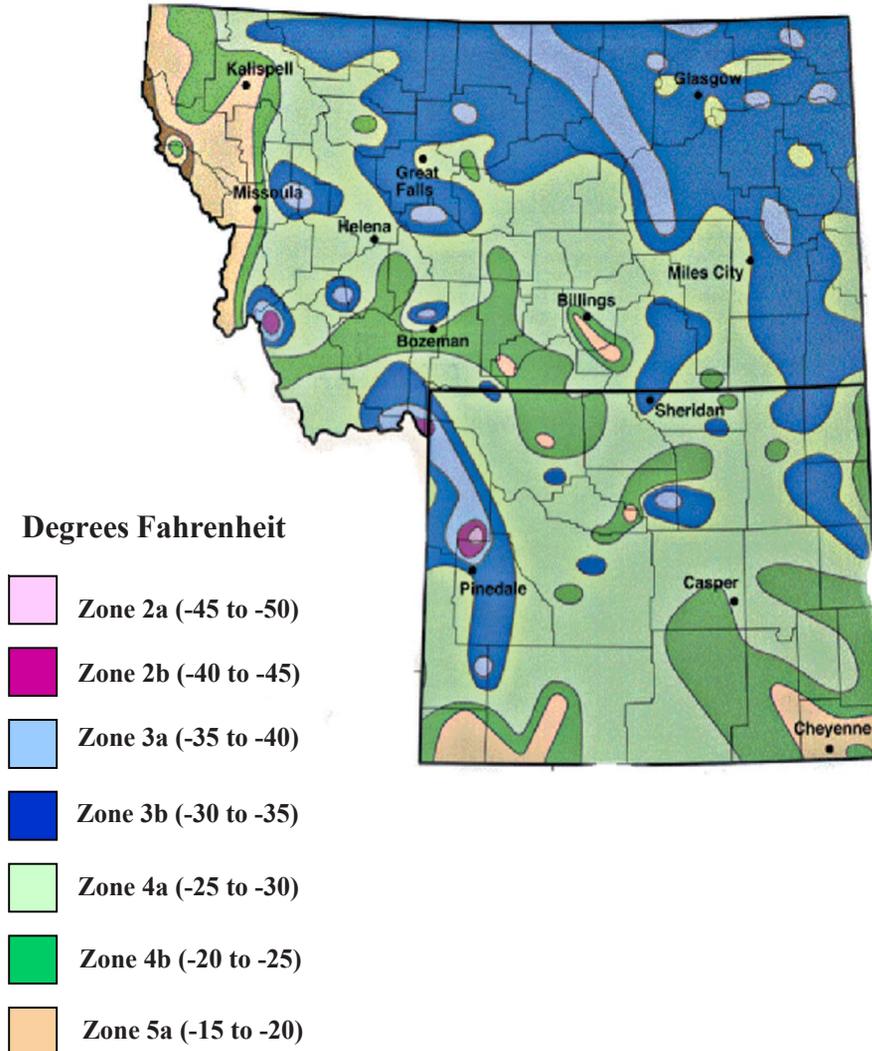
xeriscapes, and more. Proper planting of bareroot seedlings is *one* critical step in a successful conservation planting that includes a good design, proper site selection and preparation, appropriate species selection, quality nursery stock, suitable temporary storage and handling, correct planting, and frequent, long term maintenance. Follow these 12 steps to successful installation of your bareroot plants!

Always call your local utility company before digging.





USDA Winter Hardiness Zones





Watering

Proper watering is the most important factor in keeping your plants growing vigorously. Watering needs vary with individual plant requirements, as well as the soil type, drainage, exposure and weather. Develop a watering schedule from your own experience by checking the soil moisture. You can do this by digging down about 6 inches just outside the root zone. If the soil tends to crumble when you squeeze it, you should water the plant. If the soil forms a ball, wait a few more days before watering. Do not worry about the dryness of the top inch of soil. Plant roots need both air and water for development. If you water too frequently, you keep the soil constantly wet and exclude oxygen from the roots. Therefore, when you do water, soak the ground thoroughly enough to saturate the root zone, but allow adequate time between waterings to permit the soil to drain and air to penetrate into the root zone. Watering trees at the drip line of tree branches and beyond is recommended; this will ensure that soil moisture is there for the greatest majority of the roots.

To assure survival, a tree will need 10 gallons of water per inch of trunk diameter with each watering. A typical garden hose on medium pressure will supply 10 gallons in 5 minutes of run time. The way to calculate how long to leave water running for appropriate water application is to take the diameter of a tree times the five minutes needed to get 10 gallons of water flow. Therefore, 8-inch diameter trees will need 40 minutes of water flow to receive 80 gallons of water. Most trees will need three waterings per month from April through October. Newly planted trees and shrubs need additional, supplemental water applications during their first growing season. Due to our dry climate, the supplemental water must be applied to even low-water-requiring plants until the root system is developed and well established.



Winter Care

“Hardened” or preconditioned plants can withstand remarkably low temperatures. Practices that aid in hardening trees to cold include:

- a. Avoid early fall overwatering. Reduce watering after August 15 - Sept. 1. Excess water in late summer stimulates new tissue growth, which is sensitive to cold. Remember, however, that late fall watering, after trees are hardened, is beneficial.
- b. Avoid late summer fertilization. High nitrogen and calcium fertilization, in particular, promotes new growth and increases sensitivity to injury. However, fertilization after leaf drop is a good practice.
- c. Avoid late season pruning. This stimulates tissue growth and hinders plant hardening.

In this area, most winter damage is caused by drying out of plant tissues. The combination of winds, intense sunlight, and sparse winter moisture causes stress to plants, especially young plants with small root systems. Typically, in Wyoming, the recommendation for winter watering is to apply water when the daily temperatures exceed 45 degrees and the ground is not frozen. If possible, watering once a month from October through April will supply plenty of water to sustain trees.

Fertilizing

It is best not to use fertilizer the first year. (Never apply high nitrogen fertilizer at planting time as it may burn tender roots.) Good, rich native soil, placed in the hole, is usually adequate. Tree fertilization is often overrated as a cure-all and is also often ignored when it could be helpful. Fertilizer application can help plants grow better, withstand various stresses, and reduce winter damage ONLY if the elements applied are lacking in the soil. Gradual reduction in annual growth is often a sign of low soil nutrients.



Fertilizing (continued)

Trees and shrubs make most of their growth in spring and early summer. Apply fertilizer long enough ahead of this growth period so it will be available in the soil or even stored inside the plant. Regardless of when fertilizer is applied, it may not be readily absorbed or utilized until growth begins in the late winter/early spring. Uptake and metabolic demand are low in the dormant season, and some of the more soluble forms of nitrogen may leach from the soil before they can be utilized. Studies show that nitrogen uptake peaks during the spring and summer when metabolic need is greatest. Late summer or early fall fertilization can force the production of new growth that does not have time to mature and become hardy before severe winter cold. Fertilizer uptake is greatest during periods of active root growth, so applications of fast-release fertilizers are most effective spring through fall. Slow-release fertilizers can be applied at any time the ground is not frozen and when soil moisture is adequate.

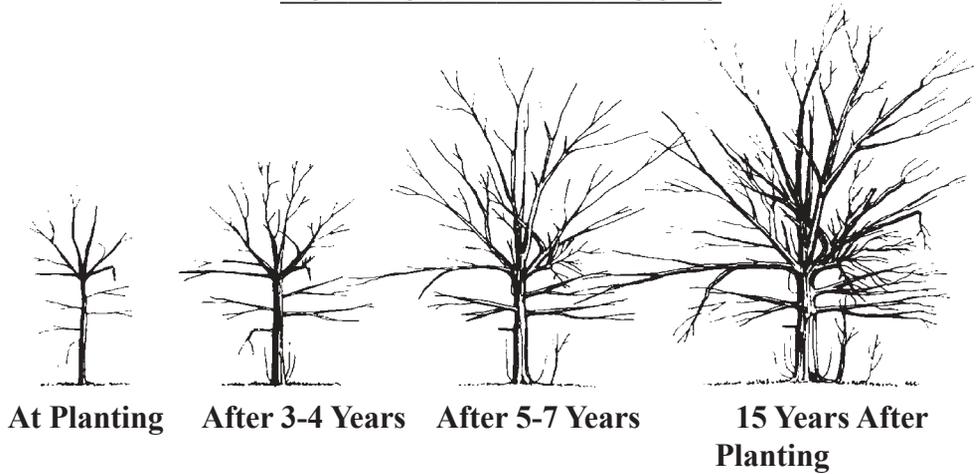
Pruning

Pruning should be done with a purpose and not as an automatic routine. Prune only dead or broken branches the first year. Begin corrective pruning only after a full season of growth in the new location. In the second growing season, begin training by removing crossing limbs and selecting permanent branches evenly distributed along and around the main trunk. For the first 1 to 5 years, leave small temporary branches, especially on the lower trunk, to help the tree develop taper and promote early rapid growth. Each year remove a portion of these temporary branches. As trees grow to maturity, the need for structural pruning should decrease and pruning should then focus on maintaining the tree's structure, form, health and appearance.

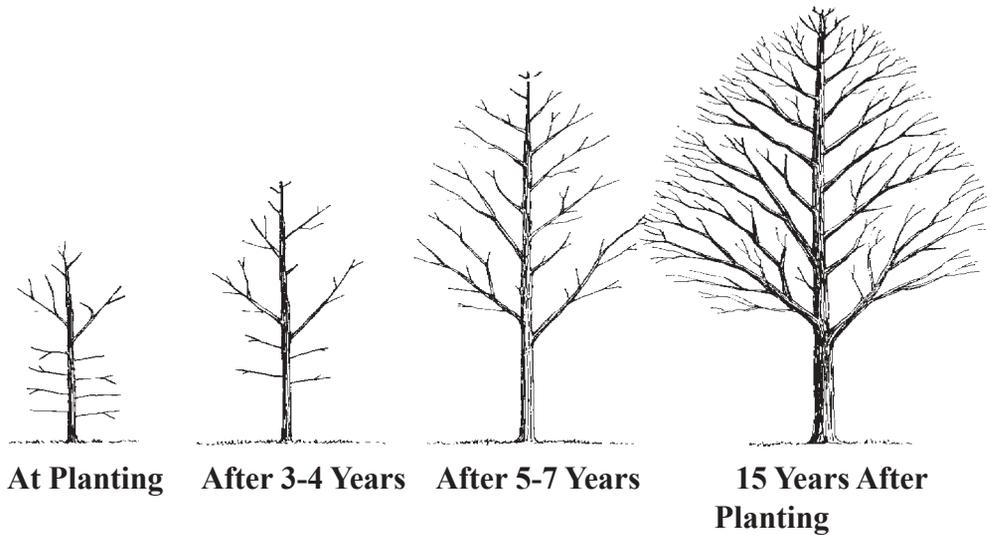
Proper pruning cuts are made at the point where one branch to twig attaches to another. The cut is made just outside the branch bark ridge and collar. Flush cuts and stubs should be avoided. Remove a large limb by making three cuts, (See page 41) which will reduce chances of injury and damage to the tree. On small branches, make a sharp and slightly slanted, clean cut just beyond a lateral bud or other branch. Pruning cuts should be clean and smooth, leaving the bark at the edge of the cut firmly attached to the wood. The best time to prune living branches is in late dormant season or very early spring before leaves begin to open. Dead and injured branches can be pruned anytime.



NOT PRUNED WHEN YOUNG



PRUNED WHEN YOUNG





Weed Control

Weed control is an extremely important factor for tree growth and survival. Weeds are better competitors than seedlings, for moisture, nutrients, and sunlight. They also provide fuel for fires and habitat for tree-injuring pests. Mulch, cultivation, and herbicides are three basic methods for controlling weeds. Herbicides must be used with care and should be selected specifically for the weed type, soil, and species. Read the herbicide label carefully.

Cultivation around trees and between tree rows controls competitive weeds, improves moisture conditions, reduces fire hazards, and decreases the need for supplemental watering.

Mulches have significantly improved the survival of tree plantings. Mulch reduces competition from weeds. Woven plastic mulches are woven in a pattern that allows moisture to pass through to the soil but minimizes evaporation. Organic mulches such as wood chips or bark can also be used. Straw and hay mulches tend to attract rodents that can damage trees.

For large plantings, a tractor drawn woven mulch applicator is available for use through the Washakie County Conservation District. The applicator lays the mulch right over the freshly planted seedlings where the trees are later pulled through openings cut in the mulch.

Wind and Sun Protection

Most Wyoming evergreen plantings require protection from wind and sun, particularly during the winter months. Sunlight reflected off snow, while soils are frozen, can quickly dry unprotected conifer foliage. Young trees are more susceptible to this kind of damage. Shading seedlings and blocking wind from the south and west is critical and can be provided using a number of items. Existing vegetation, rocks or logs are the easiest and cheapest to use, while shake shingles and commercially manufactured shade products are also available.



Keys To Proper Pruning

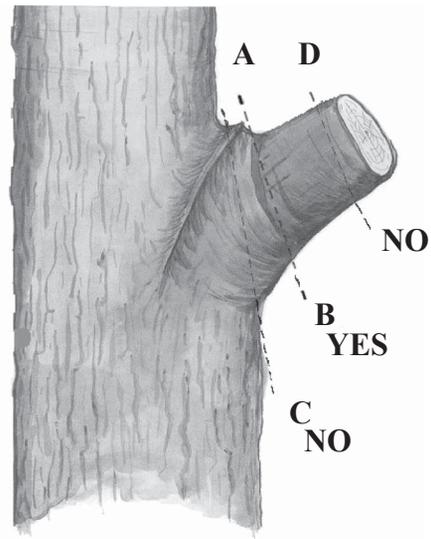
- Pruning cuts must be made outside the branch bark ridge and the branch collar.
- Cuts made too close, also called flush cuts, do not heal correctly.
- Cuts that leave stubs, often start the decay process which will weaken the branch.
- When shortening small branches, make cuts at lateral buds or other lateral branches.
- When removing a large limb, the 3-cut method should be used to prevent tearing.
- Under no circumstances should more than 1/3 of the foilage be removed at any one time, on young trees. On mature trees, no more than 1/4 of the foilage should be removed within a growing season.
- Do not top trees! Topping is the drastic removal of the upper portions of the tree. Branches are cut back to stubs, giving the tree an ugly and deformed appearance. After topping, the tree puts on a flush of new growth that is much weaker and prone to breakage and dieback.

Branch Pruning

Cut living and dying branches (A) as close as possible to the branch collar (B).

- Do not remove the branch collar (C).
- Do not leave stubs (D).
- Do not paint the cuts.

If possible, avoid pruning when leaves are forming or falling.





Animal Protection

It is essential to protect trees and shrubs from livestock of all types. Livestock will kill or damage trees and shrubs at all stages of their life cycle. Damages include: eating or trampling seedlings, damaging mature trees by rubbing off bark, or breaking and eating branches and foilage. Deer, elk and rodents can also destroy plantings in a short amount of time. Fencing is the most effective method to minimize this damage, and while fencing is expensive, the development of electric systems has decreased costs over traditional wire. Using individual plastic seedling protectors can also minimize animal damage.

Many commercial repellents can also be used to protect plantings from animal damage. The effectiveness of commercial brands varies and often is dependent on repeated application. An effective home remedy is to mix whole eggs with tap water to form a 1:5 solution of eggs to water, strain the solution and spray on the seedlings. Another method, which has been used effectively to eliminate pocket gopher problems, is to place a half stick of chewing gum into the animal's burrow.

Insects and Disease

Insects normally do not cause much damage to healthy trees. When trees are growing slowly or lacking vigor because of drought or trampling by livestock, insect attacks may then become serious. The most common insects which attack trees and shrubs are: aphids, western tent caterpillars, bagworms, sawflies, tree borers, grasshoppers, spider mites, scale insects, elm leafbeetles, fall webworms and tip and shoot insects.

The most common diseases include: canker diseases, decay and rot fungi and foliar diseases.

Technical assistance in identifying and treating insect and disease problems is listed on page 49 of this pamphlet.



Conservation Trees

Conservation trees include plantings for windbreaks to protect farmsteads, livestock, and crops. Windbreaks can be designed to trap snow, wildlife habitat, firewood, erosion control, buffer strips, energy savings, livestock protection, and a host of other uses. Farmstead windbreaks significantly reduce the wind speed around buildings and can result in energy savings of up to 40 percent, which creates a comfortable environment to live and work. When planning a conservation planting, there are many variables to consider:

- The purpose of the planting (i.e. farmstead windbreak, wildlife habitat, etc.)
- The hardiness zone (or climate, precipitation, and elevation of the area to be planted) - these zones are shown on page 35 of this publication.
- The water requirements of the species as a mature tree, and the availability of water to sustain the tree.
- Soils and site characteristics - species need to be adapted to your soil characteristics (texture, pH, and salinity), to the specific site characteristics (depth to water table or bedrock), and other limiting criteria.
- Diversity - diversifying the species used in your plantings may reduce the effects of insect or disease infestations to your planting.
- Location - overhead or underground utilities, distance from protected area, snow drifting effects, location of septic systems, and proximity to roads (do not create blind corners).
- Special plantings like windbreaks and living snow fences require specific design criteria in order to maximize effectiveness and growth potential. These criteria include: spacing between trees and tree rows, row length, tree density, species height arrangement, and snow trapping distances.

Technical assistance for help with species selection and windbreak design are provided by the Washakie County Conservation District and the Natural Resources Conservation Service.



Community Forestry

Community Forestry is defined as the planting and management of trees to maximize the benefits to communities. Trees in Wyoming naturally grow in the mountains and along waterways. However, when planting trees around our property, we need to know about the species we're planting, such as height, placement, and how they can be used for many benefits. Strategically planted trees around your home can create a beautiful landscape while also providing energy savings all year round. Deciduous trees that shed leaves in the fall can provide shade to cool a home in the summer, while allowing sunlight and its warmth into the interior of the home in winter. Well-placed conifers and other evergreen trees and shrubs can deflect or block winter's harshest winds.

Cooling

Trees can shade a home's windows and walls from the hot summer sun. They will also create a cooler atmosphere around the home, cooling sidewalks and driveways that normally reflect heat. They are able to do this through a transpiration process that cools the air around them, acting as nature's evaporative coolers. Cooling costs can be significantly reduced by shading. Shading an air conditioner will also improve its efficiency by up to 10 percent. Below are some tips when planting trees and shrubs around your home:

- Medium to large trees provide excellent cooling because they shade both home and yard, helping to cool the outside and inside temperatures. However, do not plant large trees near power lines.
- Plant deciduous trees on the east and west sides of the home to offer the greatest energy savings by blocking the morning and afternoon sun, while offering no obstruction to winter sunlight.
- Shrubs and small trees can be planted to shade air conditioners and heat pumps. However, be careful not to plant too close to the unit, blocking its air flow. Keep units free of leaves and needles.
- Incorporate eaves into the home's structure on the south side for cooling.



Heating

Properly placed trees and shrubs can help reduce heating costs by blocking winter winds. In addition, deciduous trees planted to cool a home, will lose their leaves in the winter and allow the radiant heat of the winter sun to warm a home's interior.

- Conserve energy by planting a combination of evergreen trees and shrubs on the side of your home that blocks the coldest of winter winds. Choose vegetation with branches low to the ground.
- When siting a new home, consider free passive solar heating.
 - Orient the home so the broadest area and the most windows face south.
- On sunny winter days, open drapes to allow the low-angled winter sunlight to heat the interior of the home.

Remember, trees are relatively small at planting time but can reach heights of 80 feet and can be just as wide depending on the species. When purchasing a tree, check the tag for the mature height and spread of the tree.

Tree Species Selection

When selecting a tree to plant, it is critical to choose a species that will thrive in your community.

Hardiness Zone - Washakie County is located in Hardiness Zone 4. Tree and shrub species with a Hardiness Zone 4, or lower, are recommended. (See page 35.)

Moisture - All trees and shrubs need moisture to survive, but some species are more drought tolerant than others. On sites where moisture is limited, trees with higher drought tolerance are recommended.

Other factors to consider in selecting a tree species is tolerance to a wide range of soil conditions and resistance to insects and disease.



Acquiring a Quality Tree

Quality trees and shrubs can sometimes be difficult to find in Wyoming. The purchaser must be able to identify quality nursery stock. Desirable and undesirable characteristics to look for include:

- **Size** - Trees should have the dimensions common to their species, diameter and age. The root ball diameter of balled and burlapped trees should be 1 foot for each 1 inch of trunk diameter.
- **Form** - Trees should be typical to their species. Tree trunks should be relatively straight and have adequate trunk taper and diameter in relation to their height. The crown should be well-formed with one main stem and branches should not have tight crotches.
- **Vigor** - Trees should have well-developed branches that are less than half the diameter of the trunk and are evenly distributed along the trunk. Leaves should be of normal color and not shriveled. If trees are dormant, without leaves, check the number and location of viable buds. Buds, bark, and branches should not be shriveled, desiccated, or discolored.
- **Roots** - For balled and burlapped trees, the soil ball should be held together tightly and feel damp to the touch. If the ball is broken or loose, many of the roots, especially the smaller feeder roots, have probably been injured. If the trunk can be easily moved from side to side, the roots have likely been damaged. To check for circling roots, which can strangle a young tree, pull back the burlap or remove the pot and inspect the roots. Circling roots should be cut to prevent future damage to the tree. The roots of bare root trees must be kept moist at all times. Check roots to make sure they are not dry and are adequately protected against drying.
- **Wounds** - The trunk and branches should not have any injuries including excessive pruning wounds, broken limbs, sunscald, discolored bark, rot or insect and disease damage.



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www.extension.iastate.edu/Pages/tree/index.html

<http://forestry.msu.edu/uptreeid/default.htm>

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<http://www.dnr.state.oh.us/forestry/Education/ohiotrees.htm>

<http://archive.tri-cityheerald.com/HOME/GARDEN/garden33.html>

<http://www.nysite.com/nature/flora/basswd.htm>

<http://www.floridata.com>

<http://www.mt.nrcs.usda.gov/technical/ecs/forestry/bareroot.html>



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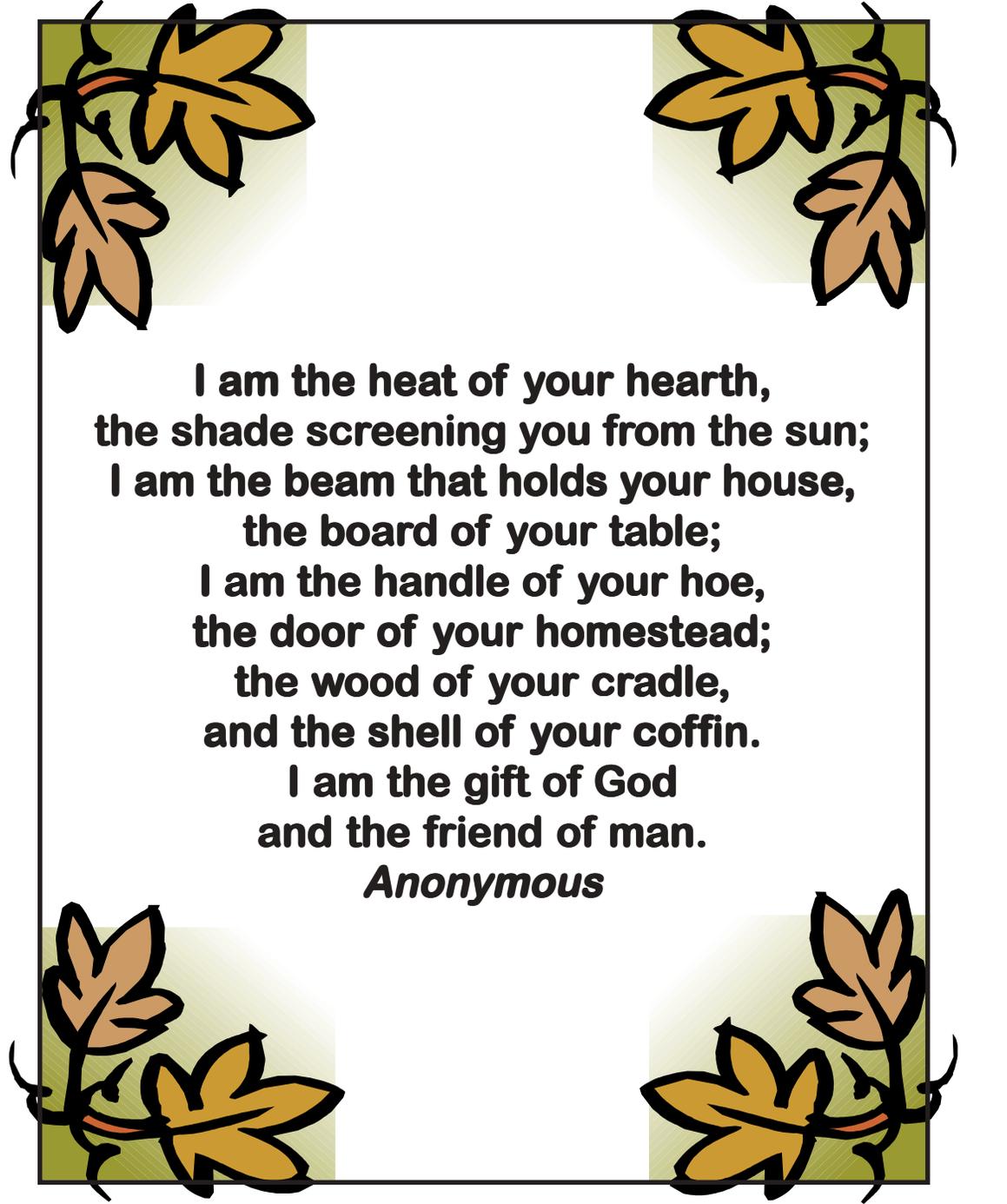
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To gain information from local
nurseries and tree vendors,
please consult your phone book.



We hope this publication will help give our readers a general idea of what is commonly growing in Washakie County. It was published for the purpose of supplying the local public with an all-in-one booklet (species, tree selection, pruning, watering, tree care, planting, etc.) to use as a quick reference. We have tried to be as accurate and as up-to-date as possible with the information we have supplied to you. We do realize that there are some tree and shrub species growing in the area that are not in this publication.

**WASHAKIE COUNTY
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The page is framed by a black border. In each of the four corners, there is a cluster of stylized autumn leaves. The leaves are rendered in shades of yellow and orange, with black outlines and some internal shading to suggest depth. The leaves are arranged in a way that they appear to be growing from the corners of the page.

**I am the heat of your hearth,
the shade screening you from the sun;
I am the beam that holds your house,
the board of your table;
I am the handle of your hoe,
the door of your homestead;
the wood of your cradle,
and the shell of your coffin.**

**I am the gift of God
and the friend of man.**

Anonymous