



Fire-Resistant Plants for Montana Landscapes

Fires can damage soil and reduce its capacity to hold moisture.

This can affect plants' ability to survive. However, there are a number of groundcovers, herbaceous plants, shrubs and trees that are fire-resistant. Plants that do well in Montana are on the back page.

ANY PLANT WILL BURN

if it is dry enough and the fire is slow enough and/or hot enough. The ability of a plant to survive a fire depends upon the speed and type of fire, the time of year, the moisture-holding capacity of the plant, and the plant species.

CROWN FIRES

that travel from the crown of one tree to another are often more damaging than other types because they destroy the foliage and thus reduce the plants' capacity to photosynthesize. This inability to manufacture carbohydrates weakens the plant and makes it more susceptible to subsequent winter damage and pest infestations. Young trees are often more severely affected by this type of fire than older trees.

SLOW-MOVING FIRES

can do damage to the cambium (part of the plant responsible for its growth), often girdling or partially girdling the plant, which can lead to the death of the plant.

HOWEVER,

new tissue grown in the following spring can allow many damaged trees to survive. Succulent plants and those full of water (for instance, in the spring), survive fires better than trees with low moisture contents. Shrubs often survive by their ability to resprout from their base.

BURNED ORGANIC MATTER

reduces the soil's capacity to store water and fosters compaction. Fires can accelerate erosion and increase the magnitude of changes in soil temperatures.

NUTRIENTS

such as nitrogen and some others are lost by volatilization, ash convection, and subsequent leaching after hot fires. However, the nitrogen is often replaced quickly by rain, increased soil microbial activity, and nitrogen fixation. Some nutrients are also released from burned organic matter, often making the total availability of mineral nutrients to the plants higher after the fire than before. Site quality deteriorates more on coarse sands and heavy soils than on sandy and loamy soils.

FOLLOWING A FIRE,

prune out dead branches and be sure the remaining plants are watered well. There may be no reason to add huge quantities of fertilizer.

ON THE BACK PAGE

is a list of plant species adapted to Montana that have been noted to be fire resistant. Not all species on this list will grow in all parts of the state. Refer to "Choosing Trees and Shrubs for Montana Landscapes" (Montana Extension Bulletin EB 123), "Choosing Herbaceous Perennials and Biennials" (MontGuide 9903) and "Growing Annual Flowers" (MontGuide 9501) for more information on growing site conditions for selected species. We have also avoided categorizing plants as "fast-growing" or "slow-growing" since this can be misleading. There are too many variables that can affect the rate of growth of a plant.

Some entries include an entire genus (ash, for example) followed by some individual species. This is because some references list only a genus while others list particular species as being resistant.



Fire-Resistant Plants for Montana Landscapes

Groundcovers and Herbaceous Plants

Common Name

Alfalfa
Bergenia
Blanket Flower
Bluegrass, Kentucky
Buffalograss
Candytuft, Evergreen
Carpet bugle
Cinquefoil, Spring
Columbine
Coral Bells
Coreopsis
Cotoneaster
Cotoneaster, Rock
Cotoneaster, Bearberry
Daisy, Shasta
Daylily
Drosanthemum
Dusty Miller
Fescue
Fescue, Blue
Fescue, Tall
Fescue, Creeping Red
Flax
Fleabane
Four O'clock
Geranium, Hardy
Geranium, Bloodred
Geranium
Ginger, Wild
Hen and Chicks
Iris
Kinnickinnick
Lambs Ear
Lavender
Lupine
Mahonia, Creeping

Genus and Species

Medicago sativa
Bergenia spp.
Gaillardia x grandiflora
Poa pratensis
Buchloe dactyloides
Iberis sempervirens
Ajuga reptans
Potentilla tabernaemontanii
Aquilegia spp.
Heuchera sanguinea
Coreopsis spp.
Cotoneaster spp.
Cotoneaster horizontalis
Cotoneaster dammerii
Leucanthemum x superbum
Hemerocallis spp.
Drosanthemum speciosum
Artemisa stelleriana
Festuca spp.
Festuca cinerea
Festuca arundinacea
Festuca rubra
Linum spp.
Erigeron hybrids
Mirabilis spp.
Geranium cinereum
Geranium sanguineum
Geranium spp.
Asarum caudatum
Sempervivum tectorum
Iris spp.
Arctostaphylos uva-ursi
Stachys byzantina
Lavandula spp.
Lupinus spp.
Mahonia repens



Geranium sanguineum



California Poppy



Hen and Chicks

Common Name

Mock Strawberry
Mountain Spray
Myrtle, Dwarf Periwinkle
Orchardgrass
Penstemon, Rocky Mtn.
Pinks
Poppy
Poppy, California
Potentilla
Primrose, Mexican Eve.
Primrose
Pussytoes
Red Hot Poker
Ryegrass
Sage
Sedum, Goldmoss
Silver Spreader
Snow-in-Summer
Stoncrop
Stoncrop, Green
Strawberry, Wild
Sunrose
Thrift, Common
Thyme, Woolly
Thyme, Creeping
Valerian, Red
Violet, Canadian
Virginia Creeper
Wheatgrass, Western
Wheatgrass, Crested
Winterfat
Yarrow
Yarrow, White
Yarrow, Fernleaf
Yarrow, Woolly
Yucca

Genus and Species

Duchesnea indica
Holodiscus spp.
Vinca minor
Dactylis glomerata
Penstemon strictus
Dianthus plumarius
Papaver spp.
Eschscholzia californica
Potentilla spp.
Oenothera berlandieri
Oenothera spp.
Antennaria spp.
Kniphofia uvaria
Lolium spp.
Salvia spp.
Sedum acre
Artemisia caucasica
Cerastium tomentosum
Sedum spathulifolium
Sedum album
Fragaria chiloensis
Helianthus mummularium
Armeria maritima
Thymus pseudolanuginosus
Thymus praecox articus
Centranthus ruber
Viola canadensis
Parthenocissus quinquefolia
Agropyron cristatum
Agropyron cristatum
Eurotia spp.
Achillea spp.
Achillea millefolium white
Achillea filipendulina
Achillea tomentosa
Yucca filamentosa

Trees

Common Name

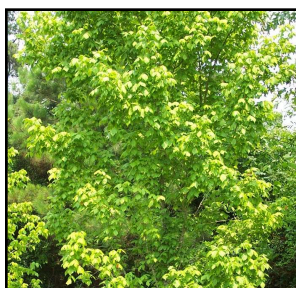
Alder, White
Ash
Ash, Green
Aspen, Quaking
Birch
Cottonwood
Hackberry
Locust, Black
Maple
Maple, Big-toothed
Maple, Boxelder
Maple, Rocky Mountain
Olive, Russian
Poplar
Narrowleaf Cottonwood
Prunus

Genus and Species

Alnus rhombifolia
Fraxinus spp.
Fraxinus pennsylvanica
Populus tremuloides
Betula spp.
Populus spp.
Celtis occidentalis
Robinia pseudoacacia
Acer spp.
Acer grandidentatum
Acer negundo
Acer glabrum
Eleagnus angustifolia
Populus spp.
Populus angustifolia
Prunus spp.



Green Ash



Box Elder



Quaking Aspen



Lilac



Buffaloberry

Shrubs

Common Name

Antelope Brush
Buckthorn
Buffaloberry
Buffaloberry, Russett
Buffaloberry, Silver
Cherry
Cherry, Sand
Cherry, Nanking
Chokecherry
Cinquefoil, Shrubby
Deerbrush (Buckbrush)
Dogwood, Red-osier
Gooseberries and Currants
Honeysuckle
Lilac, Common
Mahogany, Mountain
Mockorange
Plum, Native
Pyracantha
Raspberry
Rose
Saltbush
Sumac, Skunkbush

Genus and Species

Fendlera rupicola
Rhamnus spp.
Shepherdia spp.
Shepherdia canadensis
Shepherdia angentea
Prunus spp.
Prunus besseyi
Prunus tomentosa
Prunus virginiana
Potentilla fruticosa
Ceanothus spp.
Cornus sericea (C. stolonifera)
Ribes spp.
Lonicera spp.
Syringa vulgaris
Cercocarpus spp.
Philadelphus spp.
Prunus americana
Pyracantha spp.
Rubus spp.
Rosaceae
Atriplex spp.
Rhus trilobata

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