Mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*) is killed by fire but establishes from seed in fire-created openings.
Flowers: August-early September

Silver sagebrush (*Artemisia cana*) is one of few sagebrush species that sprouts after fire. It can establish from seed if newly burned sites are moist during the growing season.
Flowers: mid-August-early September

Lanceleaf stonecrop (*Sedum lanceolatum*) may establish from the soil seed bank after fire. Flowers: spring-fall

Glossary

Caudex: persistent and often woody base of an herbaceous perennial
Rhizome: horizontal underground stem with a series of nodes that commonly produce roots
Root Crown: the transition point between stem and root

Fire Sciences Laboratory

Research in native grasslands

In the Sawmill Creek Research Natural Area of the Bitterroot National Forest, applying prescribed fire to grasslands where nonnative species had been controlled resulted in minimal changes in plant community composition. Several nonnative plant species, including spotted knapweed (*Centaurea maculosa*), have invaded these native grassland communities. As a result, the native bunchgrasses and forbs are less common. Missoula Fire Sciences Laboratory scientists found that compared to untreated sites, those treated with herbicides and biocontrol insects had less spotted knapweed and other nonnative forbs and more cover of native bunchgrasses and forbs, even with a prescribed fire treatment.

Grasses are an important fuel for carrying fire. In the foothills prairie ecosystem, many different types of grasses grow, produce seeds, and dry out during the year. Scientists at the Missoula Fire Sciences Laboratory are conducting a study on how the moisture in the grass blades changes over time, how the proportion of live to dead grass blades changes from spring green-up to fall, and how the changes in moisture and live tissue in grass blades relate to weather and soil conditions. Knowing how different types of grasses dry out is important to evaluating fire danger, and knowing how each grass type becomes fuel is important to predicting fire potential and behavior in grasslands.

MISSOULA FIRE SCIENCES LABORATORY

5775 Hwy 10 W
Missoula MT 59808
Phone: 406-329-4800
Email: missoula_firelab@fs.fed.us.

Missoula Fire Sciences Laboratory
Native Intermountain Prairie Species

Welcome to the Montana native prairie garden. All the plants in this garden grow in fire-adapted ecosystems, although more studies are needed to determine how some of these species recover after fire. The Fire Sciences Laboratory conducts prescribed fire and fuel studies to learn more about the fire ecology of western grassland ecosystems.

Bluebunch wheatgrass (*Pseudoroegneria spicata*) leaves and stems are consumed by fire, but it usually grows back from the root crown. Flowers: May-June

Idaho fescue (*Festuca idahoensis*) usually survives low-severity fires and is killed by severe fires. It may establish from soil-stored seed even after severe fires.
Flowers: May-June

Prairie Junegrass (*Koeleria macrantha*) survives most grassland fires. Grazing wildlife and livestock seek out new growth after fire.
Flowers: May-June

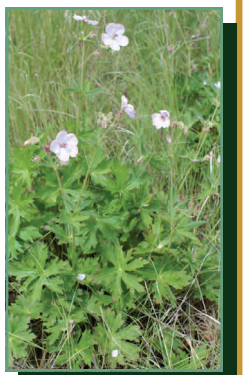
Small-leaved pussytoes (*Antennaria parviflora*) sprouts from the caudex and grows from soil-stored seed after fire. Flowers: late spring or summer

Velvet lupine (*Lupinus leucophyllus*) can be toxic to livestock, although animals generally avoid grazing it.
Flowers: June-July

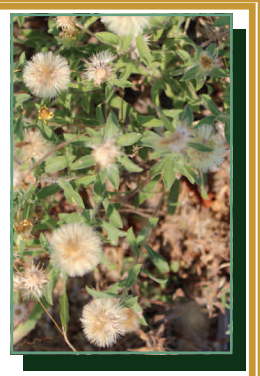
Prairie smoke (*Geum triflorum*) seeds are spread by wind after fire, and it may also sprout from its rhizomes.
Flowers: June-July

Scarlet globemallow (*Sphaeralcea munroana*) frequency was not affected following a prescribed fire in sagebrush habitat in Oregon. Little else is known about its response to fire.
Flowers: June-September

Sticky geranium (*Geranium viscosissimum*) may be a carnivorous plant. Small insects get trapped on its sticky leaves, and the plant may absorb nitrogen from the insect remains.
Flowers: summer



Cliff false golden aster (*Heterotheca viscida*) has a caudex that is somewhat woody and usually buried in soil, so it is well protected from grassland fires.
Flowers: July-September



Blanket flower (*Gaillardia aristata*) is a popular garden plant; it attracts butterflies and withstands drought.
Flowers: July-September

Common snowberry (*Symphoricarpos albus*) usually sprouts from the rhizomes after fire. Flowers: summer