The purpose of this Technical Note is to provide guidance for the design and implementation of conservation plantings to enhance habitat for pollinators including: bees, wasps, butterflies, moths and hummingbirds. Plant species included in this document are adapted to the Intermountain West; encompassing southern Idaho, eastern Oregon, northern Nevada and northern Utah.
# Technical Note No. 2A

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WHAT THIS GUIDE COVERS
This technical note provides information on plants adapted for use in pollinator plantings in the Intermountain West. The species listed should be used in areas to which they are adapted according to the precipitation and soil requirements of the species. For additional species adapted to the Inland Northwest, refer to Idaho Plant Materials Technical Note 2B. Species adapted to the Colorado Plateau can be found in Technical Note 2C.

This is not meant to be an inclusive list of all species that can be used for pollinator plantings but provides information on many plants available. Revisions and updates to this guide will be made as new species and varieties become available on the market, and as more knowledge is developed to better establish and manage pollinator plantings.

INTRODUCTION
Many of the world’s crop species benefit from insect pollination, which is mostly provided by bees. In North America, bees pollinate billions of dollars’ worth of crops annually. Over 30% of our diet comes from crops whose production benefits from pollinating bees.

Pollinators include bees, moths, flies, beetles, wasps, desert bats, hummingbirds, and butterflies. Collectively, pollinators are critical to the function of terrestrial ecosystems because they enhance plant reproduction. Despite their importance, pollinators are threatened world-wide by habitat loss, habitat fragmentation, improper pesticide use, disease and parasites. This has serious economic implications for humans and for maintaining ecosystem diversity and stability.

The Natural Resources Conservation Service can assist landowners with habitat enhancement for pollinators by encouraging the establishment of an array of attractive plants that flower throughout the growing season. Plant species, both herbaceous and woody, that provide sources of nectar, pollen and cover for adult and immature pollinators, will also provide habitat for a large array of other wildlife species.

Well-chosen forbs, legumes, shrubs and trees planted along farm and ranch borders and within fields attract wildlife, including pollinators and other beneficial insects. The correct mix of plant species that bloom throughout the growing season will provide a continuous source of nectar and pollen needed by pollinators and other beneficial insects. An ideal plant mix would be one that consists of nine or more species: three that bloom early in the season,
three in mid-season and three in late season. In precipitation zones below 16 inches mean annual rainfall in the intermountain west, 9 adapted and commercially available species may not always be available. When seed of pollinator-friendly species are limited, at a minimum, try to have at least one blooming species available during the early, mid-, and late season.

Annual flowering plants can be useful tools in pollinator plantings because they produce tremendous amounts of flowers. However, annual plants only last one growing season and can be very competitive with perennial species that are slower establishing. Annual plants may also be “weedy”. Consequently, annuals should only be considered for small, odd areas, and should not be mixed with perennials. A few annual plants that readily attract pollinators include buckwheat, canola, safflower, berseem clover, camelina, lentils and dry peas. Annuals can also be used as interim crops prior to planting perennials, to suppress weed growth and can help to reduce the weed seed bank in the soil.

HABITAT CONSIDERATIONS
Habitat needs for pollinators are the same for other animal species: food, shelter, nesting sites and water. Shelter and nesting sites may also be a limiting factor in your project area and should be considered during planning.

Nectar and pollen from flowering plants provide food and water for pollinators. Additional needs for water, if necessary, can be met in riparian areas and wetlands, and with birdbaths, fountains, irrigation water, and moisture from plants. Moist salt licks help provide mineral requirements for butterflies and sweat bees. Shelter and nesting habitat needs differ by pollinator species and include bare or partially vegetated, well-drained soil; soil banks and cliffs, dead standing or fallen trees with beetle emergence holes, live trees, clumps of grass, live brush, tall grass, piles of leaves and sticks, wood piles, tree bark and rock crevices.

Most native bees are solitary, nesting underground, or less commonly, above ground using beetle holes in deadwood or dead pithy stems (e.g. elderberry, sumac or rose). Bumblebees are social with colonies of dozens to hundreds of workers. They typically nest in tree hollows or below-ground in old rodent burrows or in grass hummocks.

In pollinator plantings, use of pesticides should be avoided, especially insecticides. (Some applications, such as carbaryl bran baits for grasshoppers, are safe for bees.) If pesticides must be used, choose active ingredients and formulations that are less toxic to bees. Harm to beneficial insects can be reduced by spraying after dark when pollinators are nesting and not actively foraging. Aerial application should not be used.

**TABLE 1: HABITAT REQUIREMENTS FOR NATIVE POLLINATORS**

<table>
<thead>
<tr>
<th>Pollinator</th>
<th>Food</th>
<th>Shelter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solitary bees</td>
<td>Nectar and pollen</td>
<td>Nest in bare and partially vegetated soils where water won’t pond; or in beetle holes in deadwood, within pithy stems or twigs, or construct surface nests of mud or leaf pulp</td>
</tr>
<tr>
<td>Bumblebees</td>
<td>Nectar and pollen</td>
<td>Nest cavities underground, often in old rodent burrows, or in hollow trees or within clumps of grass</td>
</tr>
<tr>
<td>Butterflies and moths</td>
<td>Nectar, nutrients, minerals and salts from rotting fruit, tree sap, clay deposits and mud puddles</td>
<td>Leaves and stems of larval host plants; also small woodpiles used by species that winter as adults</td>
</tr>
<tr>
<td>Hummingbirds</td>
<td>Nectar, insects, caterpillars, tree sap and willow catkins</td>
<td>Trees, shrubs and vines</td>
</tr>
</tbody>
</table>
ECOLOGICAL BENEFITS OF POLLINATOR PLANTINGS

Pollinator-friendly plantings have the potential to provide multiple ecological benefits. They can:

**Reduce pesticide use.** Sequentially flowering plants provide forage and cover for predatory and parasitic insects that help control pest species. Established plant communities will resist weed invasion.

**Stabilize soil and provide ground cover.** Root systems and above ground vegetation hold soil in place, improve soil moisture infiltration, reduce the risk of erosion and serve as buffers which protect against surface water pollution. Legumes contribute nitrogen to the soil.

**Serve as windbreaks and shelterbelts.** Shrubs and trees protect farmsteads, feeding areas, crops and livestock from wind and dust damage. They also provide food, nesting and cover habitat for a great variety of wildlife, pollinators and other beneficial insects.

ESTABLISHING POLLINATOR PLANTINGS: GENERAL CONSIDERATIONS

- **Start right.** Most grasses and forbs, including legumes, can be started by direct seeding or in some cases by transplanting nursery seedlings. Flowering shrubs and trees are often best established by transplanting nursery seedlings.

- **Determine soil drainage and other soil limitation factors.** Most species will not do well in heavy, poorly drained or saline to sodic soils; select species that can perform well in the soils of the site.

- **Match plants with similar site preferences.** Choose plants that have similar soil and water requirements and that are adapted to the local climate. Choosing a small number of species well adapted to the site conditions saves money compared to using commercial mixes of 25 to 40 species covering a broader range of adaptation.

- **Water wisely.** Shrub and tree plantings in the drier portions of the Intermountain West will require irrigation. For the best establishment biweekly watering the first 2 to 3 years is recommended. Once the plants are well established, watering less frequently, for a longer duration will drive the moisture deeper into the soil to ensure the plants develop their roots more fully, enhancing long-term survival.

- **Control weeds.** Most plants do not compete well with weeds during establishment. Start with a weed free area or create one using appropriate herbicides or tillage. Keep the area relatively weed free for the first 2 to 3 years of establishment. Mowing weeds during plant establishment will help suppress weed competition and encourage desired plants. However, some annual and biennial weeds are good nectar sources for pollinators and will die out naturally as the planting becomes established. **Always control noxious weeds.**

- **Protect planting from wildlife and livestock.** Fencing to protect the planting may be required in areas with abundant deer, antelope or elk, or with livestock such as sheep, cattle or horses. Monitor and control rodents and rabbits. This will ensure flowers are available to provide nectar, pollen and succulent foliage for pollinators.

- **Choose the right plant species.** Plantings should include a mixture of species that provide continual blooms throughout much of the growing season. Depending on the precipitation zone, at least one to three species are recommended for each bloom period: early, mid, and late. One or two grass species may also be included in the mix if ground cover is needed. Grasses should not comprise more than 25% of the mixture. To select plant species for your precipitation zone, use the Approved Pollinator Plant Lists (Tables 2 - 6).
- **Maintain plantings.** Treatments such as haying or mowing may be required outside of the primary flowering period(s) to remove plant litter or weeds. Spot-spray herbicide treatments may also be needed to control invasive or noxious weeds.

### PLANT SELECTION AND ESTABLISHMENT GUIDELINES FOR POLLINATOR HABITAT PLANTINGS

#### PLANT SELECTION

- Select plants from the Approved Plant List (found in appendix tables 2-6) that corresponds to your precipitation range.
- A mixture of 9 or more species including those that bloom in spring, summer and late summer (fall) are recommended. NRCS has a variance under CRP to only plant 5 species in areas under 16 in precipitation.
- Select plants that will attract the target pollinator type(s).
- Species not included on these lists may be substituted only if approved by the State Plant Materials Specialist.

#### RECOMMENDED ESTABLISHMENT GUIDELINES

##### SITE PREPARATION

- Some herbicides can have residual carryover and can negatively affect seedling establishment. Know the cropping history and past herbicide use of the site to be planted.
- Eliminate existing vegetation prior to seeding with tillage, herbicide, or a combination of techniques.
- Fallow the area to be seeded for at least one growing season. Delay seeding until after a flush of fall germinating weeds. These weed seedlings need to be controlled prior to any seeding.
- Create a firm, weed-free seed bed. Rule of thumb: a person’s footprint will not be deeper than ½ inch into the seedbed.

##### SEEDING

- Seed forbs and grasses at the same time during a late fall dormant planting (November or December).
- One of two seeding methods is recommended:
  - Drill seed into a firm weed-free seedbed. The best drill seedings have been accomplished by setting the drill to place the seed no deeper than ¼ inch. Drag chains or press wheels help to cover the seed with a thin soil layer.
  - Broadcast seed into a weed-free seedbed. The best broadcast seedings have been accomplished by pulling the tubes on the drill and running the packer wheels with enough down pressure to create good furrows and seed to soil contact.
- Rice hulls, cracked grain or granular clay may be used to assist seed flow.
- Omit grasses from the planting mix in areas heavily infested with cheatgrass or medusahead to allow for the option of using selective grass herbicides. This should only be done if the ground is not highly erodible.
• Alternating rows or swaths of forbs and grasses can reduce interspecies competition and favor better forb establishment.

SHRUB ESTABLISHMENT

• Plant shrub seedlings in early spring (late March through April) directly into soil where vegetation has been killed during the previous growing season with 1-2 applications of herbicides or by mechanical site preparation. Plant shrubs in areas that will not be mowed, or in rows to allow for mowing between the rows.
• Suppress weed growth around the shrubs with use of weed barrier fabric, cardboard sheets, or herbicides.
• Install protective tubes or other barriers to reduce damage from rodents, rabbits and deer.

MANAGEMENT

• Manage weeds during the first year by mowing to prevent spread of weed seed.
• Manage weeds during following years by spot spraying, using pre-emergent herbicides or herbicides applied during phases of perennial dormancy.
• Do not apply fertilizer during the first year of establishment.

Establishment techniques different than those listed above may be used, but only with extreme caution. The above-mentioned guidelines have proven to have the highest rates of success.

THERE ARE MANY CHALLENGES ASSOCIATED WITH ESTABLISHING FORB PLOTS. Many forb seedings fail due to poor seed germination/emergence, weed competition, and neglect. Establishing, monitoring and maintaining forb plantings may be expensive and labor-intensive. The area may have to be re-seeded if an adequate stand is not achieved the first time.

An alternative establishment method to seeding is transplanting forb seedlings. Transplanting seedlings may initially be more expensive than seeding but may be less expensive in the long run, especially if a seeded stand fails, and has to be reseeded. The advantages of transplanting forb seedlings are: there are no seed dormancy/germination concerns, they already have a developed root system, and they can better compete with weeds. To establish forb plugs, use the same guidelines listed above for shrub establishment.
Species Descriptions
Additional information for many of these species can be found in NRCS Plant Guides and Fact Sheets, available by download from the PLANTS Database (http://plants.usda.gov). Seeding rates listed are full stand (not recommended) pure live seeding rates, derived from a target rate of 20-30 PLS/ft² for species with <500,000 PLS/lb, and 40-50 PLS/ft² for species with >500,000 PLS/lb. Rates should be adjusted to reflect the percentage in the mixture when used as a part of a seed mixture. Seed rates should be doubled when using broadcast seeding methods.

Forbs and Legumes

Achillea millefolium, western yarrow
Origin: native forb
Mature Height: 0.5-1.5 ft
Growth Rate: rapid
Growth Habit: upright to prostrate
Wildlife Value: good forage
Attracts: butterflies, some bees
Flowers: white to yellow
Bloom: June-August
Seeding Rate: 0.5 lb/ac
Recommended precipitation range: 8-60 in

Nettleleaf giant hyssop, Agastache urticifolia
Origin: native forb
Mature Height: 2-3 ft
Growth Rate: rapid
Growth Habit: upright
Wildlife Value: good food
Attracts: bees, butterflies, monarch
Flowers: lavender
Bloom: June-July
Seeding Rate: 1 lb/ac
Recommended precipitation range: 18-36 in
Plants for Pollinators in the Intermountain West

Blue columbine. Photo ©Al Schneider, www.swcoloradowildflowers.com, used with permission.

**Aquilegia caerulea**, Colorado columbine
Origin: native forb
Mature Height: 1-2 ft
Growth Rate: moderate to rapid
Growth Habit: upright
Wildlife Value: excellent food
Attracts: hummingbirds
Flowers: blue-white to yellow
Bloom: June-July
Seeding Rate: 3 lb/ac
Recommended precipitation range: 20-40 in

Showy milkweed. Derek Tilley, NRCS Idaho

**Asclepias speciosa**, showy milkweed
Origin: native forb
Mature Height: 2-3 ft
Growth Rate: moderate
Growth Habit: upright
Wildlife Value: **can be toxic to livestock**
Attracts: butterflies; larval host plant for the monarch (*Danaus plexippus,* and the queen butterflies (*Danaus gilippus thersippus*).)
Flowers: pink
Bloom: May-July
Seeding Rate: 8 lb/ac
Recommended precipitation range: 16-30 in

Butterfly milkweed, J.S. Peterson @ PLANTS Database

**Asclepias tuberosa**, butterfly milkweed
Origin: native forb
Mature Height: 1-3 ft
Growth Rate: rapid
Growth Habit: upright
Wildlife Value: can be toxic to livestock
Attracts: butterflies, monarchs
Flowers: orange
Bloom: July-August
Seeding Rate: 15 lb/ac
Recommended precipitation range: 28-45 in

Cicer milkvetch. Dan Ogle, NRCS Idaho

**Astragalus cicer**, cicer milkvetch
Origin: introduced forb
Mature Height: 1-3 ft
Growth Rate: moderate to rapid
Growth Habit: upright (lodges at maturity)
Wildlife Value: excellent forage
Attracts: bees; host plant for *Colias* butterflies.
Flowers: cream
Bloom: May-July
Seeding Rate: 8 lb/ac
Recommended precipitation range: 16-30 in
**Plants for Pollinators in the Intermountain West**

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**Astragalus filipes**, basalt milkvetch
Origin: native legume
Mature height: 1-3 ft
Growth Rate:
Growth Habit: upright
Wildlife Value: excellent forage
Attracts: bees
Flowers: white to cream
Bloom: May-July
Seeding Rate: 9 lb/ac
Recommended precipitation range: 8-12 in

**Balsamorhiza hookeri**, Hooker’s balsamroot
Origin: native forb
Mature Height: 1-2 ft
Growth Rate: slow
Growth Habit: upright
Wildlife Value: excellent
Attracts: bees
Flowers: yellow
Bloom: May-June
Seeding Rate: 18 lb/ac
Recommended precipitation range: 9-20 in

**Balsamorhiza macrophylla**, cutleaf balsamroot
Origin: native forb
Mature Height: 1-2 ft
Growth Rate: slow
Growth Habit: upright
Wildlife Value: excellent
Attracts: bees
Flowers: yellow
Bloom: May-June
Seeding Rate: 18 lb/ac
Recommended precipitation range: 14-40 in

**Balsamorhiza sagittata**, arrowleaf balsamroot
Origin: native forb
Mature Height: 1-2 ft
Growth Rate: slow
Growth Habit: upright
Wildlife Value: excellent
Attracts: bees, butterflies
Flowers: yellow
Bloom: May-June
Seeding Rate: 18 lb/ac
Recommended precipitation range: 14-18 in

**Chaenactis douglasii**, Douglas’ dustymaiden
Origin: native forb
Mature Height: 1-3 ft
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**Yellow beeflower. Idaho Dept. of Transportation**

- **Cleome lutea**, Yellow beeflower
- **Origin**: native forb
- **Mature Height**: 2-3 ft
- **Growth Rate**: rapid
- **Growth Habit**: upright
- **Wildlife Value**: limited
- **Attracts**: bees, butterflies, monarchs
- **Flowers**: yellow
- **Bloom**: May-June
- **Seeding Rate**: 11 lb/ac
- **Recommended precipitation range**: 8-12 in

**Crownvetch. Purdue University**

- **Coronilla varia**, crownvetch
- **Origin**: introduced legume
- **Mature Height**: 1-2 ft
- **Growth Rate**: rapid
- **Growth Habit**: spreading to upright
- **Wildlife Value**: good forage
- **Attracts**: bees
- **Flowers**: white-pink
- **Bloom**: May-June
- **Seeding Rate**: 8 lb/ac
- **Recommended precipitation range**: 18-36 in

**Searl’s prairie clover. Gary A. Monroe @ PLANTS Database**

- **Dalea spp.**, prairie clover
- **Origin**: native forb
- **Mature Height**: 1-2.5 ft
- **Growth Rate**: moderate
- **Growth Habit**: upright
Plants for Pollinators in the Intermountain West

**Purple coneflower**
- **Origin**: native forb
- **Mature Height**: 1.5-3 ft
- **Growth Rate**: rapid
- **Growth Habit**: upright
- **Wildlife Value**: excellent forage
- **Attracts**: butterflies, bees
- **Flowers**: white to purple
- **Bloom**: July-September
- **Seeding Rate**: 9 lb/ac
- **Recommended precipitation range**: 14-40 in

**Echinacea purpurea**, purple coneflower
- **Origin**: native forb
- **Mature Height**: 1.5-3 ft
- **Growth Rate**: rapid
- **Growth Habit**: upright
- **Wildlife Value**: excellent forage
- **Attracts**: butterflies, bees
- **Flowers**: white to purple
- **Bloom**: July-September
- **Seeding Rate**: 9 lb/ac
- **Recommended precipitation range**: 14-40 in

**Blanketflower**
- **Origin**: native forb
- **Mature Height**: 1-1.5 ft
- **Growth Rate**: moderate
- **Growth Habit**: upright
- **Wildlife Value**: excellent food and cover
- **Attracts**: bees
- **Flowers**: orange, yellow
- **Bloom**: July-September
- **Seeding Rate**: 5 lb/ac
- **Recommended precipitation range**: 16-30 in

**Sticky geranium**
- **Origin**: native forb
- **Mature Height**: 2-3 ft
- **Growth Rate**: rapid
- **Growth Habit**: upright
- **Wildlife Value**: Attracts: bees, butterflies
- **Flowers**: purple
- **Bloom**: May-June
- **Seeding Rate**: 20 lb/ac
- **Recommended precipitation range**: 16-20 in

**Northern or Utah sweetvetch**
- **Origin**: native legume
- **Mature Height**: 1-2 ft
- **Growth Rate**: upright to spreading
- **Growth Habit**: spreading to upright
- **Wildlife Value**: good forage
- **Attracts**: bees, butterflies
- **Flowers**: red to purple
- **Bloom**: May-June
- **Seeding Rate**: 24 lb/ac
Recommended precipitation range: 12-18 in

**Helianthella uniflora**, oneflower sunflower  
Origin: native forb  
Mature Height: 1-3 ft  
Growth Rate: rapid  
Growth Habit: upright  
Wildlife Value: good forage  
Attracts: bees, ants  
Flowers: yellow  
Bloom: June-July  
Seeding Rate: 26 lb/ac  
Recommended precipitation range: 12-35 in

![Annual sunflower. A. Schneider @ PLANTS Database](image)

**Heliomeris multiflora**, showy goldeneye  
Origin: native forb  
Mature Height: 1-3 ft  
Growth Rate: rapid  
Growth Habit: upright  
Wildlife Value: cover  
Attracts: bees  
Flowers: yellow  
Bloom: June-August  
Seeding Rate: 2 lb/ac  
Recommended precipitation range: 16-25 in

![Showy goldeneye. Photo ©Al Schneider, www.swcoloradowildflowers.com, used with permission.](image)

**Helianthus annuus**, annual sunflower  
Origin: native forb  
Mature Height: 2-5 ft  
Growth Rate: rapid  
Growth Habit: upright  
Wildlife Value: good winter food  
Attracts: butterflies, bees and ants  
Flowers: yellow to orange  
Bloom: July-September  
Seeding Rate: 24 lb/ac  
Recommended precipitation range: 8-15 in

![Annual sunflower. A. Schneider @ PLANTS Database](image)

**Ipomopsis aggregata**, scarlet gilia  
Origin: native forb  
Mature Height: 2-3 ft  
Growth Rate: biennial  
Growth Habit: upright  
Wildlife Value: forage  
Attracts: bees, hummingbirds  
Flowers: red  
Bloom: April-July  
Seeding Rate: 6 lb/ac  
Recommended precipitation range: 10-25 in

![Scarlet gilia. Derek Tilley, NRCS Idaho](image)
**Lathyrus pauciflorus**, fewflower pea  
Origin: native forb  
Mature Height: 1-3 ft  
Growth Rate: rapid  
Growth Habit: climbing vine  
Wildlife Value: medium palatability  
Attracts: bees; larval host for butterflies  
Flowers: pink-purple  
Bloom: April-May  
Seeding Rate: 87 lb/ac  
Recommended precipitation range: 5-14 in

**Linum perenne**, blue flax  
Origin: introduced forb  
Mature height: 1-2 ft  
Growth Rate: moderate to rapid  
Growth Habit: upright  
Wildlife value: excellent food  
Attracts: bees  
Flowers: light blue  
Bloom: May-July  
Seeding Rate: 4 lb/ac  
Recommended precipitation range: 10-20 in

**Lomatium dissectum**, fernleaf biscuitroot  
Origin: native forb  
Mature Height: 0.5-2 ft  
Growth Rate: slow  
Growth Habit: erect  
Wildlife Value:  
Attracts: bees  
Flowers: yellow green  
Bloom: June-July  
Seeding Rate: 24 lb/ac  
Recommended precipitation range: 14-30 in
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**Lomatium grayi**, Gray’s biscuitroot
- Origin: native forb
- Mature Height: 0.5-1 ft
- Growth Rate: slow
- Growth Habit: erect
- Wildlife Value:
- Attracts: bees
- Flowers: white
- Bloom: April-June
- Seeding Rate: 24 lb/ac
- Recommended precipitation range: 12-20 in

**Lomatium triternatum**, nineleaf biscuitroot
- Origin: native forb
- Mature Height: 2-3 ft
- Growth Rate: slow
- Growth Habit: erect
- Wildlife Value:
- Attracts: bees
- Flowers: yellow green

**Lotus corniculatus**, birdsfoot trefoil
- Origin: introduced legume
- Mature Height: 1.5-3 ft
- Growth Rate: rapid
- Growth Habit: upright
- Wildlife Value: good winter food
- Attracts: bees
- Flowers: yellow
- Bloom: June-August
- Seeding Rate: 3 lb/ac
- Recommended precipitation range: 20-45 in

**Machaeranthera canescens**, hoary tansyaster
- Origin: native forb
- Mature Height: 2-3 ft
- Growth Rate: rapid
- Growth Habit: erect
Plants for Pollinators in the Intermountain West

Wildlife Value: forage
Attracts: bees, butterflies
Flowers: blue to purple
Bloom: August-October
Seeding Rate: 2 lb/ac
Recommended precipitation range: 8-15 in

Medicago sativa, alfalfa
Origin: introduced legume
Mature Height: 2-3 ft
Growth Rate: fast
Growth Habit: upright
Wildlife Value: excellent forage
Attracts: bees
Flowers: purple
Bloom: May-July (delay by cutting)
Seeding Rate: 5 lb/ac
Recommended precipitation range: 12-65 in

Yellow blossom alfalfa.  Derek Tilley, NRCS Idaho.

Melilotus alba and M. officinalis, white and yellow sweetclover
Origin: introduced legume
Mature Height: 1-3 ft
Growth Rate: rapid
Growth Habit: upright
Wildlife Value: fair forage
Attracts: many bees
Flowers: white or yellow
Bloom: June-July
Seeding Rate: 4 lb/ac
Recommended precipitation range: 9-18 in

Mentzelia laevicaulis, smoothstem blazingstar
Origin: native forb
Mature Height: 1-3 ft
Growth Rate: rapid
Growth Habit: upright
Wildlife Value: cover for small animals, poor forage
Attracts: bees, butterflies, moths
Flowers: yellow
Bloom: June-August
Seeding Rate: 4 lb/ac
Recommended precipitation range: 7-15 in

Yellow sweetclover.  J.S. Peterson @ PLANTS Database
**Onobrychis viciifolia**, sainfoin
Origin: introduced legume
Mature Height: 2-5 ft
Growth rate: rapid
Growth Habit: upright
Wildlife Value: excellent forage
Attracts: larger bees
Flowers: pink
Bloom: May-July (delay by cutting)
Seeding Rate: 34 lb/ac
Recommended precipitation range: 14-45 in

**Penstemon eatonii**, firecracker penstemon
Origin: native forb
Mature Height: 1-2.5 ft
Growth Rate: rapid
Growth Habit: upright
Wildlife Value: excellent forage
Attracts: bees, wasps, hummingbirds; larval host plant of *Euphydryas anicia hermosa* butterfly
Flowers: red
Bloom: April-June
Seeding Rate: 3 lb/ac
Recommended precipitation range: 10-18 in

**Penstemon palmeri**, Palmer’s penstemon
Origin: native forb
Mature Height: 2-3 ft
Growth Rate: rapid
Growth Habit: erect
Wildlife Value: fair forage
Attracts: larger bees
Flowers: pink
Bloom: May-July
Seeding Rate: 4 lb/ac
Recommended precipitation range: 6-12 in
**Penstemon speciosus**, royal penstemon  
Origin: native forb  
Mature Height: 2-3 ft  
Growth Rate: rapid  
Growth Habit: erect  
Wildlife Value: fair forage  
Attracts: bees, butterflies  
Flowers: light blue  
Bloom: July-August  
Seeding Rate: 3 lb/ac  
Recommended precipitation range: 12-18 in

**Penstemon strictus**, Rocky Mountain penstemon  
Origin: native forb  
Mature Height: 1-3 ft  
Growth Rate: rapid  
Growth Habit:  
Wildlife Value: fair forage  
Attracts: bees  
Flowers: purple  
Bloom: May-July  
Seeding Rate: 4 lb/ac  
Recommended precipitation range: 14-26 in

**Penstemon venustus**, Venus penstemon  
Origin: native forb  
Mature Height: 2-3 ft  
Growth Rate: rapid  
Growth Habit: erect  
Wildlife Value:  
Attracts: bees  
Flowers: blue-purple  
Bloom: July-August  
Seeding Rate: 2 lb/ac  
Recommended precipitation range: 16-25 in
Plants for Pollinators in the Intermountain West

**Phacelia hastata**, silverleaf phacelia
- Origin: native forb
- Mature Height: 1-2 ft
- Growth Rate: rapid
- Growth Habit: upright
- Wildlife Value: good forage
- Attracts: bees
- Flowers: blue-purple
- Bloom: June-August
- Seeding Rate: 2 lb/ac
- Recommended precipitation range: 10-18 in

*Prairie coneflower. Derek Tilley, NRCS Idaho.*

**Ratibida columnifera**, prairie coneflower
- Origin: native forb
- Mature Height: 1-1.5 ft
- Growth Rate: rapid
- Growth Habit: upright
- Wildlife Value: good forage
- Attracts: bees
- Flowers: yellow/orange
- Bloom: June-August
- Seeding Rate: 3 lb/ac
- Recommended precipitation range: 16-40 in

*Small burnet. Derek Tilley, NRCS Idaho.*

**Rudbeckia hirta**, blackeyed Susan
- Origin: native forb
- Mature Height: 2-3 ft
- Growth Rate: rapid
- Growth Habit: upright
- Wildlife Value: seed is food for birds
- Attracts: bees, butterflies
- Flowers: yellow
- Bloom: June-July
- Seeding Rate: 1 lb/ac
- Recommended precipitation range: 28-65 in

*Blackeyed Susan. P. Alexander @ PLANTS Database*

**Sanguisorba minor**, small burnet
- Origin: introduced forb
- Mature Height: 1-2.5 ft
- Growth Rate: rapid
- Growth Habit: upright
- Wildlife Value: excellent forage
- Attracts: bees
- Flowers: green-red
- Bloom: June-August
- Seeding Rate: 26 lb/ac
- Recommended precipitation range: 15-25 in

*Globemallow. Vince Tepedino, ARS Bee Research Lab.*
**Sphaeralcea spp.**, globemallow
Origin: native forb
Mature Height: 1-3 ft
Growth Rate: rapid
Growth Habit: upright
Wildlife Value: excellent forage
Attracts: bees
Flowers: orange to red
Bloom: April-June
Seeding Rate: 2 lb/ac
Recommended precipitation range: 7-15 in

**Symphiotrichum spp.**, Aster
Origin: native forb
Mature Height: 0.5-3 ft
Growth Rate: moderate
Growth Habit: upright
Wildlife Value: excellent food and cover
Attracts: bees, butterflies Larval host plant for field crescent (*Phyciodes pulchellus camilla*) and northern crescent (*Phyciodes cocyta*) butterflies
Flowers: creamy white to purple
Bloom: June-September
Seeding Rate: 1 lb/ac
Recommended precipitation range: 14-60 in

**Trifolium spp.**, clover
Origin: introduced legume
Mature Height: 0.5-1 ft
Growth Rate: rapid
Growth Habit: spreading
Wildlife Value: excellent forage
Attracts: bees, butterflies (monarchs prefer red clover)
Flowers: white, red, pink
Bloom: May-July (delay by cutting)
Seeding Rate: 4 lb/ac
Recommended precipitation range: 20-60 in
Plants for Pollinators in the Intermountain West

**American vetch. Photo ©Al Schneider, www.swcoloradowildflowers.com, used with permission.**

*Vicia americana*, American vetch
- Origin: native legume
- Mature Height: 0.5-1 ft
- Growth Rate: rapid
- Growth Habit: spreading
- Wildlife Value: excellent forage
- Attracts: bees
- Flowers: purple
- Bloom: May-June
- Seeding Rate: 33 lb/ac
- Recommended precipitation range: 9-50 in

**Shrubs, Half-shrubs and Trees**

*Amelanchier alnifolia*, serviceberry
- Origin: native shrub
- Mature Height: 6-15 ft
- Growth Rate: slow

*Artemisia tridentata ssp. tridentata*, basin big sagebrush
- Origin: native shrub
- Mature Height: 3-8 ft
- Growth Rate: slow
- Growth Habit: upright shrub
- Wildlife Value: cover and food
- Attracts: provides habitat and nesting structure
- Flowers: yellow
- Bloom: September-October
- Seeding Rate: 0.5 lb/ac
- In-row Spacing: 3-6 ft
- Recommended precipitation range: 9-15 in

*Artemisia tridentata ssp. vaseyana*, mountain big sagebrush
- Origin: native shrub
- Mature Height: 2-4 ft
- Growth Rate: slow
- Growth Habit: upright shrub
- Wildlife Value: cover and food
- Attracts: provides habitat and nesting structure
- Flowers: yellow
- Bloom: September-October
- Seeding Rate: 0.5 lb/ac
In-row Spacing: 3-6 ft
Recommended precipitation range: 16-25 in

Wyoming big sagebrush. Derek Tilley, NRCS Idaho.

*Artemisia tridentata ssp. wyomingensis*, Wyoming big sagebrush
Origin: native shrub
Mature Height: 2-3 ft
Growth Rate: slow
Growth Habit: upright shrub
Wildlife Value: cover and food
Attracts: provides habitat and nesting structure
Flowers: yellow
Bloom: September-October
Seeding Rate: 0.5 lb/ac
In-row Spacing: 3-6 ft
Recommended precipitation range: 8-13 in

Siberian peashrub. R.A. Howard @ PLANTS Database

*Caragana spp.* Siberian peashrub
Origin: introduced shrub
Mature Height: 6-20 ft
Growth Rate: rapid
Growth Habit: erect oval shrub
Wildlife Value: nesting
Attracts: large bees (especially bumblebees)
Flowers: small showy yellow
Bloom: April-June
In-row Spacing: 5-10 ft
Recommended precipitation range: 12-50 in

Clematis. Tim Dring, NRCS Washington

*Clematis ligusticifolia*, clematis
Origin: native shrub or vine
Mature Height: 1 ft
Growth Rate: moderate
Growth Habit: spreading and climbing vine
Wildlife Value: cover
Attracts: moths, bees
Flowers: white
Bloom: May-July
In-row Spacing: 2-6 ft
Recommended precipitation range: 10-20 in
Cotoneaster integerrimus, cotoneaster
Origin: introduced shrub
Mature Height: 4-6 ft
Growth Rate: moderate
Growth Habit: multi-branched erect shrub
Wildlife Value: fruit, cover
Attracts: bees
Flowers: white
Bloom: May – June
In-row Spacing: 4 – 6 ft
Recommended precipitation range: 18-30 in

Crataegus douglasii, black hawthorn
Origin: native shrub
Mature Height: 12-15 ft
Growth Rate: slow
Growth Habit: upright
Wildlife Value: food and cover
Attracts: moths, bees, butterflies
Flowers: white
Bloom: May-June
In-row Spacing: 4-6 ft
Recommended precipitation range: 18-25 in

Ericameria and Chrysothamnus spp., rabbitbrush
Origin: native shrub
Mature Height: 2-6 ft
Growth Rate: moderate
Growth Habit: open spreading
Wildlife Value: loafing, food and browse
Attracts: butterflies, small bees
Flowers: yellow
Bloom: August-October
Seeding Rate: 0.5 lb/ac
In-row Spacing: 3-6 ft
Recommended precipitation range: 7-16 in
Plants for Pollinators in the Intermountain West

**Eriogonum heracleoides**, whorled buckwheat
Origin: native sub-shrub
Mature Height: 1-3 ft
Growth Rate: moderate
Growth Habit: spreading, open sub-shrub
Wildlife Value: cover, fall forage
Attracts: moths, butterflies, bees
Flowers: white, cream
Bloom: July-September
Seeding Rate: 4 lb/ac
In-row Spacing: 1-3 ft
Recommended precipitation range: 12-25 in

**Eriogonum umbellatum**, sulphurflower buckwheat
Origin: native sub-shrub
Mature Height: 0.5-2 ft
Growth Rate: moderate

**Krascheninnikovia lanata**, winterfat
Origin: native shrub
Mature Height: 1-3 ft
Growth Rate: rapid
Growth Habit: low shrub
Wildlife Value: excellent winter forage
Attracts: provides nesting structure for bees
Flowers: green/white
Bloom: July-August
Seeding Rate: 2 lb/ac
In-row Spacing:
Recommended precipitation range: 7-12 in

**Philadelphus lewisii**, Lewis’ mockorange
Origin: native shrub
Mature Height: 8-11 ft
Growth Rate: moderate
Growth Habit: multiple stemmed shrub
Wildlife Value: nesting, loafing, food, browse
Attracts: bees
Flowers: white
Bloom: May-June
In-row Spacing: 6-10 ft
Recommended precipitation range: 18-50 in
**Prunus americana**, American plum  
Origin: native shrub  
Mature Height: 8-10 ft  
Growth Rate: moderate  
Growth Habit: rounded crown, suckers  
Wildlife Value: nesting, loafing, food, browse  
Attracts: butterflies, bees  
Flowers: white  
Bloom: April-May  
In-row Spacing: 6-10 ft  
Recommended precipitation range: 20-40 in

**Prunus pumila**, western sandcherry  
Origin: native shrub  
Mature Height: 3-6 ft  
Growth Rate: moderate  
Growth Habit: open and spreading  
Wildlife Value: loafing, food, browse  
Attracts: butterflies, bees  
Flowers: white  
Bloom: April-May  
In-row Spacing: 3-6 ft  
Recommended precipitation range: 20-40 in

**Prunus tomentosa**, Nanking cherry  
Origin: introduced shrub  
Mature Height: 6-10 ft  
Growth Rate: moderate  
Growth Habit: upright, semi-spreading  
Wildlife Value: browse, fruit for song birds  
Attracts: butterflies, bees  
Flowers: small pink  
Bloom: April-May  
In-row Spacing: 6-8 ft  
Recommended precipitation range: 16-40 in

**Prunus virginiana**, chokecherry  
Origin: native shrub  
Mature Height: 12-25 ft  
Growth Rate: moderate  
Growth Habit: oval to round; suckering  
Wildlife Value: excellent food and cover  
Attracts: bees, butterflies  
Flowers: white  
Bloom: April-May  
In-row Spacing: 8-12 ft  
Recommended precipitation range: 16-60 in

**Purshia tridentata**, antelope bitterbrush  
Origin: native shrub  
Mature Height: 2-6 ft  
Growth Rate: moderate  
Growth Habit: upright shrub  
Wildlife Value: cover, fall forage  
Attracts: butterflies, bees
**Skunkbush sumac. Derek Tilley, NRCS Idaho.**

*Rhus trilobata*, skunkbush sumac  
Origin: native shrub  
Mature Height: 6-8 ft  
Growth Rate: slow to moderate  
Growth Habit: ascending to spreading  
Wildlife Value: browse, nesting, bird food  
Attracts: early bees  
Flowers: light yellow  
Bloom: May-June  
In-row Spacing: 4-6 ft  
Recommended precipitation range: 8-18 in

**Golden currant. Derek Tilley, NRCS Idaho.**

*Ribes aureum*, golden currant  
Origin: native shrub  
Mature Height: 5-8 ft  
Growth Rate: moderate  
Growth Habit: spreading and upright  
Wildlife Value: roosting, loafing, nesting, fruit  
Attracts: early spring bees, bumblebees  
Flowers: fragrant golden yellow  
Bloom: April-May  
In-row Spacing: 4-6 ft  
Recommended precipitation range: 12-18 in

**Wood’s rose. Derek Tilley, NRCS Idaho.**

*Rosa woodsii*, Wood’s rose  
Origin: native shrub  
Mature Height: 3-6 ft  
Growth Rate: moderate  
Growth Habit: upright to semi-weeping shrub  
Wildlife Value: nesting, cover, excellent food  
Attracts: bees  
Flowers: pink  
Bloom: June-July  
In-row Spacing: 3-5 ft  
Recommended precipitation range: 12-40 in

**Salix spp., Willow**  
Origin: native shrub or tree  
Mature Height: 8-30 ft  
Growth Rate: moderate  
Growth Habit: upright; single base or rhizomatous  
Wildlife Value: nesting, cover, excellent food  
Attracts: bees, butterflies  
Flowers: yellow  
Bloom: April-July  
In-row Spacing: 10-15 ft  
Recommended precipitation range: 18-40 in

**Sambucus cerulea**, elderberry  
Origin: native shrub
Plants for Pollinators in the Intermountain West

Buffaloberry, Shepherdia argentea
Mature Height: 6-20 ft
Growth Rate: moderate
Growth Habit: upright to spreading tall shrub
Wildlife Value: browse, fruit
Attracts: butterflies, bees
Flowers: male=yellow; female=inconspicuous
Bloom: May-July
In-row Spacing: 8-10 ft
Recommended precipitation range: 12-20 in

Solidago spp., goldenrod
Mature Height: 3-6 ft
Growth Rate: moderate
Growth Habit: spreading shrub
Wildlife Value: cover
Attracts: butterflies, bees
Flowers: yellow
Bloom: July-October
In-row Spacing: 2-6 ft
Recommended precipitation range: 16-40 in

Goldenrod, Solidago spp.

Douglas spiraea, Spiraea douglasii
Mature Height: 4-6 ft
Growth Rate: rapid
Growth Habit: thicket forming to upright
Wildlife Value: cover
Attracts: butterflies, bees
Flowers: rose to pink
Bloom: June
In-row Spacing: 2-4 ft
Recommended precipitation range: 16-50 in

Goldenrod, Spiraea douglasii
Plants for Pollinators in the Intermountain West

**Symphoricarpos spp., snowberry**
Origin: native shrub  
Mature Height: 2-4 ft  
Growth Rate: moderate  
Growth Habit: open and spreading  
Wildlife Value: loafing, food, browse  
Attracts: butterflies, bees, hummingbirds  
Flowers: pink  
Bloom: June-August  
In-row Spacing: 3-4 ft  
Recommended precipitation range: 14-40 in

**Syringa vulgaris, common lilac**
Origin: introduced shrub  
Mature Height: 6-12 ft  
Growth Rate: moderate  
Growth Habit: upright, leggy, suckering  
Wildlife Value: nesting  
Attracts: early spring bees

**Yucca spp., yucca or soapweed**
Origin: native shrub – Great Plains  
Mature Height: 2-4 ft  
Growth Rate: slow  
Growth Habit: upright  
Wildlife Value: cover  
Attracts: moths  
Flowers: creamy white  
Bloom: June-July  
In-row Spacing: 3 ft  
Recommended precipitation range: 7-12 in
APPROVED POLLINATOR PLANT LISTS

The following tables 2 – 6 are lists of plants that have known value for pollinators and are adapted to various precipitation ranges in the Intermountain West. The lists are separated into 7–9”, 9–12”, 12–15”, 15–18” and 18–25+” mean annual precipitation zones. Some judgment might be necessary to determine if a species from a lower precipitation zone can be used in a higher precipitation area; however, a species from a higher precipitation zone should not be used in a lower precipitation zone. Care was taken to list species that are commercially available. Additional species may be available or become available that were not considered for this technical note during publication. Consult your State Plant Materials Specialist prior to making any species substitutions.

The seeding rates listed are the full seeding rate (as if a single species were being planted). Adjust the seeding rate to the percentage of the species desired in the mix.

This section also lists additional grasses and shrubs, which, although they do not provide pollen or nectar, are important elements of pollinator habitat, and should be included in pollinator or wildlife friendly plantings.
### TABLE 2: POLLINATOR PLANT LIST 7 – 9 INCH PRECIPITATION

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Bloom Color and Time</th>
<th>Height (in)</th>
<th>Seeding Depth (in)</th>
<th>Seeds/lb</th>
<th>Full Seeding Rate (PLS lbs/ac)</th>
<th>Soils</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Forbs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achillea millefolium</td>
<td>Western yarrow</td>
<td>Native 6-24</td>
<td>0 - 1/8</td>
<td>4,400,000</td>
<td>0.5</td>
<td>X X</td>
<td></td>
</tr>
<tr>
<td>Astragalus filipes</td>
<td>Basalt milkvetch</td>
<td>Native 12-36</td>
<td>1/4-1/2</td>
<td>120,000</td>
<td>9</td>
<td>X X X</td>
<td></td>
</tr>
<tr>
<td>Chaenactis douglasii</td>
<td>Douglas’ dustymaiden</td>
<td>Native 12-36</td>
<td>0 - 1/8</td>
<td>350,000</td>
<td>3</td>
<td>X X</td>
<td></td>
</tr>
<tr>
<td>Cleome lutea</td>
<td>Yellow bee flower</td>
<td>Native 24-36</td>
<td>0 – 1/4</td>
<td>101,000</td>
<td>11</td>
<td>X X</td>
<td></td>
</tr>
<tr>
<td>^ Helianthus annuus</td>
<td>Annual sunflower</td>
<td>Native 36-120</td>
<td>1/4 - 1/2</td>
<td>45,000</td>
<td>24</td>
<td>X X X</td>
<td></td>
</tr>
<tr>
<td>Lathyrus pauciflorus</td>
<td>Fewflower pea</td>
<td>Native 8-30</td>
<td>1/8-1/2</td>
<td>12,500</td>
<td>87</td>
<td>X X X</td>
<td></td>
</tr>
<tr>
<td>Machaeranthera canescens</td>
<td>Hoary tansyaster</td>
<td>Native 24-36</td>
<td>0 - 1/8</td>
<td>1,300,000</td>
<td>2</td>
<td>X X</td>
<td></td>
</tr>
<tr>
<td>^ Melilotus alba</td>
<td>White sweetclover</td>
<td>Introduced 12-36</td>
<td>1/8 - 1/2</td>
<td>260,000</td>
<td>4</td>
<td>X X X</td>
<td></td>
</tr>
<tr>
<td>^ M. officinalis</td>
<td>Yellow sweetclover</td>
<td>Introduced 12-36</td>
<td>1/8 - 1/2</td>
<td>260,000</td>
<td>4</td>
<td>X X X</td>
<td></td>
</tr>
<tr>
<td>Mentzelia laevicaulis</td>
<td>Smoothstem blazingstar</td>
<td>Native 12-36</td>
<td>1/4-1/2</td>
<td>300,000</td>
<td>4</td>
<td>X X</td>
<td></td>
</tr>
<tr>
<td>Penstemon palmeri</td>
<td>Palmer’s penstemon</td>
<td>Native 24-36</td>
<td>0 - 1/8</td>
<td>294,000</td>
<td>4</td>
<td>X X</td>
<td></td>
</tr>
<tr>
<td>Sphaeralcea spp.</td>
<td>Globemallow</td>
<td>Native 12-30</td>
<td>1/4 - 1/2</td>
<td>500,000</td>
<td>2</td>
<td>X X</td>
<td></td>
</tr>
<tr>
<td><strong>GRASSES</strong></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Achnatherum hymenoides</td>
<td>Indian ricegrass</td>
<td>Native 30</td>
<td>1/2 - 3</td>
<td>235,000</td>
<td>8</td>
<td>X X</td>
<td></td>
</tr>
<tr>
<td>Elymus elymoides</td>
<td>Bottlebrush squiretail</td>
<td>Native 24</td>
<td>1/4 – 1/2</td>
<td>220,000</td>
<td>6</td>
<td>X X</td>
<td></td>
</tr>
<tr>
<td>E. lanceolatus</td>
<td>Thickspike wheatgrass</td>
<td>Native 32</td>
<td>1/4 – 1/2</td>
<td>135,000</td>
<td>8</td>
<td>X X</td>
<td></td>
</tr>
<tr>
<td>E. wawawaiensis</td>
<td>Snake River wheatgrass</td>
<td>Native 48</td>
<td>1/4 - 3/4</td>
<td>139,000</td>
<td>8</td>
<td>X X</td>
<td></td>
</tr>
<tr>
<td>Leymus cinereus</td>
<td>Basin wildrye</td>
<td>Native 72</td>
<td>1/4 – 3/4</td>
<td>130,000</td>
<td>8</td>
<td>X X</td>
<td></td>
</tr>
<tr>
<td>Poa secunda</td>
<td>Sandberg bluegrass</td>
<td>Native 12</td>
<td>0 – 1/4</td>
<td>1,000,000</td>
<td>2</td>
<td>X X X</td>
<td></td>
</tr>
<tr>
<td>Sporobolus cryptandrus</td>
<td>Sand dropseed</td>
<td>Native 36</td>
<td>0 – 1/4</td>
<td>5,298,000</td>
<td>1</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

^ Can become weedy or invasive under proper conditions.
# Plants for Pollinators in the Intermountain West

## TABLE 2 continued: POLLINATOR PLANT LIST 7 – 9 INCH PRECIPITATION

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Bloom Color and Time</th>
<th>Seeding Depth (in)</th>
<th>Origin</th>
<th>Height (ft)</th>
<th>Full Seeding Rate (PLS lbs/ac)</th>
<th>Plant Spacing (ft)</th>
<th>Soils</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shrubs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Artemisia tridentata ssp. wyomingensis</em></td>
<td>Wyoming big sagebrush</td>
<td><img src="spring" alt="spring" /> <img src="summer" alt="summer" /> ![late summer](late summer)</td>
<td>Native</td>
<td>1-4</td>
<td>0 – 1/8</td>
<td>1,700,000</td>
<td>0.5</td>
<td>6</td>
</tr>
<tr>
<td><em>Atriplex canescens</em></td>
<td>Fourwing saltbush</td>
<td><img src="spring" alt="spring" /> <img src="summer" alt="summer" /> ![late summer](late summer)</td>
<td>Native</td>
<td>1-6</td>
<td>1/4 - 3/4</td>
<td>52,000</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td><em>Chrysothamnus viscidiflorus</em></td>
<td>Green rabbitbrush</td>
<td><img src="spring" alt="spring" /> <img src="summer" alt="summer" /> ![late summer](late summer)</td>
<td>Native</td>
<td>1-3</td>
<td>0 - 1/8 or seedlings</td>
<td>782,000</td>
<td>0.5</td>
<td>4</td>
</tr>
<tr>
<td><em>Ericameria nauseosa</em></td>
<td>Rubber rabbitbrush</td>
<td><img src="spring" alt="spring" /> <img src="summer" alt="summer" /> ![late summer](late summer)</td>
<td>Native</td>
<td>1-6</td>
<td>0 - 1/8 or seedlings</td>
<td>693,000</td>
<td>0.5</td>
<td>4</td>
</tr>
<tr>
<td><em>Eriogonum umbellatum</em></td>
<td>Sulphur buckwheat</td>
<td><img src="spring" alt="spring" /> <img src="summer" alt="summer" /> ![late summer](late summer)</td>
<td>Native</td>
<td>2</td>
<td>0 - 1/4 or seedlings</td>
<td>209,000</td>
<td>4</td>
<td>X</td>
</tr>
<tr>
<td><em>Krascheninikovia lanata</em></td>
<td>Winterfat</td>
<td><img src="spring" alt="spring" /> <img src="summer" alt="summer" /> ![late summer](late summer)</td>
<td>Native</td>
<td>1-4</td>
<td>0 - 1/8</td>
<td>123,000</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td><em>Rhus trilobata</em></td>
<td>Skunkbush sumac</td>
<td><img src="spring" alt="spring" /> <img src="summer" alt="summer" /> ![late summer](late summer)</td>
<td>Native</td>
<td>2-7</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>8</td>
</tr>
<tr>
<td><em>Yucca spp.</em></td>
<td>Yucca</td>
<td><img src="spring" alt="spring" /> <img src="summer" alt="summer" /> ![late summer](late summer)</td>
<td>Native</td>
<td>1-4</td>
<td>1/4 – 1/2 or seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>6</td>
</tr>
</tbody>
</table>

^ Can become weedy or invasive under proper conditions.
TABLE 3: POLLINATOR PLANT LIST 9 - 12 INCH PRECIPITATION

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Bloom Color and Time</th>
<th>Origin</th>
<th>Height (in)</th>
<th>Seeding Depth (in)</th>
<th>Seeds/lb</th>
<th>Full Seeding Rate (PLS lbs/ac)</th>
<th>Soils</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>spring</td>
<td>summer</td>
<td>late summer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Forbs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Achillea millefolium</em></td>
<td>Western yarrow</td>
<td>☉ ☉ ☉</td>
<td>☉ ☉ ☉</td>
<td>☉ ☉ ☉</td>
<td>Native</td>
<td>6-24</td>
<td>0 - 1/8</td>
<td>4,400,000</td>
</tr>
<tr>
<td><em>Astragalus filipes</em></td>
<td>Basalt milkvetch</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>Native</td>
<td>12-36</td>
<td>1/4 - 1/2</td>
<td>120,000</td>
</tr>
<tr>
<td><em>Balsamorhiza hookeri</em></td>
<td>Hooker’s balsamroot</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>Native</td>
<td>12-24</td>
<td>0-1/4</td>
<td>55,000</td>
</tr>
<tr>
<td><em>Chaenactis douglasii</em></td>
<td>Douglas’ dusty maiden</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>Native</td>
<td>12-36</td>
<td>0 - 1/8</td>
<td>350,000</td>
</tr>
<tr>
<td><em>Cleome lutea</em></td>
<td>Yellow bee plant</td>
<td>☉ ☉ ☉</td>
<td>☉ ☉ ☉</td>
<td>☉ ☉</td>
<td>Native</td>
<td>24-36</td>
<td>1/8 - 1/4</td>
<td>101,000</td>
</tr>
<tr>
<td><em>Dalea spp.</em></td>
<td>Prairie coneflower</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>Native</td>
<td>12-36</td>
<td>1/4-1/2</td>
<td>148,000</td>
</tr>
<tr>
<td><em>Helianthus annuus</em></td>
<td>Annual sunflower</td>
<td>☉ ☉ ☉</td>
<td>☉ ☉ ☉</td>
<td>☉ ☉</td>
<td>Native</td>
<td>36-120</td>
<td>1/4 - 1/2</td>
<td>45,000</td>
</tr>
<tr>
<td><em>Ipomopsis aggregata</em></td>
<td>Scarlet gilia</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>Native</td>
<td>24-36</td>
<td>0-1/8</td>
<td>360,000</td>
</tr>
<tr>
<td><em>Lathyrus pauciflorus</em></td>
<td>Fewflower pea</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>Native</td>
<td>8-30</td>
<td>1/8-1/2</td>
<td>12,500</td>
</tr>
<tr>
<td><em>Linum lewisii</em></td>
<td>Lewis flax</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>Native</td>
<td>12-24</td>
<td>0 - 1/8</td>
<td>260,000</td>
</tr>
<tr>
<td><em>L. perenne</em></td>
<td>Blue flax</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>Introduced</td>
<td>12-24</td>
<td>0 - 1/8</td>
<td>278,000</td>
</tr>
<tr>
<td><em>Machaeranthera canescens</em></td>
<td>Hoary tansyaster</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>Native</td>
<td>24-36</td>
<td>0 - 1/8</td>
<td>1,300,000</td>
</tr>
<tr>
<td><em>Medicago sativa ssp. falcata</em></td>
<td>Yellow blossom alfalfa</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>Introduced</td>
<td>24-36</td>
<td>1/8 - 1/2</td>
<td>211,000</td>
</tr>
<tr>
<td>^ <em>Melilotus alba</em></td>
<td>White sweetclover</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>Introduced</td>
<td>12-36</td>
<td>1/8 - 1/2</td>
<td>260,000</td>
</tr>
<tr>
<td>^ <em>M. officinalis</em></td>
<td>Yellow sweetclover</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>Introduced</td>
<td>12-36</td>
<td>1/8 - 1/2</td>
<td>260,000</td>
</tr>
<tr>
<td><em>Mentzelia laevicaulis</em></td>
<td>Smoothstem blazingstar</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>Native</td>
<td>12-36</td>
<td>1/4-1/2</td>
<td>300,000</td>
</tr>
<tr>
<td><em>Penstemon eatonii</em></td>
<td>Firecracker penstemon</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>Native</td>
<td>12-30</td>
<td>0 - 1/8</td>
<td>315,000</td>
</tr>
<tr>
<td><em>Penstemon palmeri</em></td>
<td>Palmer’s penstemon</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>Native</td>
<td>24-36</td>
<td>0 - 1/8</td>
<td>294,000</td>
</tr>
<tr>
<td><em>Phacelia hastata</em></td>
<td>Silverleaf phacelia</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>Native</td>
<td>18-24</td>
<td>1/8-1/4</td>
<td>450,000</td>
</tr>
<tr>
<td><em>Sphaeralcea spp.</em></td>
<td>Globemallow</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>Native</td>
<td>12-24</td>
<td>1/4 - 1/2</td>
<td>500,000</td>
</tr>
<tr>
<td>^ <em>Vicia Americana</em></td>
<td>American vetch</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>☉ ☉</td>
<td>Native</td>
<td>6-12</td>
<td>1 - 2</td>
<td>33,000</td>
</tr>
</tbody>
</table>

^ Can become weedy or invasive under proper conditions.
<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Bloom Color and Time</th>
<th>Origin</th>
<th>Height (in)</th>
<th>Seeding Depth (in)</th>
<th>Seeds/lb</th>
<th>Full Seeding Rate (PLS lbs/ac)</th>
<th>Soils</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>spring</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Grasses</strong></td>
<td></td>
<td>summer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><em>Achnatherum hymenoides</em></td>
<td>Indian ricegrass</td>
<td>Native</td>
<td>30</td>
<td>1/2 - 3</td>
<td>235,000</td>
<td>8</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><em>Elymus elymoides</em></td>
<td>Bottlebrush squirreltail</td>
<td>Native</td>
<td>24</td>
<td>1/4 – 1/2</td>
<td>220,000</td>
<td>6</td>
<td>X</td>
<td>X</td>
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<tr>
<td><em>E. lanceolatus</em></td>
<td>Thickspike wheatgrass</td>
<td>Native</td>
<td>32</td>
<td>1/4 – 1/2</td>
<td>135,000</td>
<td>8</td>
<td>X</td>
<td>X</td>
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<tr>
<td><em>E. trachycaulus</em></td>
<td>Slender wheatgrass</td>
<td>Native</td>
<td>40</td>
<td>1/2 - 3/4</td>
<td>135,000</td>
<td>8</td>
<td>X</td>
<td>X</td>
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<tr>
<td><em>E. varwawalensis</em></td>
<td>Snake River wheatgrass</td>
<td>Native</td>
<td>48</td>
<td>1/4 – 1/2</td>
<td>139,000</td>
<td>8</td>
<td>X</td>
<td>X</td>
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<tr>
<td><em>Leymus cinereus</em></td>
<td>Basin wildrye</td>
<td>Native</td>
<td>72</td>
<td>1/4 - 3/4</td>
<td>130,000</td>
<td>8</td>
<td>X</td>
<td>X</td>
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<tr>
<td><em>Poa ampla</em></td>
<td>Big bluegrass</td>
<td>Native</td>
<td>48</td>
<td>0 - 1/4</td>
<td>925,000</td>
<td>2</td>
<td>X</td>
<td>X</td>
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<tr>
<td><em>P. nevadensis</em></td>
<td>Nevada bluegrass</td>
<td>Native</td>
<td>39</td>
<td>0 - 1/4</td>
<td>925,000</td>
<td>2</td>
<td>X</td>
<td>X</td>
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<tr>
<td><em>P. secunda</em></td>
<td>Sandberg’s bluegrass</td>
<td>Native</td>
<td>12</td>
<td>0 - 1/4</td>
<td>1,000,000</td>
<td>2</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><em>Pseudoroegneria spicata</em></td>
<td>Bluebunch wheatgrass</td>
<td>Native</td>
<td>48</td>
<td>1/4 – 1/2</td>
<td>139,000</td>
<td>8</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><em>Sporobolus cryptandrus</em></td>
<td>Sand dropseed</td>
<td>Native</td>
<td>36</td>
<td>0 - 1/4</td>
<td>5,298,000</td>
<td>1</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><em>Stipa thurberiana</em></td>
<td>Thurber’s needlegrass</td>
<td>Native</td>
<td>24</td>
<td>1/4 – 1/2</td>
<td>180,000</td>
<td>6</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Bloom Color and Time</td>
<td>Origin</td>
<td>Height (ft)</td>
<td>Seeding Depth (in)</td>
<td>Seeds/lb</td>
<td>Full Seeding Rate (lbs/ac)</td>
<td>Plant Spacing (ft)</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------</td>
<td>----------------------</td>
<td>--------</td>
<td>-------------</td>
<td>-------------------</td>
<td>---------</td>
<td>---------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td><strong>Shrubs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Artemisia tridentata</em> ssp. <em>tridentata</em></td>
<td>Basin big sagebrush</td>
<td>Native</td>
<td>5-10</td>
<td>0 – 1/8</td>
<td>1,700,000</td>
<td>0.5</td>
<td>6</td>
<td>X X</td>
</tr>
<tr>
<td><em>Atriplex canescens</em></td>
<td>Fourwing saltbush</td>
<td>Native</td>
<td>1-6</td>
<td>1/4 - 3/4</td>
<td>52,000</td>
<td>2</td>
<td>6</td>
<td>X X X</td>
</tr>
<tr>
<td><em>Chrysothamnus viscidiflorus</em></td>
<td>Green rabbitbrush</td>
<td>Native</td>
<td>1-3</td>
<td>0 - 1/8 or seedlings</td>
<td>782,000</td>
<td>0.5</td>
<td>4</td>
<td>X X</td>
</tr>
<tr>
<td><em>Ericameria nauseosa</em></td>
<td>Rubber rabbitbrush</td>
<td>Native</td>
<td>1-6</td>
<td>0 - 1/8 or seedlings</td>
<td>693,000</td>
<td>0.5</td>
<td>4</td>
<td>X X</td>
</tr>
<tr>
<td><em>Eriogonum umbellatum</em></td>
<td>Sulphur buckwheat</td>
<td>Native</td>
<td>2</td>
<td>0 - 1/4 or seedlings</td>
<td>209,000</td>
<td>4</td>
<td>4</td>
<td>X X</td>
</tr>
<tr>
<td><em>Krascheninikovia lanata</em></td>
<td>Winterfat</td>
<td>Native</td>
<td>1-4</td>
<td>0 – 1/8</td>
<td>123,000</td>
<td>2</td>
<td>6</td>
<td></td>
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<tr>
<td><em>Purshia tridentata</em></td>
<td>Antelope bitterbrush</td>
<td>Native</td>
<td>2-6</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>6</td>
<td>X X</td>
</tr>
<tr>
<td><em>Rhus trilobata</em></td>
<td>Skunkbush sumac</td>
<td>Native</td>
<td>2-7</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>8</td>
<td>X</td>
</tr>
<tr>
<td><em>Yucca spp.</em></td>
<td>Yucca</td>
<td>Native</td>
<td>1-4</td>
<td>1/4 – 1/2</td>
<td>N/A</td>
<td>N/A</td>
<td>6</td>
<td>X X</td>
</tr>
</tbody>
</table>
### TABLE 4: POLLINATOR PLANT LIST 12 - 15 INCH PRECIPITATION

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Bloom Color and Time</th>
<th>Origin</th>
<th>Height (in)</th>
<th>Seeding Depth (in)</th>
<th>Seeds/lb</th>
<th>Full Seeding Rate (PLS lbs/ac)</th>
<th>Soils</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Forbs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achillea millefolium</td>
<td>Western yarrow</td>
<td>spring</td>
<td>Native</td>
<td>6-24</td>
<td>0 - 1/8</td>
<td>4,400,000</td>
<td>0.5</td>
<td>X X</td>
</tr>
<tr>
<td>Balsamorhiza hookeri</td>
<td>Hooker’s balsamroot</td>
<td>spring, summer</td>
<td>Native</td>
<td>12-24</td>
<td>0-1/4</td>
<td>55,000</td>
<td>18</td>
<td>X X X</td>
</tr>
<tr>
<td>Balsamorhiza macrophylla</td>
<td>Cutleaf balsamroot</td>
<td>spring, summer</td>
<td>Native</td>
<td>12-24</td>
<td>0-1/4</td>
<td>55,000</td>
<td>18</td>
<td>X X X</td>
</tr>
<tr>
<td>Balsamorhiza sagittata</td>
<td>Arrowleaf balsamroot</td>
<td>spring, summer</td>
<td>Native</td>
<td>12-24</td>
<td>0 - 1/4</td>
<td>55,000</td>
<td>18</td>
<td>X X</td>
</tr>
<tr>
<td>Chaenactis douglasii</td>
<td>Douglas dustymaiden</td>
<td>spring, summer</td>
<td>Native</td>
<td>12-36</td>
<td>0 - 1/8</td>
<td>350,000</td>
<td>3</td>
<td>X X</td>
</tr>
<tr>
<td>Cleome serrulata</td>
<td>Rocky Mountain bee plant</td>
<td>spring</td>
<td>Native</td>
<td>12-72</td>
<td>0-1/8</td>
<td>66,000</td>
<td>17</td>
<td>X</td>
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<tr>
<td>Dalea spp.</td>
<td>Prairie coneflower</td>
<td>spring</td>
<td>Native</td>
<td>12-36</td>
<td>1/4-1/2</td>
<td>148,000</td>
<td>7</td>
<td>X X</td>
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<tr>
<td>Echinacea purpurea.</td>
<td>Purple coneflower</td>
<td>spring</td>
<td>Native</td>
<td>6-24</td>
<td>1/8 - 1/2</td>
<td>117,000</td>
<td>9</td>
<td>X X X</td>
</tr>
<tr>
<td>Hedysarum boreale</td>
<td>Northern/Utah sweetvetch</td>
<td>spring</td>
<td>Native</td>
<td>12-24</td>
<td>1/4 - 1/2</td>
<td>46,000</td>
<td>24</td>
<td>X X X</td>
</tr>
<tr>
<td>Helianthus annuus</td>
<td>Oneflower sunflower</td>
<td>spring</td>
<td>Native</td>
<td>12-36</td>
<td>1/8-1/4</td>
<td>41,000</td>
<td>26</td>
<td>X X</td>
</tr>
<tr>
<td>Helianthus annuus</td>
<td>Annual sunflower</td>
<td>spring</td>
<td>Native</td>
<td>36-120</td>
<td>1/4 - 1/2</td>
<td>45,000</td>
<td>24</td>
<td>X X X</td>
</tr>
<tr>
<td>Ipomopsis aggregata</td>
<td>Scarlet gilia</td>
<td>spring</td>
<td>Native</td>
<td>24-36</td>
<td>0-1/8</td>
<td>360,000</td>
<td>6</td>
<td>X X</td>
</tr>
<tr>
<td>Lathyrus pauciflorus</td>
<td>Fewflower pea</td>
<td>spring</td>
<td>Native</td>
<td>8-30</td>
<td>1/8 - 1/2</td>
<td>12,500</td>
<td>87</td>
<td>X X X</td>
</tr>
<tr>
<td>Linum lewisii</td>
<td>Lewis flax</td>
<td>spring</td>
<td>Native</td>
<td>12-24</td>
<td>0 - 1/8</td>
<td>260,000</td>
<td>4</td>
<td>X X</td>
</tr>
<tr>
<td>L. perenne</td>
<td>Blue flax</td>
<td>Introduceed</td>
<td></td>
<td>12-24</td>
<td>0 - 1/8</td>
<td>278,000</td>
<td>4</td>
<td>X X</td>
</tr>
<tr>
<td>Lomatium dissectum</td>
<td>Fernleaf biscuitroot</td>
<td>spring</td>
<td>Native</td>
<td>6-24</td>
<td>1/8 - 1/2</td>
<td>45,000</td>
<td>24</td>
<td>X</td>
</tr>
<tr>
<td>L. gravi</td>
<td>Gray’s biscuitroot</td>
<td>spring</td>
<td>Native</td>
<td>6-12</td>
<td>1/8 - 1/2</td>
<td>45,000</td>
<td>24</td>
<td>X</td>
</tr>
<tr>
<td>L. triternatum</td>
<td>Nineleaf biscuitroot</td>
<td>spring</td>
<td>Native</td>
<td>24-36</td>
<td>1/8 - 1/2</td>
<td>45,000</td>
<td>24</td>
<td>X</td>
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<tr>
<td>Machaeranthera canescens</td>
<td>Hoary tansyaster</td>
<td>spring</td>
<td>Native</td>
<td>24-36</td>
<td>0 - 1/8</td>
<td>1,300,000</td>
<td>2</td>
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<tr>
<td>Medicago sativa</td>
<td>Alfalfa</td>
<td>Introduced</td>
<td></td>
<td>24-36</td>
<td>1/8 - 1/2</td>
<td>200,000</td>
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^ Can become weedy or invasive under proper conditions.
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<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Bloom Color and Time</th>
<th>Origin</th>
<th>Height (in)</th>
<th>Seeding Depth (in)</th>
<th>Seeds/lb</th>
<th>Full Seeding Rate (PLS lbs/ac)</th>
<th>Soils</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicago sativa ssp. falcata</td>
<td>Yellow blossom alfalfa</td>
<td>Introduced</td>
<td>24-36</td>
<td>1/8 - 1/2</td>
<td>211,000</td>
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<td>X X</td>
<td></td>
</tr>
<tr>
<td>Melilotus alba</td>
<td>White sweetclover</td>
<td>Introduced</td>
<td>12-36</td>
<td>1/8 - 1/2</td>
<td>260,000</td>
<td>4</td>
<td>X X X</td>
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<tr>
<td>^ M. officinalis</td>
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<td>12-36</td>
<td>1/8 - 1/2</td>
<td>260,000</td>
<td>4</td>
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<tr>
<td>Mentzelia laevicaulis</td>
<td>Smoothstem blazingstar</td>
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<td>1/4-1/2</td>
<td>300,000</td>
<td>4</td>
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<tr>
<td>Onobrychis vicifolia</td>
<td>Sainfoin</td>
<td>Introduced</td>
<td>24-60</td>
<td>1/4 - 3/4</td>
<td>18,500</td>
<td>34</td>
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<td>Firecracker penstemon</td>
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<td>0 - 1/8</td>
<td>315,000</td>
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<td>24-36</td>
<td>0 - 1/8</td>
<td>294,000</td>
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<td>P. speciosus</td>
<td>Royal penstemon</td>
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<td>24-36</td>
<td>0 - 1/8</td>
<td>400,000</td>
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<tr>
<td>Phacelia hastata</td>
<td>Silverleaf phacelia</td>
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<td>18-24</td>
<td>1/8 – 1/4</td>
<td>450,000</td>
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<tr>
<td>Sphaeralcea spp.</td>
<td>Globemallow</td>
<td>Native</td>
<td>12-24</td>
<td>1/4 - 1/2</td>
<td>500,000</td>
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<tr>
<td>Symphyotrichum spp.</td>
<td>Aster</td>
<td>Native</td>
<td>12-40</td>
<td>0-1/4</td>
<td>2,000,000</td>
<td>1</td>
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<tr>
<td>^ Vicia Americana</td>
<td>American vetch</td>
<td>Native</td>
<td>6-12</td>
<td>1 - 2</td>
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<td>33</td>
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**Grasses**

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<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Bloom Color and Time</th>
<th>Origin</th>
<th>Height (in)</th>
<th>Seeding Depth (in)</th>
<th>Seeds/lb</th>
<th>Full Seeding Rate (PLS lbs/ac)</th>
<th>Soils</th>
</tr>
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<tbody>
<tr>
<td>Achnatherum hymenoides</td>
<td>Indian ricegrass</td>
<td>Native</td>
<td>30</td>
<td>1/2 - 3</td>
<td>235,000</td>
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<tr>
<td>Elymus elymoides</td>
<td>Bottlebrush squirreltail</td>
<td>Native</td>
<td>24</td>
<td>1/4 – 1/2</td>
<td>220,000</td>
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<tr>
<td>E. lancelatus</td>
<td>Thickspike wheatgrass</td>
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<td>32</td>
<td>1/4 – 1/2</td>
<td>135,000</td>
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<tr>
<td>E. mutisetus</td>
<td>Big squirreltail</td>
<td>Native</td>
<td>25</td>
<td>1/4 – 1/2</td>
<td>192,000</td>
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<tr>
<td>E. trachycaulus</td>
<td>Slender wheatgrass</td>
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<td>1/2 - 3/4</td>
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<tr>
<td>E. wawawaiensis</td>
<td>Snake River wheatgrass</td>
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<td>1/4 – 1/2</td>
<td>139,000</td>
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<tr>
<td>Leymus cinereus</td>
<td>Basin wildrye</td>
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<td>72</td>
<td>1/4 - 3/4</td>
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<tr>
<td>Poa ampla</td>
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<td>48</td>
<td>0 - 1/4</td>
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<td>Poa nevadensis</td>
<td>Nevada bluegrass</td>
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<td>139,000</td>
<td>8</td>
<td>X X</td>
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</tbody>
</table>

^ Can become weedy or invasive under proper conditions.
<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Bloom Color and Time</th>
<th>Origin</th>
<th>Height (ft)</th>
<th>Seeding Depth (in)</th>
<th>Seeds/lb</th>
<th>Full Seeding Rate (PLS lbs/ac)</th>
<th>Plant Spacing (ft)</th>
<th>Soils</th>
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<td><strong>Shrubs</strong></td>
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<tr>
<td>Amelanchier alnifolia</td>
<td>Serviceberry</td>
<td>☂ ☂</td>
<td>Native</td>
<td>3-15</td>
<td>Seedlings</td>
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<td>N/A</td>
<td>10</td>
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<tr>
<td>Artemisia tridentata ssp.</td>
<td>Basin big sagebrush</td>
<td>☂ ☂</td>
<td>Native</td>
<td>5-10</td>
<td>0 – 1/8</td>
<td>1,700,000</td>
<td>0.5</td>
<td>6</td>
<td>X</td>
</tr>
<tr>
<td>tridentata</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>A. tridentata ssp. wyomingensis</td>
<td>Wyoming big sagebrush</td>
<td>☂ ☂</td>
<td>Native</td>
<td>1-4</td>
<td>0 – 1/8</td>
<td>1,700,000</td>
<td>0.5</td>
<td>6</td>
<td>X</td>
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<tr>
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<td>Fourwing saltbush</td>
<td>☂ ☂</td>
<td>Native</td>
<td>1-6</td>
<td>1/4 - 3/4</td>
<td>52,000</td>
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<td>6</td>
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<tr>
<td>Caragana arborescens</td>
<td>Siberian peashrub</td>
<td>☂ ☂</td>
<td>Introduced</td>
<td>10-25</td>
<td>0 - 1/8 or seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>10</td>
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<tr>
<td>Chrysothamnus viscidiflorus</td>
<td>Green rabbitbrush</td>
<td>☂ ☂</td>
<td>Native</td>
<td>1-3</td>
<td>0 - 1/8 or seedlings</td>
<td>782,000</td>
<td>0.5</td>
<td>4</td>
<td>X</td>
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<tr>
<td>Clematis ligusticifolia</td>
<td>Clematis</td>
<td>☂ ☂</td>
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<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>10</td>
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<tr>
<td>Crataegus douglasii</td>
<td>Black hawthorn</td>
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<td>30</td>
<td>Seedlings</td>
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<td>N/A</td>
<td>10</td>
<td>X</td>
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<tr>
<td>Chrysothamnus viscidiflorus</td>
<td>Green rabbitbrush</td>
<td>☂ ☂</td>
<td>Native</td>
<td>1-3</td>
<td>0 - 1/8 or seedlings</td>
<td>782,000</td>
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<td>Ericameria nauseosa</td>
<td>Rubber rabbitbrush</td>
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<td>Native</td>
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<tr>
<td>Eriogonum heracleoides</td>
<td>Whorled buckwheat</td>
<td>☂ ☂</td>
<td>Native</td>
<td>2.5</td>
<td>0 - 1/4 or seedlings</td>
<td>135,700</td>
<td>4</td>
<td>4</td>
<td>X</td>
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<tr>
<td>E. umbellatum</td>
<td>Sulphur buckwheat</td>
<td>☂ ☂</td>
<td>Native</td>
<td>2</td>
<td>0 - 1/4 or seedlings</td>
<td>209,000</td>
<td>4</td>
<td>4</td>
<td>X</td>
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<tr>
<td>Purshia tridentata</td>
<td>Antelope bitterbrush</td>
<td>☂ ☂</td>
<td>Native</td>
<td>2-6</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>6</td>
<td>X</td>
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<tr>
<td>Rhus trilobata</td>
<td>Skunkbush sumac</td>
<td>☂ ☂</td>
<td>Native</td>
<td>2-7</td>
<td>Seedlings</td>
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<td>Ribes aureum</td>
<td>Golden currant</td>
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<td>Native</td>
<td>10</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>6</td>
<td>X</td>
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<tr>
<td>Rosa woodsii</td>
<td>Wood’s rose</td>
<td>☂ ☂</td>
<td>Native</td>
<td>2-6</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>5</td>
<td>X</td>
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<tr>
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<td>Buffaloberry</td>
<td>☂ ☂</td>
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<td>6-20</td>
<td>Seedlings</td>
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## TABLE 5: POLLINATOR PLANT LIST 15 - 18 INCH PRECIPITATION.

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Bloom Color and Time</th>
<th>Origin</th>
<th>Seeding Depth (in)</th>
<th>Height (in)</th>
<th>Seeds/lb</th>
<th>Full Seeding Rate (PLS lbs/ac)</th>
<th>Soils</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>spring</td>
<td>summer</td>
<td>late summer</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Forbs</td>
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<td></td>
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<tr>
<td>Achillea millefolium</td>
<td>Western yarrow</td>
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<td></td>
<td>Native</td>
<td>0 - 1/8</td>
<td>6-24</td>
<td>4,400,000</td>
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<tr>
<td>Asclepias speciosa</td>
<td>Showy milkweed</td>
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<td></td>
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<td>1/8-1/2</td>
<td>36-48</td>
<td>72,000</td>
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<tr>
<td>Astragalus cicer</td>
<td>Cicer milkvetch</td>
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<td></td>
<td>Introduced</td>
<td>1 /4 - 1/2</td>
<td>12-36</td>
<td>130,000</td>
<td>8</td>
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<tr>
<td>Balsamorhiza hookeri</td>
<td>Hooker’s balsamroot</td>
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<td></td>
<td>Native</td>
<td>0-1/4</td>
<td>12-24</td>
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<td>Balsamorhiza macrophylla</td>
<td>Cutleaf balsamroot</td>
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<td>0-1/4</td>
<td>12-24</td>
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<td>Balsamorhiza sagittata</td>
<td>Arrowleaf balsamroot</td>
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<td>0 - 1/4</td>
<td>12-24</td>
<td>55,000</td>
<td>18</td>
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<tr>
<td>Cleome serrulata</td>
<td>Rocky Mountain bee plant</td>
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<td>0-1/8</td>
<td>12-72</td>
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<td>Dalea spp.</td>
<td>Prairie clover</td>
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<td>1 /4 - 1/2</td>
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<td>Purple coneflower</td>
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<td></td>
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<td>1/8 - 1/2</td>
<td>6-24</td>
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<td>Blanket flower</td>
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<td>Native</td>
<td>1 /4 - 1/2</td>
<td>12-18</td>
<td>200,000</td>
<td>5</td>
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<tr>
<td>Geranium viscosissimum</td>
<td>Sticky geranium</td>
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<td>1 /4 - 1/2</td>
<td>24-36</td>
<td>55,000</td>
<td>20</td>
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<td>Northern/Utah sweetvetch</td>
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<td>8-39</td>
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<td>Ipomopsis aggregata</td>
<td>Scarlet gilia</td>
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<td>24-36</td>
<td>0-1/8</td>
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<td>Lewis flax</td>
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<td>0 - 1/8</td>
<td>12-24</td>
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<td>L. perenne</td>
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<td>Fernleaf biscuitroot</td>
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<td>Gray’s biscuitroot</td>
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<td>1/8 - 1/2</td>
<td>6-12</td>
<td>45,000</td>
<td>24</td>
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<td>Nineleaf biscuitroot</td>
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<td>1/8 - 1/2</td>
<td>24-36</td>
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<td>24</td>
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<tr>
<td>Medicago sativa</td>
<td>Alfalfa</td>
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<td>1/8 - 1/2</td>
<td>24-36</td>
<td>200,000</td>
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<tr>
<td>M. sativa ssp. falcata</td>
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<td>1/8 - 1/2</td>
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</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Bloom Color and Time</td>
<td>Origin</td>
<td>Height (in)</td>
<td>Seeding Depth (in)</td>
<td>Seeds/lb</td>
<td>Full Seeding Rate (PLS lbs/ac)</td>
<td>Soils</td>
</tr>
<tr>
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<td>-------------</td>
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<td>--------</td>
<td>-------------</td>
<td>-------------------</td>
<td>---------</td>
<td>-------------------------------</td>
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<tr>
<td><strong>Forbs</strong></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Onobrychis vicifolia</em></td>
<td>Sainfoin</td>
<td>spring summer late summer</td>
<td>Introduced</td>
<td>24-60</td>
<td>1/4 - 3/4</td>
<td>18,500</td>
<td>34</td>
<td>X X</td>
</tr>
<tr>
<td><em>Penstemon eatonii</em></td>
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<td></td>
<td>Native</td>
<td>12-30</td>
<td>0 - 1/8</td>
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<tr>
<td><em>P. speciosus</em></td>
<td>Royal penstemon</td>
<td></td>
<td>Native</td>
<td>24-36</td>
<td>0 - 1/8</td>
<td>400,000</td>
<td>3</td>
<td>X</td>
</tr>
<tr>
<td><em>P. strictus</em></td>
<td>Rocky Mountain penstemon</td>
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<td>Native</td>
<td>12-36</td>
<td>0 - 1/8</td>
<td>286,000</td>
<td>4</td>
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</tr>
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<td><em>P. venustus</em></td>
<td>Venus penstemon</td>
<td></td>
<td>Native</td>
<td>24-36</td>
<td>0 - 1/8</td>
<td>1,090,000</td>
<td>2</td>
<td>X X</td>
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<tr>
<td><em>Phacelia hastata</em></td>
<td>Silverleaf phacelia</td>
<td></td>
<td>Native</td>
<td>18-24</td>
<td>1/8 – 1/4</td>
<td>450,000</td>
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<td>X X</td>
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<tr>
<td><em>Ratibida columnifera</em></td>
<td>Prairie coneflower</td>
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<td>12-18</td>
<td>1/4 - 1/2</td>
<td>740,000</td>
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<td><em>Symphyotrichum spp</em></td>
<td>Asters</td>
<td></td>
<td>Native</td>
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<td>0 - 1/2</td>
<td>2,000,000</td>
<td>1</td>
<td>X X</td>
</tr>
<tr>
<td>^ <em>Vicia Americana</em></td>
<td>American vetch</td>
<td></td>
<td>Native</td>
<td>6-12</td>
<td>1 - 2</td>
<td>33,000</td>
<td>33</td>
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<td><strong>Grasses</strong></td>
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<tr>
<td><em>Bromus marginatus</em></td>
<td>Mountain brome</td>
<td></td>
<td>Native</td>
<td>40</td>
<td>1/4 – 1/2</td>
<td>80,000</td>
<td>10</td>
<td>X X X</td>
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<tr>
<td><em>Elymus glaucus</em></td>
<td>Blue wildrye</td>
<td></td>
<td>Native</td>
<td>60</td>
<td>1/4 – 1/2</td>
<td>145,000</td>
<td>8</td>
<td>X X</td>
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<tr>
<td><em>E. multisetus</em></td>
<td>Big squirreltail</td>
<td></td>
<td>Native</td>
<td>25</td>
<td>1/4 – 1/2</td>
<td>192,000</td>
<td>6</td>
<td>X X</td>
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<td><em>E. trachycaulus</em></td>
<td>Slender wheatgrass</td>
<td></td>
<td>Native</td>
<td>40</td>
<td>1/2 – 3/4</td>
<td>135,000</td>
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<td>X X</td>
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<tr>
<td><em>Festuca idahoensis</em></td>
<td>Idaho fescue</td>
<td></td>
<td>Native</td>
<td>12</td>
<td>1/4 – 1/2</td>
<td>450,000</td>
<td>4</td>
<td>X X</td>
</tr>
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<td><em>Koeleria macrantha</em></td>
<td>Prairie junegrass</td>
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<td>Native</td>
<td>24</td>
<td>1/4 – 1/2</td>
<td>2,135,000</td>
<td>1</td>
<td>X X</td>
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<td><em>Leymus cinereus</em></td>
<td>Basin wildrye</td>
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<td>72</td>
<td>1/4 - 3/4</td>
<td>130,000</td>
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<td>X X</td>
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<tr>
<td><em>Poa ampla</em></td>
<td>Big bluegrass</td>
<td></td>
<td>Native</td>
<td>48</td>
<td>0 - 1/4</td>
<td>925,000</td>
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<td>X X</td>
</tr>
<tr>
<td><em>Poa nevadensis</em></td>
<td>Nevada bluegrass</td>
<td></td>
<td>Native</td>
<td>39</td>
<td>0 - 1/4</td>
<td>925,000</td>
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<td>X X</td>
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<tr>
<td><em>Pseudoroegneria spicata</em></td>
<td>Bluebunch wheatgrass</td>
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<td>Native</td>
<td>48</td>
<td>1/4 – 1/2</td>
<td>139,000</td>
<td>8</td>
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</table>

^ Can become weedy or invasive under proper conditions.
### TABLE 5 continued: POLLINATOR PLANT LIST 15 - 18 INCH PRECIPITATION.

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Bloom Color and Time</th>
<th>Origin</th>
<th>Height (ft)</th>
<th>Seeding Depth (in)</th>
<th>Seeds/lb</th>
<th>Full Seeding Rate (PLS lbs/ac)</th>
<th>Plant Spacing (ft)</th>
<th>Soils</th>
<th>Fine</th>
<th>Med</th>
<th>Course</th>
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<td><strong>Shrubs</strong></td>
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<td>Amelanchier alnifolia</td>
<td>Serviceberry</td>
<td>♻️ ♻️ ♻️</td>
<td>Native</td>
<td>3-15</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>10</td>
<td>X</td>
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<td></td>
<td></td>
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<tr>
<td>Artemisia tridentata ssp. vasaseyana</td>
<td>Mountain big sagebrush</td>
<td>♻️ ♻️ ♻️</td>
<td>Native</td>
<td>2-4</td>
<td>0 – 1/8</td>
<td>1,700,000</td>
<td>0.5</td>
<td>6</td>
<td>X X</td>
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<td></td>
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<td>Atriplex canescens</td>
<td>Fourwing saltbush</td>
<td>♻️ ♻️ ♻️</td>
<td>Native</td>
<td>1-6</td>
<td>1/4 - 3/4</td>
<td>52,000</td>
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<td>6</td>
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<tr>
<td>Caragana arborescens</td>
<td>Siberian peashrub</td>
<td>♻️ ♻️ ♻️</td>
<td>Introduced</td>
<td>10-25</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>10</td>
<td>X X X</td>
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<td></td>
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<tr>
<td>Clematis ligusticifolia</td>
<td>Clematis</td>
<td>♻️ ♻️ ♻️</td>
<td>Native</td>
<td>6-8</td>
<td>2-4</td>
<td>1,700,000</td>
<td>0.5</td>
<td>4</td>
<td>X X</td>
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<td></td>
<td></td>
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<tr>
<td>Cotoneaster integerrimus</td>
<td>Cotoneaster</td>
<td>♻️ ♻️ ♻️</td>
<td>Native</td>
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<td>Seedlings</td>
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<td>N/A</td>
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<tr>
<td>Crataegus douglasii</td>
<td>Black hawthorn</td>
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<td>Native</td>
<td>30</td>
<td>Seedlings</td>
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<td>N/A</td>
<td>10</td>
<td>X X</td>
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<td></td>
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<tr>
<td>Ericameria nauseosa</td>
<td>Rubber rabbitbrush</td>
<td>♻️ ♻️ ♻️</td>
<td>Native</td>
<td>1-6</td>
<td>0 - 1/8 or seedlings</td>
<td>693,000</td>
<td>0.5</td>
<td>4</td>
<td>X X</td>
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<tr>
<td>Eriogonum heracleoides</td>
<td>Whorled buckwheat</td>
<td>♻️ ♻️ ♻️</td>
<td>Native</td>
<td>2-5</td>
<td>0 - 1/4 or seedlings</td>
<td>135,700</td>
<td>4</td>
<td>4</td>
<td>X X</td>
<td></td>
<td></td>
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<tr>
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<td>Sulphur buckwheat</td>
<td>♻️ ♻️ ♻️</td>
<td>Native</td>
<td>2</td>
<td>0 - 1/4 or seedlings</td>
<td>209,000</td>
<td>4</td>
<td>4</td>
<td>X X</td>
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<tr>
<td>Prunus tomentosa</td>
<td>Nanking cherry</td>
<td>♻️ ♻️ ♻️</td>
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<td>10</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>8</td>
<td>X</td>
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<tr>
<td>P. virginiana</td>
<td>Chokecherry</td>
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<td>Native</td>
<td>12-25</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>12</td>
<td>X</td>
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<tr>
<td>Rhus trilobata</td>
<td>Skunkbush sumac</td>
<td>♻️ ♻️ ♻️</td>
<td>Native</td>
<td>2-7</td>
<td>Seedlings</td>
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<td>Ribes aureum</td>
<td>Golden currant</td>
<td>♻️ ♻️ ♻️</td>
<td>Native</td>
<td>10</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>6</td>
<td>X</td>
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<td></td>
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<tr>
<td>Rosa woodsii</td>
<td>Wood’s rose</td>
<td>♻️ ♻️ ♻️</td>
<td>Native</td>
<td>2-6</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>5</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Sambucus cerulea</td>
<td>Elderberry</td>
<td>♻️ ♻️ ♻️</td>
<td>Native</td>
<td>3-13</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>6</td>
<td>X X</td>
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<tr>
<td>Shepherdia argentea</td>
<td>Buffaloberry</td>
<td>♻️ ♻️ ♻️</td>
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<td>Seedlings</td>
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<td>N/A</td>
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<td>X</td>
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<tr>
<td>Spiraea douglasii</td>
<td>Douglas spirea</td>
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<td>Native</td>
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<td>Seedlings</td>
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<td>N/A</td>
<td>5</td>
<td>X X</td>
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<td>Symphoricarpos spp.</td>
<td>Snowberry</td>
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<td>1-5</td>
<td>Seedlings</td>
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<td>4</td>
<td>X</td>
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</table>
### TABLE 6: POLLINATOR PLANT LIST 18 – 25+ INCH PRECIPITATION

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Bloom Color and Time</th>
<th>Origin</th>
<th>Height (in)</th>
<th>Seeding Depth (in)</th>
<th>Seeds/lb</th>
<th>Full Seeding Rate (PLS lbs/ac)</th>
<th>Soils</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Forbs</strong></td>
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<td></td>
</tr>
<tr>
<td>^ Achillea millefolium</td>
<td>Western yarrow</td>
<td></td>
<td>Native</td>
<td>6-24</td>
<td>0 - 1/8</td>
<td>4,400,000</td>
<td>0.5</td>
<td>X X</td>
</tr>
<tr>
<td>Agastache urticifolia</td>
<td>Nettleleaf giant hyssop</td>
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<td>Native</td>
<td>30-36</td>
<td>0-1/8</td>
<td>1,400,000</td>
<td>1</td>
<td>X X X</td>
</tr>
<tr>
<td>Aquilegia caerulea.</td>
<td>Columbine</td>
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<td>Native</td>
<td>12-24</td>
<td>0 - 1/8</td>
<td>400,000</td>
<td>3</td>
<td>X</td>
</tr>
<tr>
<td>Asclepias tuberosa</td>
<td>Butterfly milkweed</td>
<td></td>
<td>Native</td>
<td>12-36</td>
<td>1/8 - 1/2</td>
<td>70,000</td>
<td>15</td>
<td>X X</td>
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<tr>
<td>Astragalus cicer</td>
<td>Cicer milkvetch</td>
<td>Introduced</td>
<td>Native</td>
<td>12-36</td>
<td>1/4 - 1/2</td>
<td>130,000</td>
<td>8</td>
<td>X X</td>
</tr>
<tr>
<td>Balsamorhiza hookeri</td>
<td>Hooker's balsamroot</td>
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<td>Native</td>
<td>12-24</td>
<td>0-1/4</td>
<td>55,000</td>
<td>18</td>
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<tr>
<td>B. macrophylla</td>
<td>Cutleaf balsamroot</td>
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<td>Native</td>
<td>12-24</td>
<td>0 -1/4</td>
<td>55,000</td>
<td>18</td>
<td>X X X</td>
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<td>Cleome serrulata</td>
<td>Rocky Mountain bee plant</td>
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<td>Native</td>
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<td>66,000</td>
<td>17</td>
<td>X</td>
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<td>^ Coronilla varia</td>
<td>Crownvetch</td>
<td>Introduced</td>
<td>Native</td>
<td>12-24</td>
<td>1/4 - 1/2</td>
<td>140,000</td>
<td>8</td>
<td>X X</td>
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<tr>
<td>Echinacea purpurea</td>
<td>Purple coneflower</td>
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<td>6-24</td>
<td>1/8 - 1/2</td>
<td>117,000</td>
<td>9</td>
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<td>Gaillardia aristata</td>
<td>Blanket flower</td>
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<td>Native</td>
<td>12-18</td>
<td>1/4 - 1/2</td>
<td>200,000</td>
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<td>X</td>
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<td>Native</td>
<td>24-36</td>
<td>1/4 - 1/2</td>
<td>55,000</td>
<td>20</td>
<td>X</td>
</tr>
<tr>
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<td>Native</td>
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<td>1/8-1/4</td>
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<td>8-39</td>
<td>1/4-1/2</td>
<td>1,000,000</td>
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<td>X</td>
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<td>Ipomopsis aggregata</td>
<td>Scarlet gilia</td>
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<td>Native</td>
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<td>0-1/8</td>
<td>360,000</td>
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<td>X X</td>
</tr>
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<td>Lewis flax</td>
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<td>Native</td>
<td>12-24</td>
<td>0-1/8</td>
<td>260,000</td>
<td>4</td>
<td>X X</td>
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<td>L. perenne</td>
<td>Blue flax</td>
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<td>12-24</td>
<td>0 - 1/8</td>
<td>278,000</td>
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<td>Fernleaf biscuitroot</td>
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<td>1/8 - 1/2</td>
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<td>24</td>
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<td>1/8 - 1/2</td>
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<td>24</td>
<td>X</td>
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<tr>
<td>L. triternatum</td>
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<td>1/8 - 1/2</td>
<td>45,000</td>
<td>24</td>
<td>X</td>
</tr>
<tr>
<td>Lotus corniculatus</td>
<td>Birdsfoot trefoil</td>
<td>Introduced</td>
<td></td>
<td>18-36</td>
<td>1/4 – 1/2</td>
<td>375,000</td>
<td>3</td>
<td>X X X</td>
</tr>
<tr>
<td>Medicago sativa</td>
<td>Alfalfa</td>
<td>Introduced</td>
<td></td>
<td>24-36</td>
<td>1/8 - 1/2</td>
<td>200,000</td>
<td>5</td>
<td>X X</td>
</tr>
<tr>
<td>M. sativa ssp. falcata</td>
<td>Yellow blossom alfalfa</td>
<td>Introduced</td>
<td></td>
<td>24-36</td>
<td>1/8 - 1/2</td>
<td>211,000</td>
<td>5</td>
<td>X X</td>
</tr>
<tr>
<td>Onobrychis vicifolia</td>
<td>Sainfoin</td>
<td>Introduced</td>
<td></td>
<td>24-60</td>
<td>1/4 - 3/4</td>
<td>18,500</td>
<td>34</td>
<td>X X</td>
</tr>
</tbody>
</table>
Plants for Pollinators in the Intermountain West

^ Can become weedy or invasive under proper conditions.

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Bloom Color and Time</th>
<th>Origin</th>
<th>Height (in)</th>
<th>Seeding Depth (in)</th>
<th>Seeds/lb</th>
<th>Full Seeding Rate (PLS lbs/ac)</th>
<th>Soils</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Forbs</strong></td>
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<td></td>
<td></td>
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<tr>
<td>P. strictus</td>
<td>Rocky Mountain penstemon</td>
<td></td>
<td>Native</td>
<td>12-36</td>
<td>0 - 1/8</td>
<td>286,000</td>
<td>4</td>
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<tr>
<td>P. venustus</td>
<td>Venus penstemon</td>
<td></td>
<td>Native</td>
<td>24-36</td>
<td>0 - 1/8</td>
<td>1,090,000</td>
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<tr>
<td>Ratibida columnifera</td>
<td>Prairie coneflower</td>
<td></td>
<td>Native</td>
<td>12-18</td>
<td>1/4 - 1/2</td>
<td>740,000</td>
<td>3</td>
<td>X X X</td>
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<tr>
<td>Rudbeckia hirta</td>
<td>Blackeyed Susan</td>
<td></td>
<td>Native</td>
<td>9-12</td>
<td>1/8-1/4</td>
<td>1,600,000</td>
<td>1</td>
<td>X X</td>
</tr>
<tr>
<td>Sanguisorba minor</td>
<td>Small burnet</td>
<td></td>
<td>Introduced</td>
<td>12-30</td>
<td>¼ - 1/2</td>
<td>42,000</td>
<td>26</td>
<td>X X</td>
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<tr>
<td>Symphyotrichum spp</td>
<td>Aster</td>
<td></td>
<td>Native</td>
<td>12-40</td>
<td>0 - 1/2</td>
<td>2,000,000</td>
<td>1</td>
<td>X X</td>
</tr>
<tr>
<td>^ Trifolium spp.</td>
<td>Clover spp.</td>
<td></td>
<td>Introduced</td>
<td>8-24</td>
<td>1/8 – 1/4</td>
<td>300,000</td>
<td>4</td>
<td>X X X</td>
</tr>
<tr>
<td>^ Vicia Americana</td>
<td>American vetch</td>
<td></td>
<td>Native</td>
<td>6-12</td>
<td>1 - 2</td>
<td>33,000</td>
<td>33</td>
<td>X X</td>
</tr>
<tr>
<td><strong>Grasses</strong></td>
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<td></td>
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<tr>
<td>Bromus marginatus</td>
<td>Mountain brome</td>
<td></td>
<td>Native</td>
<td>40</td>
<td>1/4 – 1/2</td>
<td>80,000</td>
<td>10</td>
<td>X X</td>
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<tr>
<td>Elymus glaucus</td>
<td>Blue wildrye</td>
<td></td>
<td>Native</td>
<td>60</td>
<td>1/4 – 1/2</td>
<td>145,000</td>
<td>8</td>
<td>X</td>
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<tr>
<td>E. multisetus</td>
<td>Big squirreltail</td>
<td></td>
<td>Native</td>
<td>25</td>
<td>1/4 – 1/2</td>
<td>192,000</td>
<td>6</td>
<td>X</td>
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<tr>
<td>Festuca idahoensis</td>
<td>Idaho fescue</td>
<td></td>
<td>Native</td>
<td>12</td>
<td>1/4 – 1/2</td>
<td>450,000</td>
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<tr>
<td>Koeleria macrantha</td>
<td>Prairie junegrass</td>
<td></td>
<td>Native</td>
<td>24</td>
<td>1/4 – 1/2</td>
<td>2,135,000</td>
<td>1</td>
<td>X X</td>
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<tr>
<td>Pseudoroegneria spicata</td>
<td>Bluebunch wheatgrass</td>
<td></td>
<td>Native</td>
<td>48</td>
<td>1/4 – 1/2</td>
<td>139,000</td>
<td>8</td>
<td>X</td>
</tr>
</tbody>
</table>

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<tr>
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<th>Full Seeding Rate (PLS lbs/ac)</th>
<th>Plant Spacing (ft)</th>
<th>Soils</th>
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<tbody>
<tr>
<td><strong>Shrubs</strong></td>
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<tr>
<td>Amelanchier alnifolia</td>
<td>Serviceberry</td>
<td>Spring</td>
<td>Native</td>
<td>3-15</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>10</td>
<td>X</td>
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<tr>
<td>Artemisia tridentata ssp. vasaseyana</td>
<td>Mountain big sagebrush</td>
<td>Summer</td>
<td>Native</td>
<td>2-4</td>
<td>0 – 1/8</td>
<td>1,700,000</td>
<td>0.5</td>
<td>6</td>
<td>X X</td>
</tr>
<tr>
<td>Caragana arborescens</td>
<td>Siberian peashrub</td>
<td>Late summer</td>
<td>Introduced</td>
<td>10-25</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>10</td>
<td>X X X</td>
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<tr>
<td>Clematis ligusticifolia</td>
<td>Clematis</td>
<td></td>
<td>Native</td>
<td>Climbing</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
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</tr>
<tr>
<td>Cotoneaster integerrimus</td>
<td>Cotoneaster</td>
<td></td>
<td>Introduced</td>
<td>4-6</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>6</td>
<td>X</td>
</tr>
<tr>
<td>Crataegus douglasii</td>
<td>Black hawthorn</td>
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<td>Native</td>
<td>30</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Dasiphora fruticosa</td>
<td>Shrubby cinquefoil</td>
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<td>Native</td>
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<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>6</td>
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<tr>
<td>Eriogonum heracleoides</td>
<td>Whorled buckwheat</td>
<td></td>
<td>Native</td>
<td>2.5</td>
<td>0 - 1/4 or seedlings</td>
<td>135,700</td>
<td>4</td>
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<tr>
<td>E. umbellatum</td>
<td>Sulphur buckwheat</td>
<td></td>
<td>Native</td>
<td>2</td>
<td>0 - 1/4 or seedlings</td>
<td>209,000</td>
<td>4</td>
<td>4</td>
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<tr>
<td>Philadelphus lewisii</td>
<td>Lewis’ mockorange</td>
<td></td>
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<td>3-10</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
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<td>X X X</td>
</tr>
<tr>
<td>Prunus americana</td>
<td>American plum</td>
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<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>P. pumila</td>
<td>Western sandcherry</td>
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<td>Native</td>
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<td>Seedlings</td>
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<td>N/A</td>
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<tr>
<td>Prunus tomentosa</td>
<td>Nanking cherry</td>
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<td>10</td>
<td>Seedlings</td>
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<td>N/A</td>
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<tr>
<td>Prunus virginiana</td>
<td>Chokecherry</td>
<td></td>
<td>Native</td>
<td>12-25</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>12</td>
<td>X</td>
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<tr>
<td>Rosa woodsii</td>
<td>Wood’s rose</td>
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<td>Native</td>
<td>2-6</td>
<td>Seedlings</td>
<td>N/A</td>
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<td>5</td>
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<tr>
<td>Salix spp.</td>
<td>Willow</td>
<td></td>
<td>Native</td>
<td>8-30</td>
<td>Cuttings</td>
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<td>10-15</td>
<td>X X</td>
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<tr>
<td>Sambucus cerulea</td>
<td>Elderberry</td>
<td></td>
<td>Native</td>
<td>3-13</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>6</td>
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<tr>
<td>Shepherdia argentea</td>
<td>Buffaloberry</td>
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<td>Native</td>
<td>6-20</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Solidago spp.</td>
<td>Goldenrod</td>
<td></td>
<td>Native</td>
<td>2-6</td>
<td>0 - 1/4 or seedlings</td>
<td>4,600,000</td>
<td>0.5</td>
<td>2-6</td>
<td>X X X</td>
</tr>
<tr>
<td>Spirea douglasii</td>
<td>Douglas spirea</td>
<td></td>
<td>Native</td>
<td>4-6</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
<td>4</td>
<td>X X</td>
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<tr>
<td>Symphoricarpos spp.</td>
<td>Snowberry</td>
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<td>Native</td>
<td>1-5</td>
<td>Seedlings</td>
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<td>N/A</td>
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<td>X</td>
</tr>
<tr>
<td>Syringa vulgaris</td>
<td>Common lilac</td>
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<td>Introduced</td>
<td>6-12</td>
<td>Seedlings</td>
<td>N/A</td>
<td>N/A</td>
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<td>X X X</td>
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</tbody>
</table>
REFERENCES


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