

TECHNICAL NOTE

USDA-Natural Resources Conservation Service
Boise, Idaho

TN PLANT MATERIALS NO. 77

February 2021

HEDGEROW PLANTINGS FOR IDAHO AND UTAH

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Figure 1. Hedgerows are linear plantings of woody plant species designed to provide wildlife with cover and food, while also providing the benefits of traditional windbreaks and shelterbelts. Derek Tilley, NRCS Idaho.

This Technical Note provides guidance on the design, installation and management of Hedgerow Plantings (422) for wildlife and pollinator habitat.

Introduction

Vegetative breaks can come in a wide variety of shapes and sizes depending on the goals one wishes to achieve or the resource concerns to be addressed. For example, windbreaks and shelterbelts consisting of medium to large trees with densely packed canopies are commonly used to prevent wind erosion of topsoil, mitigate odors and disrupt snow drifting. Fuel breaks and greenstrips are an additional category designed to establish areas of plants with high moisture content to slow the advancement of wildfires. Hedgerow plantings are a subset of vegetative breaks comprised of a diverse mixture of woody plants, designed to support wildlife habitat while providing numerous other functions.

The primary purpose of a hedgerow planting is to provide food, cover and nesting sites for wildlife. Properly designed hedgerows increase biodiversity and will consist of a variety of woody plant species that offer a variety of food sources, cover for nesting, and movement corridors for wildlife including mammals, reptiles, amphibians, as well as bats and birds. They can further include multiple flowering species to provide pollen, nectar, and nesting habitat for beneficial insects. When planted near riparian or wetland areas they can add food, cover, and shade for aquatic organisms that live in adjacent streams or watercourses. They can also provide a substrate for predaceous and beneficial invertebrates as a component of integrated pest management.

Hedgerow plantings can also provide several secondary benefits to support conservation practices (Figure 2). Like windbreaks and shelterbelts, they can intercept airborne particulate matter, reduce chemical drift and odor movement. Hedgerows can also control erosion and water runoff from agricultural fields and create a filter strip to reduce the amount of sediments and nutrients leaching offsite into waterways. They can act as screens and barriers to noise and dust. Vegetation planted around confined animal facilities or equipment yards can reduce wind speeds and odors and lessen windblown objects such as feathers. Hedgerows can increase carbon storage in biomass and soils and can serve as living fences and provide boundary delineation and contour to the landscape. Choosing appropriate hedgerow species can also enhance pest control and aid in pollination of crops. Birds attracted to hedgerows can provide benefits to the landowner by consuming pest insects and eating weed seeds. Larger birds and raptors can likewise provide rodent pest control.



Figure 2. hedgerows provide numerous benefits to wildlife and can provide secondary benefits like erosion control and crop pollination services to landowners. Photo by Pamela Pavek, NRCS Idaho.

Design

The hedgerow design, species composition and distribution will depend on the resource concerns being addressed or the goals of the planting (Figure 3). In general, hedgerows will consist of woody plants or perennial bunch grasses producing erect stems attaining average heights of at least 3 feet persisting over winter. The plants selected must be suited and adapted to soil and site conditions, climate, and conservation purpose (possibly with irrigation and inputs). Selected species should also not host pests or diseases that could pose a risk to nearby crops.

For wildlife food, cover and corridors, hedgerows should consist of a minimum of two compatible native plant species. Offering a greater diversity of species will increase the food and habitat diversity while reducing pest and disease risk, so a highly diverse plant assemblage is desired. The selected plants should provide abundant cover and/or food to support the landowner's wildlife objectives. Consider the various aspects of the plant that may be of most benefit for the desired wildlife. For example, what fruit, seed, and woody structure is most desired? The minimum hedgerow crown width for NRCS practices is 15 feet at maturity. This will likely necessitate the establishment of more than one row of plants.

Hedgerows that are created to support pollinator habitat must provide abundant pollen and nectar resources. Multiple species with different blooming periods (early spring through late summer), flower shape, flower color, and size should be included in the planting to serve the widest variety of insects (Figure 2). Native species are preferred to provide the most benefit to native pollinators, however introduced plant species that support European honeybees are also encouraged. See ID Plant Materials Technical Notes 2A, 2B or 2C of the "Plants for Pollinators" series for more information on pollinator habitat development in your specific area.

Plants can be arranged and mixed randomly or placed into groups. Grouping may be easier and faster during installation, but will look more artificial, while randomization better mimics natural conditions and may better serve wildlife goals. Spacing between plants for hedgerow plantings will depend upon the mature size of the plants. Smaller shrubs like sagebrush and cotoneaster should be planted more closely together than larger shrubs or small trees. See the appendix for spacing recommendations.



Figure 3. This pollinator hedgerow was designed with groups of plants of the same species and includes several flowering species including lavender (front left) and bergamot (front right). Photo by Pamela Pavek, NRCS Idaho.

To provide the greatest benefit to a variety of wildlife, it is important to include a diverse mixture of plant species of various sizes and food offerings. See the appendices at the end of this document for a list of recommended species and their traits to help with species selection. A general separation of species by relative size is usually a good starting point.

Plant Groups

Larger shrubs and small trees can provide roosting, perching, stopover, and nesting sites for birds, and often provide fruit and seeds for food. Larger shrubs offer shade and can have a greater effect on wind reduction. This group would include native species like chokecherry (Figure 4), black hawthorn and silver buffaloberry as well as introduced species like Siberian peashrub.



Figure 4. Chokecherry is an excellent large shrub or small tree which provides flowers for pollinators as well as fruit and seeds for birds. Derek Tilley, NRCS Idaho.

The Intermountain West is home to several species of medium-sized shrub that are very valuable to native wildlife. Golden currant and Woods' rose for example produce fleshy fruit that can be eaten by birds, while basin big sagebrush and rubber rabbitbrush are excellent fall-flowering species that offer pollen or nectar when other sources are limited.

In addition to woody shrubs and trees, including a small proportion of large bunch grasses in hedgerow plantings is recommended. Large statured bunch grasses can provide hiding cover and seed for birds. They also create a fibrous root system that can be utilized by native ground-nesting bees (Figure 5). Basin wildrye is an attractive, drought-tolerant native grass that can grow to heights in excess of 6 feet.



Figure 5. Large statured bunch grasses like basin wildrye (shown) can provide cover for birds and small mammals and nesting habitat for native bees. Derek Tilley, NRCS Idaho.

Larger statured wildflowers (perennial forbs) are often incorporated into the outer rows of the hedgerow. While these may not meet all NRCS specifications for this practice (woody stems and 3 ft tall through winter) they can add additional nectar and pollen sources and add variability in the structure and profile of the hedgerow. Forbs like goldenrod, native buckwheat species, lavender and purple coneflower are common choices. For more forb options, refer to the ID Plant Materials Technical Notes 2: Plants for Pollinators series.

Site Preparation

The NRCS Plant Materials Program commonly recommends using synthetic weed barrier fabric (WBF) for linear woody plantings in Idaho and

Utah. This will reduce weed competition near the installed plants, increase moisture retention and availability. However, WBF may not be desirable for all hedgerow plantings. For example,

WBF can limit soil access for ground nesting bees. It can also provide habitat for voles and mice, which may lead to issues as rodents eat the bark of young saplings. WBF can limit suckering and spreading of some shrub species such as Woods' rose and dogwood. WBF also requires maintenance to prevent girdling of the planted materials. See ID Plant Materials Technical Note 25: Function and Operation of a Machine to Lay Weed Barrier Fabric for more information and guidance on this topic.

General site preparation recommendations include eliminating the existing vegetation prior to seeding with tillage, herbicide, or a combination of techniques. If not using WBF, fallow the area to be seeded for at least one growing season and delay planting until after a flush of fall germinating weeds has been treated. Some herbicides can have residual carryover and can negatively affect establishment; thus, it is very important to know the cropping history and past herbicide use of the site to be planted.

Installation

Direct seeding is not practical for the establishment of woody species. Containerized or bareroot stock should be used. Plants can be installed using mechanized tree planters or by hand. On non-irrigated sites, plant tree and shrub stock 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. Irrigated sites can be planted nearly throughout the growing season, so long as plant water stress can be prevented. Late spring and fall are optimum. Weed growth around the shrubs can be suppressed with use of weed barrier fabric, cardboard sheets, mulch, or herbicides. Protective tubes or other barriers to reduce damage from rodents, rabbits and deer are recommended for trees, however they can have a detrimental effect on shrubs, making them elongated and spindly. If tubes are used, they should not be left on for more than two growing seasons, just long enough for plant establishment. For more information on installation dates and methods, see ID Technical Note 43: Tree and Shrub Planting Care and Management.



Figure 7. A 3-inch auger bit on a cordless drill can be used to excavate holes for planting small-rooted stock. Derek Tilley, NRCS Idaho.



Figure 6. A metal jig welded with sections of 3 to 6-inch pipe can be used to burn holes into weed barrier fabric with a hand torch. Derek Tilley, NRCS Idaho.

When using WBF, planting of the stock is typically done after the fabric is laid down, especially when planting a variety of species with various spacings. WBF can be cut with a box cutter or holes can be

burned directly into the fabric using a metal jig (Figure 6) and a hand-held torch. Holes can be dug for the roots with a small spade or a bulb auger on a cordless drill (Figure 7).

It is important to plan for how to address the space between and around rows (Figure 8). Failure to fill these areas with competitive plants will result in weeds occupying the site and reducing the benefits of the planting. Site adapted species including cool season grasses and forbs may be seeded between tree/shrub rows to reduce erosion and runoff, prevent sandblasting, and improve wildlife cover. Refer to ID Plant Materials Technical Note No. 24: Grass, Grass-Like, Forb, Legume, and Woody Species for the Intermountain West and ID Materials Technical Note No. 2 for more information.

When planting grasses between rows, it is essential a weed free zone of at least 4 feet be maintained around each tree or shrub (2- foot radius around the trunk) for the first 3 years after planting. In southern Idaho, it is best if the weed free zone is maintained for the entire life of the planting.

Between row cover may be seeded before or after the tree and shrub planting. When seeding during the tree-planting year, be alert to the potential conflict between the herbaceous seeding



Figure 8. This hedgerow planting in California has plant interspaces filled with mulch for weed suppression and moisture retention. It also utilizes many non-woody perennial forbs to increase pollinator diversity. Kitty Bolte, Xerces Society.

dates (see ID Plant Materials Technical Note No. 24). Seeding herbaceous cover during the prior year fallow period or seeding between rows after tree and shrub planting or fabric installation can minimize the potential conflict between grass seeding and tree planting dates. The pure live seed (PLS) seeding rates found in Idaho Plant Materials Technical Note No. 24 may be used for designing between row grass and forb seeding mixtures.

Irrigation

Although drought tolerant species native to the local conditions are best, non-local species that require supplemental moisture are often desired for enhanced benefits. However, mixing species with significantly different water requirements makes irrigation to the optimum levels for all species present difficult. Having a well-designed hedgerow consisting of species with similar water needs will help the landowner avoid some of these issues. Drip lines with emitters and irrigation handlines can be used, so long as the moisture needs can be met for the lifetime of the planting. WBF or mulch will further improve soil moisture retention and reduce irrigation needs by up to 50%.

Management

A fair amount of management is required to maintain the health and function of a hedgerow planting. The planting will need to be protected from livestock grazing and trampling to the extent necessary to ensure that it will perform the intended purpose(s). Plant mortality may occur over time, consider the cost and maintenance required to replant. Irrigation lines and emitters will need upkeep for the duration of the planting. Likewise, weeds will need to be controlled, especially if not using WBF.

Even in hedgerows using WBF, maintenance will be required. Over time, trunks will grow larger than the holes cut into the WBF which may lead to girdling and death of the plant. To prevent girdling, the fabric holes will need to be cut and enlarged periodically. See ID Plant Materials Technical Note No. 25 and ID Plant Materials Technical Note No 43 for more information on management of woody plantings and management of WBF.

Between row spaces planted to cover may also require some degree of management. Grasses and forbs may need periodic mowing, especially during the first year of establishment to prevent weeds from producing and spreading seeds. Spot treatment of noxious weeds may also be necessary. After establishment, pre-emergent herbicides may be used to prevent germination of weeds. Always follow label instructions and be mindful of potential ill-effects on the established plants and on beneficial insects.

Fertilizer is typically not recommended for Intermountain rangeland seedings as it can provide greater benefit to invasive weeds than the desired species. However, establishing plants in areas that have undergone intensive farming and nutrient depletion may require chemical inputs. A soil test is recommended.

Useful References

The following Technical Notes from the Idaho Plant Materials Program can provide additional information on many of the topics mentioned here. They can be located at the [Aberdeen PMC website](#).

- TN 2A: Plants for Pollinators in the Intermountain West
- TN 2B: Plants for Pollinators in the Inland Northwest
- TN 2C: Plant Materials for Pollinators and Other Beneficial Insects in Eastern Utah and Western Colorado
- TN 24: Conservation Plant Species for the Intermountain West
- TN 25: Function and Operation of a Machine to Lay Weed Barrier Fabric
- TN 32: Native Shrubs and Trees for Riparian Areas in the Intermountain West
- TN 43: Tree and Shrub Planting Care and Management
- TN 50: Conservation Shrubs and Trees for the Intermountain West

Appendix 1. Growth traits and wildlife benefits of recommended species for hedgerow plantings in Idaho and Utah.



Serviceberry. Derek Tilley, NRCS Idaho

Amelanchier alnifolia, serviceberry

Origin: native shrub
Mature Height: 6-15 ft
Growth Rate: slow
Growth Habit: upright
Wildlife Value: good cover and browse
Attracts: butterflies, bees
Flowers: white
Bloom: May-June
In-row Spacing: 6-10 ft
Recommended precipitation range: 14-30 in



Basin big sagebrush. Derek Tilley, NRCS Idaho

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, browse and nesting structure
Attracts: cover and nesting structure for pollinators
Flowers: yellow
Bloom: September-October
In-row Spacing: 3-6 ft
Recommended precipitation range: 9-15 in



Mule-fat. USDA PLANTS Database.

Baccharis salicifolia, mule-fat

Origin: native shrub
Mature Height: 6-10 ft.
Growth Rate: rapid
Growth Habit: upright shrub
Wildlife Value: cover
Attracts: butterflies
Flowers: white
Bloom: April-July
In-row Spacing: 8-10 ft.
Recommended precipitation range: 10-15 in.

Ceanothus fendleri, Fendler's ceanothus

Origin: native shrub
Mature Height: 2-3 ft.
Growth Rate: slow
Growth Habit: rounded shrub

Wildlife Value: cover
Attracts: small bees and butterflies
Flowers: white
Bloom: June-July
In-row Spacing: 2-3 ft.
Recommended precipitation range: 12-20 in.



Redstem ceanothus. Susan McDougall @ PLANTS Database

Ceanothus sanguineus, redstem ceanothus

Origin: native shrub
Mature Height: 6-10 ft.
Growth Rate: slow
Growth Habit: erect shrub
Wildlife Value: cover
Attracts: butterflies
Flowers: white
Bloom: May-June
In-row Spacing: 8-10 ft.
Recommended precipitation range: 16-35 in.

Ceanothus velutinus, snowbrush ceanothus

Origin: native shrub
Mature Height: 2-5 ft.
Growth Rate: moderate
Growth Habit: rounded shrub
Wildlife Value:
Attracts: butterflies
Flowers: white
Bloom: May-June
In-row Spacing: 3ft.
Recommended precipitation range: 16-40 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



Desert sweet. Nevada native Plant Society @ PLANTS Database.

Chamaebatiaria millefolium, desert sweet

Origin: native shrub
Mature Height: 3-7 ft.
Growth Rate: moderate
Growth Habit: upright shrub
Wildlife Value: cover
Attracts: bees
Flowers: white
Bloom: July-September
Broadcast Seeding Rate: 8 lb/ac
In-row Spacing: 8-12 ft.
Recommended precipitation range: 15-60 in.



Redosier dogwood. Derek Tilley, NRCS Idaho

Cornus sericeus, redosier dogwood

Origin: native shrub
 Mature Height: 3-10 ft
 Growth Rate: fast
 Growth Habit: upright
 Wildlife Value: food and cover
 Attracts: Bees
 Flowers: white
 Blooms: May-June
 In-row Spacing: 3-4 ft
 Recommended precipitation range: 12-60in



Cotoneaster. E.E. Herman @ PLANTS Database

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



Black hawthorn. Susan McDougall @ PLANTS Database

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
 Blooms: May-June
 In-row Spacing: 10-12 ft
 Recommended precipitation range: 16-60 in



Shubby cinquefoil. Photo ©Al Schneider, www.swcoloradowildflowers.com, used with permission.

Dasiphora fruticosa, shrubby cinquefoil

Origin: native shrub
 Mature Height: 2-4 ft.
 Growth Rate: slow
 Growth Habit: upright
 Wildlife Value: food and cover
 Attracts: moths, bees, butterflies
 Flowers: yellow

Blooms: May-June
In-row Spacing: 4-6 ft.
Recommended precipitation range: 18-25 in.



Rubber rabbitbrush. Derek Tilley, NRCS Idaho

Ericameria nauseosa, rabbitbrush

Origin: native shrub
Mature Height: 2-6 ft
Growth Rate: moderate
Growth Habit: open spreading
Wildlife Value: loafing, food and browse; good nectar plant
Attracts: small bees, butterflies, monarchs
Flowers: yellow
Bloom: August-October
In-row Spacing: 3-6 ft
Recommended precipitation range: 7-16 in



Apache plume. Gary Monroe @ PLANTS Database

Fallugia paradoxa, Apache plume

Origin: native shrub
Mature Height: 4-6 ft.
Growth Rate: rapid

Growth Habit: upright shrub
Wildlife Value: cover
Attracts: bees and butterflies
Flowers: white-purple
Bloom: May-June
In-row Spacing: 4-6 ft.
Recommended precipitation range: 8-20 in.

Forestiera neomexicana, stretchberry

Origin: native shrub
Mature Height: 4-6 ft.
Growth Rate: moderate
Growth Habit: shrub
Wildlife Value: cover
Attracts: butterflies
Flowers: yellow
Bloom: April-May
In-row Spacing: 4-6 ft.
Recommended precipitation range: 9-24 in.



Oceanspray. Susan McDougall, @ PLANTS Database

Holodiscus discolor, oceanspray

Origin: native shrub
Mature Height: 3-9 ft
Growth Rate: moderate
Growth Habit: open spreading
Wildlife Value: browse, cover
Attracts: bees, butterflies
Flowers: white
Bloom: May-July
In-row Spacing: 4-6 ft
Recommended precipitation range: 18-24 in



Fivepetal cliffbush. Margaret Williams @ PLANTS Database

Jamesia americana, fivepetal cliffbush

Origin: native shrub
 Mature Height: 3-6 ft
 Growth Rate: slow
 Growth Habit: open spreading
 Wildlife Value: browse, cover
 Attracts: bees, moths, butterflies
 Flowers: white
 Bloom: May-August
 In-row Spacing: 4-6 ft
 Recommended precipitation range: 15-25 in



Juniper. Derek Tilley, NRCS Idaho

Juniperus spp., juniper

Origin: native shrub
 Mature Height: 15-20 ft
 Growth Rate: slow
 Growth Habit: upright
 Wildlife Value: food and cover
 Attracts: cedar waxwings
 Flowers: NA

Blooms: NA
 In-row Spacing: 7-12 ft
 Recommended precipitation range: 9-14 in

Leymus cinereus, basin wildrye

Origin: native grass
 Mature Height: 3-8 ft
 Growth Rate: fast
 Growth Habit: upright
 Wildlife Value: food and cover, nesting for native bees

Attracts: NA
 Flowers: NA
 Blooms: NA
 In-row Spacing: 3-5 ft
 Recommended precipitation range: 8-16 in



Twinberry honeysuckle. Derek Tilley, NRCS Idaho

Lonicera involucrata, twinberry honeysuckle

Origin: native shrub
 Mature Height: 8-12 ft
 Growth Rate: moderate
 Growth Habit: open spreading
 Wildlife Value: browse, cover, food
 Attracts: butterflies
 Flowers: pink
 Bloom: May-July
 In-row Spacing: 6-10 ft
 Recommended precipitation range: 14-32 in

Lonicera utahensis, Utah honeysuckle

Origin: native shrub
 Mature Height: 8-12 ft
 Growth Rate: moderate
 Growth Habit: open spreading
 Wildlife Value: browse, cover, food
 Attracts: butterflies
 Flowers: white, cream
 Bloom: May-July
 In-row Spacing: 6-10 ft
 Recommended precipitation range: 24-60 in

Malus sylvestris, European crab apple
 Origin: introduced tree
 Mature Height: 30-40 ft
 Growth Rate: moderate
 Growth Habit: upright
 Wildlife Value: food and cover; good nectar plant
 Attracts: bees, butterflies
 Flowers: white
 Bloom: April-May
 In-row Spacing: 12-15 ft
 Recommended precipitation range: 30-50 in



Wild crab apple. Margaret Williams @ PLANTS Database

Peraphyllum ramosissimum, wild crab apple
 Origin: native tree
 Mature Height: 12-25 ft
 Growth Rate: moderate
 Growth Habit: upright
 Wildlife Value: food and cover; good nectar plant
 Attracts: bees, butterflies
 Flowers: white
 Bloom: April-May
 In-row Spacing: 12-15 ft
 Recommended precipitation range: 16-40 in



Mockorange. Derek Tilley, NRCS Idaho

Philadelphus lewisii, mockorange, syringa
 Origin: native shrub
 Mature Height: 8-11 ft
 Growth Rate: moderate
 Growth Habit: open spreading
 Wildlife Value: browse, cover, food
 Attracts: bees
 Flowers: white
 Bloom: May-June
 In-row Spacing: 6-10 ft
 Recommended precipitation range: 18-50 in

Physocarpus malvaceus, ninebark
 Origin: native shrub
 Mature Height: 2-6 ft
 Growth Rate: moderate
 Growth Habit: open spreading
 Wildlife Value: browse, fruit
 Attracts: bees, butterflies
 Flowers: white
 Bloom: June
 In-row Spacing: 3-4 ft
 Recommended precipitation range: 18-40 in

Prunus americana, American plum
 Origin: native tree
 Mature Height: 12-25 ft
 Growth Rate: moderate
 Growth Habit: upright
 Wildlife Value: food and cover; good nectar plant
 Attracts: bees, butterflies
 Flowers: white
 Bloom: April-May
 In-row Spacing: 12-15 ft
 Recommended precipitation range: 16-40 in



Nanking cherry. D.E. Herman @ PLANTS Database

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 songbirds
Attracts: butterflies, bees
Flowers: small pink
Bloom: April-May
In-row Spacing: 6-8 ft
Recommended precipitation range: 16-40 in



Chokecherry. Derek Tilley, NRCS Idaho.

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; good nectar plant
Attracts: bees, butterflies, monarchs
Flowers: white
Bloom: April-May
In-row Spacing: 8-12 ft
Recommended precipitation range: 16-60 in



Antelope bitterbrush. Derek Tilley, NRCS Idaho.

Purshia tridentata* and *P. mexicana, antelope bitterbrush and Mexican cliffrose
Origin: native shrub
Mature Height: 2-6 ft
Growth Rate: moderate
Growth Habit: upright shrub
Wildlife Value: cover, fall forage
Attracts: butterflies, bees
Flowers: yellow
Bloom: May-June
In-row Spacing: 3-5 ft
Recommended precipitation range: 10-15 in



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 aueum, 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

Ribes cereum, wax currant
 Origin: native shrub
 Mature Height: 3-6 ft
 Growth Rate: moderate
 Growth Habit: rounded shrub
 Wildlife Value: cover, fruit
 Attracts: early spring bees, bumblebees
 Flowers: pink
 Bloom: May-June
 In-row Spacing: 2-4 ft
 Recommended precipitation range: 13-35 in



Woods' rose. Derek Tilley, NRCS Idaho.

Rosa woodsia and ***R. nutkana***, Woods' rose and Nootka rose
 Origin: native shrub
 Mature Height: 3-6 ft
 Growth Rate: moderate
 Growth Habit: upright to semi-weeping shrub
 Wildlife Value: nesting, cover, excellent forage; good nectar plant
 Attracts: bees, butterflies, monarchs
 Flowers: pink
 Bloom: June-July
 In-row Spacing: 3-5 ft
 Recommended precipitation range: 12-40 in



American red raspberry. Sheri Hagwood, USDI BLM

Rubus idaeus, American red raspberry
 Origin: native shrub
 Mature Height: 3-6 ft
 Growth Rate: moderate
 Growth Habit: thicket forming shrub
 Wildlife Value: nesting, cover
 Attracts: bees, butterflies
 Flowers: white
 Bloom: June-July
 In-row Spacing: 3-5 ft
 Recommended precipitation range: 10-100 in



Peachleaf willow. Derek Tilley, NRCS Idaho

***Salix* spp., willow**

Origin: native tree
Mature Height: 12-25 ft
Growth Rate: fast
Growth Habit: upright
Wildlife Value: excellent food and cover; good spring nectar plant
Attracts: bees, butterflies
Flowers: yellow/green
Bloom: April-May
In-row Spacing: 12-15 ft
Recommended precipitation range: 16-60 in



Elderberry. Derek Tilley, NRCS Idaho

***Sambucus cerulea*, elderberry**

Origin: native shrub
Mature Height: 6-15 ft
Growth Rate: moderate
Growth Habit: upright
Wildlife Value: nesting, food
Attracts: butterflies, nesting bees
Flowers: white to cream
Bloom: June-July
In-row Spacing: 4-6 ft
Recommended precipitation range: 18-30 in



Buffaloberry. R.A. Howard @ PLANTS Database

***Shepherdia argentea*, buffalo berry**

Origin: native shrub
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



Greene's mountain ash. Derek Tilley, NRCS Idaho

Sorbus scopulina, Greene's mountain ash

Origin: native shrub
 Mature Height: 8-12 ft
 Growth Rate: moderate
 Growth Habit: upright to spreading tall shrub
 Wildlife Value: browse, fruit
 Attracts: butterflies, bees
 Flowers: white
 Bloom: May-July
 In-row Spacing: 8-10 ft
 Recommended precipitation range: 12-60 in



Douglas spiraea, L. Koepke @ PLANTS Database

Spiraea douglasii, Douglas spiraea

Origin: native shrub
 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



Snowberry. R.A. Howard @ PLANTS Database

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
 Flowers: white to purple
 Bloom: April-May
 In-row Spacing: 5-10 ft
 Recommended precipitation range: 18-40 in