



# FLOWERS

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## Wildflowers in Colorado

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### Quick Facts...

Wildflower plantings have a different appearance throughout the growing season.

Commercial seed mixes are developed to show variation in height, bloom color and time.

Choose a wildflower seed mix adapted to your site conditions.

The best site for wildflowers has well-drained and aerated soil.

Control weeds prior to seeding wildflowers.

Water as needed for germination and maintenance.

The term "wildflower" does not necessarily mean a native flower.

Wildflowers are ideal for a more natural, less formal appearance. A planting of wildflowers provides a changing pallet of color. You may choose to model wildflower plantings after surrounding native-plant communities or use wildflowers to provide bold splashes of color.

The term wildflower does not necessarily mean that such plants are native to our area. Rather, it refers to an overall look or feel of an informal planting. Many plants in wildflower seed mixes are not native to Colorado, although native mixes are available.

A wildflower planting provides change throughout the growing season as different plants in the mix come into bloom. Due to varying characteristics of plants in a wildflower mix, the appearance of the planting may differ from year to year as some species thrive and dominate less aggressive species.

Because some wildflowers can be aggressive, you may lose the diversity of a wildflower planting over time. Their aggressiveness can be compounded by site conditions. Some species invade areas where they are not wanted. See Table 4.

The type of wildflower seed mix you choose depends on site conditions and the effect you want to create. Commercial seed mixes may be formulated using a variety of flowers with different heights, colors and bloom times. Usually, a mix of self-seeding annuals, biennials and perennials is most effective. Wildflower mixes also may contain some grass species, which can fill in spaces around flowers, add texture and color contrast, and provide support and protection to wildflowers. Grasses also can reduce soil erosion and enhance wildlife habitat. See Table 1. On steep slopes, existing or seeded grasses can reduce soil erosion until wildflowers become established. Use jute mats or weed-free straw mulches on the soil surface to help establish wildflowers on steep slopes. Large areas can be hydroseeded.

### Site Preparation and Weed Control

Choose a mix suitable for specific site conditions, such as dry, hot, south exposures; cooler, shaded, north and east exposures; or moist meadows. Varying site conditions require different plant species. Seed companies often formulate their mixes for different site conditions. Most wildflowers grow best on well-drained, well-aerated soils. Others are adapted to moist sites. On sites with poor or compacted soil or extensive weed populations, considerable soil preparation and weed control are necessary before planting.

If weeds predominate on the site or if the soil has been disturbed by rototilling or construction activity, it may take up to a year to control weeds before you can plant wildflowers. Eliminating weeds prior to planting wildflowers is easier and less expensive than identifying and controlling them in

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## Maintenance

- After wildflowers are established, pull or spot spray weeds as soon as they can be identified and before they set seed.
- During extended dry spells, supplemental water helps wildflowers look their best.
- If initial soil preparation was done, little if any fertilizer is required.
- After plants brown from killing frost, mow wildflower areas to distribute seeds set by plants. Cut stalks to 4 to 6 inches and leave clippings on the ground.
- In the second and succeeding years, the appearance of the wildflower planting may differ due to bloom of biennial and perennial species. Additional seeding can be beneficial if your wildflower stand is not satisfactory or plant growth was spotty or poor.
- Some species of wildflowers are toxic to grazing livestock (e.g., lupines and larkspurs).
- Observe which wildflowers escape from your landscape to rangeland, open space, wetlands or other natural areas. Remove escaped plants and replace them with less aggressive species.

newly seeded sites. Water to stimulate weed-seed germination and growth. Then spray or pull the resulting weeds. Repeat this process several times if possible.

One method of sowing wildflower seeds with minimal soil preparation is to lightly cultivate or break the soil with a rake prior to sowing. If the soil is compacted or heavy clay, you may need soil improvements. Incorporate organic matter, such as compost or sphagnum peat moss, into the top 6 inches. Three cubic yards of organic matter per 1,000 square feet, or about enough to cover soil 1 inch deep, generally is sufficient. Tilling the soil will increase weed seed germination, as new seeds are brought to the surface.

After incorporating organic matter, water the area to germinate any existing weed seeds. Spray these weed seedlings with glyphosate (Roundup), glufosinate (Finale) or another appropriate herbicide. As with any pesticide, read and follow label directions. Remove dead weed debris prior to planting wildflowers. The number of times you need to repeat this water/spray process depends on the degree of weed infestation and types of weeds prevalent.

On sites where other desirable vegetation exists, cultivate the soil lightly or break it with a rake, then sow wildflower seeds in the manner described below. A cool moist treatment can greatly enhance the germination of perennials. If sowing in spring or summer you may want to check with the seed company if they have pre-treated the perennial seeds.

## Seeding

Fall is a good time to sow wildflower seed because subsequent winter cold and snow (moisture) will promote seed germination the following spring. You may need to water in the spring to germinate seeds if winter moisture is insufficient. For spring or summer seedings, water to germinate seeds if rains are insufficient. Seedlings emerging in late summer may not become well established and may be killed by fall frosts.

Depending on the mix or species selected, sow 4 to 8 ounces of seed per 1,000 square feet or follow recommendations on seed packet. Exceeding recommended seeding rates may result in poor stands, especially of perennials shaded out by too-dense annuals.

For an even distribution of wildflower seed, mix six parts dry sand with one part seed. For small areas, spread the mix by hand. On larger areas, use a cyclone-type fertilizer/seed spreader. For small areas, light raking followed by tamping the soil with your feet can help ensure good seed contact with soil. For large areas, it's faster to pull a section of chain-link fence behind a tractor. To ensure good germination use a lawn roller or in small areas tramp soil surface with your feet.

Table 1: Native grasses suitable for wildflower plantings.

Plant Name	Exposure <sup>a</sup>	Moisture <sup>b</sup>	Season of Bloom <sup>c</sup>
<i>Oryzopsis hymenoides</i> Indian rice grass	S	D	SU
<i>Bouteloua gracilis</i> Blue grama, eyelash grass	S/PS	D	SU
<i>Festuca arizonica</i> Arizona fescue	S/PS	D-M	SP/SP
<i>Koeleria macrantha</i> June grass	S/PS	D-M	SU
<i>Schizachyrium scoparium</i> ( <i>Andropogon scoparius</i> ) Little bluestem	S	D	SU/F

<sup>a</sup>Exposure: S = sun, PS = partial shade, SH = shade

<sup>b</sup>Soil moisture preference: D = dry, M = moist (needs supplemental irrigation)

<sup>c</sup>Season of bloom: SP = spring, SU = summer, F = fall

Table 2: Native Wildflowers most commonly available in seed mixes.

Plant Name	Type <sup>a</sup>	Flower Color	Exposure <sup>b</sup>	Moisture <sup>c</sup>	Season of Bloom <sup>d</sup>
Artemisia spp. Sage	P	Gray foliage	S	D	—
Aquilegia spp. Columbine	P	Yellow, red, blue	S/PS	M	SP/SU
Cleome serrulata Rocky Mtn. Bee Plant	A	Pink	S	D	SU/F
Coreopsis tinctoria Coreopsis (plains) <sup>e</sup>	A	Yellow/maroon	S/PS	D	SU/F
Epilobium angustifolium (Chamerion) Fireweed <sup>e</sup>	P	Pink	S/PS	D-M	SU
Eriogonum umbellatum Sulfur flower (Chamerion)	P	Yellow	S	D-M	SU
Erigeron speciosus Showy daisy (fleabane)	P	Violet	S/PS	D-M	SP/SU
Erysimum spp. Wallflower	P/B	Yellow, orange	S/PS	D-M	SP/SU
Eustoma grandiflorum Prairie gentian	TP	Blue/purple	S	M	SU/F
Gaillardia aristata Gaillardia (perennial)	P	Yellow/red	S	D	SU
Ipomopsis aggregata Scarlet gilia	B	Red	S/PS	D-M	SU
Liatris punctata Spotted (dwarf) gayfeather	P	Purple	S	D	SU
Linum lewisii Flax (blue) <sup>e</sup>	P	Blue	S	D or M	SP/SU
Machaeranthera spp. Aster	A/B	Purple	S/PS	D	SU/F
Monarda fistulosa Pink bergamot	P	Pink	S	D-M	SU
Oenothera caespitosa White evening primrose	P	White	S	D	SU/F
Penstemon spp. Penstemon, beard tongue	P	Varies	S	D	SU
Penstemon strictus Penstemon (Rocky Mountain)	P	Blue	S/PS	D	SU
Pulsatilla patens Pasque flower	P	Purple	S/PS	D	SP
Ratibida columnifera Mexican hat, prairie coneflower	B/P	Yellow/red	S/PS	D	SU
Rudbeckia hirta Black-eyed Susan <sup>e</sup>	A/P	Yellow	S/PS	D-M	SU/F
Thermopsis montana Golden banner, false lupine	P	Gold	S	D-M	SP/SU
Viguiera multiflora Showy goldeneye	P	Yellow	S/PS	D or M	SU/F

Table 3: Non-Native Wildflowers most commonly available in seed mixes.

Plant Name	Type <sup>a</sup>	Flower Color	Exposure <sup>b</sup>	Moisture <sup>c</sup>	Season of Bloom <sup>d</sup>
Aster novae-angliae Aster (New England)	P	Violet	S/PS	D-M	F
Campanula carpatica Carpathian harebell	P	Blue	S/PS	M	SU
Centaurea cyanus Cornflower <sup>e</sup>	A	Blue	S/PS	D	SU
Clarkia unguiculata Clarkia	A	Pink, lavender	S	D-M	SP/SU
Consolida ambigua Larkspur	A	White, pink, violet	S/PS	M	SU
Coreopsis lanceolata Coreopsis (lanceleaf) <sup>e</sup>	P	Yellow	S/PS	D-M	SU/F
Cosmos bipinnatus Cosmos <sup>e</sup>	A	Pink, white, red	S/PS	D	SU/F

Table 3 (continued): Non-Native Wildflowers most commonly available in seed mixes.

Plant Name	Type <sup>a</sup>	Flower Color	Exposure <sup>b</sup>	Moisture <sup>c</sup>	Season of Bloom <sup>d</sup>
Dianthus barbatus Sweet William	B/P	Pink, red, white	S/PS	D-M	SU
Dimorphotheca aurantiaca African daisy	A	White, orange	S	D	SU/F
Echinacea angustifolia Narrowleaf Coneflower	P	Pink	S	D-M	SU
Echinacea purpurea Purple coneflower	P	Purple	S/PS	D-M	SU
Eschscholzia californica California poppy <sup>e</sup>	TP	Yellow/orange	S	D	SP/SU
Gaillardia pulchella Gaillardia	A	Yellow/red	S	D	SU
Gypsophila elegans Baby's breath <sup>e</sup>	A	White	S/PS	D	SU
Iberis umbellata Candytuft	A	Pink, white	S/PS	D-M	SU
Leucanthemum x superbum (Chrysanthemum x superbum) Shasta daisy	P	White	S/PS	M	SU
Linaria maroccana Snapdragon (spurred)	A	Pink, yellow, violet	S/PS	D	SP/SU
Linum grandiflorum rubrum Flax (scarlet)	A	Scarlet	S/PS	D-M	SU
Lobularia maritima Sweet alyssum <sup>e</sup>	TP	White, lavender	S/PS	D-M	SP/SU
Lupinus spp. Lupine	A/P	Blue, pink, red	S/PS	D-M	SP/SU
Oenothera missouriensis Ozark sundrop	P	Yellow	S/PS	D	SU
Papaver rhoeas Poppy (corn), Shirley poppy	A	White, pink, red	S/PS	D	SU
Phacelia campanularia California bluebell	A	Blue	S	D	SP/SU
Silene armeria Catchfly	A/B	Pink	S/PS	D	SU
Solidago rigida Goldenrod	P	Gold	S	D-M	SU/F
Viola spp. Johnny jump-up	P	Purple/yellow	S/PS	M	SP/SU/F

Table 4: Avoid seed mixes containing these species (high potential for invasiveness).

Plant Name	Type <sup>a</sup>	Flower Color	Season of Bloom <sup>b</sup>
Achillea millefolium Yarrow (white) <sup>c</sup>	P	White	SU
Cichorium intybus Chichory <sup>c</sup>	P	Blue	SP/SU
Hesperis matronalis Dames' rocket <sup>c</sup>	P	Violet	SP/SU
Leucanthemum vulgare (Chrysanthemum leucanthemum) Oxeye daisy <sup>c</sup>	P	White	SU
Linaria vulgaris Yellow toadflax <sup>c</sup>	P	Yellow	SU
Myosotis sylvatica Forget-me-not <sup>c</sup>	A	Blue	SP/SU

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<sup>a</sup>Type: A = Annual, B = Biennial, P = Perennial, TP = Tender Perennial

<sup>b</sup>Season of bloom: SP = spring, SU = summer, F = fall

<sup>c</sup>Very aggressive, may eventually dominate planting