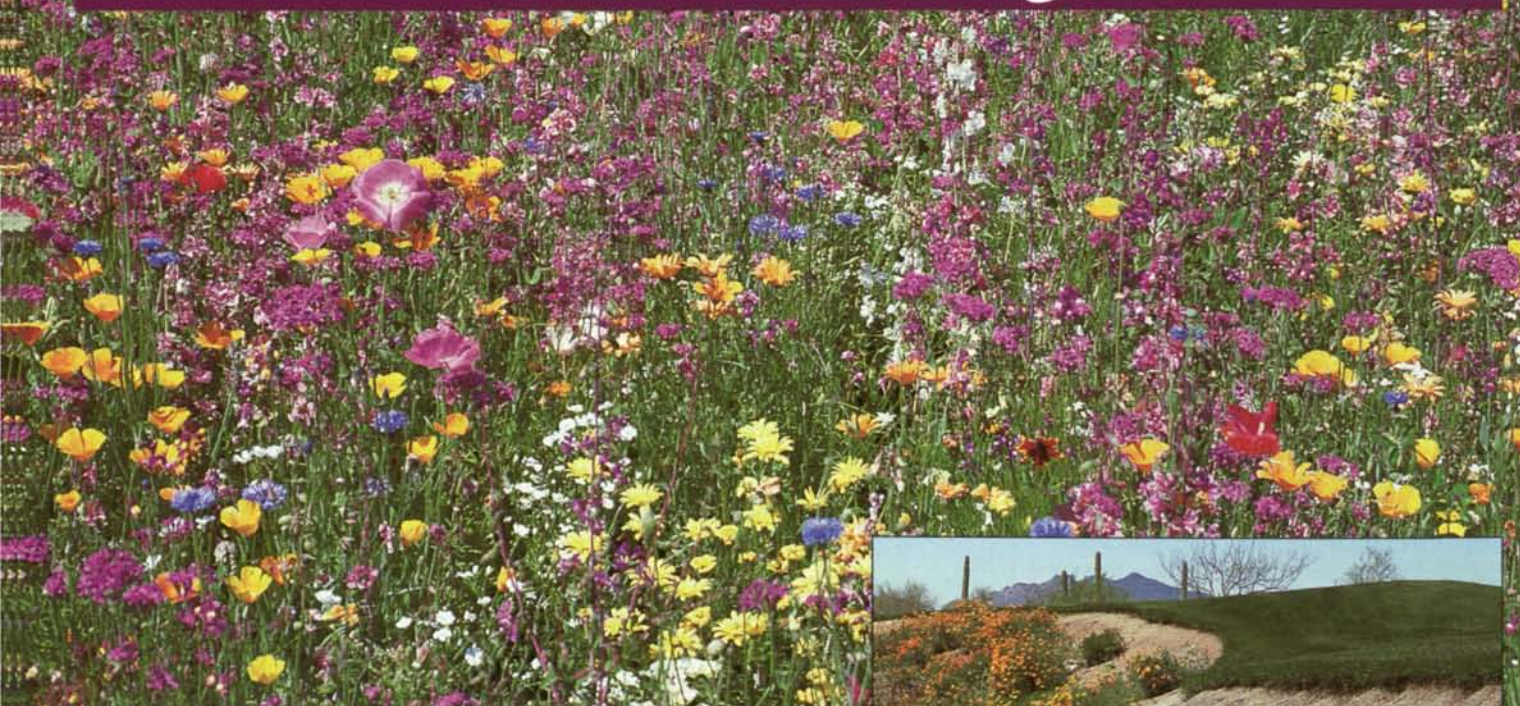


Creating Borders Of Color With Wildflowers



By Crystal Fricker

Wildflowers offer a colorful, naturalized look in parks and golf courses with moderate maintenance once established. Yet there are more aspects to their success than first meets the eye. Elements to consider include what goes into developing a mix and what to look for when purchasing wildflower seed, establishment, and maintenance requirements.

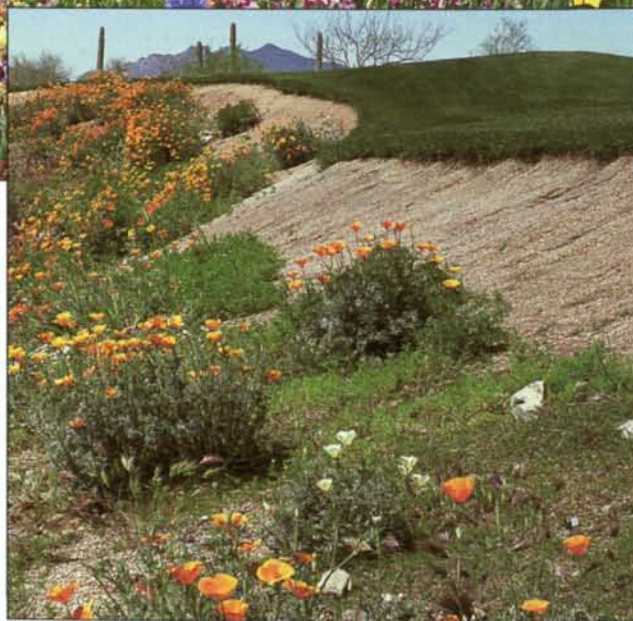
Wildflowers can be used as either single species or in mixtures. A mixture provides the advantage of several different colors, textures, and blooming times to create an ever-changing landscape.

Developing A Wildflower Mix

In developing a mixture, several characteristics of the flowers must be considered. Plant height should be fairly uniform, either short (below two feet high), medium (two to three feet high) or tall (above three feet high). If heights vary,

(Top) Bloomers flowering in summer following spring planting on Pure-Seed Testing, Inc.'s research farm. Photos ©1992 Larry Kassell, courtesy of Turf Seed, Inc.

(Right) Wildflowers create a color border along a fairway at Desert Mountain Golf Course in Scottsdale, AZ.



the shorter species become hidden from view and are eventually crowded out.

A knowledge of the blooming times of each species is crucial to maintain an extended flowering period in a mixture. Some species flower for 120 days or more, depending on water availability. Others bloom only for a few weeks. Early spring and summer flowering species include Bluebells, Baby's Breath, Sweet Alyssum, Johnny Jump-Up, Iceland Poppy, Forget-Me-Not, Snow-In-Summer, Blue Flax, and Dwarf Columbine. Purple Coneflower, Prairie Coneflower, New England Aster, Rocket

Larkspur, Lemon Mint, Black-Eyed Susan, and Gilia bloom in late summer and early fall. Perennial species need cold winter temperatures and short day lengths to initiate flowering the next spring.

The compatibility of wildflowers in a mixture depends on the percentage of each component used. Competitiveness and the number of seeds per pound are key factors to consider. For example, Catchfly, Cornpoppy, and Wild Thyme have very small seeds resulting in a high number of seeds per pound. A lower percentage of these items in a mix would still pro-

duce a stand with adequate plant populations of each component. Yarrow and Black-Eyed-Susan are very competitive species requiring low percentages to insure a diverse stand of wildflowers. The overall percentage of annuals and perennials in a mix must be complimentary to maintain a diverse population.

Of course, colors are critical to develop an eye-catching landscape. Warm and cool color groups can be used in combination with blooming periods to produce various "looks" throughout the season. The warm oranges, reds, and yellows of the African Daisy, Siberian Wallflower, Scarlet Flax, Prairie Coneflower, and *Coreopsis* species can be used for one look. The cool blues, pinks, white, and purples, of Blue Bells, Catchfly, Snow-In-Summer, Baby's Breath, and Purple Coneflower, can produce a different look. Turf Seed, Inc., markets a wildflower mix based on this criteria called bloomers.

Using only species native to local landscapes is a hot topic these days. Native species are indigenous to a geographical region or to a specific habitat. In trials sponsored by Pure-Seed Testing, Inc., across the nation, several species proved to be widely adapted, growing well in many locations.

However, they are not native to all the areas in which they survived. If these species are not invasive in the ecosystem and they perform adequately, why not use them? Because many native species are not commercially available, adapted species are your next best choice.

Purchasing A Wildflower Mix

When purchasing a wildflower mix, there are several factors to consider. First, what kind of mixture should you buy? A mixture containing all annual species can be planted and reseeded yearly, producing a broad range of colors and textures. After flowering is completed, they can be mowed and a non-selective herbicide can be used to control weeds before reseeding each spring.

When annual and perennial species are used together, the annuals act as a nurse crop flowering the first summer after a spring planting. Cold winter temperatures and short day lengths vernalize the perennials initiating flowers the following spring, a year after planting. Herbicides can be used prior to the initial planting for weed control. After the annual species die out, the bare areas will be open to weed invasion,

so they should be reseeded with more of the mix each spring until the perennials take over.

Nonaggressive bunch grasses can also be used in "meadow mixtures" for soil stabilization to fill in areas where annual flowers die out. A bunch grass such as sheep fescue adds a powder blue color to the mix and can compete with weeds, while not crowding out the flowers. In a mixture study with 5, 20, and 60 percent Bighorn sheep fescue mixed with bloomers wildflower mixture, 60 percent Bighorn provided too much competition, leaving only a few wildflowers surviving. Five percent Bighorn didn't effectively compete with weeds, while 20 percent sheep fescue was a good combination with plenty of flowers and enough grass to fill in the bare areas.

Individual species may also be used by planting complimentary colors, heights, and flowering times where desired. A single species may be appropriate in an area where a more uniform look is desired.

When purchasing wildflower seed, one should always look for high seed quality. Poor quality wildflower seed may be inexpensive, but it will cost more to maintain. It may contain noxious weeds, have poor germination, and/or a low purity resulting in a poor stand. Such a mix is difficult to establish and maintain because it is easily invaded by weeds. Watch out for mixes with a high percentage of inexpensive fillers. Common fillers include grasses, Baby's Breath, Bachelor Buttons, and Chicory. Too much of one species will result in an unbalanced mix with a limited flowering period. Some fillers are too aggressive and will take over a mix within a year. Aggressive species can be useful in hard-to-grow areas with poor soil. Balanced amounts of each aggressive species is necessary for those situations. Chicory, Yarrow, Birdsfoot Trefoil, Ox-Eye-Daisy, Butter and Eggs, Wild Carrot, and Purple Loosestrife are examples of aggressive species.

Establishing A Wildflower Mix

Once the wildflower mix is selected, proper establishment is a key step in the success of a wildflower planting. Begin soil preparation by removing existing vegetation with herbicides or cultivation no deeper than three inches or a combination of the two. Use a non-selective, non-persistent, herbicide such as "Roundup." Apply after rain or irrigation

has sprouted weeds, usually mid-spring for a spring planting or early fall for a fall planting. After the existing vegetation is removed, the seed bed should be prepared by tilling or disking, then dragged or raked smooth. For uniform seeding, mix seed with an equal amount of sand and broad-cast the seed in two directions. Rake seed in no deeper than 1/4 inch. A seeding rate of 15 pounds per acre or six ounces per 1,000 square feet is recommended. If there are no weed problems, a no-tilling planting can be done with a mulch to protect the seedlings until they are established. Hydro-seeding is another successful method of seeding wildflowers, especially on banks or areas that are difficult to work up.

Irrigate the seeded area if rain showers don't keep the soil moist. Once the flowers are well established, they shouldn't require irrigation unless wilting occurs. In fact, too much water will encourage foliar growth and less flowers. No fertilizer is needed unless the soil is depleted.

Maintaining A Mix

To maintain a wildflower mix, one can either leave it alone after establishment and let nature take its course, or degrade the dried wildflower debris. If the debris is offensive, the area can be mowed four to six inches high after all flowers are gone during late fall, removing the debris. This helps to scatter the seeds so they can be spot-sprayed with Roundup or pulled out and reseeded with more mix each year. Any bare areas may need overseeding each spring to ensure a full stand of flowers. Some annual species will successfully reseed themselves for a few years. Therefore, maintenance of your wildflower area depends on whether you use all annuals or a mixture of annuals and perennials. Since all annual species do not reseed themselves, annual wildflower beds need reseeding each year to maintain a balance of species.

Wildflowers can add an exciting array of color with a different combination of flowers blooming throughout the spring and summer. With the proper, selection, establishment and maintenance, wildflowers can be a success in parks, grounds, or golf courses creating a naturalized setting for people to enjoy. □

Editor's Note: Crystal Fricker is a plant breeder for Turf Seed, Inc. Turf Seed and its extension arm, Pure-Seed Testing, Inc., have been studying wildflowers for more than 10 years.