

FLOWER & GARDEN

THE HOME GARDENING MAGAZINE

Wildflowers

The Case For Native Plants

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The recent surge of interest in low-maintenance meadows has spawned a plethora of wildflower seed mixes that are now available to the consumer. Most consist of a combination of annuals, biennials, and perennials, but some contain only annuals, and a few are composed purely of perennials. Which wildflower seed mix will best suit your needs?

First and foremost, the gardener should be familiar with the various species that are included in a given wildflower mix. Learn about plant heights, colors, adaptability to region, soil type, and sun conditions. Most commercially available "general purpose" meadow mixes contain a variety of flowers that do best in full sun and tolerate a wide range of soil conditions. Many mixes include a few species that are specifically adapted to dry, regular, or moist soils, so that some seed will almost certainly grow no matter where the mix is planted.

Some vendors sell the same mix nationwide, while many companies offer variations for different parts of the country. Most of these commercial wildflower concoctions are surprisingly similar in content. They usually contain plants from all over

the world that tend to exhibit "weedy" behavior: that is, they grow rapidly on an open seedbed. Most are annuals and biennials. This assures quick results, so that the customer is immediately gratified. However, a common problem with these types of wildflower mixes is that by the third or fourth year the annuals and biennials have played out, and been overtaken by undesirable grasses and weeds.

Most wildflower mixes are advertised to yield meadows that flower year after year with a minimum of maintenance. Unless proper care is taken in selecting the seed mix, the desired outcome may not materialize. If long-term results are the goal, it is crucial that a seed mix contain a high proportion of perennials that are adapted to the particular region in which they are planted. This is especially true in the high-rainfall Northeast, Southeast, and Midwest. Plant growth is rapid in these regions, and perennial species tend to naturally dominate the landscape.

An exception to this occurs in arid regions, such as the Southwest, where perennials do not effectively control the soil environment. Native annual wildflowers here will usually self-

seed themselves from year to year. The Far West states also have distinct wet and dry seasons, and require plants that are adapted to that cycle. Specific seed mixes are available for many of the various environments found in the Far West.

It is important that the wildflowers in the mix be matched to the particular soils and slope aspects of a site. Dry, sandy or rocky soils will support a completely different set of flowers than rich, loamy soils. If the area to be planted is on a hillside, the direction that the hill faces can strongly influence what will successfully grow there. South and west slopes tend to be hot and dry. North slopes are cooler and moister, and east slopes are intermediate. Plants that thrive on a north-facing slope may not even survive the seedling stage on a south-facing hillside. Conversely, those that require the heat of the south slope may be completely overtaken by the competition on a north slope. Most companies offer seed mixes for dry soils and normal soils; a few offer mixes for wet soils as well. Some specialty houses will even design custom mixes to suit individual situations.

Most meadow and prairie plants require at least one half day of full

sun in order to perform well. If an area is shady, woodland wildflowers and ferns would be the best choice. There are very few seed mixes presently available for shady areas at this time. Most of our native woodland plants produce only small quantities of seed, and these are often difficult to harvest. Availability of seeds of woodland plants therefore tends to be low, and prices high. Transplants are available for many woodland wildflowers, however. There are a number of nurseries across the eastern half of the United States that propagate and sell a variety of plants for shady areas.

As mentioned before, a critical consideration in the selection of a wildflower mix is its relative proportions of annuals, biennials, and perennials. Many a gardener has been thrilled with the first year or two of their "wildflower" planting, only to despair by the third year when only a few of the annuals and biennials they planted reappear. A reverse phenomenon occurs with mixes composed exclusively of perennials and biennials. Because these plants ordinarily require at least two years to reach maturity, such plantings are typically dominated by annual weeds in the first year. The perennial flowers grow slowly and concentrate on building extensive root systems that will sustain them in the coming years. Underneath the weeds are numerous small flower seedlings that are evident to the experienced wildflower gardener, but not to the average citizen. For the distressed individual who recognizes only weeds, it appears to be an unmitigated disaster. If one is to reap the long-term benefits of an all-perennial mix, a little patience is required at the outset.

Understanding the behavior of the plants in a seed mix is instrumental in developing one's expectations of its performance. For the purposes of predicting the short-term and long-term results that will occur with a given mix, wildflowers can be divided into three basic behavioral groups:

- 1) *Native plants;*
- 2) *Naturalized plants;*
- 3) *Non-naturalized plants.*

NATIVE PLANTS

There is some disagreement on the definition of native plants among botanists and ecologists. Most plants are native to a certain region, usually encompassing many states. Within their individual areas of distribution, some species occur only in specific habitats: these plants are usually difficult to cultivate because they demand special conditions. Plants that thrive in a variety of situations tend to be quite adaptable: because of this flexi-



bility, these species can often be successfully utilized in wildflower seed mixes.

Most native wildflowers are slow-growing and long-lived. They focus first on developing strong root systems. Blooming comes later, after the plant is well-established. It is not uncommon for such native perennials as purple coneflower, butterflyweed, and blazingstar to require three years to flower. This may seem like a long time to wait, but once established they will return year after year. Some native prairie wildflowers have been documented to live for 25 years and longer!

NATURALIZED PLANTS

Although there may be no record of a plant's occurrence in a certain region, that does not mean that it cannot grow and thrive there. We seldom

think of plants as being mobile, but they are fully capable of migrating from place to place. Just because we don't actually see them move does not mean that they cannot establish themselves across large distances. Plant migrations have been occurring throughout the eons, and continue today, now largely due to the activities of people.

When a plant invades, or is moved to a new location, and is capable of reproducing there, it is said to be **naturalized**. Plants from one part of the world can become naturalized in new, far-away areas, either by human intent or by chance. Plants from a certain region of one country can also move into other parts of that same country and become naturalized there.

Some of our best-known wildflowers are actually non-native, naturalized species that originally came to the Americas from Europe and Asia. These include Queen Anne's Lace, Chickory, Dame's Rocket, Ox Eye Daisy (Shasta Daisy), Bachelor's Button (Corn Flower), and Butter and Eggs, among others. Commonly found along roadsides and in waste places in many parts of the U.S., they exhibit aggressive, weedy behavior. These non-native species are heavily used in most commercial wildflower seed mixes, precisely because of their ability to grow rapidly on freshly worked soil.

The introduction of non-native plant species into a region is sometimes associated with undesirable side effects. The great majority of our agricultural weeds, Johnson grass, purslane and quackgrass, for example, have been introduced from Eurasia, mostly by accident. Perhaps worse, certain non-native landscape plants such as purple loosestrife, Tatarian honeysuckle, buckthorn, multiflora rose, and the dreaded kudzu, have been introduced into various parts of the world, then escaped from cultivation and caused serious ecological problems. When these aggressive interlopers break the weak leash of the garden and begin prowling about in the larger landscape, the big losers are often our native plants. The introduction of

exotic plants, although well intentioned, has led to some unfortunate consequences. For this and other reasons, an increasing number of landscapers and gardeners are planting attractive *native plants* instead of naturalized exotics.

NON-NATURALIZED PLANTS

The third category of flowers that are commonly used in commercial wildflower seed mixes are **non-naturalized** species. These are usually annuals from other parts of the world that are capable of growing and flowering on a prepared seedbed, but do not persist without being replanted on a regular basis. Examples include baby's breath and the California golden poppy when planted in climates with extremely cold winters, such as in the upper Midwest. Non-naturalized "wildflowers" cannot actually be considered to be true wildflowers, as they will grow only with a helping hand from the gardener. True wildflowers are generally defined as plants that **grow naturally in the wild without the assistance of cultivation**. It is misleading to call non-naturalized plants "wildflowers", much less to sell them as such. It is particularly distressing for the home gardener when these mixes are planted, bloom for a year or two, and then quickly relinquish the meadow to unwanted weeds.

THE CASE FOR NATIVE PLANTS

Many homeowners and landscapers are now using seed mixes that are composed of wildflowers native to their region. Our native flora has been overlooked for far too long, and is finally being appreciated for its own innate, often stunning, beauty. With the exception of the arid regions of this country, which exhibit a predominance of annual wildflowers, almost all of our native meadow and prairie wildflowers are long-lived perennials. Many grow on a wide variety of soils, and some are perfectly suited to extreme sites where few other plants can survive. Properly installed and managed, native wildflowers constitute a dynamic, self-

sustaining plant community that can actually bring a lifetime of enjoyment.

Native plants also possess the advantage of being adapted to the conditions of their region. For hundreds, if not thousands of years, they have survived and prospered. They are well accustomed to handling the climatic curveballs that Nature occasionally throws their way. The great drought of 1988 clearly illustrated this point in the American Midwest. While many lawns and non-native



flowers curled up and even died, the native prairie vegetation either continued to grow and flower, or went dormant until adequate precipitation finally arrived later in the season. With the advent of late summer rains, a large proportion of the prairie plants that had gone dormant resumed rapid growth, sometimes literally overnight.

Perhaps most amazing of all was that prairie plantings that were seeded in 1988 were surprisingly successful; most species germinated and grew despite the cataclysmic conditions. They were able to utilize what little soil moisture was available in order to survive extended dry spells. In some areas, newly-germinated prairie seedlings endured 50 consecutive days without rain, coupled with relentless winds and temperatures well over 100 degrees F. In other

instances, many seeds simply sat in the soil, waited until rains came in mid-summer, and germinated then. Some seeds remained intact in the ground, overwintered, and came up in the spring of 1989.

There are definite reasons why plants are native to their regions. Sometimes it takes a major climatic event to remind us why.

GRASSES IN WILDFLOWER SEED MIXES

Some wildflower seed mixes include grasses. Grass seed is usually less costly than flower seed, and it may appear that adding grasses "cheapens" the mix. However, grasses are a natural component of wildflower meadows, where they occupy the space between individual flowers. The inclusion of grasses in a seed mix is therefore both logical and ecologically sound. If some sort of grass is not planted, it is a sure bet that one or more unwanted grasses will appear in short order.

Many of the grasses that tend to muscle their way into wildflower plantings are often incompatible with most flowers. Although grasses can be controlled by spraying with selective herbicides, this merely serves to reopen the niche that grasses naturally occupy. The inevitable result is the return of some kind of grass, or worse yet, other weeds. As one begins to rely upon spraying to maintain the meadow, it suddenly becomes less "low-maintenance" and more like "lawn maintenance." Which is what most people try to avoid when they plant a meadow in the first place.

By including selected grasses in a mix, it is possible to establish types that will coexist with the wildflowers. Different mixes rely upon various grasses to fill this niche. Many use short, non-aggressive cool season varieties, such as sheep fescue (*Festuca ovina*) or hard fescue (*F. ovina* var. *duriuscula*). These tend to stay fairly low, and leave plenty of rooting zone for most flowers. Sheep fescue grows in a clump rather than developing into a sod. This type of growth form is particularly compatible with flowers because it leaves space open

for them between the clumps. Sod-forming grasses such as Kentucky bluegrass, tall fescue, smooth bromegrass, and our warm-season native switchgrass, generally make poor companions for wildflowers. They spread aggressively, infringe on their neighbors, and often lead to the eventual exclusion of all but the most competitive wildflowers.

Of our native warm-season prairie grasses, three clump-formers, or "bunchgrasses", stand out as excellent companions for wildflowers. These are little bluestem (*Andropogon scoparius*), side oats grama (*Bouteloua curtipendula*), and Indiangrass (*Sorghastrum nutans*). Little bluestem and side oats grama grow to between two and three feet in height; Indiangrass reaches between four and seven feet tall. All three grow readily on almost any normal, well-drained soil, and can tolerate very dry conditions. Side oats grama leaves the most room for flowers due to its open growth form and relatively shallow roots. Little bluestem is more competitive, but is very popular because of its striking bronze fall color. Indiangrass is usually planted with the taller prairie flowers: it possesses a beautiful golden seedhead that is matched by few other grasses anywhere.

When seeded with wildflowers, grasses weave the "fabric" that holds the "floral tapestry" of the meadow together. Throughout the spring and summer, the grasses serve as a backdrop to highlight the showier flowers. Then, at the end of the growing season, the grasses send up their seedheads and don their fall colors to extend the meadow's period of interest well into the winter. The bronzes and golds of the prairie grasses provide an especially welcome addition to the late season landscape, long after the last flower has bloomed.

WILDFLOWERS AND WILDLIFE

Equally as exciting as the wildflowers themselves are the numerous birds and butterflies that are attracted to them. Many homeowners are planting meadows and prairies

specifically to create habitat for these wonderful winged creatures. The activities of these garden visitors span the four seasons, and add yet another dynamic element to the wildflower patch, whatever its size.

In spring, ground-nesting birds utilize the cover afforded by the grasses to brood and rear their young. Summer flowers attract insects, which, in turn, constitute the most important element in the diet of young birds. Come autumn, many of the native wildflowers and grasses produce highly nutritious seeds. These are relished by a variety of songbirds, and attract many migrants that stop over on their long journey south. Throughout the winter, resident birds will forage for the remaining seeds to help them survive the long, cold months.

Many butterflies have developed close relationships with native wildflowers. As our few remaining undisturbed habitats continue to be lost to development, many native plants are becoming extremely rare. The implications for many butterflies are dire: with the loss of their host plants, some butterfly species are inching closer and closer toward extinction. Unless native wildflowers and the habitat they provide are restored, we can expect to see further declines in overall butterfly populations, and more losses of rare and endangered species.

The home gardener can help reverse this trend by planting native flowers, grasses, trees and shrubs. Combined together, these plants beautify the landscape and create new habitat for a variety of wildlife. This is particularly effective if the native plantings replace the ecological desert known as "lawn". Providing little food, no cover, and subject to regular incursions by loud, deadly machines, the lawn is no friend to wildlife. Add a regular dose of chemicals to keep it "healthy," and the lawn becomes the last place that any wild thing would want to spend its time.

Lawns can also be expensive and time-consuming. Many people are replacing portions of their lawns with wildflowers so that they have less

turf to care for and more free time to enjoy other pursuits. When selecting a wildflower seed mix, why not choose one that will provide long-term results and also benefit our wild friends? Then integrate the meadow or prairie with many different berry-producing shrubs, and coniferous and deciduous trees. This will go a long way toward making your property more attractive to a wide variety of wildlife.

WHICH MIX FOR YOU?

So, the question remains: which wildflower seed mix is best for you? Your needs and expectations will determine the answer. First and foremost, the mix must be suited to your climate, soil type, and personal taste. If you want a meadow that will bloom year after year, choose a mix with a high proportion of perennials that are adapted to your region. If instant results are a necessity, make sure that the mix has some annuals in it, but not to the exclusion of longer-lived varieties. For those interested in preserving a part of our natural heritage of plants and animals, a mix of native flowers and grasses is the answer.

Whatever your choice, make sure that the mix will do what *you* want it to do. Don't be fooled by pretty pictures: know the behavior of the plants that will grow from the seeds you are buying. This will require some investigation, but it will be well worth the effort. Once your wildflower planting is installed and established, you can sit back, relax, and know that you made the right decision.

Neil Diboll is co-owner of Prairie Nursery, a leading producer of native prairie wildflowers and grasses. Their informative, illustrated catalog is available by sending \$2.00 to:

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