



Successful Wildflower Meadows

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Many gardeners want to start a wildflower meadow, being inspired by those along the roads. A properly constructed meadow is aesthetic, yet results in less maintenance than lawns and gardens. Less maintenance also means less inputs such as from water and fertilizers, which in turn means less expense and less potential for pollution. Better water infiltration means less erosion. A good meadow increases biodiversity, resulting in fewer pest and disease crises, and more attraction to wildlife.

To be successful, you should be aware of some myths, and five key steps.

Myth 1. You can get color easily spring through fall. Spring wildflowers typically bloom in woodlands, summer ones in meadows. Only through proper selection can you get flowers most the summer.

Myth 2. These are no maintenance. They are low, but not no, maintenance. In fact, meadows are a natural succession in our region to a woodland, so require some work in future years weeding out woody plants to keep as a meadow. Prairies in the Midwest, on the other hand, are stable and the end result of succession there.

Myth 3. You simply can scatter seeds. Nature does this, but with millions more seeds than we can afford. So we must compromise by preparing the soil well and getting rid of weed competition first.

Steps to Establishing Meadows

1. Site Selection. Choose a site with full sun, or at least six hours a day. It should have good air movement. This helps keep diseases down, and the movement in wind will make plants sturdier, stems stronger. The site should have few weeds. An already cultivated site such as a field or garden plot is ideal. A lawn can work too. The hardest is an overgrown garden bed, or old field full of aggressive weeds and grasses. A site next to such an area is also difficult, due to weed seeds blowing in. A site next to a formal landscape, or in such a neighborhood, may also be a hard sell. In such formal areas, meadows may need to be out of public sight, or with an informal transition area between.

2. Plant Selection. Plant selection is important for long bloom, as noted already, but more importantly for species that will last under your conditions. Soil type is not as important as whether the site is dry or moist. Meadows that are too wet will quickly revert to trees and shrubs, or wetland species such as sedges.

Plant selection can get quite involved, keeping in mind various ecological and climatic factors. The key is to have a diversity of species, as found in nature, with a mix of graminoides (grasses and grass-like plants) and forbs (flowering meadow wildflowers). The following examples should work on a dry site.

- Species should be chosen to fill the lower (birdfoot violet, clover), mid (smooth aster, black-eyed susan, butterflyweed, showy goldenrod, tufted hair grass), and upper levels (bee balm, compass plant, coneflowers, wild indigo, Carolina lupine, switchgrass) above ground.
- Species should be chosen to have a mix with surface (bee balm, black-eyed susan, birdfoot violet), deep fibrous (smooth aster, showy goldenrod, little bluestem), and tap roots (wild indigo, butterflyweed, carolina lupine).
- For the north, choose cool season species.
- Add some species that "fix" nitrogen (mainly legumes such as wild indigo, Carolina lupine, and clover that make air nitrogen available to roots).

- Finally, use a mix of species that will grow and stabilize quickly in the first year (black-eyed susan, lavender hyssop), over two to four years (coneflowers, bee balm, spiderwort), and for the long term (butterflyweed, wild indigo, blazing star, compass plant).

If all this seems too complex, buy a good quality seed mix from a reputable supplier. When it comes to these seeds, you truly get what you pay for. Inexpensive mixes often contain mainly annuals which are gone after the first year, species not native to your area, seeds that have poor germination, potential weedy species, or just a lot of seed debris.

Another consideration under species selection, whether you buy a mix or make your own mixture, is whether you want a short term (1 to 5 years) or longer term meadow. In the former you may have more annuals for color up front, being out competed with weeds after a few years. A long term meadow may have mainly perennials which may take several years to begin a good display, but will last and out compete many weeds.

3. Site Preparation. This is the step often overlooked, yet the key to success or failure. Since these wildflowers are usually less competitive than weeds, the site should contain no weeds or weed seeds. Unless the site has been cultivated already, with few to no weeds, there are several methods you may use.

You may smother vegetation with black plastic for a whole growing season. You may also smother with thick layers of leaves, grass clippings, or newspapers covered with these. Another method is to plant a summer buckwheat crop, cut and tilled in before going to seed, followed by fall planting of winter wheat, cut and tilled in late winter. You may need to repeat this a second season. Or you may repeat deep soil tillage every three weeks for a full growing season. If a lawn with no weeds, remove the sod using a sod-cutter that can be rented from equipment rental firms. Many use a systemic herbicide, but avoid those that are residual (last in the soil).

4. Sowing or Planting. You may sow in spring or early summer, which favors grasses over the forbs. Keep the spring-sown meadow watered as you would a newly seeded lawn, often for a month or two. Sowing in early fall favors the forbs, as some grass seeds rot then. Since many seeds will either not germinate until the following spring, or germinate and not grow until then, you should also use annual rye as a winter cover crop with fall sowings. Avoid sowing in mid to late summer when there may be drought, seeds drying out before germinating. For sowing, aim for about 80 seeds per square foot. In several years this will result in one or two plants in this space. Of this number per square foot, for spring sowing use about 60 forb and 20 grass seeds. This is about 9 lbs. and 3 lbs. per acre. For fall sowing, use a higher proportion of grass seeds.

For small areas (for instance under 1000 square feet), consider using already-germinated small plants you can buy in trays as "plugs". These are more costly than seeds, but will establish much quicker. You can find these from specialty suppliers, either local, mail-order, or online.

Number of plants of any one type will depend on how you will be viewing the meadow. If seeing it from a distance, you'll want to use larger numbers of each plant type, and place them in sweeping masses. If a small area, or one viewed at close range, you may have few of any one type plant, and have them all mixed.

5. Post-planting management. In the first two years, seeds of annual and biennial weeds still in the soil or blown in will grow faster than your perennial wildflowers. Don't allow such weeds the first year to get above one foot tall before cutting back to four to six inches high. The wildflowers will, for the most part, remain short and below this height. The second year, cut back to about one foot high since plants will be larger. A weed or string trimmer works well for this. Don't pull weeds, as this may also disturb wildflower seedlings. Don't use herbicides as these may drift, killing large patches of both weeds and wildflowers!

In the third and future years, burn off the meadow (if this is allowed in your area, and by following local laws on burning), or mow it close to the ground. This should be done in late fall or early spring, removing the debris from mowing. This exposes the soil to the rapid warmth from the sun in spring, encouraging your wildflowers over cool-season weeds. Learn your wildflowers, and over the years you can selectively weed out any weeds or woody plant seedlings.