

Flower Gardening Basics

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The Flower Garden

When it comes to flower garden design, it's mostly up to you. Sure, it's important to do a good job of soil preparation and carefully match plants to the site. If you ignore these imperatives, your results will likely be disappointing.

The aesthetics, however, are more a matter of personal preference. You might prefer a formal look with straight edged beds and plants in orderly patterns. Or you might prefer a more natural look with sweeping curves and irregular clumps of plants. The styles you choose are up to you.

The tips below avoid as much as possible the prescriptive "shoulds" that dominate advice about garden design. Instead, they'll point out the aesthetic consequences of different strategies. Remember that, in most cases, there is more than one way to arrange plants, and that many of the "rules" of garden design were made to be broken. What's important is that your garden look good to you.

Match plants to the sun

Break this rule at your own peril. Different plants need different amounts of light. Most candidates for flower gardens prefer full sun (6 or more hours of direct sun each day). Others need full- or part-shade. Some plants may grow fine in the shade but flower better in full sun.

Pay attention to soil needs

This is the other unbreakable rule. Most garden plants need well-drained soil. Unless you are going to limit yourself to plants that can tolerate boggy soil conditions, avoid locating flower gardens where there is standing water after heavy rains or during the spring thaw. Prepare soil well in advance of planting -- preferably in fall for planting the following spring.

Where to plant?

Plant flower beds where you can see them. Especially consider the views from private outdoor spaces such as patios, decks, and terraces. Don't forget about how the beds will look when viewed through windows from inside the house. Also consider how neighbors and passersby will see your gardens.

Trees are tough

One of the most tempting places to put your flower garden is around the base of a mature tree. This is one of the most difficult places to grow flowers because of the deep shade and intense competition for moisture and nutrients from tree roots. Very few plants will thrive here -- with the exception of some tough, competitive groundcovers.

Start a sketch

Now might be a good time to start sketching your design plans on paper. Start with the footprint of your house. Add the garage, other buildings, driveway, walks, fences, and patios. Sketch in existing trees and other plantings. Indicate which way is north on your sketch so that you become more aware of how much sun different places receive. For example, areas close to the north sides of buildings get little direct sun.

Consider the slope

Flower gardens are easiest to establish on level or slightly sloping ground. Steep slopes pose special problems, especially protecting soil from erosion. They may require terracing if you want to create flowerbeds without losing soil. Such slopes might also be good candidates for a tough, spreading, mat-forming groundcover. Some steep slopes might be ideal sites for rock gardens. Indicate steep slopes on your sketch.

Foundation plantings

Many homes are girdled by often-overgrown evergreen shrubs. With older homes, the purpose of these plantings was to hide ugly foundations and basement windows. Most newer homes lack ugly foundations, but many still sport the shrubs -- more out of tradition than anything else. Consider removing some of these shrubs and using the space occupied by foundation plantings for flower beds or mixed plantings, or creating beds in front of the shrubs.

Borders and islands

Returning to your sketch, look for likely spots for creating new flower beds. These may be border beds, tied along one edge to a building, fence, or walkway. Or they may be island beds, carved out of the middle of the lawn.

Background

Before you pencil in potential bed locations, consider the background. Most plantings benefit from a background to provide some visual contrast to the plants. Buildings, fences, hedges, or a row of evergreen trees can keep the plants from just melting into the existing landscape.

Growing vines on a fence can give that background an interesting texture. With island beds, larger plants in the center of the bed can provide a background for other plants. One caution: Solid backgrounds can restrict airflow and increase disease problems if plants are spaced too close together.

How wide?

In a small yard with limited space, 2- to 3-foot-wide borders may make the most sense. The rule of thumb for traditional English perennial borders is that they need to be at least 6 to 8 feet wide to accommodate the range of plants needed to provide varying heights and continuous bloom. (If shrubs are used as a background at the rear of the bed, allow at least two feet between them and the perennials for good airflow and access for maintenance.) If the cottage gardening bug bites you, you might find your beds expanding to take up most if not all of the yard, with just a few footpaths or stepping stones winding through. But you need not feel restricted by either of these traditional garden styles. Feel free to try the range of options that fall between these two.

What shape?

The beds in formal gardens usually have straight edges that are easier to maintain. But some gardeners find these dull. Gently curving edges provide a less formal look and give the bed the illusion that it is longer than it really is. At the other end of the spectrum, sharply scalloped edges are harder to maintain and mow around. Some gardeners find such complicated edges distracting.

Edging

Use a garden hose to mark the edge of your bed before you create it. It's not a bad idea to leave it in place for a few days to give you time to work around it, view it from different angles while envisioning the plants, and adjusting the boundary. You can also mark the edge with flour, lime, or landscape paint. Pencil beds into your sketch.

Plan to maintain the boundary between lawn and flowerbed by edging with a flat spade, half-moon edger, or weed-trimmer. You can also work a variety of edging materials into your plan, including products made from metal or plastic, bricks, field stones, or pavers.

Plant height

Now it's time to start sketching which plants might go where in your beds. Most gardeners arrange plants in beds with the tallest plants in the rear and the smallest toward the front. If you are designing a bed to be viewed from a window, this might mean having the shorter plants closer to the house. Similarly, island beds usually have tall plants in the center and smaller plants toward the edges.

A general plan might include plants that are less than 1 foot tall in the front third of the bed, plants that are greater than 3 feet tall in the rear third of the bed, and plants between 1 and 3 feet tall in the center third of the bed. Don't adhere to these guidelines too rigidly unless you want your garden to look like stair steps in profile. You can bring some of the taller plants forward and plant some of the shorter plants farther back to create a more varied topography.

To create a smooth gradation of heights, the tallest plants should be no taller than about two-thirds the width of the bed, or half the width of the bed in the case of island beds.

Plan for constant color and interest

Choose plants so that your garden offers color and interest throughout the growing season and even in winter. Spring-flowering bulbs are good for early color. Herbaceous perennials have specific times during the growing season when they flower, ranging from one to as much as six weeks. Many annuals, once they start flowering, continue to bloom until fall frost. (A few even continue after frost.)

As you continue to sketch your plan, note when you expect each species to bloom. Many successful designs start with penciling in fall-flowering plants or plants that provide winter interest, as these are often neglected in garden plans. Then work back through the seasons to fill in with summer- and spring-flowering plants. Also plan for pleasing combinations of color.

Foliage and form

Spectacular blooms grab our attention, but don't ignore the rest of the plant in your planning. Many plants have foliage that adds color and interesting visual textures to the garden. Plants also come in a variety of shapes (also called form or habit). Some plants grow into cushions, mounds, or clumps. Others are upright and spiky. Still others are round and bushy. Some gardeners mix these different forms in close proximity for a varied effect. Others group plants with similar forms together.

Arrangement

In formal gardens, plants are usually arranged in rows or other regular patterns. In informal gardens, they can be in clumps (a circular group of three or more plants) or drifts (an elongated grouping of plants). Clumps and drifts are most often planted with an odd number of the same kind of plant to give the appearance of a more natural grouping.

Planting groups of the same kind of plant in clumps or drifts provides more visual impact than planting a single plant, unless the plant is large enough and spectacular enough to hold interest by itself. (These are called specimen plants.) For example, a single cut-leaf Japanese maple can have a dramatic impact in an ornamental planting. A single zinnia, on the other hand, won't attract much attention.

Alternating individual plants with flowers of different colors in a rigid pattern (red, white, red, white, etc) in close proximity can have a jarring effect. Repeating a plant or color in several places along a border, however, can add cohesiveness to a seemingly random planting.

Other plants

Many flower gardeners rely on herbaceous perennials as the backbone for their plantings, using spring-flowering bulbs for early color and annual flowers to fill in gaps. Don't feel limited by such orthodoxy. Many gardeners also incorporate evergreen or flowering shrubs and small trees into their gardens. These are especially helpful for providing fall color and winter interest. Ornamental grasses -- from the very tall to the very short -- can provide background, form, texture, and fall and winter interest. Many vegetables and herbs provide a double bonus, being pleasing to both the eye and the palate.

Specialty gardens

You may decide at some point to specialize in a particular type of gardening. For example, rock gardeners specialize in growing plants (many of them native to alpine regions) that thrive in gravelly, well-drained soils. Other gardeners have particular interest in growing plants that attract butterflies or hummingbirds.

Fascinated by particular ecosystems, some gardeners create water gardens, bog gardens, prairie gardens, or woodland gardens. Those focused on different plant uses create herb gardens, fragrance gardens, cut-flower gardens, or edible landscapes. Others create authentic gardens reflecting the traditions of another culture -- the Japanese meditation garden, for example.

You may decide to incorporate some or all of these into your own garden, creating your own unique style. After all, that's what gardening is all about.

Cornell University -- **Guides to 269 flowers and foliage plants** -- Each profile contains a detailed description and growing instructions, site and soil requirements, varieties, and special uses.

<http://www.gardening.cornell.edu/homegardening/scenec139.html>

Cornell University -- **Home Gardening** --

<http://www.gardening.cornell.edu/homegardening/index.html>

Seed Starting Tips

Supplies - What You'll Need

Here are the basics of what you'll need to get your garden seeds started:

1. **Containers** - Either purchased pots or flats or containers you've saved, like egg cartons and yogurt cups. Used pots should be cleaned and disinfected by soaking in 1 part bleach to 10 parts water.
2. **Potting Mix** - Seeds do best in a soilless mix where there are fewer inherent problems than with garden soil
3. **Seeds** - Your choice
4. **Labels/markers** - Trust me, you won't remember what's what
5. **Plastic Bags or Covers** - These will trap warmth and humidity where the seeds need it
6. **Water**
7. **Light Source** - If you don't have a bright window, you will need some kind of florescent or high density plant light

Preparing the Potting Mix

Loosen and dampen the potting mix before you put it into your seed starting containers. It is easier to get a uniform level of moisture if you do it this way.

Dampen the mix to the consistency of a rung-out sponge. It should be wet, but not dripping, with no dry lumps.

There are many good potting mixes available. Using a soilless potting mix rather than outdoor soil is preferable because potting mixes don't readily compact, don't contain weed seeds and don't have disease spores and other possible problems.

Also, since new seedlings don't require fertilizer until they sprout their first true leaves, you don't really need a mix with fertilizer already in it.

Filling the Containers

- Use the pre-dampened potting mix to fill your seed starting containers.
- Don't pack the potting mix into the container.
- Fill about 2/3s full and tap the container on the table top, to help the potting mix settle.
- Gently firm with your hand or a small board.

Planting the Seeds

Start Planting: Once you have your containers prepared, you can begin planting the seeds.

- Make sure you read the seed package for special instructions. Some seeds may require a period of pre-chilling or soaking.
- Small seeds can be sprinkled on top of the potting mix. Larger seeds can be counted out and planted individually.
- Use at least 3 seeds per container, since not all seeds will germinate and not all that do germinate will survive. You can thin extras later.

Finish Planting

Finishing Touches

- Cover the seeds with more dampened potting mix and then gently firm again.
- Re-check your seed packet for information on how much potting mix should go on top of the seeds. Generally, the smaller the seed, the less you need to cover them.
- There are a few seeds, like lettuce, that require light to germinate and should barely be covered with potting mix.

Watering Newly Planted Seeds

And Water Again:

Although the potting mix was pre-dampened, it is still a good idea to sprinkle some additional water on top of the newly planted seed. This insures that the top layer of mix won't dry out and it also helps to firm the potting mix and insure good contact between the seed the mix.

Creating the Right Atmosphere for Your Seeds

Greenhouse Effect: Your seeds are now ready to be covered loosely with some type of plastic. This will help hold in both heat and moisture. You can place the whole container into a plastic bag or simply lay a sheet of plastic over the container. If you have special seed starting trays with plastic covers, use those.

Heat: Move your container to a warm, draft free spot and check it daily. Most seeds germinate best when the temperature is between 65 and 70 degrees F. The top of a refrigerator is an idea spot or you could consider purchasing heating mats specially made for germinating seed.

Heating mats go under the potting containers and heat the soil from below. You will usually need to water more frequently when using heating mats. Caution: Only use heating mats certified for seed starting use.

Light and Air: In general, seeds will not need light until they emerge. They will need air circulation under the plastic or you will be encouraging mold.

Signs of Life: Remove the plastic as soon as you see a seedling emerging and move the plant into indirect light. Be sure the potting mix stays moist, but not wet.

Emerging Seedlings

First Signs of Growth: Once your seedlings begin poking through the soil, they will start to straighten up and unfurl. What look like two leaves will appear. These are actually leaf-like structures, called **cotyledons**, that are part of the seed and serve as food sources until true leaves are formed and the plant is capable of photosynthesis. At this point you should move your seedlings under a light source.

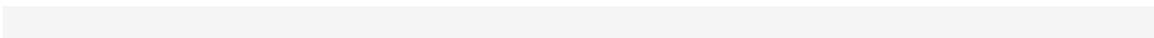
Move into the Light: Your seedlings will need between 12-18 hours of light each day. This may seem extreme, but artificial light and even the low rays of the winter sun are not as intense as full summer sun. The best way to insure regular long doses of light is to attach your florescent or high intensity plant lights to an automatic timer.

True Leaves

True Leaves: As the seedling grows, the cotyledons will wither and what are called the first "true" leaves will form. This is when your seedling begins actively photosynthesizing. Since it is growing in a soilless mix, you will need to give it some supplemental feeding at this point. Use a balanced fertilizer or one high in nitrogen and potassium, to encourage good roots and healthy growth.

Potting up: Seedlings can remain in their original containers until you are ready to plant them in their permanent spots. However it is common to move the seedlings into a larger pot once several sets of leaves have formed and the seedling is a couple of inches tall. This is called "potting up" and it allows the roots more room to develop. Three to four inch pots are good sizes to pot up to, allowing plenty of room for root growth.

Thinning: If more than one seedling is growing in the same pot, either separate the seedlings into individual pots or cut off all but the strongest seedling. Don't try to pull out the extra seedlings, since this might hurt the roots of the seedling you are keeping.



Hardening Off

By the time the temperature warms outside, you should have stocky, healthy young plants. Before moving them out into the garden, take a week or two to gradually introduce them to their new growing conditions. This is called **hardening off**. It gives the plants a chance to acclimate to sunlight, drying winds and climate changes.

- Move the plants to a shady spot for increasing amounts of time, several days in a row.
- Bring them in or cover them if the temperature looks like it will dip.
- Gradually increase the amount of time they spend outside and the amount of sunlight they receive until you see that they are growing strong and appear ready to go out on their own.
- Water your seedlings well before and after transplanting and try not to transplant during the hottest, sunniest part of the day.