



JR Kelsey



# The Basics of Growing Plants in Containers for Pollinators

Plants in containers are still beneficial to pollinators, even if there are just a couple pollinator-friendly plants. Using containers like pots or planter boxes can be beneficial if you don't have time or space for a large garden, or just want to add dimension to your garden.

By planting pollinator-friendly plants in containers, any apartment balcony, window box, small deck, or downtown corner can contribute to a healthy landscape for pollinators.



Mark Sadowski

## What to plant

Annuals are by far the best and easiest choice for growing in containers. For aesthetic or other reasons, you can use any kind of plant in a container, including perennials, shrubs, trees, ferns, and grasses.

As long as you can meet the plant's requirements in a container, they should do fine. However, these plants tend to be more expensive than annuals and over-wintering them in the container outdoors can be risky. Also keep in mind that plants are less hardy in an over-wintered container (typically one or two hardiness zones less hardy).



## Choosing a container

Containers can be made of ceramics, plastics, wood, or any other material that will hold up to the weather for at least a season. Be sure the container has holes in the bottom so excess water can drain. In addition to allowing room for more plants, larger containers give more leeway to watering requirements. The ideal container should be covered by plants when they've reached maturity and yet offer enough space for adequate root growth.

## Soil

Do not use garden soil in containers. The commercially available soil-less media you buy at garden centers works well. It will most likely consist primarily of peat moss, ground bark, or a combination of the two. These mixes will ensure your containers drain well and discourage pathogens. Depending on the peat moss content of your media, your containers will vary somewhat in how quickly they will drain. Those with more peat will hold more water, but all commercially available mixes should work well for any containers you would use for common pollinator plants.



## Watering

Because your container and soil-less media are both designed to foster drainage, you will need to get in the habit of watering regularly. But be careful! **Too much watering can be just as damaging as too little watering.** Your plants require both water and air at their roots to remain healthy and properly function. Too much water means too little air and the plant's roots rot. Too little, means they dry out. Either way, the plant suffers from lack of water and nutrients and dies. Fortunately, a pot with soilless media is designed to make watering as easy as possible.



However, it is best to water only when needed. Ideally, you water to full saturation just as the container is drying out. When the pot is almost dry again, repeat. Of course, outdoor containers are subject to rain and great differences in temperature, so get in the habit of checking how dry your media is before you water. Obviously, in cooler and wetter weather, you'll need to water less or not at all. In dry, hot periods, you might need to water twice a day.

If you consistently check the soil by feeling it a few inches below the surface before watering, you'll soon get a sense for when you need to water.

Water with a gentle spray using a quality watering can or garden hose attachment wand. The ideal spray will drench the soil quickly without blasting the foliage with a jet of mist.



Typical garden hose attachment wands for gentle watering

## Light

Plants prefer different levels of exposure to the sun. Our [detailed plant guide](#) lists the sun requirements for all the Zoo's recommended pollinator plants. Different plants may require full sun, part shade or part sun (same thing), or shade. Full sun plants require six or more hours of direct sunshine. Part sun or part shade plants require four to six hours of sun, and shade plants need under four hours of sun.

## Fertilizer

Peat and bark-based media on their own provide virtually no plant nutrients. Some brands are now including fertilizer in their mixes and these products will prominently advertise this on the bag. If your media does not have fertilizer, you will need to provide it.

If you go with chemical fertilizers, choose those that include micronutrients. These are nutrients plants need at much lower levels than the typical N-P-K (or nitrogen, phosphorus, and potassium), which are in fertilizers. There are different types of fertilizers: water soluble types you mix with water, regular release granules, slow-release granules, and a variety of organic types. All are effective if used according to directions.



Amanda Wischmeyer

Water soluble fertilizers provide immediate nutrients to plants, which is very useful to give plants a strong start early in the season or when they need a quick shot of pick-me-up. Regular release granules also provide immediate nutrients to a lesser extent. Slow-release granules are designed for a single application to provide a steady supply of nutrients over time.

The best organic fertilizers for containers are fish emulsion (some of which have a strong odor) and seaweed extract. Both are low in N-P-K, but do offer micronutrients.

Do not use more fertilizer than the labels recommend. Too much fertilizer can not only be harmful to your plants, it can also leach into the environment and cause issues to concrete, decks, soil, and the quality of water in our streams and lakes.

## Fixing Issues

If your plants do not appear to be thriving, first check the watering situation. Has it been extremely wet or cold? Hot and dry? Does the container smell bad? Are the roots rotting? If water is not the issue, try to remember when the plant was last fertilized. Resist the impulse to immediately water and fertilize a plant just because it looks bad without doing a little investigation.

## Diseases and Pests

You will seldom experience pest issues with most container plants if you buy healthy plants from reputable garden centers. Choose plants that score high in the Cincinnati Zoo & Botanical Garden's trialing program or in other trials from our region, use a high-quality soil-less media mix, water in a timely fashion, and fertilize according to the product label.

If watering and fertility are not the issue, then it's time to consider whether it has a disease or problems with a pest. If a container plant is diseased, consider removing it and replace it with something different. Seldom is it worthwhile or effective to treat with chemicals.

If you suspect a pest, first try to identify what insect is doing the damage, and then check with your local Extension office or other scientific references to determine if this insect and its damage are anything other than cosmetic damage. And remember, many times, your pollinator friends will take care of the problem if you give them a little time. For a pollinator container, chemical insecticides are seldom necessary.



Sandy Dobberstein



Myra Bhatanger

## Transplanting

The plants you buy from the garden center will be growing in a soil-less media. This could be similar to the one you're using in your pot or very different. Sometimes, you'll find that the roots of your new plants will be somewhat root-bound when you remove them from their cell packs or pots. That is, the roots have outgrown the pot and become a dense mass or ball of roots. To mitigate both issues, we suggest gently breaking up the root ball and spreading the roots out into your container's media as you plant. Follow with a thorough watering to help the media settle around the roots.

## Additional Tips and Tricks

Here are some ideas and advice that might help you enjoy success and also save time and money.

- Art is in the eye of the beholder, but the best containers tend to have simple designs. There is nothing wrong with a container filled with only one variety of plant, however the go-to formula for container design is to include a thriller, a filler, and a spiller. The thriller is tall and at the back or center. The filler occupies the middle ground while the spiller drapes over the side. 95% of the finest designs you've ever seen use this template, and, because of the many fine annuals available in the market, the design options are almost endless.



Julie Chartrand  
Garden pot with thriller, filler, and spiller plants



Nancy Krueger

- To save money on soil-less media and to aid drainage, fill up excess space in the bottom of large containers with old milk bottles or other filler.
- Consider pinching or pruning back strong new growth to encourage bushier plants and potentially more bloom.
- Consider applying a thin layer of mulch on the surface if your pots are drying out faster than you like. The mulch can be anything from ground-up bark to fish aquarium gravel.
- Understand that Mother's Day weekend is the traditional start of the gardening season for a reason! We can still get cold weather and frost up to about mid-May. If you are tempted to start your container early, you will need to bring them inside or protect them in some other way if the temperature is expected to fall below 45°F.