



# Container Gardening

Since early times, gardeners have grown plants in containers. It is as old as gardening itself; flowering plants were grown in ornate vases in China long before the Christian era began. Shrub-filled clay pots were a feature of the gardens in Ancient Greece, Egypt, and Rome. The Grand Gardens of Britain and France have long had their impressive stone urns filled to overflowing with flowers.

Container gardening has become very popular partly because of the increase in the numbers of apartment and condo 'gardeners'. Another reason is because many homeowners want to add color to their decks, porches and patios. Container gardening is amazingly flexible; a broad spectrum of plants can be used, including some very pretty herb and vegetable plants. Container gardening lets you add visual interest to anywhere you want to draw the eye or direct traffic. **Read our 'Vegetable Gardening In Containers' handout.**

Container gardens provide focal points that grab attention, and screen what you don't want people to see. With a little practice, you can learn to create attractive focal pieces for your garden, patio or home, by planting an eye catching variety of flowers and plants. There are a few guidelines to follow, but otherwise the possibilities are endless.



## Soil

Soil is the single most important part of container gardening. It is the difference between success and failure. A good potting soil mix drains well, retains moisture, and provides support for container plants. For container gardening, it is best to use a commercially bagged, multi purpose soil, such as **Black Gold All Purpose Potting Soil**. This soil consists of a mixture of compost, pumice, earthworm castings and peatmoss; excellent for all plants.



**Do not ever use plain garden soil in your container gardens.** Soil taken directly from the garden, to be used in pots, tends to compact and become hard. Regular garden soil in pots also makes it difficult for plants to grow, and for roots to develop. Regular garden soil often provides inadequate drainage and it may contain unwanted weeds, insects or diseases.



Even though commercial potting soil is not sterilized, it has been pasteurized; which means it should not contain any harmful insects or diseases.

If your container is deep, you can put a layer of gravel, pot shards, or 'packing peanuts' in the bottom of the pot to reduce the amount of soil needed. Another way to reduce the amount of soil in a pot, and to help make the pot lighter, is to use an **'Ups-A-Daisy Planter Insert'**. You can choose a size that fits in your pot about halfway down (for most plants); raising the bottom of the container. This also allows for proper drainage and for essential oxygen to access plant roots.



**Always use fresh potting soil every year.** Older potting soil can retain insect eggs or

diseases from the previous year. The soil is not bad, so mix last year's soil into your gardens to improve that soil. However, if you do want to reuse your older potting soil, mix it 50/50 with fresh, new potting soil to refresh it for the new plants. Remember, soil is the single most important part of container gardening.



## Sunlight

You can make any container plant happy with the right amount of light. One advantage of container gardens is that they can be moved to different locations if needed. Full sun is considered to be at least 6 hours of direct sunlight, while less than 2 hours of sun is considered shade.



While some plants will only grow in the sun and some plants will only grow in the shade, many plants will grow in both the sun or shade. As a rule of thumb, cluster sun loving flowers together for a hot sunny spot. Let shade tolerant combinations fill pots to be used in spots under trees and in dark corners. Plant a combination of both sun and shade flowers for all the conditions in between.

Remember that plants grow toward the light, so rotate the pots occasionally, especially those plants growing near fences or within other barriers of light.

## Water

The task of watering is more time-consuming than any other part of container gardening, and is probably the most difficult to master. It is something that cannot be done on a regular routine.



You may only need to water your containers once or twice a week when they are first planted. Later in the summer, you may need to water them once or twice a day.



Factors such as sunlight, wind, size and type of container, temperature, location, and soil type all have an influence on the watering needs and schedule.

Shaded containers do not dry as quickly as pots in the sun. Clay pots breathe and dry out quickly. Plastic pots retain water and do not dry out as fast. Because of these varying factors there is not one 'clear-cut' watering routine.

An easy way to test to see if a container needs water is to use a moisture meter. Moisture meters are reliable and are very accurate. Another method to test water needs is 'the knuckle test'. Stick your finger into the soil down to the first knuckle. If your fingertip is dry, it is time to water.



How much water is enough? Irrigate every pot until water flows out the bottom. If your pot drains into a saucer, let it set in water for about an hour. After an hour remove the excess water. A saucer that stays full of water can mean root rot and death for plants. A turkey baster or a sponge is an easy way to remove excess water from saucers of large containers.

If, on the other hand, a container completely dries out, the soil shrinks and pulls away from the pot. Newly added water will just go out along the edge of the pot, and right down to the bottom, instead of soaking into the dry soil. The soil stays dry even after watering. The plant will die unless the soil is able to re-absorb enough water - quickly.



A dry pot will need to be completely soaked in the bathtub, a large bucket, or another container of water, for about 30-60 minutes. It takes that long for the soil to soak in enough water, that is needed for the soil to swell back to normal. If the pot is too large to move, poke holes in the soil with a pencil. Water the pot every 10 or 15 minutes for at least an hour. Make sure the water is penetrating the soil, not just flowing down the sides.

## Choosing a Container

The sky is the limit when it comes to choosing containers for your plants to grow in. You can use plastic pots, clay pots, an old bucket, a bushel basket, a wooden fruit crate, a whiskey barrel, a wire basket, a window box, an old hollowed out log, or anything else that will hold soil. The container should be stable, durable, and most importantly, have drainage holes.

**Terra cotta pots** are available in a wide range of sizes and styles.



Clay is one of the oldest materials to make containers. Keep in mind, however, clay pots are brittle and will break if dropped. Also, their porous nature means they dry out quickly and need more frequent watering than other types of pots.



**Ceramic pots.** A ceramic pot is a clay pot which is hardened by baking the clay at high temperatures. A glaze may be added to the pot for decorative purposes and to help prevent cracking. Ceramic pots are more decorative. They also hold less moisture than plastic pots, which is good when your plant's soil should be kept moist but not wet. Ceramic pots break easily when dropped.

Sometimes ceramic pots do not have drainage holes. If not, you should either drill a hole in the pot, or not plant directly in them. You can use a plastic pot to hold your plant, and then just place it inside the ceramic pot.

**Wood containers** made of redwood or cedar are more rot resistant than those made of other types of wood. If wood containers are homemade they should be treated so they won't rot easily. Line your wooden containers with heavy plastic to make them last longer.



Half whiskey barrels, or wine barrels, are wonderful pots for container gardens. They were used to hold whiskey, so making several drainage holes is essential. Empty whiskey barrels dry out quickly, the wood shrinks, and the pot falls apart if the wood is not kept moist. Store barrels with a little soil in them.



Cleats (feet) under wood pots will increase air circulation reducing decay and insect problems, and may help with drainage.



**Plastic containers** are the most popular pot because they are lightweight, durable, usually inexpensive, and are available in a wide range of finishes, colors, sizes, and shapes. Deck planters and many 'self-watering' styles are available.

However, with age, plastic pots can become brittle and break. Plastic pots are very susceptible to breakage during the cold winter weather.

**Resin containers** and fiberglass pots are very durable. They are much stronger than plastic pots and do not break as easy as many other types of pots. They are often more expensive than other containers, but they usually last a lot longer. Many of these pots do not have drainage holes, so be sure to drill adequate size drainage holes before planting.

**Cement pots** are very popular but they are heavy and hard to move. Cement pots should be sealed every few years to prevent water from penetrating the concrete, which can cause the cement to crumble during the freezing - thawing cycles of winter weather.



## Tips for Success

The biggest difficulty with container gardens is maintaining the correct moisture level, which can require inconsistent or frequent watering schedules. Products are available to help with this problem; coconut fiber, water holding polymer granules, and drilled PVC pipes.

**Coconut Fiber** is made from the shredded husks of coconuts. It has the unique ability to absorb large amounts of moisture rapidly, then release it over a long period of time. Coconut fiber will not compact and will maintain a loose texture. It can be used with regular potting soil at a ratio of 1/2 to 1 part coconut fiber to 1 part potting soil.



**Water Holding Polymer Granules**, such as **Waterhold** or **Soil Moist** absorb and store water. These granules slowly release their stored water as the plant needs it. This storage and release process reduces watering requirements by 50% to 75%, particularly in dry, hot climates. The crystals will remain effective in the soil for 3-5 years.



Soil Moist must be incorporated into the soil; do not top dress or place it on the surface. It is easiest to use this polymer in its swelled state; so you know how much is being used. It can be also be used dry, but remember the crystals expand greatly when moistened. One teaspoon of **Soil Moist** is all that is needed for a 6" pot.

**PVC pipes**, which are capped on one end and have holes drilled along its length, help water soak into large containers much more effectively. Put the pipe in the center of the container (leave it in the pot the entire summer). Pouring water through the pipe helps distribute water deeply in large containers, especially in strawberry jars. This method helps maintain moisture around the root system and helps the soil stay evenly moist; top to bottom.



## Fertilizer

Container gardens do not require a large amount of fertilizer all at one time, but they do need to be fed continually all summer. A slow-release fertilizer like **Osmocote**, added to the potting soil at the time of planting, will feed most containers for 3 months. Osmocote can also be top dressed to already potted plants. Each time you water, your plants are being fertilized.



You can use a water soluble fertilizer, such as **Fertilome Blooming and Rooting Fertilizer** every 2 to 3 weeks during the summer, while you are watering. If you use **Osmocote**, you do not need to use a liquid fertilizer as often; maybe just once a month to give your plants a little burst of new growth or stimulate some new colorful flowers.



Liquid fertilizers are safe and quick acting; results are evident in a few days.



They do not burn the plant unless you fertilize a dry, wilting plant, or you mix the fertilizer too strong. **The only disadvantage of using water soluble fertilizers is that you have to 'remember' to fertilize your plants regularly.**

## Maintenance

To keep your containers looking perfect, be sure to dead-head your plants occasionally: remove the old or dead blossoms. Trim the plants once in a while to help the plants keep their shape and to stimulate more flowers. It doesn't hurt to give your flowers a late-summer haircut followed with a quick burst of energy from Blooming and Rooting Fertilizer. You will lose your flowers for a week or two, but the reward of fresh new blossoms is worth the wait.



## Planting Containers

1. Prepare the container by placing broken pot shards, weed cloth, or rock over the drainage holes.



**Tip:** Small containers are easy to move around while large pots can be quite difficult to move. Once a container is filled with soil it can be quite heavy and difficult to maneuver, so, whenever possible set the larger containers in place, or on a dolly, before adding the soil.



2. If you have a large container, position a PVC pipe watering device in the center (or just a little off center) of the container. Fill the container half full with potting soil. Mix water holding polymer granules with the potting soil needed to fill the rest of the pot.

3. Start planting your container in the center and work towards the edges. Traditionally the largest plants go in the center of the container but you can spread them throughout the pot if desired.

Remove the plants carefully from their pots. Loosen the soil in the rootball slightly. Place the rootball in the hole to the same depth as it was in its original container. Firmly set the plant in place and compact the soil around the rootball.

4. Continue planting the container with the other flowers until they all are planted, or until the pot is full; whichever comes first.

5. Sprinkle **Osmocote** fertilizer over the entire soil surface. Be sure to use the recommended amount of **Osmocote** which is approximately one tablespoon of **Osmocote** for every six square inches of soil surface.



6. To add a finishing touch to your container cover the surface with bark, mood moss, reindeer moss or spaghnum moss.



7. Water your container thoroughly as soon as you are finished planting it. Let your container sit for an hour or two, and then water your container again, this time using

## Fertilome Blooming and Rooting Fertilizer.

8. Check your containers regularly. Containers will not need a lot of water at first, but as the plants begin to grow, they will need a consistent watering schedule to keep them looking their best.

## Strawberry Jars

For those gardeners with little space that want homegrown strawberries, a strawberry pot is the perfect solution. Strawberry Jars are attractive as well as practical. You can add a conversation piece right on your deck or patio. Be sure to choose those varieties that are everbearing such as Quinalt, Ft Laramie, Seascape, or Tri Star. That way, you can have ripening strawberries all summer long, even when your hard-to-impress friend comes to visit.

Plants, other than strawberries, will also grow well in the jars, such as herbs and flowers. Growing annual flowers in strawberry jars is a fun way to get lots of color in a small space. Flowers planted in the pockets should be a mounding or a cascading variety. Plants in the top should be a combination of mounding or upright plants for vertical accents.

1. Prepare the soil by adding the osmocote and polymer granules and mix together well.

2. Begin by placing the capped PVC pipe in the center of the pot with the cap covering the drainage hole. Hold the pipe upright while filling the jar with potting soil up to the bottom tier of pockets. Pack the soil firmly.

3. Gently poke the plants through the pockets from the inside of the pot to the outside.

4. Fill the jar with soil to the next tier of pockets, packing them gently with soil. Continue planting until all the pockets are filled.

5. Plant the top with remaining plants. Sprinkle top with Osmocote. Then tuck moist sphagnum moss around the base of the plants in the pockets and around the plants on top. This helps maintain the moisture.

6. Water thoroughly through the PVC pipe. Water the jar again in an hour using **Fertilome Blooming and Rooting Fertilizer**. This fertilizer will act as a root starter to help your new plants root quickly.

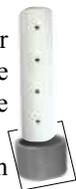
7. Harvest berries as soon as they are ripe, and remove any rotted fruit or yellowing leaves as you see them.

8. Strawberries are perennials, and will produce happily for years. However, after two years, it is best to remove all the plants, fill the jar with fresh potting soil, and then plant some of the runners back into the strawberry jar, or buy new plants. Older plants are not as productive as younger plants.

If you want to overwinter them in the pot, you'll need to place the entire pot in a sheltered location, such as an unheated shed or garage. Do not let it dry out, and be sure to protect it from extreme freezing conditions.

## Moss Baskets

1. Use moistened sphagnum moss to line the bottom and the bottom third of the basket. Fill the basket to this point with potting soil already prepared with water holding polymer crystals and Osmocote fertilizer. Carefully tuck the plants into the basket between the wires.



2. Line the next third of the basket with moss, fill with soil, and tuck in the plants. Continue in this manner to the top.

3. Fill the top of the basket with the tallest plants in the middle. Use the mounding plants around the edge.

4. Carefully tuck sphagnum moss around the plants.

5. Hang your basket in its new home and water it well. Water your basket again in an hour using **Fertilome Blooming And Rooting Fertilizer**.

6. Moss baskets dry out very quickly. Be faithful in checking them daily for moisture.

## Vegetables for Containers

Vegetable containers should be a minimum of 12" to 24" deep. The bigger the pot the better.

Try beans, beets, broccoli, cabbage, carrots, corn, cantaloupe, peas, eggplant, cauliflower, kohlrabi, kale, leeks, lettuce, onions, parsley, peppers, cucumbers, radishes, spinach, tomatoes, or swiss chard.

Herbs also grow well in containers and make excellent indoor planters during the winter months. Try chives, basil, cilantro, oregano, thyme, sage or mint, to mention a few.

*Read our 'Container Gardening For Vegetables' handout for more information.*

## Annuals for Shade

The amount of shade can be variable and many plants will grow in both partial sun or shade.

Some of the popular annual flowers for shade are fuchsia, viola, lobelia, begonia, coleus, impatiens, ivy, monkey flower, dahlia, schizanthus, torenia, nierembergia, dracena spike, asparagus fern, and many more.

Don't be afraid of using a few perennials in your containers such as coral bells, hostas, hardy ferns or ranunculus.

## Annuals for Sun

Sun-loving annuals are useful to add vibrant splashes of color and beauty in the areas of your landscape that receive an abundance of sunshine. Gardening with sun-loving annuals gives you endless possibilities for beautifying your home and property. You are only limited by your imagination!

Many annuals like the sun and will grow in partial shade. Try some of these in your sunny container gardens; alyssum, snapdragon, crystal palace lobelia, dwarf sunflower, petunias, surfinia, verbena, vinca, geranium, nicotiana, calendula, nasturtium, marigold, african daisy, marguerite daisy, strawflower, dusty miller, canna, gazania, osteospermum, lotus vine, dracena spike, scaevola, ipomea, celosia, portulaca, red fountain grass, and bacopa. The choices can be mind boggling.

A few perennials to use are creeping jenny, ivy, vinca vine, and many varieties of daisies.

These are just a few of the many flowers suitable to grow in your flower pots. Don't be afraid of trying several of these plants in many combinations. **The only limit in planting containers is your imagination. Keep track of your successful combinations.**

*Read our 'Container Thrillers' handout, for more information about choosing plants, and our 'Vegetable Container Gardening' handout, to learn more about edible pots.*



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