

## **Container Gardening: In This Small Place**

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Growing vegetables or any plant in a container can be a challenge and requires that the gardener pay attention to details. However, if you are short of garden space, live in an apartment or just want to grow a limited number of plants, containers provide an excellent alternative. To be successful you need to make sure you have a good sunny location and space for the container.

Many gardeners think that you can't grow vegetables in containers. Since can't shouldn't be a word used by any gardener, growing in containers is more about paying attention to details and being aware of the limitations of this production system. To be successful, you need to think a bit about what the plant is like and then match the container to each plant's specific need. Also look for dwarf type plants as these generally take up less space.

Container grown vegetables have a few exacting requirements to optimize growth and productivity. First, the growing sites should get more than 6 hours of full sunlight, enough space for the container, and good air circulation. A readily available water source near by will also help save time.

Once you have met these simple requirements, you are now ready to think about some of the other things that will help make the whole operation successful. By careful container selection, using the right soil mix and with proper irrigation, your chances of success are very good. Since you can have containers just about anywhere, think how you can integrate these into your landscaping scheme. Remember that container gardens can be on a patio or deck, on your terrace, balcony or window ledge. Put them on a garage roof or near a narrow walkway. Integrate veggies into your hanging baskets. The ideas are limitless and really can make the gardening experience an enjoyable, fruitful and nutritious exercise.

### **Containers:**

Being a successful container gardener requires some specific plant knowledge to ensure that the container has sufficient volume to adequately grow the desired crop. Large containers are always best but not always practical. As long as you provide ample root space, you can generally grow a container plant similar to a garden grown plant.

For growing vegetables, a container should have a minimum diameter of 6 inches and a depth of 8 inches. This would be adequate for lettuce, radishes, herbs and other small vegetables. For root vegetables (carrot, beet, turnips) you will need a container with enough depth to support the plant's rooting depth. Generally these should be 10-12 inches deep.

Always pay attention to the final plant size before selecting the container. If you intend to grow an indeterminate tomato or squash you are going to need a very big pot. Half-barrels or 10 gallon containers should be adequate.

In addition to the size of the container, you need to address the issue of drainage. Generally, containers have too few or small drainage holes which causes excess water in the root zone. Since you can grow in many different container types (plastic, paper, wood, ceramic) some additional holes may be needed. You could add rocks or pot shards to the bottom of a small holed container but I recommend additional holes over the creation of a drainage layer.

When selecting a container, study the construction carefully. Wooden benches may be OK but these can be heavy or may breakdown over time. Plastic pots are cheap but may heat up or keep the media too wet. Porous red clay pots are good, readily available, come in a range of

sizes and allow water loss through the container wall. However, they are also quite heavy and break easily. Tubs and half barrels are quite big and sturdy but have limited mobility when filled. Newer foam or pressed paper containers come in many sizes, are inexpensive and light-weight. In windy areas, these have some limitation.

Container color should also be considered. Bright colors make for attractive displays when plants are small. Dark colors absorb heat to encourage early growth but in the heat of summer, may be too hot for good root growth and function. White reflects summer heat. Think about painting the container if you are not satisfied with the color or need a change. Don't forget to use hanging baskets or window boxes as vegetable growing areas around the home.

Finally, if you're thinking of moving bigger pots, you may want to build a rolling platform for them. You'll need heavy duty wheels and a  $\frac{3}{4}$  inch plywood base. These are handy for tomato containers and allow you the flexibility to move the plants indoors in the fall.

### **Soilless Media/Growing Mixes**

Gardening in containers requires you to pay attention of the soil mix you use to grow the plants. Potting mixes should be of uniform texture, free draining, lightweight, have good water holding capacity and free of pests and diseases. Avoid the temptation to use garden soil unless you can sterilize the soil and don't purchase mixes with lots of bark or other coarse materials in them.

Follow these recipes for making good homemade potting mixes. Each is slightly different but all are reasonably good for containers. If you're using hanging baskets, light weight mixes are better. If wind is a problem, use a heavier container to help anchor the plant in place. Also, wind can topple tall plants like tomato or corn.

Soilless plant mixes contain very low levels of nutrients. Therefore, some fertilizer should be added before planting and regular liquid feeding should occur during the growing season. Here are some generic fertilizer mixes that you can make up yourself. Otherwise, purchase a bag of a complete soluble fertilizer and apply some to your containers every week.

### **Planting requirements**

You can start your plants from seed or transplants when growing in containers. There are advantages and disadvantages to each. When starting from seed, you can easily over-seed and then thin back to the correct plant population for the size container. Some plants grow best from seed (carrot, beet) while others don't really care. With seeding, pots look bare for a while which isn't that attractive.

Fill the container to within 1 inch of the surface then sow the seed and add some additional soil mix to the depth for that seed. Once the seedling has emerged, thin back to the right plant population. Cut out the additional plants rather than pull them out. This will minimize root disturbance of the remaining plants.

To transplant fill the container with soil mix, hollow out a hole and place the transplant in that hole so the root ball is just below the soil line. Try not to damage the root system on the transplant. If the plant is root bound, gently tease apart the roots. Most transplants should be planted at the same depth of the container they were transplanted from. With tomatoes, however, you can plant these very deep as they can root out of their stems.

After planting, water the soil mix to set the seed or transplant and begin fertilizing about 2 weeks after emergence of the seedlings or transplanting. Fertilizing solutions should not be

above 100 ppm to minimize root burning. Follow label directions on fertilizer containers carefully.

Some staking may be required for tall growing plants. Stakes, poles, cages or trellises are regularly used. Set these soon after planting to avoid damaging the plants root system. It may be necessary to tie the plants to the support structures. Twist ties, twine, plastic tape, or panty hose are good. Don't tie them too tightly as stems will continue to enlarge over time. It may be necessary to prune the plants if they get too big.

## **Watering Containers**

Learning how to water containers can greatly improve the chances of being a successful container gardener. Improper watering is probably the main cause of problems when growing plants in pots. If watered too much, root diseases and weak root systems develop. If watered inadequately, plant development and fruiting is adversely affected.

Ideally, the soil media should be uniformly moist throughout to container but not water logged. Lots of gardeners water to run-off but when using mixes with soil in them, this can create water-logging. This is why have adequate drainage holes is so important.

In our hot dry climate, diseases are not much of a problem. However, water stress can occur so often, you may need to water more than once a day. Water when the top inch of soil dries out. Since vigorously growing vegetable use lots of water, this extra water will help keep the plant healthy and hydrated. Dry soils, particularly during flowering can affect fruit set or enlargement.

Regular watering will cause nutrient leaching; therefore you must regularly fertilizer to keep the plant growing. Here are some recipes for making your own liquid feeds. Otherwise, apply a half strength solution every few days. Time released fertilizers (osmocote) are also good and are only applied once a year. You can also apply dry fertilizer but it is difficult to calculate the correct amount for the different crops and containers in use.

If you can learn to water correctly, container gardens are very productive and will provide you with produce for a very long time. More often however, productivity suffers because plants are over-watered when they are small and under-watered when they are big. Some gardeners have tried to mechanize the watering process, but it gets real difficult because container sizes and plant needs vary greatly.

Be careful when you water containers with a garden hose. Since most homes have relatively high water pressure, be careful not to blast the soil mix or young seedlings out of the pot when watering. This will damage the root system and will affect plant growth. In addition, if the hose is left in the sun, be sure to run the water to help cool down the water a bit before you irrigate. Hot water is very hard on the plants root system.

## **Conclusions**

Since container gardens are small, available and reasonably productive, expect a lot of really fresh vegetables. A well maintained container will add beauty to a patio, deck or window ledge and grow a plant that is fresh and ready to eat. Some plants are not that practical in containers (corn) while others can almost overwhelm you with the amount of produce grown (tomato). So get out there and experiment a bit and see what you can grow in your small place.