

# HOME GROUNDS FACT SHEET

CORNELL

Cooperative Extension  
Nassau County



Nassau County  
Horticulture Program  
Eisenhower Park  
East Meadow, NY 11554  
516 228-0426

## Container Gardening

Interest in “Container Gardening,” a revival of an ancient practice, has been growing rapidly in recent years. Apartment and condominium dwellers may find this method is the only way they can enjoy gardening. Homeowners can use container gardening to overcome problems caused by lack of sun or compacted/poor soil. There is also a growing desire to enhance paved surfaces, entranceways, small areas, decks and swimming pools with nature’s beauty. Container gardening also makes it possible for physically challenged individuals to enjoy gardening.

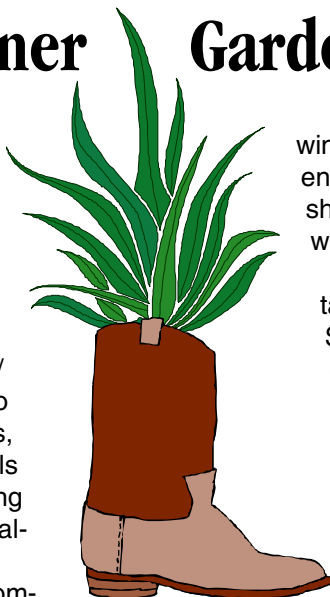
This area of gardening can be accomplished by using not only flower pots, whiskey barrels and window boxes, but also with whatever container one can imagine provided it can hold potting mixture and has drainage holes. The possibilities are endless.

Container gardens can be planted with annuals, perennials, woody plants, vegetables, ornamentals and specimen plants. This method of gardening is also a great way to conserve water. Initial preparation of the containers may take a little more time, but maintenance will be less time consuming than a traditional garden.

### Containers

Determine how large your plants will grow. Healthier root systems will develop if you start your plants in a larger container rather than planting in a smaller container and transplanting as they grow. Transplanting can damage fragile roots. Also, larger containers mean less watering.

Containers **must** have drainage holes to allow excess water to drain from the potting mixture. Adequate drainage helps prevent overwatering, provides good air circulation and may reduce root rot. If the container has no drainage holes, drill four to six evenly spaced 1/4–1” holes depending on the size of the container. **Do not drill ceramic containers.** To prevent potting mixture from being washed out, place a piece of



window screening or coffee filter over the entire bottom of the pot. Wood containers should not contain creosote or any unsafe wood preservative.

High quality foam, resin or fiberglass containers are lightweight and easily moved. Some are hard to distinguish from heavy clay or ceramic containers. Be aware that clay pots and moss baskets dry out more quickly due to absorption of water through the container and thus need to be watered more frequently. Soak clay pots in water before planting.

If a container needs to be watered several times a day, dries out very quickly or roots appear from the drainage holes, the plant(s) probably need to be repotted into a larger container. Generally, upgrade to a container 2” larger or you may root prune and reuse the same container.

At the end of the season, wash containers well, then soak in a solution of one part bleach to nine parts water for at least one hour. This cleaning of containers may not be possible if you are growing anything other than annuals or if the container is very large. However, when using very large containers, replace the top third of the potting mixture in the spring with new potting mixture before planting.

### Growing Medium

- ▶ **Do not** reuse old potting mixture. The nutrients may be depleted and/or it may contain diseases and weed seeds.
- ▶ **Do not** use garden soil; it’s physical properties, weight and the presence of weed seeds or disease organisms make it unsuitable for containers.

Use a soilless potting mixture that is lightweight, contains peat moss, perlite, vermiculite, nutrients, limestone and slow release as well as fast acting fertilizers. Better quality potting mixture may also contain water-absorbent polymers, wetting agents and/or growth enhancers. Soilless potting mixtures retain

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moisture, drain well and permit gas exchange to and from the pots.

You can mix your own growing medium. Mix one gallon each of peat moss, perlite and horticulture grade vermiculite. Add a low concentration, complete fertilizer, such as 5-10-5; to the mixture at the rate of one cup per bushel (one bushel equals eight gallons). Also, add one and a quarter (1-1/4) cups of fine ground limestone, dolomite limestone is preferred since it also supplies magnesium. Add one-fourth cup of triple superphosphate (0-46-0) to enhance root formation. Mix thoroughly.



## Location

Prior to planting the container, determine the amount of sun and/or shade it will receive. Will it be near a fence, a wall or a driveway? White objects reflect the sun's rays while dark objects absorb the sun's rays.

Keep in mind that most flowering plants need at least 3-4 hours of sun for limited blooming and 6-8 hours of sun to flourish. Vegetables need 6-8 hours of sun to produce fruit. Not only should plant combinations in a container have the same light requirements but also the same water needs.

## Plant Selection

Choose plants with different heights, colors, shapes, textures and growth habits to add overall interest or select a special color theme.

### Use:

- ▶ **Trailers** – plants that cascade over the edges of the container
- ▶ **Uprights** – plants in center
- ▶ **Fillers** – plants in middle between trailers and uprights

Mix annuals (which produce the most color for the longest period of time), perennials and other ornamental plants to add interest.

### For suggested plant varieties see *Fact Sheets*:

- ▶ A-2-21 Annuals
- ▶ A-2-22 Annuals for Special Uses
- ▶ A-2-23 Suggested Annual Varieties
- ▶ A-2-26 Herbaceous Perennials
- ▶ A-2-27 Perennials for Special Uses
- ▶ D-1-31 Ornamentals with Drought-Tolerant Attributes

## Planting

Place a layer of coarse gravel or (non-dissolving) styrofoam peanuts (thickness of layer depends on size of container) on the bottom of the container for drainage. Use of styrofoam peanuts is a great way to lighten the weight of a large container so it can be moved more easily.

Moisten your potting mixture and fill the container approximately two-thirds. If your potting mixture does

not contain water-absorbent polymers and you are going to use them, mix them into your dry potting soil before you start. **Warning:** follow instructions for polymers very carefully, more is not better since they expand greatly and can push plants out of the container.

After gently teasing apart the plant's roots to encourage good root growth, place them in the container. Pay careful attention to the plant's mature height and width. Crowded plants will not mature and wasted space reduces total production.

Start with your tallest "Upright" plants, then your "Filler" plants and finish planting with the "Trailer" plants. Fill in gaps between planting with additional potting mixture and press firmly to remove air pockets. **Do not** add polymers to the top two inches of the potting mixture. The crown (top of the root system) of your plant should be just at the surface so that the foliage is not covered with potting mixture. Fill the container to an inch or two of the top (the bigger the container the more space you should leave).

Finally, water the container until water runs out of the drainage holes. This ensures that all the roots are moistened. Additionally, a thin layer of mulch can be added on top to discourage weeds, conserve moisture and insulate against temperature extremes.

## Fertilization

The fertilizer in the initial planting will give the plant a good start. As the plants grow, nutrients will be used up or lost in the drainage water. Since potting mixture drains quickly, slow release fertilizers are suggested. These fertilizers should be applied at half the recommended amount several times during the growing season and carefully mixed into the potting mixture. If you are using a water-soluble plant food, apply it at half the recommended rate but twice as often. Or, once each month fertilize with one teaspoonful of 5-10-5 dissolved in a quart of water. Apply this solution generously to each container.

It is important to realize that plants can survive on lower levels of fertilizer and may be killed if over-fertilized. In general, it is better to apply lesser or diluted applications of fertilizer rather than infrequent, concentrated applications.

## Watering

Once containers are planted, the most important maintenance is watering. Potting mixture in containers dries out much more quickly than garden soil. In hot weather, sun-loving plants, especially those in small containers, may need to be watered several times a day. **Never** let a container dry out completely.

To make watering easier, consider purchasing an adjustable drip irrigation kit with a timer or a moisture gauge. Potting mixture should be kept uniformly moist, not wet, at all times. Water containers when the surface of the potting mixture is dry to the touch. Potting mixtures that contain water-absorbent polymers can reduce the frequency of watering; they can hold up to forty times their weight in water.



When watering, water until a small amount of water comes through the drainage holes. This process helps flush soluble salts and fertilizer residues from the potting mixture and reduces

the chance of salt injury to the root system as well as making sure the entire root system is moist. **Never let containers stand in water!** Drainage is improved with the use of "pot feet" which raise the container up about an inch off the surface.

### Maintenance

Groom plants once a week. Remove ripped or discolored foliage as well as dying flowers. Halfway through the growing season, cut back trailing plants to ensure they will continue to look great as well as provide a second flush of flowers. If containers seem to be in the wrong spot, move them to a more suitable area. To change the look of your plant displays, interchange the containers.

### Helpful Hint

In an out-of-sight area, grow additional plants of your choice to replace container plants that may die or not perform well. By doing this, you always have a supply of more mature plants rather than having to settle for newly purchased immature garden center plants. Replacing plants will be quicker, less noticeable and easier if you have your own backup supply.

### Winter Care

Cold winters can kill container-grown plants. Some perennials and ornamentals can be overwintered depending on the severity of the winter weather, the type of plants and how they are protected.

If your garden has open spaces, it's best to sink the containers into the ground up to their tops. Cover with mulch or evergreen branches after the ground freezes. Another method is to store the containers in an unheated garage or shed. Wrap the outside of the container with some type of insulating material to protect the root area. Water if soil is dry and not frozen.

If neither of these methods is feasible, leave the containers above ground, grouped together and in a protected area such as near a fence or building, on the south side of a house or near a group of evergreens. Cover the container tops with mulch or evergreen branches after the ground freezes. Protect the container plants' roots with barriers of wood, straw bales or burlap. If temperature is above freezing, water the containers if the surface is dry.



### Integrated Pest Management (IPM)

IPM is a common sense approach to pest control and plant care. It employs a number of measures to prevent, control or reduce plant problems. These measures include using resistant plant varieties, proper plant selection and placement, good aftercare and biological and/or mechanical controls. As a last resort, after all other remedies have been explored, a pesticide\* that is least toxic to people and natural predators can be considered. Prior to using any pesticide, plants should be monitored for the degree of infestation and a sensible control measure considered. A good rule of thumb to avoid insect and disease problems is to keep your plants healthy and stress free and check them often.

\* A pesticide is a substance that kills, or attempts to kill, a particular pest. For example: **insecticide**, **fungicide**, **herbicide**, etc.