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## G98-1363 Container Gardening (Revised September 2004)

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## Container Gardening

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Growing flowers, vegetables, and other plants in containers provides many gardening opportunities to people who lack garden space, time or have physical limitations.

### Advantages

Container gardening has many advantages. People with physical limitations may appreciate the ability to garden without bending over or kneeling. Container gardens can also bring the garden closer to one's home or outdoor living area, such as along a sidewalk that is accessible from a wheelchair. Container gardens can place culinary herbs close to the kitchen to be snipped and used in cooking. Container gardens on patios or decks give people with limited outdoor space, such as apartment and townhome dwellers, the opportunity to enjoy plants.

Potting mixes that are appropriate for use in containers are often lightweight and easy to work. Small containers or those with wheels can be moved with the seasons to place the plants in favorable growing environments. However, wheels will make containers less stable if the gardener leans on them for support. When not in use, containers can be stored out of sight in the garage or basement.

### Disadvantages

Nebraska's weather can make container gardening a challenge. Extreme summer heat coupled with high winds can quickly dry the roots of container plants. This can be minimized by carefully selecting plants, growing media, site and watering methods.

### Container Selection

Containers should be selected to complement other landscape elements, including patio furnishings, surrounding pavement, architecture and plants. They are available in a variety of sizes and styles, and can be made from clay, metal, wood, concrete or just about any other durable material. Large containers are often more appropriate for the scale of outdoor spaces and will allow larger plants

to be grown, giving a more immediate impact. Containers can be used alone or in groups, depending on the size of the area available and the desired appearance. Many items found around the home can be used as planting containers, such as feeding or watering troughs, whiskey barrels, and hanging baskets. The only requirements are drainage holes to remove excess water. If the desired container does not have drainage holes, they can be drilled into the bottom of the container. A 1-gallon container should have three to four 1/4 inch diameter holes. Larger containers should have more holes, in proportion to the size of the container. Large holes can be plugged with rocks or broken pottery pieces to prevent soil from washing out, yet allowing water to drain. Drainage is necessary to prevent waterlogged soils. Soils that remain saturated deplete soil oxygen and reduce or prevent root growth, resulting in overall plant decline.

Plastic containers are lightweight and easy to move. Clay pots are heavier and porous, allowing excellent drainage and air movement. Soil in clay pots dries faster than soil in plastic or glazed ceramic pots because water evaporates through the sides. Before adding soil to a clay pot, the pot should be thoroughly moistened to avoid having moisture wicked from the soil to the pot.

Wood containers can be custom made, but choose materials carefully. Avoid using wood treated with creosote or *penta* (Pentachlorophenol), as the vapors can injure some plants. More expensive wood containers made of redwood or cedar, or synthetic lumber made from recycled plastic are recommended because they resist rotting and do not require staining or painting. Chromated copper arsenate (CCA) treated wood, used previously in construction of wood containers and walls for raised beds, is no longer available commercially. Containers made from this type of wood can still be used safely as long as the wood was treated and processed correctly. Ask about this at a garden center or wherever you purchased the pot.

Which size container you use depends on the eventual size of the plant. Larger plants, such as trees and shrubs, need at least 7- to 10-gallon containers. Large vegetable crops, such as tomatoes, squash and peppers, and large flowers and ornamental grasses need 3 to 5 gallon containers. Smaller flowers, herbs and vegetables, such as lettuce, petunias, and geraniums require 1/2 to 1-gallon size containers. Larger containers are needed as the number of plants in the container increases.

Larger containers allow a mix of different sizes and types of plants to be planted, which contribute to the long-season interest of the planting.

The soil in small containers dries out quickly and requires frequent watering. Small containers that are hanging or placed in windy or excessively sunny areas may need to be watered at least once a day.

### **Growing Media**

Heavy, poorly drained soils are a key contributor to poor plant growth. A well-aerated, well-drained, lightweight soil is best for container gardening. The soil must support the plants and provide water, nutrients and space for the plants to grow.

Garden soil is generally not recommended for container plants because the regular watering required by container plants causes garden soil to compact, leading to poor aeration and poor drainage. Potting soils or soilless mixes are carried by many garden centers and are ideal for containers. These mixes are less likely to contain weed seeds or disease organisms than garden soil. Ideally, soilless growing media should be replaced every year. For gardeners with several containers, mixing soil may be a more economical choice. A common soil mix is one part sphagnum peat moss or composted bark or compost, one part vermiculite or perlite, and one part sand.

### **Plant Selection**

Containers can hold one to many different types of plants. When using more than one plant species in a container, arrange them to take advantage of their forms, colors, textures, heights, and bloom times. Containers with multiple plant species are usually arranged with a vertical plant, such as an ornamental grass, vine on a trellis or spike in the middle to provide height to the arrangement; plants with color such as geraniums, lantana, or variegated coleus around the vertical element to attract attention; and plants with trailing characteristics such as ivy, million bells or ornamental sweet potato to spill over the rim of the container.

Perennials and annuals are often a good combination in a container as the perennial plants can be purchased in large sizes to make an immediate impact while the annual plants are developing. Herbaceous and woody perennial plants used in containers can be saved and planted in the garden in the fall.

Perennial plants growing in containers will generally not overwinter, unless they are in large enough containers to withstand severe soil temperature changes during the winter.

Choose plants that are adapted to the site (sun, shade, wind, reflected heat, and other site conditions) and that meet the functional and aesthetic requirements of the existing landscape. Select plants with similar growing requirements if they are placed in the same container or if the containers are grouped together.

### **Plant Care**

Container grown plants must be watered and fertilized more frequently than other garden plants because of their restricted root system. Plants should be fertilized according recommended label rates, every two to three weeks using a water-soluble fertilizer. Potting soils or soilless mixes may contain small amounts of fertilizer. These mixes will not need a fertilizer application for the first six to eight weeks.

Water thoroughly to prevent buildup of soluble salts. Smaller containers need to be watered more frequently than larger ones. Containers that have soils high in organic matter retain soil moisture longer than other growing media. Water the container when the top 1/2 to 1 inch of soil becomes dry. At each watering, water should drain through the drainage holes. This will ensure the entire root zone has been moistened.

Many garden stores carry water-holding synthetics. Research has shown that these products are effective in absorbing water, but the water is held tightly and is not readily available for plant use. These products may have some use in small containers, as soil temperature fluctuations and damage to plant roots may be reduced.

Harvest vegetables and herbs and pinch off spent blossoms frequently to promote continuous blooming and production, and to keep plants attractive.

The same insects and diseases that afflict plants in a traditional garden can affect container-grown plants. Check the plants regularly and be ready to control these problems if they occur. Spider mites may become a problem on plants that are water-stressed. Pasteurized soil media will eliminate most weed problems and many soil borne diseases.

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