

A photograph of a garden scene. In the foreground, there are purple clematis flowers with green leaves. To the left, a hanging basket filled with red and orange flowers hangs from a wooden pergola. The pergola is made of weathered wood and extends across the background. A white wooden bench is visible on the left side of the image. The ground is covered with green grass.

A GUIDE TO CONTAINER GARDENING

the healing gardens
MSU DEPARTMENT OF RADIOLOGY

SELECTING AN EFFECTIVE CONTAINER

Be sure to select containers that:

Hold soil and moisture.

Tolerate windy conditions.

Have adequate drainage holes.

Are easy to store when not in use.

Are at least six to eight inches deep.

Are light in color if placed in full sun.

Have not held products toxic to people or plants.

Are big enough to support fully-grown plants and roots, the bigger the better especially in hot locations.

SPECIAL CONSIDERATIONS

HANGING BASKETS

Should be over ten inches wide.

Use swivel hooks and have a sturdy support.

Be sure to consider location of hanging baskets, particularly if placed in a windy site. Make sure that the basket will not collide with other objects.

STANDING CONTAINERS

Large deep containers can be filled first with Styrofoam peanuts. This adds drainage and reduces the weight of the container.

Don't forget to think about mobility. Use casters or wheeled platforms if needed.

Use saucers to prevent rot and mildew, and protect from insects OR elevate the pots for air circulation and water drainage.

CHOOSING THE RIGHT CONTAINER



WHICH CONTAINER IS BEST FOR YOU?

ADVANTAGES

DISADVANTAGES

METAL

Porous
Moderately priced

Rusts
Heavy
Heats up quickly (may damage roots)

PLASTIC

Lightweight

Stores heat, dries out quickly
Lightweight

PULP, MOSS, COCOA FIBER OR FIBERBOARD

Porous
Lightweight
Inexpensive
Absorbs Water

WICKER

Attractive

Decomposes when exposed to water and sun

(If wicker is desired, place a smaller plastic container inside the wicker. Use a plastic or clay container for plantings. Be sure and use a saucer on the bottom to protect the wicker from rotting.)

CONCRETE

Durable
Low evaporation
Little staining from fertilizer salts

Heavy

ADVANTAGES

DISADVANTAGES

CLAY

Porous
Moderately priced

Heavy
Needs a lot of water (reduce water loss by double potting. Place a clay pot within a larger clay pot with the space between packed with damp sphagnum or peat moss.)
Tends to crack, flake, & break
Stains from fertilizer salts

CERAMIC

Porous
Attractive

Heavy
Requires a lot of water
Tends to crack, flake, & break
Expensive

WOOD

Porous
Attractive

Heavy
Expensive
Insulates heat (good early in spring for cool nights, but not ideal for summer temperatures)
Degrades (except for cedar or redwood)

FAUX CERAMIC

Porous and light
Non-porous (holds moisture and reduces maintenance)

Heavy
Requires a lot of water
Tends to crack, flake, & break
Expensive

CHOOSING A PLANTING MEDIUM



Do not use potting soil, dirt or garden loam. Use a potting MIX.

Garden soil or heavy potting soil drains poorly, resulting in too little air for roots and increases the chance for plant diseases. Garden soil will pull away from the sides of the container when it dries out. Soil also contains weed seeds, disease pathogens and insect pests. Peat alone is too lightweight, hard to wet and becomes compacted. A lightweight, fast draining planting medium is a necessary ingredient for abundant flowers, healthy foliage and easy container maintenance. It will help prevent plants from drying out between waterings.

There are two types of mixes available, a soil-less mix or soil-based mix. These two mixes can be purchased or homemade. When using large deep containers, Styrofoam peanuts can be used in the bottom to fill space. The peanuts will allow for drainage and decrease the weight of the container.

SOIL-LESS MEDIUM

Characteristics:

Lightweight and porous

Need to add nutrients

Good for annual plantings

Breaks down by the end of the season

Holds moisture

Not recommended for vegetables, poor support for roots

RECIPE

One part peat moss (for moisture control)

One part vermiculite (for aeration and drainage)

One tablespoon slow-release fertilizer

SOIL-BASED MEDIUM

Characteristics:

Heavy

Retains nutrients

Good for perennial plantings

Holds moisture

RECIPE

One part high-quality top soil

One part perlite and/or vermiculite

One part peat moss

One part sieved compost if desired

One tablespoon slow-release fertilizer

Fill containers to one inch or a thumb's length from the rim. This will provide enough space to water without water and soil spilling over. Do not pack the medium, lightly 'thump' the container about three times to allow for settling. Because peat absorbs water slowly, moisten the medium with warm water before planting.



THE IN'S & OUTS OF PLANTING

Place pre-watered plants on the filled container and arrange before actually planting. Remove yellowing, dead or diseased leaves. Gently remove the plant from the container, loosen and break some of the roots to encourage new growth. Place the plant in a hole and cover the roots. Be careful of the stem. After all the plants are in the container, add any additional media and gently water in. Because there is fertilizer in the mix, wait about two weeks before feeding on a regular basis. Place containers in a slightly shaded location so the plants will be able to acclimate.

HARDENING OFF

After potting and after the danger of frost, place hanging baskets and containers in a protected area. A site that is not hot, sunny or windy. The plant's energy will be directed to set roots. Reducing the stress of water loss and heat stress is important. A few days of minimum exposure will help acclimate the plants to their new environment.


PLANT EXPOSURE & LOCATION

Exposure to wind, sun, shade and structures such as overhangs, buildings and trees will affect the temperature and amount of light and water that a plant will require. Selection of an appropriate location is an important consideration. Make the selection with regards to the plant, whether it requires full sun, partial shade, or shade. Wind plays an important factor also. Select a container that can withstand a gusty wind. Make sure the container or hanging basket is secure and will not blow over or off its support. Rotate hanging baskets and containers for equal exposure to sun and wind.

Northern exposures have the lowest temperature and least amount of light. A few plants that will do well at this site are impatiens, ferns, begonias and violas. Torenia, bacopa, asparagus fern, fuchsia, New Guinea impatiens, verbena hybrid 'Babylon', and lamium will do well in partial shade.

Most other annuals and perennials require partial or full sun for continuous bloom through the summer. Plants suitable for east and west exposures are impatiens, New Guinea impatiens, fibrous and tuberous geranium, nemesia, miniature roses, nasturtium, lobelia, verbena and petunias. Vinca zonal and ivy geraniums can tolerate dry conditions for several days.

Wind from the west and southwest can tear and shred leaves and flowers of some plants. Examples of wind tolerant plants are Helichrysum petiolare, Scaevola, Arggyranthemum (Cobbity Daisy) and Suptertunias, 'Wave' petunias, ivy, and vinca.



It is essential to water and fertilize routinely and thoroughly. Wilting will reduce plant growth and delay flowering. Adequate nutrition is important for healthy foliage and continuous abundant flowers. Yellowing leaves and/or few flowers is an indication of a lack of fertilizer.

WATERING & FERTILIZING

Check the available moisture at root level, not at the top of the container. One way to determine the moisture level of a container is to lift the planted container when dry. Then lift again after the container has been watered to determine the weight at each stage. For small containers or hanging baskets, push a finger into the bottom inch or so of the container and detect the amount of moisture present. The smaller the basket, the more frequent it will need to be watered. One way to check on moisture (too much or too little) is to observe the plant for signs of wilting.

Containers, especially hanging baskets, will require water one or more times per day if conditions are sunny and/or windy. Do not use water treated by a water softener, the chemicals (such as salts) could be harmful to the plants and roots. Water the potting mix, not the plants. On a hot day, cold water could damage foliage and roots.

If a container or basket has dried out, soak the container in tepid water for at least ten minutes or until the potting mix is wet on the surface. Water until it leaches through the bottom of the container. Water with a breaker or with a gentle stream from a watering can. Ten inch hanging baskets will usually require two quarts of liquid feed per day. Larger baskets may need up to a gallon per day.

When using a soil-less medium, frequent watering washes nutrients out of the container, so you will need to replenish them. Provide nutrient by using 20-20-20 water soluble fertilizer diluted according to package instructions. Usually one to two teaspoons is needed for each gallon of water. Fertilize or feed every time the container needs water. This routine practice will supply the plants with enough nutrients throughout the growing season.

PINCHING & DEADHEADING

Pinching, pruning, and deadheading improves appearance, increase blooms and extends the flowering season. Depending on the type of plant or design desired, pinching will alter the plant's growth and appearance. To encourage a trailing plant such as ivy, pinch off side branches. To persuade a bushy appearance pinch back no more than a third of the length. The plant will soon direct its energy into the side branches.

An annual plant is programmed to produce seeds and then die. Seed production will rob the plant of energy and health. To alter the production of seeds and extend the plant's life, deadhead or pinch off the old flowers. The plant will continue to produce blooms until frost or exhausted. Some annuals that require little or no deadheading are helichrysum, tapien (verbena hybrid), scaevola, million bells petunia, torenia and nemesia.

INSECTS & DISEASES

Whiteflies, aphids, and Japanese beetles are a few of the insects that may attack plants in hanging baskets and containers. Most insects have a plant of preference, so combine different plants in a basket or container. Companion planting is a possible method for prevention that is worth trying. Chives, garlic, nasturtiums, mints, oregano, pelargoniums and members of the allium family deter Japanese beetles and aphids. Lady beetles that prey on aphids are attracted to morning glories. Most problems can be controlled by close inspection of plants regularly. First, attempt to spray insects away with a stiff spray of water with liquid feed, before using insecticides. Insecticides will also destroy many of the beneficial insects, such as lady beetles, that may be there feeding on the predators.

Diseases can be controlled by removing old flowers and dead leaves, watering the potting mix (not the foliage), close inspection, pruning for better air circulation, and mixed plantings. By planting a variety of plants, habitats for diseases and insects are reduced. For standing containers use saucers to prevent rot and mildew and to protect from insects. Elevate the pots for air circulation and water drainage.



THE NOT SO
PRETTY SIDE
OF GARDENING

A close-up photograph of several pink peony flowers. The petals are layered and have a delicate, ruffled texture. The color is a soft, vibrant pink. The background is slightly blurred, showing more of the same flowers.

OVERWINTERING PERENNIALS

Toward summer's end, the day length shortens, nights become cooler and the angle of the sun is longer. At this time perennial plants gradually fall into dormancy. In the autumn, perennial plants in containers and baskets need less water, sun, and fertilizer. The containers can be brought indoors and held through the winter.

TIPS FOR BRINGING PLANTS INDOORS

Do not permit plants to freeze. Bring containers in at night, if weather permits, place outside during the day.

Stop fertilizing beginning early September and cut back watering.

Situate containers in a location that is cool (45-50°F) and has low light levels. A good place would be a basement, insulated garage or root cellar. Do not place in an area that will reach freezing temperatures. Miniature roses can be planted outside in a protected area, be sure to mulch well. Tuberous begonias should be allowed to die back. After foliage dies, remove the tubers and store in a cool place. Mist the tubers occasionally to prevent them from drying out. Prune back fuchsias and annual geraniums to about eight inches.

Water about once a month.

Inspect plants from time to time. Do not allow plants to freeze or dry out completely.

PREPARING FOR SPRING

In early April, place containers and baskets under fluorescent lights or near a sunny window. Water more often. After a few weeks, remove root bound plants, cut back the roots and repot (fuchsias especially). Temperatures and watering indoors during the winter will effect the bloom time for some of the plants. If a plant doesn't flower as soon as expected, it might be July or August before flowering occurs.



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