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FACT SHEET

DEPARTMENT OF HORTICULTURE

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MH 336

CONTAINER GARDENING

BLACKSBURG, VIRGINIA

If you don't have any space for a vegetable garden or if your present site is too small, consider the possibility of raising fresh, nutritious, homegrown vegetables in containers. A window sill, a patio, a balcony or a doorstep will provide sufficient space for a productive container garden. Problems with soil-borne diseases, nematodes or poor soil conditions can also be easily overcome by switching to a container garden.

Use dwarf and miniature varieties. Grow vegetables that take up little space (such as carrots and radishes), or crops that bear fruits over a period of time (such as tomatoes and peppers).

The amount of sunlight that your garden spot receives may determine what crops can be grown. Generally, root crops and leaf crops can tolerate partial shade, but vegetables grown for their fruits may need at least five hours of full, direct sunlight each day.

Containers

There are many possible containers made of clay, wood, plastic, or metal. Containers for your plants must 1) be big enough to support your plants when they are fully grown. 2) Hold soil and 3) have adequate drainage. Consider using barrels, flower pots, cut-off milk and bleach jugs, re-

cycled styrofoam coolers, and window-boxes. If you are going to build a planting box out of wood, redwood and cedar are the most rot resistant. Never treat wood with creosote or pentachlorophenol ("Penta") wood preservatives. These may be toxic to plants, and harmful to you. If you have to use a wood preservative to keep wood from rotting, use a copper naphthenate product.

Some gardeners have even built vertical planters out of wood lattice work lined with black plastic then filled with a lightweight media, or out of welded wire shaped into cylinders lined with spaghnum moss and then filled with media. Depending on the size of your vertical planter, a 2" perforated plastic pipe may need to be included inside for watering purposes.

Whatever type of container you use, be sure that there are holes in the bottom so that the plant roots do not stand in water. Most plants need containers at least 6-8 inches deep for rooting.

Media

A lightweight potting mix must be used in your containers. Soil from the garden cannot be used in a container because it is too heavy. The particles are too small, and the soil becomes too compacted in the container when watered. Soil must be porous in order to support plants because the roots require both

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air and water, which fill the pore spaces. A packaged potting soil or composted soil available at local garden centers is useful as it is lightweight and sterile. A standard soil mix that will give excellent results is the peat-lite mix.

If you plan on using large quantities of potting mix, it would be especially practical to make your own, since this would be much less expensive in the long run. The two main ingredients of the peat-lite mix are peat moss and vermiculite, which come in quantities of cubic yards and fractions of a cubic yard (a cubic yard equals approximately 22 bushels).

For 1 bushel of media, mix together:

- 1/2 bushel #2 size vermiculite
- 1/2 bushel peat moss
- 5 tablespoons ground limestone
- 2 tablespoons super-phosphate
- 8 tablespoons 5-10-5 or 6-12-6 fertilizer

For 2 quarts, mix together:

- 1 quart vermiculite
- 1 quart peat moss
- 1/2 teaspoon lime
- 1/2 teaspoon 5-10-5 fertilizer

Planting

Fill a clean container to within one-half inch of the top with the mixture. Before planting, thoroughly water the soil mix in your container (which has already been provided with drainage holes). Sow the seeds. Follow the instructions on the seed package for planting the seed. Sow the seed more thickly than needed in case some do not germinate. Put a label with the name and variety of the vegetable on each container. After sowing, soak the soil with water, being

careful not to wash out the seed. Thin to obtain proper spacing when the plants have two or three leaves.

Watering

Pay particular attention to watering the vegetables. The soil in containers can dry out very quickly, especially on a concrete patio in full sun. Daily watering may be necessary. However, the soil should not be soggy or have water standing on top of it. Apply water until it runs out the drainage holes. Clay pots have additional evaporation from the sides and watering must be done more often. Small pots dry out quicker than large window boxes. Check your containers at least once a day and twice on hot, dry days. Feel the soil to see whether or not it is damp.

Fertilizing

If you use the peat-lite mix with the fertilizer added, then your plants will have enough nutrients for about 10 weeks. If plants are grown longer than this, then add a water-soluble fertilizer at the recommended rate. Repeat every 2 - 3 weeks. Do not add more than the recommended rate, since this may cause fertilizer burn and the death of your plants. If a little is good for your plants, a lot will not be better.

General Care

Vegetables grown in containers can be attacked by the various types of insects and diseases that are common to any vegetable garden. Plants should be periodically inspected for the presence of foliage and fruit-feeding insects as well as the occurrence of diseases. (See section on Pest Diagnosis & Controls.)

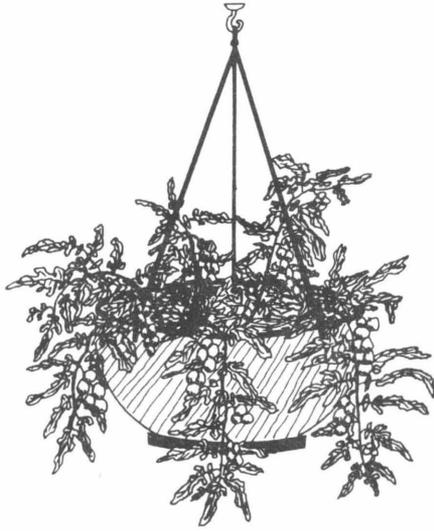
Protect plants from very high heat caused by light reflection from pavement. Move them to a cooler spot or shade them during the hottest part of the day. Plants may be removed to a more sheltered location during severe rain or wind storms or for protection from the first fall frosts.

Some vegetables such as leaf vegetables, can be grown inside year-round with artificial light (use full spectrum lights). Fruiting vegetables, on the other hand, usually cannot be grown indoors in the dead of winter because they will not receive enough light, even with supplemental lighting, to produce fruit.

Planting Information For Growing Vegetables in Containers

Vegetable*	Light Requirements	Days from Seed to Harvest	Distance (") Between Plants in Containers	Comments
Beans, Bush	Full sun	45-60	2-3	Several plantings, 2-week intervals.
Beets	Full sun; tolerate partial shade	50-60	2-3	Thin plants when 6-8" tall
Carrots	Full sun; tolerate partial shade	65-80	2-3	Several plantings 2-week intervals.
Cabbage	Same	65-120	12-18	Requires fertile soil
Chard, Swiss	Same	30-40	4-6	Harvest only leaves
Cucumbers	Full sun	70-80	14-18	Require hot weather
Eggplant	Full sun	75-100	1 plant per 5-gal. cont.	Requires fertile soil
Kale	Full sun; tolerate partial shade	55-65	10-15	Harvest only leaves
Lettuce, Leaf	Partial shade	30-35	4-6	Same
Mustard greens	Same	35-40	4-5	Several plantings 2-week intervals
Onions, Green	Full sun; tolerate partial shade	70-100	2-3	Lots of moisture
Peppers, Bell	Full sun	110-120	1 plant per 5-gal. cont.	Require hot weather
Radishes	Partial shade	25-35	1	Several plantings weekly intervals
Squash, Summer	Full sun	50-60	14-18	Plant only the bush squash
Tomatoes	Full sun	55-100	Cherry, 1 plant per 1-gal container	Do better if staked & pruned
Turnips	Tolerates partial shade	30-60	2-3	Harvest leaves and roots

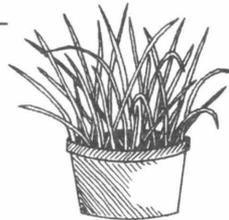
*Consult recommended varieties' guide for varieties adapted to container culture.



Hanging tomato baskets may be attractive while growing food for your table.

SIZE IS IMPORTANT

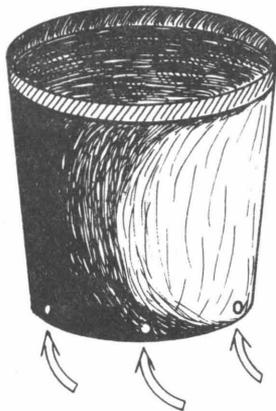
The right container size depends on the size of the vegetable. Six-inch pots are fine for small plants like chives. A pepper plant needs at least a five gallon container or the soil will dry out too fast.



Chives



Peppers



DON'T FORGET DRAINAGE

All containers should have a few $\frac{1}{4}$ -inch holes drilled along the side near the bottom or through the bottom.