



Gardening in a Grow Bag

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Introduction

Gardening at home is a great way to grow fresh food for yourself and your family, and you don't need a lot of space or expensive things to enjoy this tasty pastime! Growing fruits and vegetables in grow bags, much like growing in other containers or raised beds, provides gardeners with better control of their growing media and eliminates the risk of heavy metal toxicity from soils in urban areas. Grow bags can also result in better root growth and higher yields when compared to growing in more compacted soils. A grow bag is like a garden pot but made from felt fabric or polypropylene plastic rather than ceramic or rigid plastic. Grow bags are less expensive than most garden pots and are also porous and breathable, which provides improved drainage.

What can you grow in a grow bag?

You can grow anything in a grow bag that you would grow in a raised bed or container. Because of limited space, it is best to select fruits and vegetables with compact growth habits that produce many fruits per plant. Trellising can optimize space when growing vining vegetables such as cucumbers or squash. Growing vertically, rather than horizontally along the ground, can also improve airflow and light infiltration around leaf surfaces, which can increase productivity and help prevent plant diseases. The planting and harvesting calendar (Figure 1) is helpful for garden planning, but more detailed information for growing specific fruits and vegetables can be found in Extension publication ID-128: Home Vegetable Gardening in Kentucky (QR code linked below).

Getting Started with Grow Bags

1. Fill your grow bag with potting soil or another grow

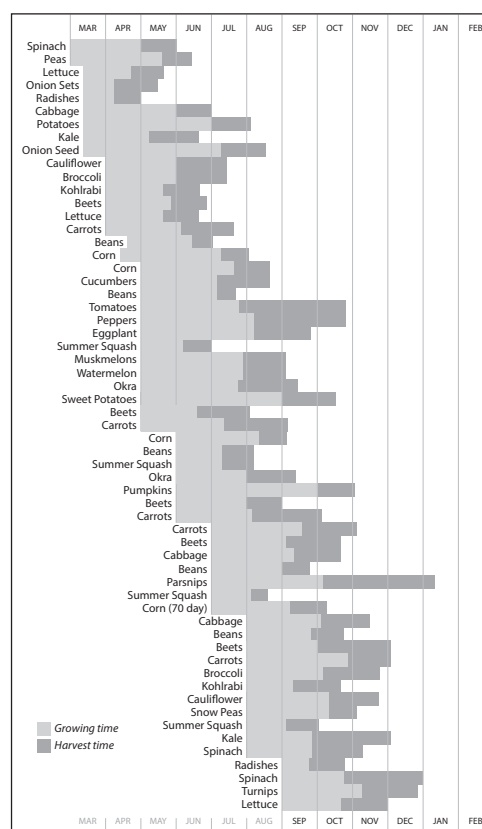


Figure 1. Reproduced from Home Vegetable Gardening in Kentucky (ID-128) by Richard Durham (ed.) et al. Courtesy of the University of Kentucky College of Agriculture, Food and Environment.

media that will support root growth. Up to 25% native soil can be added to potting soil or soilless media such as peat moss, cocoa coir or compost. Native soil (soil formed naturally from biological and geologic processes) can increase biological

activity and nutrient holding capacity, but any soil should be tested for heavy metals before it is used to grow food. Soil tests can be submitted through your local Cooperative Extension Office.

2. If you are direct seeding (not transplanting) vegetables like carrots, radishes, or greens in your grow bag, soak the grow media thoroughly, then simply place your seeds at the appropriate depth.

Remember, the bigger the seed the deeper it is planted. Small seeds like carrots, and most greens, should not be planted more than a ¼ inch – ¾ inch deep. If you are transplanting plants that were started earlier in the year, or were purchased from a nursery, they should be planted in moist soil just deep enough that the roots are covered. Use Table 1 as a reference for plant spacing.

Table 1. Suggested final spacing* of commonly planted vegetables in raised beds and containers

Vegetable type	Typical spacing (inches)	Plants per square foot
Radishes Leaf lettuce (quick crop)	2 x 2	36
Carrots Onions (green from seed) Spinach Leaf lettuce Mustard	3 x 3	16
Beets Turnips Garlic Onions (from slips or bulbs) Peas (provide trellis or support)	4 x 4	9
Most herbs (Basil, Cilantro, Dill, Fennel**, Mint**, Parsley*, Oregano**, Thyme) Bok Choy Head Lettuce Chard Beans Garlic Edible Soybean (Edamame) Corn (not recommended in small plantings)	6 x 6	4
Broccoli Cauliflower Kale Collards Cabbage Potatoes Sweet Potatoes Horseradish Summer squash Eggplant (dwarf types) Cucumber (trellised) Okra Peppers	12 x 12	1
Tomatoes Cucumbers (not trellised) Eggplant Pumpkins Rhubarb** Winter squash Cantaloupe Watermelon	18 x 18 to 18 x 24	<1 (actually, 33–44 plants per square ft)

*Biennial but usually grown as an annual

**Perennial, some perennial herbs can be aggressive, such as mint

Table 1. Reproduced from Gardening in Small Spaces (ID-248) by Richard Durham (ed.) et al. Courtesy of the University of Kentucky College of Agriculture, Food and Environment.

in a grow bag because the bag drains and dries out more quickly than plants in the ground. Observe how moist your plant's roots are by periodically touching the grow media. If it feels dry one inch below the surface, it is probably too dry for the plant's roots!

2. Nutrient management does not have to be complicated, but it is important to remember that nutrients are removed from the grow media every time plants are harvested or disposed of. Fertilizer can be applied around the base of the plants once they begin to flower. A good rule of thumb is to apply no more than 1 tablespoon of nitrogen fertilizer (such as a 15-0-0) or a ¼ oz of 10-10-10 fertilizer per grow bag. Applying too much fertilizer can be wasteful and even harmful to your plants and the environment. See ID-128 (Home Vegetable Gardening in Kentucky) or one of the suggested references at the end of this publication for additional information on fertilization.

3. Harvest your fruits, vegetables or herbs when they are mature and/or when you are ready to eat them! When you are planning your grow bag garden, it can be helpful to reference the “days to maturity” stated on the seed label. However, some vegetables, like sweet peppers or tomatoes, may be harvested green to get different flavors.

Where should I place my grow bag?

All plants need sunlight, water and nutrients to grow. Most fruits and vegetables commonly grown in Kentucky grow best in full sun. Locating your grow bag(s) by a water source is helpful because your plants will need to be watered regularly.

Care and Maintenance

1. Your grow bag garden should be watered regularly. It is ideal to water plants at their base, rather than from above, because plants uptake water through their roots and excessive moisture on leaf surfaces can lead to disease problems. It is difficult to overwater plants

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