KENTUCKY 4-H HORTICULTURE AND PLANT SCIENCE PROJECT

VEGETABLE CONTAINER GARDEN





4-H is a community of young people who are learning leadership citizenship and life skills.

The Vegetable Container Garden Contest is a perfect opportunity to showcase a container garden that you have created and cared for. Remember that this contest is specific to vegetable plants.

Container. The vegetables you choose to grow will determine the size of container you need. When selecting a container, choose one that has (1) *proper growing room* for plants selected and (2) *drainage holes*.

- Choose a container that is large enough for plants as they grow and get larger. For each vegetable plant you include in your container garden, research the size of the plant.
- Plant roots need water, but most do not need to stand in water continuously. Too
 much water can harm plants because roots need air as well as water to grow properly.
 If you choose a container that does not have holes, talk to your parent or guardian
 about the possibility of creating several holes that are evenly spaced in the bottom of
 your container.

Potting Mix. Container plants need a potting mix that is lightweight, drains easily while retaining moisture, and does not become compacted and hard. Look for a potting mix that contains most or all of these components: peat moss, perlite, vermiculite, compost, and/or pasteurized soil. Purchase enough potting mix to fill your container within an inch of the top. Do not use regular garden soil in containers. Soil from your yard or garden can make your container very heavy, can compact very easily so that roots have a hard time growing, and may include pests that can harm your plants.

Vegetable Selection. When choosing a vegetable, (1) select one that you like to eat and (2) a variety that will do well in a container. To know what vegetables to choose for container gardens, look at the back of the vegetable seed packet or on the plant tag of a transplant. If phrases or words like "grows well in containers", "compact"," bushy", or "dwarf" are used that indicates that your vegetable should do well in the limited growth space of your container.

Container gardening is growing plants in containers instead of in the ground.
Container gardens can be grown outside, on patios, porches, or balconies.
Vegetable container gardens are great for those with limited outdoor space.

Materials Needed

- Container (such as a 5gallon food-grade bucket)
- Potting mix
- Vegetable seeds or plants
- Gardening trowel
- Watering can

State Fair Information

- Division 6015: 4-H
 Horticulture and Plant

 Science
- Class 567: Vegetable Container Garden (grown in container)

Visit the 4-H Horticulture webpage at https://4-h.ca.uky.edu/content/horticulture for additional information.

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Vegetable Selection continued...

Vegetable transplants and seed packets are available at garden or home centers, farm stores, and perhaps grocery stores. Before buying a transplant, make sure it has been well taken of, appears healthy, is disease and insect free, has no flowers or fruits, and the roots are not knotted and circling the bottom of the pot. Reject spindly, elongated plants with weak stems. Vegetable seeds stay viable for no less than a few years if they are stored properly. If you are buying seeds look for a packet that has this year's date on it, as the seeds should germinate nicely.

Sunlight and Placement. Research each vegetable you plan to include in your container garden before you purchase the plant or seed. How much sunlight does that plant need? How much water? Different plants require different amounts of sunlight and water. For example, lettuce needs a cool, shaded area while eggplant should be located in an area that receives full sun. Choose vegetables for your container garden that need similar amounts of sunlight and water. Determine where you will place your container garden so that it receives the proper amount of sunlight and is easy for you to water.

Watering. Your container garden needs consistent water checks. All sides of the container are exposed to sun, wind, and heat, which causes the soil to lose water quickly.

- Make sure the soil is not so dry that your plants wilt. Dry soil hurts small roots that work for the plant.
- Do not overwater your container garden. Very wet soil decreases the amount of air to the roots. Roots need air to do their job properly.
- Do a Water Test. Stick your index finger into the soil. If your fingertip is dry, the plants need water, if it is moist, do not water at that time.
- Remember moisture levels will change quickly in hot temperatures so a container feeling moist in the morning, may need watering by the afternoon.

Food. Plant nutrients can be used by the plants in a container quickly. Plants may need added food (fertilizer) to do well. Some potting mixes have fertilizer added into the mix. If you have this type of potting mix, read the potting mix label before you consider an additional fertilizer. If you do add fertilizer, make the first application 3 weeks after the plants have three sets of leaves. If your mix does not have added fertilizer, use a water-soluble fertilizer (this means you mix it with water). Look for a water-soluble fertilizer suitable for vegetables. Use once per week. Always follow label directions for application and ask your parent/guardian before using fertilizers.

Planting Procedure. For best results, moisten the potting mix the day before you intend to plant, especially if the mix contains a high percentage of peat, which requires time to soak up the water (Note that peat moistens faster with hot water than with cold water.) Fill your container within ½ to 1 inch from the container top with the potting mix. For seeds, follow the seed packet instructions. The seed packet will include planting depth information. Sow the seeds thicker than needed in case some seeds do not germinate. Record the name and variety of vegetable, along with the planting date on your Project Record Form. After sowing, water seeds gently with a watering can, being careful not to dislodge the seeds. Once the seedlings have two to three leaves, thin the seedlings for spacing (refer to your seed packet). To thin, use your index finger and thumb to gently pinch off the seedling at the soil surface. Choose the weaker seedling(s) to thin. For transplants, gently plant in container. For information for transplants, including spacing and container size needed, see the Home Vegetable Gardening in Kentucky publication (see Resource List).

Care

- Place the container where it receives the right amount of sunlight for your plant(s).
- Check the container every day to see if it needs water. As the
 plant gets bigger and the days get warmer, your container garden
 will need more water. Before you water, remember to perform
 the water test mentioned in the Watering section. If your
 container needs moisture, water thoroughly until water runs out
 of the drainage holes at the bottom of your container.
- Fertilize your container once a week with a water-soluble fertilizer. Always follow label directions for application and ask your parent/guardian before using fertilizers.
- Harvest your vegetables when they mature and enjoy!

Getting your vegetable container garden ready for entry into the fair.

- Check plants for insects or signs of insect damage.
- Remove yellowing or dead leaves.
- Water your container garden well, but do not leave the container dripping water or have standing water in the plant saucer.
- Clean the outside of your container removing dead leaves, dirt, or dried mud.
- Pack your container garden for transport, securing any loose parts, tags, or paperwork.

Contact your county Extension agent for information about exhibiting your container garden in your county's fair.

Visit the 4-H Horticulture webpage, https://4-h.ca.uky.edu/content/horticulture for the Kentucky State Fair guidelines and scoresheet for this project.

Resources for more Information from University of Kentucky:

- Home Vegetable Gardening in Kentucky (ID-128) http://www2.ca.uky.edu/agcomm/pubs/ID/ID128/ID128.pdf
- Gardening in Small Spaces (ID-248) http://www2.ca.uky.edu/agcomm/pubs/ID/ID248/ID248.pdf

References:

Home Vegetable Gardening in Kentucky (ID-128). University of Kentucky Cooperative Extension Service.

Success with Containers. University of California. Available online https://ucanr.edu/sites/MG_Alameda/files/37093.pdf

Vegetable Container Garden prepared by Sharon Flynt , Horticulture Extension Agent for Scott County, and Ashley Osborne, Extension Specialist for 4-H Youth Development, 2020.

4-H Vegetable Container Garden Project Record Form



1. Fill in the necessary information in table below.

Vegetable:	Date Planted:	Seeds	<u>or</u> (Circle C	Transplant One)
			•	•

2. Fill in the table below. Add additional rows as needed.

Fertilizer Record								
Fertilizer used:	Date applied:	Amount:						

3. Keep a log of the date you harvest and amount harvested. Add additional columns and rows as needed.

Harvest Date	Amount Harvested	Harvest Date	Amount Harvested	Harvest Date	Amount Harvested	Harvest Date	Amount Harvested
Example: July	Example:						
3	1 tomato						
	(1/4 pound)						

Let's Think About It (Use a separate sheet of paper if needed to answer these questions.)

- 1. What type of container did you chose? Why?
- 2. How much water did your container garden need in the June? July? August?
- 3. What did you learn about plants?
- 4. Did you have any challenges growing your container garden?
- 5. What is the total amount you harvested (either in pounds or number of vegetables)?

Apply It

1. Will you use what you have learned to complete another gardening project?

Growing Up (grow your knowledge in horticulture)

- Try annual gardening in containers.
- Learn how to start your own seeds at home, and grow into transplants.
- Research what 'fertilizer analysis' means and make a poster to explain it.
- Try growing an indoor herb container garden.

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