

# MESSENGER-INQUIRER



University of Kentucky  
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**HORTICULTURE EDUCATION**  
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**Requirements for Producing Quality Vegetable Transplants**  
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Seed packets in stores, seed catalogs, and online gardening advertisements make me excited about warmer weather and growing vegetables. However, the desire to start transplants for growing outside must wait. Producing quality transplants depends on the proper starting date, light requirements, temperature, and care.

To determine when to start the transplants, count backward the number of weeks it takes to grow one starting from the desired date to plant it into the garden. For example, cool season crops, which tolerate light frosts, such as cabbage can be transplanted outside starting around March 15, depending on the weather. Within 5 to 7 weeks, plants are ready for the garden. Starting these seeds beginning February 10, provides seven weeks of growing time. Broccoli seeds should be started two weeks later. These crops bolt and ruin when the weather turns hot. The latest target date to plant them in the garden is the beginning of April.

Tomato plants can be transplanted into the garden starting the last week in April. Tomato seeds sown around March 24 will be ready for the garden four to six weeks after seeding. The tomato is a warm-season crop. Be ready to cover them if frost is predicted after transplanting into the garden.

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Since peppers and eggplants are sensitive to cool soil and air temperature, they are best transplanted into the garden the first week of May. Plants are ready for the garden six to eight weeks after seeding. They can be started about March 10.

Cucumber, muskmelon, squash, and watermelon can be transplanted into the garden after May 1 since they require warm temperatures to grow. Sow seeds around April 15 because they will be ready to transplant in two to three weeks. They become difficult to transplant as they grow longer.

When starting seeds, use an artificial growing medium of peat moss and perlite or a commercial seedling mix available at garden centers. These do not contain disease-causing pathogens that may harm the emerging seedlings. Add water to the growing medium to moisten the amount needed. Take a plastic tray or container, such as the bottom of a milk jug or plastic sandwich container, with holes poked in the bottom. Fill it with moistened medium. Dry medium is difficult to moisten evenly after it is placed in a container.

Sow seeds in rows within the container, or broadcast seeds over the growing medium. Lightly cover the seeds and moisten the soil slightly with water to remove air pockets around the seeds. Place the seeded container in a plastic bag to keep the top of the growing medium from drying out quickly. Keep them at room temperature until seedlings begin to emerge. Then remove the plastic bag and place the container on top of something to catch the water running through it. To save time transplanting seedlings, eggplant, pepper, and tomato seeds can be planted directly into individual containers.

Start cucumber, muskmelon, squash, and watermelon seeds in individual peat pots or peat pellets because their roots do not like to be disturbed after germination.

The average windowsill usually does not get enough light and needs to be supplemented with artificial light. Use cool white fluorescent lamps alone, a mixture of cool white and warm white fluorescent lamps, or a mixture of cool white and plant growth fluorescent lamps. LED lights can be used

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too. A variety of light stands are available at different prices or make your own. Lamps can be placed in fixtures such as a shop light mount and placed on a type of stand that allows for raising and lowering the fixture.

Locate lamps 5 to 10 inches above the foliage and operate them 12 to 18 hours per day. Raise the lights as the plants grow. After they germinate, keep seedlings cool enough (60 to 65 degrees F) for strong, sturdy growth.

While the seedlings are still small, about one to two weeks after they emerge, transplant them by handling the leaves only. Plant them into 3- to 4-inch plastic pots, cell packs, disposable cups, milk cartons, or small peat pots with holes in the bottom for drainage. If seedlings are not transplanted into individual containers, roots become tangled and severely damaged when transplanted. Place individual pots or packs in plastic or metal trays for growing and for convenience. Place the trays back under the lights. Remove excess water from trays so the seedlings will not rot.

Fertilize the vegetable seedlings when the second true leaves appear. Use a fertilizer such as 20-20-20 at rates recommended on the package. Fertilize again in another week or two.

For more information about growing transplants, contact the Daviess County Cooperative Extension Service at 270-685-8480 or [annette.heisdorffer@uky.edu](mailto:annette.heisdorffer@uky.edu).

## **Annette's tip:**

Remember to harden off transplants started indoors for one week before planting them in the garden. Harden off plants by placing them in a cool location and reducing the amount of water; don't allow them to dry out and wilt. This process helps plants acclimate to outside conditions.

Before planting peat pots in the garden, tear off the top edge of the pot. If the top of the pot is above the soil, the peat pot will dry out and damage roots near the pot's edge.

## **Upcoming Event:**

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“Where Do I Start? Vegetable Seed Selection and Producing Transplants.” Thursday, January 23, 2025, at 1:00 p.m. and repeated at 6:00 p.m. at the Daviess County Cooperative Extension Service Office. Each participant will take home seeds at the end of the hands-on program.

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