

GARDNING: Get your vegetables started indoors



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If you have read anything at all about starting vegetable seed indoors, then you may have noticed a trend in the recommended steps to follow.

For example, you may have read the suggestion to start your seeds in very small pots first and transplant to slightly larger containers once your seedlings have germinated and developed.

Rarely is an explanation given for following this simple but important step.

Why not start seeds in a large container and transplant the young seedlings directly into the garden once all danger of frost is past?

Compared to small pots, large containers hold more water for longer periods of time. If the roots of young seedlings are allowed to remain wet for extended periods of time they may develop a condition known as “damping-off.” Damping-off is often caused by a fungal pathogen (disease agent) which can have a variety of effects on seeds or seedlings. Pre-emergent damping-off will destroy seeds before they sprout. Seeds attacked early may never grow at all. Post-emergent damping-off attacks growing seedlings. These seedlings will often wilt and die. A more frustrating circumstance occurs when damping-off causes the seedlings to simply stop developing.

Small peat pots or seed trays are readily available at nurseries. These small containers do not hold much water and therefore tend to dry out quickly.

Newly germinated seeds have very small root systems and require both oxygen and water. A constantly wet medium will force oxygen out of the soil and the young plant roots will suffocate. An extended dry period will likewise kill the roots. The frequent cycling of wet and dry periods created by watering seedlings in small pots creates an ideal environment for the young roots.

So why not transplant seedlings directly into the garden from a small container? The size of the root system will be restricted by the size of the container.

A small root system may not be able to physically support rapid shoot growth. Also, placing a small root system into a large volume of soil in the garden will subject it to rapid drying. The surrounding soil will draw moisture away from the differently textured medium of the indoor-grown seedlings root systems.

I recommend starting with fresh seeds in small containers with a starting medium that drains well. In the past I have recommended the use of small Styrofoam cups that have a drainage hole punched in the bottom. Warmth is crucial in activating the growth enzymes already present in the seeds.

Once the seedlings emerge from the soil, they should be placed in light. Placing seedlings in a south facing window is one option for temporarily growing young plants. Placing them beneath a fluorescent lamp is better.

The first leaves that appear are not “true leaves” but are rather embryonic leaves that will eventually be lost.

The next leaves that develop will be true leaves and will begin to earnestly nourish the young seedling in the presence of light. These leaves will help develop the root system more fully. Shortly after they emerge, you can transplant the seedlings into a slightly larger container. Transplanting into a container about 25 percent larger is ideal. Allow the seedlings to continue growing in this container or transplant them once more if necessary prior to putting them in the garden once all danger of frost is past.

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