

## Starting Vegetable Seeds at Home

(Wausaukee) The growing season is close, but there is still time to start your own vegetable seeds at home. Starting seeds can be a simple biology lesson for your kids and grandkids, as they watch plants grow and develop. And it can be a very fruitful lesson, as those young seedlings develop into productive plants that provide tasty, nutritious food for your family.

Before you start, think a bit about where you can best start new plants. You don't need an expensive, perfectly designed plant starting assembly, but your little plants do need the right types of temperature and light. They also need to be started in some type of soil media that is held in an easy to manage container for your situation. The best soil-less mixes are ones that are not too coarse and not too fine. Too many chunks or bigger pieces will create difficulties for the seed germination process and may impact your results negatively. If the mix looks like it went through a blender it is too fine and can lead to other types of problems. You want one that can compact a bit in your pot to give the seeds the moisture they need, but not get too tight and limit air or water flow.

What do you want to start? Many vegetables are actually best served by sowing seed directly into the garden at the right time, as they grow quickly enough and dislike being transplanted. Root vegetables (carrots, parsnips, turnips, radishes); salad greens; beans and peas; and certain others, such as sweet corn and potatoes, should all be planted directly into the ground. Good candidates for seed starting at this time of the year are tomatoes, cabbage, cauliflower, broccoli, pepper, eggplant, and herbs such as basil, parsley, or others. It is rather late for some things, such as onions from seed, as they grow very, very slowly. Vine crops (pumpkins, squashes, etc..) can be started indoors, but you don't want them to be in pots too long, so it is best to start them in late April or early May and plan on transplanting them around May 15-25 into your gardens.

One nice aspect about growing your own transplants is that you can choose from a very wide range of cultivars or hybrids. As an example, most garden centers will have 12-24 different types of tomato plants to buy, but you can buy seed of well over 500 different cultivars. It is probably best to raise cultivars you know your family likes, but is also fun to try one or two new cultivars, as you might find one that is perfect for you or others in your family.

Most vegetables need some light to germinate, so do not bury the seed too deeply into the soil, best to be about ¼ inch into the soil. Light needs can be met in different ways. You can use fluorescent lights, specifically designed plant lights, or a mix of incandescent and fluorescent. Bulbs designed for plants emit all the necessary wavelengths of light, so they are optimum, but are also more expensive. Fluorescent bulbs get close to this, especially if they are relatively new bulbs. It can also help quite a bit if you locate the developing plants where they can get some natural sunlight. Just using incandescent bulbs is not advisable, as they are often too hot for young plants; are more expensive to operate; and do not emit a sufficient array of light wavelengths for proper plant development.

Use small pots, recycled plant six-packs or the like, or recycle deli containers or anything else that is about the right size. A key is to have water drainage and enough soil depth for the little plants to not get root bound too quickly, as that can be devastating for some species. Seeds will germinate best at warmer temperatures, so place the containers on top of the fridge while they are germinating, or some other location in your house where they will be at least 65 degrees Fahrenheit, up to 80 degrees. You also want consistently high moisture, but not wet, conditions as the seeds germinate, so consider using closable containers, tray covers, or clear plastic bags that your pots can fit into for this critical time period.

At optimum moisture and temperatures, most seeds will germinate in 2-5 days, although some are slower, such as pepper and eggplant. Please note that there are some seeds that take weeks to germinate, so do some research when selecting what you are planting. The next steps are easier if you have seeds in a container which germinate within a day or so of each other. Please note that you do

NOT need to plant all the seeds in a packet. Close it back up and place the seeds in an older freezer until next year. Placing the seeds in glass jars first works well, and is necessary if you use a freezer that is part of a fridge.

Once most seeds in a group have germinated, you must remove the covering and make sure the little plants have good light and air flow. Overly wet young plants may succumb to fungal pathogens that cause a common issue, termed damping off. The small plants will be looking good and then relatively quickly just keel over at the soil line, due to the fungi girdling the little stems. You probably don't need to have an actual fan blowing air over them, but air flow in and around the plants is required for healthy plants.

The little plants have very, very small root systems and need water access constantly. Especially if in small cells, they can dry out very quickly. Watering from the bottom is best, as it keeps the leaves dry while the soil mix can wick water up into it for the roots to have good access. Fertilizing the seedlings is not necessary until they are at least a week or more old. At that point, you can start adding a quarter to half strength water soluble fertilizer once or twice a week. Keep the light quality high, and the bulbs about an inch over the little plants, if possible. Having the light source on a chain or designing some type of height adjustment option into your setup makes this a lot easier.

If you start seeds in small cells or pots, you will likely need to transplant them into a larger pot size after they get growing. Carefully move the plants so that you don't tear either young leaves or young roots, and make sure they have good water access in their new pots.

As plants near being able to get planted in the garden, you need to acclimate them to being outdoors and in the stress of direct sunlight and wind. For example, put the plants outside in the sun for an hour or so, at most, the first time you do so. Or, put them into the shade on a breezy day for a couple hours. Slowly increase the time of exposure and the degree of exposure and you will have hardy plants that experience less transplant shock. Of course, consistent watering when you put them into the garden or into large outdoor containers is still critical.

You can get ready for a productive garden, and have some learning opportunities for your family as you do so, by starting your own seeds. A good source of information on vegetable selection and starting dates is Wisconsin Extension publication A1653; Vegetable Cultivars and Planting Guide for Wisconsin. If you have any questions, contact Scott Reuss, Horticulture Agent with the UW-Madison, Division of Extension, at 715-732-7510 or e-mail to [sreuss@marinettecounty.com](mailto:sreuss@marinettecounty.com)