Prepping Before Planting

By Kathy Wolfe
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Early preparation increases vegetable garden success

As the days become lighter and signs of spring begin to appear, our gardening instincts awaken. You have studied your seed catalogs, determined varieties that will prosper in your climate and conditions, and mapped out your garden site. What comes next?

Let's start with seeds. Determining the number of seeds needed to fit your garden's space can be made easier using a seed calculator. Choose your crop, if it is to be directly sown or transplanted, the number of available feet per row and press "Calculate" to get your answer. If you wish to start your own seeds indoors or are wondering when certain crops can be directly sown or transplanted, a seed-starting calculator is invaluable. By knowing your USDA climate zone, you can calculate the first and last average frost dates in your area and plug that information into the starting calculator to determine sowing/planting dates by crop. Both of these calculators can be found free on-line at several seed catalog sites, gardening blogs and university extension publications.

You are now ready to take seed inventory. Start by separating crops that will be directly sown into the garden bed and those you will start indoors. The outdoor directly sown plants might include peas, spinach, radishes, carrots, lettuce, beans, squash and cucumbers, among others. Using your calculator, chart or seed packet information, sort these into the order they will be planted and file them aside.

Now look at the "sow indoors" seeds and determine planting dates using this same method. Remember to factor in where you will be starting the seeds. If working in a cool place (under 70-degrees F.), you may want to start seeds earlier. In a warmer starting area, such as a greenhouse, you might think about starting them later.

Do you have seeds left over from previous years? Check a seed viability chart to determine average seed longevity when stored under proper conditions (cool and dark). Many extension services and seed companies can provide this information on-line or in print.

Conduct a seed germination test by counting out ten seeds, placing them in a row on a damp paper towel, rolling it up and labeling it. Do this with each packet you are testing. Put the whole lot into a plastic bag and leave in a warm place. Check after a few days to ensure they are still moist. After a week, count how many germinated and multiply that number by ten to get the viability percentage. Remember that vigor is as important to the start of the plant as viability. A puny starter will not make a thriving plant. Although vigor testing is being done with agricultural crops, there is currently no home test for vigor. Err on the side of fresher seeds if you have any doubts.

Above Left: White plastic film used early in the season allows light into the tunnel cloche creating a mini-greenhouse to increase the soil temperature prior to planting. Make "green" clips to secure the plastic by slicing sections of old hose. The plastic can be replaced later with a floating row cover, which allows water and light to reach the plants. **Above Right:** A temporary blanket of black plastic in early March will help to both smother weed seeds and warm the soil. *Photos by Christine Farrow / WSU Skagit County Master Gardeners.*

For seed starting, you will need a supplementary light source. A fluorescent grow-light hung on a chain works well. Seedlings grown in insufficient light become tall and spindly or "leggy." The lights should be on 14 hours per day. A heat pad can be used to ensure the highest rate of germination.

A sterile, soilless planting medium (bought commercially as "seed starting mix" or "soilless mix" or made by yourself) will help avoid damping-off. This common disease is caused by soil borne pathogens that result in poor seed germination and seedling death.

Many gardeners cover flats or pots with plastic wrap, window glass or a commercial hard plastic to promote germination. Keep covered containers out of direct sunlight. The covers are removed once germination is well underway.

Labels will help you keep track of what you are growing and when it was planted. Tongue depressors or commercial plastic labels are good choices. Larger pots for transplanting may be needed further along in your process.

Seedlings will need some fertilizer for best development. House plant fertilizer (15-30-15) works well. Resist over-fertilizing. More comprehensive steps in the seed starting process are available through university extension sites and publications, as well as through trusted gardening on-line sources.

Above: Cold frames can be easily constructed out of repurposed materials of purchased as a ready-to-assemble kit. The frames can used throughout the year to start seedlings, harden off tender plants or to grow leafy lettuce in cold weather. *Photo by Christine Farrow / WSU Skagit County Master Gardeners*

Let's get outside and see what needs attention. Have you gotten a soil test recently? A soil test will determine the amount of fertilizer recommended, the soil pH, humic material and lime requirements (if your soil needs to balance acidity). For more information on how soil tests are done and for soil testing recommendations, contact the WSU Skagit County Extension Master Gardeners at 360-428-4270.

Use a clean garden trowel and collect 6 - 8 scoops from holes 4" – 6" deep throughout the vegetable patch. Place in a clean, self-sealing bag marked with your name, address, and the date when the sample was taken. Follow the directions given by your extension agent to proceed. When the results come back, follow amendment additions as recommended.

Pre-warming and drying the soil is a good way to get a jump-start on the season. Prepare your soil by broadcasting compost and raking in to make a seedbed. Cover with a 4 mil or greater grade of clear or black plastic anchored with U-shaped pins. To raise soil temperature even more, add a tunnel cloche (a series of hoops covered in clear polyethylene sheets). Keep these in place 4 – 6 weeks. When ready to plant, remove the plastic sheet covering the soil and plant your seeds, leaving the tunnel cloche in place, ventilating and watering as needed.

You are well on your way to a successful year in the vegetable garden. The earliest directly sown plants may be in, seedlings emerging under grow lights, and soil fertile and warming for the upcoming season. But don't jump the gun to get all plants out too soon. Mother Nature is still in charge. The operative word in Pacific Northwest gardening is **patience**.

RESOURCES:

- "Plant Early: Warming the Soil". Carl Wilson, horticulture agent, Colorado State University Cooperative Extension, Denver. January 5, 2010.
- "Resident Self-Testing Protocol for Testing Soil". Public Health – Seattle & King County.

- "Soil Testing". David H. Hardy, Ph.D., Section Chief, Agronomics Services, North Carolina Department of Agriculture & Consumer Services.
- "Starting Seeds Indoors". Michael N. Dana and B. Rosie Lerner. Department of Horticulture, Purdue University Cooperative Extension Services. April, 2001.
- "Importance of Seed Vigor Testing". Seed Laboratory, Oregon State University.
- "How to Clean and Sanitize Seed Starting Pots". Maria Woodie. *Horticulture Magazine.* December 18, 2012.
- "Seed Quantity Calculator". http://www.johnnyseeds.com/seedcalculator.aspx.
- "Seed-Starting Date Calculator". https://www.johnnyseeds.com/growers-library/seed-planting-schedule-calculator.html

Note: some hyperlinks in this article have been updated since its initial publication.