

FOR IMMEDIATE RELEASE

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Don't guess. Test soil temperatures before planting vegetables!

It is easy to get excited about planting vegetable seeds and transplants in the vegetable garden, even when it is too early to plant. This frustration is one of the most common comments that I receive from gardeners that call into the Extension Offices in Nebraska. Slowly but surely, the weather is warming up. Along with warming air temperatures, our soil temperature is warming up too. This is key to the timing of planting vegetable crops for success.

While retail stores have had vegetable seeds for a while and soon vegetable transplants will be available, the weather and the soil temperatures have not been favorable for planting a number of vegetable crops in the ground. Planting in soil temperatures that are too cool will lead to poor seed germination and stunted plants that will not produce to their full potential during the growing season. This is going to be especially true for tomato, pepper, and vine crops that do not tolerate cool soil temperatures or even a light freeze.

One of the most valuable gardening tools in my opinion is the soil temperature thermometer. They are easily purchased at garden centers or online from supply catalogs at a reasonable price. They can be used for years if they are kept clean and in good repair. For that reasonable price, these handy tools can track when the soil temperature is ready for growing vegetable crops, or other applications such as when to apply pre-emergent herbicides on the home lawn.

How do soil thermometers work, and how does a person use it correctly track soil temperatures? First, decide when to record soil temperatures. It is crucial to use the same time each day test the soil temperature in the area where it is desired. To gain a more informed idea of soil temperature, it is important to test the soil for four consecutive days at the same time.

The next crucial step is to follow the instructions on the soil thermometer completely to gather a valid reading. A number of soil thermometers will require the instrument to be shoved into the ground in the same place for three to four inches deep, and waiting at least five minutes before taking the reading. After repeating this process at the same time of day, over a series of days according to the thermometer directions, a valid soil temperature reading can be obtained. After writing down the soil temperature reading for four or more days, some decisions can be made on when to wait or plant a crop based off that series of soil temperatures. Did the soil temperature vastly fluctuate during that four day span of data? Are the soil temperatures fairly consistent or exactly the same? If these temperature readings are consistent, and meet the minimum soil temperature for the intended vegetable crop, it is time to plant based off of soil temperatures.

For the sake of simplicity, there are a few vegetable crop groupings that use similar soil temperatures. According to Oregon State University Extension, here are those groupings:

- 40 Degree Fahrenheit Plant Grouping – These vegetable crops include arugula, fava beans, kale, lettuce, pak choi, parsnips, peas, radicchio, radishes, and spinach seed.

- 50 Degree Fahrenheit Plant Grouping – These vegetable crops include Chinese cabbage, leeks, onions, Swiss chard, and turnips.
- 60 Degree Fahrenheit Plant Grouping – These vegetable crops include beans, beets, broccoli, Brussels sprouts, cabbage, carrots and cauliflower. Do be careful with planting beans since they are prone to be damaged by a freeze.
- 70 Degree Fahrenheit Plant Grouping – These vegetable crops include tomatoes, eggplants, peppers, cucumbers, squash, corn, and melons. These crops are very prone to damage from a light freeze as transplants, and may take a while to germinate even when the soil is at this temperature threshold.

For more information on vegetable crops and soil temperatures, please refer to the full article from Oregon State University at: <http://extension.oregonstate.edu/gardening/2018/03/stick-thermometer-soil-planting-vegetables> for specific information.

For those gardeners who do not access to a garden soil thermometer, the Nebraska Extension Crop Watch website does track soil temperatures across Nebraska. Simply click on the website at <https://cropwatch.unl.edu/cropwatchsoiltemperature> and scroll down the page to find a soil temperature testing station close to your location. Look for the seven-day temperature average closest to the station location. This is the temperature reading that gardeners need to follow to make planting decisions.

If anyone has any questions about testing soil temperatures before planting vegetables, please send an email to dlott2@unl.edu, call the Extension Office in North Platte at (785) 532-2683 or call your local Nebraska Extension Office. I will be happy to help any questions that gardeners may have.

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