

Yard and Garden - 03-16-2013 - Ted Griess / Extension Horticulture Assistant

In last week's column I encouraged readers to consider growing more plants from seeds rather than from purchased transplants. I referenced a number of the advantages of growing plants from seed; however, I disclosed little about seed starting methods. Perhaps you may have followed my suggestion; and by now you are holding a number of seed packets, scratching your head, and wondering where to begin. Allow me to share a few recommendations for successful seed starting.

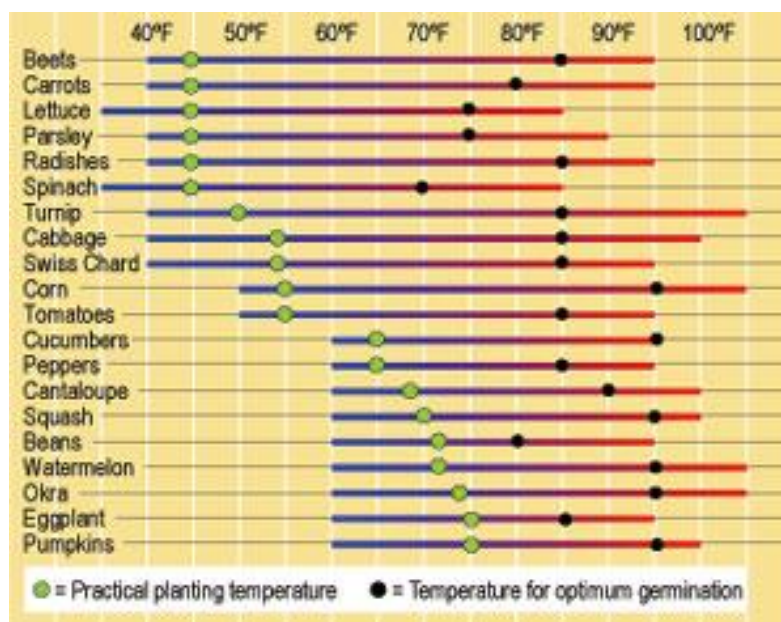
Whether they are vegetable seeds or flower seeds, both could be classified as those capable of being planted directly into the soil or those performing best when pre-started indoors under lights. With either, one might question, "When is the correct time to plant?" Although the backside of a seed packet contains an assortment of valuable information regarding seed planting instructions, not all pertinent information is presented.

Generally, if the seeds can be planted directly into the soil, the instructions will usually state planting should be done a certain number of days before or after the last expected frost date. In USDA Zone 5, May 10th is the last expected frost date.

For those seeds that need to be planted indoors before one sets them out as seedling transplants, most seed packets report the number of days before harvest for veggies or the number of days before bloom for flowers. The fact remains— whether planted directly into the soil or started indoors, success with seed planting is directly related to timing.

Some seeds can tolerate colder soils than others. To get a vegetable garden off to a fast start, it is important to know when the soil is warm enough to plant, thus insuring good germination. Not all seeds should be planted at the same time. For example, certain seeds germinate only when soil temperatures are above 60°F; others can readily sprout at 40°F.

A range of temperatures exists where the soil becomes warm enough for germination to begin and where it becomes too warm and germination stops. The optimum temperature is a point where seeds germinate at nearly 100%. For example, bean seeds need a temperature of nearly 60°F to begin germinating and will ultimately stop germinating when soil temperatures exceed 90°F. With this example, the optimum seed germinating temperature is approximately 80°F.



The fact remains, when spring arrives, most gardeners are eager to start planting. For Central Nebraska, it usually takes until late May or early June before soil temperatures reach 75°F to 80°F, the optimum soil temperature needed to germinate bean seeds at nearly 100%.

The attached chart indicates the minimum and maximum germination temperature ranges for each vegetable crop. The location of the black dot indicates the optimum germination temperature. The green dot on the chart represents what is called the practical soil temperature. This is the soil temperature at which gardeners can expect germination, but rarely, if ever, at 100% germination. If one plants according to the green dot, expect to plant seeds at a thicker rate in order to insure greater germination success.

The University of Nebraska has a website called *Crop Watch* which provides timely research-based information on crop production and crop protection in Nebraska. By logging onto this site, one can see soil temperatures within a seven day spread. I encourage gardeners to examine this site. It will help in determining when to plant seeds.

To reach Crop Watch, log onto the University of Nebraska's website at <http://ianrhome.unl.edu> . Once on this page, scroll down to the bottom and click on *Crop Watch*. When it opens, click on Weather (GDD, ET) located on the red bar near the top. Open Soil Temperature Maps and Data. There you will find current soil temperatures. As of 3-12-2013, the seven-day average soil temperature for the Kearney area was 36°F.

Here's wishing you optimal seed starting.