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Soil Temperature and Vegetables

Some of you are probably getting itchy! When temperatures get in to the 70's – with sun to boot! – it's pretty tough to hold off getting in the garden!

Air temperature (or the calendar for that matter!) may not be the best indicator of planting time, however. A better, and one of the most neglected, tools for vegetable gardeners is a soil thermometer. Why? Planting when soils are too cool result in seed rots and transplants that just sit there. Neither of those is real positive for plant growth!

A number of vegetables can germinate and grow at cool temperatures. For example, peas will germinate and grow well at a soil temperature of 40 F. Though lettuce, parsnips, and spinach can sprout at a soil temperature of 35 F, they prefer at least 45 F for best germination and growth. Radishes also do well at a soil temperature of 45 F. Warm-season crops such as tomatoes, sweet corn and beans prefer at least 55 F for germination (or transplanting), but others such as peppers, cucumbers, melons and sweet potatoes need it even warmer, about 60 F.

Taking soil temperature isn't as easy as just shoving a thermometer in the ground! Doing so accurately is a bit of a science. First, use a metal soil thermometer, which is sold in many garden, auto parts and hardware stores. Take temperature 2.5 inches deep at about 10 to 11 a.m. Temperature variations throughout the day and night affect soil temperature, with lowest readings after dawn and warmest around mid-afternoon. The late-morning reading gives a good average temperature. If taking the soil temperature at this time is not practical, take a reading before you leave for work and a second when you return home and use the average. Also be sure to get a consistent reading for four to five days in a row before planting, and make sure a cold snap is not predicted.

An excellent guide sheet on this subject is published by the Alabama Cooperative Extension System and is titled "Soil Temperature Conditions for Vegetable Seed Germination." It can be found at <http://www.aces.edu/pubs/docs/A/ANR-1061/ANR-1061.pdf> .