Extending the growing season

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In Minnesota, the growing season often feels brief, but it does not have to limit what gardeners can achieve.

By starting early and using various techniques, gardeners can create favorable conditions for their plants both in the spring and again in the fall. These methods help maximize the time available for planting and harvesting.

One of the most popular ways to get planting in the garden early is by warming the soil. Studies show transparent plastic mulch heats soil faster than colored or black plastics because a layer of water forms beneath it, trapping heat and increasing solar absorption. Install plastic mulch for one to two weeks before planting heat loving plants (60–65 degree soil temperature) for optimal growth. To achieve favorable results, apply mulch on a warm, calm day when the soil is moist, preferably during the hottest part of the day. This timing helps ensure that the mulch remains stable and effective, as laying it during cooler periods may cause it to loosen and ripple with rising temperatures. Ensure the plastic is tight and edges are secure by using anchor pins with washers, or anchoring stakes to prevent ripping and shifting in wind.

Cold frames help you extend your growing season by using a shallow, unheated box with a clear lid to trap warmth. Place them in a sunny, south-facing spot and build with scrap lumber and old windows, ensuring the lid fits tightly but opens for ventilation. They are great for cool season crops and hardening off seedlings. Regularly check temperatures, ventilate to prevent overheating, and water early to avoid plant diseases.

Understanding soil temperature is an important part of extending the season effectively. The Extension recommends using a soil thermometer to check temperatures at a depth of two to four inches, ideally in the morning for consistency. Cool season crops such as lettuce, spinach, peas, and radishes germinate and grow best in cooler soil, often between 40 and 50 degrees. Warm season crops like tomatoes, peppers, cucumbers, and squash require much warmer soil conditions, generally at least 60 degrees, with optimal growth occurring closer to 65 to 70 degrees. Planting according to soil temperature rather than the calendar helps ensure strong germination and healthy growth.

In our area the average last spring frost is between May 10–20, and the first fall frost occurs from September 10–25, though these dates vary yearly. To protect young seedlings and flowering plants from the threat of frost (33-36 degrees air temperature), cover them with frost blankets or row covers in the evening and remove them when it warms up. If using containers to extend the growing season simply move them indoors if possible.

When choosing warm season crops like tomatoes, peppers, and cucumbers look for those with earlier maturity dates often resulting in longer harvests. Fast growing cool season crops can be planted in spring and again in midsummer for an additional fall harvest when temperatures drop. This approach can also be applied to many annual flower varieties.

For more information on extending your growing season visit
https://extension.umn.edu/planting-and-growing-guides/extending-growing-season