

Hardening Off & Protecting Tender Seedlings

To succeed in getting ripe vegetables in our Montana climate, we must often use all kinds of devices and strategies to protect our plants both early in the season and sometimes late in the year, too. On a cold May night, our gardens can take on the appearance of a yard sale in progress as we try to protect all our hard work!

First, it is important to understand our growing season. We typically get our last frost sometime around the middle of May and our first fall frost, sometime around the middle of September. This gives us about 130 days or 18 weeks of growing. But. We've all seen it snow in June.

Gardeners are weather watchers. We have home weather monitors. We know the websites, we know the forecasters on the news, and we all have our favorites. What are we looking for? Freezing is 32°F. One of the surest signs of frost is clear blue skies all day, and a forecast for an overnight low of 32°F. But on an overcast day with good cloud cover, frost is unlikely, even at 32°F. Temperatures would have to drop much lower, to 25°F, or less.

Weather conditions also depend on your location in the valley. Gardens along Flathead Lake enjoy a few degrees of warmth over what may be forecast. Gardens in the heart of town can also have a few degrees of advantage. Once we head out away from town, especially with any elevation gain, temperatures may be cooler than forecast. The valley range for USDA Hardiness zones ranges from 5-6 on Flathead Lake, 4 over most of the valley floor, and 2-3 in spots higher up in elevation such as Essex.

It is also important to know your site. Cold air flows downhill so a site at the bottom of a hill may not be ideal. South and west facing exposures will be warmer earlier and longer in both the day and season. Gardens in raised beds will warm up earlier than garden soil.

Vegetables have a wide range of tolerances around that 32°F number. If the forecast calls for nighttime temperatures below freezing, how far below freezing is important. Generally speaking, the vegetables that you can seed directly into the soil early have more cold tolerance than ones you put out as started plants or ones that you start late and put out tender plants. This is a very general guideline.

Generally speaking, all newly planted plants or emerging seedlings will need to be protected from temperatures below 32°F for at least a week. If you wanted to plant and the temperatures for the coming week are cold, we'd recommend waiting to plant.

Take a look at our separate handout 'Cloches' for a good look at items to use to protect your garden. Keep reading here for more information on hardening off tender plants.

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Hardening Off

As you are learning about gardening you will come across the phrase 'hardening off'. This is the process of getting plants that have only been in cozy conditions inside, ready to be outside in the weather. Whether you grew plants yourself or purchased them, they will need to be acclimated, that is, get used to, the changing weather conditions that make up the 24 hours of each day.

Decide when you want to put your plants into the garden and work back from there. Early in the season, late April into May, it is a good idea to spend a week hardening off your plants. Later in June, you can take just a day or two to get plants ready.

Check the weather. If a storm is forecast, put off hardening off until it passes. Locate a spot where the plants will be sheltered outside. By sheltered we mean where an unexpected rainstorm or wind won't reach them. A spot next to the house, but away from roof runoff, right in front of the garage or on a deck is ideal. This makes it easy to move them back in at night.

Put the plants out in the morning. Take them in at night. That's it. That's hardening off in a nutshell. Do this every day for a week. The last night before you plan to plant, leave them out all night if the forecast is above freezing.

Keep an eye on the weather forecast. If a storm is predicted and you won't be home, either put the plants in a sheltered location such as a covered porch or don't put them out for a day. It won't hurt them one bit. Same if you are home.

If you can, take them into an unheated space at night instead of your warm house. This can be very helpful to your plants. The garage is usually good for this, plus then the plants are right where you can put them out again in the morning.

Once you have hardened your plants off, they are ready to be planted into the garden, whether in the ground, a raised bed or a container. By the way, one of the big advantages of container gardens is that you can plant the container and if you are able, move the whole thing inside and out to harden off the plants.

For the first week or so, keep supplies nearby in case you need to protect your plants from unexpected weather. This can be as simple as old sheets, buckets or cloches like we describe in that handout. Whatever you use, don't leave it on all day unless the weather is bad all day. It is easy for plants to overheat under cover. If the weather is bad, cold, wind or hard rain, it is okay to leave plants covered.

The most important thing to learn as you learn more about gardening is to keep a sharp eye on the weather. Learn how the forecast relates to what you see at your house. Is it warmer there or colder than the prediction? Think about investing in a home weather monitor. It is okay to start with a simple thermometer. Gardens and weather are inseparable. We can garden in Montana and succeed if we know that.





