

By Chris Hilgert

Wyoming often provides less-than-ideal growing conditions for vegetables.

We are constantly reminded that living in our state is ripe with challenges – strong wind, short growing seasons, extreme dryness, and poor soils.

So, why would gardeners subject themselves and their plants to this punishment? Some grow gardens for economic reasons; others because nothing is better than the taste of fresh fruits and vegetables.

Some just like a good challenge.

Whatever the reason, gardeners know they must adapt to their growing environments to succeed. How can we be successful gardeners in Wyoming?

We need to understand there are some things we can't change.

- The weather is something we have to deal with. We
 do have plentiful sunshine, and that is a good start.
 Your vegetable garden should be in a location that
 receives at least six to eight hours of direct sun.
- Wyoming is windy and dry. That tells us we need to water gardens regularly.

Watering with a drip irrigation system can help prevent the wind from blowing the irrigation water away, but whatever your watering method, try to keep the roots wet and the foliage dry. Some fungal diseases are more likely to show up on plants with wet leaves.

Add Organic Matter

Adding compost to gardens helps the soil retain moisture. Do this every year when tilling the garden. Spread a layer of compost over the entire garden 1 to 2 inches deep and work it into the soil with a tiller or turn it in using a shovel. Over time, the tilth and quality of the soil will improve. In addition to holding moisture in the soil, as compost decomposes, it acts as a slow-release fertilizer.



If you don't have a compost pile, grow a cover crop after the last harvest in fall and till it in in the spring. Crimson clover, winter wheat, or cereal rye are good choices. Mulch applied over the top of the soil will provide insulation from drying winds and cold night temperatures. Another benefit – some weeds will have a hard time pushing through 2-4 inches of mulch.

Plants Require Right pH Levels

Gardeners know healthy plants grow in healthy soil. Most plants grow best at 7.0 pH. Some nutrients may become unavailable to vegetable plants at higher or lower pH levels. Many areas in Wyoming have alkaline soils (pH above 7.0), reaching levels of 8.0 or higher. Have the soil tested to find out its pH. Sulfur-based products are used to acidify the soil, or lower the pH. Taking the time to amend the soil to appropriate pH levels will pay off in the long run.

Because many soils have a large "buffering" capacity and are constantly working their way back to more alkaline conditions, adjusting the pH every few years may be necessary.

Raised Beds, High Tunnels

Raised beds can help maintain a lower pH and solve other soil problems, including drainage issues and lack of organic matter. Build the beds at least 12 inches high and fill them with quality topsoil. Someone once gave me this advice: "Gardeners need good soil. Don't treat it like dirt."

Build your garden from the ground up and you reap what you sow.

Laramie has about 90 frost-free days a year. Areas around Sheridan may have a 140-plus-day growing season. Find out the average growing season where you live and choose varieties that mature and produce within that growing season window.

Heat-loving plants that have relatively long growing requirements may need some help, but they can be grown here.

The growing season can be extended by starting seeds indoors a couple of weeks before the last spring frost or planting into a cold frame. High tunnels can extend the growing season by a month in the spring and a month in the fall. The soil warms earlier in the spring, allowing plants to go in the ground earlier, and the cover protects the plants from cold night temperatures.

High tunnels can cost about \$700-\$1,500 to build. Low tunnels and row covers will cost just a fraction of that.

Cool-season crops like lettuce, peas, and root crops can be planted when soil temperatures reach 40 degrees.

Heat-loving plants like tomatoes, peppers, corn, beans, squash, and cucumbers need soil temperatures to reach at least 60 degrees.

In general, cool-season crops will do well early in the year and in late summer through fall. You can even get two or three crops per year. Yes – you can plant lettuce again in late summer for fall harvest.

Keep Out Unwanted Munchers

Keeping critters out of your garden is also a challenge in most areas of the state. Nothing beats a 7- to 8-foot tall fence to keep out hungry herbivores such as deer, elk, or antelope. For some of the smaller creatures intent on eating lettuce, an additional portion of fencing (such as wire fencing with small holes) partially buried in the ground will help deter them from tunneling under the larger fence into gardens.

If this all sounds like too much trouble, there is another way to enjoy fresh produce. Support local growers at farmer markets and shop at vendors selling local food. You will have to pay for it, but it's worth it.



Chris Hilgert, the state Master Gardener Program coordinator with UW Extension, is so good at growing plants he has TWO green thumbs. He can be reached at (307) 766-6870 or a chilgert@uwyo.edu.