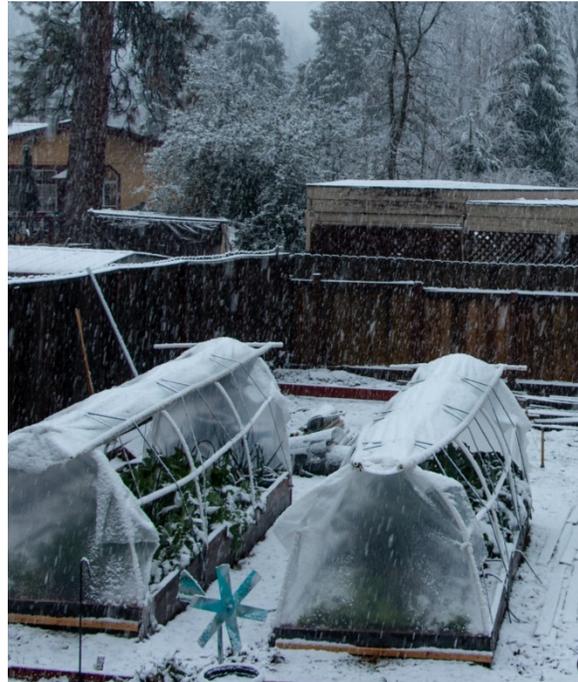


Low Tunnels for Winter Gardening

By Jim Bliss

Winter, especially where there is snow, is normally a time when gardeners hang up their tools for the season. With a little planning however, it doesn't have to be. A do-it-yourself low tunnel is one relatively inexpensive way to extend your gardening year. They have been used in France extensively in market gardens where they cover rows in the fields that can be quite long. There they are known as *chenilles* the French word for caterpillar because of the way they look as you drive through the countryside.

Low tunnel construction can be as simple or complex as you want. You can build them on raised beds right on the ground. The simplest method is to drive 18 in long 3/8-inch rebar stakes about a foot into the ground four feet apart and bend 8 foot 1/2 inch schedule 40 PVC pipes from stake to stake across your garden bed.



Space these hoops every four feet. The low tunnel can be as long as you like. Cover this with ten-foot-wide clear polyethylene sheet. I used a six mil UV resistant plastic because it will last up to five years. Leave an extra five or six feet at each end, gather it up and tie it together and stake it to the ground. Weight the extra plastic sheet on the sides with dirt or rocks. With this type of tunnel, you can raise the sides by unweighting them and tying them up. Voila! A simple low tunnel.

My own low tunnels are built over raised beds a foot high that have half inch hardware cloth stapled to the bottom for vole and gopher protection. Living in the foothills makes that necessary. Instead of tying the ends I cover them with plastic fastened at the bottom with a 1x2 board to the raised bed. I fasten the sheeting to the pipes with clips I make out of 3/4 inch PVC pipe. The next step is to run 3 pipes the length of the tunnel by drilling 1-inch holes in a 3/4 inch tee so I can run the three 3/4 pipe between the hoops. This gives the whole structure more rigidity when the wind begins to howl.

Because of the variable weather where I live, I adapted a method from Hi Tunnel construction. I make the 6 Mil sheeting about two feet longer than the bed and fasten a half inch PVC pipe to the long sides of the sheet with the 3/4 PVC clips. I then glue a PCV crank at one end of each pipe. The last step is to run 1/4 line crisscrossed over the top, snug but not so tight that I can't roll up the sides. This enables me to roll up the sides when the weather is too warm. Some seasons I raise and lower the sides morning and evening to take advantage of the warm days and protect during the cold nights.

So, there you have it, one simple and one complex low tunnel. Eliot Coleman, a respected gardening author, says you can extend your season by one or two USDA zones with these tunnels. In extreme weather I can put a cloth row cover over my plants to protect them even further. I grow lettuce, swiss chard, broccoli, cabbage and rutabagas under my low tunnels. In an area that gets down below 20 degrees occasionally in the winter, that helps keep us in greens all season long. You do need to watch the weather a little if you raise your sides up though, as you can see from the picture, sometimes the snow sneaks up on you. By the way, we caught the snow in time and there was no damage.

Before you throw up your hands and say I could never do this, remember you can always call the Master Gardener hotline (209) 533-5912 if something here confuses you. We are here to help, and this is a proven method to extend your growing season.

Jim Bliss is a University of California Cooperative Extension Master Gardener of Tuolumne County.

UCCE Master Gardeners of Tuolumne and Calaveras Counties can answer home gardening questions. Call 209-533-5912 or go to: <http://ucanr.edu/survey/survey.cfm?surveynumber=7269> to fill out our easy-to-use problem questionnaire. Check out our website at: http://cecentralsierra.ucanr.edu/Master_Gardeners/ You can also find us on Facebook.