



Garden All Winter With a Cold Frame

by Sussex County Master Gardener Gaye Mara

As cold weather approaches, you can continue gardening in inexpensive, easy-to-build cold frames. Herbs, leafy greens, and root crops like beets, carrots, and onions can be tended all winter long. You can also overwinter perennials, start spring or summer crops earlier (and keep them growing later), or harden off young seedlings started indoors.

The soil provides the growing medium. The sides and top insulate the plants from the wind and cold. The hinged or removable top can be opened on warm days to keep the interior from overheating.



Sussex County Master Gardener Gaye Mara Photo

Classic Cold Frame. A bottomless box, set on or into good garden soil and covered by a transparent movable lid slanted toward the sun to collect light and heat of the winter sun.

The most common materials used to build a traditional cold frame are wooden boards for the sides and a recycled glass window or door for the top, hinged to the top of the back wall for opening.

Cold Frame Tips

Tips for Growing in a Cold Frame

Plants to grow: Compact, non-fruiting plants that thrive in cool weather are best for cold growing:

- Herbs, like chervil, cilantro, dill, marjoram, and parsley.
- Greens like arugula, bok choy, broccoli, cabbage, chart, Chinese cabbage, endive, kale, lettuce, mizuna, mustard, radicchio, and spinach.
- Root crops like beets, carrots, leeks, onions, radishes, and turnips.

Forget about trying to grow fruiting plants like tomatoes, peppers, beans, peas, cucumbers, and squashes. They require pollination to set fruit and the pollinators are not around in the winter. You can, however, grow peas for their edible shoots. Most fruiting plants also grow too big for a cold frame and want stronger sun and warmer temperatures than they will get in a cold frame.

Growing Timetable: If you are starting plants from seed and want full-grown plants to harvest through the winter, you will need to start the seeds early so they can put on good growth before the days get too short. They will stop growing when there is less than 20 hours of sunlight a day, from about mid-November to mid-January.

DIY Cold Frames

Sussex County Master Gardener, Bruce Egolf started gardening in Pottstown, Pennsylvania before moving to southern Delaware. He built his cold frames from concrete blocks sunk 24 inches into the soil, lined inside with one to two inches of foam insulation, and topped with a double layer of glass. He remembers that his grandfather placed his cold frame against a south-facing stone wall of his garage to retain the sun's heat and block cold north winds. "There could be three feet of snow on the ground and I could lift the lid up and smell the earth and the green, growing plants."

In our milder winters, Master Gardener Penny Huth says an enclosure of straw bales topped with plexiglass can also work well.

Another easy solution is a low tunnel – sections of PVC pipe bent into arches with the ends pushed into the soil and covered with six-mm plastic sheeting. The plastic sheeting can be clipped to the pipes and/or weighted down with rocks and/or with attached strips of one-foot x two-foot lumber.

The Joys and Pitfalls of Winter Gardening

Winter cold brings an end to most of the insects and diseases that attack plants in the summer saving a lot of garden maintenance. The few pests still around are mostly kept out by a cold frame. Pests that attack humans, like ticks and mosquitoes, have gone away.

Our mild Delmarva winters add to the pleasure of being outdoors. Like so many of us, Master Gardener Bunnie Williams finds it hard to work in our summer heat and confesses, "My garden gets away from me in the summer." She now does most of her gardening in cool weather in the big cold frame her husband built out of scrap materials. Williams's cold frame has a "kind of milky" lid rather than a clear one. She has found in our climate she can leave it cracked open three to four inches almost all winter and only fully open on the warmest days.

Mild winters do however pose some problems. Master Gardener Penny Huth warns, "Watch the temperatures. An unusually warm winter day can heat up the cold frame and cook the plants!" The interior temperature should be kept between 40 and 80 degrees Fahrenheit. Even when below 80 degrees outside, the sun can make the inside of the cold frame much warmer when the lid is closed. If nobody is regularly at home on winter days to open the lid, a cold frame may not be for you. Master Gardener Wendy Ferranti found that despite her best efforts, "My cold frame fried things," and she gave up.

For More Information

A four-minute video from Joe Lamp'1 ("Joe Gardener") at <https://www.youtube.com/watch?v=9lKhseTSI6U> shows how to build a cold frame from scrap lumber and plastic sheeting. A web search

To figure the planting dates, just back out the maturity dates from mid-November. For example, for a lettuce that matures from seed in 45 days, subtract 45 days from November 15 and start the seeds on or before October 1.

Watering: Keep the soil moist but not wet, taking great care not to overwater. Plant roots can rot in cold, wet soil.

Author



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Questions

For questions on this subject or any gardening topic call the Master Gardener Helpline: In New Castle County, (302) 831-8862; in Kent County, (302) 730-4000; and in Sussex County, (302) 856-2585 x 535. The Master Gardeners monitor the Helpline in the winter but it may take a few days to get back to you.

on cold frames will turn up additional resources, including ready-made cold frames for sale in a range of materials and sizes.

Cooperative Extension services have produced some excellent illustrated articles about cold frames – how to construct them and what and how to grow in them – available at no charge from their websites. Two that are especially useful:

From Penn State Extension: Diane Diffenderfer, “Season Extenders and Growing Fall Vegetables,” at <https://extension.psu.edu/season-extend-ers-and-growing-fall-vegetables>, explains cold frames and other structures for extending the growing season.

From Cornell Extension: “Cold Frames and Hot Beds” at <https://cceschuyler.org/resources/cold-frames-hot-beds-chemung-county>, includes instructions for adding heat to a cold frame.

And for truly hard-core weather gardening techniques, check out Niki Jabbour’s book, *Growing Under Cover: Techniques for a More Productive, Weather-Resistant, Pest-free Vegetable Garden*, 2020, Storey Books. Jabbour gardens all winter long in Canada.

More Information

For more information about Master Gardener workshops, garden helplines, presentations, becoming a Master Gardener Volunteer, or other activities, please visit these websites.

UD Website - <https://www.udel.edu/academics/colleges/canr/cooperative-extension/environmental-stewardship/master-gardeners/>

DSU Website- <https://cast.desu.edu/cooperative-extension/agriculture-natural-resources/delaware-master-gardeners>



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