

COLD FRAME GARDENING

I. Location

- A. In the garden or separate from the garden or by the house.
- B. Face the cold frame to the south
- C. Avoid the bottom of a slope which could be a frost pocket.
- D. Slightly sloped to the south
- E. Near a water source
- F. Out of the wind, or provide a windbreak.

II. Size

- A. Depends on the size of window sash or windowed door.
- B. Small would be 24" x 36", large would be 36" x 72"
- C. Back higher than front, slope 10 to 25 degrees.

III. Frame Materials

- A. Wood
- B. Cinder Blocks
- C. Bricks
- D. Polycarbonate
- E. Straw bales

IV. Top Materials

- A. Lexan Polycarbonate
- B. Glass Window
- C. Plastic
- D. Windowed Door

V. Temperature control

- A. Prop open
- B. Use auto vent opener
- C. Temperature sensor

VI. Uses

- A. Soil Warmer - You don't need to actually grow anything in a cold frame. You can just use it to warm up your garden's soil to get it ready for the growing season. If the cold frame is portable enough, you can move it from section to section of your garden to warm up the soil underneath. If you have a raised bed and the width is right, you can lay an old window frame over sections of it to get it ready. Just remember that once you remove the window, ambient temperatures will resort to normal, even if the temperature of the soil underneath stays relatively warm. Stick to cold-hardy plants until the last frost has passed.
- B. Staggered Starts - You can use a cold frame as a seedling relocation center if you've run out of room for seedlings under your grow lights. If you're planning on starting seeds

indoors, you'll need to start them grouped into various start dates: Some need to be started indoors 6-8 weeks before the last frost, others 4-6 weeks, and so on. You can transfer some of your mature seedlings to a cold frame to make room for another round of seedlings.

- C. Direct Sow - You can also start your seeds early directly into the cold frame. Some seed packets recommend sowing seeds directly into the ground, especially if they do not transplant well. In a cold frame, your average last frost date might be a month earlier than in your garden. Just keep the seedbed moist and vent it frequently to avoid damping-off, where seeds or seedlings rot before they get a chance to mature.
- D. Hardening Off - If you've started seeds indoors under grow lights, allow your seedlings to adjust to outdoor temperatures and light variations by introducing them first in a cold frame before you plant them into the ground. Before you bring your seedlings outdoors and into the cold frame, wait until the seedlings develop two or more sets of leaves beyond the first set, called cotyledons, that appear soon after germination.
- E. Frost Protection - Early in the season, you may have put out potted plants, hoping that you've judged it correctly that there will be no more frosts. But if a frost is in the forecast, you can move your pots into a cold frame to protect them. A cold frame will be 5 degrees F warmer, or more, than the outside temperatures, so this won't protect impatiens when it's 20 degrees below outside, but it may protect them when it's 36 degrees F.
- F. Propagation Center - Use your cold frame any time of year to propagate new plants. Snip off runners or suckers such as those on a mint or tomato plant, pot them up, and keep them in your cold frame (covered or not) to give them a good start before transplanting.
- G. Artificial Tropics - Give your tropical plants a taste of home. You can convince tomatoes and chili peppers that they live in their native tropics by growing them in a cold frame all summer. Just make sure that they are adequately watered and vented regularly, especially in extreme heat.
- H. Detention Center - If your cold frame has a bottom (most don't), you can use it to grow plants outdoors that might otherwise take over your garden. Mint is a notoriously vigorous colonizer, sending rhizomes in every direction. With a garden box filled with at least 18 inches of soil, you can grow mint and other aggressive colonizers outdoors without fear. Just don't fill your cold frame with so much soil that the plant can send runners over the top of the frame and out into your garden.
- I. Season Extender - Perhaps the most enticing reason for a cold frame is the possibility of eating fresh vegetables throughout the winter. Grow cold-tolerant herbs and vegetables directly in your cold frame by starting seeds in late summer or early fall. Your plants will grow until the days get shorter and winter approaches. After their growing season ends, keep your plants moist over the winter, though do not over-water. Keep the plants out of the wind and away from direct sun (to prevent premature growth). Vent the cold frame periodically. Protect the plants with a layer of leaves or mulch. Over the winter, your veggies and herbs will stay in semi-dormancy, ready for you to harvest them until spring comes.
- J. Mini Shed - When you're not growing anything in your cold frame, you can use it as a convenient place to store your gardening tools, especially those that you use all the time during the growing season.

VII. What to grow

A. Salad Greens

1. Without a doubt, salad greens are among the easiest of all vegetable crops to grow in frames. Not only do they sprout and grow well in cool weather, they produce a harvest in quick fashion
2. In fact, quickly enough, that with a single frame you can produce a continual harvest of salad greens that will keep a family of four supplied with fresh greens all winter long.
3. Sow seeds 1/8" deep in the soil, spacing 1/4" apart to maximize space in the frame. For best results, sow new rows in the frame every two weeks to keep a fresh supply coming on.

B. Spinach

1. Spinach is another cool weather crop that thrives growing in cold frames. And like salad greens, it is a fast grower. Harvesting of tender baby spinach leaves can begin in as little as 21 days after planting. Spinach can be planted closer together in cold frames and harvested as baby greens. Their flavor actually improves when grown in cold frames.
2. Sow seeds 1/4" deep in rich, fertile soil, spacing seeds an inch or so apart to maximize space in the cold frame. Since spinach is perfect for harvesting as young greens, spacing can be much closer than in a traditional garden setting.
3. Harvest as soon as leaves reach a few inches above the soil line. You should be able to get at least two to three cuttings from regrowth before having to replant.

C. Radishes

1. Radishes are a fast seed-to-harvest, cool weather loving crop. Especially if you prefer the taste of tender baby radishes. Some varieties can be ready for picking just a month after going into the soil.
2. When growing in frames, sow radishes a 1/4" deep in loose, fertile soil. Radishes will benefit greatly from fresh compost mixed into the soil prior to planting. It helps loosen the soil for strong root growth, and provides valuable nutrients. Radishes are a fast grower, and perform well when grown in the winter in cool weather.

D. Kale

1. It's hard to beat the health benefits of adding kale to your diet on a regular basis. Not only is it loaded with Vitamin C, it is also considered one of the best antioxidant vegetables around.
2. Like spinach, kale's flavor actually improves with cool weather, so cold frame growing is a perfect fit. Plant seeds shallow at a depth around 1/8 – 1/4", spacing them about an inch apart. Kale performs well in cool weather. In fact, it is one crop whose flavor actually improves with cooler temperatures.

E. Baby Onions / Scallions

1. Nothing can be better in winter soups and roasts than the taste of fresh onion! Baby onions, green onions and scallions all perform well in a cold frame environment.
2. When growing in cold frames, Plant seeds or small bulbs 1/4" deep in rich fertile soil. Once again, compost will help the bulbs form easily and provide extra nutrients for quick, strong growth.