

Production of hardy vegetables in cold frames during winter in Oklahoma

by Edwin Kessler

Hardy vegetables such as carrots, lettuce, mustard, turnips, spinach, and Swiss chard can be grown during the Oklahoma winter season in cold frames. No artificial heat is necessary. (Your author has found that beets, broccoli, and cabbage do not mature well under plastic.)

An inexpensive cold frame of almost any desired size can be made with 3/8" reinforcing rods formed in arcs, with ends pushed about one foot into the ground. Horizontal bars of diameter 1/4" can be welded or wire-tied to the arcs to maintain uniform separation of the arcs.

The whole may be covered with polyethylene plastic film of thickness 6 mils, with earth covering the plastic skirts to hold the film against the frame. Where exposed to strong winds, it may be desirable to have a few ropes pass over the cold frame in order to hold the plastic against the bars.

Plants in the cold frame will grow vigorously during daylight hours on sunny winter days, when the temperature inside rises to about 30° F above that outside.

At night, minimum temperature in a cold frame in the field will be only about 3° F warmer than outside, unless (expensive!) artificial heat is provided. During occasional extremely cold periods, it may be desirable to mulch the plants with straw.

Planting season is during October and November, and harvest typically begins during December. Earlier plantings suffer from fall insects, and later plantings don't mature until after the coldest weather has passed.

Tomatoes planted in the cold frame in March will usually provide fruit about two weeks ahead of usual outside plantings. The sides of the cold frame cover may be lifted in April in order to prevent extreme interior heat, and the cover may be removed at the end of May.

If applied and removed with care, the plastic can be used for two or possibly even three seasons.

Outside gardens with some hardy vegetables during Oklahoma winters can be successful with row covers, which also inhibit insects that are vigorous during planting time in late summer and fall. Turnips can be quite successful when planted outside without protection in Oklahoma during September 1-15.

Edwin Kessler received a doctorate in meteorology from MIT in 1957 and was Director of the National Severe Storms Laboratory in Norman, Oklahoma, from 1964 until 1986, when he retired. He was Chair of Common Cause Oklahoma from 1993 until 1999 and today is CCOK's vice-chair. With the University of Oklahoma, he shares operation of an organic research farm ten miles west of Purcell, Oklahoma. He believes that farming is too important to be left to the corporations.