

# STORING VEGETABLES AT HOME

H. C. HARRISON

**H**ome storage is a good and inexpensive way to keep many vegetables. When stored properly, fresh vegetables keep most of their food value and original flavor. Successful storage depends on proper choice of crops, careful harvesting and preparation, maintenance of a suitable temperature and humidity, and adequate care during the storage period.

## HARVESTING AND PREPARING VEGETABLES FOR STORAGE

Store only mature vegetables of good quality. Use small, cut, bruised, or broken produce in early fall or preserve them by freezing or canning.

### Root Vegetables and Potatoes

In most cases, and especially for root vegetables which withstand light frost, delay harvesting as long as possible. Harvest and handle with care to avoid cuts and bruises. Remove the soil from beets, carrots, celeriac, parsnips, potatoes, rutabagas, salsify, turnips, and winter radishes by careful washing. To help prevent rotting, allow excess water to evaporate before storing the vegetables. Cut off tops of root vegetables  $\frac{1}{2}$  inch from the crown. Both tops and tap roots are commonly removed from rutabagas; tap roots need not be removed from other root vegetables. Do not wax rutabagas and other root vegetables for storage; it reduces shriveling but does not slow growth when the temperature is too high.

Sweet potatoes generally do not get mature enough in Wisconsin to store well. Store only larger, more mature roots harvested before the vines are frosted. Handle them carefully and cure them for 10 days at 80° to 85°F under moist conditions. They should keep for about a month or more in a cool (55° to 60°F), dry place. Use the smaller, younger roots soon after harvesting or freeze or can them.

## STORAGE REQUIREMENTS FOR COMMON VEGETABLES

Commodity	Temp. (°F)	Relative humidity	Average storage life
Beets	32	95%	1-3 months
Brussels sprouts	32	90-95%	3-5 weeks
Cabbage	32	90-95%	3-4 months
Carrots	32	90-95%	4-6 months
Cauliflower	32	90-95%	2-4 weeks
Celeriac	32	90-95%	3-4 months
Celery	32	90-95%	2-3 months
Chinese cabbage	32	90-95%	1-2 months
Dry beans	32-50	65-70%	1 year
Endive	32	90-95%	2-3 weeks
Garlic	32	65-70%	6-7 months
Horseradish	30-32	90-95%	10-12 months
Jerusalem artichoke	31-32	90-95%	2-5 months
Kale	32	90-95%	10-14 days
Kohlrabi	32	90-95%	2-4 weeks
Leeks	32	90-95%	1-3 months
Onions	32	65-70%	5-8 months
Parsnips	32	90-95%	2-6 months
Peppers, dry	32-50	60-70%	6 months
Peppers, sweet	45-50	90-95%	8-10 days
Potatoes	38-40	90%	5-8 months
Pumpkins	50-55	70-75%	2-3 months
Rutabaga	32	90-95%	2-4 months
Salsify	32	90-95%	2-4 months
Sweet Potato	55-60	85-90%	4-6 months
Tomatoes, mature green	55-60	85-90%	2-6 weeks
Turnips	32	90-95%	4-5 months
Winter radishes	32	90-95%	2-4 months
Winter squash	50-55	70-75%	3-6 months

## Cabbage, Chinese Cabbage, and Cauliflower

To prevent splitting, when the heads become firm, lift cabbage plants until a few roots are broken. Remove the loose, outer leaves from cabbage, Chinese cabbage, and cauliflower; store only sound, solid heads. Place the heads in plastic bags which have a few holes for escape of excess moisture. Remove the roots and stems from cabbage and Chinese cabbage close to the base of the head. Remove both leaves and roots from kohlrabi.

## Celery and Endive

Harvest celery and endive just before heavy frost. Leave the roots and soil attached and set in moist sphagnum moss, soil, or sand in a shallow container on the storage room floor. To avoid decay, make sure the tops are dry when stored and kept dry thereafter. The moss, soil, or sand should be only deep enough to cover the roots and must be kept slightly moist.

To increase crispness and tenderness, blanch celery and endive by covering them or keeping them in a darkened room.

## Pumpkins, Squash, and Onions

Pumpkins and squash should be mature; harvest them before frost and cure in a warm, well-ventilated location for 10 days before they are placed in storage. To prevent rot, leave a part of the stem on each fruit. The cultivar Table Queen (acorn) stores best if placed directly in storage without curing. All immature pumpkins and squash or any which have been damaged from light frost should be eaten soon after harvest or cooked and frozen.

Pull onions when the tops fall over and begin to dry. When tops are completely dry, cut the tops off 1 inch from the bulbs. Cure bulbs for another week or two in a dry well-ventilated location before placing in storage. Onions store best in a dry, well-ventilated room where the temperature can be kept near 32°F.

## Dry Beans

Pick fully mature snap beans, field beans (pinto, great northern, kidney, navy), lima beans, peas and vegetable soybeans, and spread them to dry in a warm, well-ventilated location for several days before shelling. To avoid possible weevil damage in beans and peas, freeze seeds at 0°F or lower for 4 days or spread in shallow pans and heat in an oven for 30 minutes at 120°F soon after shelling. Vegetable

soybeans are not attacked by weevils and do not need to be treated. Store beans, peas, and soybeans in closed containers in a cool, dry place.

## Cucumbers, Eggplant, Peppers, and Tomatoes

Cucumbers, eggplant, peppers, and tomatoes may be kept for several weeks in a cool, moderately moist place. Rinse and allow the vegetables to dry before placing them in storage. Put them in plastic bags which have holes for ventilation and store at about 55°F. As mature green tomatoes begin to color, remove them to a 65° to 70°F location for more rapid ripening. Mature hot peppers should be air-dried and stored in a dry, well-ventilated location.

## A BASEMENT STORAGE ROOM

The correct temperature is a must for successful vegetable storage; with a few exceptions, this is between 32° to 38°F. In most homes it is difficult to find a place where the temperature can be kept that low unless a separate room is provided. Therefore, try to develop a storage room in the northeast or northwest corner of your basement. Insulate this room well and provide adequate ventilation from the outside to keep the temperature down and the room moderately dry. Use this room to keep cabbage, rutabagas, and turnips, which give off undesirable odors in storage, so they will not flavor other vegetables. The size of the room will vary with the space available and your family needs. If you plan to store both vegetables and canned foods in the same room, 8 by 8 feet is a good size (see figures 1 through 4).

## PREVENT SHRIVELING OF POTATOES AND ROOT CROPS

Many vegetables, especially root crops, shrivel rapidly unless stored in a moist atmosphere. You can prevent shriveling by bedding the roots in sphagnum moss which is kept slightly moist or by placing them in plastic bags with a few holes to prevent the accumulation of excess moisture. After curing, keep onions, pumpkins, and squash dry. Onions store best in mesh bags or slatted crates. Squash and pumpkins store best on shelves at around 55°F.

Because of the large quantity and the need to prevent shriveling and keep out light, store potatoes in covered bins, boxes, or other containers with a few openings for ventilation. To prevent excessive shriveling, store rutabagas in the same way.

# PLANS FOR BUILDING A BASEMENT STORAGE ROOM

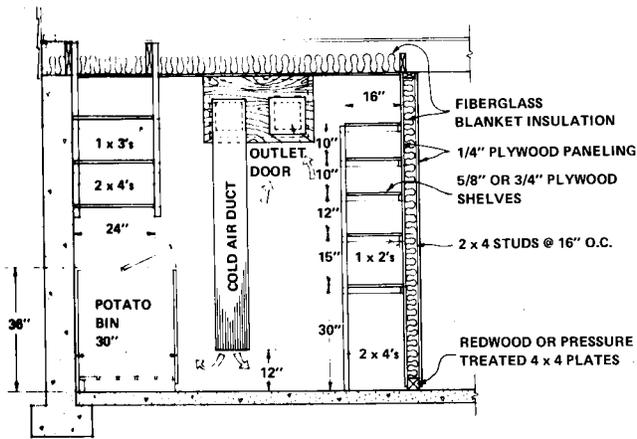


Figure 1. Side view

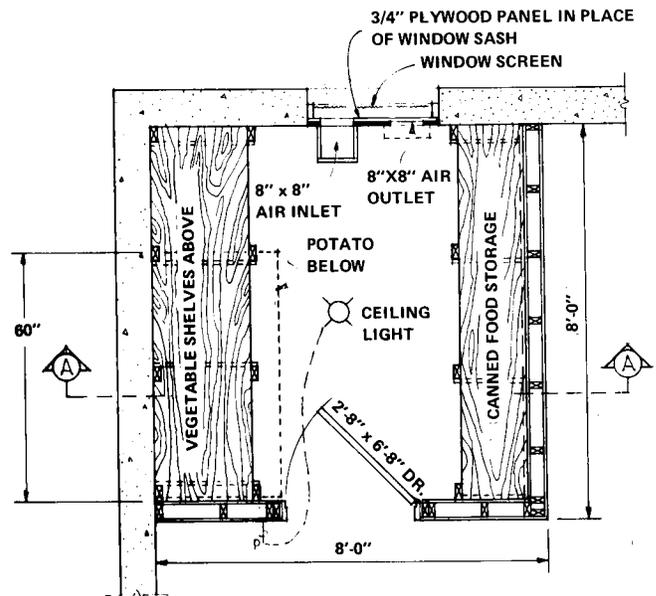


Figure 2. View from above

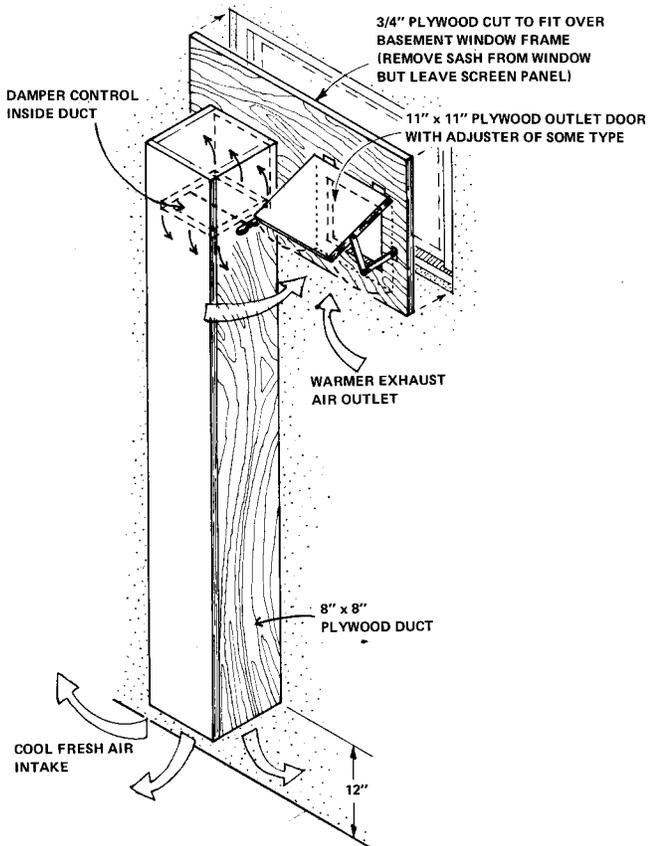


Figure 3. Ventilating system

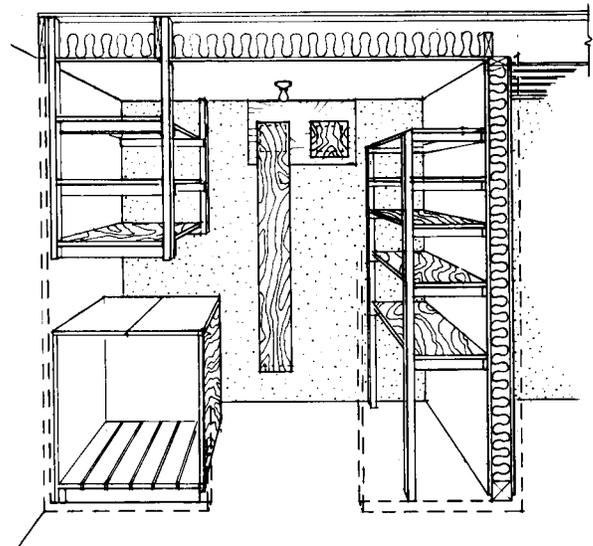


Figure 4. Overall view into storage room

After careful washing, store parsnips, salsify, and horseradish like carrots; these vegetables also may be left in the garden over winter but should be harvested before new growth starts in the spring. Parsnips and salsify will be sweeter and more tender in the spring; garden parsnips which have remained in the soil over winter are not poisonous. Add a light covering of soil and mulch as soon as the ground freezes to prevent damage from alternate freezing and thawing.

## OUTDOOR CELLARS

Properly constructed outdoor cellars are excellent for storing many vegetables, especially root crops, cabbage, kohlrabi, and potatoes. It is doubtful, however, whether building an outdoor cellar is a sound investment. A basement storage room, when properly constructed and carefully managed, is not only more convenient and just as good, but less expensive.

## TEMPORARY PITS

If you do not have a basement storage room or an outdoor cellar, you can store several fresh vegetables, especially root crops, kohlrabi, potatoes and cabbage, in outdoor pits. This method is very inconvenient but economical and effective if properly done. Arrange the vegetables in a cone or inverted V-shaped pile on a well-drained, straw-covered location. Then cover them with alternate layers of straw and soil until the covering is thick enough (12 to 15 inches) to prevent freezing. Provide ventilation by extending part of the first covering of straw through the top or by inserting a flue. In either case, place a suitable cover over the ventilator to keep out water and rodents. Ventilation is most important during late fall and early winter before the vegetables have become thoroughly cooled. Completely close the ventilator when severe weather sets in.

Modifications of this temporary pit method are sometimes used. Place the vegetables in cold frames,

barrels or boxes before covering them. If you place a barrel horizontally or in a slanting position or have a side-opening box, it will be more convenient than the open pit or top-opening box or barrel. Unless you provide ample covering, storage of this type may not be successful in Wisconsin. It is used more commonly farther south where mid-winter temperatures are higher.

## CARE OF VEGETABLES IN STORAGE

Regardless of the method you use, watch stored vegetables carefully to avoid losses from decay, growth, or excessive shriveling. Remove decaying vegetables at once to prevent rot from spreading. If vegetables start to grow, the temperature is too high. If they shrivel excessively, the air around them is too dry.

## MAINTAINING A SUITABLE TEMPERATURE

To obtain and maintain a desirable temperature of near 32° to 38°F in an insulated basement storage room depends largely on outside conditions. Outside temperatures, especially during the day in both early fall and late spring, are likely to be higher than desired in the storage room. During these critical periods, it is essential to close the outlet door and the damper in the cold air duct (figure 3) during the day and open them at night when the temperature is lower. When the desired temperature is reached, adjust the ventilating system to maintain it. As a general rule, the ventilators should be open whenever the outside temperature is lower than the desired temperature in the storage room. When the temperature in the storage room falls to about 35°F, the ventilators should be closed. A small exhaust fan may be used in the outlet door to cool air faster. Remove the fan for winter operation. A rectangular sheet metal duct or stovepipe with damper could be substituted for the wooden duct illustrated. Windows should be adequately screened at all times.

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