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SAVE THOSE VEGETABLES

By L. C. GROVE and S. W. EDGECOMBE

IN OUR EFFORT to conserve food at home this year, the storage of vegetables is exceedingly important. Potatoes, carrots, beets, parsnips, cabbage, onions, squash, pumpkins and other vegetables can be stored successfully over winter so that they remain fresh and firm. The more vegetables that can be stored fresh, the less the family need draw upon canned, frozen and other conserved foods.

One of the first essentials in successfully storing vegetables is to make sure that only sound ones are placed in storage. Any vegetables which have injuries from insects, diseases or mechanical causes should not be stored.

Unfortunately the right storage conditions for one vegetable may be just the wrong kind for another. Cabbage, beets, carrots, parsnips, turnips and other root crops require cold, moist storage; onions, on the other hand, need a cold, dry place; sweet potatoes, squash and pumpkins keep best in a dry, relatively warm place.

There are ordinarily three choices of places to store vegetables on the farm: 1. The house basement; 2. the cave; 3. outdoors in a pit. Of course closed porches and outside buildings may sometimes be used at least into late fall, but basements, caves and pits are places in which vegetables may be left until spring.

The house basement is likely to be the poorest of the three places for most vegetables. This is especially true if it contains a furnace. But a cold, well ventilated basement can be an excellent place for storing vegetables.

Basement Storage

The two factors so necessary in successful basement storage are good insulation and ventilation.

In order to have suitable storage, it is generally best to partition off a room either in one end or one corner of the basement. There should be no heating pipe from a furnace in this room. The floor area of this room need not be larger than 8' x 12'. The walls in this special room should be of good insulating material. Cork, mica and red-wood bark are among the best insulating materials. Other good ones are insulating boards made of sugar cane, wood, cornstalk, straw and the like; mineral or rock wool; 8-inch and 12-inch hollow tile (insulating value depends on number and direction of spaces); 12-inch interlocking tile. Concrete, stone walls, brick walls, plaster, stucco, cement mortar, concrete block are poor insulating materials. Wood lath and plaster, dry sawdust, lumber, dry shavings and cinders are about a third as effective insulators as the best ones listed.

It is best to spend a little extra for insulation when the room is being built because the vegetables will keep better and in the long run pay for the additional cost of insulation. It is a good plan to have double doors into a basement storage room.

Supposing your basement already is equipped with a small room with a window. Likely all that will be needed will be rock wool batts to nail on the ceiling and sides (not the foundation

Root crops, as well as any others that are to be stored, should be carefully examined to insure that only sound ones that will keep use the storage space.
walls). The cost of insulation is relatively small.

Ventilation is highly important in basement storage. One or two windows are desirable for this purpose. If there is but one window, one pane of glass may be removed to make an intake and another removed to permit an outlet of air near the ceiling. One square foot of outlet ventilator area is necessary for every 1,200 cubic feet of storage space. A shaft should be built down from the inlet ventilator space so that the cool air from outside is released near the floor. False floors, together with false walls, are needed for ideal ventilation.

The air may be too dry in a basement storage room with concrete floor and good ventilation. When vegetables shrivel, the air has been too dry. A false or flirt floor should be built, allowing about 3/4 inch spaces between the boards, so that water may be kept on the floor to keep the humidity at a high level. Vegetables stored in closed baskets and boxes may be kept out of the water by setting them on the false floor or on shelves. It is helpful to use peat or sphagnum moss underneath the false floor. An earthen floor makes it easier to handle the humidity problem.

The basement windows should be covered to exclude light as most vegetables store best in the dark. A thermometer should always be kept in the storage room to check the temperature. The temperature should not go below 32 degrees or above 40 degrees.

Pumpkins, squash and sweet potatoes need a warmer and drier storage room. These crops can be stored in the furnace room on shelves. A temperature of about 50 degrees is ideal. They just won't keep well in a place that is satisfactory for Irish potatoes and root crops. Pumpkins, squash and sweet potatoes before they are stored should be cured for about 2 weeks in a place where the temperature is between 80 and 90 degrees F. Onions, too, require similar treatment before storing in a cold, dry place. Such curing is essential for satisfactory storage of these few vegetables.

Cave “Tops” for Roots

Outdoor storage cellars or caves are excellent for the storage of vegetables such as potatoes, root crops and cabbage. Cellars and caves have all of the advantages of the basement storage room and are superior in some respects. Temperature and humidity can be maintained more evenly than in basement rooms.

Ventilation in caves is essential and should consist of an outlet which is flush and opens at the highest place in the ceiling. As with the basement room, 1 square foot of outlet ventilator area should be allowed for every 1,200 cubic feet inside the cave. A 4 or 5-inch drainage tile is entirely too small to be used as an outlet ventilator.

The door, however, will serve as the major intake ventilator during the cool, fall nights. The essential principle in ventilation of any storage room is to open the ventilators at night when the temperature of the outside air is lower than that within the storage room and to close the ventilators when the outside temperature is higher than that in the storage room. Vegetables in a properly insulated cave will not freeze even with large ventilators since the ventilators may be plugged with old sacks or straw during exceptionally cold weather. All ventilators must be screened to keep out rats and mice. Drainage should be provided in the cave by the use of tile properly placed.

Storage in Pits

Outdoor pits as storage places are valuable to those who do not have a cave or a basement and do not wish to construct one. The major advantage which they have over all other types of vegetable storage places is that they cost little or nothing. The only material necessary to build a pit storage consists of straw, old boards and earth. The use of pits requires considerable labor in storing and removing the vegetables.

It is difficult to control the temperature and moisture in a pit. Still another disadvantage is that it is sometimes difficult to remove produce from a pit in severe weather and close it up again. Some of this difficulty can be overcome by having a series of small pits in each of which is placed a small supply of each kind of vegetable. The removal of all the material from such a pit will overcome losses due to freezing of the portion left in the pit after it is once opened.

Small pits may be constructed without provision for ventilation. For large ones, select a well drained location so that surface water runs away from the mound. In any kind of pit storage select a place on the north or east side of a building for shade. Avoid drip from roofs.

Barrels or boxes may be sunk in the ground in a well drained place and covered with straw and soil. Wooden dividers in the barrel or box will separate several kinds of vegetables and make it easier to remove them. Cabbage, parsnips and salsify can be stored in barrels or boxes sunk in the ground. Once the vegetables have been frozen, they may be kept in this condition until March 1 if the barrel is covered with soil, straw and cornstalks to prevent alternate freezing and thawing.

Can Use Tile

A very good pit storage can be made by using large concrete or clay tiles. A good size is one 18 inches in diameter and 30 inches long. It will hold about 3 bushels of vegetables. Dig the hole about 8 inches deeper than the length of the tile. Place three building bricks in the bottom of the hole upon which to rest the tile. Then place about 4 inches of cinders, fine gravel or coarse sand in the bottom. Wet the tile and material in the bottom. Use hardware screen cloth to cover the tile after the vegetables are stored. A few inches of straw and a waterproof covering will complete the protection. When severe weather sets in, several feet of mulch must be added.

Select your method of storage now so that you are prepared to store your surplus vegetables this fall. Get your drain tile, boxes and other materials not on hand as soon as possible if pit storage is to be used. Be sure you have enough boxes, baskets and crows or other containers with lids in which to store the vegetables if a cave or basement storage is to be used.

Pamphlet on Storage

Further details on storage of garden products will be found in Extension Pamphlet 70, entitled “Storing Victory Garden Vegetables,” and Extension Circular 241, entitled “Home Storage of Vegetables.” Copies of these can be secured at the office of the County Extension director or by writing to the Agricultural Extension Service, Ames, Iowa.

Iowa this year is producing about 1950 acres of waxy corn which will be processed commercially to replace the tapioca starch formerly imported from the East Indies. The Station also is producing approximately 7,500 bushels of waxy seed for next year’s crop.