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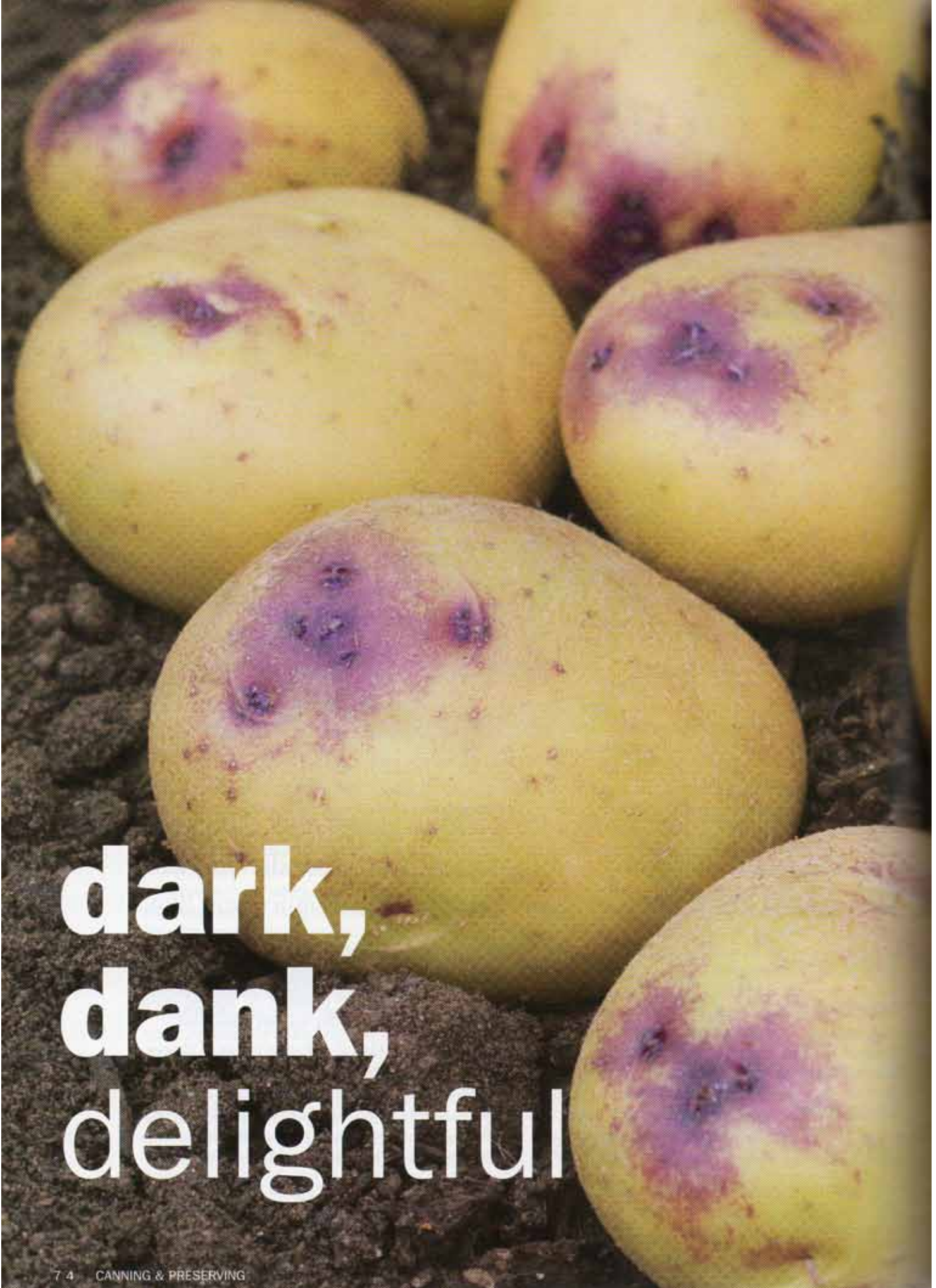
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**dark,
dank,
delightful**

Hardy vegetables and fruits keep well in root cellars, basements and unlit nooks.

By Nancy Mann Jackson

Canning and freezing work well to preserve all kinds of fruits and vegetables for long periods of time, but you also can keep a variety of produce through the winter without any blanching, processing or bagging. Used for centuries in various forms, the low-tech, energy-saving root cellar represents the easiest, most convenient way to preserve garden vegetables and fruits.

Traditionally, a root cellar consisted of a hole dug into the side of a hill or in the ground and covered with straw or a simple wooden roof. Today, "digging a hole in your yard isn't what root cellaring is all about anymore," says Jennifer MacKenzie, a professional home economist and co-author of "The Complete Root Cellar Book: Building Plans, Uses and 100 Recipes" (Robert Rose). "Although you can build an effective, self-contained underground outdoor cellar, there are other options, many of which make more sense for living a 21st-century lifestyle."

Those options include basements, unheated rooms, garages, closets and under-bed storage spaces. The key is to understand the conditions needed to preserve the food you want to keep; then you can determine the best spot in your home to transform into a root cellar. Nancy Bubel, co-author of "Root Cellaring: Natural Cold Storage of Fruits and Vegetables" (Storey), describes a root cellar as your own personal grocery store, full of all the fresh vegetables you will need throughout the winter.

Why Cellars are Stellar

Preserving food using a root cellar isn't just a way to avoid spending time over a steaming pressure canner. It offers other advantages. Root cellaring provides "the ability to forge a closer relationship with food and the seasonal rhythms of harvest, the opportunity to enjoy locally produced food over a longer time period, and the chance to enhance convenience, economy and food security by having a supply of fresh, whole foods on hand," MacKenzie says. "Food can be stored in a cellar in its original form so you can use it in more versatile ways than with food that is preserved by other methods. You can use celled foods in all kinds of dishes, soups, salads, main courses, side dishes, desserts and condiments."

Not only does root cellaring make for more versatile year-round cooking, but it also saves money. The first year she used a root cellar, Bubel says her family's gas and electric bills fell significantly. "I was not heating two-gallon kettles of



Root vegetables, like carrots, are ideal veggies for underground storage.

water to can things," she says. "I was stuffing less into the freezer, and I didn't need to buy new canning jar lids or freezer bags." While the Bubels' root cellar hasn't replaced canning and freezing completely, it provides a nice complement that requires less work and money.

How it Works

Root cellaring, also referred to as "cold storage," relies on cool, damp air and dark spaces to preserve vegetables and fruits. A variety of fresh foods can be stored in a root cellar, but it is especially suited for root vegetables like potatoes, turnips and carrots. The best root cellars mimic the underground areas where these vegetables naturally grow.

"Cellars typically use low temperatures to preserve freshness and high humidity levels to prevent the food from drying and softening," MacKenzie says. "They should not be quite as cold as a refrigerator but cooler than average room temperature. Cellars also are kept dark, with small amounts of ventilation, which are essential for the best long-term storage performance."

Due to their cold, dark nature, root cellars have a bit of a mysterious reputation. In his poem "Root Cellar," Pulitzer Prize-winning poet Theodore Roethke describes the spooky effect of bulbs breaking out of boxes, "hunting for chinks in the dark," and the "long yellow evil necks" of squash, hanging down "like tropical snakes." In that cellar, Roethke writes, "nothing would give up life: Even the dirt kept breathing a small breath."

While it might seem creepy to the poet, a room full of living, nourishing vegetables and fruits that stay harvest-fresh throughout the winter is like a dream come true for many gardeners and home cooks. While root cellaring saves money and time, it also preserves foods the natural way, using the cold air and dark conditions that vegetables would experience if they still were out in the garden.

Food Fit to Store

As the name suggests, some of the most common vegetables to store in a root cellar are root vegetables including carrots, potatoes, sweet potatoes, rutabagas, beets, onions, radishes and turnips. With proper planning, however, a variety of other vegetables and fruits can be kept in cold storage for lengthy amounts of time. These include apples, oranges, cabbage, tomatoes, squash, pumpkins, kale, celery, collard greens, parsley, broccoli and cauliflower.

"Hardy vegetables and fruits are better for cellar storage than more delicate produce," MacKenzie says. "Sturdy fruits can be stored, many for several months. You even can enjoy fresh, leafy vegetables

tip Consider placing your food in the north part of the cellar or basement, which generally is the coldest side.

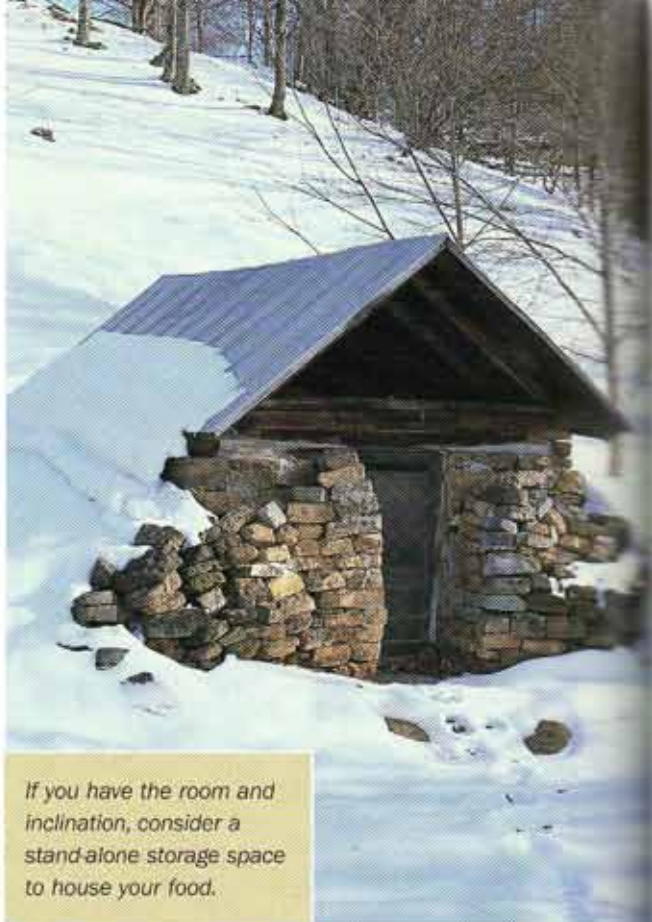


True to its name, a root cellar provides the ideal conditions to store root vegetables, such as radishes and garlic, and a good place to keep dried corn.

keeping tabs

Consult this chart to determine the shelf life, temperature and humidity requirements for commonly stored food.

Food	Temperature (degrees Fahrenheit)	Relative humidity (percent)	Shelf life
Cabbage	32	90 to 95	3 to 4 months
Carrots	32	90 to 95	4 to 6 months
Onions	32	65 to 70	5 to 8 months
Potatoes	38 to 40	90	5 to 8 months
Sweet potatoes	55 to 60	85 to 90	4 to 6 months
Turnips	32	90 to 96	4 to 5 months
Winter squash	50 to 55	70 to 75	3 to 6 months



If you have the room and inclination, consider a stand-alone storage space to house your food.

SAMUJ HEVENER



Some vegetables, like turnips, might last longer if stored in boxes filled with soil.

like endive in the winter, growing in the dark from roots buried in troughs of soil. That said, a root cellar isn't just about food preservation; it's also about food craftsmanship. The ability to seek out and store quantities of heritage apples, gourmet beets, exotic carrots and traditional squash varieties easily turns this previously ordinary food into something of a passion."

Different types of food need to be stored at different temperatures. The length of time you can expect to keep the food varies according to the type. (See "Keeping Tabs" above.)

Building Roots

Whether you're digging a hole in your back yard or searching for a nook inside your house, pay attention to the necessary humidity level and the temperature. If you have an unheated basement or cellar, it could serve as the perfect spot for storing produce, but it's not your only option.

"You really have to change your thinking from 'root cellaring' to 'storage of root vegetables,' because you don't need a cellar," says Barbara Salisbury, author of "Beating the High Cost of Eating: The Essential Guide to Supermarket Survival" (Horizon). "You can have a root storage place in a closet. If there's a good sale on potatoes, you can buy 10- or 20-pound sacks rather than one or two pounds at a time. I store them in a closet close to my kitchen, keep the door shut so it stays dark and cool, and redirect the heat or shut off the



Storing your harvest in crates allows you to see what you have and scan your food easily for signs of spoilage.

vent. A closet under the staircase is wonderful, where you can store boxes or buckets full of onions, potatoes and carrots."

Edward C. Smith, author of "The Vegetable Gardener's Bible" (Storey), uses nooks and crannies all over his house as makeshift root cellars. In his dirt-floor cellar, Smith stores carrots and cabbage in boxes filled with damp sand. He keeps garlic in mesh bags hanging in closets, and he stores winter squash and pumpkins on the floor underneath his bed, which is possible because he keeps the bedroom temperature hovering at around 60 degrees Fahrenheit. If you want to store winter squash or pumpkins indoors, harvest them before the first frost, then leave them on a sun porch or in another bright, cool place for a couple of weeks to allow the shells to harden.

Once you've located the right spot (or spots) for your root cellar, create the best storage environment depending on the types of food you plan to keep. For some items, you might need to just close the air vent in the closet. In a basement room, you might need to install an air vent to allow cold air and moisture to come in from outside. For carrots, rutabagas, turnips and other produce

that require high levels of humidity, it's best to store them in damp sand. Many other vegetables and fruits only need to be spread out on a shelf or layered in a burlap sack and stowed away.

If your home doesn't offer enough space to store all the produce you want to keep, consider outdoor options. "If you live in a climate where you can harvest carrots and potatoes all winter long, you don't have to dig them up," Salsbury says. "The ground is your root cellar. Make sure you mark where the plants are. After the frost comes, the leaves will be gone, but the root vegetables still will be in the ground."

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Dugouts can be the best places to store food because they sit underground and are protected from heat.



Periodically check the health of your produce. If anything looks spoiled, throw it away.

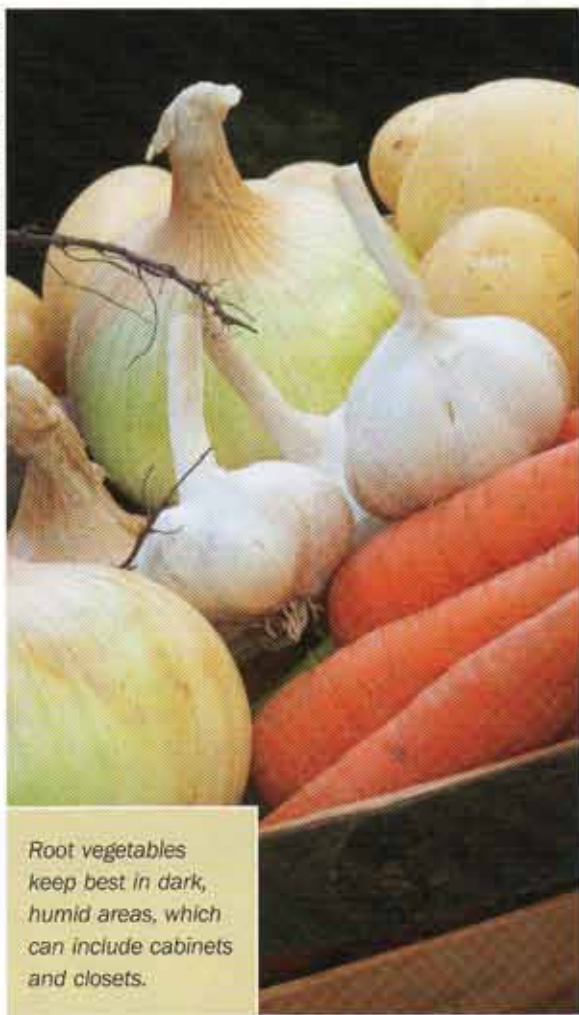
If you harvest your vegetables and want to store them outside without the hassle of building a specialized root cellar, Salsbury recommends burying plastic garbage cans in the dirt beside a patio or other outdoor area that will be accessible during the winter. Tilt the containers on a slant so that the opening is above the ground but the rest of the can is underground. Pad the can with leaves or straw, insert the vegetables in mesh bags or burlap sacks, then cover them with leaves or straw to insulate them against the cold.

If you store produce in an underground hole, your main concern will be to avoid letting the vegetables freeze. Smith says he has stored carrots and potatoes in the ground with a heavy layer of straw and chicken wire placed over the top. "If you have good snow cover, the ground won't freeze, and you can go out there in January and dig up a batch of carrots," he says.

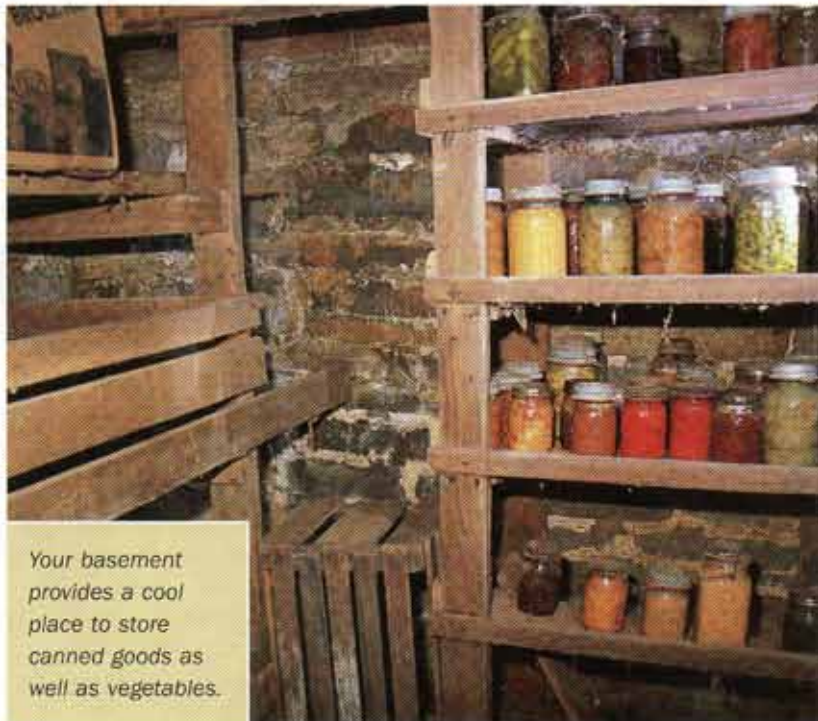
Fresh and Easy

If there is a downside to storing food in a root cellar, it's that stored foods won't last indefinitely, and over time, they will deteriorate. "Pay attention to what's in your cellar, monitor the conditions, and use the stored produce while it still is of good quality," MacKenzie says.

A few precautions can prevent spoilage. For instance, apples release enzymes that can cause other produce to rot, so they should be stored in a



Root vegetables keep best in dark, humid areas, which can include cabinets and closets.




Your basement provides a cool place to store canned goods as well as vegetables.

separate location. If apples must be stored in the same room with other vegetables, they should be in a box that is double-sided and waxed with the lid closed.

Even if apples aren't in the root cellar, keep an eye on all your produce to make sure it remains healthy. "It takes work to keep up with your stored vegetables," Salsbury says. "You can't just stash them in the cellar; you have to go through them frequently, and if something starts to spoil, you have to pull it out."

The National Center for Home Food Preservation recommends carefully watching your stored vegetables not only for decay but also for growth or excess shriveling; many vegetables will experience some shriveling from storage. If you find decaying vegetables, immediately remove them to prevent the decay from spreading. If the vegetables start to grow, this means the temperature in your root

cellar is too high. If the vegetables shrivel excessively, the air in your root cellar is too dry. Consider storing them in damp sand or humidifying the air around your vegetables.

Even though the produce in your root cellar needs your attention from time to time, this method of preserving requires much less time, energy and expertise than more high-tech processes like canning and freezing. The perfect complement to your kitchen garden, a root cellar allows you to cook and eat seasonally, without wasting any of your harvest, just as gardeners have done for centuries. 

Freelance journalist Nancy Mann Jackson writes regularly about gardening, preserving and cooking home-grown produce, and she blogs about it at GrowingFoodandKids.com. Contact her through her website, www.NancyJackson.com.

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