NATURAL SOLUTIONS
Clinical Kinesiology, Acupuncture, & (w)Holistic Healthcare
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HOW TO BUILD A ROOT CELLAR

by Sandy Newton

Before refrigeration, the root cellar was an essential way to keep carrots, turnips, beets, parsnips, potatoes, and other root vegetables fresh through the winter months. If you have snowy, wintry conditions, this time-tested storage method still makes sense today—whether you stock a root cellar with your own homegrown produce or the bounty from local farmers' markets.

Technically, a root cellar is any storage location that uses the natural cooling, insulating, and humidifying properties of the earth. To work properly, a root cellar must be able to hold a temperature of 32º to 40º F and a humidity level of 85 to 95 percent.

The cool temperatures slow the release of ethylene gas and stop the growth of microorganisms that cause decomposition. The humidity level prevents loss of moisture through evaporation—and the withering look that goes along with it.

1. BASEMENT ROOT CELLARS

Today, root cellars are often attached to houses for easy access, though it can take some effort to create a cold basement corner. The best method is to use the foundation walls on the northeast corner as two sides of your root cellar. Build the other two walls in the basement with stud and board. Insulate the interior walls, ceiling, and door (and any pipes or ducts) to keep the heat out. Ensure there is a ventilation system that allows cool, fresh air from the outside to be brought into the root cellar and stale air to be exhausted out.

2. HOLE-IN-THE-GROUND CELLAR

Another option outside the house is to dig down into the ground or horizontally into a hillside. This option requires good drainage; sandier soil works better. An elevated slope helps because the water will run away from your pit as it moves downward. If your winter temperatures drop below 25°F, dig your pit deep enough so that all the crops are under the soil's surface. As you dig your hole in the ground, flare the sides so that it does not cave in. Line the hole with straw and dried leaves, cover the hole with a thick wooden lid, and cover the lid with soil.

3. THE GARBAGE CAN

During the wintertime, using a metal garbage can or barrel in your hole-in-the ground cellar helps keep water out. Dig a hole slightly larger than the diameter of the garbage can and deep enough so that the can's lid will sit 4 inches above the soil level. Heap earth around the circumference, add straw inside the can with the crops, and cover the lid with straw or mulch and a sheet of plastic to keep everything dry. Root vegetables will store well, even in the coldest weather.

HOW TO KEEP IT COOL

To create the best atmosphere in your root cellar, consider this:

- Complete temperature stability is reached at about 10 feet (3 m) deep.
- Don't dig a root cellar near a large tree; the tree's roots can be difficult to dig through, and they will eventually grow and crack the cellar walls.
- Inside, wooden shelving, bins, and platforms are the norm, as wood does not conduct heat and cold as rapidly as metal does.
- Air circulation is critical for minimizing airborne mold, so shelves should stand 1 to 3 inches (3 to 8 cm) away from the walls.
- For outdoor root cellars, packed earth is the preferred flooring. Concrete works well and is practical for a cellar in a basement.
- Every root cellar needs a thermometer and a hygrometer (to measure temperature and humidity, respectively), which should be checked daily, if possible.
- Heat is usually regulated using ventilation to the outside or an exhaust pipe—usually to allow cold air in, often on fall nights to get the temperature down.

SOURCE: The 2003 Old Farmer's Almanac Canadian Edition
https://www.almanac.com/content/how-build-root-cellar