

A Look at Root Cellaring

By Kristen Gallagher, UVM Student

Storing vegetables through the winter is an easy task requiring only minimal set-up and maintenance. Not only will these veggies help us be more self-sufficient, but they will provide a number of health benefits, which our bodies need particularly in the winter. Discussed here will be a few great storage veggies, along with some ways to get a root cellar started.

The Brassica family, which includes cabbage, kale, broccoli, rutabaga, and turnip, is a great place to start. These vegetables contain a group of compounds called dithiolthiones, which have anti-cancer and anti-oxidant properties. Some are also high in sulfur, which has antibiotic and antifungal properties. Sulfur also warms and purifies the body by promoting circulation. Sulfur-containing brassicas include: rutabaga, turnips, and cabbage. All of these vegetables are perfect for winter consumption, as they provide us with energy, vitamins, minerals, and enzymes, as well as aid in circulation, detoxification and cleansing of the body.

Various potato varieties are conducive to root cellar storage. Although they are most often considered unhealthy due to common preparation techniques, potatoes do in fact have great health values when steamed. They contain readily digestible carbohydrates that enter the blood stream slowly, thus providing us with a sustained energy source through the colder winter months. Potato skin has acidophilus cultures which are beneficial to the digestive tract. The sap is high in vitamin C, enzymes, and minerals, and has antibiotic properties.

We can add to this list a number of other storage crops that we will surely want through the winter, but do best *not* stored in the root cellar. On this list would be garlic, onions, dried hot peppers, and other cured veggies which are great for warming the body and soul in winter. These veggies are kept in a slightly different environment than that which the root cellar provides, one which is slightly warmer and less moist. An unused room which is only slightly heated, a garage corner, or an attic would all be prime locations for keeping these veggies through the winter. When searching for good storage varieties, consult Nancy and Mike Bubel's book, *Root Cellaring: Natural Cold Storage of Fruits and Vegetables*.

As you begin seeking out ideal spots for storing your winter crops, keep in mind that a root cellar can be anything from an upside-down bucket buried outside, to an insulated, climate-controlled room in the basement. All creations in between can be made to work using what you have; creativity and experimentation are advised. No matter the location or design, there are three basic

requirements that should be met in a root cellar: temperature, moisture, and darkness.

Ideal temperatures for storing root cellar crops are between 32-36 degrees F. A vent allowing cold air to enter near the floor, and another for warm air to exit near the ceiling- both of which can be opened and closed, will certainly aid in temperature control. If this is unfeasible, try picking the coldest spot in your basement or garage which could be heated if necessary, as this would result in rot.

A common problem encountered when storing root crops, is shriveled, pruney produce, due to low moisture levels; storage veggies like it moist!! Watering the floors, storage containers and walls helps maintain proper moisture levels. Maintaining the highest humidity possible is ideal, between 90-95%.

Darkness is also an essential feature to control in a root cellar. This is especially important for potatoes, as they turn green when exposed to light and produce a chemical called solanin, which is poisonous and causes belly aches. Vegetables are also more apt to sprout and start growing in light, which will use up the stored energy and degrade flavor. To ensure proper levels of light, make sure that any windows and vents are covered up so that the only light entering is from the occasional open doorway, or light bulb.

Along with storing root crops for winter consumption, certain bulbs and roots can be stored in the root cellar to be persuaded, or forced, into producing fresh leaves and/or sprouts. Root crops are biennials; the part of the plant which is eaten is the storage unit for next year's growth. In forcing these vegetables you are essentially tricking them into starting their new growth early. The



HOMEOPATHY

Treat:

Arthritis	Skin Problems
Mastitis	Colic
Indigestion	Cold/Flu
Sinus Congestion	& much more

SAFE, GENTLE, EFFECTIVE MEDICINE

"I am convinced that homeopathy is the way to healthier farms, healthier farm families, healthier farm animals and, finally a healthier planet."
-C. Edgar Sheaffer, VMD

Call for a free catalog. We offer farm discounts & bulk sizes.

 **Washington Homeopathic Products, Inc.**
33 Fairfax St. Berkeley Springs, WV 25411
800-336-1695 www.homeopathyworks.com

environment which you create for them inside during winter months, tells them that it is springtime, and that they should start growing.

Endive is a popular vegetable which is grown by forcing. The roots can be stored in your root cellar through the winter in buckets filled with sand, and brought inside about ten days before a desired crop. Optimal environments for sprouting endive have a maintained temperature close to 50-55 degrees F, high humidity, and no light. If grown in light, the endive will be bitter and inedible. Eliot Coleman, author of *Four-Season Harvest*, recommends placing the endive bucket under the kitchen counter with an inverted black bucket on top to keep moisture in, and light out. To harvest the endives, simply cut the chicon, the flowering structure, off where it reaches the soil.

Forcing can also be done to produce winter greens. Beets, onions, carrots, celeriac, turnips, and others are great for growing salad greens and garnishes. Simply bring the roots up from the root cellar, pot them up like you would a bulb, and keep them watered; as it is the greens you want to harvest in this instance, light is essential. As leaves sprout, snip them off and use them in salads or stir-fry's. The root will continue to produce as long as it has the energy, so bigger, healthier roots will have greater yields.

Cabbages can be forced in a similar way. When harvesting your cabbages in the fall, pull the outer leaves off and uproot the remainder-the head, stem, and roots together. Store these upright in the root cellar. When desired, bring the whole root inside, cut the cabbage head off for eating, and pot the remainder of the root. Keep moist, and harvest after new leaves have grown from the exposed nodes, (the spots where the previous leaves had been).

Summer harvests are plentiful, we are all familiar with the feeling of drowning in zucchini, trying desperately to come up with new ways to prepare and use them. These harvests can be drawn out into- and through- the winter. With this list of fine delicious veggies, we can store our food for winter consumption, and be nourished with healthy delicacies right on through until spring. Root cellaring is not a difficult thing, it can be done on any scale and with just about any resource base.

Resources:

Bubel, Mike and Nancy. *Root Cellaring: Natural Cold Storage of Fruits and Vegetables*. Storey Books, 1991. \$14.95 + \$2 s/h.

Coleman, Eliot. *Four-Season Harvest*. Chelsea Green Publishing Co., White River Junction, VT. 1999. \$24.95 + \$2.50 s/h.

Onstad, Dianne. *Whole Foods Companion*. Chelsea Green Publishing Co., White River Junction, VT. 2005. \$35.00 + \$3.50 s/h.

All of these books are available through the NOFA-VT bookstore.



Elmore Roots Nursery
"Your local organic nursery"

■ Fruit Trees ■ Berry Plants
& the tools to help you grow them!



Catalog & info at elmoreroots.com

802-888-3305 Lake Elmore, Vermont
800-42-PLANT! Design, Delivery, & Planting Available

"If it grows in Elmore, it will grow where you are"



J·D·L·E·W·O·O·D
THE RESTAURANT

Experience
the *flaSH*

flavor
sustainability
harmony

— OPENING THIS SUMMER —

Route 132 • Sharon • Vermont
(802) 763-5236 • www.marceausfinefoods.com