

Storing Vegetables for the Winter

The Basics

- ➔ **Basic idea:** To keep them alive, by slowing their metabolisms so they're in a resting state. ¹
- ➔ **Key message:** If conditions aren't just right, it's OK -- your veggies will still store, just not as long. ¹
- ➔ **Key discipline:** Every 2-3 weeks: monitor, adjust, and sort. ¹

Root Veggies and Tubers

- ✓ Over-wintering (not recommended in the Flathead): Leave in ground to over-winter: mulch heavily, at least 6 inches deep, to prevent the ground beneath the mulch from freezing. Harvest in spring. ^{2, 4}
- ✓ To dig them up as-needed, cover area with a waterproof cover that will help prevent moisture from causing the ground to freeze (also not recommended in the Flathead). ²
- ✓ Have them mature as late as possible by planting as late as possible. Leave your last planting in the ground until the roots are fully mature; they'll store better if they're protected by a thicker skin. ³
- ✓ Harvest as close to the time you plan to use as possible, for best flavor and nutrition. If possible, dig from fall garden after 2 - 3 days of dry weather. Leave out for a few hours in the sun right after you pull them: kills root hairs, making the plant dormant; dries soil on roots so it falls off easily. ³

Cold Storage:

- ✓ Best at 31⁰ - 33⁰F (0⁰C) with high humidity ¹ (See "Cold Storage Options" below).
- ✓ Only store the best roots. Check carefully for insect or harvesting damage; never peel or clip off the bottom end of the root. Such damage is opportunity for rot. Best to use fresh. ³
- ✓ Keep in cold corner of detached garage or shed. Experiment with locations. A little frost can actually make them sweeter, as starches convert to sugar, but don't let them freeze completely. ²
- ✓ If your vegetables freeze in storage, don't panic. You can still use them. But once they've thawed they won't keep for more than a day or so. ³
- ✓ Never wash root veggies before storing; wash roots just before using them. Cut off the tops right in the garden: leave an inch or so of stem on beets to prevent bleeding in cooking. For other root crops, cut the tops close, with about 1/4" stem remaining, to prevent exposure of root flesh to rot. ^{3,5}
- ✓ Give roots some space--don't pack tightly in the pail or box. For example, arrange a loose layer of parallel carrots, then run the second row the opposite direction. ¹

Onions, Shallots, Garlic

- ✓ Keep these cold, like root veggies, but not so humid. ¹
- ✓ Use onion bags or airy boxes. ¹
- ✓ Hang them: ensure they are thoroughly dried by leaving them on ground after picking, about 2 weeks. If it is wet, cover them to shield them from rain, but allow wind to reach them. Two bricks and a length of board on top works well. Take 4 dry onions and knot together by twisting around a piece of string. Then add one onion at a time to the string by twisting it's stalk around the string. Then plait the knotted stalks around another bit of string. Tie top of the string in a cool place where there is plenty of air. ⁴

Leeks

- ✓ Lift leeks from soil with a fork and trim leaves (optional) to a foot long. ¹
- ✓ Pack upright in 5-gallon plastic pails with 1 inch (2 cm) moist soil at bottom. ¹
- ✓ Keep humid and cold like root veggies; add water as needed to keep soil moist. ¹
- ✓ A loose fabric row cover over the top may slow drying. ¹

Cabbage

- ✓ Cold and humid, like root veggies. ¹
- ✓ Best in root cellar, loose or in boxes. Sprinkle or mist insides of the container weekly to keep humidity up (a bit on the heads is OK). ¹
- ✓ Or pile heads in cold corner of the porch or detached garage and cover with hay, leaves, etc.. ¹
- ✓ If a cabbage head is a bit frozen, allow it to thaw slowly, over a day or two, and the leaves will be undamaged. ¹

Brussels Sprouts

- ✓ Remove leaves, store like cabbage. Good for a month or so. ¹
- ✓ For longer keeping, retain the roots and stand up the plants in 5-gal pails with some soil in the bottom. Sprinkle soil t keep it moist. ¹

Peppers

- ✓ Store medium-cold (40⁰ - 50⁰F (5⁰ - 10⁰C), and humid. ¹

Tomatoes

- ✓ Store cool (45⁰ - 65⁰F (7⁰ - 18⁰C); ideally, also humid (80%+ relative humidity). ¹

Squash/Pumpkin

- ✓ Store cool (50⁰ - 60⁰F (10⁰ - 16⁰C), rather dry (50% relative humidity). ¹
- ✓ Hang in nets in a cool place. Or store on shelves and turn occasionally.

Cold Storage Options (for Root Veggies)

A root cellar is not necessary, just cool, moist, dark surroundings. Strive for even, cold temps; fluctuations of even 5 degrees can initiate sprouting or rotting. Allow room for air to circulate between veggies in a layer. ³

- **In-ground** storage is least expensive and least trouble. ³
- **Unheated, insulated basement:** Construct a root cellar in a corner by adding insulation and a good, sound door. Coolest near the floor - best spot for root veggies, but not directly on the floor, to avoid dampness -- raise up on a few boards. ³
- **Cool but not insulated basement:** Construct a "root box" from a large, sturdy cardboard or wooden box. Place 2 - 3 inches of insulating material (sawdust, moist peat moss, or sand) on bottom and sides. Place a layer of roots on top of the sawdust, leaving two to three inches of space near the sides. Cover the roots lightly with sawdust--1/4 inch is fine. Alternate layers (and directions) of roots with sawdust, filling-in around the edges with sawdust. Add a final 2 - 3 inches of sawdust on top, and store in cool basement area. In older homes, the cellar steps leading outside make handy storage areas. ³
- **Other cool cellar options:** Put roots in plastic trash bag, punch a few small holes in it, tie up the top and store bag. Or, put roots into a trash barrel with a plastic liner, close lid and store the whole thing. ³
- **No cellar: use a root box** (see above), using a really large box (such as what paper towels come in - check with your grocer), to allow space for more insulation: line bottom, sides and top with 4 - 5 inches of sawdust or peat moss. Pack the roots in the sawdust and store the box in a cold place--your garage, back porch or an unheated spare room. Whenever you need some vegetables, just take them out and repack the sawdust around the rest.
- **Alternative to a box:** Use plastic pails or perforated poly bags. Monitor moisture weekly, regulating with lid position, more or less ajar. You don't want drying out, nor do you want root surfaces to have visible water droplets. ¹

5-gallon plastic pails work well for storing carrots in sand: ⁵ Put a little sand in bottom of pail; layer carrots in alternating directions, adding sand and shaking bucket to settle sand around the carrots. Keep top-most carrots completely covered with sand, removing only excess sand as you remove carrots. Avoid really damp sand - it promotes rot. In spring, they may begin to sprout albino shoots, but this only very slowly begins to diminish or soften the carrot.

Veggie Keeping -Time in Cold Storage ⁵

Veggie	Storage Time
Beets	4 - 5 months
Broccoli	1 - 2 weeks
Cabbage (Red or green heads)	long keeper
Chinese Cabbage	1 - 2 months
Carrots	4 - 6 months

Veggie	Storage Time
Cauliflower	2 - 4 weeks
Celery	long keeper
Chives	not a root cellar crop
Collard Greens	1 - 2 weeks
Cucumbers	2 - 3 weeks
Eggplant	1 - 2 weeks
Horse radish	long keeper
Jerusalem artichokes	1 - 2 months
Kohlrabi	long keeper
Leeks	(info not available)
Onions	good keeper
Parsnips	1 - 2 months
Pepper	good keeper
Sweet Potatoes	long keeper
Potatoes	4 - 6 months
Pumpkin	good keeper
Radishes	2 - 3 months
Rutabagas	2 - 4 months
Salsify	good keeper
Soybeans	long keepers
Squash	4 - 6 months
Tomatoes	1 - 2 months
Turnips	long keepers

Sources:

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2. Mother Earth News: Store Root Veggies This Winter (www.motherearthliving.com/issues/motherearthliving/organic_gardening/Winter-Root-Crop-Storage_145-1.html)
3. National Gardening Association: How to Store Root Crops (www.garden.org/articles/articles.php?q=show&id=623)
4. Selfsufficientish: Build a Potato Clamp & Other Ways of Storing Veggies: www.selfsufficientish.com/clamp.htm
5. Tribe Watch: www.tribewatch.com/rootcell.htm
6. Keith Hammer email