

STORAGE CROPS: POST HARVEST HANDLING STORAGE TECHNIQUES

Southwest Indiana Homesteading Conference

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The case for long term storage crops.

- Save money by utilizing foods grown or purchased seasonally through the 'off season'
- Enjoy local, fresh foods through much of the year
- Eat local, reduce impact from food transportation and commercial storage



Long Term Storage Crops: Tips and Te

Planning with long term storage in mind.

- Choose varieties that are suitable for storage.
- Make reachable goals for your resources.
- Plan your processing and storage space before harvesting.
- Have a plan B!



Long Term Storage Crops: Tips and Te

What crops are suitable for storage and what does 'long term' mean?

- Some crops will store for a couple of months, some will store through spring with the correct conditions.
- Most root crops will store well.
- Winter squashes.
- Dried beans, corn, or grains
- Grow what you want to eat!



Long Term Storage Crops: Tips and Te

What do you need for long term storage?

- Cool temperatures; basement, crawlspace, root cellar. Below 50 degrees but above freezing.
- Extra refrigerator to create a cool enough environment. Set to 38-40 degrees.
- Dry area; moisture is the enemy of stored foods.
- Free from pests.
- Bins for storage.
- Moist packing material; sand, peat moss, or garden soil.



Long Term Storage Crops: Tips and Te

How to create a storage area if you don't currently have a space

- Consider making what you have work for you.
- Work with someone else to create a shared space, share the labor and cost.
- Build a root cellar.
- Build a garden pit – small scale.
- Add an extra refrigerator for storage.

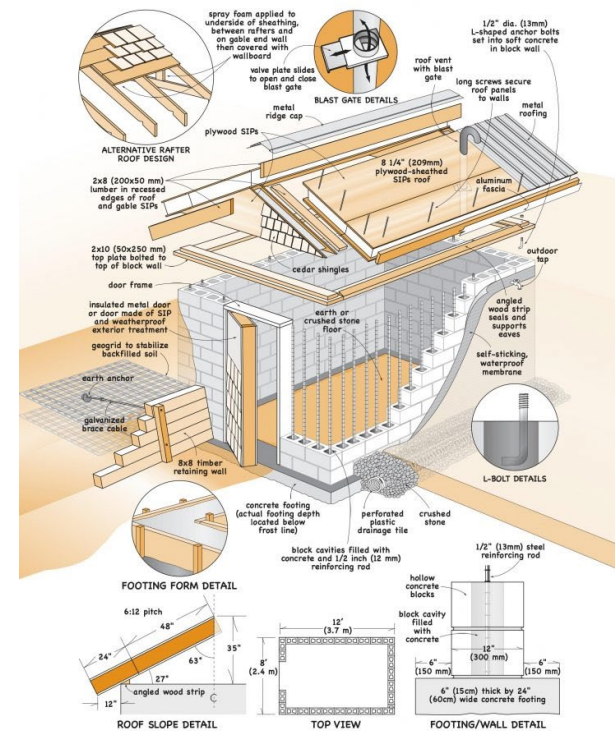


Photo: Harrosmith Magazine

Long Term Storage Crops: Tips and Te

How to create a storage area if you don't currently have a space

- SAFETYFIRST– root cellars require dirt work and stabilization of walls.
- Must account for ventilation.
- Many plans are available online.
- Creating a root cellar out of a new, unused pre-formed septic tank.
- Garden pit is inexpensive and relatively easy.

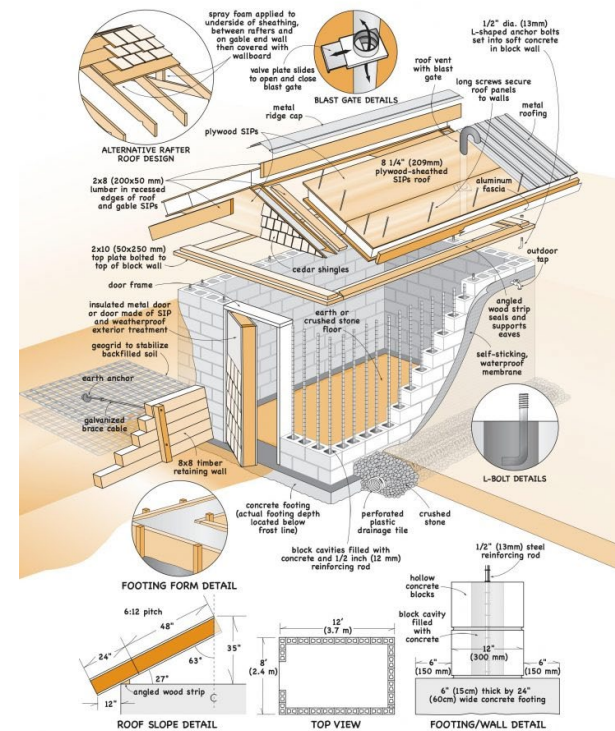


Photo: Harrosmith Magazine

Garden pit made of a lidded trash can (metal is more rigid). Ensure water cannot get inside.

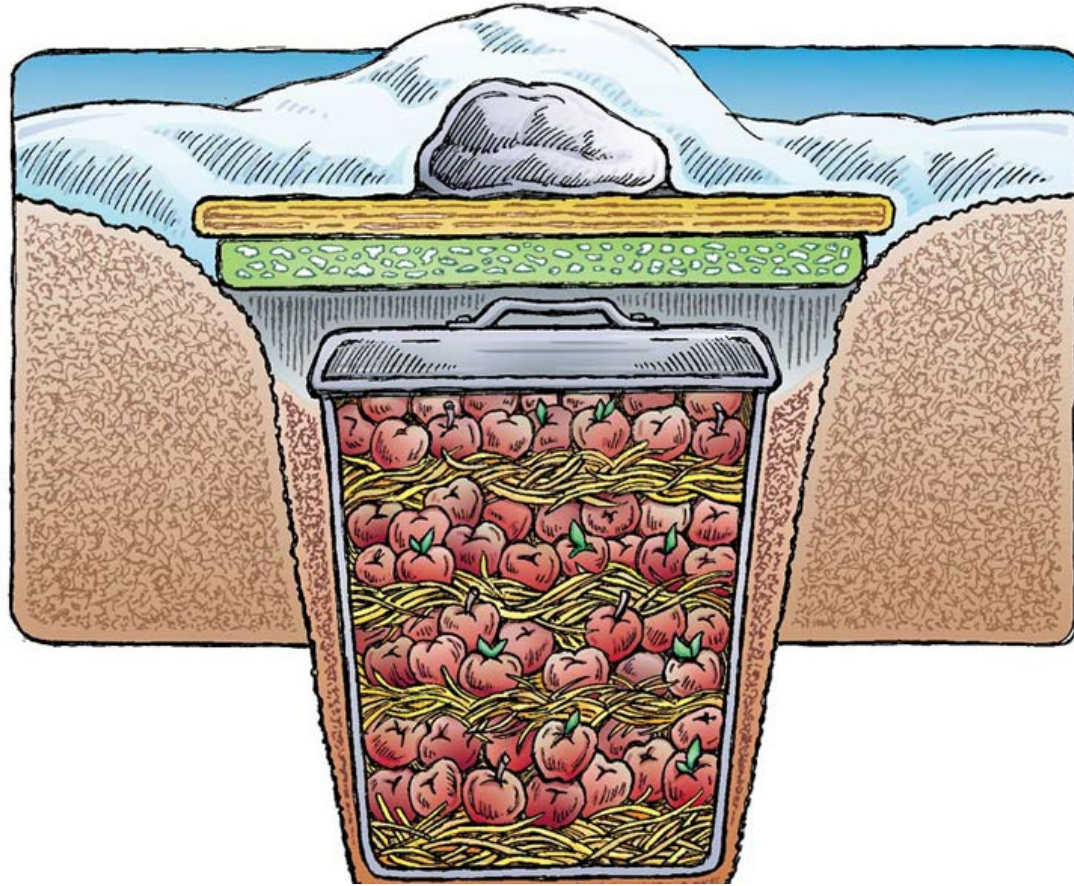


Photo: Inhabitat

Long Term Storage Crops: Tips and Te

Foods for long term storage: Suitability and Harvesting Handling

- Harvest foods at proper ripeness for storage.
- Harvest and handle to avoid damage.
- Do not wash root crops; wipe soil off with a dry rag.
- Inspect crops before storing for damage, rot, or pests/pathogens
- Store immediately



Long Term Storage Crops: Tips and Te

Crops for long term storage: Potatoes

- Harvest two weeks after foliage has died back and avoid watering the week before harvest.
- Brush dirt off well.
- Store in a dark area on newspaper, not touching, for two weeks to cure them before storage.
- Store in a container that allows for ventilation. You can insulate them with shredded paper if desired.
- Store in a dark area. Ideally between 35 and 40 degrees.
- Inspect every few weeks to ensure potatoes have not sprouted or are getting wrinkly. Too dry and they may wrinkle – refrigerator storage is not recommended.
- Can be stored up to 8 months in ideal conditions.



Photo: The Rustic Elk

Long Term Storage Crops: Tips and Te

Crops for long term storage: Sweet Potatoes

- Harvest once the vines start to wither.
- Brush dirt off well.
- Lay out and let dry for 2 weeks in a warm location, preferably with high humidity (80%). If done indoors, cover to retain humidity.
- Wrap sweet potatoes in newspaper and store indoors ideally between 55 and 60 degrees.
- Check often for mildew
- Can be stored up to 6 months in ideal conditions.



Photo: Grow a Good Life

Long Term Storage Crops: Tips and Te

Crops for long term storage: Beets and Carrots

- Dig out before hard frost. Cut off stems/leaves, leaving about an inch of stem.
- Brush dirt off well.
- Pack in layers in damp sand or peat moss. 2 inches of damp fill, then a layer of beets— repeat until full with the last layer being fill.
- Store in a dark area. Ideally between 35 and 40 degrees.
- Can be stored in a refrigerator. Pack in sealed bag.
- Can be ‘stored’ in ground. Cover with 12 inches straw or leaves before frost. Harvest as wanted.
- Can be stored up to 6 months in ideal conditions.



Photo: SDSU Extension



Long Term Storage Crops: Tips and Te

Crops for long term storage: Garlic and Onion

- Harvest when tops turn yellow.
- Place on newspaper and let cure for 2 weeks (may be longer for onions depending on the variety)
- Both need lower humidity – 60-70% during both curing and storage.
- Garlic will store for 2 months at ambient temps but will last up to 6 months at 32 degrees; refrigeration is recommended.
- Store onions in a dark cool place—ideally at 40 degrees.
- Can be stored up to 6 months in ideal conditions.



Photo: Creative Vegetable Gardener



Long Term Storage Crops: Tips and Te

Crops for long term storage: Cabbage

- Harvest when mature but before it splits.
- Cut off outer leaves and stem.
- Can be stored in a refrigerator wrapped in perforated plastic with a damp paper towel to retain humidity. (May release a pungent odor when stored this way.)
- To store in a root cellar; pull up by the roots and shake off dirt before storing on a shelf not touching.
- Can also be hung upside down by roots.
- Store in a dark area. Ideally between 32 and 40 degrees.
- Inspect every few weeks to ensure they are not yellowing or developing a rotting smell.
- Can be stored 3-4 months in ideal conditions.



Photo: And Then We All Had Tea

Long Term Storage Crops: Tips and Te

Crops for long term storage: Dried Beans

- Harvest when bean dry out and rattle in the pod.
- Pod will need to be threshed. Then cleaned and sorted. Can be threshed by banging on the inside of a bucket/barrel.
- Clean using a screen and hair drier or air compressor.
- Freeze fully dried beans BEFORE storage to kill any insects (bean weevil).
- Store beans in a airtight container (canning jar) out of sunlight. May add a silica packet to reduce moisture.
- Can be stored at ambient temperature with low humidity.
- Inspect every few months for mold/insect activity.
- Can be stored several years for eating or planting.



Photo: Bean Institute

Long Term Storage Crops: Tips and Te

Crops for long term storage: Tomatoes

- Choose storage varieties for best results.
- Pick while still green and firm.
- Place a piece of tape over the stem scar and store upside down in a crate layered with newspaper. Individual fruits can be wrapped with newspaper.
- Allow for air flow.
- Store in shallow container, just 2 layers deep.
- Entire plant can be pulled and stored (with roots on) upside down if space allows.
- Store at 55 degrees.
- Inspect often for spoilage.
- Can be stored 4-6 months with ideal varieties and conditions.



Photo: Melissa K Norris

Long Term Storage Crops: Tips and Te

Crops for long term storage: Apples

- Choose storage varieties for best results. Tart, thick skinned apples are best (Granny Smith or Braeburn for example)
- Pick before fully ripe. Apple must be completely blemish free for storage. Take care not to bruise.
- Wrap individual fruits with newspaper, it's best if apples don't touch.
- Store away from potatoes.
- Store tightly in a bin to prevent airflow.
- Can be stored in a refrigerator but may get mealy.
- Store at 30-32 degrees ideally but under 70.
- Inspect montly for spoilage.
- Can be stored 4-6 months with ideal varieties and conditions.



Photo: Practical SelfReliance

Long Term Storage Crops: Tips and Te

Crops for long term storage: Grains

- Wheat, corn, amaranth, buckwheat
- Takes a large amount of space but can be relatively easy.
- Grains need to be harvested and threshed, large amounts may need specialized equipment vs hand processing.
- Freezing grains ahead of storing can prevent insect damage.
- Store in airtight containers, consider silica packets.
- Store between 50 and 70 degrees (40-50 degrees if not previously frozen to prevent insect damage).
- Inspect monthly for mildew or insect damage.
- Can be stored for years with proper conditions.



Photo: Traditional Cooking School

Long Term Storage Crops: Tips and Te

Basic Take Home Messages:

- Grow and store what you like.
- Cool, Dry, Dark
- First in; first out. Label everything.
- Work with what you have.
- Have a Plan B



Photo: Mother Earth News

Long Term Storage Crops: Tips and Te

Other Storage Techniques:

- Dehydration
- Freeze Drying
- Deep Freeze
- Vacuum Sealing



THANK YOU

Questions? Comments? Experiences?