

The Basics of Freezers and Freezing Food

IS A FREEZER A LUXURY – Freezing versus Canning

| Freezing | Canning |
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| <ul style="list-style-type: none"> • Easy and fast | <ul style="list-style-type: none"> • More technical knowledge • Takes time |
| <ul style="list-style-type: none"> • Holds color, flavor and nutrients | <ul style="list-style-type: none"> • Discoloration, alteration in flavor and nutrients can be lost if canning liquids not utilized in soups and or gravy |
| <ul style="list-style-type: none"> • Suited to more foods than canning | <ul style="list-style-type: none"> • Manitobans like our dill pickles and canned tomatoes, jellies and relishes |
| <ul style="list-style-type: none"> • Safe and convenient | <ul style="list-style-type: none"> • Can be unsafe if proper processing/canning procedures aren't followed |
| <ul style="list-style-type: none"> • Cost of freezer is an initial high cost, plus electricity to run • Cost of materials for freezing food can be low especially plastic zip-loc are used versus rigid containers | <ul style="list-style-type: none"> • Cost of initial canning equipment is costly, especially pressure cooker, but last a long time • Jars and lids have to be replaced |
| <ul style="list-style-type: none"> • No additives required | <ul style="list-style-type: none"> • Canned goods require salt and/or sugar, vinegar which is especially important to avoid for individuals on special diets |
| <ul style="list-style-type: none"> • Freeze leftovers, extra baked goods, casseroles | <ul style="list-style-type: none"> • Not possible with canning |
| <ul style="list-style-type: none"> • Take advantage of meat and vegetable specials and bulk buying, resulting in considerable cost saving | <ul style="list-style-type: none"> • Limited to mainly vegetables |
| <ul style="list-style-type: none"> • Wild game storage (eg. ducks, geese, deer, caribou, moose, elk) are hunted in the fall. Freezing of this ensures a food supply for the rest of the year. Same goes for wild berries | <ul style="list-style-type: none"> • Meat would have to be pressure cooked and therefore is not usually recommended |

Freezers can be very cost-saving as it allows bulk and special sales buying. Ensures storage of extra food to maintain food source during storm days.

Canned goods are costly to ship as you are paying for tin and liquid the product is stored in. Frozen products are usually just in light weight plastic type bags or containers.

Store bought or home preserved frozen or canned produce are preserved using prime quality produce. A problem with buying fresh produce especially in

northern communities is that the quality has deteriorated with long distance shipping. Just a few days in transit causes "fresh" produce to lose significant amounts of all important nutrients.

What this means, is that frozen vegetables can be superior (especially in winter) to many of the fresh produce we buy as well as a great cost saving. Good comparisons are broccoli, cauliflower, green beans and strawberries.

Having a freezer allows you to plan ahead, as you know what you have in the freezer to prepare meals. Saves you time as you don't have to shop as often. Many times because of the unavailability of product in the Northern communities, menus have to be altered.

Freezers offer food security. We know we have food even if it storms for a week.

Before You Buy A Freezer

Things to consider – Location, decide where you'll put it.

- house/doors/room doors (how wide are they)
- stairs and corners, as a freezer will have to be carried through, up, down and/or around
- strong, firm, level floor as freezer weighs a lot when full
- conveniently located, easy to get to
- away from direct heat such as direct sunlight, stoves, washers, dryers, furnaces or heat registers
- proper air circulation around a freezer (at least two to three inches at the sides and back)
- freezer should be located near an 120-volt electrical outlet and should have a separate circuit. Extension cords for connecting a freezer are not recommended
- freezers operate best between 4°C to 32°C (40°F to 90°F)
- avoid keeping freezers in porches and garages where temperature changes are great

- choose **ENERGUIDE** (energy efficient) freezer. Energy guide located in Natural Resources Canada
- size of freezer required
- freezers vary in weight (lighter over the years) width and depth.

Examples: 5.0 cu. ft. 27" w x 23" d x 34" h

12.8 cu. ft 43" w x 29 ½ d x 35" h

14.8 cu. ft 48" w x 29 ½ d x 35" h

21.7 cu. ft 64 ⅞ w x 29 ½ d x 34 ¾ h

Capacity

- Actual sizes range from 100 to 625 litres (3.5 cu. ft to 22 cu. ft)
- Allow roughly 85 to 140 litres (3 to 5 cu. ft) per person. (Depends on lifestyle and shopping habits)

Example: three people 10 - 12 cu. ft.

four people 14 - 15 cu. ft.

five-to-six people 16 -18 cu. ft.

- Recommend 14 -16 cu. ft is most cost efficient. Estimate that one cubic feet stores 35 pounds. But just keep in mind, a five pound roast takes less room than five pounds of baked bread.
- Recommend purchasing chest freezer types not uprights although upright freezers may be purchased for the physically challenged.

| Chest Freezer | Upright Freezer |
|--|--|
| • lower purchase price | • higher purchase price |
| • manual defrost | • self defrost |
| • long term storage | • medium term storage |
| • not as easy to take out food | • easier to take out and locate food |
| • less electricity to run (25 per cent more efficient) | • requires more electricity to run, as more cold air is lost when door is opened |
| • has more useable space and is better for storing large and unusual shaped items like turkeys | • less useable space, as food will fall out if it is over filled |
| • less problems with freezer burn to foods | • more problems with freezer burn to food with opening and closing of freezer door |
| • more floor space required | • less floor space required but must allow for door opening |
| • can provide additional work space on top of lid | • height of upright too high |

Setting Up A Freezer

- Set up freezer on level floor away from stoves, washers, dryers, heaters or direct sunlight.
- Allow two to three inches space from walls to allow air to circulate around a freezer.
- Freezer should be located near an electric plug in. Extension cords for connecting a freezer are not recommended.
- Make sure the lid of freezer can be opened freely (i.e. doesn't rub against a door frame or window sill)
- Plug in deep freeze and set temperature dial according to manufacturer's instructions.
- Let freezer run for two hours before placing any food in it.

Freezer Storage

- Label all food with date before placing in freezer.
- Do not overload your freezer with unfrozen food. Add only the amount that will freeze within 24 hours which is usually two-to-three pounds of food per cubic foot. (14 cubic foot freezer x 3 lbs = 42 lbs).
- Spread food out through deep freeze leaving a little space between packages so air can circulate freely, then, when the food is frozen store the packages close together.
- Keep a list of foods in your freezer.
- Check off frozen foods as you take them out.
- Organize the food in the freezer into food groups so you can find them easily.
- Place heavier items to the bottom of freezer.
- Place same type of foods in plastic large bags or cardboard boxes to keep together and be able to lift out to get to food at bottom of deep freeze.

How to Defrost A Freezer

1. Turn the freezer off.
2. Remove all food from the freezer and store in insulated cooler while you are defrosting. If temperature is -1°C outside, store cooler outside or place ice packs on top of food in cooler.

3. Remove ice in freezer. This can be done by:
 - letting the freezer door stand open until ice melts
 - putting a pan of hot water in the freezer compartment and closing the door. Always put hot pot on a wire rack or tea towel to avoid direct contact of freezer wall. Close freezer door. Check for melting ice and reheat water every 10 to 15 minutes until ice melts. *Never chip at freezer ice with knife or sharp objects.
4. Pick up ice and water as it melts with a dishcloth or sponge and deposit into sink.
5. Use a sponge or dishcloth and a bowl of warm water (1 quart warm water and 1 tbsp baking soda) and wipe out inside of freezer
6. Turn the freezer back on.
7. Put food back into freezer and close the door.

Freezer Care During Power Failure

- Frozen foods will stay frozen for at least 24 hours if the freezer door is kept closed.
- Pack blankets/quilts on top of food if freezer is not full.
- If the power failure continues, pack ice into the freezer every 24 hours if possible.
- If food still contains ice crystals, then food is safe to be re-frozen when power is restored or can be cooked and eaten.



Freezing Foods

- Freezing is a quick and easy method of preserving food.
- Freezing keeps the colour and flavour of foods.
- Freezing keeps most of the original food value.
- Freezing results in attractive food products, almost the same as fresh foods.
- Freezing makes it possible to have a great variety of seasonal foods all year round.

Seven Steps to Freezing Foods

1. Select only fresh foods of good quality.
2. Prepare foods quickly. Refer to chart for cleaning, cutting, blanching (if needed) and packing.
3. Pack in odorless, tasteless and moisture proof freezer containers, bags or wrappings to protect from freezer burn (drying out) or absorbing flavours.
4. Freeze foods at -18°C or lower as soon as possible.
5. Store foods at -18°C or lower. Avoid opening deep freezer often or leaving door open too long. If deep freezer is less than half full, cover food with blanket or towels to fill space.
6. Thaw frozen foods carefully in refrigerator or microwave. Use soon after thawing.
7. Cook frozen foods until boiling hot. Do not overcook frozen vegetables.

Packaging – Freezer bags

Plastic bags store easily and cost less than other freezer packaging. Use only bags made for freezing. The packages should be dated and have name of product. To close a freezer bag, press out as much air as possible or using a straw, suck extra air out of the bag.

Packaging – Freezer containers

A large selection of containers are available. Square and rectangular containers store more than round ones.

Plastic – Select containers with tightly fitting lids, leaving head space of $\frac{1}{2}$ inch. They may be reused.

Aluminum – foil containers are rigid and can be used for cooking. Many foil containers are shaped like baking dishes. Some have covers that can be sealed tightly. Other foil containers can be first covered with saran wrap and then foil. (Remember to remove saran; when cooking.)



Five Steps to Freezing Vegetables

1. Select good quality fresh vegetables.
2. Clean, cut and blanch (put food briefly in boiling water).
3. Cool quickly in ice water and drain.
4. Pack in freezer bags or containers.
5. Store foods at -18°C or lower.



Freezing Vegetables

| VEGETABLE | PREPARATION | BLANCHING TIMES |
|--------------------|--|--|
| Beans Green or Wax | Trim blossom ends. Leave whole or cut 3 cm (1 ½ ") pieces. Can French cut, too. | Whole – three minutes Cut – two minutes |
| Beets | Leave roots end on, cut off tops leaving 3 cm (1 ½ ") stems Cook in boiling water until tender. Cool. Peel and slice or dice. | None |
| Broccoli | Remove woody stems and trim; cut stalks to about 3 cm (1 1/2") across. | Medium – three minutes Large – four minutes |
| Carrots | Remove tops and peel Leave small carrots whole. Cut large carrots into 1 cm (1/2") slices or dice or cut lengthwise into fingers. | Cut – three minutes Whole – five minutes |
| Corn | Whole Kernel- Remove husks and silks On Cob – Remove husks, trim cobs | Four min., then cut kernels from cob Small – seven min. Med – nine min. Lrg – 11 min. |
| Fiddleheads | Leave whole | Two minutes |
| Mushrooms | Wild – Wash with cold water twice. Domestic – Slice and fry 500 ml (2 cups) mushrooms in 30 ml (2 tbsp) of butter for four minutes. | Twelve minutes None |
| Peas | Regular – Shell Edible pods – Remove stem and blossom and leave whole | Two minutes Three minutes – Keeps for six Months |



Four Steps to Freezing Fruit

1. Select good quality fresh fruit of good ripe quality
2. Wash fruit gently
3. Pack in freezer containers or bags *Pack without sugar
**pack with sugar
4. Store foods at -18°C or lower



| Freezing Fruit | | |
|---------------------------|--|---|
| Fruit | Preparation | Packing |
| Apples | Peel, core and slice | $\frac{1}{4}$ cup sugar and 1 Tbsp lemon juice or $\frac{1}{4}$ tsp ascorbic acid to 1L (4 cups) apples |
| Applesauce | Peel, core and slice apples. Cook until tender | Sweeten to taste. Cool. Package and freeze. |
| Bananas | Peel and mash. Add $\frac{1}{4}$ tsp. lemon juice to one banana. | Use for baking |
| Whole Banana | Place in freezer with skin | Use for baking |
| Blueberries | Stem | Pack without sugar |
| Cranberries, Currants | Stem | Pack without sugar |
| Peaches, Apricots | Dip in boiling water for 30 seconds, cool in cold water and slip skin off. Cut in half, remove pit and slice. | **Dry sugar pack with ascorbic acid using 175 ml ($\frac{3}{4}$ cup) sugar to 1L (4 cups) prepared fruit |
| Raspberries, Blackberries | Leave whole | Mix 175 ml ($\frac{3}{4}$ cup) sugar with 1 L (4 cups) prepared fruit or pack without sugar * |
| Saskatoons | Leave whole | *Pack without sugar |
| Rhubarb | Cut stalks in 3 cm ($1\frac{1}{2}$ ") lengths. Another method is to cook with 125 ml ($\frac{1}{2}$ cup) water until tender | *Pack without sugar Sweeten to taste. Cool, package and freeze |
| Strawberries | Remove stems Leave whole or cut in quarters. Remove stems and leave whole | Mix 125 ml ($\frac{1}{2}$ cup) sugar with 1L (4 cups) whole berries or 175 ml ($\frac{3}{4}$ cup) sugar to 1 L (4 cups) quartered or sliced berries. *Pack without sugar |

*Pack without sugar

**Pack with sugar