



NORTHERN BACKYARD FARMING

PRESERVING FOOD

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1 Food Preservation

7 Freezing

9 Dehydrating

11 Canning Basics

15 Safety

16 Jams and Jellies

18 Pickling

19 Pressure Canning

20 Lactic Fermentation

22 Root Cellaring

23 Resources

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Food Preservation

Fruits and veggies

Preserving food is a way to treat and store fresh seasonal produce so that it can be eaten in the winter. There are many ways to preserve food. In this guide we discuss freezing, canning, jams and jellies, dehydrating, pickling, lactic fermentation and root cellaring. All these processes have been used for generations, they allow us to safely store summer's bountiful food for times when fresh foods aren't available.

In this guide our focus is on the preservation of fruit and vegetables. However, meat and fish have been preserved in the Northwest Territories (NWT) for generations.



Save some summer



Canned peaches
are a favourite!



Nowadays, the food from the grocery store comes from around the world, but the satisfaction of eating food you grew and preserved will help you remember the long days of summer and the joys of the northern harvest.

You can still get in the food preservation game even if you don't grow your own food. Buy fresh fruit and vegetables in the summer harvest season, when they are fresh and ripe to get the best tasting and quality preserves.

Northern bounty

Preserving your own food is a tasty way to eat local throughout the year. Locally harvested foods are preserved fresh, and maintain that delicious goodness that comes from home-grown produce.

Here are some other benefits of preserving local foods in the NWT:

- Local food generally has less chemicals added
- Long northern days make our produce sweeter
- Local food hasn't travelled thousands of kilometres to get to your table
- A full pantry increases your food security
- You can save money on your family food bill
- Your friends and neighbours will be impressed
- Preserved foods make great gifts
- It is fun and rewarding

Wild harvest!
























































You don't need a garden to harvest locally. In the NWT wild plants surround us. An elder or experienced harvester can help you identify specific edible plants, berries, mushrooms, and herbs. Preserve your hand-picked bounty the same as your home-grown harvest.

Cranberries and cloudberry are popular berries to harvest. There are wild edibles plants you can harvest all summer long. Mid-summer is a good time to harvest cloudberry. Many northerners wait until after the first frost to harvest cranberries. Most have a secret picking patch they return to each year.



Food preservation chart

Here are the most common methods for food preservation for a variety of locally grown fruits and vegetables:

| | |
|---------------------|---|
| Freezing |             |
| Dehydrating |            |
| Pressure Canning |         |
| Jams / Jellies |   |
| Pressure Canning |          |
| Lactic Fermentation |        |
| Root Cellaring |       |



Freezing

To blanch or not to blanch

Freezing is a straightforward way to preserve food. It's quick and easy! Here are a few tips for the best results:

- Freeze as soon as you can after harvesting, the fresher food goes in the freezer the fresher it comes out
- Use containers or bags made for food storage
- Scalding vegetables in boiling water or steam is called blanching. Most vegetables, but not fruits, should be blanched before freezing. Blanching can change flavour, colour and texture. Blanching times vary per vegetable and are key to success!
- Cool immediately in ice water, drain well, and pack in a food-safe freezing container.
- Label and date your container. Quality diminishes over time, don't wait too long to use it!
- Enjoy your frozen foods immediately upon thawing, as they will spoil faster than fresh ones

Freezer burn, don't return



Frozen fruits and vegetables are great in smoothies.

Freezing only stops bacteria growth but does not destroy enzymes and microorganisms. Blanching can slow or stop them. Just another reason to blanch before freezing.

Some foods don't freeze well. For example, lettuce and radishes turn out limp and water-logged. See the chart on page five. Spread fruits or vegetables out on baking trays to freeze quickly before putting in bags. This way they won't emerge as a frozen lump! Some people freeze herbs in ice cube trays before storing in plastic bags. Pop a cube in your stew for a taste of summer.

Dehydrating

Drying food

Food can be dried using sunrays, a regular oven or an electric (or solar) dehydrator.

Our NWT climate is ideal for dehydrating. Long sunny days, and extremely dry air makes dehydrating an easy way to preserve food. Depending on what you are dehydrating, you may want to use different dehydrating techniques. All dehydrating removes water and dries food so it will not spoil as easily.

Some combinations that work well include sun drying morels; air drying herbs; dehydrating cranberries; and oven-drying kale chips.

When choosing foods to dry:

- Use fresh and tender, fruits and vegetables
- Avoid over ripe foods
- Dry right after harvest for best quality and nutrition. Use quality food. Dehydrating does not improve quality



Dehydration method

Here are some pointers to help you get started with dehydrating:

- Wash gently, peel, trim or pit, and cut into small pieces, removing any bad spots
- Some foods are improved by blanching, or dipping in citric acid, honey or salt solution
- Arrange in a single layer, without touching or overlapping edges
- Follow the directions for your chosen method
- Drying times and temperatures vary for different foods
- Is it done yet? Yes, once it feels dry or crispy to the touch! The rule of thumb is the drier the food, the longer it stores
- Cool before packing. Store in airtight food-safe containers in a cool dark place for three to six months or frozen for up to one year

Be mindful food can go from done to over-done very quickly!

Canning Basics

Jars, lids and more

Canning preserves food by removing oxygen, which prevents the growth of undesirable bacteria, yeast and mould, while also forming a vacuum seal in storage jars.

Use glass canning jars meant for canning. Check jars for cracks or chips. Clean jars are important for safety.

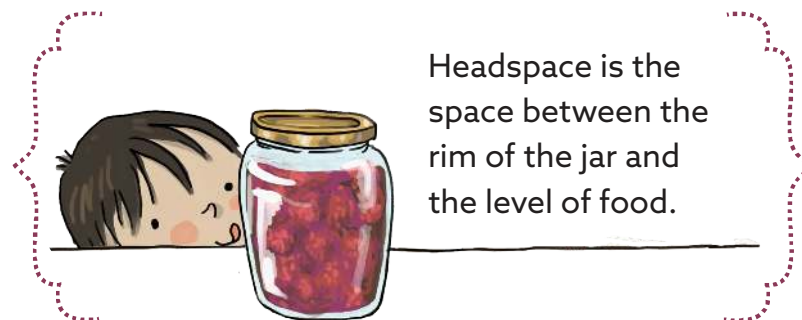
Get new lids each time you plan to can. Follow the manufacturer's instructions to prepare. A lid with a good seal is a lid that is dented down. A good seal is key to successful food preservation.

The two main types of canning are the boiling water method and pressure canning.

For the boiling water method, your jars are covered by at least five to ten centimeters for a set period of time. Pressure canning involves special equipment and is discussed on page 19.



Can-canning



Headspace is the space between the rim of the jar and the level of food.

Many canning recipes exist. The basic steps are below:

- Wash and sterilize jars
- Fill jar with food, leaving approximately a half inch of headspace
- Wipe away any spillage on the lip of the jar
- Screw on lid
- Cover with five to ten centimeters of boiling water (or follow pressure canning instructions)
- Remove from boiling water or pressure canner when indicated by your recipe.
- Let cool for 12-24 hours
- Check the seal to make sure the lid is dented down
- Label and store in your pantry



- | | | | |
|---|-----------------|----|-----------------------|
| 1 | Canned Foods | 7 | Thermometer |
| 2 | Dried Herbs | 8 | Water |
| 3 | Pressure Canner | 9 | Pickles |
| 4 | Jam | 10 | Lactic Fermented Kale |
| 5 | Potatoes | 11 | Fermentation Crock |
| 6 | Dehydrator | 12 | Frozen Food |



Safety

Proceed with caution



Test each lid for firmness indicating proper seal.

Caution is important for jams, jellies, pressure canning, pickling and fermenting.

Only use recipes with tested proportions of ingredients, and do not alter the vinegar, food or water proportions. A uniform level of acid is required throughout to prevent the growth of *Clostridium botulinum*, a bacterium that can cause botulism.

Always examine the seal of the lids when you finish canning, the lid should be dented down.

Check the seal again when you go to eat your canned food.

Jams and Jellies

Jammin'



Jams and jellies are one of the most common and delicious methods of food preservation. Northern berries make amazing jams and jellies. You can also use your imagination to make sweet or savoury combinations.

Jams, jellies, and marmalades have the same basic ingredients but vary in consistency. The four main ingredients are fruit, acid, pectin, and sugar. A combination of approximately 75% ripe fruit and 25% under ripe is recommended since the under-ripe fruit provides part of the pectin and acid.

The pectin, acid and sugar combine to ensure your jam thickens or sets properly. Different fruits naturally have different amounts of pectin and acid. Sometimes you need to add one or both depending on the fruit you are using. Recipes provide specific instructions and quantities.

Saskatoon rhubarb jam



Voila!
A christmas gift.

Saskatoons make a lovely deep purple jam. The following recipe, which uses no commercial pectin, comes from a northern saskatoon grower.

- 6 cups saskatoons
- 4 cups diced rhubarb
- ½ cup water
- 6 cups sugar



Crush saskatoons (don't use food processor). Combine rhubarb with water in heavy saucepan and bring to boil. Simmer (covered) five minutes or until rhubarb is soft. Stir in crushed saskatoons and return to boil. Meanwhile warm sugar and slowly add to hot fruit. Continue boiling for ten minutes uncovered or until spoon of jam quickly cooled has the desired consistency. Ladle into sterilized jars and seal. Makes ten (eight ounce) jars.

Ben Greenfield,
Paradise Gardens Saskatoons,
Hay River, NWT

Pickling



Dill with it!

Pickling is a canning procedure. Less acidic vegetables need to be preserved in vinegars and/or salts. Common pickling vegetables include cucumbers, beets, cauliflower, carrots, beans or Brussel sprouts. There are four ways to pickle:

Fresh pack or quick process pickles use boiling water canning. Easy, tart flavoured, and taste best if they sit in a jar for several weeks.

Low temperature pasteurization treatment includes a brine soak, which changes the colour, flavour and texture. (That's part of the appeal!)

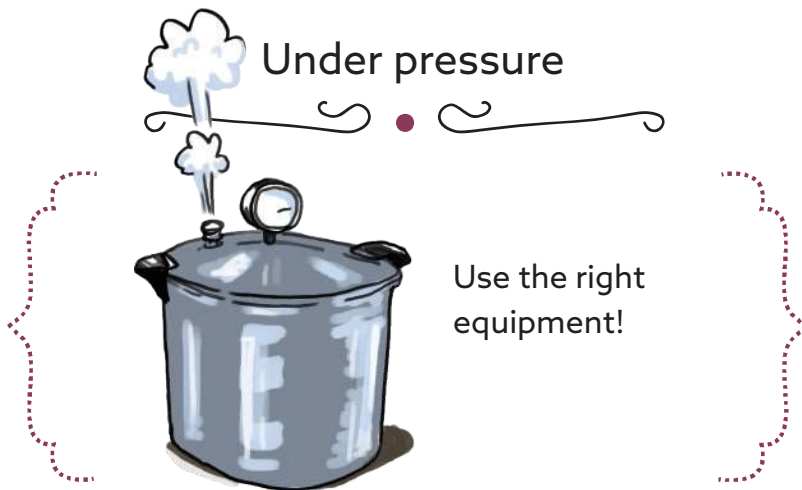
Fruit pickles use cooked fruits, simmered in a spicy sweet-sour syrup.

Relishes are made with spicy vinegar cooked vegetables and fruits.



Low-temperature method or pasteurization treatment should only be used when the recipe indicates.

Pressure Canning



Pressure canning puts food under pressure in a special pot for a specific length of time at a specific temperature. If you don't get the pressure, length of time, or temperature right, then you risk the safety of your preserves. But if you follow the instructions properly, you will have tasty and nutritious food to enjoy!

A pressure cooker and pressure canner are different. A pressure cooker is too small to hold most canning jars, and doesn't reliably maintain a consistent pressure.

Lactic Fermentation

An old way

Lactic fermentation is a very old form of food preservation. Evidence of fermented food can be found in ancient China, ancient Rome and as far back as 6000BC. The process uses naturally occurring lactic acid bacteria to ferment or culture food. Lactic acid is one of the beneficial bacteria that are found on many foods, and even in our digestive system. The process does an excellent job of preserving food and gives it a distinct flavour and texture.

Does lactic fermentation sound familiar but make you think of milk products? That's because lactic acid is best known for its role in the preparation of fermented dairy products such as cheese and yogurt. Sauerkraut is the most commonly known vegetable product. Some dill pickles are also made using lactic fermentation.

Lactic Fermentation is straightforward, but can be time consuming, since the vegetables have to soak or ferment in brine. Give it a try!

Root Cellaring

Winter spuds!

A root cellar is a hole or room in the ground in which food is stored in a consistently cool and moist climate. This is an ancient method of food preservation, and still one of the easiest. It is particularly effective for root vegetables like potatoes, and firm fruits.

However, our northern climate can make this a challenge. If you live in a permafrost zone, root cellaring won't work for you. Your vegetables will freeze!

Humidity, temperature, and ventilation are three key elements of root cellaring that require a close eye. Northern winters are very dry, and thus adding humidity may be necessary. Keeping potatoes from freezing is critical to keep your vegetables from drying out. One solution is to store your root vegetables in sand or soil. If there is a risk of freezing, elevate potatoes off the floor and put a bowl of water underneath them. If ice forms in the bowl, then it's too cold!



Some northern solutions



There are northern variations. Heated crawlspaces or garages are often an ideal temperature. A cool mudroom or box in a cool corner can even do the trick! Use a thermometer to find a spot with the appropriate temperatures in your house. An ideal temperature is zero to five degrees Celsius. Food can be stored for short periods of time at zero degrees Celsius. An effective root cellar in the north can be as simple as a cardboard box in your front entrance. Remember to double check the temperature on the coldest days.

Resources



Books

The New Northern Gardener

Jennifer Bennett, 1996

The Busy Person's Guide to Preserving Food

Janet Chadwick, 1995

The Big Book of Preserving the Harvest

Carol Costenbader, 2002

The Fannie Farmer Cookbook

Fannie Merritt, 1979

Boreal Herbal, The: Wild Food and Medicine Plants of the North

Beverly Gray, 2011



Web resources

Bernardin

www.bernardin.ca/pages/recipes/3.php

Many interesting and tasty recipes.

Eat Right Ontario

www.eatrightontario.ca/en/Articles/Cooking-Food-Preparation/Home-Canning.aspx

A good introduction to home canning.

Northern Lights Gardening Manual

www.iti.gov.nt.ca/publications/northern-lights-gardening-manual

NWT-based guide to growing vegetables.

National Center for Home Food Preservation

www.nchfp.uga.edu/index.html

A great resource for all types of food preservation.

Preserving Alaska's Bounty

www.uaf.edu/files/ces/preservingalaskasbounty/

Learning modules on northern preservation techniques.





About this book

Preserving food is an age-old tradition. Freezing, drying, canning, jams and jellies, pickling, fermenting, and root cellaring are all great ways to store food from one season to the next. This guide is intended to provide some basic inspiration to preserve your own food. Preserving food can be fun, easy, interesting, and delicious. This guide is the second in a series of booklets that Ecology North has developed about food in the NWT. Pick it up and give it a read; maybe food preservation is your next step to eating more healthy and locally grown food from the NWT.

For additional books in the series or for more information, please contact Ecology North.
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