

# Produce Preservation and Garden Winterization Webinar

Use and storage of garden fresh veggies, and end-of-season winterization tips.

Presented By:

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# Who are we?



Hands on science and sustainability  
education.

[Spark-Y.org](http://Spark-Y.org)



# Introductions + Agenda Overview

## Agenda

- Introduction
- Food storage and preservation techniques
  - Pickling and Fermentation
  - Canning and Jarring
  - Root Storage
  - Other preservation techniques
- Unique garden products, and how to use them
- Garden Winterization
- Getting youth involved
- Q+A



## Zoom Logistics

- **Recording:** This webinar will be recorded and posted online at [Spark-Y.org](https://spark-y.org)
- **Mute:** Please remain muted throughout the webinar, unless you are selected to ask a question at the end
- **Chatting:** Use the “chat” feature to get questions answered during the presentation.
- **Raising Hands:** Use the “raise hand” feature during Q & A if you would like to ask a question

# MPS CWS Updates

- **FREE School Meal Boxes** for all youth 18 & under  
[cws.mpls.k12.mn.us/2020-21\\_school\\_year](https://cws.mpls.k12.mn.us/2020-21_school_year)
- **October is Farm to School Month!**
- **Great Lakes Apple Crunch** | October 5-9, CRUNCH into local apples!  
[cws.mpls.k12.mn.us/great\\_lakes\\_apple\\_crunch](https://cws.mpls.k12.mn.us/great_lakes_apple_crunch)
- **Walk & Bike to Anywhere Week** | October 5-9  
[cws.mpls.k12.mn.us/sr2s](https://cws.mpls.k12.mn.us/sr2s)
- **Meet Eliza (MN Greencorps Member) and Savina (Dietetic Intern)**
  - *Would you like help in your garden? They can help!*
  - Email [Eliza.Pessereau@mpls.k12.mn.us](mailto:Eliza.Pessereau@mpls.k12.mn.us)



# Pickling and Fermentation

## Why pickling and fermentation?

Do you have a more veggies than you know what to do with?

Avoid unnecessary waste and spice up your life with pickled and fermented foods!

## What can you pickle or ferment?

- Asparagus
- Brussel sprouts
- Cabbage (Sauerkraut)
- Napa Cabbage (Kimchi)
- [And many more!](#)
- The [National Center for Home Food Preservation](#) has a variety of resources for pickling a various vegetables.



# Pickling and Fermentation

## How does it work?

- **Pickling** is the process of preserving food in an acid solution, usually vinegar, or in salt brine.
- **Fermentation** is an anaerobic process where microorganisms like yeast and bacteria break down food sugars such as glucose into organic acids, gases and alcohol.
  - Lactic Acid
  - Ethyl Alcohol
  - Acetic Acid



# Tips for successful pickling and fermenting

- Select recipes from approved sources.
- Follow the directions carefully.
- Harvest vegetables within 24 hours of pickling.
- Wash vegetables thoroughly and with clean water.
- Use soft water for brine
- Use new lids.
- Weigh down you veggies
- <https://extension.psu.edu/lets-preserve-quick-process-pickles>



# Basic steps for pickling and fermenting

- Sanitize jars
- Wash your vegetables thoroughly
- Make the pickle brine.
- Place the herbs and spices into jars along with the vegetables.
- Add Brine to jars
- Prep jar for sealing
- Check the seal.
- Store in a cool dry place for up to 1 year.
- Enjoy!

Find out more at the [U of M extension website](#).





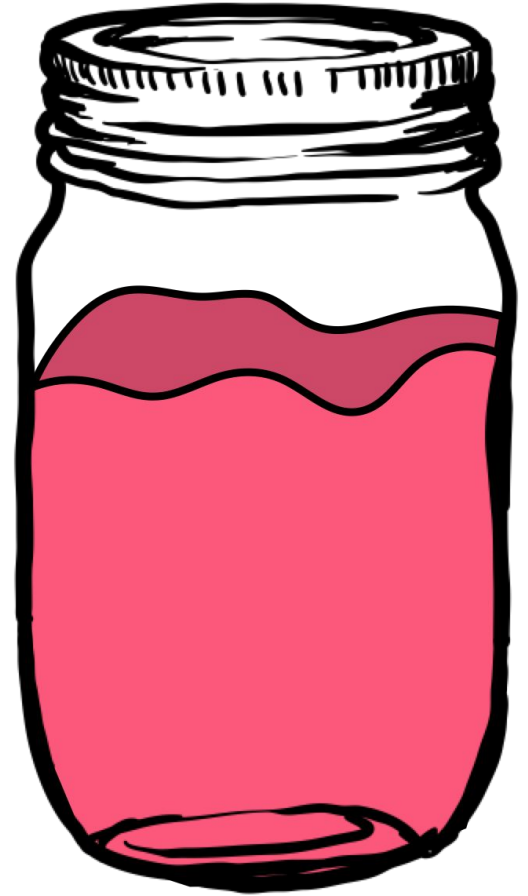
# Canning and Jarring

## Why canning and jarring?

Food longevity and storage - keeps for 6-12 months!

## What can you can or jar?

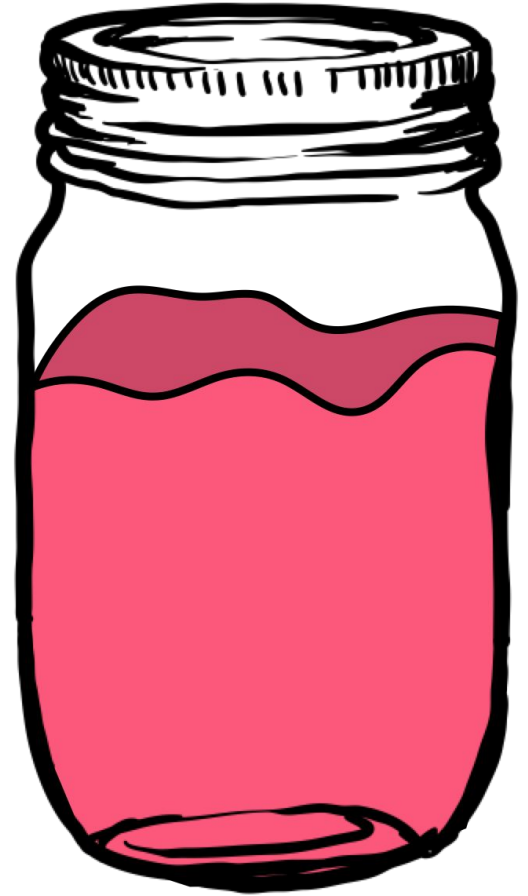
- Fruit
- Tomatoes
- Vegetables (including soups!)
- Jams and jellies
- Pickled or fermented foods



# Canning and Jarring

## How does it work?

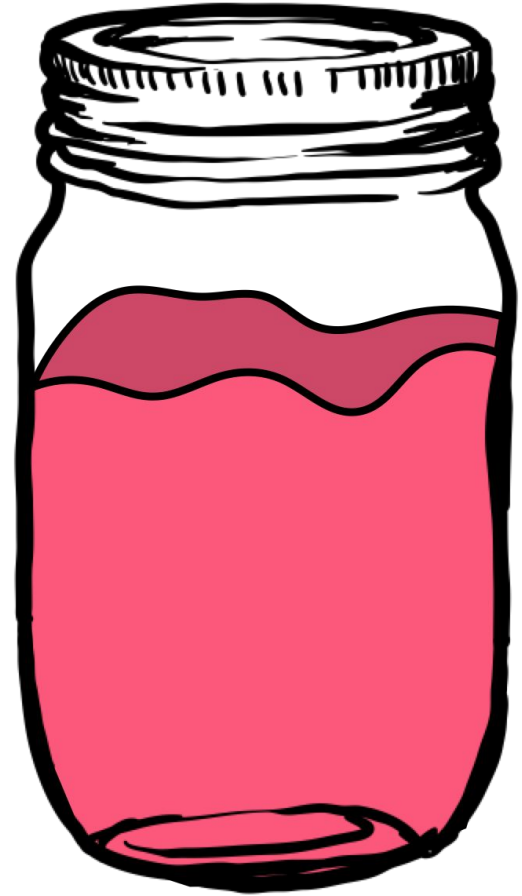
- Prepare foods for storage by cooking, pickling, or preparing for preservation in some other way.
- Sterilize your jars and lids.
- Put your prepared food into your sterilized jar and seal it.
- Heat the jar through boiling or pressure cooking to kill dangerous bacteria.
- Store for 6-12 months.



# Canning and Jarring

## Beware of Botulism!

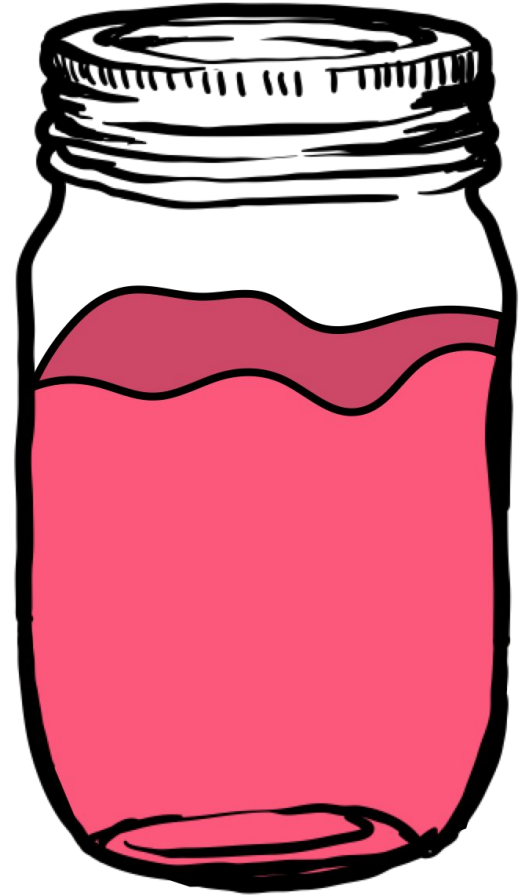
“Botulism is a rare but potentially deadly illness caused by a poison most commonly produced by a germ called *Clostridium botulinum*. The germ is found in soil and can survive, grow, and produce a toxin in certain conditions, such as when food is improperly canned. The toxin can affect your nerves, paralyze you, and even kill you. You cannot see, smell, or taste botulinum toxin, but taking even a small taste of food containing this toxin can be deadly.” - CDC



# Canning and Jarring

## Safety Tips

- When in doubt throw it out!
- Always follow [USDA](#) and [CDC](#) recommended guidelines for preparing your food.
- Use tried and true recipes for canning and jarring.
- Heat is your friend!



# Root Storage

**Root Vegetables:** Carrots, beets, onions, potatoes, rutabaga, radish, parsnip, garlic, yams, sweet potatoes, etc.,

**Storage:** Keeping them stored properly will greatly increase the shelf life of root vegetables

## How?

- Store root vegetables in a cool, dark location (55-60 degrees F)
- Humidity helps keep the vegetables from drying out, but not too much!
- Check on them regularly for spoilage or moisture, which can cause them to rot.



# Root Storage

## Tips

- Always cut the leafy tops off of root vegetable before storing
- Curing → This step is only necessary for onions, garlic, and potatoes
  - Potatoes: Cure them in warm, dark, humid area
  - Garlic and Onion: Cure them in a warm, dry, sunny location
- Onions and garlic prefer dry storage conditions
- Store root vegetables in crates or boxes with ample airflow

## Root Cellars

Built underground, root cellars are cool, dark, and humid areas perfect for root storage. The vegetables won't freeze underground, and the humidity will prevent them from drying out.



# Additional Storage Techniques - Refrigeration

- Use the crisper! The humidity can be adjusted in the crisper drawers
  - *Low humidity:* Store items sensitive to moisture, as well as ethylene producing fruits and vegetables (apples, pears, melon, avocado, etc.,)
  - *High humidity:* Store leafy greens in high humidity, and anything sensitive to ethylene (chard, lettuce, strawberries, kale, etc.,)
- Make sure refrigerated fruits and vegetables are clean and dry before storage
  - Longevity of refrigerated produce will vary



# Additional Storage Techniques - Freezing

- Nearly any garden veggie or homemade product can be frozen!
- Blanch first
  - Place vegetables in boiling water before freezing. Blanching times will vary. Use this [guide from the National Center for Home Preservation](#) to find out how long to blanch.
  - Blanching cleans the produce, brightens the color, and improves the flavor of frozen vegetables.
- Homemade products can be frozen too!
  - Not so sure about canning? Freeze that pasta sauce, or soup instead!
  - Frozen products can last well through the winter! Place in jars, bags, or airtight containers, to freeze.
- Pro tip: store herbs and garlic with butter or oil in ice cube trays for simple quick and simple sauces





# Additional Storage Techniques

## Dehydrating

- This method removes moisture, so the product doesn't rot or decompose for long periods of time.
- Best items to dehydrate:
  - *Fruit*: often becomes more desert-like after dehydration. Sugars get concentrated, and the texture may take on that of a gummy, or a chip.
  - *Root vegetables*: Take on a crunchy texture. Often used as a chip substitute
  - *Meat*: If available to you, can make for great jerky!
- [Find more info about dehydration at this link!](#)



# Unique Garden Products and How to Use Them

## Tatsoi

- Family Brassicaceae
- Closely related to bok choy and cabbage.
- Can be eaten raw or cooked.
- Great substitute for spinach or lettuce.
- Can be steamed or stir fried.
- [Tatsoi with Oyster Sauce- Recipe from Marc Matsumoto, \*Fresh Tastes blog\*](#)



## Okra

- Has mucilaginous juice that acts like a thickening agent.
- Compliments other foods like tomatoes, onions, corn, and fish.
- Full of important nutrients like vitamins A,C and K
- High in antioxidants.
- [Okra Gumbo- Recipe from Toni Tipton-Martin, \*Jubilee\*](#)



# Unique Garden Products and How to Use Them

## Mexican Sour Gherkin “Cucamelon”

- Perfect for snacking fresh out of the garden.
- Can be put in fresh salsa to add a nice bright flavor
- Can be pickled and put into in salads, sandwiches and wraps.
- Can be used as an interesting and unexpected garnish.
- [Cucamelon Refrigerator Pickles from Reese Amorosi, \*Glamorosi Cooks\*](#)



## Squash Blossoms

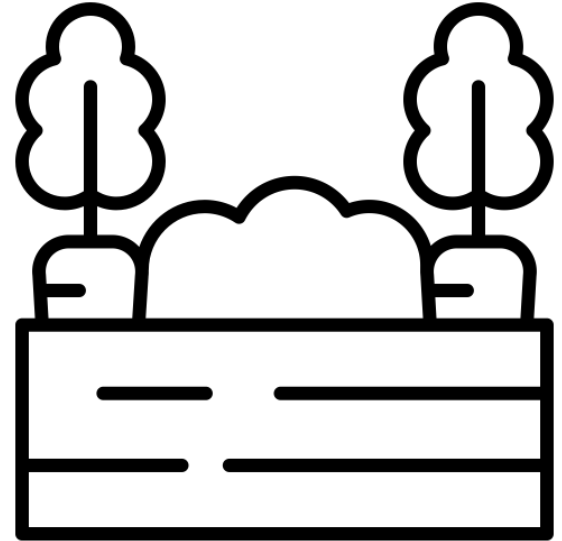
- Best when eaten fresh but will keep in the fridge for about 2 days.
- A versatile ingredient for many types of dishes.
- Blossoms can be dried, eaten raw in salads or sauteed.P
- Popular in Mexican and Italian cuisine
- Stuff with herbs and cheeses - Fry, bake, or steam
- Flowers can be added to pasta sauces, quesadillas, and in soups.
- [Squash Blossom Quesadillas from Nancy Lopez-McHugh, \*Spicy Foodie\*](#)



# Garden Winterization

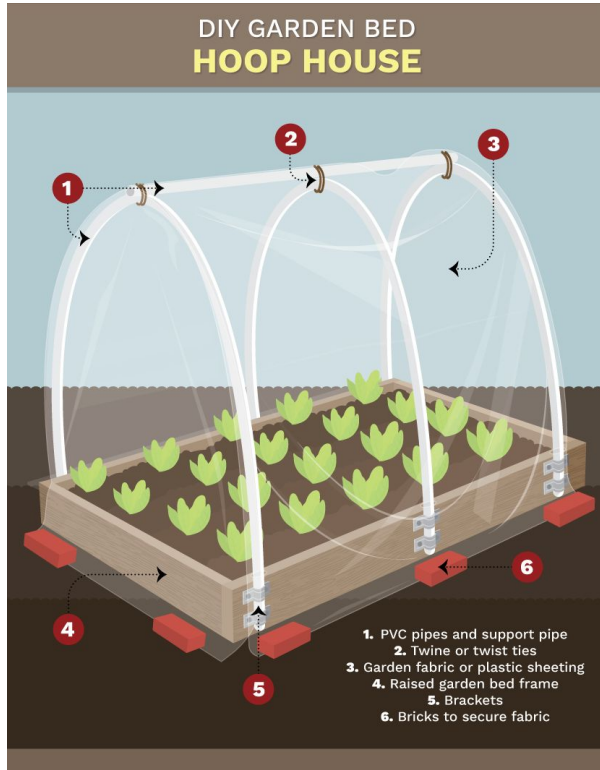
## Basic Preparation

- Harvest your fruits and veggies before the first frost.
- Remove all weeds and anything else you don't want growing in your garden come springtime!
- Collect leaves to make leaf litter (optional)
- Plant bulbs (flowers, garlic, onions) and other plants that need to overwinter.
- Protect your perennials (optional)
- Move potted annuals indoors (optional)
- Give plants one last soak, turn water off, and remove hose from the water source.
- Add mulch.



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from Noun Project

# Garden Winterization



## Hoop Houses

Extends the growing season for some plants!

Provides some protection from the elements and keeps more warm air inside.

Kale, spinach, and other cold-tolerant plants tend to do well inside a hoop house.

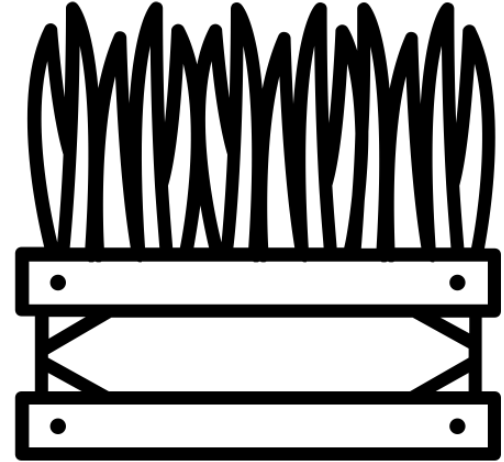
Depending on what kind of material you use, may not have a lot of light.

Materials are relatively inexpensive and do well on raised garden beds (PVC pipes, twine, garden fabric and/or plastic sheeting, brackets, bricks).

# Garden Winterization

## Cover Crops

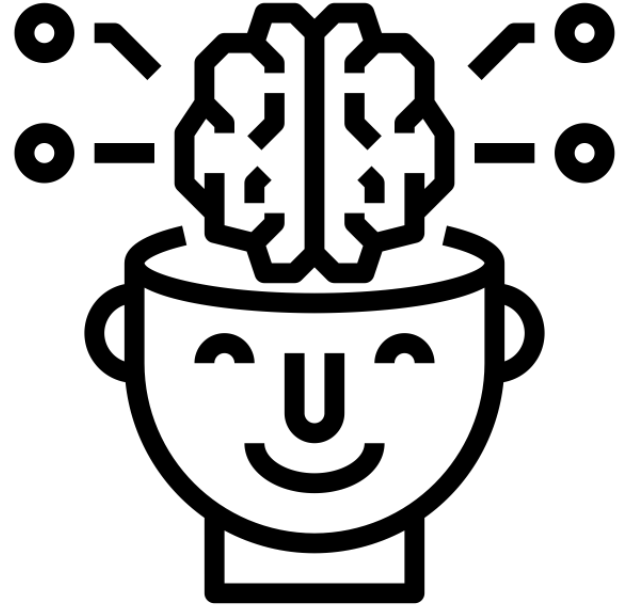
- Reintroduces necessary nutrients (namely Nitrogen) back into the soil
- Reduces erosion in garden beds that will not have any crops over the winter
- Retains soil structure and microbes to create conditions for happy, healthy soil
- Best cover crops for North America include winter rye and hairy vetch



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from Noun Project

# Getting Youth Involved

- Found Objects Hoop Houses
  - No access to PVC pipe, tarp, or a garden bed? Find objects at home that could make a hoop house!
- Mini Winter Garden
  - Use plant trays, soil, and seeds to try and start a garden at home!
- Family History - Food Preservation Techniques
  - How do your youth and their families approach preserved food? See if youth have experience and want to share!
- Pickle Something
  - [Quick refrigerator pickle recipe](#) - Great project for youth at home!



Created by Komkrit Noenpoempisut  
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# Q & A

- Raise your hand - Click “participants” and use the “raise hand” feature in the bottom right-hand corner to indicate that you have a question to ask.
- Unmute - When your name is called, unmute your microphone and ask us your question.
- 15 minutes - We will keep Q & A to about 15 minutes. If you have a question that didn't get answered, please send it to [caitlin@spark-y.org](mailto:caitlin@spark-y.org)
- Learn more at Spark-Y.org

*Thank you!*





# Picture Sources

- Pickling and fermentation picture URL: <https://hhp-blog.s3.amazonaws.com/2018/05/iStock-898200102.jpg>
- “Root Storage” pic URL:  
<https://post.healthline.com/wp-content/uploads/2020/08/root-vegetables-1200x628-facebook-1200x628.jpg>
- “Root Cellar” picture URL: <https://commonsensehome.com/root-cellars-101/>
- “Additional Storage Techniques - Refrigeration” Picture  
<https://www.absoluteappliancesrepair.com/wp-content/uploads/2019/01/fridge.jpg>
- “Additional Storage Techniques - Freezing”. URL:  
<https://cdn1-www-wholesomebabyfood.momtastic.com/assets/uploads/2015/04/baby-food-bagged.jpg>
- “Dehydration” URL:  
[https://assets.epicurious.com/photos/594d4bf88d2f4d074c3284ae/master/w\\_2000,h\\_1333,c\\_limit/Dehydrated-Fruit-21062017.jpg](https://assets.epicurious.com/photos/594d4bf88d2f4d074c3284ae/master/w_2000,h_1333,c_limit/Dehydrated-Fruit-21062017.jpg)
- “Hoop Houses” URL : <https://www.fix.com/blog/extend-your-gardening-season/>
- Jarring picture (slide 8) <https://durangoherald.com/articles/278700>
- Squash Blossom -  
<https://maryjames.net/wp-content/uploads/2011/07/Squash-blossom-male-and-female-1024x1024.jpg>