Lesson 5: Storing the Harvest and Composting

Nutrition topic: Storing and freezing produce
Gardening topic: *Compost and Sustainability*
Recommended recipe demo: fresh homemade salsa (or a recipe that focuses on the vegetables being grown in the plot).
Optional Nutrition: FFR, Dairy
Optional garden highlight: Use Fruit and Vegetable Handouts to focus on a few foods being grown in the garden.

Objectives
Participants will be able to:

- *Explain the benefits of properly storing fruits and vegetables.*
- *Describe the blanching method used to freeze fresh fruits and vegetables for long term storage.*
- *Understand the term "organic matter" and the difference between "brown" (C) and "green" (N) compost materials.*
- *Know the proper ratio between materials for successful composting.*
- *Identify materials that should not be composted.*

Required handouts:

- ***Freezing fresh fruits and vegetables***
- ***Fruit and vegetable storage***

Recommended handouts: Fruit and vegetable handouts based on what you're planting.

Storing Fresh Fruits and Vegetables

One of the benefits of growing your own produce or shopping at a farmers' market is that the fruits and vegetables available are often fresher than those at the grocery store. Fresher fruits and vegetables mean you will have a little longer to use them before they begin to go bad. It is still recommended, however, to use most fresh produce within one week of purchase. This will ensure you are able to use it before you lose it, while receiving the most nutritional benefits.

Knowing the proper storage conditions for different fruits and vegetables, as well as which ones tend to go bad more quickly, will help reduce the loss of your farm fresh food. Share the Storing Fruits and Vegetables handout, this is a reference table with the amount of time produce will generally store, as well as storage conditions to prolong its life.

- It is always a good idea to make a menu plan and shopping list before shopping at a grocery store, or a farmers' market.
- When planning to use your produce, be sure to use things that have a shorter storage time (ie: leafy greens, berries, etc.) before you use things that last longer (cucumbers, squash, peppers, etc.).
- Planning your meals around the produce you have on hand or those you plan to purchase will not only help increase your intake of fruits and vegetables but also reduce food waste.
- Remember, throwing food in the garbage is, essentially, throwing away money.

- Due to the variability of the growing season, you may find it difficult to plan exactly what produce you are going to buy at the market. What you have planned may not be available, or there may be something that looks better, or is more economical.
- It is important to be flexible with your purchases when shopping at farmers' markets. Flexibility will allow you to get the best produce for the best price. If you end up with something you didn't plan, be sure to use the storage information to make sure you use it before it goes bad.

o **Fruit & Vegetable Storage Recommendations** (Handout available on staff website)

	Produce	Storage time	Storage recommendations
	Apples	1-2 months	• These items can be kept at room temperature to ripen. • Refrigerate (40˚F) for a longer life. DO NOT refrigerate tomatoes until fully ripened. • Store these fruits away from other produce. They may cause other produce to rot.
	Apricots	1-2 weeks	
	Peaches	2-3 weeks	
	Pears	3-4 weeks	
	Melons	1-2 weeks	
	Tomatoes	1-2 weeks	
	Cherries	1-2 weeks	• Keep these items refrigerated (40˚F). • For higher quality, cover with a damp paper towel. • Do not wash until ready to use.
	Fresh herbs	1 week	
	Leafy greens	1-2 weeks	
	Raspberries	1 week	
	Strawberries	1 week	
	Beets	2-3 weeks	• Keep these items refrigerated (40˚F). • For better quality, these can be stored in an unsealed or vented plastic bag. • Other produce in this group includes oranges, celery, radishes, and parsnips.
	Carrots	2-3 weeks	
	Corn	1 week	
	Peppers	1-2 weeks	
	Summer squash	1-2 weeks	
	Cucumbers	1-2 weeks	• These items are easily damaged by cold. • Keep these items refrigerated (40˚F), but check daily for signs of rot. The fridge door is best. • Do not wash until ready to use.
	Green beans	1 week	
	Eggplant	1 week	

Freezing Fresh Fruits and Vegetables

Despite our best intentions, sometimes we buy more fresh produce than we can use.

- Freezing is a quick, simple, and cost effective way to save farm fresh fruits and vegetables until they can be used.
- Freezing does change texture, making fruits and vegetables much softer than their original form. While they may not be ideal for a fresh, crisp summer salad, they are a great addition to soups, casseroles, omelets, fruit crisps, and smoothies, just to name a few.
- Freezing fruits and vegetables is a great way to have a taste of summer during the long winter.

Freezing fruits and vegetables is simple. Follow these simple steps to freeze most things.
Handout: Freezing Fresh Fruits and Vegetables

- Always choose high quality, fresh fruit and vegetables. Freeze the produce before it is shriveled and wilted.
- Wash the fruit and vegetables. Cut into desired size, if necessary.
- Blanch the fruit or vegetable. Blanching** is a cooking method in which you put food into boiling water for a short time, and then transfer it to a bowl or sink filled with ice water. Blanching deactivates enzymes in the fruit or vegetable. This process prevents the loss of color and flavor during storage, resulting in a better looking and tasting product. It also helps prevent vitamin loss, and softens the fruit or vegetable, making them easier to store.
- Pat blanched fruit or vegetables dry with a clean dish towel or paper towel.
- Spread it in a single layer on a baking sheet that will fit in your freezer.

- Once frozen, remove the frozen fruits or vegetables from the baking sheet. Put it in a freezer bag or other air-tight container. If you do not have a baking sheet, you can freeze fruits or vegetables in a freezer bag. Once the bag is full, lay it flat in your freezer until frozen, so it doesn't freeze in one large chunk.
- Label with name and date. For best results, use within 1 year of freezing.
    - **Note: Not all fruits and vegetables require blanching before freezing.

Freezing Fresh Fruits & Vegetables (Handout available on staff website)

Produce	Freezing	Blanching Time (once the water returns to a boil)
Apricots	Blanched halves, quarters, slices, or jam	30 seconds
Apples	Blanched slices, cubes, or jam	30 seconds
Beets	Blanched cubes	3-5 minutes
Carrots	Blanched slices or cubes	2 minutes
Cherries	Pitted whole or halves	Not required
Corn	Blanched kernels	4 minutes
Cucumber	Grated	Not required
Eggplant	Grated or blanched slices	4 minutes for slices Not required for grated
Garlic	Grated or pureed	Not required
Green beans	Blanched pieces	3 minutes
Herbs	Minced	Not required
Onions	Sliced or minced	Not required
Peaches	Blanched slices, cubes or jam	30 seconds
Peppers	Slices, rings, or cubes	Not required
Potatoes	Cooked then grated	Not required
Raspberries	Whole or jam	Not required
Strawberries	Halves, slices, or jam	Not required
Summer squash	Grated	3 minutes
Tomatoes	Diced or cooked sauce	30 seconds for diced tomatoes Not required for cooked sauce

Gardening topic: Compost and Sustainability

What is compost, and what does it do?

- Compost is partially decomposed organic matter that is created by soil microorganisms breaking down plant tissue through biological processes.
- As organic matter is broken down by these microorganisms, nutrients can be released that can be taken up by plants.
- Organic matter added through compost can also improve soil.
    - Clay soil can be loosened and drainage improved by the addition of compost
    - Improvement of water and nutrient holding capacity for sandy soils
- Compost can be animal or plant based.
    - Animal based composts can contain more phosphorus and potassium, especially composts that are composed of chicken, turkey, and bird manures.
        - If your soil is already high in phosphorus or potassium, this type of compost should be avoided.
    - Plant based composts are made from plant materials, such as kitchen scraps, grass clippings, leaves, and other plant materials. Potassium and phosphorus are usually not excessive in these types of composts.

How to apply compost

- Compost can be applied in the spring or fall to the top of the soil. In order to get nutrients to the root zone, it will need to be turned into the soil.

How to create compost

- There are green materials that contain more nitrogen and brown materials that contain more carbon.
- Materials should be added in a C:N ratio of 30:1 (a lot more brown materials than green).
- Materials should be kept wet like a wrung out sponge and turned as often as possible (once a week is ideal), decomposition slows if not turned often.

• **Brown materials**	• **Green materials**
• Dried leaves	• Green plants
• Twigs and branches	• Weeds
• Pine needles	• Grass clippings
• Cornstalks	• Flowers
• Straw, hay, and animal bedding	• Fruit and vegetable scraps
• Sawdust	• Coffee grounds, tea
• Paper, newspaper	• Hair
• Dryer lint	• Cooked foot (avoid fats and animal products)

Materials to avoid: animal products, fats, large twigs and branches, plants that have been treated with herbicides, manures from carnivorous animals (cats and dogs), diseased plants, perennial weeds that can root
https://extension.usu.edu/yardandgarden/research/backyard-composting-in-utah

Recipe Sample

Allow time for participants to taste the sample.
Encourage participants to give their feedback on the recipe, including what they would do differently.