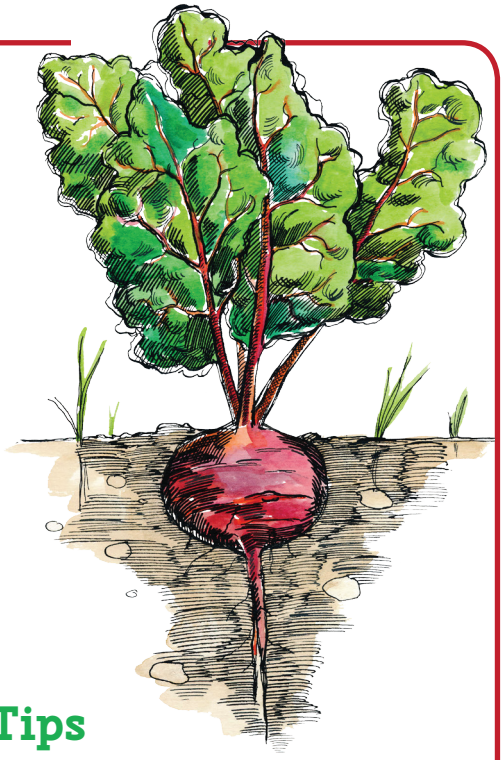
MONTANA Harvest of the Month

Classroom Bites

Beets



Did You Know

- The Romans were some of the first people to cultivate and develop beets for their roots as well as use them for feeding animals. The Greeks were the first people to consume both the roots and leaves.
- The color of beet roots can range from dark purple to bright red, yellow, or white. When cut transversely, the roots show light and dark rings, sometimes alternating. The Chioggia beet is red and white-striped and is nicknamed the "candy cane" beet.
- Beets have the highest sugar content of any vegetable, but are packed with excellent nutrients.
- Beets are a root vegetable of the Chenopodiace, or Goosefoot family. The Beta vulgaris species includes beets (table beets, processing beets, and novelty beets), chard, mangel-wurzels, and sugar beets. Beets contain a pigment called betacyanin that gives them their deep, red color. The beet, like its cousin the turnip, is known for its edible leaves and roots.
- While different in nutrient composition and culinary use, sugar beets are an important part of Montana's economy. Montana is a top producer of sugar beets, harvesting nearly 1.5 million pounds from 44,000 acres in 2014!
- Although beets are not grown in the winter in Montana, they can be kept fresh in the right storage conditions for months, making them a good vegetable for winter months.

Gardening and Agriculture

Beets are hardy vegetables and can be direct seeded four weeks before the last frost. Beets do well when planted with onions, cooking greens (kohlrabi), radishes, turnips, and garlic. If possible, plant beets where legumes previously grew (except runner or pole beans) because the soil is rich in nitrogen that beets need to grow. When grown together, pole beans and beets stunt each other's growth.

Produce Tips

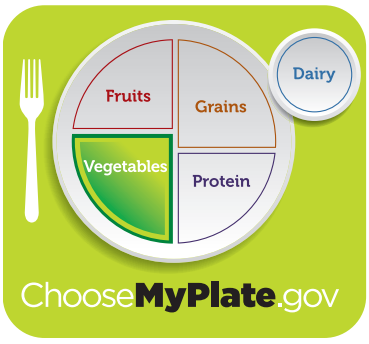
Select beets with firm skins. Beets should be round with a slender taproot. Smaller beets are more tender. If greens are still attached, select beets with fresh looking leaves. Small beets (about a half-inch in diameter) are good for eating raw. Medium and large-sized beets are best for cooking. Very large beets (more than three inches in diameter) may be too woody for eating.

Storage

Whole beets can be stored in a plastic bag in a refrigerator for up to two weeks. Beets can also be stored in a cold, humid cellar. Beet greens should be removed from the beet root for storage and can be used within a few days. When purchasing canned beets, choose low-sodium or no salt added varieties.

Nutrition Information

Beets, like many vegetables, are rich in many nutrients.
In particular, beets provide potassium, vitamin A, and riboflavin. Also, beets are high in folate and magnesium and low in calories.



Cooking

Beets are a versatile food that can be eaten roasted, steamed, raw, or pickled. Beets will bleed their red color onto other foods. Cook beets separately from other foods and add at the end of recipes to avoid turning your entire dish pink. Also try golden varieties or Chioggia (red/white striped), which do not bleed their colors. Beet greens can also be eaten raw, steamed, or in recipes in place of greens such as spinach.

Bake. Pierce and wrap washed beets in foil and bake at 350°F for 45-90 minutes or until tender.

Grill. Place 1/2-inch thick slices in a plastic bag; drizzle with olive oil and low-sodium seasonings. Shake until beets are coated. Then put slices on skewers over a preheated (medium-high heat) grill. Cook 15-20 minutes or until tender, turning the skewer occasionally.

Juice. Combine one cup 100% orange juice or apple juice and the juice of one small beet in a juicer. Add to a smoothie for added flavor and nutrition.

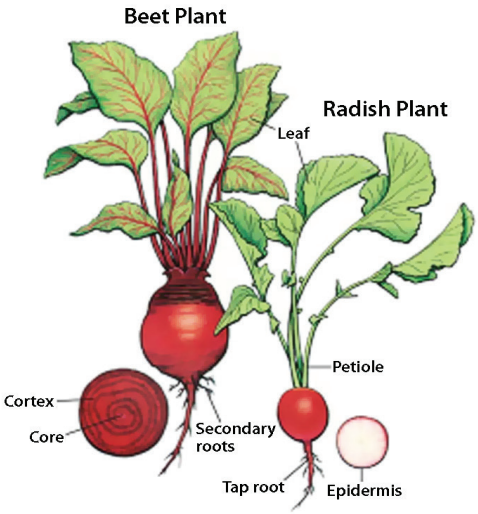
Roast. Slice 1/2-inch thick. Place in a plastic bag and drizzle with olive oil and seasonings. Shake until beets are coated. Spread on baking sheet and roast at 400°F for 30-40 minutes or until tender.

Salad greens. Rinse leaves thoroughly before adding to a salad. Tender greens are excellent for seasonal salads.

Season. To enhance the flavor, use allspice, basil, cinnamon, cloves, dill weed, ginger or nutmeg.

Shred. Grate raw beets for salads or to sprinkle on other foods for added color and nutrition.

Stir-fry or soup. Sliced beets and their leaves are a colorful addition to stir-fry and homemade soup.



Adapted from Beet Food Fact Sheet developed by Montana State University Extension. For the full fact sheet and other resources, visit: www.msuextension.org/nutrition.

Activities

Colorful Beets, Inside and Out

Source: Harvest for Healthy Kids (www.harvestforhealthykids.org)

Objectives

- Children describe the smell, feel, and color of beets.
- Children use scientific inquiry skills to predict, observe, describe, and compare beets.
- Children learn that beets can have a different color or pattern on the inside versus on the outside.

Supplies

- Beets of assorted colors – red, golden, pink. Try to include Chioggia beets, which are striped inside. You can find these at most farmers markets when beets are in season (June-January). Include a mix of raw and cooked beets (steam, boil, or microwave, and let cool). Use what you can find. If you can only find one variety, use that and show photos of other beet varieties from seed catalogs or online.
- Plastic coverings for tables
- Aprons or plastic garbage bags with holes cut out for head and arms
- Various cooking tools (use what you have) for exploring the beets. Scissors or plastic knives for cutting leaves, graters (children need adult assistance and a demonstration of safe grating so they do not grate their fingers), toothpicks for poking or picking up beet pieces, etc.
- Lemons to help clean beet stains from hands
- Plastic knives for children
- Paper for beet stamping
- Chart paper

Directions

1. Tell children today we will be exploring beets, and children will have the chance to explore how this root feels, tastes, and smells.
2. Ask children to put on aprons and explain that beet juice will stain clothing, so it is important to explore the beets on the table.
3. Remind the children that vegetables grow above the ground and below the ground, and ask children: Do beet roots grow above the ground or below the ground? (Answer: the roots grow below the ground.)
4. Talk about places you can find beets (on a farm, in a farmers market, at a supermarket).

5. Show children the different colors of beets. Ask children to guess what color the inside of the beet will be, and cut it open to reveal the color (this will be especially fun with the Chioggia beets). Record children's predictions on chart paper or whiteboard.
6. Let children explore beets with cooking tools available.
7. Talk with children about what they are seeing, smelling, and feeling. What words describe the feel of beets (hard, rough, smooth, slippery)? What does a beet smell like (sweet, salty)? How do cooked beets look, smell, and feel differently than raw beets? Do the different colors smell or feel differently? If using a garden or Harvest of the Month journal, instruct children to record these observations. Take a "Tried it, Liked it, Loved it" vote and record and chart results (see additional handout for details).
8. Help children wash hands, using lemon juice if needed. Explain that lemon can help remove the beet stains on their fingers.

Recipes

Beets and Sweets Heart-Shaped Chips

Consider assembling a traveling cooking cart at your school with a small convection/toaster oven and cooking supplies so teachers can use the equipment when needed and roll out of the way when not in use. A food dehydrator is an easy way to cook these chips without an oven.

Adapted from Nourishing Balance (www.nourishingbalance.com)

Servings

4 (or more as 1/4 cup samples)

Ingredients

3 beets, rinsed, scrubbed, do not peel or pierce

1 sweet potato, rinsed, scrubbed, do not peel

2 Tbsp olive oil

Sea salt to taste

Directions

1. Preheat oven to 400°F.
2. Slice beets and sweet potato thinly using the slicing blade of a food processor, mandolin, or sharp knife. They should be the thickness of a thick potato chip. Cut them as consistently as possible.
3. Cut sliced rounds with metal heart-shaped (or whatever your prefer) cookie cutter.
4. On cookie sheet, toss chips with olive oil and salt.
5. Spread evenly on cookie sheet.
6. Roast 20-30 minutes turning halfway through, until crisp. Check often to make sure they don't burn.
7. Use toothpicks or small cups to serve samples.

Galina's Very Berry Beet Smoothies

This is a great way to incorporate many garden and locally produced items into one tasty snack (carrots, apples, beets, kale)!

Source: VitaMix

Servings

2, or several as small samples (2-5 ounce servings)

Ingredients

1 cup blueberries

1 carrot

2 apples, cut into chunks

1 peeled beet, cut into chunks

3 kale leaves

Directions

1. Wash and prepare all ingredients.
2. Add all ingredients to blender, preferably a high-powered blender. For a very thick shake, do not add water. Add water to thin or if not using a high-speed blender.
3. Blend 45 seconds.

Book Nook

The Turnip, by Pierr Morgan

Tops and Bottoms, by Janet Stevens

Dig Deeper

For sources and photo credits along with more recipes, lessons, quick activities, resources, and guides, visit: www.montana.edu/mtharvestofthemonth.

Notes:

The Montana Harvest of the Month program showcases Montana grown foods in Montana schools and communities. This program is a collaboration between the Office of Public Instruction, Montana Team Nutrition Program, the National Center for Appropriate Technology, Montana State University Extension, Gallatin Valley Farm to School, and FoodCorps Montana. More information and resources are available at: www.montana.edu/mtharvestofthemonth.

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