Farm to School Month – Week One: Carrot Day!!

The above photo is from the harvest a friend of mine had in Galena just a couple of weeks ago. Paul Apfelbeck grew 12 varieties in his garden this year and each is represented in the blue baskets. Paul was very excited about his success this year and he and his family and friends will enjoy his carrots throughout the wintertime from his homemade root storage cooler.

Carrots are a member of the Apiaceae (formerly called Unbelliferae) family, which also includes celery, anise, dill, and cilantro. They are a biennial crop, producing their taproot the first year, and, if left to grow, would flower, set seed and die the second year. Although most all the carrots marketed in the United States today are orange, other colors such as red, yellow, or purple can occasionally be found in various fresh, frozen, and juice products.

Carrots are primarily consumed fresh and are the 6th most consumed fresh vegetable in the U.S. Consumption of fresh carrots peaked in 1997 at 14.1 pounds per person and since then has dropped off and settled into a stable amount of approximately 8.3 pounds per person in 2015 (Vegetable and Melon Outlook, 2016). In contrast, consumption of frozen carrots averaged 1.4 pounds per person.

The Roots of Carrot History

- Carrots originated in central Asia, near Afghanistan, several thousand years ago.
- Carrots are derived from a Middle Eastern crop called Queen Anne’s Lace. This wild ancestor is also a taproot crop but has a white root.
- Ancient ancestors of the modern carrot were not yellow-orange, but of purplish colors ranging from lavender to almost black. The yellow-orange root came from a mutant variety that lacked the purple pigment.
- Purple and yellow-orange varieties spread west to the Mediterranean, where ancient Greeks and Romans used them for medicinal purposes.
- In the 14th century, carrots arrived in China, which is now the world’s leading carrot producer.
- Around the 1600s, the purple variety nearly became extinct, and the yellow-orange variety was introduced to America and Japan.
- The high beta carotene content of carrots was discovered in the 19th century. During World War II, the British worked to develop a variety of higher beta carotene carrots to help their aviators see better at night.

CARROTS

Let’s learn about carrots today!! Alaska grown carrots have an advantage over carrots that are shipped here because they generally have a higher sugar (sucrose) content when they reach the stores. This is why they taste so sweet!!
Among the many popular carrot varieties in the US markets are Amsterdam, Chantenay, Cheyenne, Danvers, Envy, French, Imperator, Ithaca, Karrette, Nantes, Nelson, Paris Market, Purple, Redland, Royal, Spartan, Suko, Sweet Rocket, Trinity, and Zino.

Let’s Move into the Science of Carrots

Pronunciation: kăr´at
Spanish name: zanahoria
Family: Apiaceae
Genus: Daucus
Species: D. carota
The carrot is a root vegetable of the Apiaceae family. The edible part of a carrot is known as a “taproot.” This plant is cultivated for its enlarged edible root and its foliage is fine and lacy. In fact, the wild carrot is actually a familiar wildflower known as “Queen Anne’s lace.”

Carrots are commonly grouped into two main varieties: eastern and western. Eastern carrots are the original cultivar and are usually purple or yellow in color and have fewer branched roots. The purple color stems from an anthocyanin pigment lost in later varieties. Western carrots emerged in the Netherlands in the 15th or 16th century. Their orange color made them popular among countries associated with the House of Orange and the Dutch struggle for independence.

Carrots contain plant pigments called *carotenoids*, of which beta carotene is a member. These pigments were first identified in carrots (giving them their orange color) and their name was thus derived from the word *carrot*.

**How Do Carrots Grow?**

Carrots are biennial, meaning they have a two-year life cycle. In the first year, the edible root is formed, followed by production of the flower and seeds in the second year. Carrots can be grown most anywhere. The ideal temperature range is 60 to 70 F. For this reason, carrots are grown year-round in California. They require a growing season of 110 to 160 days and need deep, loose, well-drained soils.

Prior to planting, the soil is plowed deep and disked to avoid clods; a compaction layer also helps keep the roots from becoming forked or rough.

Germination of the seedlings may be advanced by sowing them in V-shaped furrows. Seeds are then covered with a quarter-inch layer of sand or sifted compost. Most fields are sprinkler-irrigated during the entire growing season. Commercial carrots grown in Alaska are both mechanically harvested with self-propelled harvesters and hand harvested with shovels and hands.

Carrot varieties vary only slightly in taste, shape, or size, so most consumers are unable to tell one variety from another. Varieties are actually grown in particular growing regions or for specific uses. For example, carrots found in supermarkets that are packaged in cello bags are grown specifically larger and for the supermarket.
Baby-cut carrots are made from full-grown, small diameter carrots by peeling and cutting them to the desired length. They are planted closer together so the roots stay slim and there is less waste when the carrots are cut to their small size. True baby carrots are removed from the ground early and actually look like miniature carrots.

Reasons to Eat Carrots
A ½ cup of cooked carrots provides:
- An excellent source of vitamin A, providing more than 200% of the recommended Daily Value.
- A good source of vitamin K.
- A source of vitamin C, fiber, and potassium.

What is Vitamin A?
- Vitamin A is a fat-soluble vitamin, which means it can be stored for long periods of time in your body.
- Vitamin A is an antioxidant that helps to keep the body safe from free radicals. Among Americans, toxic consumption levels of vitamin A are more of a concern than deficiencies.
- Vitamin A is required for the proper development and functioning of our eyes, skin, and many other parts of our bodies.
- Individuals who have low levels vitamin A may develop night blindness.
- Vitamin A is required for normal functioning of the immune system.
- Vitamin A that is found in colorful fruits and vegetables, like carrots, is called provitamin A carotenoid. It can be made into retinol in the body. Some carotenoids (like beta carotene, alpha carotene, and beta cryptoxanthin) can be made into vitamin A by the body.

<table>
<thead>
<tr>
<th>Nutrition Facts</th>
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<tbody>
<tr>
<td>Serving Size: ½ cup carrots, sliced (61g)</td>
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<tr>
<td>Calories 25</td>
</tr>
<tr>
<td>Total Fat 0g</td>
</tr>
<tr>
<td>Saturated Fat 0g</td>
</tr>
<tr>
<td>Trans Fat 0g</td>
</tr>
<tr>
<td>Cholesterol 0mg</td>
</tr>
<tr>
<td>Sodium 45mg</td>
</tr>
<tr>
<td>Total Carbohydrate 6g</td>
</tr>
<tr>
<td>Dietary Fiber 2g</td>
</tr>
<tr>
<td>Sugars 3g</td>
</tr>
<tr>
<td>Protein 1g</td>
</tr>
<tr>
<td>Vitamin A 204%</td>
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<tr>
<td>Vitamin C 8%</td>
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Some Great Carrot Facts
- The average person eats 17 pounds of carrots per year.
- Today the largest producers of carrots are China, the United States, Poland, Japan, and France.
- Carrots contain about 90% water.
- Most baby-cut carrots are made from large carrots that have been peeled and trimmed. The trimmings are used in salad mixes, juices, and other carrot products.
- The carrot was one of the first vegetables to be canned in the early 1800s.
- Carrots, or “skirrets,” were originally purple, white, and yellow. The orange carrot was developed in Holland as a tribute to William I of Orange during the Dutch fight for independence from Spain in the 16th century.
- When consumed in large quantities, carrots can add a yellow tint to skin. This is caused by the carotene in carrots. Don’t worry, this phenomenon is not dangerous at all.
Carrots are not just orange, some varieties produce white, yellow, purple, and even black carrots.

In addition to the root of the plant, the leafy green tops of carrots can be eaten too.

Carrots will taste sweeter after a light frost—the cold converts some of the vegetable starches into sugars.

**Let’s eat . . .**

**Refrigerator Carrot Pickles**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Carrots, washed, peeled</td>
<td>1 pound</td>
</tr>
<tr>
<td>Water</td>
<td>1 cup</td>
</tr>
<tr>
<td>Sugar, granulated</td>
<td>¼ cup</td>
</tr>
<tr>
<td>Salt</td>
<td>1 ½ Tablespoon</td>
</tr>
<tr>
<td>Apple Cider Vinegar</td>
<td>1 cup</td>
</tr>
<tr>
<td>Garlic cloves, peeled</td>
<td>2 cloves</td>
</tr>
<tr>
<td>Dill seeds</td>
<td>1 Tablespoon</td>
</tr>
<tr>
<td>Mustard seeds</td>
<td>1 Tablespoon</td>
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</tbody>
</table>

1. Cut carrots into sticks or slices, whichever you prefer.
2. Fill a large bowl with ice and water, set aside. In a large pot, bring 3 quarts of water with 2 teaspoons of salt to a boil. Blanch carrots by placing them in the boiling water and cook for 1 minute. Immediately, turn off the heat, drain carrots, and place them in the ice water to stop them from cooking. Once chilled, place carrots in a sealable container or in a jar.
3. In a saucepan, combine 1 cup of water, sugar and salt. Bring to a simmer over medium heat. Simmer until salt and sugar are dissolved. Remove from stove. Add in vinegar, garlic cloves, dill seeds, and mustard seeds. Let mixture cool for 10 minutes then pour pickling liquid over carrots. Cover carrots and refrigerate for at least 2 days before serving.
4. Serve as a snack or inside a sandwich.

**Yummy Goodness and Tasty Tips!!**

- Choose firm, bright carrots without cracks that look slightly moist.
- Large carrots with the greens attached will have the sweetest flavor.
- Remove the greens from carrots and store tightly sealed in a plastic bag in refrigerator for up to two weeks.
- Many Alaska gardeners who love to grow and eat carrots store their carrots in totes filled with sand. Keeping the totes in a dark, cool space will allow them to store well into the wintertime and stay crispy and sweet.
- Commercial Alaska carrot producers store their carrots in barns that are kept very dark and just above freezing.
- The peel of the carrot is edible; gently scrub and rinse carrots prior to eating.
- Enjoy carrots raw or cooked by microwaving, steaming, sautéing, roasting, or baking.