



JANUARY

NEWSLETTER

..... THIS MONTH
WE'RE HARVESTING

Carrots!

In This Issue



AND MORE!

Farmer Spotlight

**DON CAMERON - TERRANOVA RANCH
HELM, CA**

Forty years ago, first-generation farmer Don Cameron made a career change—from advising farmers to becoming a farmer himself. “I had absolutely no family background in farming. None. However, I was hired in 1981 to become a farm manager,” explained Cameron. Two years later, Cameron was promoted to General Manager/Vice President of Terranova Ranch, where he continues to farm today. Cameron farms a variety of crops on 8,500 acres, including 700 acres of carrots.



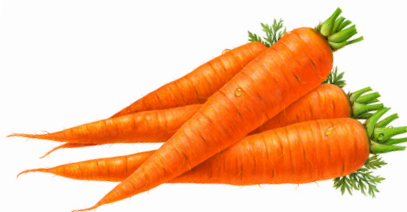
For many growers, carrots are a two-season crop. Cameron plants carrots in the spring for a summer harvest, and again in the late summer for a winter harvest. “Our summer carrots are full-sized carrots intended to be sold in cellophane bags at the grocery store; our winter carrots are baby carrots,” said Cameron. “The baby carrots are planted closer together, so they grow skinny and long. Full-sized carrots are planted a little further apart.” The tiny carrot seeds, 2-3 millimeters in length, are mechanically planted in rows on raised beds.

Immediately after planting, sprinklers are set in the fields. It’s essential to keep seeds damp until they germinate, which can take 14 to 21 days. Cameron and his crew use high efficiency irrigation pipes that help conserve water. Technology is key—weekly aerial photos reveal which fields need additional water or fertilizer applications.

After the carrots have been growing for 110 to 180 days, they are ready for harvest. A self-propelled mechanical harvester loosens the earth under the carrots and lifts the carrots by their tops. Next, it shakes the dirt off, removes the tops, and loads the carrots into a set of trailers pulled alongside the harvester.

Cameron’s carrots are trucked to Bakersfield, where they are cooled, sorted, cleaned, and packaged within 24 hours of harvest. Baby carrots are cut into two-inch pieces and tumbled inside a large drum which removes the skin and rounds the edges. Cameron sells his carrots under the Grimmway Farms and Bolthouse Farms labels. “You can find our carrots in twenty different countries—we get to grow nutritious food for kids and their families living all over the world.”

FOOD for FUEL



Carrots provide unique health benefits. They are full of essential vitamins and a natural source of beneficial antioxidants.

HERE ARE SOME OF THE HEALTH BENEFITS OF
INCLUDING CARROTS IN YOUR DIET:

Healthy VISION

Beta carotene found in carrots converts to vitamin A in the retina. Vitamin A helps you see in dim light, so a diet rich in beta carotene helps support healthy eyesight and night vision.

Happy GUT

The fiber found in carrots helps us feel full and keeps things moving in our digestive tract. One cup of cooked carrots contains five grams of fiber, about ¼ of a child's recommended daily intake.

Youthful SKIN

Anthocyanins, commonly found in deep red and purple carrots, help support healthy collagen which is known to maintain the youthful appearance of skin.



CARROTS BUNDLED UP



In winter, it's hard to leave home without bundling up in cozy winter clothes. This warm recipe features brightly colored carrots 'bundled up' in puff pastry for a healthy and fun winter snack—no mittens required! Try using multi-colored carrots, which are just as nutritious as the classic orange variety. Each hue—red, white, purple, yellow, and orange—offers unique health benefits that will help your body stay healthy through the coldest months!

Ingredients:

- 6 large carrots
- 1 sheet puff pastry
- 1 egg, beaten
- Black olives
- Soft mozzarella balls
- Ketchup
- Mustard
- Olive oil
- Salt and pepper, to taste

Tools: An oven, baking sheet, parchment paper, vegetable peeler, cutting board, chef's knife, small bowl, fork, pastry brush

Directions:

1. Preheat the oven to 425°F and line a baking sheet with parchment paper. Wash your produce under running water.
2. Peel the carrots and toss them in olive oil, salt, and pepper. Arrange carrots on the baking sheet in a single layer. Cook for 20 minutes.
3. While the carrots bake, roll out the puff pastry. Cut into thin strips.
4. Remove the carrots from the oven and let rest until cool to the touch. Reset oven to 375°F. Wrap a puff pastry strip around each carrot.
5. Arrange the wrapped carrots on the baking sheet. Brush them lightly with beaten egg. Bake for 10-12 minutes.
6. Cut the mozzarella and olives to form eyes. Once the carrots are cool, place the eyes on the carrots. Serve with ketchup and mustard. Enjoy!

(Adapted from grimmwaycarrots.com)

CLASSROOM ★ Connection ★

Growing Carrot Tops

It's not easy to grow a beautiful carrot that's suitable for the grocery store, but it is easy to grow a beautiful green carrot top to observe in the classroom. With a little nurturing from young gardeners, carrot tops will produce delicate green foliage that can be enjoyed in a sunny window or planted outside in a container. In this lesson, students will test different methods

for growing carrots, observe changes over time, and understand what plants need to survive. The best part is that carrot tops produce leaves quickly, keeping students engaged with observations and easy-to-see changes.

Objectives

In this lesson, students will grow a carrot plant from a carrot top.

California Standards:
NGSS: 4-LS1-1, 3-5-ETS1-1;
CC ELA: W.1.7, W.2.7, RI.2.3

Materials: Carrots or carrot tops (at least one per student), shallow dish (one per group), cotton rounds, newspaper, toothpicks, recycled jars (one per group), water, and student worksheet (page 3).

Procedure:

1. Read the mini book, *Carrots: From Dirt to Dinner*. Review how carrots grow, with the root vegetable developing underground and the stems and leaves developing above ground.
2. Depending on the age of students, enlist their help in preparing the carrot tops for growing. If present, remove the greens from the top. Next, cut off the top 1-inch of the carrot, near the stem. Save the tops. (This is a good time to wash and peel the remaining vegetables to eat!)
3. Explain to students that they will attempt to grow a carrot plant from just the carrot top. Have students hypothesize which part of the carrot is likely to grow: the root, stems, or leaves. Ask students, "What do carrots need to grow?" Help students identify light, water, and air as essential needs of plants.
4. Show students the available materials for growing carrot tops. Challenge groups of two to three students to use the materials to create an environment that will help the carrots continue to grow. Instruct students to complete the worksheet on page three.
5. Place carrot tops in a sunny location. Encourage students to add water as needed. Make observations over time. Identify and discuss which environment led to the most growth.

Challenge: Use the materials provided to create an environment that will help the carrots continue to grow. Record the required materials and steps for preparing the environment.

Materials:

1.

2.

3.

4.

5.

6.

Day 1

Day 5

Day 10

Day 15

virtual



The baby carrot has been called one of the simplest and yet most influential innovations in vegetable history. Today, baby carrots dominate the carrot industry. These bite-sized snacks account for almost 70 percent of all carrot sales. This video features leading carrot producer Grimmway Farms, and gives a behind-the-scenes look at how baby carrots are harvested, packaged, and shipped around the nation.



SCAN ME

DIG DEEPER

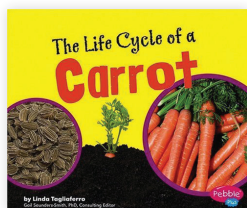
These books, websites, and other resources will help you and your students learn more about carrots.

BOOKS

The Life Cycle of a Carrot

by Linda Tagliaferro

This early reader captures the development of a carrot from seed through germination, growth, flower development and pollination, culminating with seed development.



learnaboutag.org

The California Foundation for Agriculture in the Classroom provides free resources to teachers. The resources highlight many of California's 400 agricultural commodities, including carrots.

grimmwaycarrots.com

Headquartered in Bakersfield, California, Grimmway Farms traces its roots to a produce stand opened by the Grimm brothers. Today, Grimmway is the world's largest producer of carrots. Their website provides a wealth of information including recipes, video, nutrition facts, and product information.



That's My Carrot!

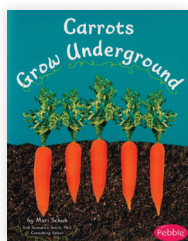
by Il Sung Na

When two bunny neighbors discover a giant carrot on their property line, they battle over ownership. When the carrot suddenly disappears, the rabbits must join forces to find it—and in their search they find friendship as well.

Carrots Grow Underground

by Mari Schuh

In this nonfiction text, readers discover how carrots and other root vegetables are grown for food. Subject-specific vocabulary words are defined in the included glossary.



Lesson Plan: Dig 'Em Up (Grades K-2)

By California Foundation for Agriculture in the Classroom

In this science investigation, students investigate the functions of roots, recognize the difference between a tap and fibrous root system, and identify the roots of some plants as edible.

Lesson Plan: Growing and Eating Carrots in the Classroom (Grades PreK-K)

By Scholastic

This lesson features the classic children's book *The Carrot Seed* and engages students in literacy, cooking, and planting activities that teach that a carrot is the root of a plant.

Resource: Carrots (Grades K-8)

By North Dakota State University

This comprehensive resource features seven carrots activities that appeal to all ages. Activities support standards in math, science, literacy, and social studies.

RESOURCES

