



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.



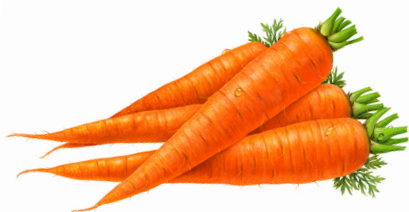
For many growers, carrots are a two-season crop. Cameron plants carrots in the spring for a summer harvest, and again in the late summer for a winter harvest. “Our summer carrots are full-sized carrots intended to be sold in cellophane bags at the grocery store; our winter carrots are baby carrots,” 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.



# STEM CARROT CAR

*Building vehicles with carrots is a fun, interactive way to strengthen STEM skills. During the construction process students learn the importance of a well-planned design, altering plans in light of failures, acquiring the right materials, and basic engineering skills. The best part? The finished product doubles as a healthy snack!*



## Materials:

- Four large carrots, washed
- Eight baby carrots
- Toothpicks
- Straws
- Brass Fasteners
- Paperclips
- Plastic knife

*(Adapted from [stemchallenge.com](http://stemchallenge.com))*

## Challenge Ideas:

*Build a ramp and see how far your carrot car can travel. Use a tape measure to gather accurate data. Make changes to your design to make your car go farther.*

*Design a carrot car that can carry a heavy load. Weigh your load to determine how much weight your car can carry.*

*Create a carrot car that replicates a popular car on the market. Add features that would help someone identify your car accurately.*

*Make a carrot taxi. Add a driver and passenger using figurines of your choice. Safely transport the passenger from point A to point B.*



## Put Carrots on the Map

their popularity in recent years. In this lesson, students will look at significant events and traditions from around the world that have “put carrots on the map.”

**Materials:** A political map of the world, student worksheet (page 3)

### Procedure:

1. Hold up a carrot. Ask students to share what they know about the history of the vegetable.
2. Tell students that in ancient times, the root was small, narrow, purple or yellow, and considered useless. Rather than using the root, their leaves and seeds were used for making natural medicines.
3. Explain that, like most fruits and vegetables, we can trace important historical events on a world map. It took thousands of years for carrots to become the vegetable we enjoy today.
4. Distribute worksheets and display a world map for students’ reference. Have students read the text and locate the countries listed. Instruct them to label the approximate location on their worksheet using the corresponding number for each fact.
5. Have students complete the student worksheet.
6. Invite students to research one additional carrot fact related to a specific country. They can do research at school or at home and share their findings with the class.

### Objectives

Students will read about geographically significant events and plot them on a world map. Students will use maps to organize information from the text.

#### Standards:

CC ELA: RI.3.7; CA History  
Social Studies: 3.1, Analysis  
Skill 4

# Put Carrots on the Map

Name: \_\_\_\_\_

Use a political map of the world to find the location of each country listed below.  
Label the approximate location on the map below using the corresponding number for each fact.

**1** Baby carrots were invented by California carrot farmer, Mike Yurosek, in 1986.

**2** Most researchers believe that a carrot-like root originated in central Asia, near present-day Afghanistan.

**3** In 1749, carrots began being exported from England by the Dutch East India Company.

**4** China currently produces about one-third of all the carrots bought and sold worldwide.

**5** In India, Hindus celebrate Diwali, the festival of lights, by eating gajar ka halwa: a pudding made from grated carrots, milk, and sugar.

**6** By the mid-16th century, Holland was leading the world in carrot cultivation, and the brightly-colored root was featured in several Dutch Masters paintings.

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

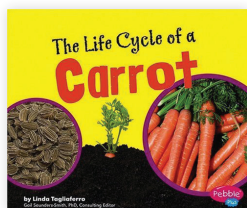
These books, websites, and other resources will help you and your students learn more about carrots.

### 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!

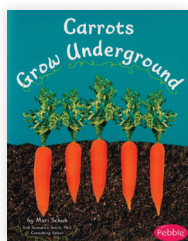
by Il Sung Na

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

