



..... THIS MONTH
WE'RE HARVESTING

Asparagus!

In This Issue



AND MORE!



Farmer Spotlight

**NEILL CALLIS - TURLOCK FRUIT COMPANY
FIREBAUGH, CA**



Ten years ago, Neill Callis and his wife were working for NASA and living near San Francisco when his father-in-law invited him to join Turlock Fruit Company, a business the family has held since 1918.

"I quickly realized I was a good fit for operations: understanding what affects the quality of our produce and how we can ensure the highest quality product to our consumers," explained Callis. "We're not launching rockets here, but we do have a responsibility to keep our food supply safe and abundant." Today, Callis works alongside three generations of the Smith family to manage the fruit company, where they farm 5,000 acres—primarily melons, but also almonds, cherries, and 300 acres of asparagus.

Asparagus is a permanent crop and once planted can be in production for ten years. Callis' asparagus starts at the nursery where seeds are planted and cared for over the course of a year before the root systems, called crowns, are dug up and transported to the field. They are hand-planted on peaked beds. "Asparagus requires some patience. The plants only reach full production after three years of growth," said Callis.

In mid-February, the crowns develop buds that push up through soil as asparagus spears. By late March, the spears are ready to harvest. Each spear is hand-cut with a 30-inch knife featuring a v-shaped blade. "Spears are growing continuously and can grow up to two inches each day in optimal conditions. Once a spear measures 10-11 inches long, it is harvested. The next day another spear from the same crown may be ready to harvest. We harvest the same 300 acres every day for 50-60 days," explained Callis. As the spears get thinner and yields decrease, it signals to the grower that the season has come to an end.

Each day harvested spears are placed in bins and brought into the packing shed on pallets, where they are processed by a semi-automated optical sorting machine that takes a photo of each spear before sorting and packing the asparagus into tight 1-pound bunches. The bunches are packed into cartons and hydro-cooled, a process of bathing fresh produce in chilled water to remove heat and reduce the presence of microorganisms, which is important for food safety. "After the hydro-cooler, it goes to the cold room and is shipped out within 48 hours." Callis' asparagus, both green and purple varieties, can be found in California supermarkets from late March to early May.

FOOD for FUEL

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



Asparagus provides unique health benefits. It is full of essential vitamins and a natural source of beneficial antioxidants.

Mood BOOST

Asparagus contains high levels of tryptophan, an amino acid that has been linked to improved mood. Additionally, asparagus is full of folate, a B vitamin that can help ward off irritability.

CELL Development

The folate found in asparagus is important in red blood cell formation and for healthy cell growth and function. This nutrient is crucial during early pregnancy to reduce the risk of birth defects of the brain and spine.

Happy GUT

The fiber content of asparagus makes it a good supplement for a healthy digestive tract. Just half a cup of asparagus contains 1.8 grams of fiber, which is 7% of your daily needs.



MINI ASPARAGUS FRITTATAS



Nothing says “spring” like crisp, sweet asparagus at its peak. April is the perfect time to buy California grown asparagus at your local grocery store or farmers market, and make these savory asparagus frittatas. They’re bite-sized, which makes for an easy and healthy on-the-go breakfast.

Ingredients:

- Cooking spray
- 1 tablespoon olive oil
- 10 fresh asparagus spears
- ½ red bell pepper
- ½ small onion
- 6 eggs
- ½ cup milk
- ¼ teaspoon salt
- ⅛ teaspoon ground black pepper
- 1 cup shredded cheddar cheese

Tools: Cutting board, chef’s knife, oven, skillet, spatula, medium bowl, whisk, mini muffin tin

Directions:

1. Preheat the oven to 350°F. Spray the muffin cups with cooking spray.
2. Wash your produce under running water. With an adult’s supervision, chop the asparagus, bell pepper, and onion.
3. Heat olive oil in a skillet over medium heat. Add chopped asparagus, bell pepper, and onion. Cook, stirring occasionally, until vegetables are tender.
4. Whisk eggs, milk, salt, and black pepper in a bowl. Add vegetables and cheddar cheese. Scoop approximately ¼ cup of mixture into each muffin cup.
5. Bake until the frittatas are set in the middle and lightly browned, about 20 minutes.
6. Enjoy!

(Adapted from coosheadfood.coop)

CLASSROOM ★ Connection ★

Asparagus Word Play

scale, and tip are all names of asparagus structures that have common alternative meanings in the English language. In this lesson, students will practice defining and illustrating the different meanings of homonyms.

In linguistics, homonyms are words that share the same spelling and the same pronunciation, but have different meanings. For example the words fire (a heat source) and fire (to remove someone from a position) are homonyms. Remarkably, most of the words that name parts of an asparagus plant are also homonyms. Crown, stalk, spear,

Objectives

In this lesson, students will use the relationship between particular words to deepen their understanding of asparagus nomenclature and the English language.

California Standards:
CC ELA: L.4.5, L.5.5; NGSS: 4-LS1-1

Materials: Internet access (optional) and student worksheet (page 3).

Procedure:

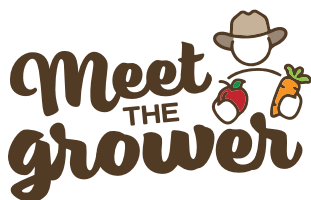
1. Read the mini book, *Asparagus All Around*. Explain to students that asparagus have plant structures that are unique, and these structures support survival, growth, and reproduction. Many of the structures have names that we’ve heard before. They are homonyms, which means they look and sound the same as other words, but they have a unique meaning as part of an asparagus plant.
2. Share an example of a homonym. Tell students that a growing asparagus spear is often called a shoot. We can also shoot a basketball. These words look the same and they sound the same, but their meanings are different. Invite students to share any other examples they can think of.
3. Distribute the student worksheet and give students access to research materials (either online or library access). Instruct students to use the graphic organizer to draw or write the different meanings of asparagus-related words.
4. Challenge older students to use both meanings of a word in a single silly sentence. For example, “After dining at the fancy restaurant, the gentleman paid the staff’s tips in asparagus tips.” Invite students to illustrate and share their silly sentences.

Asparagus Word Play

Homonyms are words that share the same spelling and pronunciation, but have different meanings. Use this graphic organizer to draw or write the different meanings of asparagus-related words.

WORD	ASPARAGUS MEANING	ALTERNATIVE MEANING
CROWN		
SPEAR		
SCALE		
STALK		
TIP		

CHALLENGE: Write a silly sentence that uses both meanings of a word below.



For more than 100 years, Turlock Fruit Company has produced California grown fruits and vegetables, including melons, almonds, cherries, and asparagus. In this video interview, General Manager, Neill Callis, shares some of the joys and challenges of growing asparagus in the Central Valley of California.



DIG DEEPER

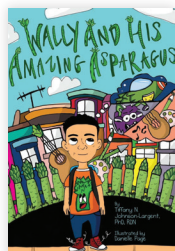
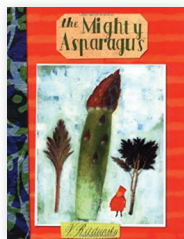
These books, websites, and other resources will help you and your students learn more about asparagus.

BOOKS

The Mighty Asparagus

by Vladimir Radunsky

With illustrations inspired by Renaissance art, this book features an egotistical king that goes head to head with an asparagus stalk growing in the center of the kingdom. Can the smallest creature in the land restore peace in the kingdom?



Wally & His Amazing Asparagus

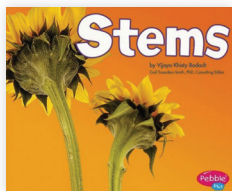
written by Tiffany N. Johnson-Largent, PhD, RDN, and illustrated by Danielle Page

Written by a registered dietician, this book aims to inspire positive eating habits in children. Wally has an extraordinary imagination, and with the help of his amazing asparagus, he experiences countless adventures.

Stems

by Vijaya Bodach

This nonfiction book uses simple text and photographs to introduce information about how stems grow, along with their uses. It features several pages on edible stems, including asparagus. Also available in Spanish.



WEBSITES

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 asparagus.

RESOURCES

Lesson Plan: Creating Asparagus Ads (Grades 3-5)

By Center for Ecoliteracy

In this lesson, students conduct a taste test of fresh and cooked asparagus, then develop advertisements to promote the benefits of asparagus and entice other children to try it.

Activity: Asparagus Ag-Bite (Grades 4-6)

By California Foundation for Agriculture in the Classroom

This resource features a "bite-sized" activity about asparagus. Students will practice measurement skills as they use metric and customary systems to accurately measure and sort asparagus by size.

Article: A Wee Fact about Asparagus (Grades 3-8)

By National Geographic Kids

This article examines the scientific explanation behind why asparagus makes your urine smell, and why some people (depending on where they live in the world) can't detect the smell at all! This kid-friendly article is sure to generate a lively discussion in the classroom.

