



..... THIS MONTH
WE'RE HARVESTING

Leafy Greens!

In This Issue



AND MORE!

Farmer Spotlight

**JACK SHIYOMURA - DOLE FRESH VEGETABLES
HURON, CA**

Jack Shiyomura has been farming for over 50 years, and had an exceptionally early start. "In fifth grade, my uncle recruited me to help with his farm. From that point on, I spent all my free time irrigating peaches and almonds. I liked that I could make money; I could save money," explained Shiyomura. Today, Shiyomura runs his own farming operation which, depending on the season, includes up to 900 acres of romaine and iceberg lettuce southwest of Fresno.



Huron is one of three growing locations for the leading lettuce producer, Dole Fresh Vegetables. "For two weeks out of the year, Huron is supplying all the nation's lettuce. We are a transitional growing region, which means the climate in Huron is a perfect bridge between Dole's production seasons in Salinas and Yuma, Arizona," said Shiyomura.

Shiyomura begins planting lettuce in November for a spring harvest, and in August for a fall harvest. "We actually plant three varieties, in waves, during each

planting season. Each variety is timed for Huron's climate as the weather changes," he explained. The tiny lettuce seeds are mechanically planted in rows on raised beds.

After seeds are successfully in the ground, Shiyomura uses sprinkler and drip irrigation throughout the crop. Water conservation is crucial, as agricultural water in the Fresno region has become scarce. "Drip irrigation has allowed us to use less water, and monitor our water use closely. Even with conservation methods, our production is severely limited by water availability," said Shiyomura.

For the spring crop, harvest begins in March. The fall crop is harvested in October. Harvest crews use a knife with an angled tip to cut the lettuce head at the base before they pack it into boxes in the field. Iceberg lettuce is wrapped in plastic, while romaine heads are secured with a twist tie. Lettuce destined for value added products, such as bagged salad mixes, are cored (removing the inner portion of the head) and packed in bins before being shipped to Dole's processing facilities around the country. "Lettuce is perishable, which means it has to move quickly to remain fresh. Within days, our lettuce is shipped around the world for consumers to enjoy."

FOOD for FUEL



Leafy greens 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 LEAFY GREENS IN YOUR DIET:

Healthy BONES & BLOOD

Collard greens are one of the best sources of vitamin K—one cup of cooked collard greens contains 1,045% of the recommended daily value. Vitamin K helps make various proteins that are needed for blood clotting and building strong bones.

Immune System SUPPORT

Spinach provides antioxidants tied to anti-inflammation and disease protection. These include kaempferol, a flavonoid shown to reduce the risk of cancer, as well as slow its growth and spread.

Happy GUT

The fiber content of romaine lettuce makes it a good supplement for a healthy digestive tract. Romaine lettuce contains 2 grams of fiber per serving, about 5% of the recommended daily value.



PORTRAIT ON A PLATE

Leafy greens come in a variety of sizes, shapes, and textures. In this activity, students can use any leafy greens they have at home, as well as a variety of fruits and vegetables to create a self portrait. The best part? Once finished, you can add your favorite dip or dressing and enjoy a ready-to-eat nutritious snack.

Ingredients:

- Several leaves of any leafy greens (lettuce, kale, spinach, cabbage, etc.)
- Assorted fruits and vegetables. Here are some ideas to get you started:

Sliced mini peppers for lips	Celery stalks for eyebrows
Baby carrot for a nose	Cherry tomatoes for eyes
Green beans for hair	Corn kernels for teeth
Sliced cucumbers for ears	
- Edible “glue,” such as dip, cream cheese, or sun butter (optional)



Directions:

1. Wash your produce under running water.
2. Place the leafy greens on a plate. Arrange the greens to create the shape of a face.
3. Use the assorted fruit and vegetables to create eyes, nose, ears, and mouth.
Add additional details, using a plastic knife to shape each fruit and vegetable.
4. Grab your favorite dip or dressing. Eat and enjoy!



Salad Mix Math

vegetable found in different bagged salad mixes. They will also create their own bagged salad mix, choosing preferred ingredients and flavors.

Materials: A head of lettuce and a bagged salad mix (optional), student worksheet (page 3), art supplies and white paper.

Procedure:

1. Show students a head of lettuce and ask them to identify the steps required to prepare the lettuce for consumption. Record the steps on the board. Show students a bagged salad mix and ask them to identify the steps required to prepare the salad for consumption. Record the steps on the board. Ask students which salad they would choose to prepare for their family. Tell students that value-added products, like bagged salad mixes, have risen in popularity in recent years because they are easy to prepare and save consumers time and energy.
2. Explain that bagged salad mixes include a unique blend of different leafy greens and sometimes other vegetables. In our lesson today, we will determine the exact quantities of each ingredient in the bagged salad. Review how to find quantity given the percent and find percent given the quantity. Distribute the worksheet and assist students as needed.
3. After students complete the worksheet, invite students (individually or in groups) to create their unique blend of leafy greens. Students will draw a picture of their bagged salad and include an ingredient list. Students should give their mix a descriptive name. Have students share their product with the class.

Value-added produce, such as pre-chopped vegetables or bagged salad kits, can make meal preparation more convenient for busy families. In 2020, value-added leafy greens accounted for nearly 10% of total fresh produce sales, bringing in \$7.2 billion and demonstrating continued strong demand for convenience items. In this lesson, students will use math knowledge and skills to determine the quantity of each

Objectives:

Students will identify the benefits of value-added products. They apply mathematical knowledge to real world problems by finding quantity given the percent and finding percent given the quantity.

Standards: CC Math: 6.RP.A.3.C, 6.RP.A.3.D, 7.RP.A.2, 7.RP.A.3

Salad Mix Math

Given the percentages below, determine how many grams of each ingredient would be added to each unique bagged salad mix.



Iceberg lettuce: _____grams
Carrots: _____grams
Romaine: _____grams
Pea pods: _____grams
Red cabbage: _____grams



Arugula: _____grams
Endive: _____grams
Red leaf: _____grams
Radicchio: _____grams
Mustard: _____grams

Given the quantities below, determine the percent of each ingredient included in the bagged salad mix.



Green cabbage: _____%
Carrots: _____%
Red cabbage: _____%



Spinach: _____%
Romaine: _____%
Green leaf: _____%
Red leaf: _____%

virtual



Located in Selinsgrove, Pennsylvania, BrightFarms grows spinach and other leafy greens on a 40,000 gallon indoor pond. In this video produced by True Food TV, viewers will learn about some of the benefits and challenges of growing food hydroponically.



SCAN ME

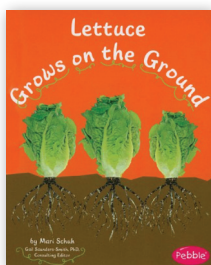
DIG DEEPER

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

BOOKS

Lettuce Grows on the Ground by Mari Schuh

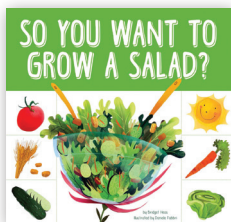
In this colorfully illustrated book, readers learn about lettuce, how it is grown, and other vegetables that grow on the ground. The author introduces plant life cycles in an easy to understand way.



So You Want to Grow A Salad?

written by Bridget Heos and
illustrated by Daniele Fabbri

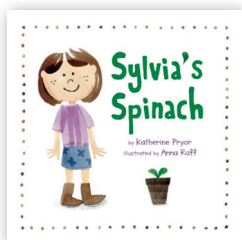
A young girl wants to grow her own salad, discovers where the many ingredients come from, and learns how to grow vegetables. Includes a kid-friendly salad recipe.



Sylvia's Spinach

written by Katherine Pryor
and illustrated by Anna Raff

Sylvia Spivens is a picky eater, until her teacher gives her a packet of spinach seeds to plant for the school garden. With a little help, Sylvia discovers the joy of growing food and the pleasure of tasting something new. 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 leafy greens.

lgma.ca.gov

The California Leafy Green Marketing Agreement was established in 2007 to assure safe leafy greens for consumers and maintain confidence in food safety programs. Their industry-focused website includes information about traceability, best practices, and updates on food safety issues.

RESOURCES

Lesson Plan: Lettuce Exploration Lesson (Grades K-5)

By Growing Minds

In this lesson, students will use scientific inquiry to observe and learn about several varieties of lettuce. Students will record their results of a taste test by creating a line plot.

Leafy Greens Lessons (Grades 3-5)

By Leafy Greens Council

This set of lessons introduces students to the nutritional benefits of consuming leafy greens. With the help of five dinosaur friends, students will learn ways to include more leafy greens in their diet, while improving their overall health.

Lesson Plan: Lettuce Be Different (Grades K-6)

By Florida Agriculture in the Classroom

In this lesson, students compare their own similarities and differences before growing and comparing several varieties of lettuce. This lesson reinforces ELA, math, and science skills while helping students learn more about ecological variation.

