

The History of Citrus in Florida

By Cynthia Joyner, Sleepy Hill Middle School

I. Lesson Summary

Summary

We all enjoy various citrus products on our tables every day. This lesson will teach the highlights of how the citrus industry has developed over the years in Florida. This lesson addresses citrus from its origins over 20,000 years ago to the state-of-the-art giant industry it has become in modern times. Citrus has played significant roles in Florida's economy and its history. Various "acts of nature" have actually carved out where citrus is grown today, which differs from its original areas of production.

Objectives

Students will:

- 1.) Identify the origin of oranges and how they arrived in America;
- 2.) Describe the history of citrus in Florida;
- 3.) Recognize that the citrus industry has had a significant impact on the economics in Florida;
- 4.) Learn how "uncontrollable acts of nature" (hurricanes, cold fronts, and wind damage) have altered the citrus history by actually changing production amounts, as well as the areas where citrus is grown.

U.S. History Event or Era

This lesson can be used for any unit covering Florida History and economy from Ponce de Leon's first bringing citrus seeds to Florida in 1493, up to today's financial news.

Grade Level

Upper Elementary and Middle School

Materials

A large bowl filled with a variety of oranges, grapefruit and other citrus fruits; "Background Information on the History of Citrus" and discussion questions for each student; handouts a transparency and copies of "The Historic Citrus Trail" activity sheet for each group; transparencies and handouts for students of "Citrus Production By County, 2001-2002"; and class set of "Florida Roadmaps" with counties named.

Lesson Time

One to two class period (50 minutes each)


II. Lesson Procedures

Procedures

- 1.) To begin the lesson, show the class a large bowl full of citrus fruit and ask the question, "What do you think of when you hear the word 'citrus'?" To demonstrate the relevance of citrus in the students' everyday lives, you may wish to follow with "How many of you ate an orange or had a glass of orange juice or any other citrus products for breakfast?"
- 2.) Have each student complete the KWL chart titled "What Do You Know About Florida's Citrus Industry?".
- 3.) Give each student a copy of the "Background Information on the History of Citrus" handout (found in the "Activities" section) for him/her to read. Then, utilize the discussion questions (also found in the "Activities" section).
- 4.) Hand out "Trace the Historic Route of Citrus" activity sheets to each student. Have students read and study the historic route as citrus progressed from area to area and then trace that route on their world maps. After the students have completed their sheets, the teacher should utilize their master transparency to show and discuss the key points found on this Historic Citrus Trail page.
- 5.) Pass out "Florida Citrus Counties" and "Florida's Citrus Producing Counties' Map" activity sheets to each student. Have the students identify the citrus producing counties using the State Road Map to identify the counties. Label them and note their amount of production. The teacher will utilize master transparency for students to check for accuracy on their maps.

III. Activities

KWL Chart - "What Do You Know about Florida's Citrus Industry?"

<u>"What do you Know?"</u>	<u>"What do you want to learn?"</u>	<u>"What did you Learn?"</u>
		

Background Information on the History of Citrus

HISTORY OF CITRUS: The origin of citrus goes back 20 million years, probably beginning in Southeast Asia, or what is today Malaysia. From emperors to peasants, citrus fruits were enjoyed in ancient China, and much later, in Japan and the South Pacific. Over the centuries, traders and explorers carried citrus from Asia to the Middle East and Africa, and to ancient Greece and Rome. Greeks revered citrus highly, considering it the food of their mythological gods (they even called oranges “golden apples”!). By the sixth and seventh centuries, citrus was popular among Europeans, mostly for the fragrant, ornamental trees; the fruit itself was bitter. Not until Portuguese explorers brought a sweeter variety to Europe did sweet oranges dominate the groves of the Mediterranean.

FLORIDA’S CITRUS HISTORY: Citrus trees are NOT native to Florida. In 1493, citrus came to the New World on Columbus’ voyage to the island of Hispaniola. A few years later, another Spanish explorer, Ponce de Leon, brought citrus seeds to Florida. By 1579, orange trees were growing in St. Augustine, the oldest European settlement in the United States. With good growing conditions, groves were established. St. Augustine and Tampa, with their easily accessible seaports, grew citrus: oranges, tangerines, lemons and limes. In 1823, the French Count Odet Philippe brought grapefruit from the West Indies to Florida, planting the first grove near Tampa. As the citrus industry grew, so did Florida. Growing areas developed beyond the areas of the coast. In the late 19th century, as the railroads expanded, trains supplied citrus to other parts of the nation. The Great Freeze of 1894-95 devastated Florida’s thriving citrus industry. Fifteen years later, the industry recovered, and crops became bigger than ever. Today, oranges are the “golden apples” of Florida, and citrus is one of the state’s most important industries. Hurricane Charley plowed through central Florida on August 13, 2004, devastating the citrus industry by destroying not only the current crop, but also demolishing millions of trees.

WHAT VARIETIES OF CITRUS GROW IN FLORIDA? Florida has approximately 100 million orange and grapefruit trees, cultivated on about eight thousand acres in thirty-one of the state’s sixty-seven counties. These counties produce Ambersweet, Hamlin, Navel, Pineapple, Valencia oranges; and white Marsh grapefruit and Ruby Red and Flame grapefruit in large quantities. The characteristics of these fruits differ, and they mature at different times of the year. Speciality fruits such as Tangelos and Temples are crosses between grapefruits and tangerines. Varieties of tangerines include Dancy, Fall-glo, Honey, Robinson, Royal Lee and Sunburst. Varieties of Tangelos include Minneola and Orlando.

GROVE WORKERS: Over 90,000 people work directly or indirectly in Florida’s citrus industry. More than 10,000 of those are growers. In the groves, others care for and pick fruit. Horticulturists help growers manage water resources, diseases and pests. Many businesses supply fertilizer, watering equipment and other grove machinery. Truck drivers transport fruit from the grove to the packing and processing plants.

PACKING HOUSE AND PLANT WORKERS: Citrus plants employ many types of workers: managers; safety inspectors; scientists that test fruit; engineers and machinists to keep equipment running; computer specialists; workers to sort and inspect fruit; and even tasters. From large equipment to cans and packing boxes, businesses supply packinghouses and processing plants. Truck drivers transport fruit and citrus juice to retailers, who, in turn, make sure it is carefully displayed in supermarkets.



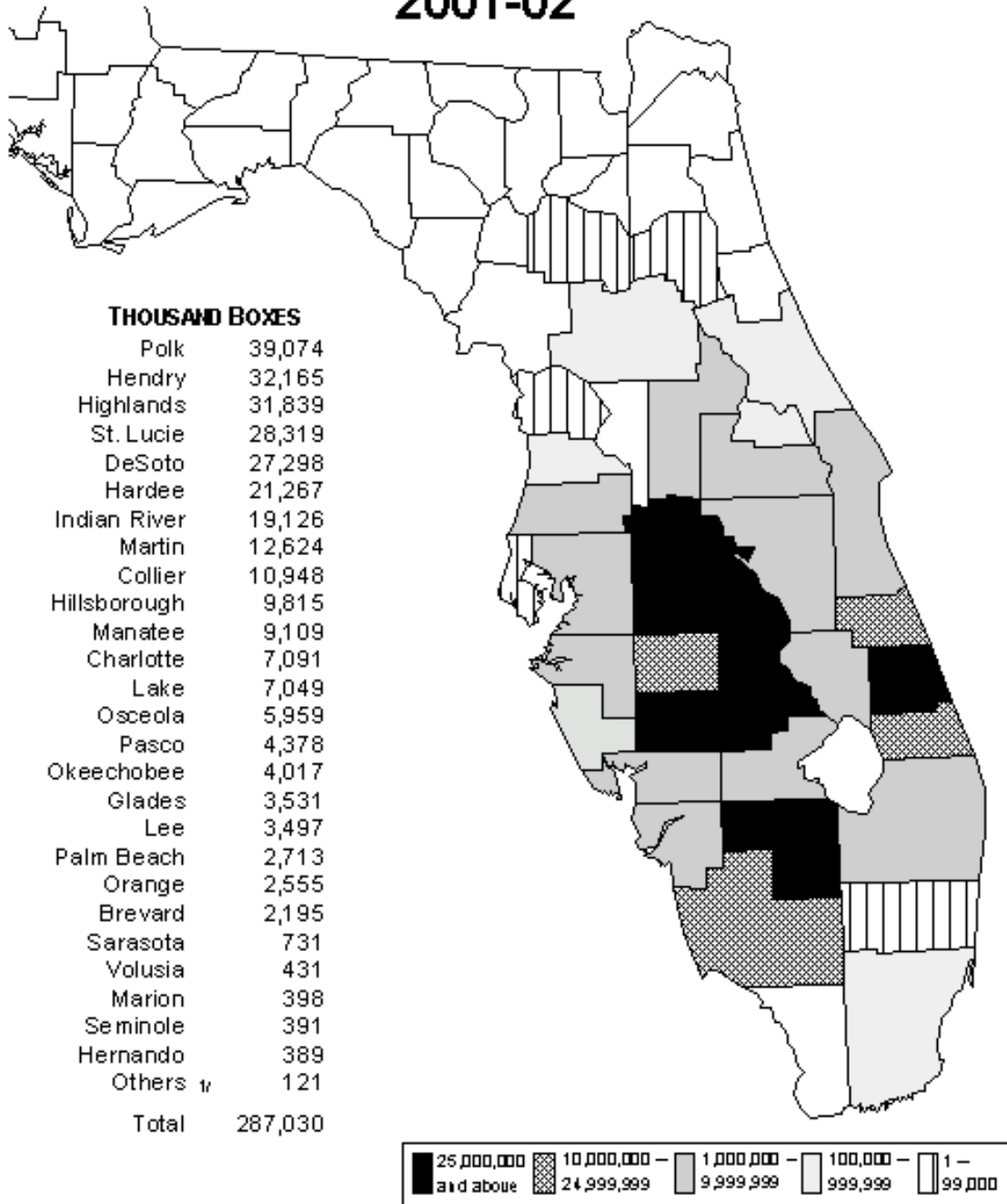
SELLING CITRUS: Many people work to sell and promote citrus products. That includes staff that work in advertising, public relations and sales. Accountants keep track of the financial end of the business. At the store level, employees stock freezer and refrigerator cases with juice while produce workers maintain the quality of fresh citrus fruits. Food service employees such as those in restaurants, school cafeterias, airlines and vending machine businesses serve citrus to consumers. Consumers around the world buy citrus from Florida! Most of the orange juice sold in the U. S. comes from Florida. Florida is the world’s largest grower of grapefruit and exports grapefruit all over the world. The citrus industry, with the jobs and businesses that support it, bring more than \$9 billion to Florida each year.

Picture G-9-1: This is the “Florida Orange Bird,” the official spokesbird for the Florida Department of Citrus during the 1960s and ‘70s. Designed by folks at Walt Disney, he regularly touted the virtues of Florida citrus, telling children all over the world to drink juice from Florida.

Discussion Questions

- 1.) Where did citrus fruit originally come from? How many years ago?
- 2.) Why do you think that the ancient Greeks called oranges “golden apples”?
- 3.) True or false. Citrus trees are native to Florida.
- 4.) How did citrus first come to Florida?
- 5.) What technological advancement helped to move great amounts of citrus to distant markets in the late 19th century?
- 6.) About how many orange and grapefruit trees are there currently in the state of Florida?
- 7.) Of all the citrus industry jobs, which do you think is the most important? Why?
- 8.) Which citrus industry job would you most like to have? Explain your answer.
- 9.) How much money does the citrus industry bring into Florida each year?
- 10.) What natural disasters have altered the citrus industry over the years? Explain how each of these “Acts of God” affected citrus production.
- 11.) Where does most of the orange juice sold in the U.S. come from?

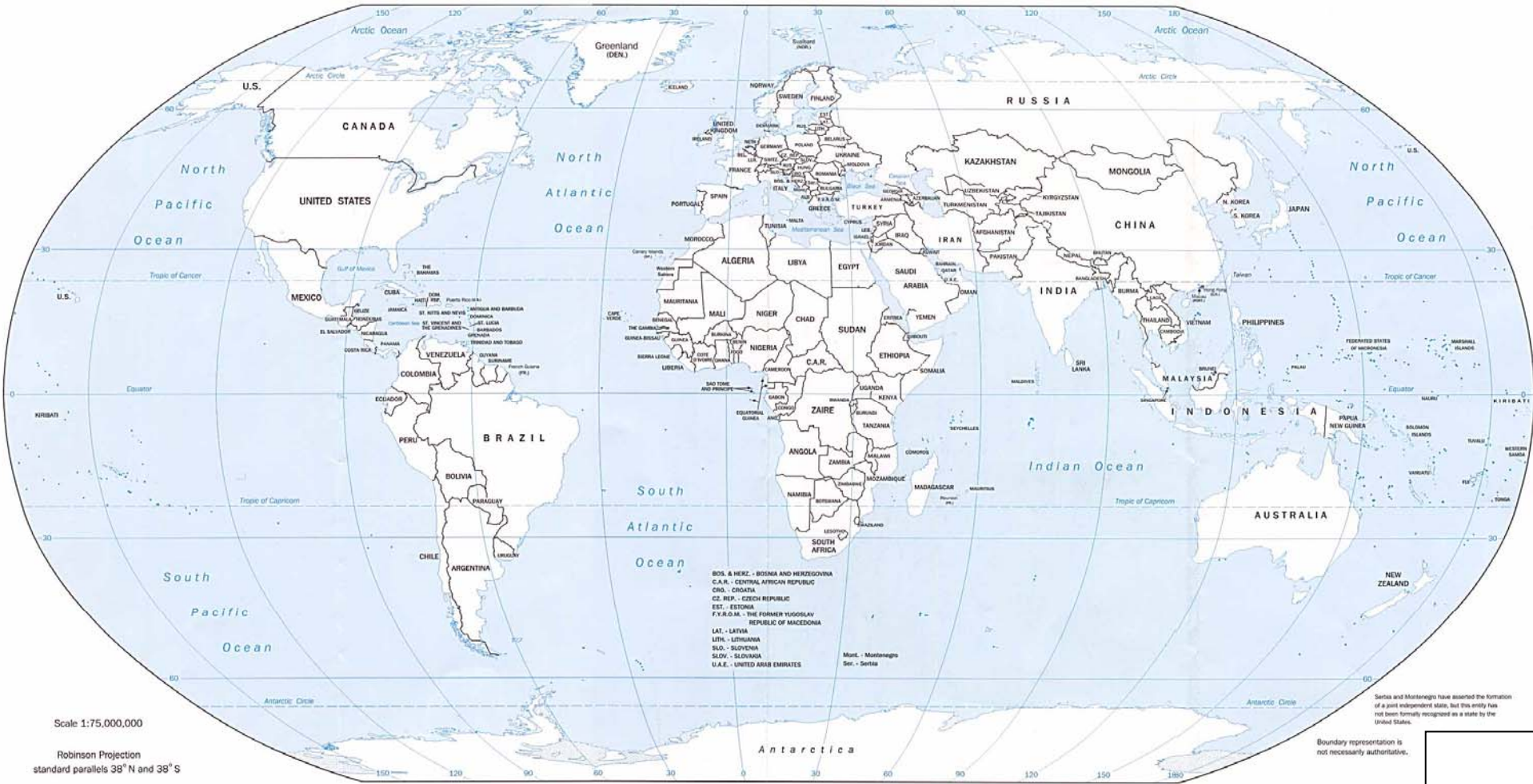
CITRUS PRODUCTION BY COUNTY 2001-02



^{1/} Alachua, Broward, Citrus, Pinellas, and Putnam counties.

<http://www.nass.usda.gov/fl/facts/faf03/a10.htm>

Trace the Historic Route of Citrus



The Historic Citrus Trail

- Oranges originated 20 million years ago in what is now **Malaysia** in **Southeast Asia**.



- More than 2,000 years ago, ancient **Greeks**, then **Romans**, prized them as food for their mythological gods. They referred to them as “golden apples.”
- In ancient times, oranges traveled with explorers to **China**, where emperors and peasants enjoyed them. In one Chinese dialect, the word for “orange” means gold.
- Traders and explorers brought them to the **Middle East, Africa, and Japan**.
- From there they spread throughout **Europe**, becoming popular trees in the gardens of royalty. They were popular due to their fragrance; the fruit itself was bitter.
- The first oranges came to **America** in 1493 when Columbus brought them to the island of **Hispaniola** in present-day Haiti.

- Sailors became aware that citrus could prevent a disease called “scurvy,” which is caused by a lack of vitamin C (people afflicted with scurvy become weak and experience joint pain; black-and-blue marks later appear on the skin; at the first visible signs of scurvy, raised red spots appear on the skin around the hair follicles of the legs, arms and back; consequently, the skin becomes flecked with small lesions that begin to appear on the body after about five months on a diet deficient in vitamin C; gums hemorrhage and their tissue becomes weak and spongy; dentin, which lies below the enamel and is part of the root of teeth, breaks down, the teeth loosen, and eating becomes difficult and painful). The British navy commanded that citrus be carried aboard all of its ships. After this, British sailors became known around the world as “limeys.”



- The history of citrus in **Florida** is more than 400 years old; the first Spanish settlers brought orange seeds to **St. Augustine** in the 1500s.
- A Frenchman named Philippe Odet first took grapefruit from the **West Indies** to the **Tampa** area in 1823.
- Today citrus fruits are grown in 31 counties all over **central and southern Florida**, from near **Orlando** in **central Florida, south to the Everglades**.
- Consumers from around the world buy citrus from Florida. Most of the orange juice sold in the U.S. comes from Florida. Florida is second in the world in orange production.
- Florida is the world’s largest grower of grapefruit and exports grapefruit all over the world.

- Today, many other parts of the world grow significant amounts of citrus fruit. The top ten citrus producers in the world are:

1 ^s	-	<i>Brazil</i>
2 nd	-	<i>United States of America</i>
3 rd	-	<i>Mexico</i>
4 th	-	<i>China</i>
5 th	-	<i>Spain</i>
6 th	-	<i>Italy</i>
7 th	-	<i>Egypt</i>
8 th	-	<i>South Africa</i>
9 th	-	<i>Greece</i>
10 th	-	<i>Turkey</i>

- The production of citrus, including the jobs and businesses that support the citrus industry (such as transportation, equipment, supplies, and sales), has a \$9 billion-a-year impact on Florida's economy.
- The United States produces citrus in **Florida**, **California**, **Arizona**, and **Texas**.

IV. Assessment

Multiple Choice Questions

1. Where did citrus originate?
 - a. St. Augustine
 - b. Southeast Asia in Malaysia
 - c. South America
 - d. Tampa Bay area
2. When did citrus originate?
 - a. 1492
 - b. 1776
 - c. 1,000 years ago
 - d. 20 million years ago
3. When was citrus introduced into Florida?
 - a. 1500s
 - b. 1200s
 - c. 1900s
 - d. 1800s
4. Who brought citrus into Hispaniola in 1493?
 - a. Ponce de Leon
 - b. Christopher Columbus
 - c. Pedro Menendez
 - d. Seminole Indians
5. Which of the following is an example of an act of nature that has caused lot citrus tree destruction?
 - a. replacing groves with subdivisions
 - b. using the land as a landfill
 - c. irrigation over-watering
 - d. tornados and high winds of hurricanes

Short Answer Questions

6. How has the citrus industry helped shape the history of Florida?

7. What were two major factors that contributed to the success of Tampa and St. Augustine, who by 1800 were thriving with oranges and tangerines?

8. How long after oranges were introduced into Florida were grapefruits introduced?

9. Why is the citrus industry so important today in Florida's economy?

10. Name two ways that agriculture contributes to the well being of Florida communities?

ANSWERS

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 - e. tornados and high winds of hurricanes

Short Answer Questions

6. How has the citrus industry helped shape the history of Florida? (It is a major contributor to the economy and history of Florida.)

7. What were two major factors that contributed to the success of Tampa and St. Augustine, who by 1800 were thriving with oranges and tangerines? (These two areas had a favorable climate and easy access to seaports, which made distribution easier.)

8. How long after oranges were introduced into Florida were grapefruits introduced? (approx. 250-300 years.)

9. Why is the citrus industry so important today in Florida's economy? (The Florida citrus industry has a \$9 billion-a-year economic impact on our state.)

10. Name two ways that agriculture contributes to the well being of Florida communities? (It provides jobs, pays taxes, serves as a home to wildlife, allows water to percolate through the soil and recharge the aquifer and supplies us with foods.)

V. Resources

Allen, Michael. "History of Florida Citrus", Florida Grower Magazine, Mid-August, 2000, Meister Publishing Company, Willoughby, OH.

"Citrus Farming for Today's Youth" Video, Department of Citrus, Lakeland, Florida

Florida Citrus, Florida Ag in the Classroom, Tallahassee, Florida

"FLORIDA CITRUS" – The Taste of Sunshine" Video, Department of Citrus, Lakeland, Florida

Mack, Thomas M. Citrifacts II: A Portion of Florida Citrus History. Associated Publications Corporation, 1998.

<http://www.flcitrusmutual.com/>

<http://www.floridajuice.com>

<http://www.polkpages.com/Citrus/story.htm>

<http://www.ultimatecitrus.com>

<http://www.geocities.com/wdwfob/> - "The Orange Tree: A Tribute to the Florida Orange Bird"

<http://www.toymuseum.com/inside/c11/3265079b.html>

<http://www.people.virginia.edu/~rjh9u/vitac.html> - "Vitamin C and Scurvy"

<http://www.hispaniola.org/images/caribbean.jpg> - map of the Caribbean Sea region

The Florida Citrus Archives at Florida Southern College (901 Callahan Court, Lakeland, FL 33801; 863/680-4334 or 863/680-4583; www.flsouthern.edu/citrusarch)