

WaterWeb

A SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT NEWSLETTER FOR GRADES 6-8

Florida's Agriculture

AGRICULTURAL ACTIVITIES TAKE PLACE ON MORE THAN HALF OUR LAND AREA AND IN EVERY REGION. IT'S NO WONDER THAT AGRICULTURE IS THE SECOND MOST IMPORTANT INDUSTRY IN OUR STATE.

Did you know that Florida agriculture is almost as important to the economy as tourism? Agricultural activities contribute billions of dollars to the state's economy every year — and that's a lot of money!

But the value of agriculture in our state shouldn't be measured only in dollars. Agriculture plays an important role in helping preserve our environment. Agricultural and forested lands provide open spaces that offer safe havens for a variety of wildlife habitat. These lands help control the natural flow of streams and soak up extra amounts of water from heavy rainfalls, which lessens the dangers of flooding. Agricultural open spaces help preserve wetlands, conserve soils and recharge aquifers. In addition, they provide natural buffer zones by separating heavily congested urban areas. These buffers reduce air and water pollution throughout a region. It's important for people to realize that agriculture means much more than just supplying us with food.

As you study Florida's agriculture, or "ag" for short, you'll learn that many ranching and farming activities are taking place all over the state. It's no surprise that our warm, sunny climate and abundant rainfall create an environment naturally suited to raising animals and growing crops. Florida has a rich history, and agricultural activities have long been an important part of our culture and economy.



It is important to acknowledge that producing crops and raising livestock require significant amounts of water. Agriculture is one of the largest water users in our area. However, farmers and ranchers have worked hard to incorporate conservation techniques into their farming practices. Efficient watering allows farmers to produce the food we need while still preserving our limited water supply. As Florida's population grows, producing more food while using fewer natural resources will continue to be a high priority for the agriculture industry.



Southwest Florida
Water Management District

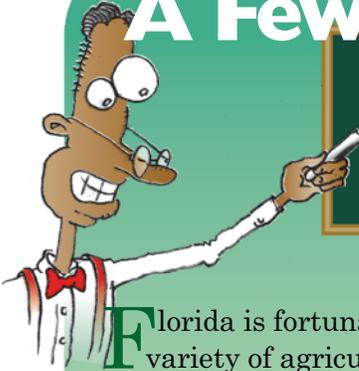
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A Few Facts and Figures About

AGRICULTURE



Florida is fortunate to have such a wide variety of agricultural activities taking place throughout the year. Let's take a closer look at a few aspects that make up the agricultural industry.

Citrus

Our state produces the largest number of citrus products in the country. It ranks first in the United States in grapefruit and orange production. Tangelos, temples, tangerines, navels, mandarins, lemons and limes also thrive in our semitropical climate. Citrus trees grow in almost half the counties in Florida.

Horticulture

Florida is ranked number two in the country for the number of plants raised in greenhouses and nurseries. Nursery operations are found throughout the state in rural, urban and suburban areas.

Aquaculture

In addition to harvesting a variety of fresh fish and seafood, Florida is a leader in raising tropical fish. The sales of decorative fish in Florida bring in millions of dollars each year, more than any other state.

Livestock

The beef cattle, milk cows and poultry commonly seen on our ranches and farms help make Florida a leader in livestock production.

Forestry

A significant amount of land in Florida is used for commercial forests. Trees are harvested for standing timber, pulp wood, saw logs, industrial wood and veneer logs. The majority of timberland is located in the northern half of the state.

Fruits and Vegetables

Vegetables, melons and berries are produced throughout Florida. In fact, Florida ranks second in U.S. production of fresh vegetables year-round and provides most of the fresh vegetables grown in the U.S. during January, February and March. The leading crops include tomatoes, peppers, potatoes, strawberries, snap beans, sweet corn, cucumbers, watermelons and squash.

Phosphate

Florida leads the world in phosphate rock production. Phosphate is primarily used in fertilizer, but can also be found in vitamins, soft drinks and toothpaste.

Checkup Time Place a ✓ next to each correct statement.

- 1. Aquaculture is the process of raising plants in greenhouses.
- 2. Fruit and vegetable crops exist throughout the state.
- 3. Florida is a leader in citrus production.

You Can Make It!

An Ag Brochure for the State Fair

There are always many kinds of agricultural presentations on display at a state fair. You will often see visitors carrying bags loaded with brochures about various events and topics related to agriculture. Brochures provide a great way to share important messages and information with the public. Pretend that you have been asked to develop a brochure about agriculture and the use of water for the Florida State Fair. Use what you have learned about the subject to share some interesting news. Your brochure will be distributed to thousands of people at the information booth as they enter the fairgrounds, so don't forget to be CREATIVE!



Additional Challenge

Create a bulletin board in the classroom and display several brochures on various topics related to agriculture.

Learning Goals

- To create and communicate important messages about agriculture and water conservation or protection
- To appreciate the need for protection of natural systems

Subjects

- Science
- Visual Arts
- Language Arts

Materials

- sheets of 8.5" x 11" white paper
- pencil
- colored pens or markers
- magazines or newspapers

Activity

1. Review the topics covered in this newsletter.
2. Decide what you want the main message of the brochure to be.
3. Search through magazines, newspapers and the Internet for pictures and interesting ideas to go with your message.
4. Use a sheet of paper, which will be your draft, and fold it into thirds. This will give you six panels or sides. Plan out your brochure on this sheet.
5. Use a pencil to sketch the pictures and topics you want to include in the brochure. Think about using different sizes of text and borders to make it attractive. List the details about agriculture that you want to include on each panel. Use your best writing skills and proofread carefully.
6. Now, take another sheet of paper and divide it into thirds. Use this paper for making your final copy.
7. When you have finished, share your brochure with other classmates.

What's News?

Is It Organic?

In most food markets today, we can easily find a selection of fresh fruits and vegetables labeled "ORGANIC." This label may also appear on various meats and dairy products. Organically grown food products have become an important part of the agriculture industry. Farmers who practice organic farming do not use synthetic chemicals, antibiotics or hormones. The U.S. Department of Agriculture (USDA) requires that in order for food products to have the USDA Organic seal, farmers must follow strict rules and meet several standards. Beware! People who sell or label products "ORGANIC" can face big fines if they know their products really don't meet the USDA standards.



Honeybees Are Sweet for Crops

Did you know that without the productive work of honeybees, we would lose almost one-third of our agricultural crops? It's true. We depend on honeybees to carry pollen from flower to flower in our fields and groves. The pollination task bees perform makes it possible for us to have plenty of vegetables, fruits, berries, nuts and other foods. The next time you hear the phrase "busy as a bee," be thankful for the contribution these buzzing creatures give to our agricultural industry.

Analyze It

Describe how practices associated with organic food production might help protect water quality.

Happenings in Your Area

Agriculture Survey

Here is your opportunity to learn more about the agricultural activities in your area. Visit a rural area where agricultural activities are taking place near your home or school. Then answer the questions below.

Identify the exact location of the area. Tell whether or not it is near an urban area.

Describe the water resources you see in the area.

Describe the general appearance of the area.

If you had to determine how productive the area might be to the economy, how would you rank it?

- very productive
- somewhat productive
- not very productive

Review page 2 of this newsletter and decide which of the following agricultural activities take place in this area. Check all that apply.

- | | |
|--|---------------------------------------|
| <input type="checkbox"/> citrus | <input type="checkbox"/> horticulture |
| <input type="checkbox"/> aquaculture | <input type="checkbox"/> livestock |
| <input type="checkbox"/> forestry | <input type="checkbox"/> fruit crops |
| <input type="checkbox"/> vegetable crops | <input type="checkbox"/> phosphate |

Now compare your results with other classmates. For a classroom challenge, use the results to create a map that includes information about several different agricultural areas.

For each agricultural activity you checked, provide more details about how water is used and conserved in that activity.



Learn More About It

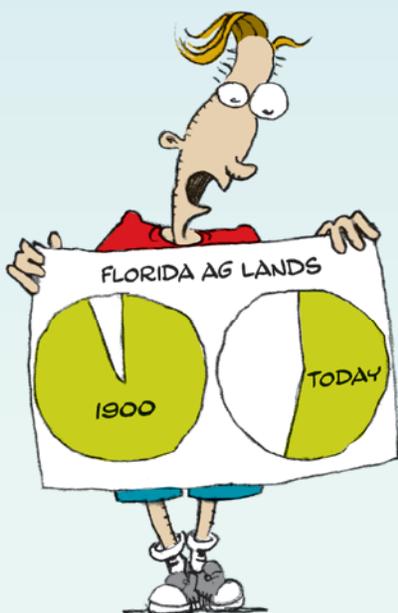
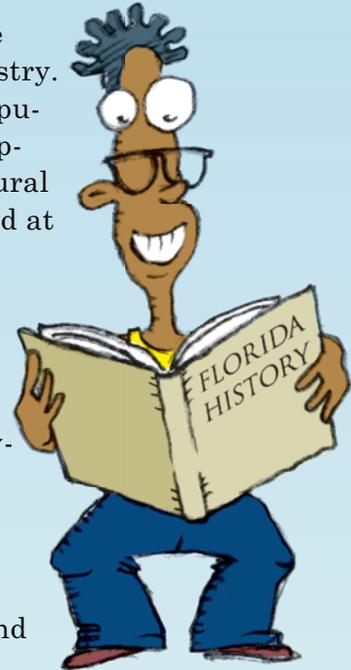
A Timely Peek at Florida Agriculture

Long ago, before Europeans settled in what is now called Florida, Native Americans had to hunt, fish and gather various foods for their survival. Over the centuries, the natural landscape of the area changed dramatically to include large plantations filled with oranges, cotton, rice and other food products. Large herds of beef cattle began grazing on open ranges throughout the region. By 1850, the state was known as a major producer of beef and oranges.

In the year 1900, most of the land in Florida was rural. Throughout the twentieth century, the state experienced a rapid increase in agricultural activities. In fact, Florida became the number one leader in the nation in citrus production and a major producer of beef, milk, poultry and eggs.

Living in the early part of the twenty-first century, we are witnessing many new

challenges for the agricultural industry. Our growth in population and development of open natural areas has occurred at a dramatic pace. Today, a little more than half of Florida's landscape is agricultural. However, advances in technology and efforts to reduce water usage have helped farmers and ranchers become more productive. Now, although less land is used for agricultural activities, farmers and ranchers are producing more than ever!



I Was Wondering...

Question:

Farmers understand how important it is to conserve and protect the quantity of water. How have farmers been able to produce more crops using less water?

Answer:

Modern farmers pay close attention to their irrigation systems. They follow an irrigation schedule that best meets the needs of their crops and conserves water at the same time. Farmers have learned that overwatering crops is actually more costly and less productive.

Just for Fun

These activities are more than just for fun — they will help you improve your math skills too!

Fruits and Vegetables Puzzler

You may be surprised to find out how much water is contained in fruits and vegetables. Select two of your favorite fruits and vegetables from the lists below. Then draw four circles, which will be used to create pie graphs. Use one circle for each food and show how much water it contains by shading the correct portion. Be sure to label each circle with the name of the food, food weight, water weight and percentage of water contained in it.

Popular Fruits	Food Weight (grams)	Water Weight (grams)	Percent Water
Apple	138	116	84
Blueberries	145	123	85
Orange	140	122	87
Strawberries	149	136	91
Watermelon	160	146	91

Popular Vegetables	Food Weight (grams)	Water Weight (grams)	Percent Water
Broccoli	44	40	91
Carrots	72	63	88
Cucumber	52	50	96
Pepper	50	46	92
Tomato	123	115	94



Bar Graph Challenge

Now that you have presented information using pie graphs, try creating a bar graph using the same data.

Agriculture Concept Map

A concept map can be used to diagram information. Place the word “agriculture” in the circle. Write eight facts you learned about agriculture on the lines surrounding the circle. Then compare your concept map with others.

Surfing for More Info

If you are interested in learning more about agriculture, be sure to search the Internet. Following are a few key words to get you started. To narrow your search, try combining "Florida" with each of these words.

- agriculture
- citrus farming
- vegetable farming
- U.S. Department of Agriculture
- beef cattle
- honeybees
- organic farms
- irrigation



Are you ready to explore Florida's natural resources? You can even take virtual tours of several different watersheds in the region. Visit WaterMatters.org to learn more.

Tell Us What You Think!

List three ways agricultural lands can help preserve Florida's environment.

- 1.
- 2.
- 3.

Mail your response to us and we will send you a prize!

Name _____

Address _____

City _____ State _____ ZIP Code _____

County _____ School _____

Grade _____ Teacher _____

WaterWeb is published by the Southwest Florida Water Management District as part of the Splash! program. For copies of this newsletter, please order online at WaterMatters.org/publications/, or call (352) 796-7211 or 1-800-423-1476 (FL only), ext. 4757.

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