

# Aquaculture

## An Overview of Georgia's Aquatic Farming



# Objectives

## Students will be able to:

- Explain the importance of the aquaculture industry in Georgia.
- Name 4 cultivars of the aquaculture industry.
- Define and give one example of polyculture.
- Identify top aquaculture producing counties in Georgia.
- Rank the Aquaculture Industry compared to other Georgia agricultural commodities.

# Why is the aquaculture industry important?

- Aquaculture has been around for thousands of years.
- Georgians consume about 258.5 million pounds of seafood annually.
- There are now over 100,000 privately owned ponds and lakes in Georgia. This represents over 260,000 acres of useable water.
- There are over 20 different fin fish species grown in Georgia, in addition to these there are several shellfish, mollusks, reptiles, and amphibians.

# Categories of aquatic species

1. Fin Fish
2. Crustaceans
3. Mollusks
4. Reptiles
5. Amphibians



# Fin Fish

- The most common cultured fish in Georgia is catfish
  - Mostly channel and blue
- Tilapia is highly valued
- Trout in certain conditions and areas
- Pan fish, such as bluegill, redear, and crappie
- Several different bass are also raised:
  - largemouth, smallmouth, striped, and hybrid striped
- These are a few of the fin fish cultured in Georgia

# Crustaceans

- The most common crustacean in Georgia aquaculture is the fresh water prawn
  - Harder to raise than fish
  - Valued for their tail (  $\geq 40\%$  of body weight )
- Other crustaceans include:
  - Shrimp, lobster, crayfish, and crabs
  - Of these lobster is the hardest to culture in Georgia

# Mollusks

- The mollusk population of Georgia is one of the most diverse and abundant found anywhere in the world
- The most popular species that are cultured are oysters, abalone, and clams
- Mollusk are used as food, bait, or shell products

# Reptiles and Amphibians

- A new part of the aquaculture industry.
- The species cultured are: frogs, turtles, and alligators.
- Because this industry is new there are few farms in the state but it is growing rapidly.



# Polyculture

- Refers to aquaculture integrated with other agricultural activities, where wastes produced by one activity may be inputs for another activity.
- These can include:
  - a fish-crustacean system
  - a fish-fish system
  - a fish-plant system



# Leading Georgia Counties

## Number of Production Facilities

## Average Pound per Acre

- 1 Seminole
- 2 Jefferson
- 3 Hancock
- 4 Upson
- 5 Baker
- 6 Floyd
- 7 Dougherty
- 8 Jasper
- 9 Jeff Davis
- 10 Butts

- 1 Decatur10,000
- 2 Terrell5,250
- 3 Baker5,000
- 4 Floyd4,300
- 5 Coffee4,000
- 6 Berrien3,150
- 7 Harris3,150
- 8 Irwin3,000
- 9 Burke2,500
- 10 Jefferson2,500

# Aquaculture's Rank in Georgia

Items and Ranking of Sales    Sales (in \$1000)    Percent of Total Sales

1. Poultry and eggs 2,780,214 56.6
2. Vegetables, melons, potatoes, and sweet potatoes 383,556 7.8
3. Cotton and cottonseed 318,013 6.5
4. Nursery, greenhouse, floriculture, and sod 315,324 6.4
5. Other crops and hay 246,936 5.0
6. Cattle and calves 240,070 4.9
7. Milk and other dairy products from cows 212,720 4.3
8. Fruits, tree nuts, and berries 122,151 2.5
9. Grains, oilseeds, dry beans, and dry peas 102,464 2.1
10. Tobacco 89,058 1.8
11. Hogs and pigs
12. Horses, ponies, mules, burros, and donkeys 65,384 1.3
13. Other animals and other animal products 9,944 0.3
- 14. Aquaculture 5,310 0.2**



# Assessment

1. How long have people been practicing aquaculture?  
A. 25 years B. 100 years  
C. Thousands of years D. Millions of years
2. How many species of animals are cultured in aquaculture?  
A. 2 B. Over 20  
C. 13 D. Less than 10
3. List at least 4 different categories of aquaculture animals that are raised in Georgia.
4. Match the following animal to their correct category.  
\_\_ A. Tilapia 1. Reptile  
\_\_ B. Shrimp 2. Fin Fish  
\_\_ C. Bluegill Sunfish 3. Crustacean  
\_\_ D. Alligator 4. Amphibian  
\_\_ E. Turtle  
\_\_ F. Prawn

# Assesment

5. Define Polyculture.
6. Give one example of polyculture.
7. Identify which of the following Georgia counties have the most aquaculture producing facilities.
  - A. Oconee
  - B. Clinch
  - C. Seminole
  - D. Putnam
8. Identify which of the following Georgia counties produce the most pounds per acre in the aquaculture industry.
  - A. Tift
  - B. Henry
  - C. Stephens
  - D. Decatur
9. Where is Aquaculture in the ranking of Georgia's commodities?
  - A. 2
  - B. 14
  - C. 45
  - D. 75
10. Which aquaculture animal that is currently cultured is the hardest to culture in Georgia?

# Assessment Key

1. C. Thousands of Years
2. B. Over 20
3. Fin Fish, Crustaceans, Mollusks, Reptiles and Amphibians
4. A. 2 - Fin Fish  
B. 3 - Crustacean  
C. 2 - Fin Fish  
D. 1 - Reptile  
E. 1 - Reptile  
F. 3 - Crustacean
5. **Polyculture** - aquaculture integrated with other agricultural activities, where wastes produced by one activity may be inputs for another activity.
6. Any known system will suffice. Tilapia and Tomatoes, Channel catfish and Fathead minnow, Carp and Rice, etc.
7. C. Seminole
8. D. Decatur
9. B. 14
10. Lobster

# Resources

[http://www.nass.usda.gov/census/census02/topcommodities/topcom\\_GA.htm](http://www.nass.usda.gov/census/census02/topcommodities/topcom_GA.htm)

<http://www.cpes.peachnet.edu/aquaculture/>

<http://www.georgiastats.uga.edu/agsheet1.html>

<http://www.georgiastats.uga.edu/>