Aquaculture

An Overview of Georgia's Aquatic Farming





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Objectives

Students will be able to:

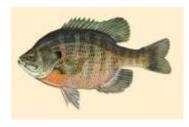
- Explain the importance of the aquaculture industry in Georgia.
- Name 4 cultivars of the aquaculture industry.
- Define and give one example of polyculture.
- Identify top aquaculture producing counties in Georgia.
- Rank the Aquaculture Industry compared to other Georgia agricultural commodities.

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

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

Average Pound per Acre

- 1 Decatur10,000
- **2** Terrel15,250
- **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 eggs2,780,21456.6
- 2. Vegetables, melons,

potatoes, and sweet potatoes383,5567.8

- 3. Cotton and cottonseed318,0136.5
- 4. Nursery, greenhouse, floriculture, and sod 315,3246.4
- 5. Other crops and hay 246,9365.0
- 6. Cattle and calves240,0704.9
- 7. Milk and other dairy products

from cows212,7204.3

- 8. Fruits, tree nuts, and berries 122,1512.5
- 9. Grains, oilseeds, dry beans,
- and dry peas102,4642.1
- 10. Tobacco 89,0581.8
- 11. Hogs and pigs
- 12. Horses, ponies, mules, burros,
- and donkeys 65,3841.3
- 13. Other animals and other animal products 9,9440.3
- 14. Aquaculture 5,3100.2



Assessment

- 1. How long have people been practicing aquaculture?
- A. 25 yearsB. 100 years
- C. Thousands of yearsD. Millions of years
- 2. How many species of animals are cultured in aquaculture?
- A. 2B. Over 20
- C. 13D. 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. Tilapia1. Reptile
- ___B. Shrimp2. Fin Fish
- ___C. Bluegill Sunfish 3. Crustacean
- ___D. Alligator4. 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. OconeeB. Clinch
- C. SeminoleD. Putnam
- 8. Identify which of the following Georgia counties produce the most pounds per acre in the aquaculture industry.
- A. TiftB. Henry
- C. Stephens D. Decatur
- 9. Where is Aquaculture in the ranking of Georgia's commodities?
- A. 2B. 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.cpes.peachnet.edu/aquaculture/

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

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