

Alabama Shellfish Aquaculture Situation & Outlook Report: 2016

► Alabama's shellfish aquaculture industry produces oysters (*Crassostrea virginica*) through off-bottom farming using an adjustable long-line system and floating cages. The first farm started in 2012, and although jobs have been created, the economic value has been limited. An anonymous survey of Alabama operators revealed the industry's situation and outlook for the 2016 production year.

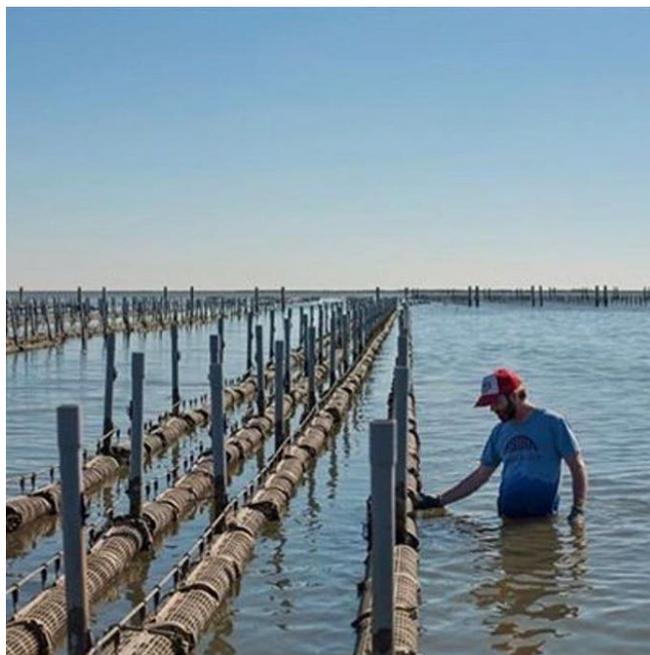
All values in the survey were compiled so individual responses would not be revealed. Also, total values were based solely on responses provided and thus may be underestimated. The survey was modeled after the shellfish aquaculture survey program conducted by the Virginia Institute of Marine Science and Virginia Sea Grant as well as the Rutgers University New Jersey Agricultural Experiment Station and New Jersey Sea Grant.

Highlights for 2016

- The Alabama Department of Public Health reported 14 oyster aquaculture operations in Alabama, and eleven of these completed the survey.
- Farm gate value for Alabama oyster commercial operations was \$1,956,776.
- Total number of single market oysters sold in 2016 was 2,698,755.
- Oyster market prices realized for respondents ranged from thirty cents to eighty cents with an average price of forty-five cents.
- Operators reported 20 full-time employees and 10 part-time employees.
- There were at least 28 acres permitted for oyster aquaculture with at least 18.1 acres used in production.

Methodology

The 2016 Alabama Shellfish Aquaculture Survey was conducted entirely with the web-based tool SurveyMonkey. The survey was anonymous and did not track the IP addresses of the respondents. An introductory email with the link to the survey was sent to all shellfish operators who were certified by the Alabama Department of Public Health. The email and the question





set are available in appendix 1. Two follow-up requests were sent to all respondents to encourage them to complete the survey if they hadn't already done so.

Summary of Findings

Of the 14 oyster aquaculture operations certified by the Alabama Department of Public Health, 12 responded to the survey and 11 of were complete enough to be included in this report. No other types of shellfish were reported as being farmed.

Hatchery and Nursery Operations

Three respondents reported combined sales of approximately 8 million seed and 6.2 million eyed larvae.



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Oyster Sales and Prices

There was a wide range of wholesale prices reported by farmers with a low price of \$0.30 each to a high of \$0.80 each. The average price was \$0.45 each.

Employment

The respondents reported 20 full-time employees and an additional 10 part-time employees. The 11 part-time employees averaged 10 hours per week, which equates to 2.75 full-time employees per year.

Challenges

In 2016, the Alabama oyster aquaculture industry dealt with several factors that had negative impacts on profitability and sustainability of the industry.

- There were prolonged closures due to harmful algal blooms and rainfall. A total of 177 days were not open to harvest (see chart below).
- Seed supply was a challenge, as the Auburn University Shellfish Lab and other hatcheries experienced larval production problems.
- The lease for the Auburn University oyster park in Portersville Bay at the mouth of West Fowl River was not renewed by the landowners, and the park had to be relocated.
- The easternmost portion of Portersville Bay, by the mouth of West Fowl River, was reclassified to conditionally restricted (from conditionally approved). The reclassification had a significant impact on operators that will likely last for months or even years.

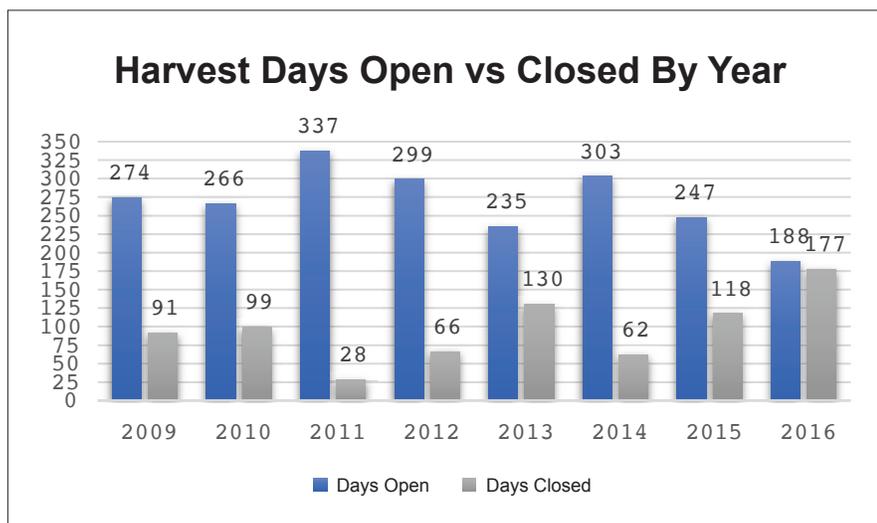


- The addition of other communities to the Bayou La Batre Waste Water Treatment Plant could eventually limit areas available for aquaculture.
- New permitting steps and associated expenses increased the cost of entry to oyster aquaculture and added months to the overall length of the permitting process.
- Farms experienced a higher-than-normal summer mortality rate in the grow-out crop. The mortality rate increase is under investigation by researchers at the Auburn University Shellfish Laboratory.
- Oyster drills reportedly recruited into grow-out bags. If they were left in the bags, they could have caused mortality.

Opportunities and Outlook

In 2017, Alabama oyster aquaculture was expected to grow in number of operations and permitted acres for farming. Additionally, there is growing interest in commercial aquaculture under existing piers, which has an easier permitting process. At the time of this report's publication (2017), two new oyster farms have begun operation this year, and two new oyster parks will begin operating this year.

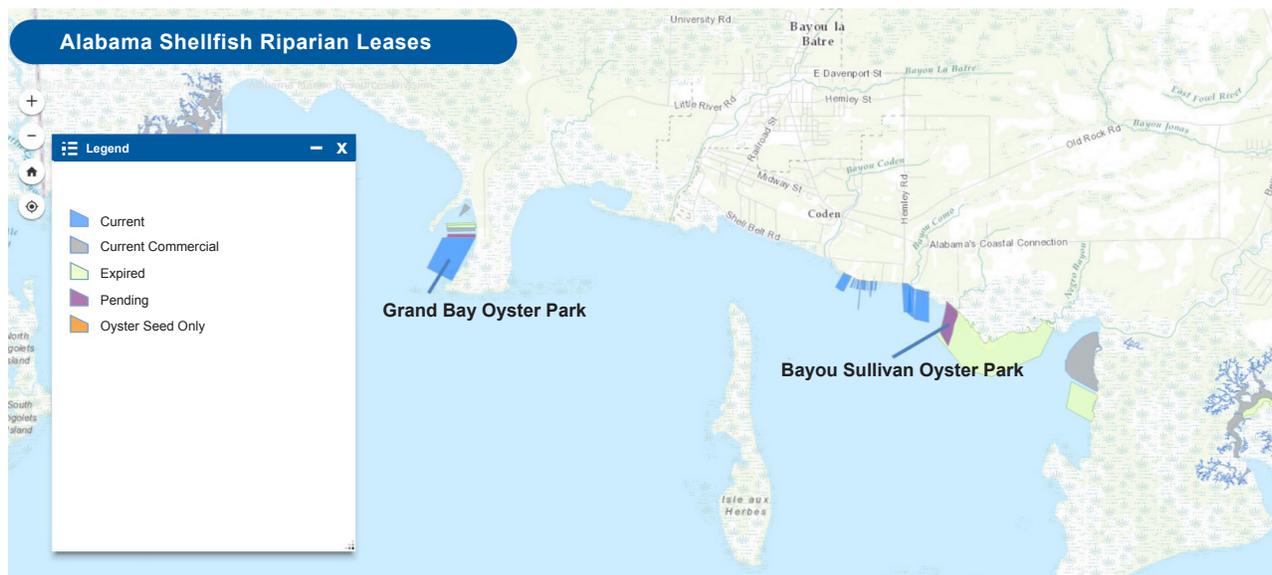
The Grand Bay Oyster Park (in Grand Bay on the Western side of Point of Pines) will have over 40 acres for off-bottom oyster farming and will be managed by Alma Bryant High School (see map below).



The Bayou Sullivan Oyster Park will have 20 acres available for commercial off-bottom aquaculture with some additional area being used for research by the Auburn University Shellfish Laboratory (see map below).

There is a strong demand for seed (with orders at 13 million) and eyed larvae (with orders at 4 million), according to the Auburn University Shellfish Lab.

The third Oyster Farming Fundamentals class began in June and includes participants from a variety of backgrounds including local fishermen, seafood processors, marine scientists, restaurateurs, as well as students from nearby Alma Bryant High School. The course provides training in all aspects of starting and operating an oyster farm in Alabama. For the first time, there are students from Mississippi in the class because there is interest in starting oyster farming in that state.





2016 Alabama Shellfish Aquaculture Situation and Outlook Survey

Welcome

Thank you for taking a few minutes to complete the following shellfish aquaculture survey. With your help, this annual survey and report will be a means to document the current economic value of shellfish aquaculture businesses in Alabama, and any issues, concerns and/or opportunities. We believe the survey will strengthen the industry's ability to promote reasonable policies, applied research and practices that ensure clean growing waters and a sustainable and profitable future for our farmers.

This is an anonymous survey. Your responses are completely anonymous. All responses submitted by participants will be held in strictest confidence and only used when combined with other participant's data to provide the 2016 Situation and Outlook Report. Individual responses will not be shared under any circumstances.

Please complete the survey as soon as possible and skip any questions that do not apply to your business operations.

If you have any questions or need assistance with the survey, please contact:

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2016 Alabama Shellfish Aquaculture Situation and Outlook Survey

General Information

1. How many acres do you have permitted for oyster aquaculture?

2. How many acres of your farm did you use in 2016?

2016 Alabama Shellfish Aquaculture Situation and Outlook Survey

Type of Aquaculture Operation

3. Hatchery that sales to others

YES

NO

4. Nursery that sales to others

YES

NO

5. Grow-out Off Bottom (using baskets/cages etc.)

YES

NO

6. Grow-out On Bottom (planted grounds, reefs etc.)

YES

NO

2016 Alabama Shellfish Aquaculture Situation and Outlook Survey

General Farm Information

7. Do you grow hard clams?

- YES
 NO

8. Do you grow Oysters?

- YES
 NO

9. Do you grow any other types of shellfish? (please specify)

10. In what county is your farm/hatchery located?

11. How many Full Time employees do you have?

12. How many Part Time employees do you have?

13. How many hours do your Part Time employees work per week approximately?

2016 Alabama Shellfish Aquaculture Situation and Outlook Survey

Oyster production in containerized systems.

These questions are for production activities specific to oysters grown out of hatchery produced seed or wild caught seed grown in containerized systems (cages, baskets, etc.).

14. Total number market oysters sold

15. Number of above sourced from other farm

16. Percent sold in-state

17. Percent sold out-of-state

18. Percent sold retail

19. Percent sold wholesale

20. Percent sold to co-op or other producer

21. Average price per oyster retail

22. Average price per oyster wholesale

23. Average price per oyster for sale to co-op or other producer

24. Estimated number of oysters harvested in 2016

2016 Alabama Shellfish Aquaculture Situation and Outlook Survey

Please answer the following questions specific to nursery and hatchery production on your farm.

25. Hatchery and nursery operation that sell to others

YES

NO

26. Hatchery only without external sales

YES

NO

27. Hatchery only with external sales

YES

NO

28. Nursery only with external sales

YES

NO

29. Nursery only that does not sell to others

YES

NO

2016 Alabama Shellfish Aquaculture Situation and Outlook Survey

Please answer the following questions specific to production in your hatchery and/or nursery operation in 2016.

30. Number oyster seed sold

31. Number eyed larvae sold

32. Average price (per 1000) oyster seed

33. Percent of sales in state

34. Number oyster seed retained for grow out

2016 Alabama Shellfish Aquaculture Situation and Outlook Survey

Thank you!

35. Please share any comments or suggestions you have in relation to this survey and or your aquaculture activities.

Acknowledgments: The survey was modeled after the Virginia Shellfish Aquaculture Crop Reporting Survey conducted by Thomas Murray and Karen Hudson, Virginia Sea Grant Extension Program, Virginia Institute of Marine Science and the New Jersey Shellfish Aquaculture Situation and Outlook Report prepared by Lisa M. Calvo, Aquaculture Program Coordinator, New Jersey Sea Grant Consortium and Haskin Shellfish Research Laboratory, Rutgers, The State University of New Jersey, and Gef Flimlin, Professor, Marine Extension Agent Rutgers Cooperative Extension. Photo credits: Bill Walton MASGP

This report is based on data generated by the Auburn University Marine Extension and Research Center and the Mississippi-Alabama Sea Grant Consortium.



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