

New Jersey Shellfish Aquaculture Situation and Outlook Report 2015 Production Year

March 2017



Introduction

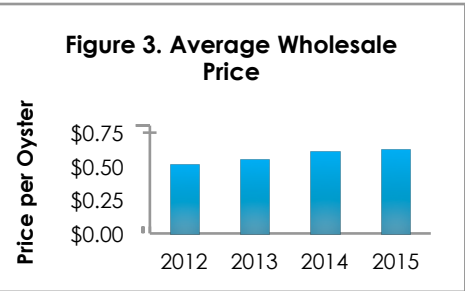
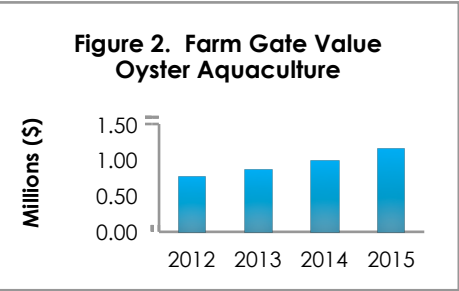
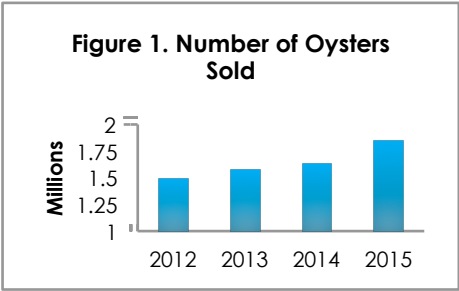
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New Jersey has a well-established hard clam (*Mercenaria mercenaria*) aquaculture industry and a growing eastern oyster (*Crassostrea virginica*) culture industry. Hatchery seed based hard clam cultivation has occurred in New Jersey since 1976, while hatchery seed based oyster culture did not occur on a commercial scale until 1997. Extensive on-bottom cultivation of wild oyster seed was decimated by disease in the mid to late 1900s and has not recovered. The State of New Jersey does not have a mandatory reporting program for shellfish aquaculture and documentation of the extent and economic value of this industry has been limited as there has not been a consistent annual production survey program. This report represents the fourth annual shellfish aquaculture survey, which was initiated in 2012, by the Haskin Shellfish Research Laboratory, Rutgers University and New Jersey Sea Grant Consortium.



1.78 aquacultured oysters were produced and sold by NJ growers in 2015



Methods

The 2015 New Jersey Shellfish Aquaculture Survey was conducted electronically. Shellfish growers were contacted in early 2016 via email and asked to respond to the survey through SurveyMonkey®. The introductory email message and survey questions are presented in Appendix 1. The survey was distributed to individuals holding shellfish leases and to shellfish industry members known to the survey author. Survey participants were asked to answer for operations and production occurring in 2015.

Results

Survey Participants

Thirty-five individuals participated in the survey; however, not all participants completed the survey. Shellfish aquaculture operations spanned five counties and included both Atlantic coastal and Delaware Bay locations. There were 12 operations in Atlantic County, 10 in Ocean County, 12 in Cape May County, and 3 in Cumberland County, and 1 in Monmouth. Ten survey participants identified themselves as hard clam growers, ten as oyster growers, including one grower that grew both oysters and clams. Four survey

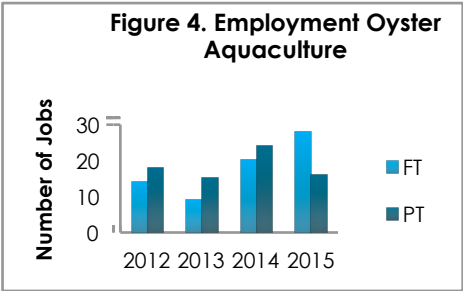
participants operated hatcheries, 10 operated nurseries, 12 conducted structural-based aquaculture, and 7 conducted bottom planting.

Oyster Aquaculture

Ten respondents provided harvest statistics for oyster aquaculture operations. In total survey participants sold 1,782,000 cultivated oysters in 2015 (Figure 1). The total farm gate value was \$1,121,947 (Figure 2).

Seventy-nine percent of the oysters sold were sold in wholesale markets and the remainder was sold in direct markets. Wholesale pricing ranged from \$0.19 to \$0.85 with an average price, weighted by number sold at each price, of \$0.62 per oyster (Figure 3). Direct market pricing ranged from \$0.4 to \$0.87 per oyster, with an average price, weighted by number sold at each price, of \$0.80 per oyster. Oyster sales were equally divided between in-state and out-of-state.

In total, oyster farms employed 24 full time employees and 16 part time employees (Figure 4).





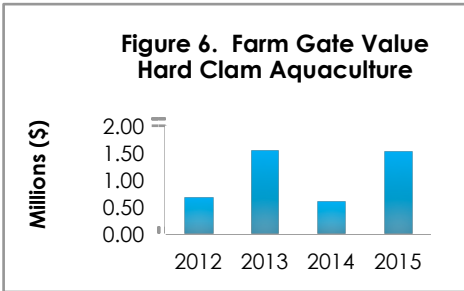
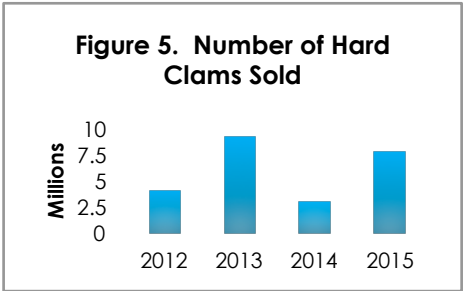
7.78 million
aquacultured
hard clams
were sold in
2015

*Based on 11 growers reporting
production*

Hard Clam Aquaculture

Eleven hard clam growers participated in the survey. In total they sold 7,776,500 market clams (Figure 5). The number of market clams harvested per farm ranged from 10,000 to 2,000,000, with an average of 777,500 clams per farm. The total farm gate value was \$1,517,960 (Figure 6).

Based on responses from eight individuals, more than 99% of the marketed clams were sold wholesale, while the remaining <1% were sold in retail markets. Fifty-two percent of clams sold by those same eight farms were sold in state. The wholesale market price ranged from \$0.16 to \$0.24, with an overall average weighted by number sold at each price of \$0.19 per clam (Figure 7). Too few participants shared information on direct sale pricing, so this information is not reported here. Eight participants answered questions regarding employment. In total, their farms employed 16 full time employees and 12 part time employees who contributed 32 man months (Figure 8).



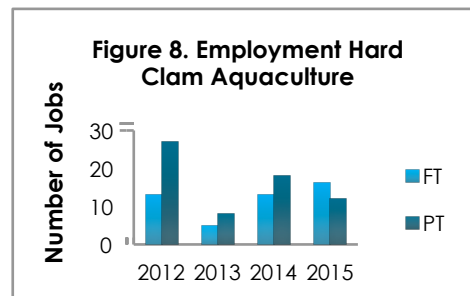
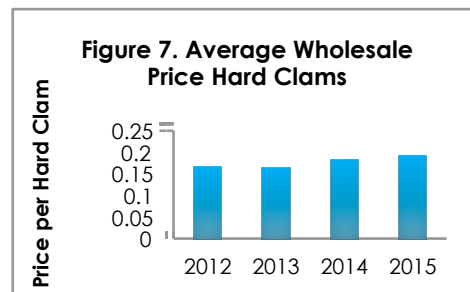
Survey participation by hard clam growers has varied significantly from year-to-year hence variability between years likely reflects survey participation rather than actual trends in production (Figures 4-8).

Hatcheries

Survey participation by hatchery operators was limited with only three hatcheries reporting production statistics. These three hatcheries produced 55,200,000 hard clam seed in 2015.

Discussion

This report presents the fourth year of survey data for New Jersey's shellfish aquaculture industry; however, while we believe the 2015 survey presents an accurate baseline for off-bottom structural-based oyster aquaculture, we feel that it underestimates hard clam aquaculture production. Approximately 45 Aquatic Farmers were issued for hard clam aquaculture in 2016, only 11 individuals participated the survey presented herein. Though seven individuals noted that they engage in bottom planting of shell and or wild oysters, production statistics were not sufficient for reporting purposes.



Acknowledgements: The survey is 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. Photo credits: Photographs on pages 1, 2, and 5 courtesy of Lisa Calvo. Photograph on page 3 courtesy of Monica Bricelj.

This publication is the result of work sponsored by New Jersey Sea Grant with funding from the National Oceanic and Atmospheric Administration (NOAA) Office of Sea Grant, U.S. Department of Commerce, under NOAA grant #NA14OAR4170085 and the New Jersey Sea Grant Consortium. The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of New Jersey Sea Grant or the U. S. Department of Commerce. NJSG-17-912.



Welcome

Thank you for participating in the New Jersey Shellfish Aquaculture Situation and Outlook Survey for reporting year 2015. This annual survey program was initiated in 2012 as a means to document the growth and increasing economic value of shellfish aquaculture businesses in the State. We believe the survey will strengthen the industry's ability to promote research, reasonable policies and practices that ensure clean growing waters and a sustainable and profitable future for shellfish growers.

Please answer all questions that apply to your business reporting on aquaculture activities and production occurring in 2015. The survey should not take more than 10 minutes to complete. Only one survey should be completed for each business entity.

The survey has a new simpler format this year. There are seven sections: (1) general information, (2) oyster aquaculture, (3) hard clam aquaculture, (4) hatchery and nursery production, (5) production from planted grounds, (6) comments, and (7) survey participant information (optional). Please answer all sections that pertain to your business and be as accurate as possible.

This information will be held in confidence and will only be shared when combined with that of other survey participants.

Please complete the survey by April 17, 2016.

If you would like to discuss the survey, please feel free to contact us.

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General Information

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

- | | | |
|-------------------------------------|-----------------------------------|--------------------------------|
| <input type="checkbox"/> Salem | <input type="checkbox"/> Atlantic | <input type="checkbox"/> Other |
| <input type="checkbox"/> Cumberland | <input type="checkbox"/> Ocean | |
| <input type="checkbox"/> Cape May | <input type="checkbox"/> Monmouth | |

2. Please describe your aquaculture activities. Check all that apply.

- ☐ Hatchery
- ☐ Hatchery and Nursery
- ☐ Nursery
- ☐ Grow-out using structures
- ☐ On-bottom planting of wild oysters, shell and or spatted shell

Oyster Aquaculture of Cultchless (single) Oysters

3. Please answer for oysters produced and sold in 2015. In order to avoid duplicate reporting, each farmer should report for production from their farm only.

Number of market oysters **produced and sold** by your farm

Percent sold in-state

Percent sold wholesale

Percent sold direct (directly to consumer, store, or restaurant)

Average wholesale price you received for your product

Average direct market price you received for your product

Number of full time (FT) employees including self

Number of part time (PT) employees including self

Number of field planted oysters (all year classes) as of January 1, 2016

Anticipated market oyster sales for 2016

Hard Clam Aquaculture

4. Please answer for clams produced and sold in 2015. In order to avoid duplicate reporting, each farmer should report for production from their farm only.

Number of market clams **produced and sold** by your farm

Percent sold in-state

Percent sold wholesale

Percent sold direct (directly to consumer, store, or restaurant)

Average wholesale price you received for your product

Average direct market price you received for your product

Number of full time (FT) employees including self

Number of part time (PT) employees including self

Number of field planted clams (all year classes) as of January 1, 2016

Anticipated market hard clam sales for 2016

Hatchery and Nursery Production

5. Please answer for hatchery and or nursery products produced in 2015?

Number clam seed produced

Number oyster seed produced

Number of eyed larvae produced

Number clam seed sold

Number oyster seed sold

Number eyed larvae sold

Total sales (\$) for clam seed

Total sales (\$) for oyster seed

Total sales eyed larvae (per million)

Percent of sales in state

Number seed of other species produced (please indicate species and number)

Number of full time employees (including self)

Number of part time employees (including self)

Production from Planted Grounds

This question is intended to capture activities involving the production of wild or remotely set oysters from planted leased grounds (ie. on-bottom shell plants and transplants, and on-bottom planting of remotely set oysters). Do not include production using methods involving structural systems (floats, cages, etc.).

6. Please answer for oyster production on leased/planted grounds for 2015?

Bushels of shell planted in 2015

Bushels of oysters planted in 2015

Number remotely set oysters planted in 2015

Number of acres planted

Total number market oysters harvested and sold from planted grounds (leased bottom) in 2015

Percent sold direct (direct to consumers, stores, restaurants)

Percent sold wholesale

Average price per oyster retail

Average price per oyster wholesale

Anticipated harvest from planted grounds in 2016

Comments

7. Please share any comments you have about this survey and or your aquaculture activities.

Thank you

8. Contact Information (optional)

| | |
|-------------------------------|----------------------|
| Name | <input type="text"/> |
| Business | <input type="text"/> |
| Address: Street | <input type="text"/> |
| Address: City and Zip Code | <input type="text"/> |
| Phone: | <input type="text"/> |
| Email: | <input type="text"/> |