

# C R M C

COASTAL RESOURCES MANAGEMENT COUNCIL

## Aquaculture in Rhode Island

### 2014 Annual Status Report



*Photograph: Monique LaFrance Bartley*

**Prepared by:  
David Beutel  
Aquaculture Coordinator  
Coastal Resources Management Council  
4808 Tower Hill Rd.  
Wakefield, RI 02879-1900**



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## **Rhode Island Aquaculture Industry - 2014**

### *At a Glance*

- The number of farms in Rhode Island increased from 52 to 55
- The total area now under cultivation is 206.2 acres\*
- Oysters remained the number one aquaculture product with 7,547,132 sold for consumption, an increase of 1.1 million oysters from last year
- The farm gate value of aquaculture products for consumption was \$5,044,917
- Oyster seed sales from RI aquaculturists was valued at \$184,150
- Combined value of aquaculture products for consumption and seed sales was \$5.23 million, and increase of over \$1 million from 2013
- The number of aquaculture farm workers increased 11.8 percent from 127 to 142

\*an error in calculation dating from 2007 was discovered. All graphs in this report have been adjusted to the correct acreage figure

## **Introduction**

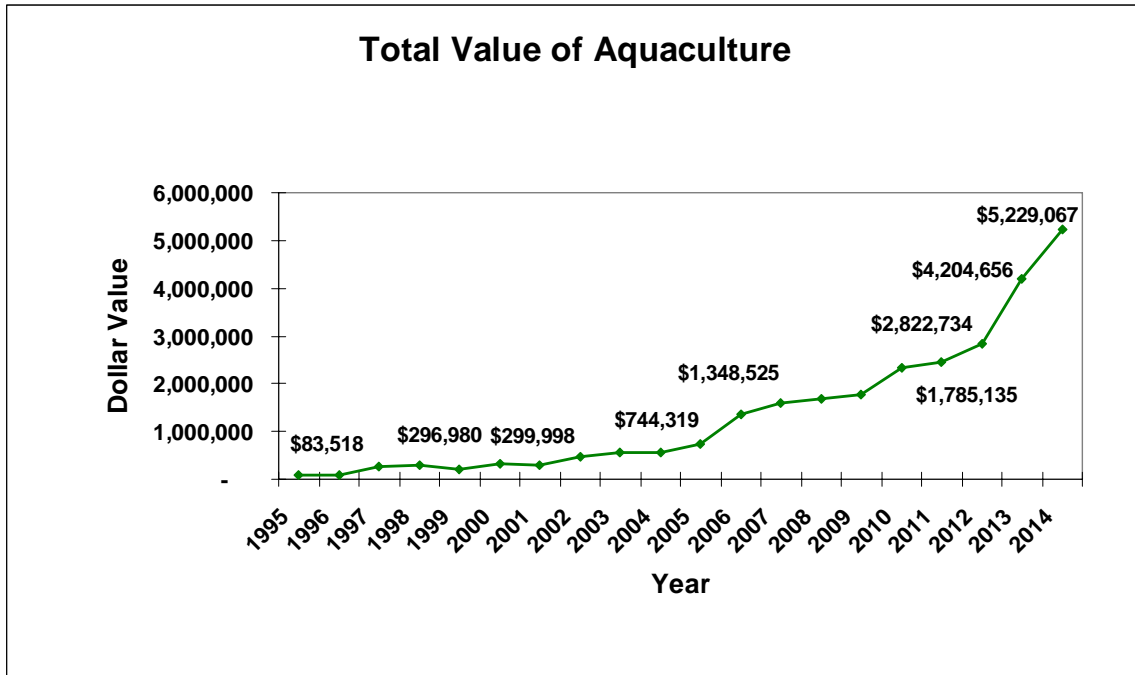
The year 2014 was an interesting year for the aquaculture industry in Rhode Island. The growth in value for shellfish for consumption was a significant 24 percent. The growth in total acreage was a modest five acres. Three new farms were permitted and their first harvests should be noted in 2015 and 2016. The growth of the aquaculture industry in Rhode Island reflects awareness of the health benefits of eating seafood, the consumer trend of purchasing local products, and efficient farm practices of local aquaculturists.

## **How the figures were derived**

Harvest figures came from the yearly CRMC aquaculture questionnaire distributed to all leaseholders. All reports are taken as an accurate value. Monetary figures for this report were calculated by averaging an estimated yearly average wholesale price from multiple sources. This figure was then multiplied by the numbers reported by growers in the yearly CRMC report to arrive at the figures used in this report. Figures from the aquaculture-associated industries came from the principals involved in these privately held companies. Seven farms have expanded into the oyster seed business and their sales are included in this report for the first time. The figures cited are for gross sales of aquaculture-related products including seed sales. A number of shellfish growers are also shellfish dealers. The sales that are direct to end users are at a higher value than wholesale price used in the averaging. Using a wholesale price results in a lower value determined for the aquaculture products but also results in a consistency of format over the years of reporting.

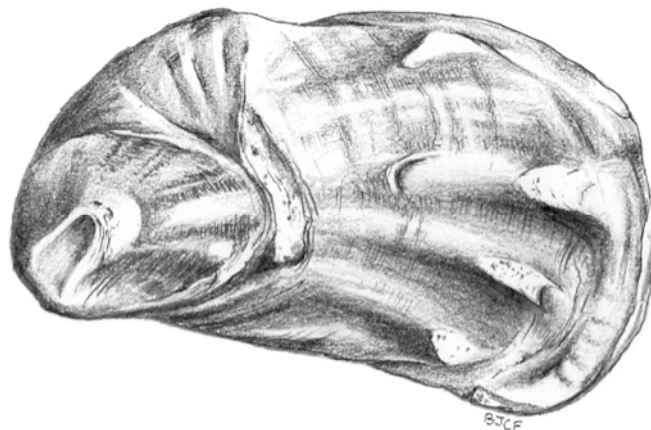
## **Farm Production**

The farm gate value of Rhode Island grown shellfish for consumption was \$5,229,067 which is an increase of 24 percent from the 2013 farm gate value of \$4,204,656. The expanding market for oyster seed sold by local farmers was worth \$184,150.

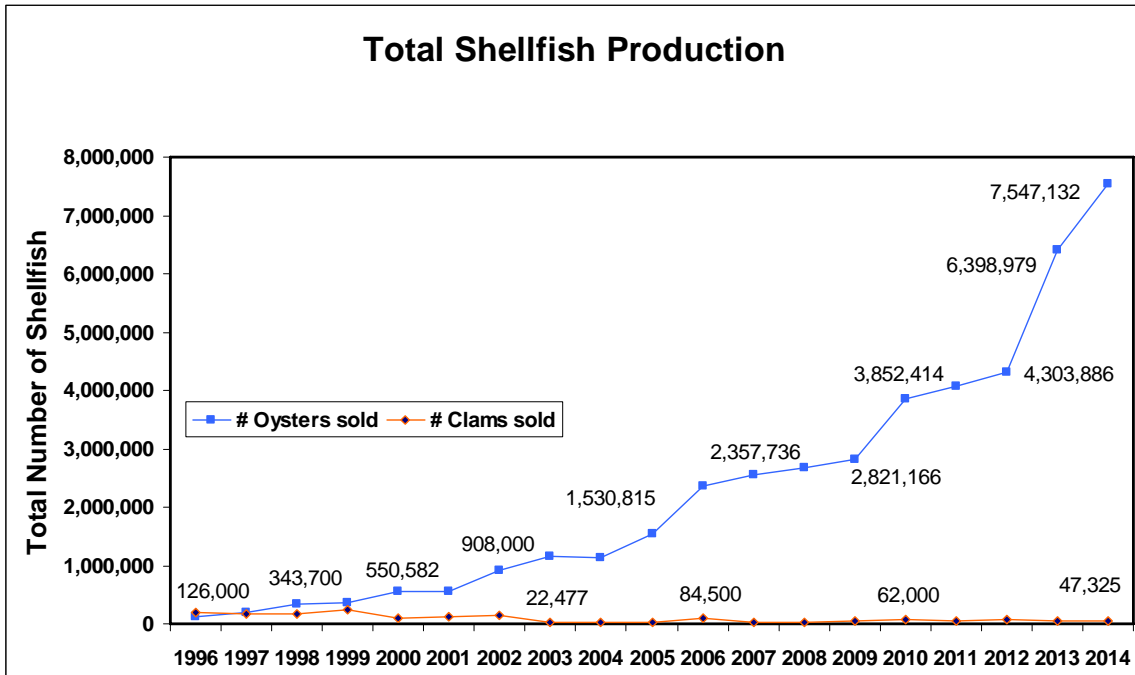


**Figure 1.**  
Total values are for shellfish grown for consumption.

The shellfish figures presented in this report are comprehensive representations. The dominant species in the RI aquaculture industry continues to be the Eastern oyster, with 7,547,132 pieces sold this year which is an eighteen percent increase from 2013. Hard clam production was a distant second with 47,325 pieces sold. Blue mussel production increased to a harvest of 15,827 pounds. The number of farms active in Rhode Island aquaculture at the end of 2014 was 55, with cultivation of 206.2 acres\* (Figure 2), the result of three new farms added in 2014. One of the new farms permitted in Quonochontaug Pond started as a commercial viability project in 2013.



\*an error in calculation dating from 2007 was discovered. All graphs in this report have been adjusted to the correct acreage figure



**Figure 2.**  
The American oyster remains Rhode Island’s dominant aquaculture product.

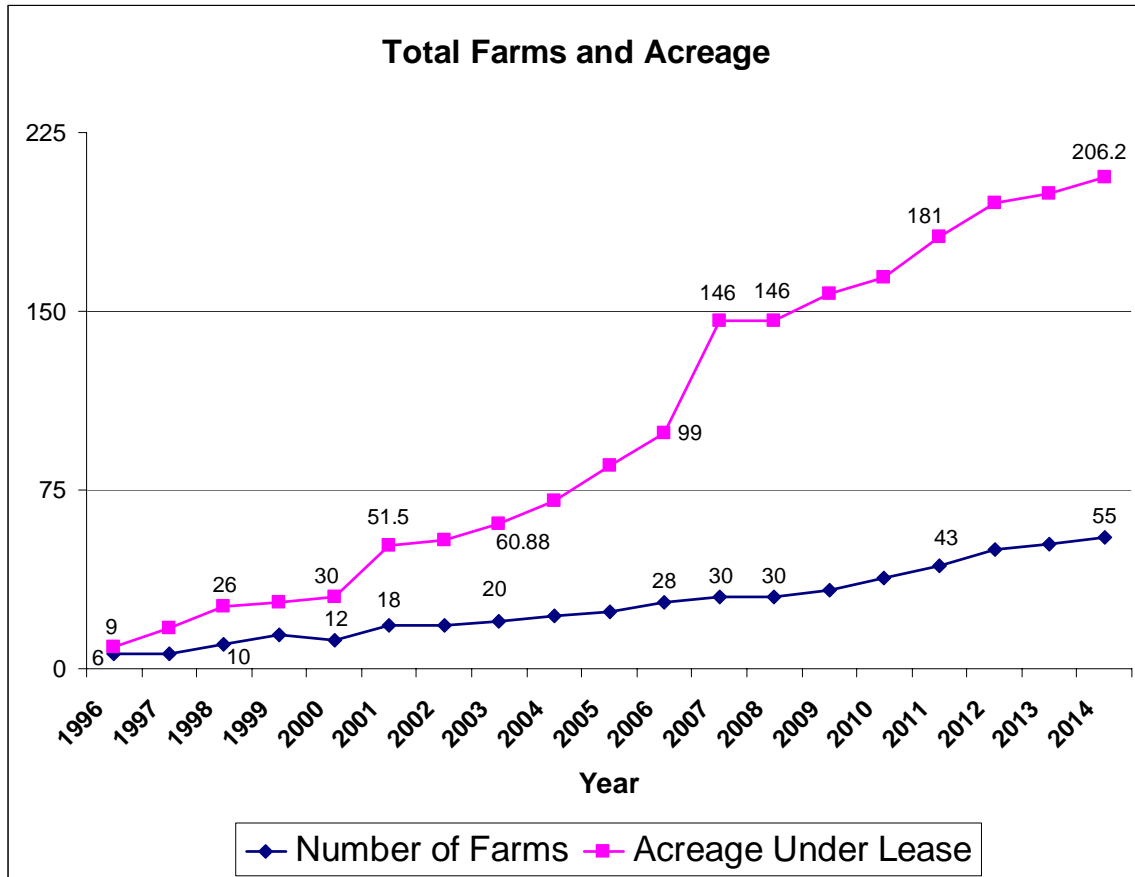
### Aquaculture Employment

Year	Full Time	Full Time	Part Time	Part Time	Total
	Year Round	Seasonal	Year Round	Seasonal	
2006	17	8	17	15	57
2007	14	2	28	17	61
2008	12	1	25	24	62
2009	14	3	25	20	62
2010	17	4	30	28	79
2011	23	3	26	32	84
2012	32	9	32	32	105
2013	35	13	37	42	127
2014	47	17	35	43	142

**Figure 3.**  
Aquaculture farm related employment statistics.

Farm-related employment increased 11.8 percent in 2014.

## How much aquaculture was there in RI through 2014?



**Figure 4.**  
Farmed acreage is 206.2 in 2014.

### Farm area summary:

- 55 farms
- Total aquaculture area in all RI waters – 206.2 acres
- Narragansett Bay and Block Island- 87,723 acres/118.85 acres of aquaculture = 0.13% of total
- South Coastal Ponds (listed below) – 4,708.96 acres/87.35 acres of aquaculture = 1.8% of the five ponds

**Figure 5.**  
Aquaculture acreage for RI south coastal ponds

Year	Winnapaug	Quonochontaug	Ninigret	Potter	Point Judith
2000	5	0	1	0	2.5
2001	5	0	1	0	2.5
2002	5	0	1	6.9	2.5
2003	5	0	1	6.9	21.5
2004	5	0	1	6.9	21.5
2005	6	0	2	6.9	38.5
2006	6	0	2	6.9	38.5
2007	8	0	4	6.9	38.5
2008	8	0	4	6.9	38.5
2009	8	0	10	6.9	38.5
2010	8	0	16	6.9	38.5
2011	8	0	16	6.9	44.25
2012	8	0	19.5	6.9	47.3
2013	8	0	22	6.9	47.3
2014	8	0.75	22	6.9	49.7



**Figure 6.**  
Seed oysters at upweller in Bristol

*Photograph: Ayla Fox*



## Universities and Environmental Organizations

Two educational institutions conduct aquaculture research activities, extension programs, and academic programs in Rhode Island. Both Roger Williams University (RWU) and the University of Rhode Island (URI) are centers of excellence in the field of aquaculture. Both universities have professional pathology testing capabilities and are assets to the shellfish aquaculture and wild harvest industries. Extension projects at RWU include the oyster gardening program (OGRE), oyster restoration, the practical shellfish farming course, and a public enhancement project for quahogs partnering with the RI Shellfishermen's Association. The Nature Conservancy and Save The Bay are both active in restoration activities in Rhode Island. They each partner with RI Department of Environmental Management Division of Fish and Wildlife to accomplish their projects for the benefit of the public. Oyster reef restoration projects use oysters grown by aquaculturists that are not included in production numbers. The educational aquaculture site in Jamestown was visited by 114 students and outreach was enhanced by a series of five films produced for the students.



*Photograph: Kettlebottom*

**Figure 7.**  
Aquaculture education by the Jamestown Aquaculture Movement

## Outlook for 2015

Aquaculture will continue as a growth opportunity for providing jobs and seafood for Rhode Island.

In 2013 Rhode Island Sea Grant began to facilitate the development of a Rhode Island Shellfish Management Plan with Rhode Island Department of Environmental Management (RIDEM), Rhode Island Coastal Resources Management Council (RICRMC), RI aquaculturists, RI shellfish harvesters, non-governmental organizations, and interested public. The written plan was completed in November 2014 and will guide RIDEM and RICRMC in making coordinated decisions about shellfish harvesting, shellfish restoration, and shellfish aquaculture in our state. The plan implementation will continue over the next few years as the changes will be gradual but continual. A part of the implementation plan underway is an aquaculture regulation review, consolidation, and re-write by both RICRMC and RIDEM. One of the early successes was a partnership between the aquaculture industry, RIDEM, RICRMC, URI and RWU in the development of a statewide Vibrio Plan to protect human health concerns. The Vibrio Plan can be found in the RIDEM Regulations “Aquaculture of Marine Species in Rhode Island Waters.”

Rhode Island Sea Grant has funded research projects that address questions raised in the Shellfish Management Plan. The research projects related to aquaculture are:

- 1) Oyster Aquaculture and Water Quality
- 2) Blue Mussel Disease and Commercial Culture
- 3) Perceptions of Aquaculture: Support and Opposition
- 4) Recreational and Commercial Uses of Coastal Salt Ponds

The results from these current research projects will assist in the refinement of the aquaculture review and permitting process. The continued unbiased support from RI Sea Grant helps to assure a healthy aquaculture industry.

Seafood is an important component of the economy and the foundation for many communities in Rhode Island. According to recent a United Nations Food and Agriculture Report, aquaculture will fill the increasing world demand for seafood. The Rhode Island Seafood Marketing Collaborative has developed and implemented a plan that facilitates the marketing of local seafood products and has increased the demand for local seafood. RI aquaculture is a major part of the local seafood movement and in fulfilling the increasing demand for all seafood. The steady growth of aquaculture and the diversification of species and methods illustrate the industry’s response to consumer demands. Aquaculture in RI uses public trust submerged lands to supply seafood to the consumer and businesses to the state. Please enjoy all fresh Rhode Island seafood.