Aquaculture in Rhode Island

2013 Annual Status Report

Photograph: Monique LaFrance

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

2013 CRMC Council Members:
Anne Maxwell Livingston, Chair
Paul E. Lemont, Vice Chair
Tony Affigne
Raymond C. Coia
Janet Coit, DEM Director
Guillaume de Ramel
Donald Gomez
Michael Hudner
Joy Montanaro
Jerry Sahagian

Rhode Island Aquaculture Industry - 2013

At a Glance

- The number of farms in Rhode Island increased from 50 to 52
- The total acreage under cultivation increased from 172.25 to 176.55
- Oysters remained the number one aquaculture product with 6,398,979 sold for consumption
- The farm gate value of aquaculture products for consumption was $4,204,656, an increase of 48.7 percent
- Oyster seed sales from RI aquaculturists was valued at $180,500
- Combined value of aquaculture products for consumption and seed sales was $4,385,156
- The number of aquaculture farm workers increased 21 percent from 105 to 127

Introduction

The year 2013 was an interesting year for the aquaculture industry in Rhode Island. The growth in value for shellfish for consumption was a significant 48.7 percent. The growth in total acreage was a modest four acres. Two new farms were permitted and their first harvests should be noted in 2014 and 2015. 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 $4,204,656 which is an increase of 48.7 percent from the 2012 farm gate value of $2,822,734. The expanding market for oyster seed sold by local farmers was worth $180,500.

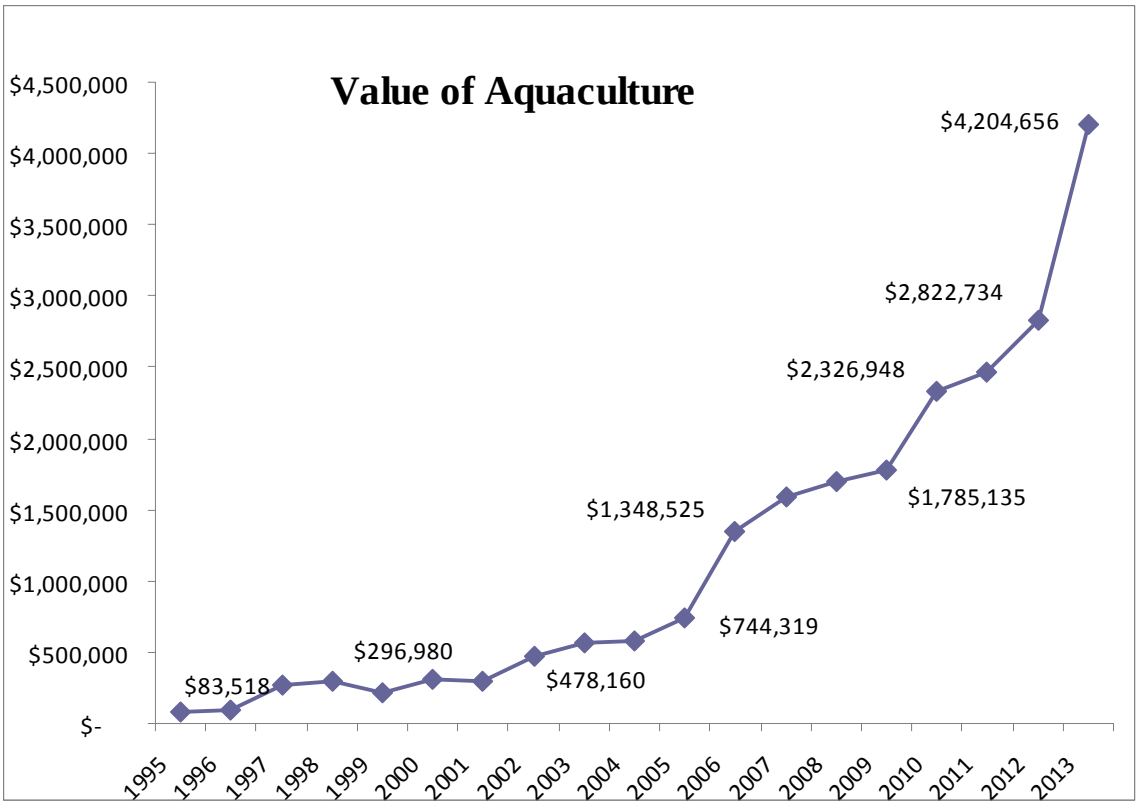

Figure 1.
Total values are for shellfish grown for consumption.

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 6,398,979 pieces sold this year which is a substantial 48.7 percent increase from 2012. Hard clam production was a distant second declining to 38,500 pieces sold. Blue mussel production was a modest 6,250 pounds. The number of farms active in Rhode Island aquaculture at the end of 2013 was 52, with cultivation of 176.55 acres, the result of two new farms added in 2013. Two limited term commercial viability projects were permitted; one started in Quonochontaug Pond and one project in Point Judith Pond will begin operation in 2014.

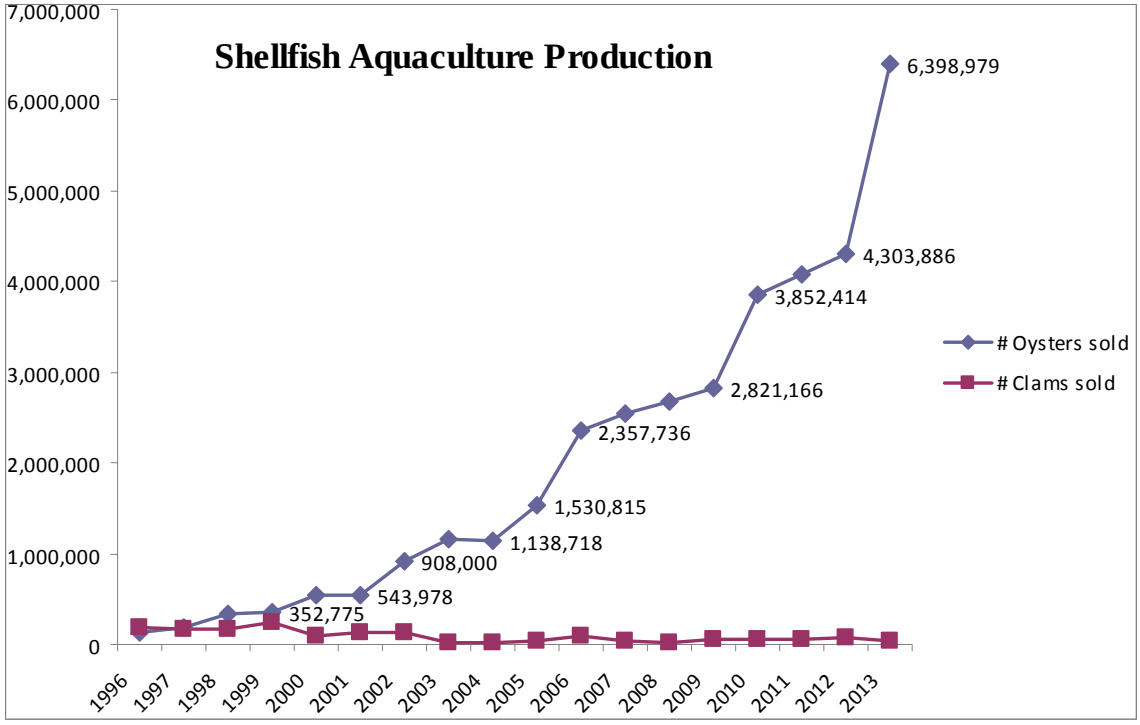

Figure 2.
The American oyster remains Rhode Island's dominant aquaculture product.

In 2013 the production per acre of aquaculture in Rhode Island was $24,838, a substantial increase from the 2012 value of $17,459 per acre. Farm-related employment increased 21 percent and was spread over all categories.

Aquaculture Employment

	Full Time	Full Time	Part Time	Part Time	
Year	Year Round	Seasonal	Year Round	Seasonal	Total
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

Figure 3.
Aquaculture farm related employment statistics.

How much aquaculture was there in RI through 2013?

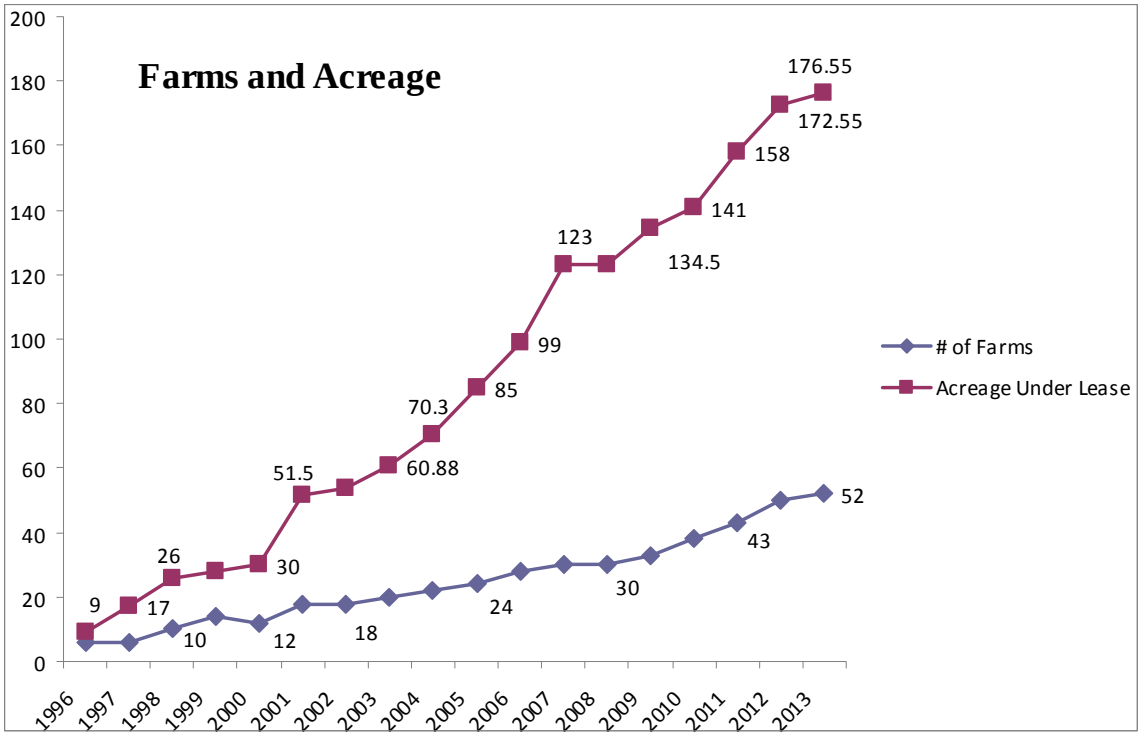

Figure 4.
Two new leases increased the farmed acreage to 176.55 in 2013.

Farm area summary:

- 52 farms
- Total aquaculture area in all RI waters - 176.55 acres
- Narragansett Bay and Block Island- 87,723 acres/94.85 acres of aquaculture = 0.1% of total
- South Coastal Ponds (listed below) - 3963.70 acres/81.7 acres of aquaculture = 2.0% of the four ponds

Total Aquaculture Acreage by Coastal Pond				
Year	**Winnapaug**	**Ninigret**	**Potters**	**Point Judith**
2000	**5**	**1**		**2.5**
2001	**5**	**1**		**2.5**
2002	**5**	**1**	**6.9**	**21.5**
2003	**5**	**1**	**6.9**	**21.5**
2004	**5**	**1**	**6.9**	**38.5**
2005	**6**	**2**	**6.9**	**38.5**
2006	**6**	**2**	**6.9**	**38.5**
2007	**8**	**4**	**6.9**	**38.5**
2008	**8**	**4**	**6.9**	**38.5**
2009	**8**	**10**	**6.9**	**38.5**
2010	**8**	**16**	**6.9**	**38.5**
2011	**8**	**16**	**6.9**	**44.25**
2012	**8**	**19.5**	**6.9**	**47.3**
Total for all south coastal ponds 81.7				

Figure 5.
Aquaculture acreage for RI south coastal ponds

The current percentage of acreage of aquaculture leases in each coastal pond is:

- Ninigret Pond - 1.23%
- Winnapaug Pond - 1.69%
- Potters Pond - 1.91%
- Pt. Judith Pond - 3.05%

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), the aquaculture training course, and a quahog public enhancement project 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. One new educational permit was issued for a project near Dutch Harbor in Jamestown. This public education effort will begin in 2014.

Photograph: Steve Patterson

Figure 6.
OGRE oyster restoration site.

Outlook for 2014

One of the new farms permitted in 2013 is for longline blue mussel culture off of the west side of Jamestown. Another farm added seaweed to the species available for farming. The RI aquaculture industry is slowly diversifying. In December 2013 there were two aquaculture farm applications pending decision and two applications in the preliminary determination process. Continued growth is anticipated this year.

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. When completed later this year, this plan will guide RIDEM and RICRMC in making coordinated decisions about shellfish harvesting, shellfish restoration, and shellfish aquaculture in our state.

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 the benefits that aquaculture provides.