Aquaculture in Rhode Island

2016 Annual Status Report

Photograph: Jeff Gardner

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CRMC

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Figure 1. Kelp research site *Photograph: Matt Griffin*

Rhode Island Aquaculture Industry - 2016

At a Glance

- The number of farms in Rhode Island increased from 61 to 70
- The total area now under cultivation increased 33.15 acres to total 274.53
- Oysters remained the number one aquaculture product with 7,818,194 sold for consumption, a decrease of 453,978 oysters from last year
- The farm gate value of aquaculture products for consumption was $5,325,703
- Oyster seed sales from RI aquaculturists was valued at $183,000
- Combined value of aquaculture products for consumption and seed sales was $5.51 million
- The number of aquaculture farm workers increased modestly from 171 to 177
- Nine farms started growing kelp

Introduction

The year 2016 saw a decrease in oysters landed and a slight decrease in value. The decreased volume of oysters available resulted in an increase in average wholesale price. The growth in total acreage was 33.15 acres; a 13.7 percent increase for the year. Nine new farms were permitted and their first harvests should be noted in 2017 and 2018. A number of farms have added kelp to their list of crops. The results will be reflected in the 2017 annual report. RI aquaculturists are inventive, efficient, and working to diversify their crops.

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. Six operations sold oyster seed in 2016 including the newest shellfish hatchery first permitted this year. 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.

Figure 1. Oysters ready to ship. *Photograph: Ocean State Shellfish Cooperative*

Farm Production

The 2016 farm gate value of Rhode Island grown shellfish was $5,508,703 which is a decrease of 1.6% from the 2015 farm gate value of $5,596,448. Oyster seed sales for 2016 increased to $183,000. A new oyster seed hatchery began business this year on Ninigret Pond. Farmed hard clam and blue mussels were both harvested with modest increases this year. This year Narragansett Bay and the coastal ponds experienced a prolonged bloom of rust tide *Cochlodinium polykrikoides*, which is not toxic to humans but is harmful to shellfish, resulting in less harvest and increased shellfish mortality. October 2016 had two shellfish harvest closures because of *Pseudo nitzschia* which is not harmful to shellfish but is harmful to people. These closures did not affect the aquaculture crop but did limit ability to harvest.

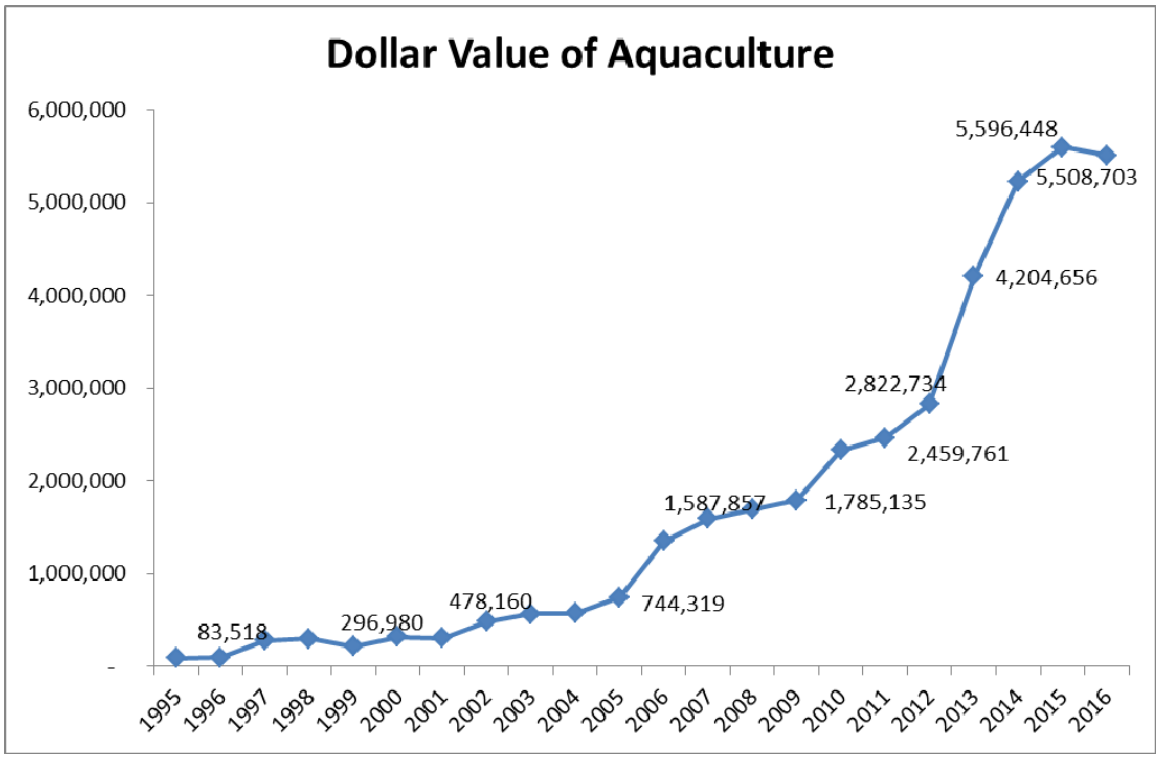

Figure 2. Total dollar value of aquaculture

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 7,818,914 pieces sold this year which is a 5.5% decrease from 2015. Hard clam production increased to 70,500 pieces sold. Blue mussel production increased to a harvest of 27,000 pounds. The number of farms active in Rhode Island aquaculture at the end of 2016 was 70, with cultivation of 274.53 acres.

Aquaculture Employment

Year	Full time Year	Full time Seasonal	Part time Year	Part time 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
2014	47	17	35	43	142
2015	47	26	39	59	171
2016	49	30	49	49	177

Figure 3.
Aquaculture farm related employment numbers show a 3.5 percent increase for 2016.

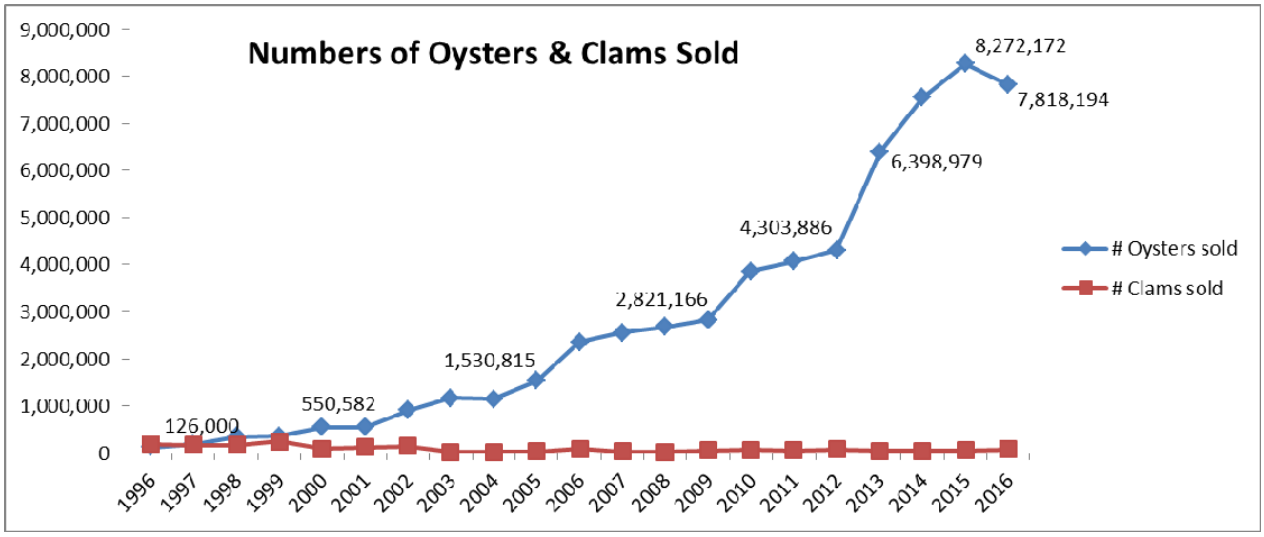

Figure 4. The Eastern oyster remains Rhode Island's dominant aquaculture product.

How much aquaculture was there in RI through 2016?

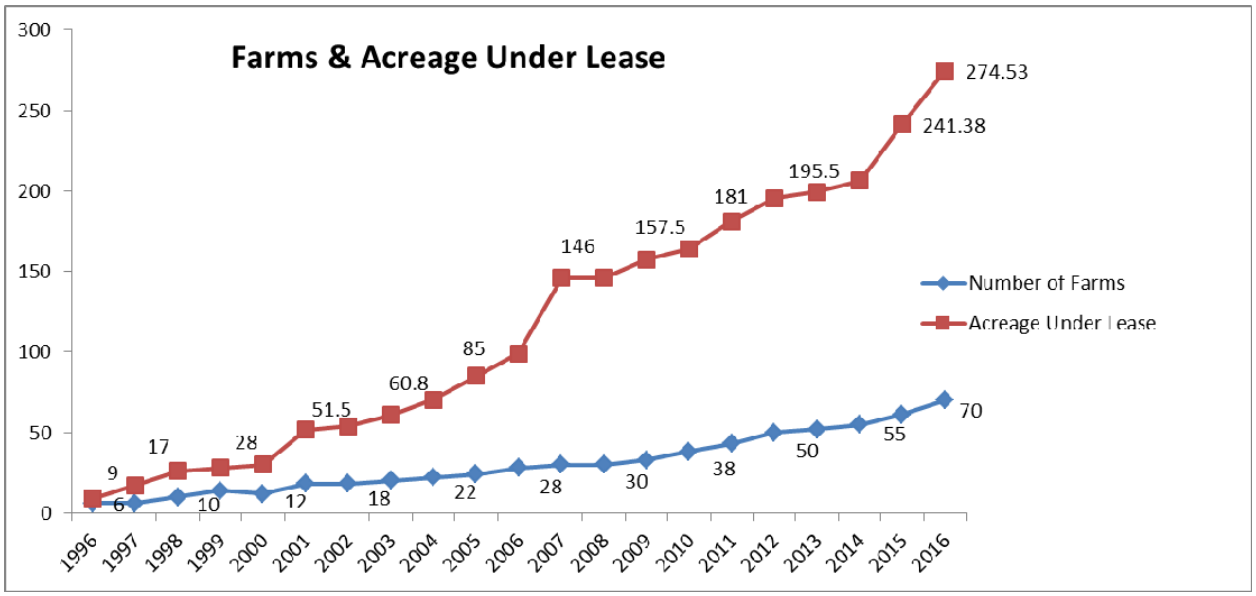

Figure 5. Acreage for the 70 farms is 274.53

Figure 6. Educational tour of Matunuck Oyster Farm *Photograph: RI Sea Grant*

Universities, Environmental Organizations, and State Agencies

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 pathology testing capabilities and are assets to the shellfish aquaculture and wild harvest industries. They each have projects concerning the nascent kelp industry in RI. Extension projects at RWU include oyster restoration, the practical shellfish farming course, and a public enhancement project for quahogs and oysters partnering with the RI Shellfishermen's Association. Rhode Island Sea Grant conducted three well attended aquaculture education workshops and two successful walking tours of aquaculture sites. CRMC conducted six on-the-water tours of aquaculture in Ninigret Pond. The RI Department of Environmental Management (DEM) partners with The Nature Conservancy, the USDA Natural Resources Conservation Service, and the aquaculture industry on oyster reefs restoration projects. The RIDEM and the RI Department of Health managed two harmful algal bloom shellfish closings in October smoothly and without incident. The monitoring program in place worked as planned and protected human health.

Figure 8. Point Judith Pond floating oyster bags *Photograph: Ayla Fox*

Outlook for 2017

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

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 is 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.

Figure 7. Working on Ninigret Pond *Photograph: Ayla Fox*