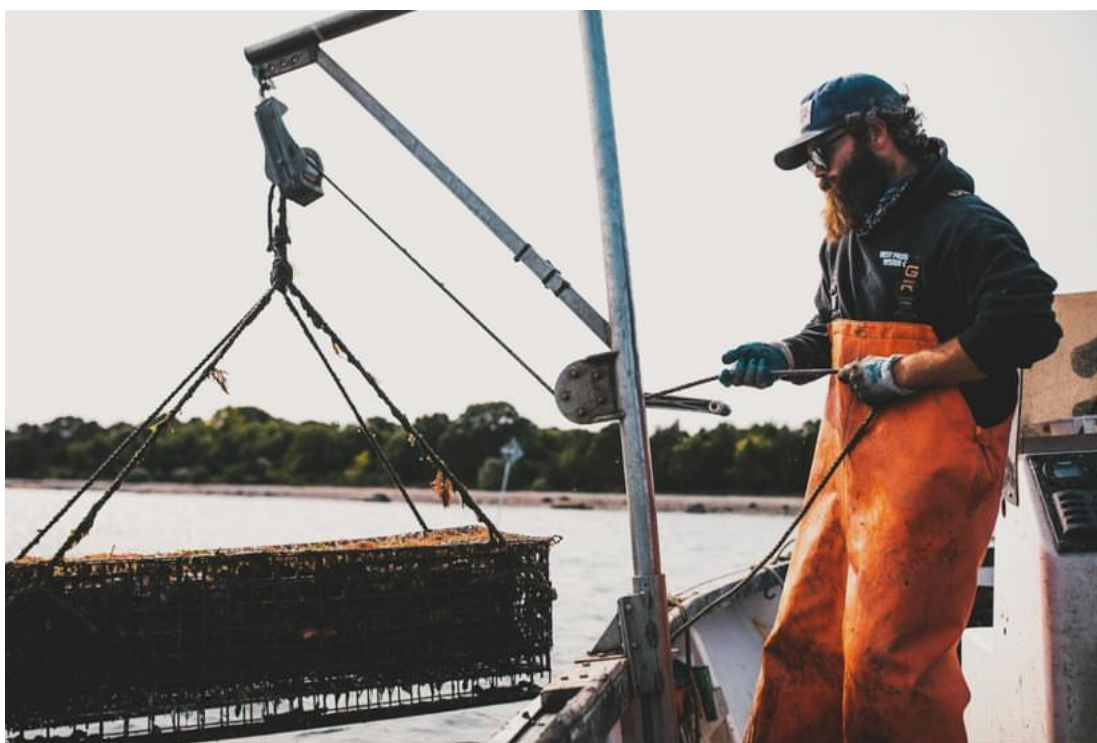




## Aquaculture in Rhode Island 2023



*Oyster farmer in the West Passage raises a bottom cage. Photograph: West Passage OysterCo.*

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# CRM C

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COASTAL **RESOURCES** MANAGEMENT COUNCIL



Oyster farmers harvest from floating cages in West Passage.  
*Photograph: Walrus and Carpenter Oysters*

CRMC Council Members:  
Raymond C. Coia, Chair  
Terry Gray, DEM Director  
Donald Gomez  
Patricia Reynolds  
Stephen Izzi  
Joseph Russolino  
Kevin Flynn

## **Rhode Island Aquaculture Industry - 2023**

### *At a Glance*

- The overall number of individual aquaculture sites in Rhode Island increased by one for a total of 84 sites.
- The total area now under cultivation increased by 10.33 acres for a total of 384.32 acres.
- Oysters remained the number one aquaculture product with 10,648,321 pieces sold for consumption.
- The farm gate value of aquaculture products for consumption was \$7,279,234.
- Oyster seed sales from RI aquaculturists were valued at \$770,000.
- Combined farm gate value of aquaculture products for consumption and seed sales was \$8,041,359.
- USDA Natural Resource Conservation Service worked with RI growers to purchase and deploy a record number of approximately 1,700,551 oysters to restoration sites throughout the coastal ponds and Narragansett Bay.
- The total number of aquaculture farm workers employed in 2023 was 228.

## Introduction

Even though the year 2023 saw a slight decrease in oyster production and overall value from the previous year, the total value of aquacultural products remains high and still surpasses the values of all previous years except for 2022. The overall acreage in production increased slightly as well with an additional 10.33 acres added. Farmers continued to work on raising new crops such as sugar kelp, soft shell clams, surf clams, and bay scallops. RI aquaculturists are inventive, efficient, and working to diversify their crops and markets using the latest technology.



**Figure 1.** Oyster farmers working in Ninigret Pond



*Photograph: East Beach Blondes*  
**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 operations sold oyster seed in 2023. Only three operations reported Sugar Kelp sales. The figures cited are for gross sales of aquaculture-related products, including seed sales. Several 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.

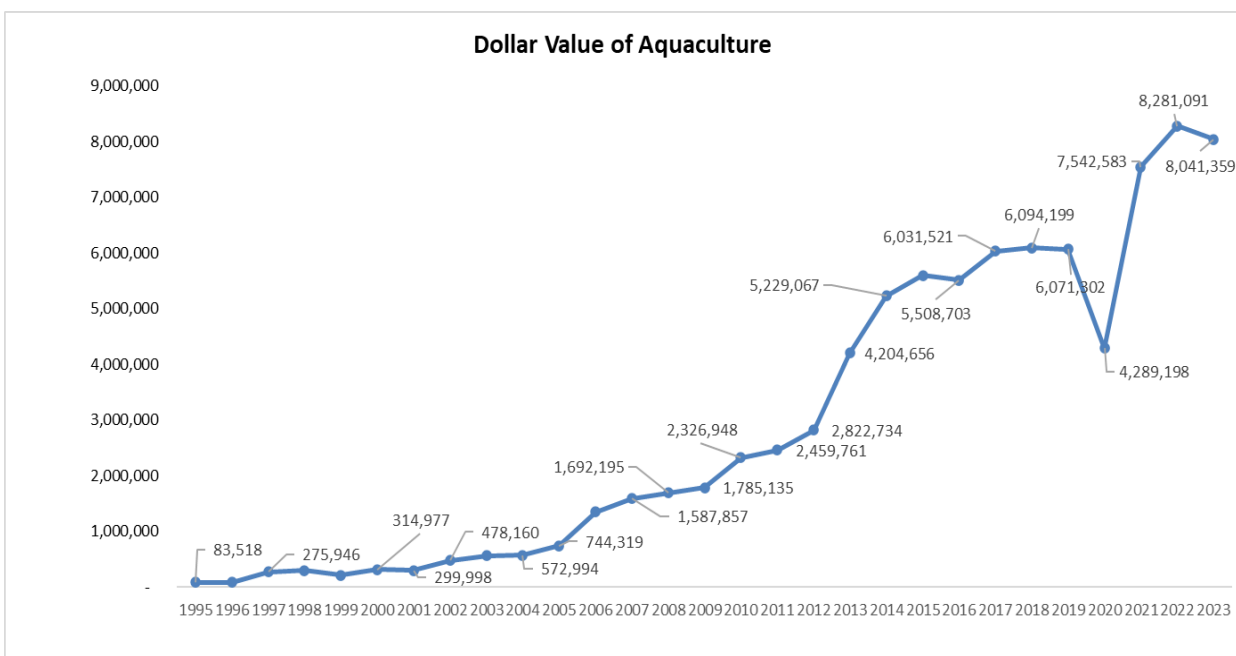


**Figure 2.** Sugar Kelp farmers harvesting in the Harbor of Refuge, Point Judith.  
*Photograph: Oliver Dixon*

## Farm Production

The 2023 farm gate value of all Rhode Island grown products was \$8,281,091, which was a slight decrease of 2.42 percent over the 2022 farm gate value. Oyster seed sales for 2023 also decreased 3.31 percent to \$770,000, while sugar kelp sales increased by 55 percent to \$22,500.

The number of farms active in Rhode Island aquaculture at the end of 2023 was 85, with cultivation of 384.32 acres. Eastern oysters, *Crassostrea virginica*, continue to be the most valuable cultivated species in Rhode Island waters and represent approximately 99 percent of all Rhode Island aquaculture production.

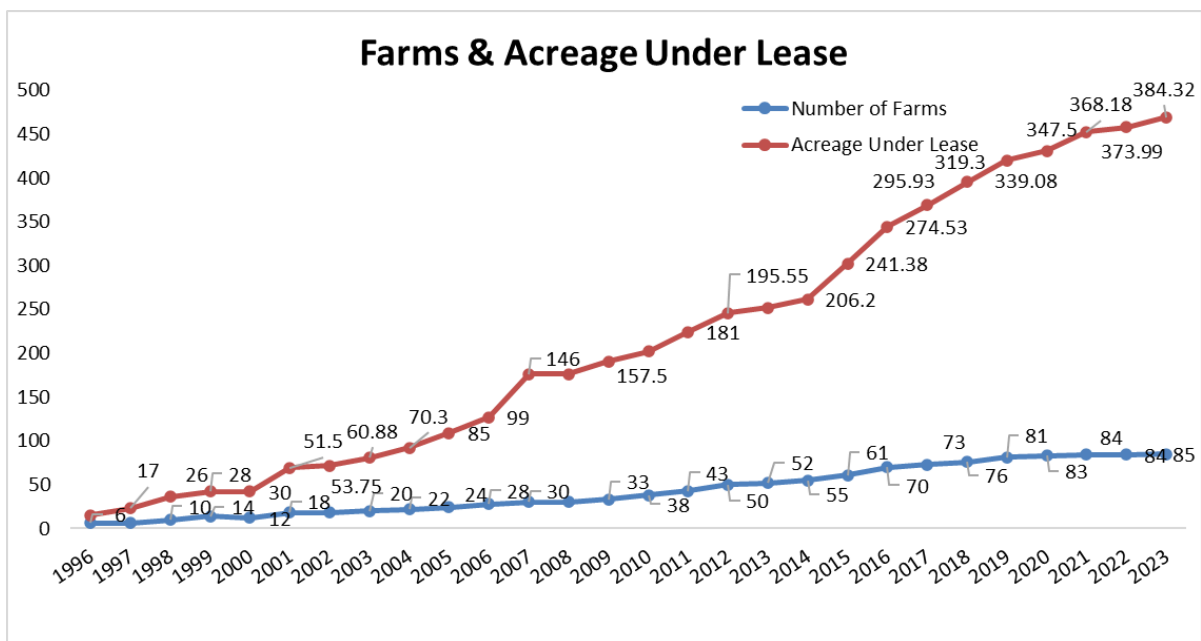


**Figure 3.** Total dollar value of all aquaculture products

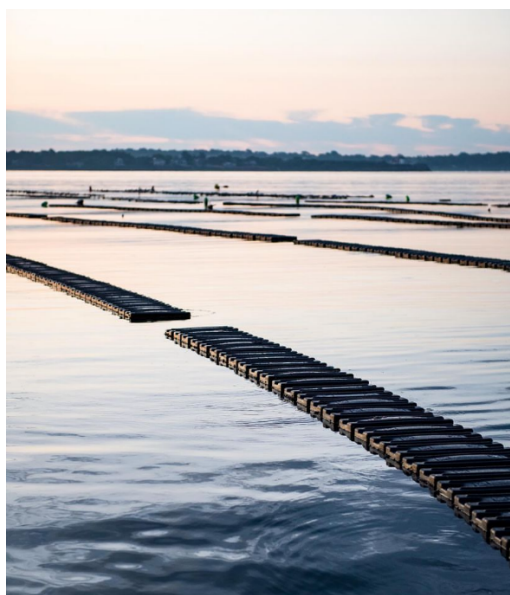
### Aquaculture Employment

Year	Full Time Year	Full Time Season	Part Time Year	Part Time Season	Total
2006	17	8	17	15	57
2007	14	2	28	15	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
2017	62	27	41	64	194
2018	62	31	38	69	200
2019	59	47	46	67	219
2020	69	20	52	75	216
2021	69	36	52	65	222
2022	76	45	53	72	246
2023	81	34	52	61	228

**Figure 4.** *Aquaculture farm jobs decreased by 7.3% in 2023*



**Figure 5.** Acreage for the 85 farms is 374.32.



**Figure 6.** Oysters growing in low profile floating baskets.  
*Photograph: Dan Torre*

## Universities, Environmental Organizations, State and Federal 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. URI also houses the USDA/ARS oyster



breeding program which will be supported by a new hatchery located in Wakefield. As part of this program, URI will work with scientists at the NOAA/NMFS Lab in Milford, Connecticut, and industry partners to spawn 100 lines of oysters to be grown out in five states. The goal is to identify lines with the best resistance to disease that are also adapted to regional differences in temperature. New genetic tools will help geneticists identify traits associated with specific genes, which will speed up the process of selective breeding. Extension projects at RWU include a shellfish research program complete with a hatchery, nursery and farm site, and a public enhancement project for quahogs and oysters partnering with the RI Shellfishermen's Association and the Town of Warren. Rhode Island Sea Grant (RISG) continues to provide aquaculture education opportunities for interested constituents. The RI Department of Environmental Management (DEM) partners with CRMC, the United States Department of Agriculture (USDA) Natural Resources Conservation Service, and the aquaculture industry on oyster reef restoration projects. In 2023, USDA Natural Resource Conservation Service worked with growers to purchase and deploy approximately 1,700,551 oysters to restoration sites around the state. The RIDEM and the RI Department of Health continue to monitor harmful algal concentrations and the program has successfully protected human health. The USDA continues to fund the shellfish sentinel program looking at shellfish disease levels in the different biosecurity zones throughout the state.

### **Outlook for 2023**

While aquaculture businesses were challenged by the COVID-19 shutdowns of 2020, many farmers experienced a huge rebound in demand with the return of indoor dining and increased at home consumption in 2021. The continued demand for sustainably grown shellfish continued to increase in 2022 leading to another record breaking year for Rhode Island shellfish farmers. In 2023, this trend in increasing production appears to have leveled off slightly, but demand and production remained very strong with 2023 out pacing all other years other than 2022. Rhode Island aquaculturists are resilient and continue to work on and invest in their farms to meet this strong demand for high quality shellfish. Many farmers remain optimistic that strong demand for sustainably grown RI aquaculture products, both locally and throughout the country, will only continue into 2024 and beyond.



**Figure 7.** Aquaculture vessel harvesting on the Sakonnet River.  
*Photograph: Dan Torre*