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# In a Half Shell: A Brief History & Current State of Aquaculture in Rhode Island

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# Pre-colonial Fishing



“fish lying so thicke with their heads above the water, as for want of nets (our barge driving amongst them) we attempted to catch them with a frying pan, but we found it a bad instrument to catch fish with”

***John Smith - June 1608***

“The manner of their fishing” 1585. Watercolor by London artist John White during the Sir Walter Raleigh voyage of discovery to Virginia (North Carolina). *Collections of the British Museum.*

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# Shellfisheries in Colonial and Early Post-Revolution Rhode Island

- Archaeological studies at Potowomut and Upper Pont Judith Pond show summer homes w/ shell middens
- 1643 Roger Williams Chapter on Fish & Fishing in *Key to Language of America*
- 1734 statute on using oysters in lime kilns
- 1766 first gear restriction: statute specifying tongs for oyster harvest
- 1798 first seasonal closures: May 1-Sept 30
- 1798 first aquaculture grant by General Assembly



Roger Williams & Narragansett  
Indians 1642  
*Brown University Special Collections*

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# Earliest Legislative Oyster Grants

- 1798 – 2 acres to Samuel Thurber for 6 years near Sabin Point, not renewed
- 1822 – 2 acres to Earl Carpenter & Leonard Wilcox in Providence River, renewed 1828
- 1827 – several acres to Ephiam Gifford near Common Fence Point, renewed 1833
- Controversy generated over no fees charged & exclusion of public from fishing grounds



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# First Controversy Over Aquaculture



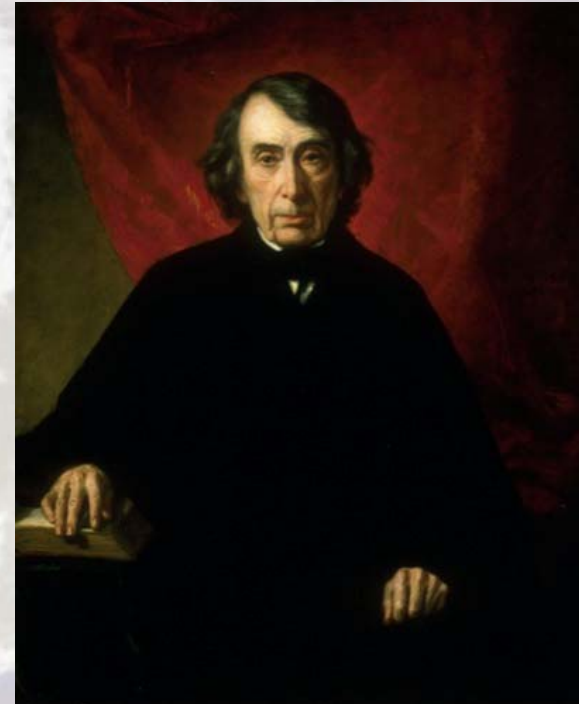
Our Express Will and Pleasure is and we do by these Presents for Us our Heirs and Successors, ordain and Appoint, that these Presents shall not in any manner hinder any of our Loving Subjects whatsoever from using and exercising the trade of Fishing upon the Coast of New England in America; But that they, and every, or any of them shall have full and free power and liberty to Continue and use the Trade of Fishing upon the said Coasts in any of the Seas thereunto adjoining, or any Armes of the Seas, or Salt Water, Rivers and Creeks when they have been accustomed to Fish. -- **King Charles Charter of 1663**

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## US Supreme Court Affirms States' Rights to Manage their Aquatic Resources 1842

When the revolution took place the people of each state became themselves sovereign; and in that character hold the absolute right to their navigable waters and the soils under them for their own common use, subject only to the rights since surrendered by the Constitution to the general government. -- (1842)  
*Martin v. Lessee of Waddell*



Chief Justice Roger Taney (1836-1864)

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# 1843 RI Constitution



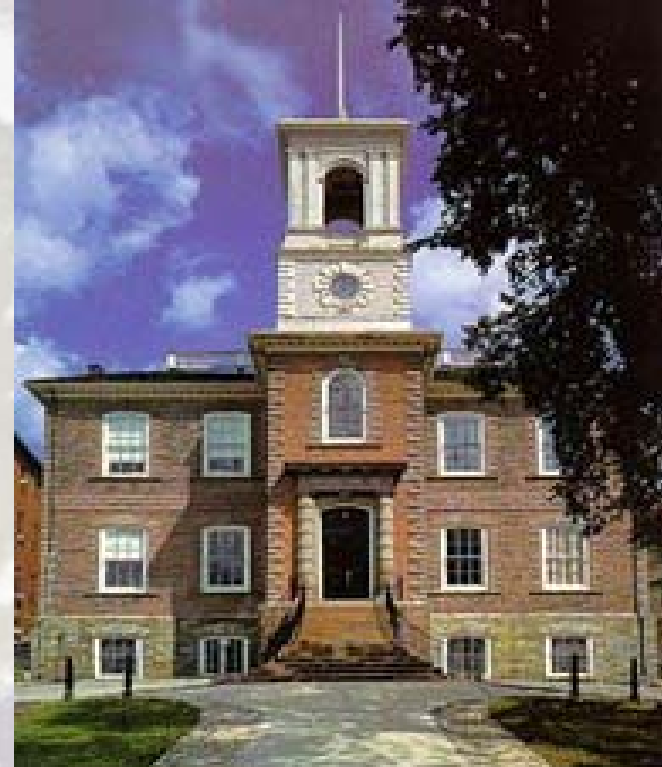
The people shall continue to enjoy and freely exercise all the rights of fishery, and the privileges of the shore, to which they have been heretofore entitled under the charter and usages of this state. But no new right is intended to be granted, nor any existing right impaired, by this declaration.

## ***Article I Sec 17***

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# 1844 Oyster Act

- Set up leasing system for oyster farms; \$10/acre to low of \$1 for additional acres
- Set up board of five Shellfisheries Commissioners; appointed by General Assembly but serving w/o salary
- 1844 \$60 generated in lease fees



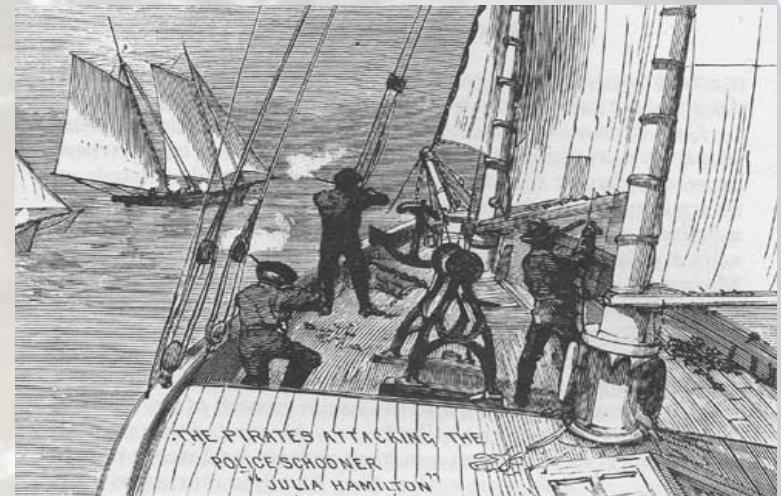
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# 1840s-50s The Oyster Wars!

- Stealing from leases
- Arrests & several court cases; all settled in favor of State
- 1852 law requiring all shellstock be returned to Bay as setting substrate
- 1854 law allowing culturists 5 bushels/day from public beds
- 1855 patrol boat purchased by Commissioners
- 1859 lease fees drop to zero; General Assembly concerned; hanky-panky by Commissioners?



Violent encounters often occurred while dredging for oysters in the 19th century. Illustration from an 1884 edition of *Harper's Weekly*.

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# 1864 Amendments to Oyster Act

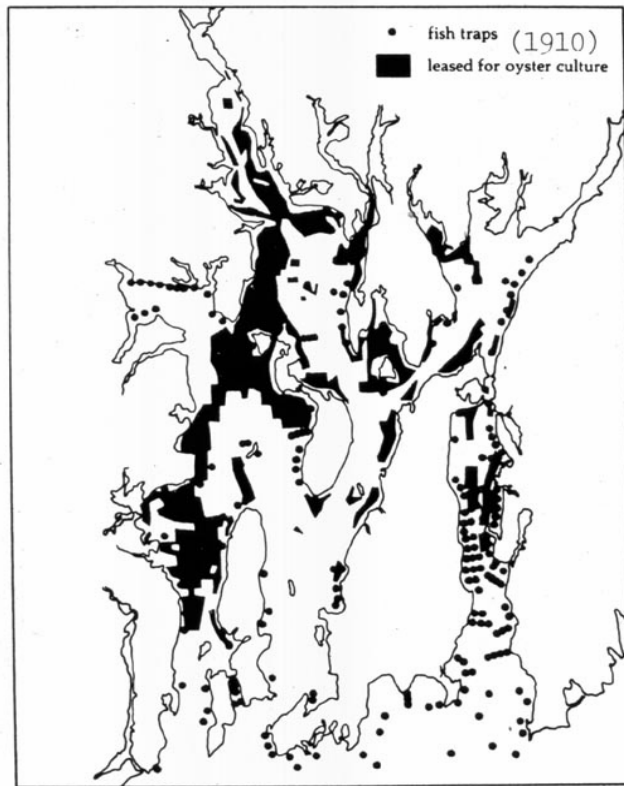


- Reduced 3 Commissioners to one & appointed Hon. John P. Knowles
- Instituted salary for Commissioners & staff
- Required annual report to General Assembly
- Improved collection of fees & termination of leases
- 1864-1869 fee collection increased \$64 to \$1,949.15
- 1869 Hon. James Collins appointed as chairman; served to death in 1910 as one of 3 to 5 commissioners + staff

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# Oyster Aquaculture Leases and Fish Traps in Narragansett Bay 1910



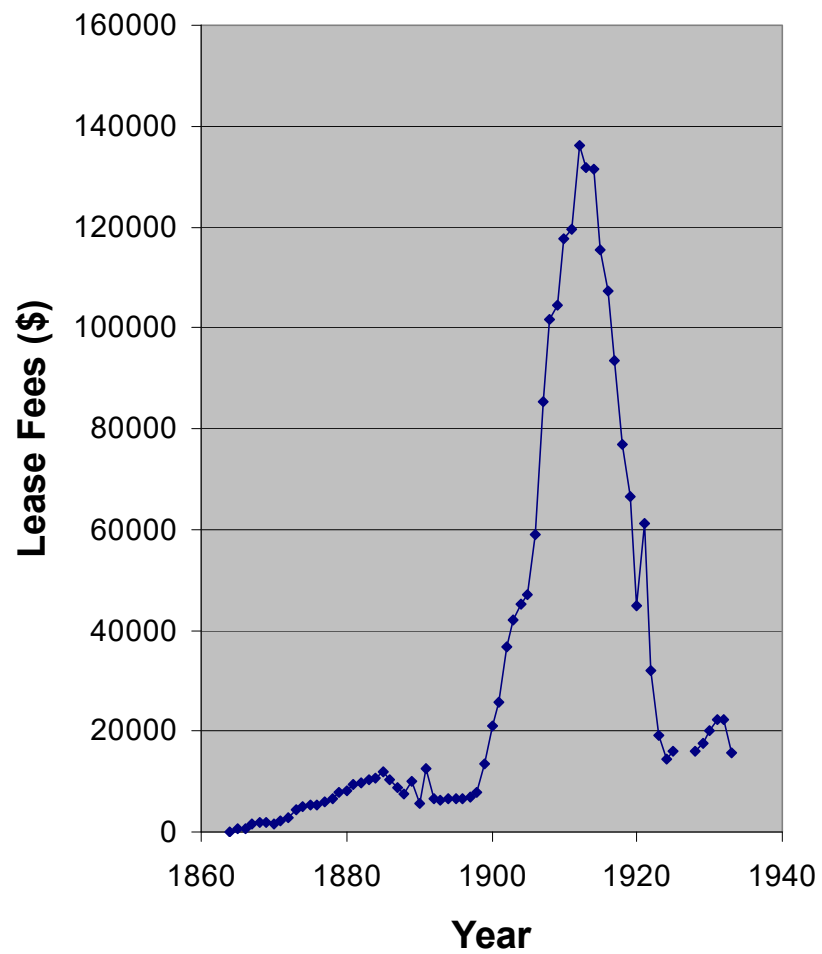
## *Features about early oyster aquaculture in RI*

- Peak 20,846 leased acres (1911)
- Peak production 1.4 million bushels live oysters & 1.3 million gallons of shucked meats (1908); worth >\$500M in today's dollars.
- “Mill Town” labor system similar to textile mills

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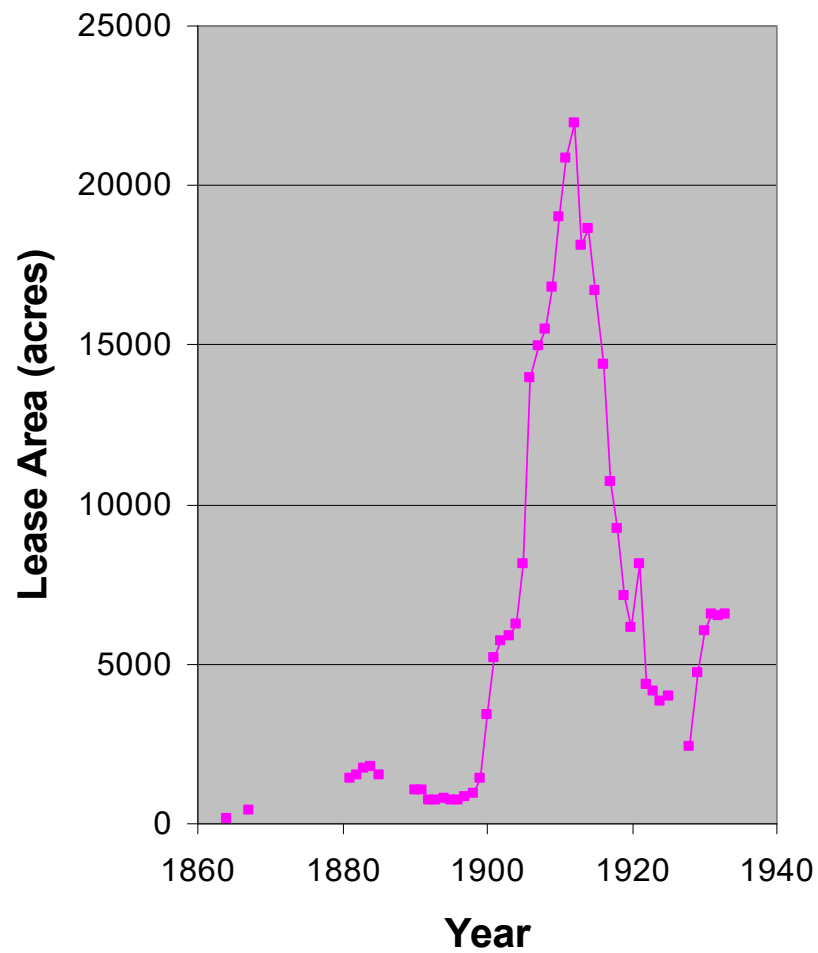
## RI Oyster Lease Fees Paid to State



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## Early Aquaculture Research & Extension in Rhode Island

- 1896 -- Establishment of marine biological station by Dr. George W. Field of RIAES for “investigation of the cause of the decline of the oyster fisheries in Pt. Judith Pond”
- 1901 work to open permanent breachway at Galilee begun; financed by oyster leases granted by towns
- 1936 – Establishment of RI’s first oyster hatchery at RISC- Narragansett Marine Laboratory.



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## Reasons for Decline of RI Aquaculture in 1920s-50s

- Increase raw sewage inputs
- Cumulative effects of continued soil erosion
- Increased metal finishing effluents
- Hurricane of 1938
- Labor shortages during WWII
- Gov. T.F. Green's 'bloodless revolution' of 1935 and associated socio-political changes
- 1952 – last farm Warren Oyster Company gave up leases



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## Reasons for lack of RI's aquaculture growth 1950s-1990s

- Lingering pollution issues
- Rise of the tourism economy
- Suburbanization of coastal zone
- Robust capture fisheries
- Fear of return to “Mill Town” social system



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## Renewed Aquaculture Interest 1970s

- 14 Dec 1976 CRMC permit to Luther Blount for Prudence Island Farm
- 13 small farm leases established in coastal ponds (1977-1980)
- 1978 Blue Gold Mussel Farms in Middletown, 60 acres



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## 1980-1983 Revamp of Aquaculture Laws & Regulations

- 1980 moratorium placed on new aquaculture leases by Governor J. Joseph Garrahy
- 1981 Revamp of Aquaculture Statutes (Chapter 20-10)
  - CRMC lead on Leases
  - Hearings by RIMFC
  - Hearings at Local Level
  - DEM Review
- 1983 CRMC Leasing Procedures Sec 300.11 in the “Red Book”



*Governor J. Joseph Garrahy*

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# First test of 1981 Aquaculture Permitting Process

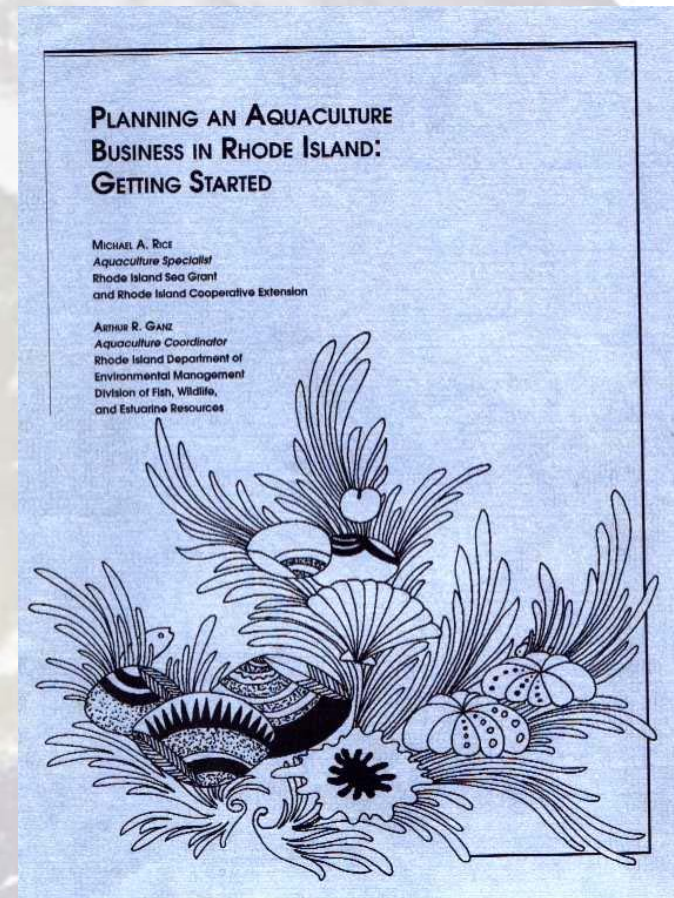
- 1988 Lease application by Spatco, Ltd. (Robert B. Rhealt, Jr.; Moonstone Oysters)
  - 50ft x 50ft in Pt. Judith Pond
  - 2 year process
  - 14 public hearings



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# Aquaculture Policy Efforts 1990s

- 1993 Formation of OSAA
- 1994 Publication of permitting manual
- 1995-96 Legislative Commission on Aquaculture
  - televised public hearings on environmental, economic & social issues
- 1996-97 CRMC cooperative aquaculture planning workshops (D. Alves, Aquaculture Coordinator)



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# Legislative Actions 1996-2002

- 1996 'An Aquaculture Act' creates aquaculture coordinator and lead agency
- 1998 strategic plan published by Legislative Commission on Aquaculture
- 1998 omnibus aquaculture bill (98-H8816) passing in parts
- 1999-2002 most remaining sections passing
- 2001 Securing federal appropriation for aquaculture planning (RIAI) via Sen. Jack Reed



*RI Rep. Eileen Naughton*



*U.S. Sen. Jack Reed*

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## Overview of Statutory/Policy Changes 1996-2002 Affecting RI Aquaculture

- “One-stop” permitting with lead agency and Aquaculture Coordinator responsible for coordinating inter-agency review
- Recognition of aquaculture as a form of agriculture under tax codes
- Exemption of aquaculture livestock from Fish and Game laws
- Multi-agency “Aquatic Biosecurity Board”
- Simplified leasing and DEM water quality certification procedures

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## Current Status of Rhode Island Aquaculture



Photo: Courtesy of Saltwater Farms

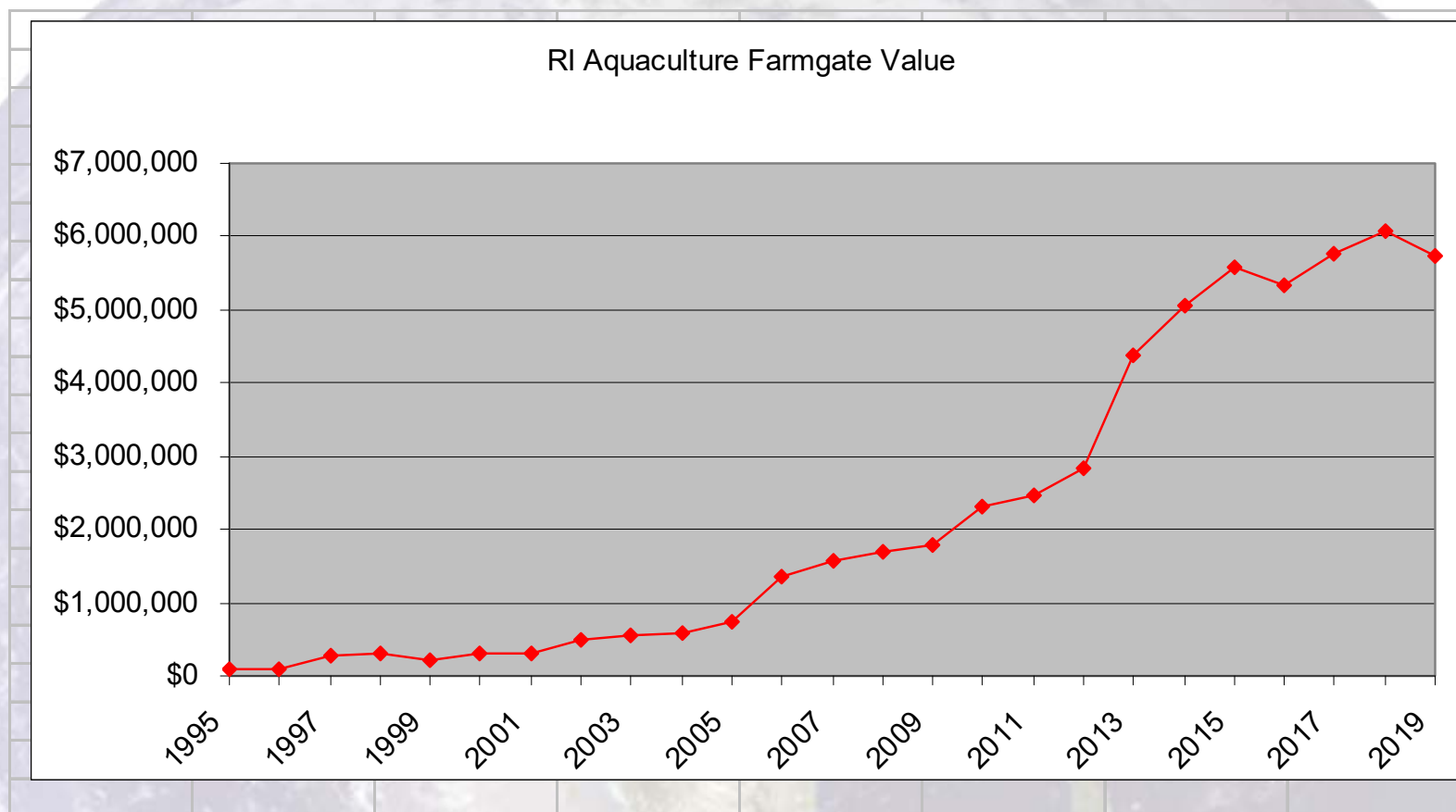
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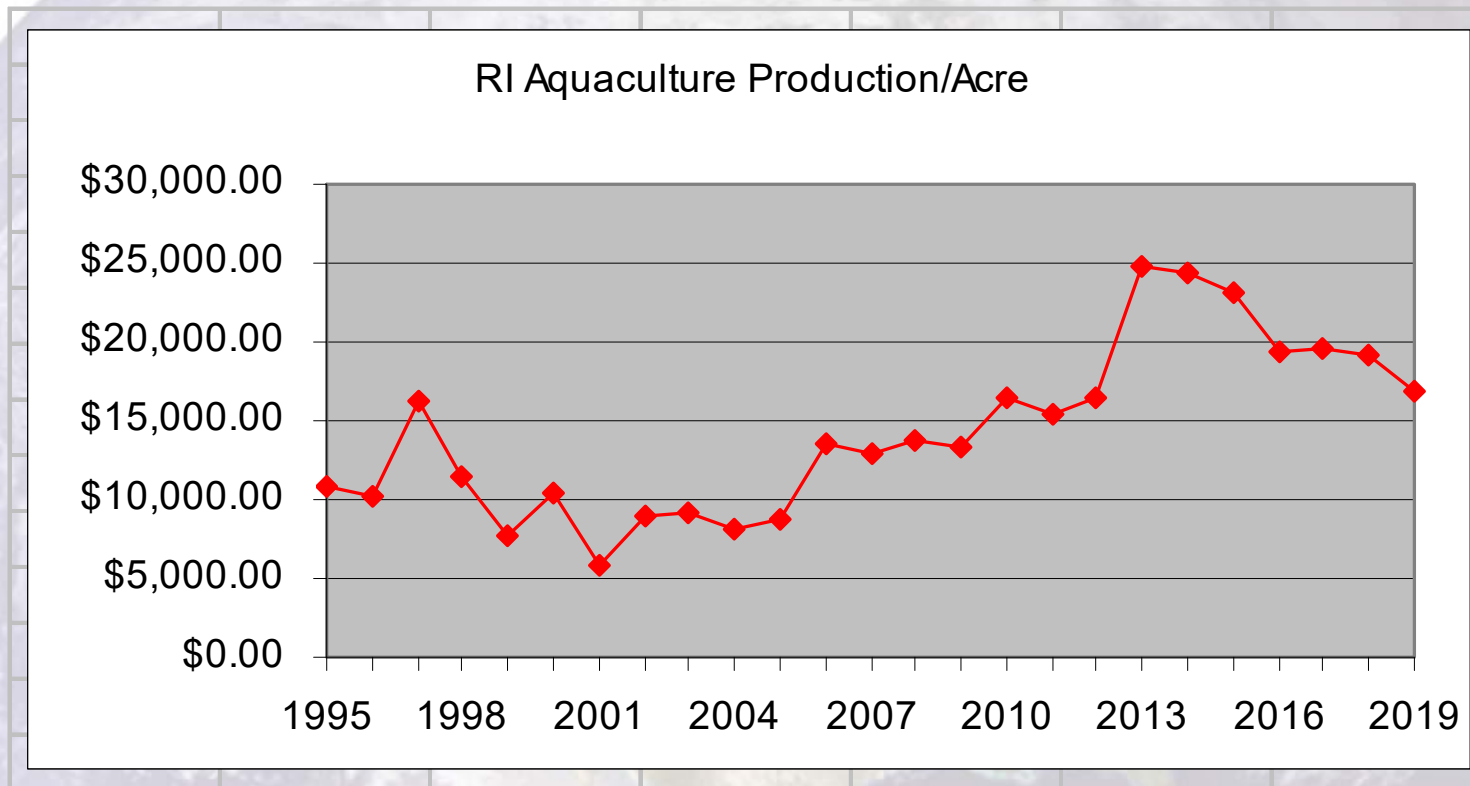
## Current Status of Rhode Island Aquaculture



Data Courtesy of David Alves, David Beutel & Benjamin Goetch CRMC

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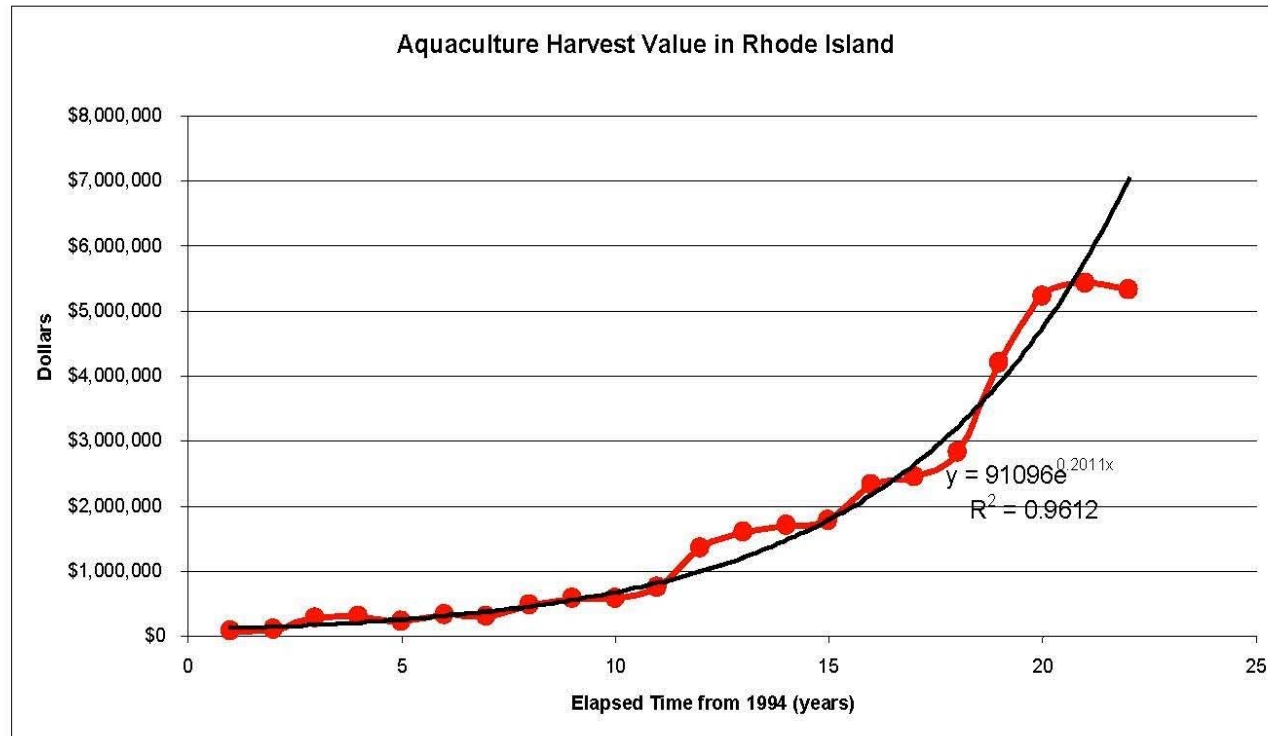
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Data Courtesy of David Alves & David Beutel, CRMC

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# Aquaculture Growth Model



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# Oyster Gardens in RI!

- Oyster Gardening for Gardening and Restoration (OGRE) Program begun 2005 & Ongoing
- Roger Williams University Marine Biology Shellfish Lab
- Funding from DEM & CRMC



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# Thank You...Questions?



Perry Raso of Matunuck Oyster Bar

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