

SEMIAAC



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SOUTHEASTERN
MASSACHUSETTS
AQUACULTURE
CENTER

MISSION

The mission of the Southeastern Massachusetts Aquaculture Center (SEMAC) is to foster the sustainable development of private/public aquaculture endeavors within the southeastern region and throughout the Commonwealth of Massachusetts by way of a coordinated effort including education, research, technical and economic assistance, best management practices and demonstration projects.

SEMAC was established based upon a recommendation in the 1995 Massachusetts Aquaculture White Paper to establish regional aquaculture demonstration centers.

The priorities of SEMAC are set by a 14 member Board of Directors. The activities are carried out by Barnstable County Cape Cod Cooperative Extension staff members. It has been funded over the years through the Seaport Bond Bill, The Environmental Bond Bill, and most recently the Massachusetts Department of Agricultural Resources.



BEST MANAGEMENT PRACTICES

Working cooperatively with the industry and concerned user groups in the region, SEMAC drafted best management practices for the industry to encourage environmentally friendly and economically sustainable shellfish aquaculture.



MINI GRANT PROGRAM

The SEMAC Mini Grant program was created by the Board of Directors in 1998 to accomplish their goal of supporting applied research in the aquaculture industry. Growers were invited to submit proposals for projects that would:

Encourage industry development and diversification.

Promote environmentally responsible aquaculture projects.

Identify and/or develop best management practices.

Develop alternative aquaculture technologies and species.

Encourage private/public collaborations.

Advance innovative marketing approaches for aquacultured products.

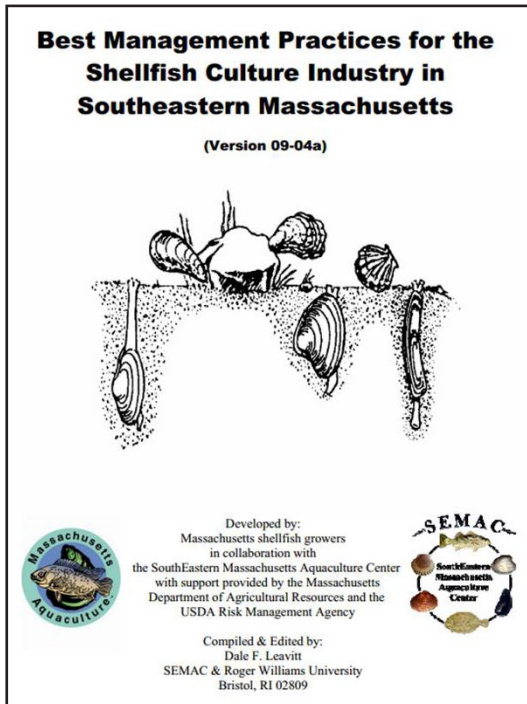
Between 1998 and 2012 – 85 people received funding to work on their ideas and 144 projects were undertaken.

Testimonials include:

“The mini grant program...provided the first connection we had to any type of aquaculture assistance.”

“I think in the big picture if you want to get something done, it helps to have a focus, and the SEMAC mini grant program helped with that focus.”

“I think anyone looking into other bigger grants should start with these as a learning process.”



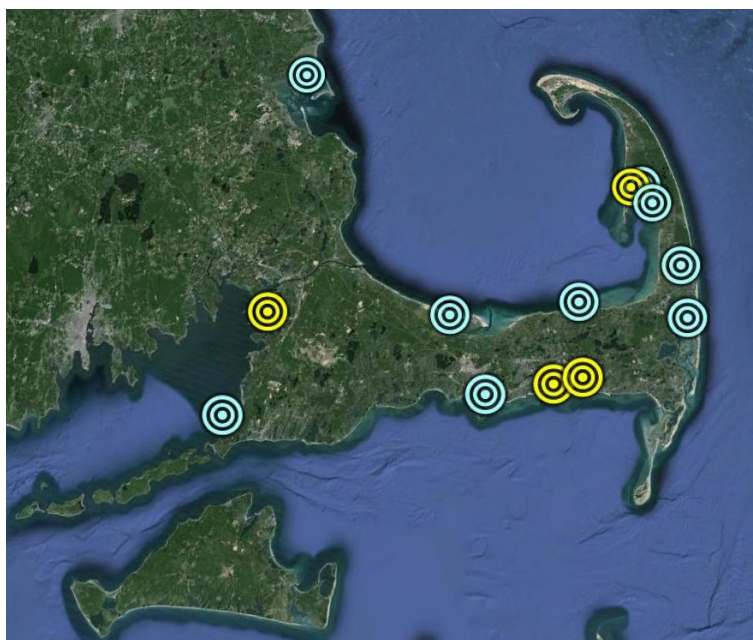


DISEASE RESEARCH NETWORK

Shellfish crops can be affected by diseases just like land based farm crops can. The presence and intensity of diseases and their effects are a large factor in farm profitability. Having access to accurate and timely information about the type of disease and its intensity can help farmers develop solutions.

SEMAC provides this information by collecting samples from shellfish farms and wild stock to determine disease occurrence, prevalence, intensity, and seasonality throughout the region. The goal of this monitoring is to provide better understanding of disease dynamics in the region and help identify pending outbreaks, giving shellfish growers the opportunity to make better informed management decisions about their standing crop.

Samples are collected from twelve (12) stations and results are shared with growers and town shellfish managers.





WATER QUALITY MONITORING

SEMAC water quality monitoring provides continuous data, since 2004, on parameters that help shellfish growers understand observations of their crops.

SEMAC maintains 5 water quality sondes at 5 different locations in Southeastern, MA. The data is accessible in real time from Wellfleet & Cotuit sites. All other data is available in weekly means on our website. Staff can provide data in any form requested.

7 Parameters are Monitored:

- Temperature
- Salinity
- pH
- Dissolved Oxygen
- Chlorophyll
- Turbidity
- Depth

"I regularly use the real time data provided by the monitoring stations at Wellfleet Harbor and Cotuit Bay. Years of making use of this information helps me make better decisions related to the timing of receiving seed in the spring and putting seed into storage in the early winter."

-Dave Ryan, Cape Cod Oyster

"Everyday I depend on the real-time data from the Wellfleet YSI - critical information that helps me with farming decisions to be made for the day, as well as the weeks ahead."

- Capt. Andrew Cummings, Wellfleet, MA



RESEARCH FARM NETWORK

The network of research farms allows for testing of aquaculture methods in many different geographic areas using the same protocols, and allows shellfish farmers and researchers to determine what methods are universally or locally better for production.

The goals of the network are to provide high quality, relevant data to local shellfish farmers; provide multiple 'platforms' for demonstration and outreach in different communities; increase communication among shellfish farmers in southeastern Massachusetts.

Recent Projects:

2015-2016 Growing Small Seed without an Upweller

2012-2015 Growing Methods for Razor Clams

2012-2013 Growing Methods for Blood Arks

2011-2012 Comparison of Bottom & Floating Gear for Growing Oysters

2008-2010 Effect of Triploidy on Oyster Growth and Survival





TRAINING NEW AQUACULTURE GROWERS

The Fundamentals of Shellfish Farming Class provides practical information for people who are interested in starting a shellfish farm, or who want to work in the shellfish aquaculture industry. Students meet once a week for 8 weeks and are taught by staff from SEMAC, Cape Cod Cooperative Extension, and Woods Hole Sea Grant, as well as guest speakers from regulatory agencies and the industry. Since 2008, 125 students have taken the class.

Topics covered:

Understanding Seed Supply & Shellfish Nursery Culture

Clam Field Planting, Grow-out & Harvest

Oyster Field Planting, Grow-out & Harvest

Predators, Pests, Diseases & Other Bad News

Safe Shellfish Handling & Food Safety
Business of Aquaculture

Permitting Basics

"I completed the Fundamentals of Shellfish Farming Class in 2015 and launched my farm that same year. Currently I have +/- 700,000 oysters of various size. In 2017, I have been able to start harvesting legal sized oysters and recouping some of my investment. Thank you and CCCEMP for helping me to launch this exciting business."

SEMAC



2018 SEMAC Board Members

The Southeastern Massachusetts Aquaculture Center (SEMAC) is one of three aquaculture centers in the Commonwealth. The Northeast MA Aquaculture Center is administered by Salem State University and the Western MA Aquaculture Center is administered by the University of Massachusetts Amherst. SEMAC is administered and staffed by the Barnstable County Cape Cod Cooperative Extension program. SEMAC covers a broad geographic region and serves the greatest portion of the shellfish aquaculture industry in the Commonwealth. As of 2016, 355 of 360 licensed shellfish farmers (98.6%) are within SEMAC's purview, as well as 1,249 of the Commonwealth's existing 1,259 shellfish farm acreage (99.2%). Funding for the three Aquaculture Centers is provided through the Massachusetts Department of Agricultural Resources.

Barnstable County Cape Cod Cooperative Extension Marine Program

Goal: To establish, develop and carry out education programs in marine resource development, to assist with problems concerning coastal industries and the management of coastal resources, and to transfer technological innovations, educational and informational materials to public officials, educators, and marine user groups. The program carries out its mission in cooperation with the Woods Hole Sea Grant Program at the Woods Hole Oceanographic Institution.

For more information on SEMAC - please contact:

www.capecodextension.org/marine/semac/

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