

University of Maryland Extension Aquaculture Programs 2016



The "Oyster Team" working to build our industry includes: University of Maryland Extension; University of Maryland Horn Point Hatchery; University of Maryland Eastern Shore; Maryland Departments of Natural Resources, Health and Mental Hygiene, Agriculture, Environment, and Commerce; the MD Agriculture and Resource Based Industries Development Corporation; National Oceanic and Atmospheric Administration; Natural Resource Conservation Service; Philip E. and Carole R. Radcliffe Foundation and the Oyster Recovery Partnership

University of Maryland Extension Aquaculture Programs

University of Maryland Extension has conducted quality educational programs for aquaculture development for over four decades. These have included outreach training for the production of finfish, shellfish and aquatic plants. Our longest running programs have encouraged the production of oysters and clams, which are important resources for economic growth, employment and the environment.

We partner with many agencies, institutions and NGOs to support industry development. When state laws were revised to encourage shellfish aquaculture in 2009, a series of programs were put in place to form an "Oyster Team" to provide critical services to the industry. The Oyster Aquaculture Education and Training Program was initiated by UM Extension to provide educational products and services for technical training to spur industry growth. Initially funded by the National Oceanic and Atmospheric Administration (NOAA), the program is now supported by the Philip E. and Carole R. Radcliffe Foundation and the Oyster Recovery Partnership to build entrepreneurship for the expansion of our shellfish industry. To date, oyster aquaculture is thriving and becoming an increasingly important part of our seafood industry by supplying many new markets with high quality products.

We urge you to visit our website (<https://extension.umd.edu/aquaculture>) and our Maryland Aquaculture Facebook page for the latest information about our programs, products and services. We offer a range of evening and day-long workshops as well as in-depth short courses and other educational events that are designed to provide you with the knowledge and skills needed to help you enter this industry and develop the expertise needed for success.

Matt Parker
Aquaculture Business Specialist
Seafood Production Team Leader

University of Maryland Extension programs are open to all and we are an Equal Opportunity Employer

MAY 25, 2016, 1 PM - 3 PM

PRODUCING CULTCHLESS OYSTER SEED

LOCATION: UM Horn Point Hatchery, Cambridge MD

CONTACT: Don Webster, Don Meritt or Stacey Willey

A workshop demonstrating production of individual seed that includes downwellers for setting larvae on microcultch and upwellers for nursery production until is large enough to plant. Growers will learn to prepare and set up units and handle larvae for successful production, as well as aspects that can cause production problems. ***Additional workshops may be scheduled if need exists. Call or email for updates.***

JUNE 2, 2016, 6 PM - 8 PM

MANAGING RISK IN SHELLFISH AQUACULTURE

LOCATION: UM Wye Research & Education Center, Queenstown MD

CONTACT: Matt Parker or Don Webster

Shellfish aquaculture is a risky business. Weather, disease and other factors can affect profitable production. We'll show you how to minimize risk by a variety of methods including business types, liability and crop insurance and other factors that provide you with information to help enhance the profitability of your shellfish business.



JUNE 6, 2016, 3 PM - 4 PM

REMOTE SETTING TRAINING PROGRAM - STATEWIDE WORKSHOP

LOCATION: UM Horn Point Hatchery, Cambridge MD

CONTACT: Don Webster or Don Meritt

A statewide training program in Remote Setting technology for shellfish growers with submerged land leases who need to produce spat on shell to plant their grounds to demonstrate 'active use'. Held at the Horn Point Lab, the demonstration will discuss the design and operation of a successful setting system and demonstrate how to handle and introduce larval oysters to the tanks, manage them during setting and handle them afterwards.

JUNE 6 - 10, 2016, DAILY 9 AM - 3 PM

OYSTER HATCHERY SHORT COURSE

LOCATION: University of Maryland Horn Point Hatchery, Cambridge MD

CONTACT: Don Webster or Don Meritt

A week-long short course at the Horn Point Hatchery. Includes daily lectures on genetics, business management, permits, algae production and hatchery technology. Afternoons in the hatchery provide hands-on experience in mass and strip spawning, larval care, phytoplankton production, spat on shell and cultchless setting. Includes field trip to observe planted areas and reference material. **ATTENDANCE IS LIMITED** and applicants must either demonstrate that they are actively engaged in building a hatchery or have an offer of employment from a hatchery. Those from out of the area are **RESPONSIBLE FOR THEIR OWN LODGING.**

JUNE THROUGH AUGUST, 2016

REMOTE SETTING TRAINING PROGRAM OPERATIONS

LOCATION: Various - 36 setting systems are provide in 9 statewide locations

CONTACT: Steven Weschler or Alan Roache

The Remote Setting Training (RST) program provides 36 setting systems in nine locations for growers to reserve on a two-week basis from June through August. Most tanks accommodate 300 shell bags although larger ones at Horn Point can take up to 500. Larvae are provided free for the first five years of participation but growers are cautioned that these systems are not provided to produce all the spat that may be needed for a lease. They are educational systems designed for training. Program personnel are available to advise you on how to design, install and operate your own system. Growers must have an active lease and are responsible for obtaining clean, aged and containerized cultch, providing the labor for moving it in and out of tanks and cleaning the equipment at the end of their production time.

JUNE 15, 2016, 9 AM - 3 PM

***SPECIAL PROGRAM:* OYSTER GROWER OPEN HOUSE**

LOCATION: University of Maryland Horn Point Hatchery, Cambridge MD

CONTACT: Don Meritt, Shannon Hood or Don Webster

A *SPECIAL PROGRAM FOR LEASEHOLDERS* who want to learn more about hatchery operations, nurseries, seed production and other aspects of shellfish aquaculture. Morning includes a tour of the Horn Point Hatchery with broodstock conditioning, algae production and larval care. Demonstrations of spawning, production of spat on shell and cultchless seed. Afternoon speakers will cover genetics, oyster lines and triploids and discuss future needs with growers, as well as methods for handling shellfish in warm months to ensure quality and health.



JUNE 22, 2016, 6 PM - 8:30 PM

INTERNET AND SOCIAL MEDIA FOR MARKETING YOUR BUSINESS

LOCATION: UM Wye Research & Education Center, Queenstown MD

CONTACT: Don Webster

The internet and social media offer many opportunities for a grower to get information about his or her farm and product to potential consumers. Whether you market oysters yourself or use a broker, people want to know more about you, your company and its products. Join us for an evening with our colleague Dennis McIntosh of Delaware State University, who will show you the benefits of advertising your company using the internet and social media and walk you through the process of creating your own **free web page**. Bring your laptop computer or you can borrow one of ours for this interesting program.

JULY 14, 2016, 9 AM - NOON

WATER COLUMN PRODUCTION FIELD DEMONSTRATION

LOCATION: UM Horn Point Hatchery, Cambridge MD

CONTACT: Shannon Hood, Stacey Willey, Don Meritt or Don Webster

A demonstration oyster farm has been installed at the UM Horn Point Lab so prospective growers can see and gain experience from a variety of culture equipment designed for water column leases. Units include bottom cages, midwater gear and surface floats that are being used in a variety of production and applied research projects. Attendees learn about gear types, mooring techniques, seed options and growing cultchless seed in nursery systems. Includes land and water based demonstrations for conducting successful oyster aquaculture operations.

JULY 20, 2016, 6 PM - 8:30 PM

DATA FOR DECISIONS

LOCATION: UM Wye Research & Education Center, Queenstown MD

CONTACT: Don Webster or Don Meritt

Efficient management of an oyster farm requires data for tracking survival and growth. Using that data allows you to better understand your farm and make decisions for profitable operation. We will show you how to sample oysters to determine which seed is growing better or which grounds are better suited for production. We'll discuss common problems found in taking data, use measurements to illustrate how to analyze it to operate more successfully and demonstrate practical aspects of managing your business with science rather than observation and opinion.

JULY 27, 2016, 6 PM - 8:30 PM

TAX MANAGEMENT FOR AQUACULTURE

LOCATION: UM Wye Research & Education Center, Queenstown MD

CONTACT: Matt Parker or Don Webster

Aquaculture is agriculture and growers can profit by using many agricultural tax benefits. Join us for this workshop where we discuss aspects of state and federal tax structure that can affect your bottom line. We'll have a tax expert on hand to answer your questions and provide you with suggestions for how to minimize your taxable income and treat a variety of business decision to enhance the bottom line in your shellfish aquaculture business.

AUGUST 18, 2016, 9 AM - NOON

WATER COLUMN PRODUCTION FIELD DEMONSTRATION

LOCATION: UM Horn Point Hatchery, Cambridge MD

CONTACT: Shannon Hood, Stacey Willey, Don Meritt or Don Webster

A demonstration oyster farm has been installed at the UM Horn Point Lab so prospective growers can see and gain experience from a variety of culture equipment designed for water column leases. Units include bottom cages, midwater gear and surface floats that are being used in a variety of research and production projects. Attendees will learn about different gear, mooring techniques, areas and seed options, growing cultchless seed in nursery systems. Includes on land and in-water demonstrations for conducting successful oyster aquaculture operations.

AUGUST 10, 2016, 6 PM - 8:30 PM

UNDERSTANDING OYSTER DISEASE

LOCATION: UM Horn Point Lab, Cambridge MD

CONTACT: Don Webster or Don Meritt

Oyster diseases such as MSX and Dermo are with us to stay. Understanding them and how they work, as well as what conditions cause epizootics resulting in severe mortality of oysters, is necessary to manage your stocks. We'll discuss the diseases and the current status of them in the bays and relate that to managing animals to make decisions when problems arise. The Oyster Recovery Partnership offers **free disease testing for Dermo** to leaseholders through the University of Maryland's Paynter Lab. If you have taken advantage of this service, please **bring your results** and we can show you how to read and use them in your business.

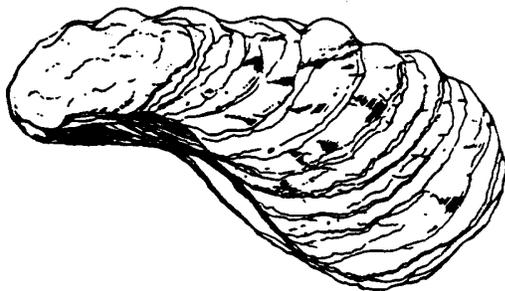
AUGUST 17, 2016, 9 AM - 3 PM

MARKETING AND SALES FOR SHELLFISH GROWERS

LOCATION: UM Wye Research & Education Center, Queenstown MD

CONTACT: Matt Parker or Don Webster

One of the most important aspects of building a shellfish aquaculture business is identifying your markets prior to getting into production. This is not only a recommended practice but a critical



one. As we know - you don't make money raising oysters; you make money by selling them. We'll bring together speakers to provide you with information on how to assess a variety of options for selling your shellfish to determine what buyers want and how to reach desired markets. From branding to packaging and transportation, important decisions must be made that will affect

the profit in your business. You will learn about how to cultivate relationships with potential buyers and determine what they want while generating sales, keeping customers and assessing directions for the future of your shellfish aquaculture operation.

SEPTEMBER 13-15, 2016, 8:30 AM - 4:30 PM

SEAFOOD HACCP BASIC COURSE

LOCATION: University of Maryland Eastern Shore, Princess Anne MD

CONTACT: Cathy Liu

This three-day course will be taught by Seafood HACCP Alliance (SA) instructor(s). The goal is to assist you in meeting the training requirements established under the FDA mandatory seafood HACCP regulation (21 CFR Part 123). You can take this course by choosing one of two options: 1) Attend an in-person course taught by SA HACCP instructor(s), or 2) Take the course in two parts or "segments". Segment One is a self-paced internet course hosted by Cornell University. Upon completion, you will be email a course completion notice. For Segment Two, attend a one-day course taught by SA instructors. **(NOTE: A Seafood HACCP Segment One Course completion notice is required to register for the Segment Two course)**

SEPTEMBER 14, 2016, 6 PM - 8:30 PM

UNDERSTANDING SIDESCAN SONAR CHARTS OF YOUR LEASE

LOCATION: UM Wye Research & Education Center, Queenstown MD

CONTACT: Don Webster

Side-scan sonar offers a way to visualize your lease and understand the contours and geographical features on it including the hard and soft areas that can lead to higher on-bottom seed survival. We will discuss the resulting charts and how to read them, as well as the advantages of mapping your grounds to determine their status. If you have charts of your lease that have been completed, you are invited to bring them to discuss and learn more about the bottom areas you are growing oysters on. The Oyster Recovery Partnership offers side-scan mapping services – the service is free to first time leaseholders.

SEPTEMBER 20 & 22, 2016, 9 AM - 3:30 PM

BUSINESS PLANNING FOR SHELLFISH GROWERS

LOCATION: UM Wye Research & Education Center, Queenstown MD (SEP 20) & Calvert County Extension Office, Prince Frederick MD (SEP 22)

CONTACT: Matt Parker or Don Webster

Good planning can help you get your business going, be used to obtain financing and keep your operation running for optimum profitability. We'll go through business start-ups and factors that are needed to address during formation. Then we'll go step by step through development of a business plan that can be used to identify areas for improvement. Financial lenders require a proper business plan prior to making loans so putting together a strong one can help with that important aspect of business formation. We'll use the spreadsheet programs that we've developed especially for shellfish aquaculture and show you how to use them as important tools to track the fitness of your business and manage it to get the most profit from it. **Feel free to bring your personal laptop or you can arrange to use one of ours for the program.**

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OCTOBER 6, 2016, 6 PM - 8:30 PM

UNDERSTANDING OYSTER PESTS AND PREDATORS

LOCATION: UM Horn Point Lab, Cambridge MD

CONTACT: Don Webster or Don Meritt

Many organisms are part of the oyster community. Some are harmless to your animals but others can damage or kill them or affect their looks to consumers, which can cause you problems with marketability and price received. We'll show you many of the common organisms that are found in the Bay such as *Polydora*, a worm that causes unsightly marks inside an oyster's shell; *Cliona*, a boring sponge that uses chemicals to eat away shell from the outside and can cause it to crumble; *Cownose rays*, that roam in schools and affect both clam and oyster beds. We'll discuss the species, teach you how to watch for them and provide you with research that can help you learn to deal with these problems.

NOVEMBER 9 & 10, 2016, 6 PM - 8:30 PM

REMOTE SETTING FALL GROWER MEETINGS

LOCATION: Calvert County Extension Office, Prince Frederick (NOV 9) & AREL Building, UM Horn Point Lab, Cambridge MD (NOV 10)

CONTACT: Don Webster or Don Meritt

Meetings for those who participated in the 2016 Remote Setting Training Program to discuss the outcome of the 2016 production season and identify problems encountered. Suggestions for new rules and changes for 2017 will allow growers wanting to participate in future to plan their operations. Meetings are held regionally to accommodate growers from all areas of the state.

CONFERENCES AND TRADE SHOWS

JANUARY 11-13, 2017, DAILY

NORTHEAST AQUACULTURE CONFERENCE AND EXPO (NACE)

LOCATION: Omni Hotel, Providence RI

CONTACT: <http://www.northeastaquaculture.org/>

NACE is a biennial conference and trade show supported by several organizations in the United States and Canada as well as the USDA funded Northeast Regional Aquaculture Center, and is held in New England states. NACE is three days long and includes many seminars with practical information for growers and a chance to interact with growers from other states. For the most up to date information on registration, lodging and program schedule, check the website.

JANUARY 14, 2017, 11 AM - 3 PM

AQUACULTURE SEMINARS - EAST COAST COMMERCIAL FISHERMEN'S AND AQUACULTURE TRADE EXPO

LOCATION: Ocean City Convention Center, Ocean City MD

CONTACT: Don Webster

Speakers cover areas of interest to Mid Atlantic shellfish growers with speakers and topics to be determined based on industry input and surveys. The show will be in its 43th year and we expect a large crowd of growers to attend. An **entry fee is required** to attend the Expo but the seminar program is included with show registration and there are numerous exhibitors with equipment and supplies of interest to growers. Check with the contact or visit the Maryland Watermen's Association website for the latest information on the show.



CONTACTS AND REFERENCE INFORMATION

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University of Maryland Extension Aquaculture Website and Facebook
<https://extension.umd.edu/aquaculture>
<https://www.facebook.com/marylandaquaculture/>

UMCES Horn Point Hatchery Website and Facebook
<http://hatchery.hpl.umces.edu/>
<https://www.facebook.com/Horn-Point-Laboratory-Oyster-Hatchery-105211906226392/>

MD Department of Natural Resources Lease Siting Tool
<http://dnrweb.dnr.state.md.us/fisheries/aquatool/aquatool.asp>

Oyster Recovery Partnership Aquaculture Products (larvae, seed and shell)
<http://oysterrecovery.org/we-do/aquaculture-seed/>