How to Start and Maintain an Oyster Garden

Step Six: Set Up and Maintain the Garden

Set Up

Most people find setting up and maintaining an oyster garden quite easy and enjoyable. By setting up your oysters in containment systems suspended above the bottom, both the quantity and quality of the food available to the oyster is improved and you've generally made life easier for them.

There are no strict guidelines regarding the best position in the water column to place the oysters. Often raising the oysters as little as 6 inches above the bottom is enough to reduce the amount of suspended sediments which they must filter and this improves their growth rates. Most people find it convenient to tie their containment systems to their dock as in the photos on pages 8 and 9. Keep in mind performance is very site specific and depends on water depth and food availability.

Placement of oysters in racks or bags in the intertidal zone can have advantages which include easy access to your oysters at low tide, fouling control, and predator protection. However, extended exposure out of the water reduces the feeding time available for oysters and reduces growth rates. If intertidal culture sites are used, oysters should be placed in the low intertidal area to reduce exposure to extremes of heat and cold.

The steps below are for growing oysters in a Taylor float. However, the basic approach can be adapted to mesh bags and cages.

1. Secure floats in the water with ropes or other means to keep them stationary. Try to place float(s) in a low wave action setting.

2. Place 20 mm seed oysters in 3/16" mesh bags at a density not exceeding 1000 oysters/bag in Taylor float. (Numbers will vary in other floats.) Remember – you may want to initiate this step in late September after the greatest threat of Dermo infection has passed.

3. After 2 - 6 weeks, depending upon growth rates, remove oysters from the small mesh size bag(s) and place them into larger mesh size bags. Alternatively, place the oysters into a float with ½" mesh lining. Densities within a 2 ft x 3 ft float should not exceed 1000 small or 500 market size oysters. Some growers prefer to keep oysters in 3/8" - 1/2" mesh bags throughout the growing cycle. If this is done, densities should be reduced to about 200 oysters/bag.

Maintain

Maintaining an oyster garden is a little like caring for a vegetable garden, although many find it easier. But like vegetable gardening, it's a good idea to stay on top of things and check on your oysters regularly.

The containment system should be cleaned periodically. The cleaning schedule will vary according to conditions in your area, but usually every 3-4 weeks in winter and every 2 weeks in summer is sufficient.

Fouling (growth of small organisms) on floats, bags, and oysters can be removed by washing with water (fresh or salt) and scrubbing with a stiff brush. High pressure washing is sometimes required to remove firmly attached organisms. Care must be taken not to damage small oysters when using high pressure washers. In some locations the settlement of barnacles, mussels, and even oysters onto the floats can be a particular problem, since these are not easily washed off.

Hydroids are colonial animals that can cover the surface of your oyster garden bag or float and reduce water flow into your garden. Remove this algae-like animal with freshwater and a brush, or allow your floats to air and then brush them off. Photo courtesy of VIMS.

Parasites, such as flatworms, can kill your oysters. If detected early enough, these animals can be removed using a **brine dip**. A brine dip should be used only with oysters greater than 10 mm. Smaller oysters will die from the procedure. Leave oysters (>10mm) out of the water for about one hour before dipping to ensure they are closed. Make a brine solution by dissolving 25 pounds of salt in 10 gallons of estuarine water (plastic trash cans work well). Leave oysters in the bags and dip and agitate each bag for five minutes. Leave the bags out of water for another hour or two then rinse them thoroughly before placing them back into the water. The amount of time that oysters should be left out of the water will depend upon their size and the weather conditions. If cleaning small oysters on a very hot day, the times given above should be reduced.

An alternative to the brine dip is to simply raise the bags above the low water mark so they are exposed to the sun at low tide. This method should also kill the

flatworms but not the oysters. Occasionally flipping the bags over in the water can also help to control fouling and improve water flow to the oysters. Make sure oysters are spread evenly in the bag, allowing all oysters space to feed and grow.

You may occasionally find dead oysters in your containment system. You should remove the dead oysters. However, clean, empty shells provide "nests" for beneficial small fish such as blennies and gobies so don't throw them out! One of the benefits of your oyster garden is the provision of habitat to other animals, so do what you can to help out the welcome visitors to your garden. See pages 18 and 19 to learn about the animals that will be attracted to your oyster garden.

If a storm is coming, be sure ropes are secure and your name and address are on your float. Use a waterproof sharpie marker. During more intense storms – hurricanes, tropical storms and northeasters – it is best to take your floats out of the water and store them in a safe, cool and dry place. The oysters will be fine out of the water for 1-2 days. The larger the oyster, the greater its ability to withstand being out of the water.

School Children Growing Oysters

Teachers are showing students that they CAN make a difference in our environment. Each year, Oyster Reef Keepers of Virginia provides schools in coastal Virginia with the opportunity to participate in a student oyster restoration program called "Schools Restoring Oysters to the Chesapeake." This program engages 7,250 students from 145 K-12 grade classes each year in a Bay-wide effort to restore the oyster population. As of 2005, 48,500 students have contributed a remarkable 2.7 million oysters to sanctuary reefs in Virginia. This project takes a hands-on approach to education, allows students to execute authentic science, is based on scientifically sound restoration strategies, and meets multiple Virginia Standards of Learning.

Students transplanting oysters. Photo courtesy of ORK.

Each September, classes receive 2,000 baby oysters from ORKV and deploy them in Taylor Floats in near their school, where the oysters are grown out. Each month, students visit their oysters and measure their growth rates and mortality and monitor the water chemistry. They clean and maintain their oysters and containers, and identify natural and human-induced actions that may impact oysters and water quality. At the end of the school year, classes transplant their oysters onto sanctuary reefs where their oysters will spawn and provide offspring to revitalize future oyster generations.

By growing and transplanting oysters, students gain knowledge of ecology, oyster biology, and water quality. They also get a chance to take part in authentic scientific research and learn field sampling techniques. In addition to academic skills, students gain a connection to our coast and an empowering sense that they have the ability to improve it.

Oyster Reef Keepers of Virginia provides teachers with a training workshop, oysters, water chemistry equipment, a Taylor Float, and classroom curricula and teaching resources, all for $90. Teachers interested in joining the program should contact Laurie Carroll Sorabella at Oyster Reef Keepers of Virginia via e-mail (oysterreefkeeper@yahoo.com) or telephone (757-460-1200), or visit our upcoming web site www.oysterreefkeepers.org.