



Remote Setting Oysters: Ordering & Handling Larvae

LARVAE ARE MICROSCOPIC, FREE-SWIMMING OYSTERS THAT develop from eggs and sperm spawned by adult oysters. Near the end of a 10-15 day swimming period, the larvae develop an eye-spot (seen as a black dot) on their shells and grow a foot that allows them to crawl. These are now called pediveliger larvae. During the last 72 hours of being a pediveliger they search for a suitable surface to set or cement themselves onto.



Remote setting allows growers to purchase pediveliger larvae from a hatchery and produce their own spat and seed. This relieves expenses associated with hatchery operations.

ORDERING LARVAE

Follow this basic formula to know how many larvae to order per set. Average setting success rate is 20 to 30%—so adding 100 larvae per oyster shell to the tank may produce on average 20 to 30 spat per shell. Here is just one example:

- If you have a tank that is 10ft x 8ft x 4ft (320 cubic feet), it can hold about 300 shell bags and/or 64,500 shells (using a standard shell bag conversion of about 1 bag per cubic foot and about 215 shells per bag). No matter what cultch you use, do not tightly pack it in the bags or in the tank, or the larvae won't be able to filter through for a good, even set.
- For that amount of shell, you will need to purchase approximately 6.5 million larvae, based on 100 larvae per shell. This will result in about 1.3 to 1.9 million spat, based on a 20 to 30% success rate.
- Of the 20 spat per shell bedded, 3 market oysters may be achieved under favorable growing conditions.

HANDLING LARVAE

Larvae are usually shipped in a styrofoam cooler, wrapped in nylon cloth or coffee filter and moist paper toweling.

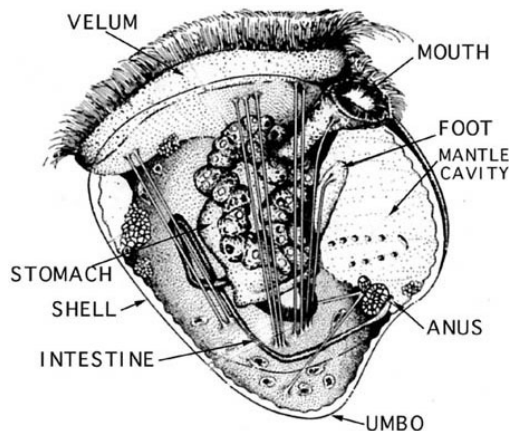
There should be no fishy odor.

Allow the individually wrapped larvae balls to reach room temperature which takes approximately 15-30 minutes. Unwrap and place the larvae ball in a clean bucket of setting tank water. The setting tank water should have a salinity of 10-20 ppt and be 28 degrees C. This reduces larvae stress and allows you to check for swimming larvae.

After the larvae begin to move do not wait long before adding them to your setting tank, or the larvae will begin setting on the bucket.

EVALUATING LARVAE

Buying a microscope (at least 10x magnification) to look at larvae and freshly set spat is a good investment.



During microscopic examination, good-quality larvae can be determined by active swimming, healthy gut, eye-spot, and foot development.

SIZE: Individual larvae should be approximately 285- 350 microns from hinge (umbo) to bill.

EYE-SPOT: This should be darkly colored and 15-17 microns in diameter.

MOVEMENT: Most larvae should be actively swimming with an extended velum (swimming organ). Swimming may not occur, however, after extended refrigeration storage (>3 days) crawling with the extended foot should be noticeable. Give the larvae time to acclimate to the temperature and salinity of the water if no movement is noticed immediately.



More information can be found at <https://www.wlf.louisiana.gov/page/oyster-importation> or by contacting the LDWF by phone at (504) 765-0175 or by email at dkinsey@wlf.la.gov

Find a detailed manual on how to remote set oysters: <https://www.lafisheriesforward.org/oyster/>

