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Optimal stocking density of the eastern oyster (*Crassostrea virginica*) in upwellers at the Sound School

Crassostrea virginica, commonly known as the eastern oyster, is a filter-feeding bivalve that inhabits the eastern coast of the U.S. in the mid-Atlantic. Data taken from the Virginia Institute of Marine Science shows that in only one year, the value of oysters (28 million single oysters) went up from \$6.7 million in 2011 to \$9.5 million in 2012 (NOAA). *C. virginica* has been aquacultured at the Sound School Aquaculture Center (Sound School) in West Haven, CT for many years; however, the optimal stocking density for the oysters in the upwelling stage had yet to be determined. By studying three stocking densities of oysters in this system, an optimal density for oyster growth can be determined: heavy (1.6L), medium (.8L), and light (.3L). All three densities experienced volumetric growth, but the light density had the greatest growth. The light stocking density increased 21.5x in size, the medium density increased 12.2x in size, and the heavy density increased only 7.5x in size. Even though the light stocking density (approximately .3L of 3mm oysters per 14.5-inch diameter silo) had the best growth, it is not the optimal stocking density for the Sound School. The experiment started with 7.925 L of oysters. In order to start all the silos at a stocking density of .3L, 27 silos would be needed, and only 12 silos are available in the Sound School upweller. Further research can determine the optimal stocking density between light and medium, so that space can be optimized at the Sound School.