

Professional Science Master's in Ocean Food Systems

I am a Midwesterner who fell in love with the Northeastern region of America while pursuing my undergraduate degree. During my college years, I began oyster shucking and catering. I realized that my passion was these bivalves mollusks, but opted to complete my degree instead. I met my wife while shucking, and have maintained an avid interest since my college days. I am currently working in finance, but intend to pursue my interest in oysters too. My first step is pursuing a Master's program in Ocean Food Systems so I can extend the knowledge about marine life with the insights that this course will provide. I intend to find out what makes oysters unique and beneficial while gaining skills to harness technological advancements to produce high-quality oysters.

My future career goals involve investing in existing oyster farms armed with appropriate information about them. This objective lies in growing oysters from small seeds into the delicious food offered in restaurants in a controlled environment. Oysters take 24 months to fully mature under standard weather conditions in the maritime surrounding. However, they help filter large amounts of water, making the marine ecosystem more habitable for aqua life. Oysters also absorb carbon and convert it into calcium carbonate to strengthen their shells. Nevertheless, their most critical contribution concerns nitrogen absorption, which is a harmful greenhouse gas. The knowledge I acquire during this program will be essential in enabling me to choose an appropriate site depending on the tide and possible predators. An overall target involves developing, owning, and operating numerous oyster farms in Maine.

My specific focus while pursuing ocean food systems is marrying both oyster farming and environmental conservation through the restoration of natural oyster reefs. Many oysters grow in cages or rock cracks, which helps provide a habitat for other marine life, such as fish or crabs. Therefore, rebuilding oyster reefs, which have been destroyed by over-harvesting

and environmental pollution, will help regenerate the population of these bivalve mollusks. Since oysters result in recreational, economic, and ecological merits, reef restorations are essential. I am hopeful that engaging in this program will empower me with further insight into the techniques useful in such projects and specific areas as reference. I intend to conduct my research primarily in Maine and in the Eastern seaboard ranging from Maine to Georgia, where the decline of oysters is most prevalent.

I am interested in working on multiple questions regarding the current industrial sector. First, I intend to explore: how can quality (often boutique) oyster farms achieve some semblance of scale? Also, while attempting to scaling up, how can any expansion efforts contribute to the conservation of the surroundings and oyster reef restorations? By exploring these two questions, I can determine whether it is possible to achieve both feats. Moreover, I intend to find out: what technologies small-scale oyster farmers could benefit from reduced costs making for the most efficient improvements? Lastly, I want to discover: does it make sense for boutique farmers to double-down and invest in specific technologies, such as upwelling, for increased control? Will such a venture better chances at diversifying by selling oyster seeds, or they should maintain their current techniques of farming? This last consideration is exceptionally fundamental due to the red tides and numerous other risks oyster farmers face as it would help mitigate potential damages.