

Shellfish Aquaculture Career Pathway

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INTRODUCTION

As a follow-up to the [Maine Aquaculture Workforce Development Strategy](#), The Maine Aquaculture Association (MAA), Gulf of Maine Research Institute (GMRI), and Educate Maine (EM), with sponsorship from FocusMaine, have collaborated on a suite of Maine Aquaculture Occupational Standards designed to help aquaculture workforce training providers understand the core technical skills and knowledge aquaculture employers need in their workforce. This document is a supplement to the Maine Aquaculture Occupational Standards for Shellfish and Sea Vegetables,¹ designed to provide an overview of the most common job types and entry points in Maine's shellfish aquaculture sector today. It is intended to help jobseekers and training institutions understand the career pathways and opportunity of shellfish aquaculture.

Please contact Chris Vonderweidt at GMRI at cvonderweidt@gmri.org for more information about the career pathway map; and Christian Brayden, Project Manager at the Maine Aquaculture Association, at christian@maineaqua.org for more information about the Occupational Standards.

SHELLFISH FARM POSITIONS

There are three primary job categories in Maine's shellfish aquaculture sector - farm hand (technical and nontechnical), crew chief, and manager. These job categories and the required skills may vary slightly from farm to farm (most notably overlap at small operations and specialization at larger companies) but are generally consistent across the sector. According to data provided by commercial businesses interviewed for the Workforce Strategy, farm hand² and management represent 49% and 18% of Maine's aquaculture workforce, respectively. Average salaries for a technical farm hand and management are \$34,106 and \$51,226 respectively.

Farm Hand

Farm hands (synonymous with 'river crew' or 'deck hand') are the heart of any sea farm because they enable the core functions of shellfish production. Duties typically range from basic physical labor such as power washing oysters or counting and bagging shellfish to more technical functions such as operating small vessels and aquaculture machinery or installing and maintaining gear. Strong work ethic, basic employability skills, and adherence to safety protocols are critical to succeeding as a farm hand and moving up the career ladder.

Crew Chief

Crew chiefs (synonymous with 'team lead,' 'foreman,' or 'assistant manager') independently carry out specific operational tasks as directed by a manager. They frequently oversee small teams of farm hands and may work independently or at the direction of a manager. Duties touch on all areas of operation and production such as building, installing, and repairing gear or harvesting market ready product. A crew chief needs the same core skills as a farm hand plus an intermediate-level ability in vessel operations and safety protocols, shellfish culture practices, and team management.

¹ Available on the Maine Aquaculture Association's website at <https://maineaqua.org/education/>

² Categorized as 'Technician /Operative' in the report.

Manager

A shellfish farm manager typically oversees one or more operational 'arms' at the company such as shoreside operations or marine growout. They are responsible for all activities in their assigned area including overseeing and assigning daily tasks to crew chiefs, designing and implementing systems, maintaining records, securing permits, and adhering to regulations; and must coordinate their activities with the other areas of the business. Managers must possess all the hard and soft skills of farm hand and crew chief plus advanced proficiency in shellfish culture/operations, regulatory compliance, and managing personnel/teams. Basic to intermediate finance and business expertise may also be required of a manager.

Table 1. Required and suggested (lighter color) competencies for each position. See Maine Shellfish & Sea Vegetables Occupational Standards for additional detail.

Competency	Responsibility / Knowledge Level	Position Title		
		Farm Hand (Technical)	Crew Chief	Manager
Vessel & Vehicle Operations & Safety	1			
	2			
	3			
	4			
Shellfish Culture	1			
	2			
	3			
	4			
Food Safety & Regulatory Compliance	1			
	2			
	3			
	4			
Essential Employment Skills	1			
	2			
	3			
	4			
Team Management	1			
	2			
	3			
	4			
Operations Management	1			
	2			
	3			
	4			
Business Management	1			
	2			
	3			
	4			
Human Resource Management	1			
	2			
	3			
	4			

Owner/Entrepreneur

Shellfish aquaculture offers enormous opportunity for entrepreneurs looking to start their own sea farm. Ideally, a shellfish entrepreneur would possess the skillset of a manager with a deeper knowledge of business and finance. However, most of Maine's successful sea farm owners learned many of the important skills along the way. Keys to success are choosing a good lease site, hard work, perseverance, and prioritizing business planning alongside husbandry.

Training and Career Pathways

Sea farms seek employees with the right combination of hard and soft skills (described above) and experience. The most common point of entry for workers new to aquaculture is as a farm hand. Experience is what allows one to climb the career ladder because it demonstrates that a worker possesses the right intangibles skills (most notably work ethic) and has mastered various occupational tasks. Promotion from farm hand can happen relatively quickly, especially when an employee comes in with a solid foundation of necessary technical and soft skills through vocational-oriented aquaculture workforce training programs.

Several Maine institutions at the Career Technical High School (CTE), Community College, and higher-education level are developing aquaculture programs to meet the growing workforce needs of Maine's aquaculture industry. Vocationally-oriented aquaculture programs can also provide a solid foundation of skills to entrepreneurs looking to start their own sea farm. Figure 1 shows the typical career progression with shellfish aquaculture.

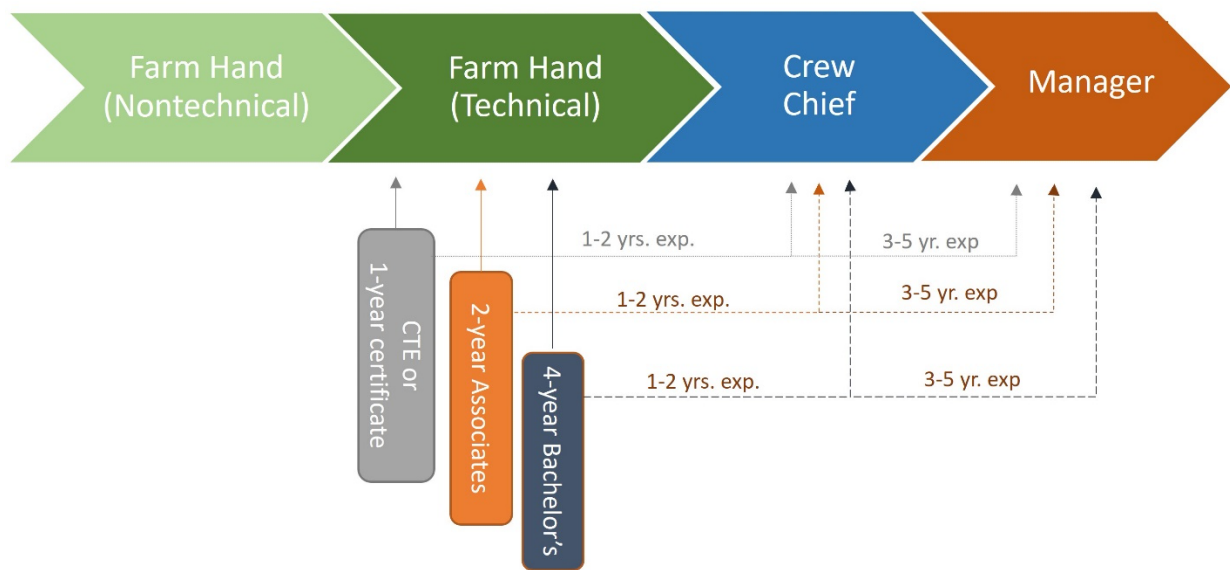


Figure 1. Typical career progression at a Maine shellfish farm. Trained employees typically begin at the technical farm hand position and if equipped with the right skillset and attitude, can work their way up to a higher tier position quickly.