QUARTERLY PROJECT REPORT

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OVERVIEW

The Alaska oyster industry has solely relied on the Pacific oyster (Magallana gigas) for shellfish farming. The “Other Mariculture Species” project, being conducted by Blue Starr Oyster Co., is working to build resilience and diversity in the sector by assessing the feasibility of growing novel oyster species: Kumamoto oysters (Magallana sikamea), Virginica oysters (Crassostrea virginica), and Olympia oysters (Ostrea lurida). Blue Starr Oyster Co. is leveraging its long-standing shellfish cultivation expertise to evaluate the growth potential of these species in Southeast Alaska and report on the results of each species’ grow-out.

PROJECT UPDATE

The “Other Mariculture Species” project has been moving forward well, with warmer summer temperatures resulting in the growth of most oyster seed. Throughout this quarter of the project (July - September, 2025), the growth of the oyster seed has continued to be tracked alongside major water quality parameters, including pH, temperature, and salinity.

Blue Starr Oyster Co. acquired ~200,000 *Virginica* oyster seed, which were deployed into the FLUPSY on July 28th. Initial growth is not as strong as anticipated; however, they continue to be monitored. A second cohort of ~100,000 Kumamotos (K2) were acquired to verify the rapid growth of the first cohort as a second sample set. They were added to the FLUPSY on July 11th and are showing strong initial growth as well. Initial Kumamoto (K1) seed and Pacific oysters (control group) are now greater than 12 mm, with some exceeding 16 mm, which is a positive growth rate.

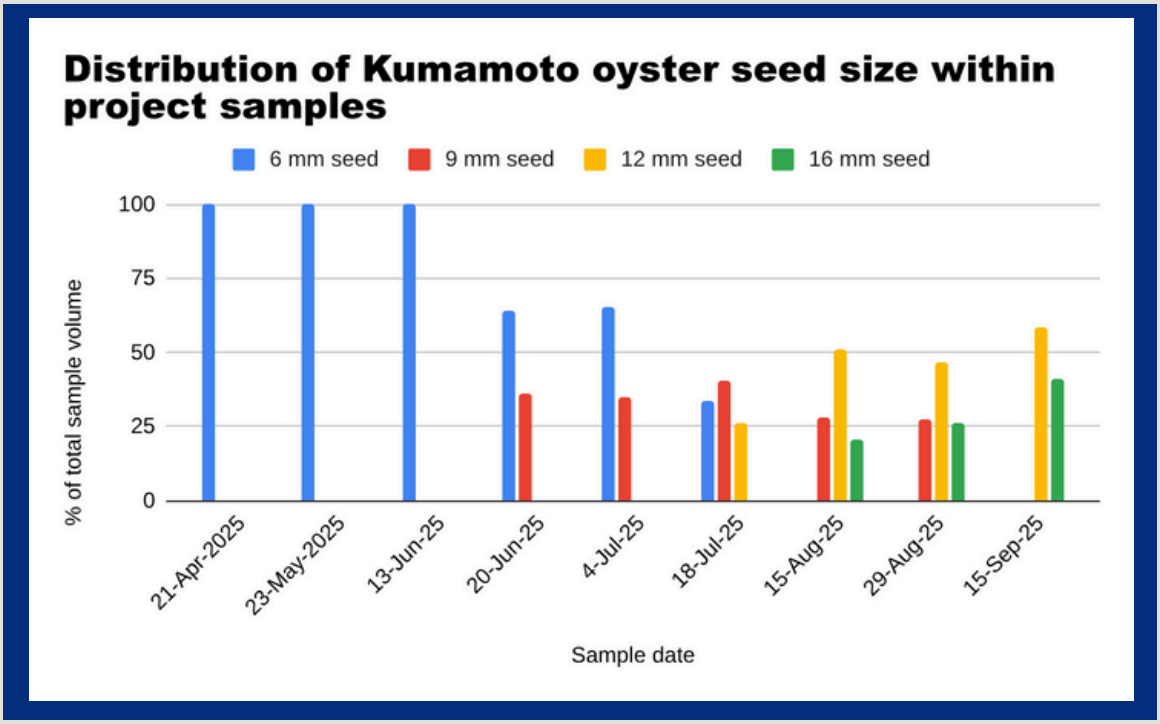
The Kumamoto growth has exceeded expectations. Observations of larger Kumamoto seed have shown some physical similarity to Pacific oysters, lacking the typical features of a Kumamoto. The team is currently consulting with scientists at UAF on the verification of our Kumamoto group’s genome.

Acquiring seed for the Olympia oyster species continues to be delayed due to interstate regulations for hatcheries. While it is too late to deploy any new seed for the 2025 season, we will work to acquire it for 2026 if possible.

MILESTONES

- A second cohort of 100,000, 7 mm Kumamotos was ordered to act as a second sample in the Kumamoto trial. The first cohort has been growing very well, and the team wanted a larger sample size for the project. This seed was deployed into the FLUPSY on July 11th and is also growing well.
- A cohort of 200,000, 3-5 mm Virginica oyster seed was received and deployed into the FLUPSY on July 28th. While initial growth is not comparable to Pacifics, it is an exciting milestone to get a new species into the water.
- Ongoing measurements indicate successful growth of the Kumamoto oysters as well as the control group of Pacifics, with some already exceeding 16 mm in size (right image)

The chart below shows the size distribution of Kumamoto (K1) oyster seed in each project sample. At first, 100% of the oyster seed was 6 mm or smaller. Over time, oyster seed reach the next size grade, and the distribution shifts.



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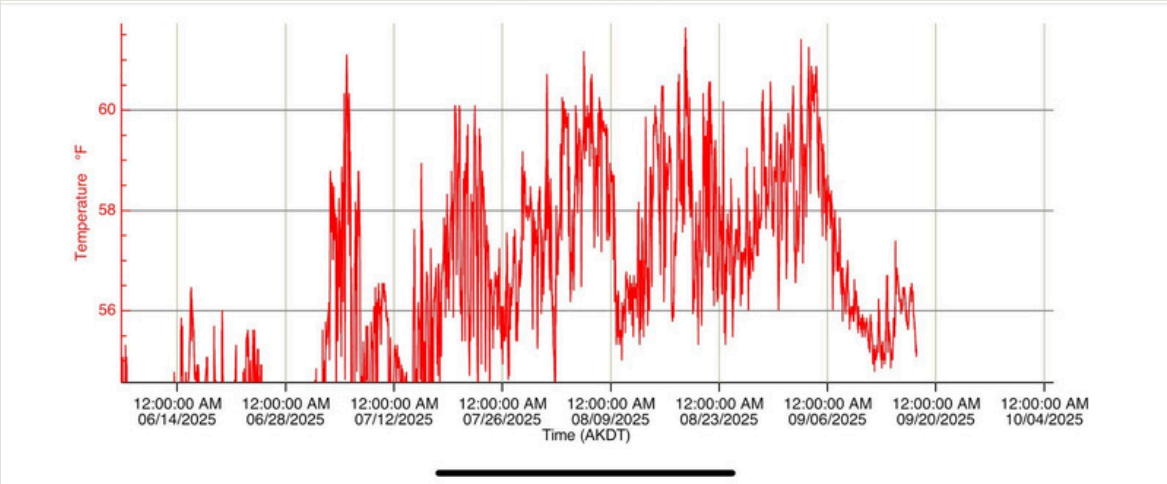


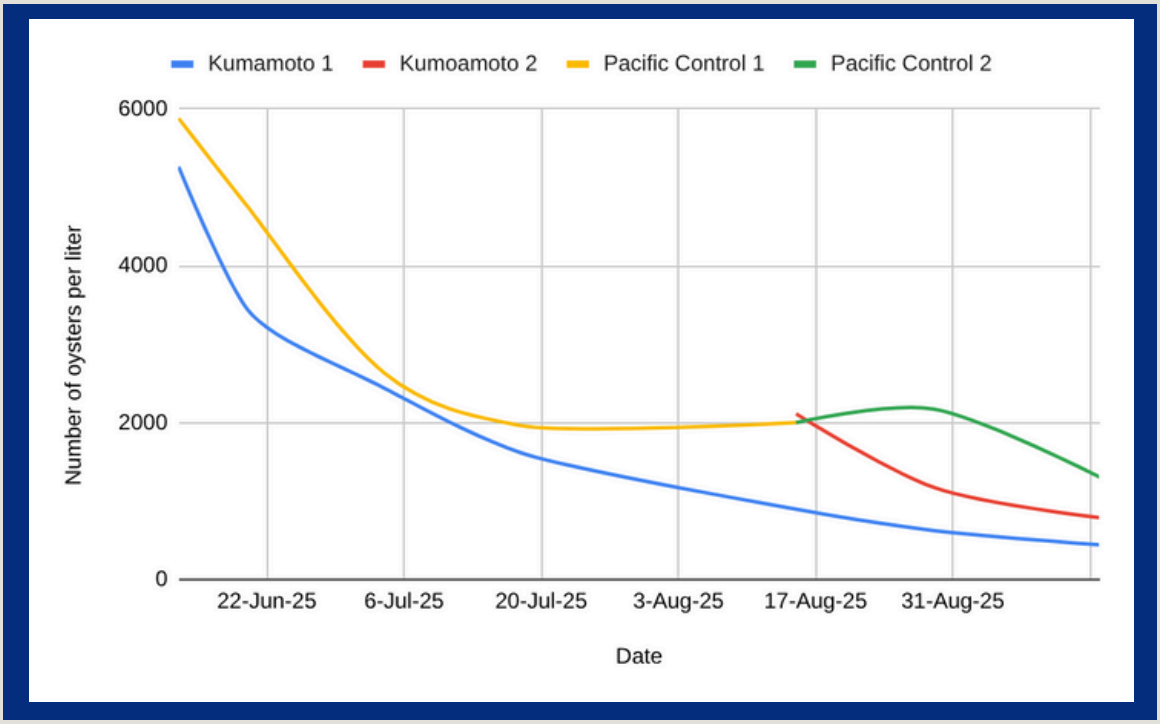
Ocean Temperature (°F), Jinhi Bay, April - Sept, 2025

The chart above shows ocean temperature readings over the course of the first two quarters. The temperatures have reached a peak of 61.5°F.

CHALLENGES

- There have been ongoing delays in receiving Olympia oyster seed due to regulatory hurdles. Navigation of these hurdles is ongoing.
- Our first control group of Pacific oysters did not grow well. Another control group of 2025 Pacific oyster seed was purchased at a size that matched the size of the Kumamotos. This second control group is growing very well and is a better comparison.
- While the successful growth of the Kumamoto oysters is exciting, there is some uncertainty about the oysters actually being Kumamotos. As they are growing, the Kumamotos are not only growing at a very similar rate to Pacifics, but they are also mostly lacking typical physical traits of a Kumamoto and showing physical traits that are similar to Pacific oysters. These similarities may be due to the oysters growing under the same conditions; however, the team is exploring ways to test the oysters with UAF scientists to verify their genome.

This chart shows the number of oysters in 1 liter of our Kumamoto and control groups, which has an inverse relationship with oyster size. i.e., The lower the number, the larger the oysters have grown.



Number of Oysters in 1 liter volume. Kumamoto vs. Pacific (control group). Note that Pacific control group 1 was discontinued due to poor growth, and Pacific control group 2 was substituted on August