QUARTERLY PROJECT REPORT

30 December, 2025

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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 continued to provide many learning opportunities through the processes of acquiring and deploying oyster seed for new species. Throughout this quarter of the project (October - December, 2025), we continued to monitor oyster growth, delved into genetics, and wrapped up the FLUPSY for the 2025 season. The final data collection for 2025 was on the 15th of October, and the oysters will not be monitored again until the spring.

Oyster growth slowed through the beginning of this quarter as water temperatures and food availability declined with the coming of winter. The Virginica oysters continued to grow, though slowly, through the beginning of the quarter before being set into floating baskets, along with all the other farm oysters, for the winter. In the spring, we will assess their survival rate over winter and continue to monitor their growth into 2026.

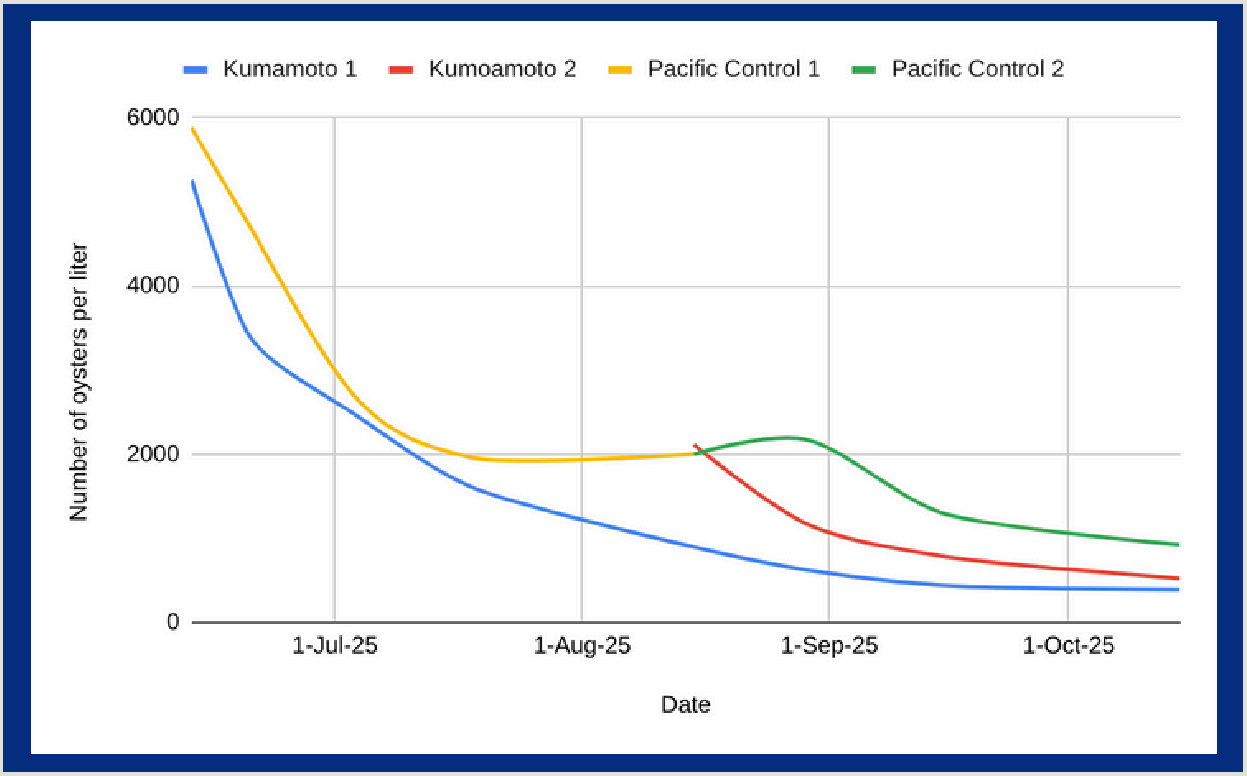
Throughout the project, the Kumamoto seed growth has been much faster than expected and has shown significant physical similarity to Pacific oysters. Working with scientists at UAF, we sent samples of our Kumamoto oysters and Pacific oyster control to the UAF lab to undergo DNA testing to assess the genetics of the Kumamoto oysters.

Alorah D. Bliese, a Ph.D student at UAF, worked with our samples and put them through several tests to compare the DNA of each sample. Her careful research and analysis are summarized in the attached report that describes her processes and the results, which suggest that the Kumamoto oysters in our possession are not true Kumamoto oysters. This is most clearly visualized in Fig. 4 of her attached report, which shows the “ITS2 Analysis” comparing the two samples, where both samples have what appears to be the same result.

Upon contact with the Kumamoto hatchery, we were informed that the hatchery had some contamination of Pacific oyster with their Kumamoto seed batches this past season, causing some seed to be hybridized. Other farms that received this batch of seed had their animals to show anywhere from 60/40 to 90/10 Kumo/Pacific characteristics. This suggests that the oysters we have been growing this season are a hybrid Pacific-Kumamoto oyster that is expressing closer to the 60/40 Kumo/Pacific characteristics, as our oysters appear to have strong Pacific physical and growth traits. There is ongoing discussion about sourcing true Kumamotos for the 2026 season, though it may prove challenging based on availability. While this is an unfortunate setback in the project, there may be potential here to better understand hybrid oyster species.

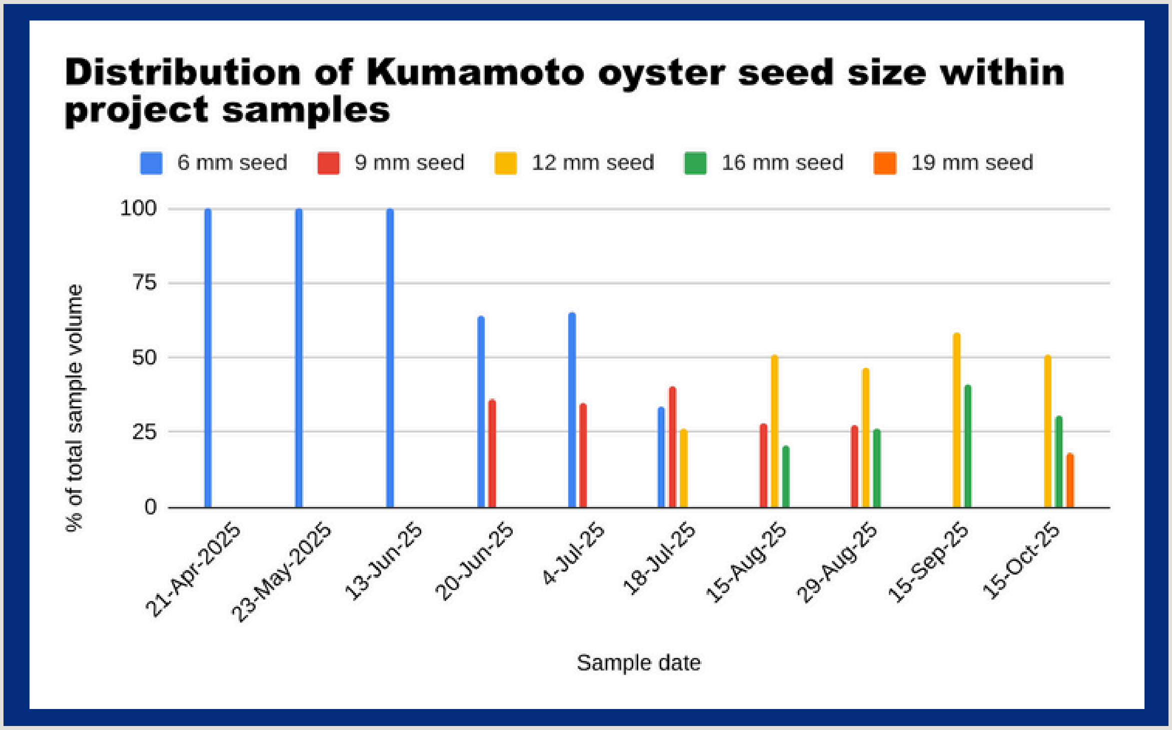
Acquiring seed for the Olympia oyster species continues to be delayed due to interstate regulations for hatcheries. We remain in contact with hatcheries in Washington in an attempt to get the interstate transfer process approved and receive Olympia seed for 2026.

The chart below 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 15th.

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. This graph represents the full 2025 growing season.



Kumamoto seed size distribution over the 2025 growing season.

Blue Starr Oyster Co.