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Benefits of Geoduck Nursery Systems & Predator Exclusion

Pacific Shellfish Institute Quarterly Progress Report

February 26, 2025 - September 30, 2025

Background

The Pacific Shellfish Institute is conducting applied research to support Alaska's mariculture industry, focusing on developing methods and assessing the viability of cultivating geoduck (*Panopea generosa*) under the Southeast Conference Other Mariculture Species grant program.

Project Update

Significant progress has been made during this project period:

- Geoduck nursery, outplant and farming methods have been compiled and shared with current and potential Alaska geoduck farmers, and nursery and hatchery operators.
- Seed was successfully raised in a new nursery system at Oceans Alaska in Ketchikan.
- Nurseried seed were planted on a farm south of Ketchikan, by the farmer and crew.

Key Milestones

Milestone	Details
Personnel Interviews	Interviewed hatchery, nursery, and farm personnel on current methodologies and challenges.
Community Meetings	Conducted meetings with the Ketchikan and Metlakatla communities with project staff and a geoduck farming expert from Washington state. Provided dynamic presentations on proper outplant care and farm maintenance.
Nursery Hitlist	Created the living document "Alaska Geoduck Nursery Hitlist" with water quality targets, food type and rate, and tips on successfully raising seed indoors in sand trays.
Oceans Alaska Setup	Established Oceans Alaska geoduck nursery following hitlist protocols.
Seed Transfer	Successfully transferred geoduck seed from Alutiiq Pride Marine Institute to Oceans Alaska. Seed settled in and fed well in the new nursery system.
Outplant Success	Geoduck seed were outplanted on a farm, using recommended seed predator protection devices and geoduck seed planting methods.

Figure 1. Oceans Alaska nursery system.

Figure 2. Geoduck seed being transferred for planting on a farm.

Challenges

The geoduck seed shipment from the Alutiiq Pride Marine Institute to Oceans Alaska was delayed awaiting a pathology report from ADFG's Fish Pathology Lab. Lab equipment to complete the pathology evaluation had to be replaced after decommissioning due to safety issues. In all, it took three months to complete the pathology report, which greatly delayed the nursery and outplant window and possibly reduced the number of healthy geoduck. This was overcome by reducing the nursery phase of the operation.

Due to the minimal number (2,000) of geoduck seed available in 2025, we propose another nursery and outplant phase of this project if geoduck seed becomes available in 2026. This would allow another year class to be outplanted, hopefully with significantly more numbers.

Geoduck seed is hard to obtain in Alaska due to the limited number of hatchery providers. Hatcheries in operation have consistently low volumes. As an offshoot of this project, we plan to assemble a proposal for a rule change to the Board of Fish to allow geoduck seed imports (British Columbia and Washington state) when they next convene on similar issues, likely March of 2027.

Next Steps & Recommendations

1. Prepare summary documents for growers and operators.
2. Plan for additional nursery and outplant phases in 2026, pending seed availability.
3. Advocate for regulatory changes to facilitate seed imports and support industry growth.

Figure 3. Geoduck farm south of Ketchikan.