

GreenWave Kelp Agricultural Product Development Project Update

January – June 2026

Task 1: Scaling Production and Aggregating Supply of Organic Farm-Grown Bull Kelp (expanded to sugar kelp)

- In Q1 we supported the Kodiak Ocean Growers in planning for coordinated production, harvest, and delivery of sugar kelp for Cascadia biostimulant production in Spring 2026, including a 20,000 lb/day cumulative landing target. This involved developing farm-level "harvest efficiency plans" including written detail of how each Kodiak farm was going to optimize their harvest capability for the 2026 season. In Q2 Lindsay traveled to Kodiak, along with Suzie (the coop coordinator) to support the harvest, stabilization, and processing logistics of over 200,000 lbs of sugar kelp.
- In Q2 we supported individual growers in Cordova and Kodiak with farm-level "kelp tendering contracts" to offset delivery expenses for Cascadia's biostimulant production. In exchange, farmers agreed to track detailed harvest metrics including the time of each harvest, the weight of kelp harvested, how many ft of growline were harvested, and any auxiliary costs (such as labor and fuel,) which will inform our technoeconomic analysis.
- In Q1 & Q2 we supported Sea Quester Farms in planning for production and harvest of bull kelp for Pacific Northwest Organics biostimulant production in Spring 2026, including hosting multiple coordination phone calls and ordering supplies.
- In March of 2026 when Cascadia announced that they were going to cut their order, GreenWave offered to cover shipping costs out of Alaska if it resulted in a higher purchase volume of kelp. We worked with Kristin Smith at Mothers of Millions to procure a vessel contract for transport of 166 IBC totes from Kodiak and Cordova to Prince Rupert, BC.

Task 2: Bull Kelp Harvest Technology Innovation

- In Q1 we advised on the design and supported the build of a new bull kelp harvesting system for Seaquester Farms, featuring an articulating arm and expanded chute. In Q2 the adaptation was built and tested with the harvest of 12,850 lbs of bull kelp.
- In Kodiak, each farm was in charge of their own harvest innovation, but multiple farms chose to work together, including trading harvest labor costs, and utilizing shared equipment such as the "gantry" system developed in 2025 and the Harvest Buddy - a mobile processing barge.

Task 3: Processing Technology Optimization

- In Q1 & Q2 we supported WildSource with the development, set up, and optimization of a kelp processing line capable of processing 200,000 lbs of kelp for Cascadia's biostimulant order. Wildsource ultimately processed over 200,000 lbs of product, which was shredded with a citric acid solution into IBC totes. The totes were then transported and stored on a Kodiak Harbor storage lot until they were recently picked up by a transport vessel to transfer to Prince Rupert, BC.
- In Q1 & Q2 we worked with Kodiak Ocean Growers to establish a plan for an at-sea processing trial utilizing a new auger system. The farmers aspire to process aboard the F/V AK Beauty, but didn't want to jeopardize the order with Cascadia with a new method. This at-sea trial is planned for fall 2026 with wild harvested or residual farmed kelp.
- In Kodiak we also engaged Cascadia and Ryan Pererras, a process engineer and plant operator at the Kodiak Fishmeal plant, to run a small trial of adding an enzyme, Corolase, to the stabilized IBCs, with hopes of creating a more homogenized product. The full results of this trial won't be known until the product has been run through final processing at the Cascadia plant in Port Edward, but the initial results were promising, and Cascadia was pleased with the trial.
- In Juneau, we supported Glacier Valley Warehousing and Pacific Northwest Organics in discussions of processing needs for spring 2026 harvest and equipment and supplies procurement.
- We sourced and delivered 120 IBC containers for Kodiak Ocean Growers, and 10 for Pacific Northwest Organics

Task 4: Biostimulant Product Efficacy Testing

- Began strawberry drought trials of PNWO product with AgMetrics group. No results yet.

Task 5: Techno-Economic Analysis & Retrospective

- We have continued to work with Chris Janke at Small Business Butter to develop an in-depth model of farm-level cost of production data.
- Before the harvest, we distributed data-gathering templates for farmers in Kodiak and Cordova to collect relevant harvest efficiency data.
- Over the last several weeks we've been holding 2 hour interviews with each farm in Kodiak and Cordova to go over the model in detail to ensure data fidelity. Chris Janke is working on some synthesis on cost of production. Additionally, we have cost of stabilization estimates from Wildsource to add to the model.