



How a Salmon Farm Improved Thickening Performance for Low-Solids Aquaculture Sludge



Background & Challenge

Bioretur needed to assess how to better manage low-concentration fish sludge from **aquaculture operations**.

With solids as low as 0.2 to 0.5 g/L, this sludge is **difficult to thicken**, and its characteristics are prone to **variation**, requiring **adaptable** and **compact treatment solutions**.

Variability in production and **changing site conditions** required a flexible approach capable of delivering stable performance while adapting to evolving operating parameters

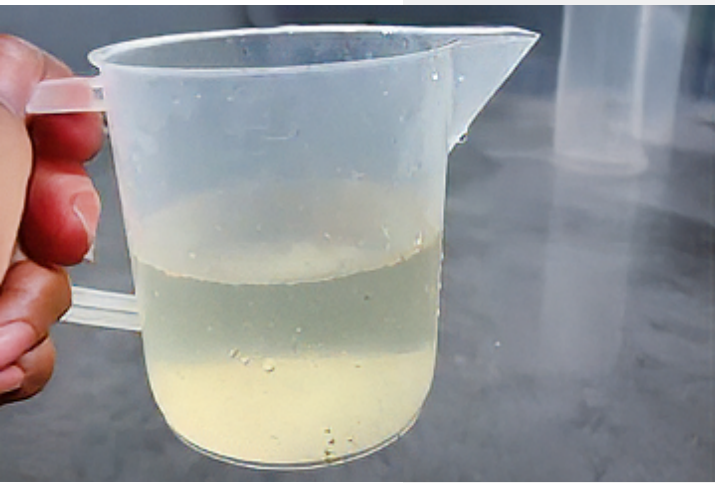
Orege's Solution & Service

Orege deployed a mobile **SLG-F thickening unit** designed to provide a complete and flexible solution for **sludge conditioning, separation, and performance** evaluation.

The objective was to validate thickening performance, solids capture, and filtrate quality under real aquaculture conditions.

Beyond equipment, Orege adapted the setup throughout the campaign to **optimize operating conditions, polymer dosing, and throughput**. The approach also included benchmarking against existing performance and identifying **practical improvements** to support future **full-scale deployment**.





Results and Benefits

Orege demonstrated that SLG-F can effectively thicken **low-concentration aquaculture sludge** under real operating conditions.

The system produced thickened sludge in the **6% to 8% dry solids range**, while achieving high **capture** rates between **93% and 99%** and delivering **clear filtrate**.

Performance results also helped define the optimal operating window, showing that stable and higher dryness levels were achieved at controlled treatment rates.

This provides valuable guidance for **future scale-up** and operational **stability**.

Beyond performance, the project established a credible compact thickening pathway for aquaculture sludge. It also identified key equipment and **process improvements**, supporting the transition toward more efficient and **scalable sludge management**.

Orege helped Bioretur validate a compact and flexible thickening solution, improving sludge handling and supporting future scale-up