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Innovation & Investment

Moleaer: Nanobubble technology a good fit for semi-closed salmon systems

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By Responsible Seafood Advocate

Collaboration with Grieg, CPI Equipment yields sustainability, cost-saving results

A three-company collaboration has reportedly shown that nanobubble technology can aid semi-closed salmon farms to reduce oxygen use, in comparison to existing systems, as well as realize cost savings.

California-based **Moleaer (https://www.moleaer.com/)** announced that its work with Grieg Seafood BC Ltd. and CPI Equipment demonstrated significant advancements for semi-enclosed salmon farming systems. The project, dubbed the CO²L Flow system (pronounced Cool Flow), was conducted by **Grieg Seafood BC (https://griegseafood.com/)** using Moleaer's patented nanobubble technology and the ODiN aeration system from British Columbia-based **CPI Equipment (https://www.cpiequipmentinc.com/)**.

Nanobubble generators inject trillions of oxygen-rich nanobubbles into water supplies, increasing dissolved oxygen (DO) levels at the highest transfer efficiency. Nanobubbles are 2,500 times smaller than a single grain of table salt. Utilizing Moleaer's nanobubble technology resulted in a 75 percent

Nanobubble technology company Moleaer's collaboration with Grieg and CPI Equipment results in lower oxygen use on a semi-closed salmon farm.

reduction in oxygen use, compared to existing technologies.

"The aquaculture industry requires sustainable solutions that enable increases in output without jeopardizing our environment. Our technology is unique because we're delivering nanobubbles with proven benefits in reducing oxygen and energy costs, while remediating the surrounding environment, and producing better water quality and higher output of fish," said Nicholas Dyner, CEO of Moleaer.

"We are committed to implementing sustainable, long-term solutions to address some of the challenges we face as ocean farmers. Using Moleaer's technology, we can safely deploy sea lice barriers down to 15 meters without compromising mixing and dissolved oxygen levels inside the net pen. This is

important for us as maintaining optimal conditions within the new CO²L Flow System when the barriers are down is critical to the health and welfare of our fish," said Dean Trethewey, director of seawater production at Grieg.

Nanobubbles, aquaculture and a world of possibility

Nanobubble technology can boost aquaculture water quality and fish growth while cutting energy costs. Growers and investors are seeing the potential.

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"Technology and innovation are the backbone of the aquaculture industry. Our latest collaboration with Moleaer's nanobubble technology was a huge success and if deployed will be a game-changer for other fish farming companies in every region in the world," said Kris McNichol, president of CPI Equipment Inc.

Through partnerships with universities, Moleaer says nanobubbles are a chemical-free and cost-effective solution to increasing sustainable food production, restoring aquatic ecosystems, and improving natural resource recovery. The company has deployed more than 700 nanobubble generators worldwide since 2016.

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