

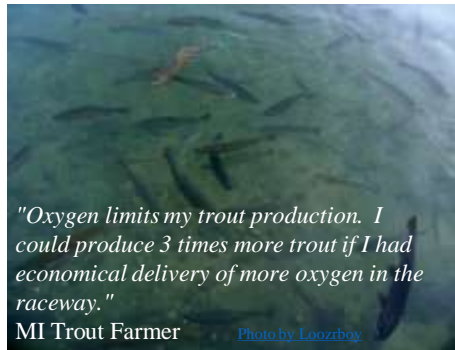
Oxygenation for Aquaculture Production

TECHNOLOGY DESCRIPTION & BUSINESS IMPACT

Nano Gas™ Technologies is a platform technology company with applications across multiple industry verticals using patented world-changing nanobubble technology.

In the area of aquaculture, the Nano Gas™ generation system rapidly delivers up to 800 billion oxygen-containing nanobubbles per liter in water. Nanobubbles are endowed with extreme longevity in solution with half-lives in the range from weeks to months. Due to their small size nanobubbles demonstrate no appreciable rise rate. In addition, their smaller size increases the gas-liquid surface-area-to-volume ratio which greatly enhances gas transfer rates (30,000 times more surface area than coarse bubbles).

Traditional oxygen delivery methods create large bubbles which rise quickly and limit gas diffusion. Delivering oxygen in the form of nanobubbles represents a new and novel modality that will provide a significant opportunity for the aquaculture market.



"Oxygen limits my trout production. I could produce 3 times more trout if I had economical delivery of more oxygen in the raceway."

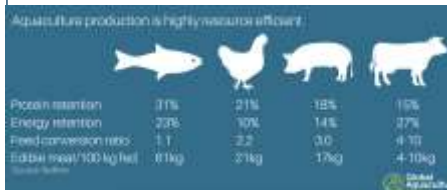
MI Trout Farmer

Photo by Looziboy



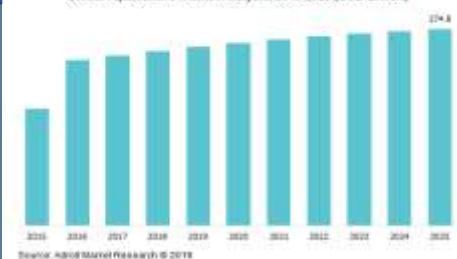
AQUACULTURE OPPORTUNITY

Overfishing has put considerable stress on the world's natural aquatic ecosystems and threatens our ability to provide the growing population with sustainably-sourced seafood. Aquaculture, the fast growing part of the world's food supply, is an important sustainable option for the world, especially when compared to other farmed proteins (chicken, pork and beef).



Fish and other important aquatic species raised on farms, require clean, oxygenated water to grow and stay healthy. Low dissolved oxygen (DO) levels is a major cause of stress, poor appetite, slow growth, disease susceptibility and death. The Nano Gas™ process improves aquaculture production by increasing DO while providing a superior living environment for both aquatic species and waste-eating microbes.

Global Aquaculture Market Analysis, 2015-2025 (USD Billion)



The global aquaculture industry is expected to grow to \$274.8 B (USD) by 2025. Aquaculture currently supplies more than half of all seafood consumed. By 2030, it's projected that 62% of all seafood produced for human consumption will come from aquaculture.

POTENTIAL DEPLOYMENT

Nano Gas Technologies is currently seeking customers interested in performing a pilot study that will lead to full implementation of the technology to solve existing oxygenation challenges in the aquaculture industry. The Nano Gas™ process uses considerably less energy with low overall operating and maintenance costs. Since the process is fully mobile and scalable, nanobubbles are easily produced on site.

