

# An independent study of the SOLVOX<sup>®</sup> system

An independent study\* was commissioned to evaluate the performance of the SOLVOX<sup>®</sup> system for the production of Atlantic Salmon, *Salmo salar*, in seawater tanks. This was done by comparing the SOLVOX<sup>®</sup> system with Ceramic Oxygen diffusers in standard tank configuration using an open seawater inlet. The parameters which were evaluated included oxygenation efficiency, environmental conditions, oxygen dynamics, water flow dynamics, total dissolved gas pressure, pH, CO<sub>2</sub>, fish performance, effluent water quality and practicality.

This study showed clear improvements over more traditional methods, indicating that use of the new SOLVOX<sup>®</sup> system resulted in an enhanced specific growth rate and food conversion ratio producing a larger fish biomass with higher condition factor.

- An Improvement in Feed Conversion Ratio (FCR) of 21%
- An increase in Specific Growth Rates (SGR) of 19%
- Improved Tank Hydraulic Conditions more effectively clear detritus and faeces (cleaner tank – healthier fish)

Measurements of oxygen efficiency in the tanks were superior with the SOLVOX<sup>®</sup> system and the total dissolved gas pressure (TDGP) showed more stable and consistently lower readings in the SOLVOX<sup>®</sup> tank, creating a healthier growing environment.

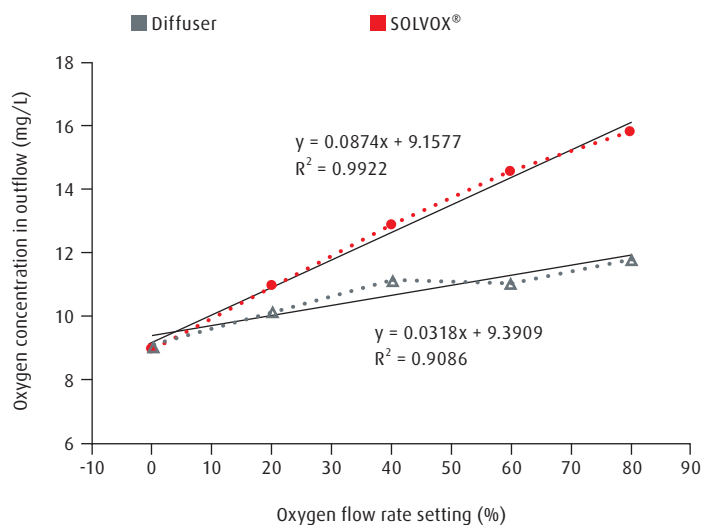
## Conclusion

This study yielded very promising results regarding the new SOLVOX<sup>®</sup> system, not only did the system show superior oxygen efficiency and tighter control over oxygen input but a number of environmental conditions appeared to be improved including more uniform oxygen concentrations and lower, more stable total gas levels. Through improved FCR, SGR and efficiency levels, the SOLVOX<sup>®</sup> range of technologies can offer the fish farm a more cost effective solution to the oxygenation of fish tanks.

Copies of the report can be obtained from Keith Nicholson on 01844 253 195 or email [Keith.Nicholson@boc.com](mailto:Keith.Nicholson@boc.com)

\*Evaluation of SOLVOX<sup>®</sup> system – Final report Prepared by M. Cowan and W. Roy, PhD, Institute of Aquaculture, University of Stirling, Marine Environmental Research Laboratory, Machrihanish, Campbeltown, Argyll, UK

## Oxygen Efficiency



## Total Dissolved Gas Pressure

