Fish farms and hatcheries are being called upon to play a more intensive role in addressing the world’s demands for fish. The easiest way to increase production without vast capital outlay is to increase the number of fish being grown in the same size or smaller tanks. Of course, as fish density increases so does the risk of infection caused by water-borne bacteria and viruses. Such contamination results in heavy losses in aquaculture worldwide and has limited the progress in commercially farming new species. Fortunately, improving water quality with ozone can decrease fish disease issues, reduce fish stress and produce excellent water quality in ultra-intensive recirculating production systems.

Ozone is increasingly used to disinfect water in aquaculture settings due to its numerous advantages over traditional water treatment methods. Ozone is a very powerful disinfectant that immediately starts to attack any oxidizable matter it comes into contact with. Not only does the oxidation produce “oxygenated” products and oxygen as it kills bacteria and viruses, unlike other disinfecting agents such as chlorine, any excess ozone reverts back to oxygen which poses no health risk for the fish or the people who subsequently consume them. This makes ozone particularly well suited for applications such as hatchery water where the presence of undesirable by-products after treatment could have grave consequences. Because ozone has a rapid reaction rate, creates few harmful reaction by-products, and produces oxygen as a reaction end product, it is an excellent solution for both recirculated and single-pass aquaculture systems.

Aquaculture

Ozone is being widely utilized by aquaculture for quality control because many of the contaminants in these waters are easily oxidized.