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Could Streptococcus in tilapia soon be a thing of the past?

3 April 2023

By Responsible Seafood Advocate

Benchmark Genetics claims a 'significant breakthrough' in the development of Streptococcus-resistant strains

Scientists at Benchmark Genetics say that they have identified genetic markers that indicate resistance to *Streptococcus iniae* in a strain of tilapia they have developed.

Their research demonstrates a significant quantitative trait locus (QTL) affecting resistance to *Streptococcus iniae*. This discovery came after a collaboration between the U.S. Department of Agriculture's Aquatic Animal Health Research Unit (AAHRU) and Benchmark's geneticist Sergio Vela-Avitúa et al.

In their development of Streptococcus-resistant strains of tilapia, the QTL explained up to 26 percent of the genetic variation in resistance. They then selectively bred fish for survival to *Streptococcus* using marker-assisted selection (MAS) to demonstrate resistance in fish classified as "resistant" or "susceptible."

"The results were impressive, with a final cumulative percent mortality of only 1 percent for offspring from resistant parents, compared to 73 percent for offspring from susceptible parents," said Vela-Avitúa. "These results demonstrate that MAS for improved resistance to *S. iniae* is feasible and likely to



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be highly effective.”

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Benchmark Genetics has already implemented these results into its breeding and production of genetically improved Spring Tilapia® breeders and fingerlings.

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