



ADVANCING EUROPEAN AQUACULTURE
BY GENOME FUNCTIONAL ANNOTATION

GENOMIC REVOLUTION

improved fish health & welfare

CHALLENGE

DISEASE THREAT

Disease outbreaks in aquaculture have severe economic and sustainability consequences.

COMPLEX PHENOTYPES

Measuring disease resistance is challenging, hindering traditional selective breeding based methods to tackle this problem.

Aquaculture has experienced substantial growth over the past two decades, contributing to global food security & economic development. However, this rapid expansion has also raised concerns about the sustainability of certain aquaculture practices and their potential environmental impacts.

SOLUTION

GENOMIC SELECTION

AQUA-FAANG utilises genomic selection for precision breeding.

IMPROVED ACCURACY

A functional genomic data manual is used to improve prediction accuracy.

INTEGRATION OF FUNCTIONAL DATA

Gene switches and their locations are identified.

UNPRECEDENTED DATA

AQUA-FAANG has provided whole-genome sequences, SNPs, QTLs, and functional elements -a whole detailed genome map- for European sea bass.

IMPACT

SUSTAINABILITY

Precision breeding for Viral Nervous Necrosis Disease resistance reduces the impact of disease, making aquaculture more sustainable.

DISEASE MANAGEMENT

Reduces reliance on pharmaceuticals, promoting healthier aquaculture stocks.

ECONOMIC VIABILITY

Improves efficiency and product quality, enhancing the economic viability of aquaculture.

Be part of the solution for sustainable and resilient aquaculture!



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