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A MEDIUM-THROUGHPUT METHOD TO PHENOTYPE FISH FOR INDIVIDUAL FEED EFFICIENCY

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Background

Feed conversion ratio (FCR) = ability of fish to convert feed into biomass

FCR = feed intake / weight gain

Easy to measure

Individual feed intake unknown ➔ Genetic parameters of FCR are unknown

Our innovation

Phenotyping fish in individual aquariums

Fish kept in aquariums 6 weeks

→ Weight gain
Weight measured every 2 weeks

→ Feed intake
Automatic delivery of restricted ration
Uneaten pellets counted daily

Individual FCR for 588 fish

Extra results

Individual phenotype + Individual genotype (3000 SNPs) = Individual FCR can be improved through selective breeding

h² = 0.26

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