

Improvement of resource efficiency and profitability of fish farming by selective breeding

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ABSTRACT:

Selective breeding programmes in aquaculture aim to improve production efficiency, fish welfare, and to reduce environmental impacts. The presentation will demonstrate the genetic improvement in feed conversion ratio (FCR) and fillet% of rainbow trout achieved by decades-long selection programmes. These are core traits that affect resource efficiency and profitability of fish farming. Improvement of FCR is also a key to minimize environmental impacts of aquaculture, including nutritional loading to aquatic environment and climate change impacts. The results were generated as a part of AqualIMPACT EU-project (<https://projects.luke.fi/aquaimpact/>) and Luke's national breeding programme.

KEYWORDS:

Selective breeding; Feed efficiency; Fillet percentage; Environmental impact, Nutritional loading, Climate change.