

Topic/Title

Kvantitativ genetik og genomikk av ikke-destruktive metoder for høy gjennomstrømning for registrering av fett i laks

Topic/Title

Quantitative Genetics and Genomics of high throughput non-destructive methods of recording fat in Atlantic salmon



Figure 1. Salmon smolt i Nofima

Summary

Recording fat content is extremely important in Atlantic salmon farming and biology as it is a key metabolic switch at different life stages of salmon. Salmon require sufficient body reserves to undergo smoltification, but too much body fat in and around the organs is a high-cost slaughter waste. Currently, recording body fat percentage in salmon requires sacrificing the fish and using expensive laboratory based methods. Two new low cost and high throughput methods which can be used on non-destructively on live salmon are now available. In this study 600 Atlantic salmon were recorded using both the hand-held Distell fat meter and the online SmartSensor™ at NOFIMA. The entire population has been genotyped by a commercial SNP chip. In this study the student will compare the phenotypes from both methods and can go onto investigate the underlying quantitative genetics parameters, genomic prediction or GWAS. The student will have the opportunity to record salmon using either of the methods for extra practical experience.

Subject area

Phenomics, Fat metabolism, Quantitative Genetics, Genomic selection

Language thesis

English

Bachelor or Master thesis

Master thesis



Bachelor or Master thesis BIOVIT 2021/22

Credits

30 or 60 credits depending on top candidates needs

Project/company

Collaboration between NOFIMA and NMBU.

Please contact

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