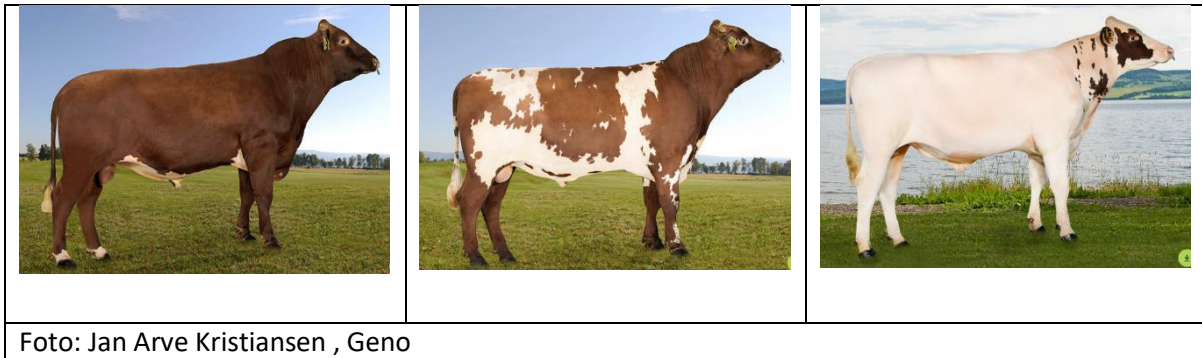**Topic/Title (Norwegian)**

Fargegenetikk/mønstergjenkjenning i norsk storfe

Topic/Title (English)

Coat colour genetics/patteren recognition in Norwegian red cattle

Foto: Jan Arve Kristiansen , Geno

Summary

The amount of white patterning in cattle is a trait that for some purposes is important. That extent of white areas varies from solid red or black to almost completely white animals. The Norwegian breeding organisation Geno have a large number of photos of breeding bulls, collected over many years. Large panels of genotype-data, and in some cases also DNA-sequence, are available from the same individuals. In this project we want to automate recognition and quantification of white colour patterns. Software for picture analysis is available that can be modified for this purpose. One goal is to improve the current phenotype description white/non-white patterns. In addition, two strong QTLs seems to be related to this trait, and those can be fine mapped by use of DNA-sequence available for these animals.

Subject area (keywords)

Genetics, statistics, machine learning

Language thesis (Norwegian and/or English)

Norwegian or English

Bachelor or Master thesis

Master

Credits

60 ECTS

Project/company

Bachelor or Master thesis BIOVIT 2022/23

Geno – Norwegian Association of Cattle Breeding

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