Other DNA tests e.g. polled, milk genomics

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Background

- DNA tests might make selection for qualitative traits cheaper

- Some qualitative traits might have economic values
Polled

- Dominate inheritance
  AA and Aa polled
  aa horned

- DNA test for distinguish between hetero and homozygotes

- Phenotypic tests for distinguish between polled and horned
Milk genomics = non-coagulating milk

- Project milk genomics has found that 18% of SRB-cows have non-coagulating milk

- Quantitative inheritance? Or quite few genes = only SRB have the problem
  0% JER and 2% HOL have non-coagulating milk

Heritability 0.45
Milk genomics = non-coagulating milk

- non-coagulating milk the most costly trait according to the milk genomic project

- If all non-coagulating milk used for cheese production doesn’t give any cheese then 5.4% of the SRB milk have a very low value

  (30% milk to cheese and 18% non-coagulating milk)
Economic value

- Polled
  Yes, labour+ medicin+ animal welfare threats from definition of organic farming

- non-coagulating milk
  Individual farmers: NO
  Dairy industry: Yes??
  Breeds?: Yes?
How to include polled in NTM

- Polled add to NTM

\[ X \text{ NTM units for } Aa \]
\[ 2X \text{ NTM units for } AA \]
\[ 0 \text{ NTM units for } aa \]

- \( X = ? \)
How to include non-coagulating milk in NTM

- coagulating milk add to NTM

\[ Y \text{ NTM units} \]

- \[ Y = ?? \]
How to continue?

• Start with recording of phenotypic polled

• Test and record all valuable females individually for non-coagulating milk

If it is possible to do it on farm

Talk with the dairy industry about the value
Suggestions

• Start to record phenotypes

• Include the result in NTM

• Continue to develop DNA-tests for milk quality