Pancreas disease; effects on digestibility

An observational study

Magnus Vikan Røsæg
Agenda

- Background
- Longitudinal observation study
- Disease development
- Digestibility
- Sampling challenges
- Conclusions
Background

• Program to monitor feed digestibility since 2010
Background

- Loss of exocrine pancreas, hallmark of PD.
  - Affect enzyme levels
  - A large portion of the pen is affected.

Should affect digestibility.
The protocol

- Follow disease development and digestibility, development in two farms. During 2015.
  - Heart tissue- PCR
  - Pooled fecal sample.
    - inclusion criteria; containing salmon feed.
  - Pancreas, heart and muscle tissue.
- Sampling every two weeks
First detection of virus

- First outbreak
- Screening sample positive in late April.
- Selected two pens
  - Sampled an waited for clinical disease.
  - Disease outbreak in late June.
- Second outbreak
  - Clinical outbreak in late August
Health situation

Oxygen drop, div. gill issues
Prevalence and Ct-values

![Chart showing prevalence and Ct-values over time.](chart.png)
Protein digestibility
Sampling

Sea cage 1

Length

Mean

Lower CI

Upper CI
Prevalence and Ct-values
Conclusions

• Crude fiber can be used as a digestive marker during PD to assess the digestibility.
• Disease outbreak of PD, coincide well with reduced digestibility.
Future work

- Histopathology
- Regression analysis on historical screening data
- Enzyme levels in intestine?
Thank you for your attention