



Rumen physiological studies

Aim

- Effect of:
 - roughage quality
 - concentrate composition and allowance
 - additives
- On rumen parameters:
 - pH
 - volatile fatty acids
 - utilisation of nutrients

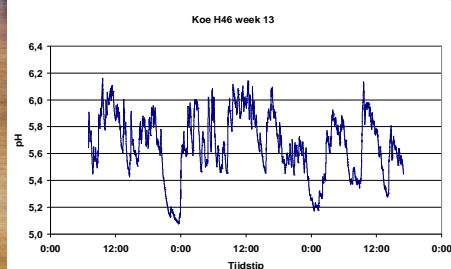
Lay out

- Latin square:
 - 2 to 6 treatments
 - 2 to 6 rumen fistulated dairy cows
 - 2 to 6 periods (3 weeks)



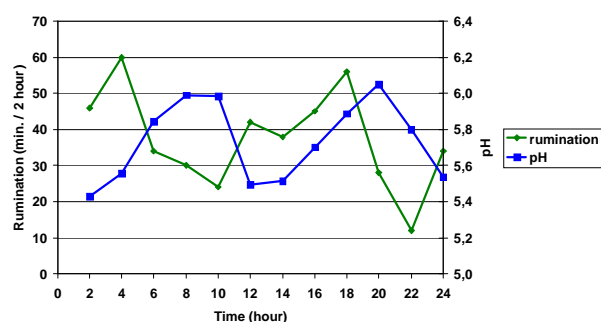
Observations

- Samples of rumen fluid:
 - pH
 - volatile fatty acids
 - ammonia
 - markers
- Continuous pH measurement
 - every minute
 - time pH < 5,5
- Rumination activity:
 - every 2 hours



Results

Rumination and pH during the day



Execution

- Rumen physiology:
 - sampling of rumen fluid
 - continuous measurement of pH
 - rumen contractions
 - passage and absorption
- Rumination and general activity
- Others:
 - DM intake basal diet and concentrate
 - milk production and weight
 - milk composition
 - faecal score and composition

Concentration of volatile fatty acids

