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Agroscope

Potential benefits of sensors like RumiWatch to record grazing behaviour

Fredy Schori

EGF 2015, Grazing Workshop, 14.06.2015



- **Behaviour** exhibited by animals is an indication of the relationship between their **internal state** (i.e. nutritional requirements, health,...) and their **environment** (i.e. sward state, climate,...)

(Penning and Rutter, 2004)



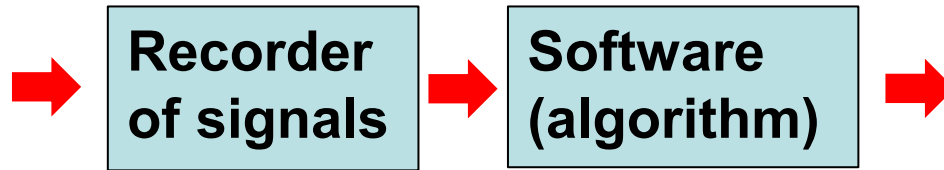
Potential benefits of sensors like RumiWatch to record grazing behaviour | EGF Grazing Workshop 2015
F. Schori



Behaviour exhibited and recorded

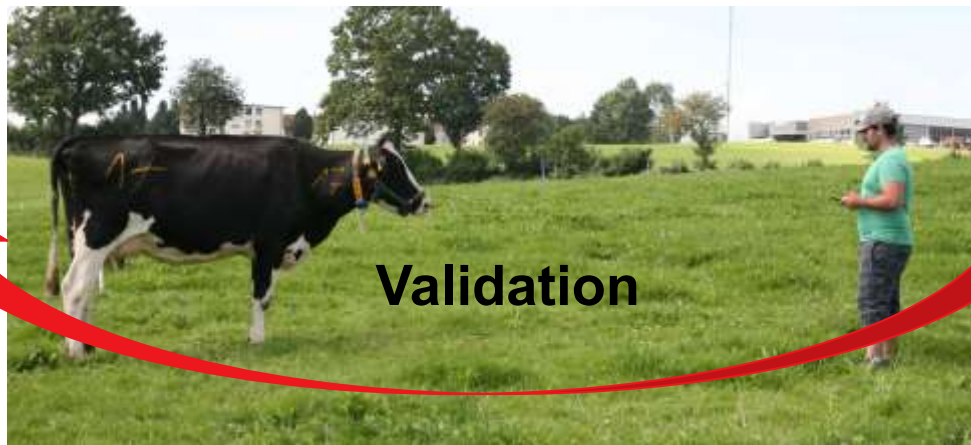
Behaviour:

- Graze
- Browse
- Eat miscellaneous
- Ruminates
- Lick
- Drink
- Vocalise
- Suckle
- etc.



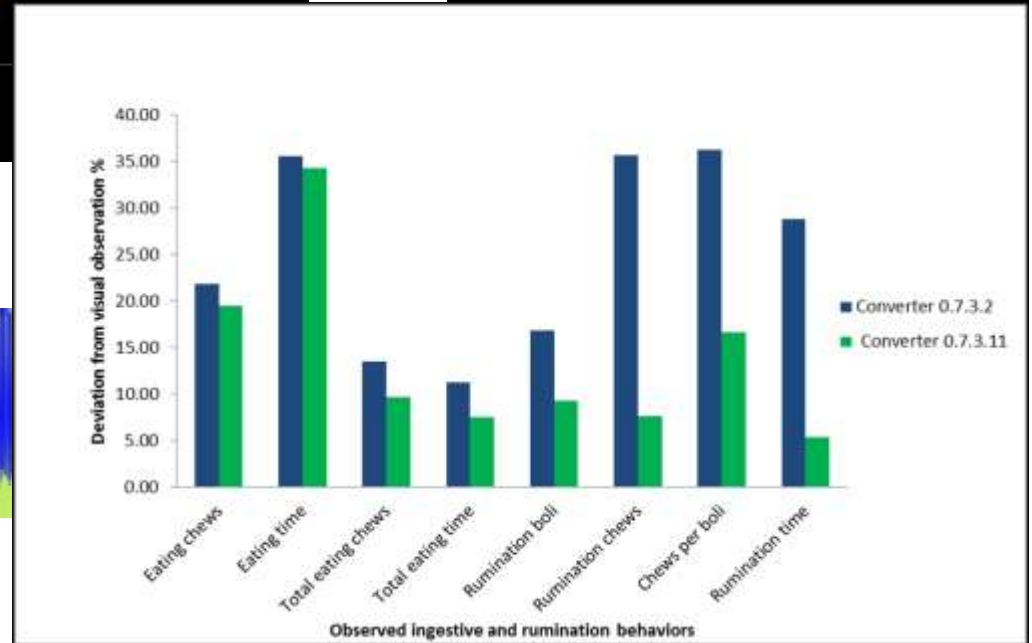
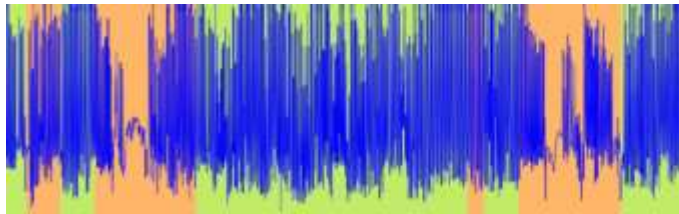
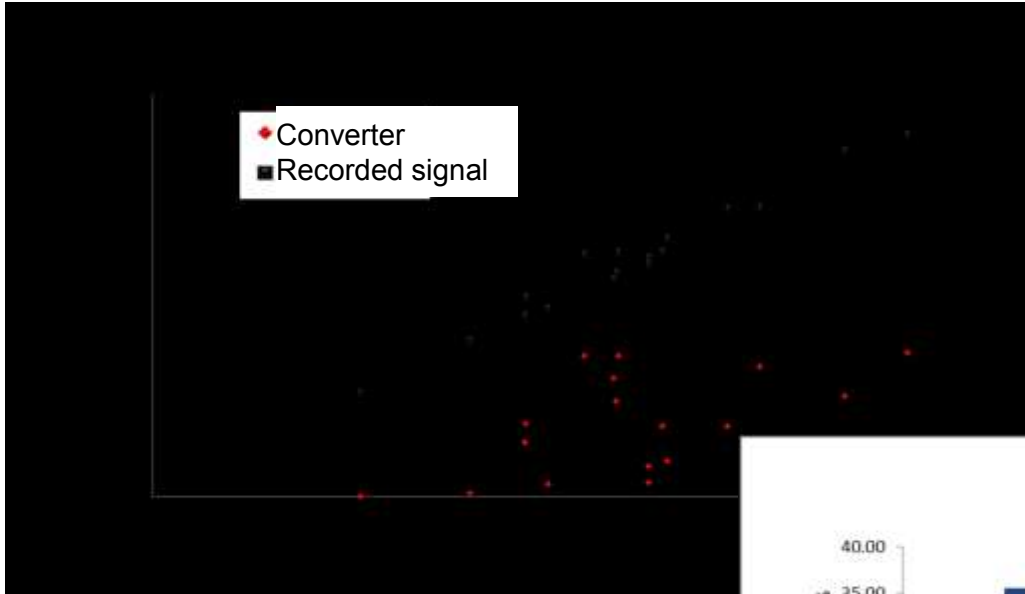
Criteria:

- Total eating time
- Total eating chews
 - Prehension bites
 - Mastication
- Rumination time
- Rumination chews
- Chews per bolus
- etc.





Validation (e.g. eating chews)



Rombach et al., 2015



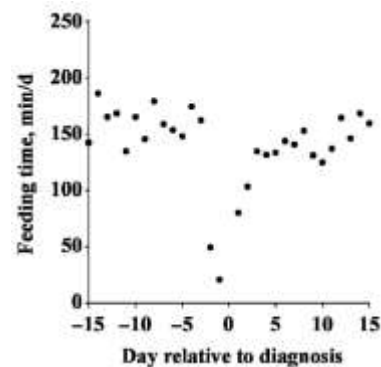
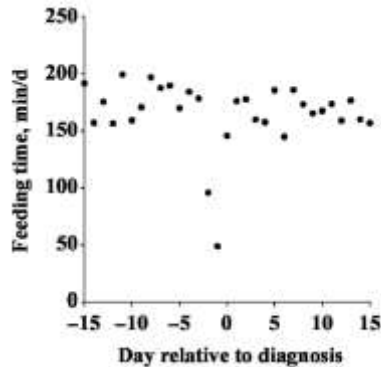
Potential Benefits

- Information internal state x environment
- Intake estimation of grazing dairy cows
 - Intake = grazing time x intake rate
 - Intake = bites x bite mass,
 - Bite mass = f (herbage mass, herbage allowance,...)
 - ...
- For advisers or at farm level:
 - Improving of pasture management (reference values)
 - Water points, consumption
 - Use in problematic cases
 - ...

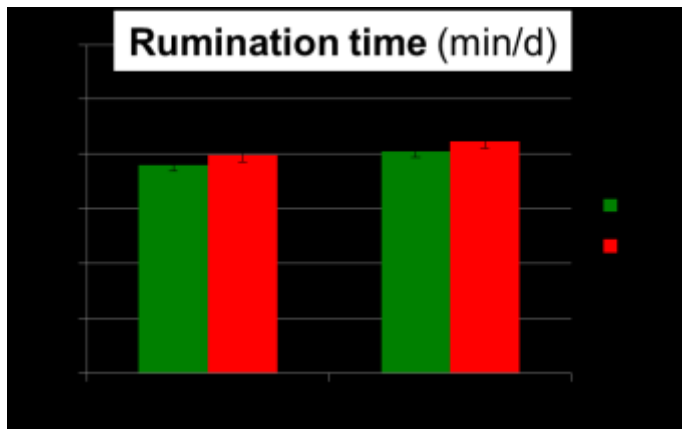


Potential Benefits

- Indicator for health
 - e.g. *Ketosis*, (Gonzalez et al., 2008)



- Rumen function?



(Gonzalez et al., 2014)



Thanks for your attention!

