RumiWatchSystem

Measurement system for automatic health monitoring in ruminants

ITIN+HOCH

RumiWatch
RumiWatchSystem
Developed by research station Agroscope Reckenholz-Tänikon (ART) and ITIN+HOCH
The Aim

To enable livestock farmers, veterinarians and scientists to generate a prompt, profound and exact statement about the health state of the animal.
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The Components

**The Noseband Sensor (NBS)**
registers all jaw movements.

The RumiWatch electronics allows recording and storage of raw data for up to 4 months.

**The Pedometer**
measures all motion states.
The transmitter/receiver communicates wirelessly between NBS/Pedometer and PC.

The RumiWatch Manager is the PC software that serves for data management and visualization.
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The Noseband Sensor (NBS)

The NBS consists of a vegetable oil-filled tube, pressure sensor and accelerometer, and a wireless transmitter.

Jaw movements are registered with a frequency of 10 signals per second.

Data analysis is conducted in real time via validated algorithms of the RumiWatch electronics.

Generation of Summaries for Rumination, Eating, and Drinking activity.
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The Pedometer

The Pedometer consists of an acceleration sensor and a wireless transmitter.

Data acquisition and analysis are conducted equivalent to the NBS.

Generation of health-relevant Summaries for Lying, Standing and Walking.
Unique feature of the NBS is its ability to register and measure every single bolus, jaw movement or drink gulp.

Example: Water intake
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2nd Advantage

Wireless transmission of Summaries to the PC enables direct and clearly structured visualization of measurement data. The livestock farmer will always keep the overview of his animals’ health.
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3rd Advantage

Alarm function based on scientifically validated threshold values for the herd and the individual animal.

Improved health monitoring results in:

+ early diagnosis of and reactions to critical conditions
+ decrease of production losses
+ increase of production reliability

= Higher profitability