



Validation of a System for Monitoring Rumination in Dairy Cows

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Background: Loggers are now available that measure rumination time, but are these measures accurate?

Aim: To compare automated recordings of rumination from the Hi-Tag rumination loggers with live observations by trained observers.

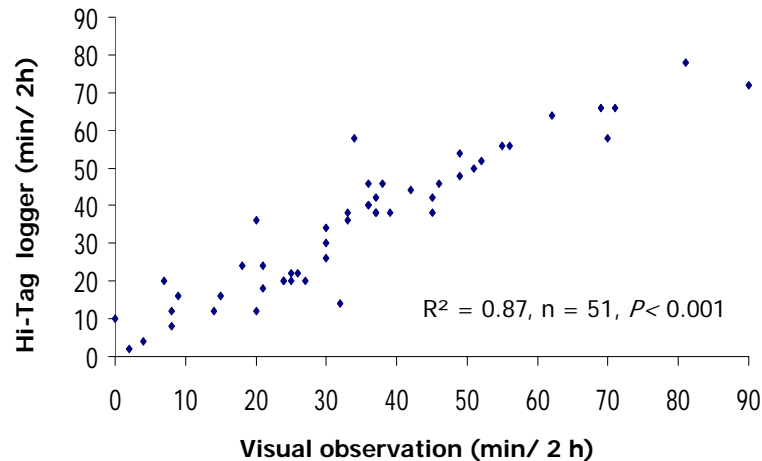
Methodology: Rumination was monitored using both live visual observations and the loggers (see photo). We monitored 27 cows, collecting data during 51 2-h recording sessions. Raw data from the loggers was processed with the proprietary *Data Flow* software to generate daily values.

We used linear regression to compare:

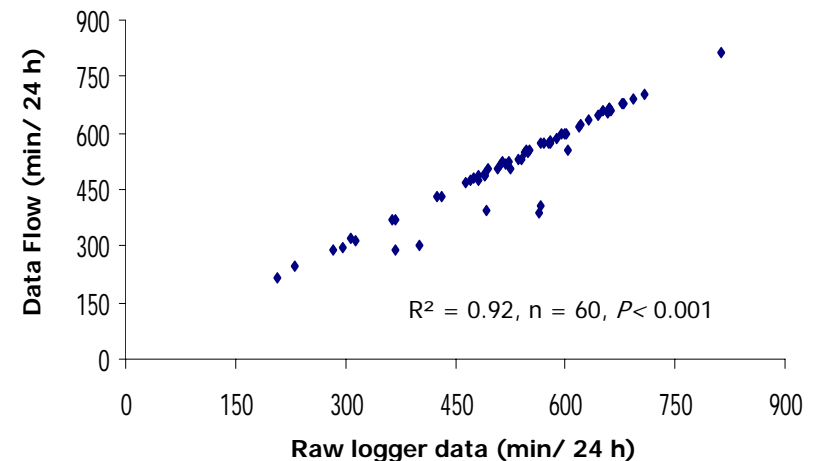
- 1) Estimates of rumination time from visual observation vs. estimates from the raw data logger files
- 2) Estimates of rumination time from the raw data logger files vs. estimates from the *Data Flow* software



Estimates from the data logger vs. visual observation



Estimates from the *Data Flow* software vs. raw data



- Hi-Tag loggers can provide a reasonable estimate of rumination times
- 24-h estimates of derived from the *Data Flow* software provide a reasonable estimate of data compiled from the raw data