Herd management and génétique improvement with Medria Monitoring Solutions

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www.amelis.fr
AMELIS is a French leading Coopérative operating in the génétique industry and reproduction services for bovine, swine and horse breeders mostly located in the ouest of France.
AMELIS statement MISSION

To supply to all its members and customers, innovative solutions that are reliable, long-lasting and good value for money, in reproduction management and genetics, adapted to each herd and the lifestyle of the farmer.
AMELIS local and global business

Bovine sector

Swine sector

Equine sector
VEL’PHONE: your cow gives you a phone call!

AMELIS is a shareholder of Medria Solutions de Monitoring since Sept 07
Zootechnic and Health Platform for the follow up of livestock
Medria develops towards farming professionals, products originating from its zootechnical and health monitoring platform. This platform is known for performing early detection of health problems in farming animals.

1) A sensor in each animal to measure regularly its temperature and transmit it by radio waves.

2) The radio base receives the zootechnical data and detects the animals who need attention.

3) The farmer is alerted in time. He can pay attention to the animals who need it.
Medria's Innovation

1) Medria is at the junction of advanced electronic, software and telecom technologies with an in-depth knowledge of farmers needs and constrains:
   - Ultra low consumption electronic solutions for sensors and radio links;
   - Real time software for analysis and transmission;
   - Consultation software and technical data base;

2) Medria introduces innovation through simple, practical and efficient solutions:
   - The Vel’Phone kit® detects the beginning of calving to inform the farmer by SMS;
   - The Thermo-bolus© measures the ruminal temperature of the animal for its lifetime;
   - The Cardio-bolus© measures the temperature and heart rate of the animal;
   - The Heat'Phone© measures the activity and locomotion of the animal (Q4 2009).
The kit VEL’PHONE©
Calving detection

1) The vaginal thermometer (5 to 20 sensors per kit)

✓ Placed in the animal 5 to 7 days before term, the vaginal thermometer measures and transmits permanently its temperature by radio waves within a radius of 100 meters. Pushed out by the water sac, the drop in temperature is sent to the GSM radio base instantly.

2) The GSM Radio Base

✓ Collects and analyses the animals temperature. It sends an SMS to the farmer as soon as the thermometer is expelled.
The Thermo-bolus© or le Cardio-bolus© produce zootechnical data

1) Thermo-bolus© or Cardio-bolus©
   - Swallowed by the ruminant, it stays for life in the reticulum.
   - Le Thermo-bolus© measures the temperature of the animal during its lifetime.
   - Le Cardio-bolus© measures the temperature and heart rate.
   - These two boluses can keep zootechnical data during 21 days and send it to the GSM radio base once it comes within the range of 150 meters around the base.

2) The GSM radio base
   - It collects the data transmitted by the bolus.
   - It communicates immediately with the PC either by cable or GPRS radio.
Medria’s participation within the MOZAE Project

1) The MOZAE Project (MONitoring Zootechnique des Animaux d'Élevage) is engaged since March 2006 with l’INRA (UMR Production du Lait), l’Ecole National Vétérinaire de Nantes (Nantes National Veterinary School), Agrocampus Rennes, la Chambre Régionale d’Agriculture de Bretagne and INRIA-IRISA de Rennes

2) More than 600 boluses were placed in cows and young bovines with the aim of:

- Implementing the first zootechnical and health data base;
- Identifying the profiles, signs and dynamics for health problems or events;
- Evaluating the functions for early detection of health problems or events.
Monitoring and detection with Thermo-bolus©

1) Hyperthermy on a dairy cow: (7 days on screen)

Ruminal temperature with drinks
Ruminal temperature without drinks
Reference temperature over the 10 last days
Relation between rectal and rumen temperature

\[ y = 0.6846x + 13.064 \]

\[ R^2 = 0.7565 \]
Young bovine hyperthermy detection
Strengths of Medria’s Platform
Thank You- Merci Beaucoup