



## **9. Milk Analysis Workshop 2 Creating Additional Value from Milk Analysis**

### **Title presentation**

Precision milk analysis : a solid tool for monitoring dairy herds

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### **Abstract**

Dairy management becomes very challenging nowadays as the herd size is continuously increasing. Thus, farmers need to assess precisely the status of their animals, in terms of health, reproduction and welfare with less time to devote to each cow. To achieve this, different tools are at their disposal: sensors, connected milking parlour, milking robot and finally milk recording. The first three are very efficient and allow providing real-time alerts to the farmers but are expensive. Concerning milk recording, which is cheaper, it is constituted of spot checks once in every 4 or 6 weeks, but is rather meant to be used as a follow-up of the animals over time. Thanks to the mid-infrared spectroscopy of milk, several parameters can be assessed to monitor the herd status. Following the project OptiMIR, a method to standardise analysers of a network (Grelet et al., 2015) has been developed and allows using spectra from different labs and countries to produce robust predictive models for health and environment-related parameters. Therefore, several models with different levels of accuracy are currently available, such as milk fatty acids, minerals, lactoferrin, ketone bodies, methane production and blood components. These predictions are further processed by milk recording organizations to produce global health indicators to be returned to the farmer for herd management. These tools allow to monitor the mastitis, ketosis risk or feeding imbalances of individual cows, get a picture of each farm compared to the mean population and receive alerts for cows with repetitive problems (culling advice).