NEW TOOLS FOR A MORE SUSTAINABLE DAIRY SECTOR

EUROPEAN RESEARCH PROJECT

BACKGROUND

The dairy industry represents 13% of the turnover of the European food industry. North West Europe produces 60% of the European milk and 150,000 people are employed in the dairy sector of this area. The low selling price of milk prevents many farmers to sustain their business.

Cooperation and pooling the resources of Milk Recording Organizations an Animal Science Research Units could deliver more global, powerful and transposable knowledge and skills that could raise everyone to the highest level.

PROJECT DESCRIPTION

The project aims to develop innovative farm management web applications that will use the spectral analysis of the Milk Recording samples to enable a sustainable and profitable management of the milk production.
The **Mid Infra Red (MIR) spectrum will be used as a mirror of the cows' state giving indicators on their:**

-Fertility
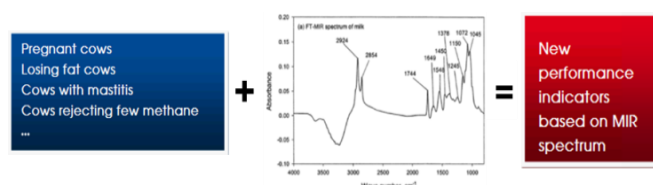-Feeding
-Health
-Rejection of pollutants
-Milk quality

Globally, Optimir aims to cooperate between Milk Recording Organizations an Animal Science Research Units to pool the resources, and deliver more global, powerful and transposable knowledge and skills.

EXPECTED RESULTS

1. To have a common **transnational database** combining phenotypic data of the cows and the Mid Infra Red spectra coming from the analysis of milk samples collected through the Milk Recording organizations.

2. To identify relevant associations between the phenotypic data and the Mid Infra Red spectrum of the milk, by pooling the resources of Research Centres and Universities.

3. By developing innovative models and equations for building web applications to provide dairy farmers and their consultants with new information and decision making tools like:
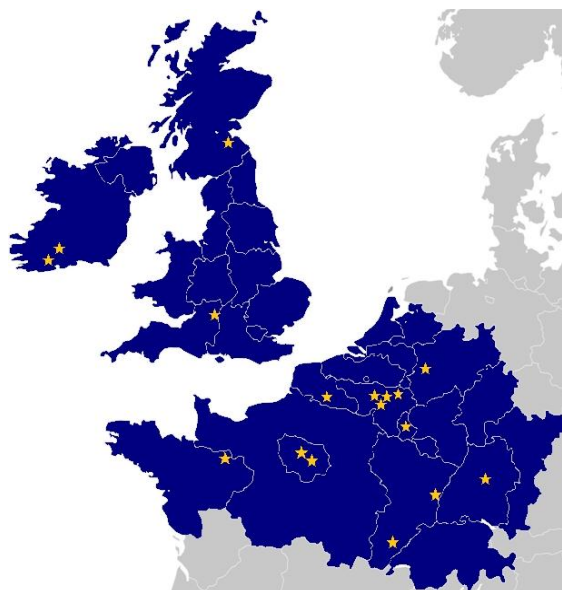
- **Pregnancy diagnosis**
- **Imbalanced fodder detector**
- **Mastitis predictor**
- **Methane rejection gauge**

CRA-W CONTRIBUTION

Owing to its experience on Infra Red spectra standardization, the CRA-W is responsible of the standardization step of all spectra, in order to construct the pooled transnational database.
Moreother, the CRA-W will lead the coordination in different research steps, to insure the cooperation between all scientific partners.

MAIN PARTNERS

RESEARCH CENTRES	COUNTRY
Institut de l'Elevage	FR
Gembloux Agro-Bio Tech	BE
CRA-W (DVPA)	BE
TEAGASC	IR
Scottish Agricultural College	UK
Université de Hohenheim	DE

MILK RECORDING ORGANIZATIONS	COUNTRY
AWE asbl	BE
Chambre régionale Agriculture Alsace	FR
ADECL62 (Pas-de-Calais)	FR
CLASEL (Sarthe & Mayenne)	FR
SCL25 (Doubs et territoire de Belfort)	FR
France Conseil Elevage	FR
LKV Baden-Württemberg	DE
LKV Nordrhein-Westfalen	DE
National Milk Recording	UK
Irish Cattle Breeding Federation	IR
CONVIS	LU

LABORATORY	COUNTRY
Comité du Lait asbl	BE

PUBLICATIONS

http://www.optimir.eu/en/publications.php

PROJECT TEAM

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Darimont Claire

Dehareng Frédéric

Fernandez Pierna Juan

Grelet Clément

COORDINATION:

Grelet Clément

FINANCING:

INTERREG and the WALLOON REGION

Duration of the project: 4 years

WEBSITE:
http://www.optimir.eu/en/index.php

Centre wallon de Recherches agronomiques