

COST ACTION FA1308 DAIRYCARE

Proposal for Short Term Scientific Mission (STSM)

Applicant: Francisco Maroto Molina, University of Cordoba, Spain.

Host: Paolo Berzaghi, University of Padova, Italy.

Title: Milk production and feeding behavior databases to assess welfare and productivity of dairy cows.

WORK PLAN

Background:

The study of feeding behavior is recognized to be important in the improvement of the welfare of dairy animals. In fact, it is a key task for the Working Group 2 (Activity) of Dairycare and it has been one of the main subjects of the last Dairycare conference in Zadar (Croatia).

However, feeding behavior trials are not abundant, as they are labor intensive and they normally use quite expensive facilities: feeding gates, transponders, antennas and troughs with scales. This is why it is important to obtain the maximum from these kind of data, and merging data from several trials, as well as other available data, e.g. milking records, is an opportunity to be explored. The availability of metadata is a must for the merging process.

Objective:

The objective of this project is to evaluate the possibilities of using milking records and feed intake data obtained in several trials with different purposes for the assessment of welfare and productivity of dairy cows.

Experimental design:

Data about milk production and composition, feed intake and feeding behavior of dairy cows from several trials carried out both in Italy and the United States by Prof. Paolo Berzaghi will be used for the purposes of this project. These data were recorded in trials aimed at studying feeding behavior and/or the effects of changes in feed intake on milk production.

During the STSM the following tasks will be held:

- Data cleaning, standardization and integration.
- Definition of metadata necessary for a proper data integration.
- Characterization of the individual variability of feed intake, feeding rate, number of visits, number of meals, milk production, feed efficiency, etc.
- Study of the relationship between intake and production (quantity and quality).
- Study of social behaviors related to the access to the trough.
- Identification of possible indicators of cow welfare.

Outcomes:

The expected outcomes of the STSM are:

- A scientific research paper publishable in a SCI journal.
- The encouragement of the existing collaboration between the departments of the University of Cordoba and the University of Padova.
- Exploration of opportunities for further collaboration in the framework of the H2020 programme.

Duration:

The STSM is expected to last two weeks in April 2016.