

COST Action no.1308

DairyCare

2013 / 2017

Background and Objectives

- As dairy farms get bigger, the need for technologies that can assist good husbandry gets greater. This Action will respond to that need.
- The first main objective is the accelerated development and application of a range of relevant innovative technologies that assist and promote good husbandry of dairy animals
- The foci in this objective are welfare-related biomarkers, activity-based welfare assessment and their combination into "smart" husbandry support systems
- The second main objective is wider dissemination of established best-practice technologies, including from the dairy cow sector into niche sectors working with non-bovine and novel dairy animals

Main Achievements

- DairyCare is a new COST Action starting March 2014
- Twenty five COST countries and 137 individuals have joined DairyCare
- The website www.dairycareaction.org is established
- The kick-off meeting has established a scientific agenda for 2014/15 that will include two major meetings and a number of STSM

www.cost.eu/fa

Food and Agriculture (FA)

Participating countries

BE, HR, DK, EE, FI, FR, MK, DE, EL, HU, IE, IL, IT, MT, NL, NO, PL, PT, RO, SI, ES, SE, CH, TR, UK

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www.dairycareaction.org

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Working Group activities

Working Group 1 Biomarker-based Welfare Technologies

- Development, validation and automation of non-invasive sampling of saliva, sweat, hair, faeces and urine for welfare biomarker analysis
- Development of novel analytical methods and identification of novel welfare-related biomarkers
- Proteomic and metabolomic welfare biomarker analysis

Working Group 2 Activity-based Welfare Technologies

- Development of novel accelerometer-based feeding behavior and locomotion monitoring
- Development of visual imaging systems for welfare monitoring, including video, infra-red, thermal and 3D imaging
- Movement and positional location analysis using GPS
- Validation of these measures by reference to Welfare Index assessment

Working Group 3 Systems-level Welfare Technologies

- Development of novel data acquisition, filtration and extraction tools
- Integration and combination of diverse biomarker and activity outputs to create bio-logic frameworks that characterize wellbeing and identify deviations from that state
- Linkage of relevant data through the production chain, from feed analysis through utilization and primary product quality
- Identification of minimum data inputs required for management optimization
- Integration of data streams into tailored "smart" husbandry support systems



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