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.
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