

Abstract by Pieter Hogewerf - Smart Dairy Farming: care for individual cows.

Traditionally a dairy farm is managed on the basis of observations of the farmer. He observes the herd a couple of times a day and attention is paid to the individual animal twice or three times a day during milking. The general increase in average farm size leaves the farmers less time for individual animals. Sensor systems and methods for automatic recognition of special care animals are able to assist the farmer in giving the required attention to the herd and individual animals. In the Dutch Smart Dairy farming (SDF) project farmers, breeding industries, feed suppliers, dairy industries, sensor, system and software developers, education and research co-workers cooperate in the development of these supporting systems and methods. The project is focussing on an integrated approach for sensing and information sharing. The following aspects are relevant: sensing, data exchange, data ownership/protection, modelling, financial impact, user interface and education and training. One of the aspects were the research project is focussing on is the use of a Dairy Facility Use Controller (DFUC). Basis for the DFUC is data received from sensors that report the activity and the position of the individual animals continuously. The sensor information can be based on sensors that are attached to the individual animals or based upon sensors that recognize the presence of a cow (e.g. cow id in concentrate box). Another research topic is the development of a Dairy Exchange Module (DEM). The DEM is used for information exchange and therefor stores sensor data (including measuring data), farmer and expert observations. The reports of decision support models are also stored in the DEM.