**Background**

- Animal welfare gains more and more interest for consumers, authorities and farmers
- Defined by FAWC as complying with 5 freedoms (FAWC, 2009*)
- Objective methods for farm animal welfare assessment are scarce
- European reference = Welfare Quality® protocol but time and resources-consuming
- Providing farmers an easy, fast and cheap tool to assess the welfare of their animals at an individual level is desirable.

**Objectives of the project**

- The objective of the project is to produce an individual welfare score for dairy cows, using existing data
- This welfare score could be used as a management tool for the farmer, to point out problems related to the barn or to the animal itself (non-resilient animals)
- A welfare score at the individual level could be very useful for genetic selection, and the use of this score in the calculation of the breeding value is considered.

**Methods**

**Welfare® Quality**

Selected farms (18):
- Participation in milk recording
- Equipped with monitoring systems

**Objective methods for farm animal welfare assessment**

- Body condition scoring
- Avoidance distance
- Cleanliness
- Lameness
- Lesions, hairless patches, swellings
- Clinical signs

**Production of gold standard**

- Delphi survey with experts
- Monitoring systems
- Activity, rumination time

**Correlations with existing indicators**

- Milk composition and MIR predictions
  - Fat, protein, acetone, citrate, fatty acids, lactoferrin, blood BHB and NEFAs
- Future MIR predictions
- Stress and disease-related molecules
- Diseases and treatments recording

**Production of individual welfare score based on existing indicators**

**First results**

- Calculation of scores with the WQ® protocol
- Most cows present injuries and lameness, with a poor relationship with humans; they are fed correctly
  - 1= excellent, 4= unacceptable
- 1= maximum +4 days after milk record

**Conclusion**

So far, the farm visits (maximum +4 days after milk record) have been carried out and the Delphi survey is in writing phase. The purpose of the project is to end up with an easy management tool for farmers that could in addition be used in the calculation of the breeding values.