Biodiversity within and between European Red dairy breeds: conservation through utilization (ReDiverse)

Partners CAU, DE; AU, DK; RSH & UH, DE; ABAL, LV; LUHS & LRCIA, LT; CRV BV & UR – DLO, NL; NMBU, NO; WUELS, PL; VG & SLU, SE

Problems addressed
- Significant decrease in numbers for many European red cattle breeds (ERDB)
- The challenge of establishing breeding and maintenance strategies for diverse farm systems and regional markets

Objectives
- Utilize unique genetic diversity of ERDB
- Develop novel breeding and management concepts for sustainable use of ERDB
- Develop genome based conservation strategy for ERDB

Research Findings (& Outcomes)
- Towards genomic selection -> estimated genetic relationships between ERDB
- Optimal economic values for production, reproduction and health traits
- Factors affecting willingness of farmers to keep ERDB and participate in conservation programs

Future research and activities
- Multi-breed reference population for GS
- Customized SNP chip tailored for ERDB
- Software for prediction of GEBVs for crossbreds performance
- Methods to estimate the effective population size taking into account a migration background

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