Resilience for Dairy (R4D) has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 101000770

# Christian Cordes
## Wanderup, Schleswig-Holstein
## Pilot Farm description

Germany

## Innovations

**Socio-economic Resilience / Animal welfare**


**2004** New loose housing barn 166 cubicles

**2006** Solar panels 220 KW

**2010** Biogas plant 400 KW

**2017** Upgrade: flexibilization of biogas plant to 950 KW, Reintroduction of grazing

**2019** Upgrade of barn to Animal welfare barn

**2020** New barn for calving + young stock

**2021** Neighbour farm bought = + 340 KW Biogas and large pig barn

**Farming milestones**

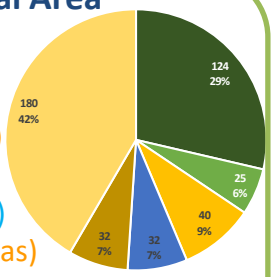
## The herd

- 213 Livestock Units (LU)
- 175 dairy cows
  Breeds: Holstein Frisian
  22% – replacement rate
- 35 + 35 dairy heifers
- Calving period : autumn block calving
- Age at first calving : 25 months
- + 2500 piglets (7- 30 kg) = 18 000 per year

## Agricultural Area

**433 ha AA**

- 124 ha perm. grassland
- 25 ha temp. grassland
- 40 ha Silage maize(cows)
- 32 ha Winter rye
- 32 ha sugar beet (biogas)
- 180 ha Silage maize (biogas)




130 ha main fodder area
69 % of grassland / forage area

## Workforces

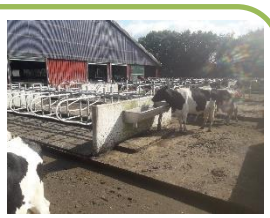
- 5 FT-labour units (3 Dairy production 2 Biogas + piglets)
- 58.3 dairy cows & 583 300 l /FTE + 18 000 piglets fed from7 to 30 kg

**Aim/pressure**: We have to be efficient

## Areas of interest

- Healthy cows, animal welfare
- Cost efficient feeding
- Exchange of experiences with other farmers (EIP-Operational Groups, EDF)

## Main buildings and equipment



- Animal welfare barn, 1.1 feeding places, 175 cubicles with straw + 42 cubicles outside. New calving barn and pen for calves
- Under installation 3 milking robots in combination with AB-grazing system
- 220 KW Photovoltaics, 740 KW Biogas, heating with excess heat
- Barn for piglet rearing from 7 to 30 kg for 2500 piglets

## Production / Technical results

- 1.750 000 kg of milk produced (97 % sold)
- 4.1 % fat & 3.4 % protein content
- Stocking rate: 1.63 LU / ha forage area
- 10 050 kg of milk /cow /year & 13 461 kg /ha forage area
- 18 000 piglets (7- 30 kg) per year
- Veterinary costs: 0.99 cent /kg milk
- 213 gr. Concentrates / kg milk

## Strengths

- Open minded
- Strong family 3.5 FTE are family
- Very good co-workers
- Spreading risks via
  1. Milk production
  2. Reneable energy
  3. Piglet rearing

## Weaknesses

- Too many working hours per family member
- High investments and high share of loans
- Coarse sandy soils with low water storage capacity

## Opportunities

- 2 sons are willing to take over as partners
- Dairy company pays extra for animal welfare milk from pasture

## Threats

- Weather dependency, climatic change because of coarse sandy soils
- Future interest rate developments

## Farmer's strategy for a "resilient" system

**Diversification with three main branches of the farm enterprise**
**Reintroduction of grazing in combination with minor investments to increase animal welfare in the barn, gave possibility for a special contract with a dairy company (+ 4 cent/kg)**
**More animal wellfare + pasture increased cow health.**
**Based on grazing lower costs for concentrates (- 1.5 kg ECM)**

## Aspirations / Needs for the future

**After fast growth of the farm, the farm has just the right size, no pressure to continue growing at any cost. Consolidation is now in the focus.**
**Reduction of work load via changing to automatic milking system (3 robots)**

## Improvement project - objectives

- Reduce work load via shift to automatic milking system in late summer 2024

**ECONOMY & LABOUR**

- Base biogas production more on residuals and manure instead of silage maize

**RESSOURCE Efficiency**

**PROJECT**

- Installation of 3 milking robots and make them work in combination with AB-grazing system
- Optimisation of grazing infrastructure – challenge: a lot of potential pasture is separated from the farm by a small public road

**ENVIRONMENT ANIMAL Wellbeing**

**Partners**

Kiel University
Christian-Albrechts-Universität zu Kiel

"Resilience 4 Dairy" is a European project involving 15 European countries and 18 partners. R4D is a thematic network on innovations and aims to support EU dairy farming in these regions where dairy farming is a main economic activity.


R4D pilot farmers are involved in a National Dairy Akis group where needs, solutions and knowledge are exchanged with other farmers, advisors and scientists on their way to build a resilient system. More information https://resilience4dairy.eu/