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

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Pilot Farm description

Germany

Innovations

Socio-economic Resilience / Animal welfare

Farming milestones

1966 Building a loose housing barn outside the village

1968 Start autumn block calving + rotational grazing

1998 Additional buildings for calves, dry cows + slurry storage

2011 Solar panels and heating with chopped wood

2019 Animal welfare barn + slurry storage

2022 3 Milking robots in combination with grazing (AB)

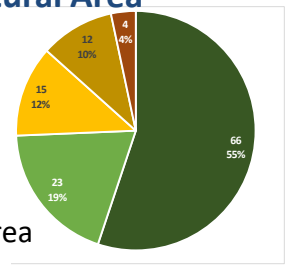
The herd

- 192 Livestock Units (LU)
- 140 dairy cows
  Breeds: Holstein Frisian
  31% – replacement rate
- 90 dairy heifers
- Calving period : autumn block calving
- Age at first calving : 29 months

Agricultural Area

130 ha AA

- 66 ha perm. grassland
- 23 ha temp. grassland
- 25 ha Silage maize
- 12 ha Winter cereals
- 4 ha set aside land
- 114 ha main fodder area
- 78 % forage area



Workforces

- 2.2 labour units (Full Time Equivalent)
- 63.6 dairy cows & 750 000 l /FTE
- **Aims** : Save time, be efficient, I am able to concentrate my work

Areas of interest

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

Main buildings and equipments

- Animal welfare barn with 1.1 feeding places and cubicles per cow, cubicles with comfort mattresses and straw litter
- 3 Milking robots in combination with an AB-Grazing system
- Photovoltaics (35 KW), heating based on wood chops from hedgerows

Production / Technical results

- 1.650 000 liters of milk produced (97 % sold)
- 3,9 % fat & 3,3 % protein content
- Stocking rate: 1.78 LU / ha forage area
- 11,785 l of milk /cow /year & 14 474 l /ha forage area
- Veterinary costs: 0.75 /kg milk
- 240 gr. concentrates / kg milk

Strengths

- Block calving gives possibility to concentrate seasonal work and healthy calves
- Always prepared: able to act instead of reacting under press

Weaknesses

- Feeding strategy for dry cows.
- High investments and high loans have to be met by high productivity (pressing)

Opportunities

- Grazing area accecible from the farm
- Spreading financial risks by also investing outside agriculture

Threats

- Weather dependency (because of grazing)
- Very high land prices, both to buy or to rent

Farmer's strategy for a "resilient" system

Beeing prepared taking preventive measures: e.g. own emergency power supply, able to milk, cool and warm up in case of power failure. Regenerative energy (Photovoltaics and wood chips for heating) Own mechanisation, to be independend from contractors when needed. The very efficient grazing system is the centra point, it leads to low feeding costs and healthy cows. Compact block calving offers many opportunities to concentrate working processes but also enables for holydays with the family during summer

Aspirations / Needs for the future

Invest more outside the agricultural sector

Building an additional storage for 1000 tons of maize silage to build up reserves for draught as well as to have already ensiled maize for cows calving in mid of september cows.

Aims and planned projects for further improvement

- Reduce work load
- Buffer tank for milk to allow constant milking for the robots even under cleaning

ECONOMY & LABOUR

RESSOURCE Efficiency

PROJECT

- Optimising of forage storage
- Enlargement of storage for solid manure
- An additional milking robot as back up
- Improve the cows roads with recycled artificial grass from urban football fields

ENVIRONMENT ANIMAL wellbeing

Partners

Kiel University
Christian-Albrechts-Universität zu Kiel

Agrarberatung-Mitte e.V.
Landwirtschaftliche Unternehmensberatung

"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/