



DAIRY FARMS IN UNITED KINGDOM

PRESENTATION OF THE SECTOR



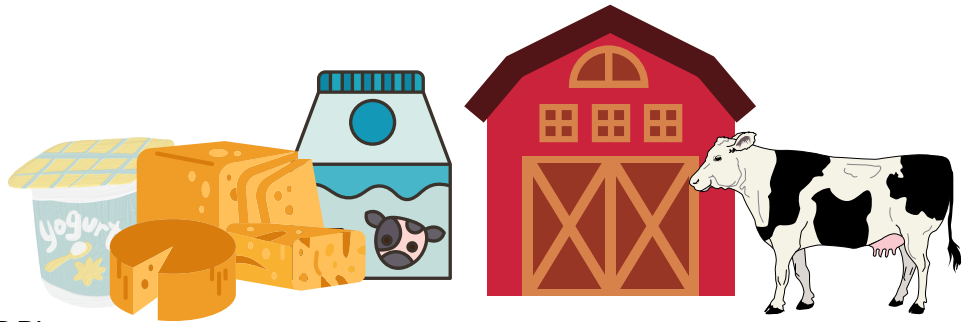
Distribution:

• Share of Total Production:

- Most of British dairy farms are located in the West and South West of England, and West Wales

• Livestock:

- 16605 dairy holdings (AHDB)
- 11900 dairy farm producers
- In average, 148 cows/farm
- There is little on-farm processing



- **Total Herd (in 2020):** 1,85 Millions
- **Milk Production (in 2020):** 15,3 billion litres

ENERGY NEEDS

Average Energy Consumption:



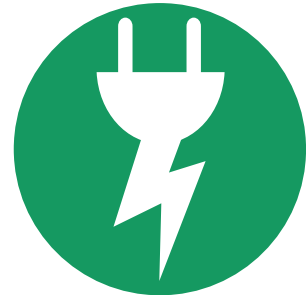
- **Total needs:** 350kWh/year/cow (12% operating costs)
- **Milk Processing:** little presence of milk processing



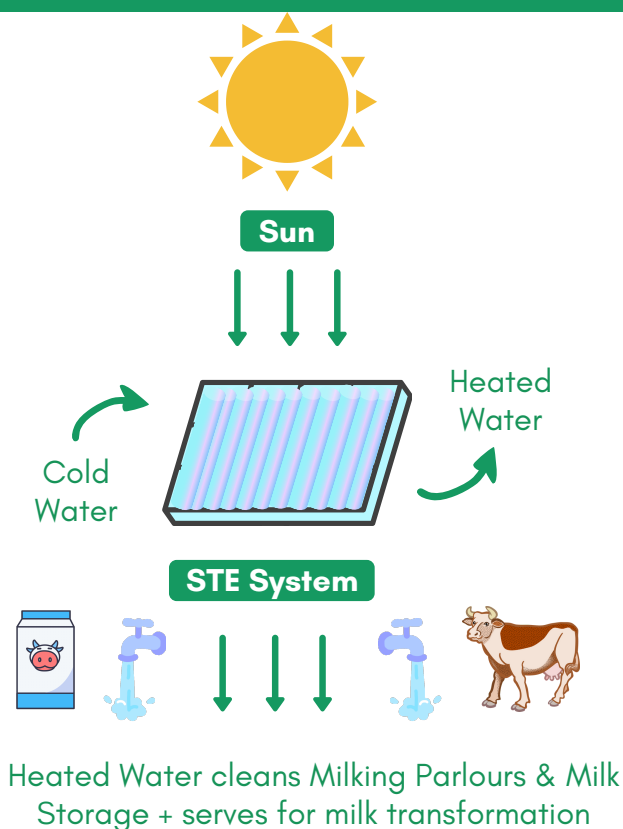
- **Cleaning:** 120 kWh/year/cow (14% of total consumption)



- **Water Supply:** 796,6 L/day



MODELISATION OF FUNCTIONING



POTENTIAL FOR SOLAR THERMAL ENERGY (STE)

Hot Water in Dairy farms:

- Raising dairy calves on milk supplement & washing dairy equipment.
- Regular without depending on seasonality

Relevant Cases: 40% of energy demand comes from heating water

- Each cow uses 350 kWh per year
- 40% of that amount, is used for heating water

Example: English Dairy Farm N1

- 175 cows need 61250 kWh/year
- 61250kWh/year x 0,4 = 24500 kWh/year
- STE supply exceeds 50% of needs