



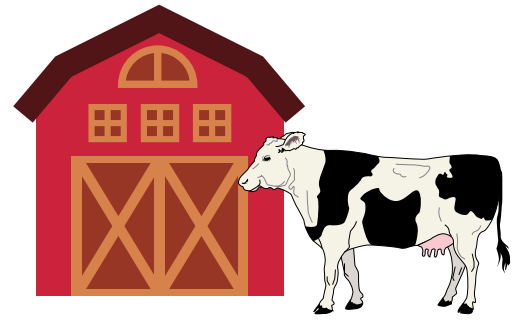
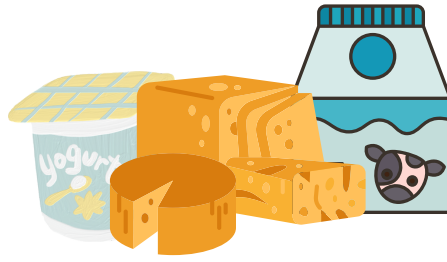
DAIRY FARMS IN FRANCE

PRESENTATION OF THE SECTOR



Distribution:

- Share of Total Production:
 - West (32%)
 - Normandy (14.2%)
- Livestock:
 - 62000 farms in total
 - 3000 holdings with on-farm processing (IDELE)
 - "Bienvenue à la Ferme" network: 1084 farms selling dairy products



- **Total Herd (in 2019):** 3.6 Millions
- **Milk Production (in 2017):** 23 Million tons
- **On average,** 59 cows/farm

ENERGY NEEDS

Average Energy Consumption:



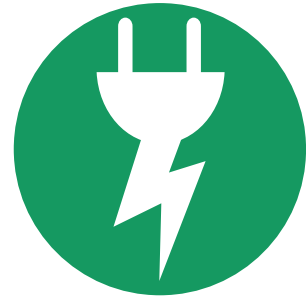
- **Total needs:** 884kWh/year/cow (12% operating costs)
- **Milk Processing:** 254kWh/year /litre of milk



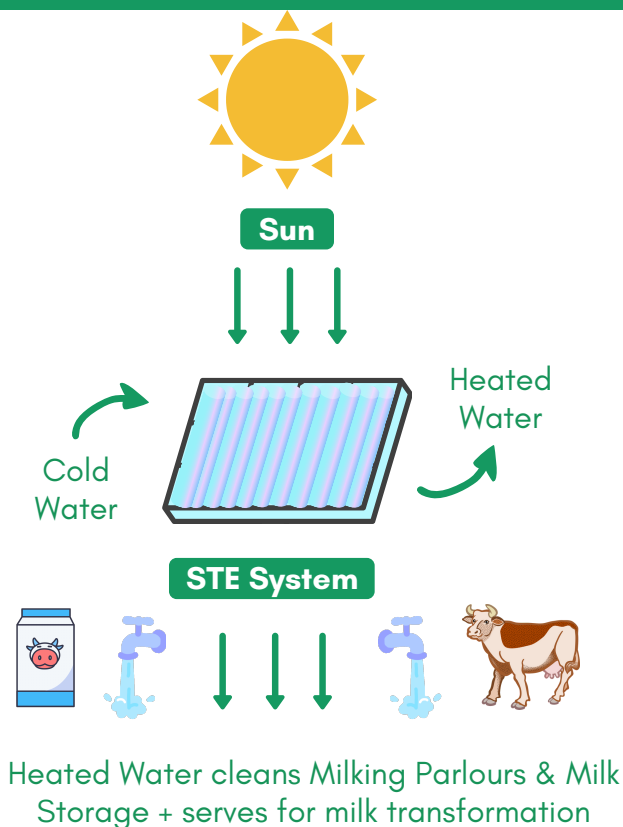
- **Cleaning:** 120 kWh/year/cow (14% of total consumption)



- **Water Supply:** 200-500 L/day



MODELISATION OF FUNCTIONING



POTENTIAL FOR SOLAR THERMAL ENERGY (STE)

Hot Water in Dairy farms:

- Daily needs & 2nd Electric Consumption
- Regular without depending on seasonality

Relevant Cases:

- 3 000 holdings with on-Farm Processing
- Farm processing at least 300000 L milk/year (production of 50 cows)
- Extra hot water requirements due to milk thermisation

=> 1L of hot water required for 1L of milk

Exemple: GAEC Arc-En-Ciel

- 70 cows producing 350000 L/y
- 300000 L at 50-70° for cheese
- 254 kWh/L Milk => 76200 kWh/y