



GREENHOUSES IN UNITED KINGDOM

PRESENTATION OF THE SECTOR



Distribution:

- Share of Total Production:
 - Most of the arable cropland is situated in the lowlands of southeast Great Britain
- Main farm features:
 - 2377 hectares for greenhouses crops all over UK
 - Depending on seasonability production
 - 104 thousand farmers in UK
 - Farm size average, 86,4 hectares/farm



Production: 3.5m tonnes of fruit and vegetables/year

ENERGY NEEDS

Average Energy Consumption:

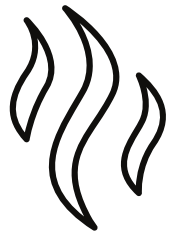


• **Total needs:**
105 kWh/m²/greenhouse

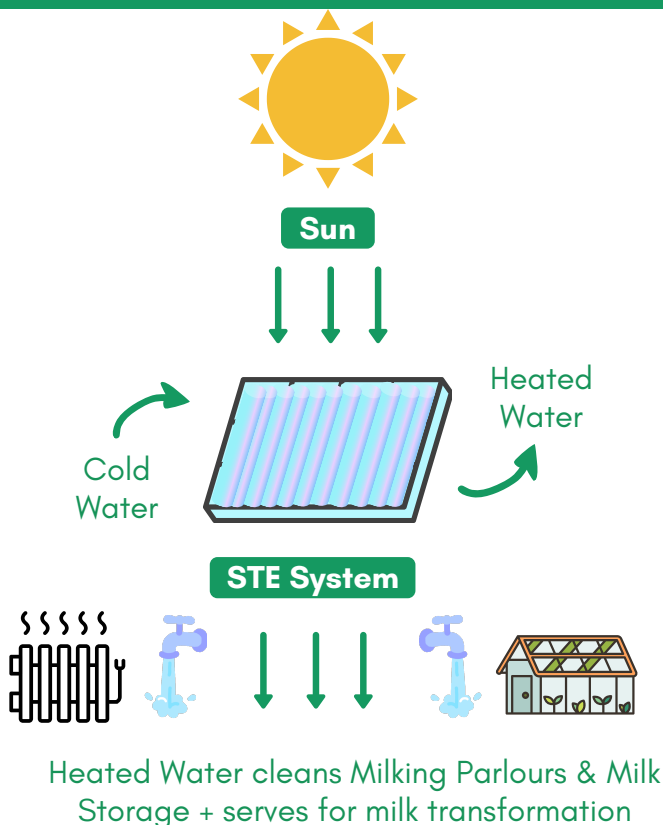
• **Water Supply:**
Close circuit



• **Heating:**
84 kWh/m²/greenhouse
(80% of total consumption)



MODELISATION OF FUNCTIONING



POTENTIAL FOR SOLAR THERMAL ENERGY (STE)

Energy use in greenhouses:

- The main use of energy is for heating and lighting
- Energy needs vary throughout the year

Relevant Cases: An average holding of 1.5 Acres (6 070,28 m²)

- Average consumption reaches 105 kWh/m²/year
- 80% is used for heating purposes
- Water is harnessed in close circuit

Example: British Greenhouse

- 6070.28 m² need 637 379 kWh/y
- 0.8 x 637 379 = 509 903 kWh/y
- STE supply exceeds 50% of the needs