

# 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:
  - o 2377 hectares for greenhouses crops all over UK
  - Depending on seasonability production
  - o 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

# Sun Heated Water STE System

Heated Water cleans Milking Parlours & Milk Storage + serves for milk transformation

# 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

Sources: Market Analysis I4F: www.nweurope.eu/icare4farms