Interreg North-West Europe ICARE4FARMS

# ICARE4FARMS PRESENTS

# Solar Thermal Energy in Irish Agriculture

**AIM:** presenting the Irish agricultural domain, its potential for Solar Thermol Energy (STE) application and its key sectors.

**METHOD:** summarizing this ambition by highlighting results from interviews, academic and official documents analyses.

## Use of Renewable Energy in Agriculture

**Share total consumption:** 3.2%

**Price of energies (2018):**

- Electricity: 0.19 €/kWh
- Photovoltaic: 0.06-0.12 €/kWh
- Biomass: 0.062-0.122€/kWh
- Natural gas: 0.089-0.147€/kWh

## National Aids & Legal Framework for STE

- Targeted Agricultural Modernisation Schemes II / TAMS II
- SEAI's Better Energy Communities /BEC
- Support Scheme for Renewable Heat (SSRH)

**BUT not applicable for now on to STE**

## KEY SECTORS FOR STE

### Milk-Fed Calves

- **Holding**:
  - **Total:** Very few/unknown
  - **Target candidates for STE:** n/a
- **Main Energy Used:** n/a
- **Average Direct Consumption over 22-week (usual rearing period) ????:**
  - 152 kWh/calf (all activities/100%)
  - 108 kWh only for drinking (= 71%)

### Dairy Farms

- **Holding:**
  - **Total:** 18 000 with in average 90 cows
  - **Target candidates for STE = On-farm processing:** the whole set
- **Main Energy Used:** Electricity
- **Average Direct Consumption:**
  - 120 kWh/cow for cleaning
  - 254 kWh/milk (L) for processing
- **Water per day:** between 200 & 500L/cow

### Greenhouses

- **Holding (tomato & cucumber):**
  - Horticulture: 1105 ha
  - Market Gardening: 1081.6 ha
- **Main Energy Used:** Electricity & Gas
- **Average Direct Consumption:**
  - Horticulture: 160kWh/m2/year
  - Market Gardening: 317kWh/m2/year

### Pig Farms

- **Holding:**
  - **Total:** 1675 farms (≈ 1017 pigs) cf. 1.7 M pigs
- **Main Energy Used:** Electricity & Fuel Oil ?
- **Average Direct Consumption ???:**
  - Maternity stage: 729kWh/place (80%)
  - Post-Weaning stage: 67kWh/place (79%)

1 particularly appropriate sectors: Dairy Farms
2 other sectors of interest: Pig Farms & Poultry
2 sectors with low potential currently: Calf Farms & Greenhouses

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