



# ECONOMICAL AND ENVIRONMENTAL ASPECTS OF ENERGY MANAGEMENT IN BELGIAN GLASSHOUSE HORTICULTURE



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MINISTRY OF  
FLANDERS

## 1. PROBLEM

- GLASSHOUSE HORTICULTURE → ENERGY INTENSIVE
- NEED FOR RATIONAL USE OF ENERGY
- NATURAL GAS ↔ FUEL OIL
  - ↳ MORE ENVIRONMENTAL FRIENDLY
  - ↳ MORE EXPENSIVE

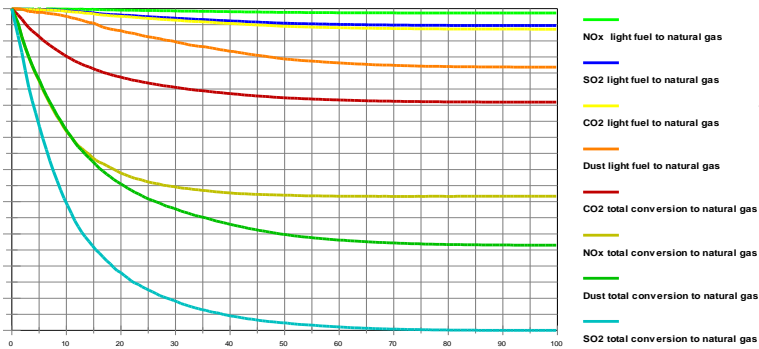
## 2. CONSUMPTION AND SOURCES OF ENERGY

- **METHOD** : EXTRAPOLATION MODEL
- **DATA** : FARM ACCOUNTING DATA NETWORK (F.A.D.N.) C.L.E. AGRICULTURAL CENSUS N.I.S.

## 3. SWITCH OVER FROM FUEL OIL TO NATURAL GAS

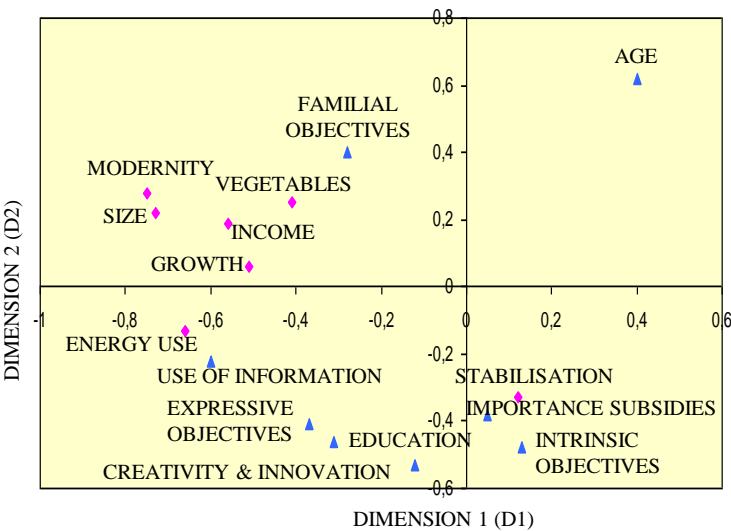
### 3.1. ENVIRONMENTAL EFFECTS

- **METHOD** : CALCULATION MODEL
- **DATA** : AGRICULTURAL CENSUS N.I.S.

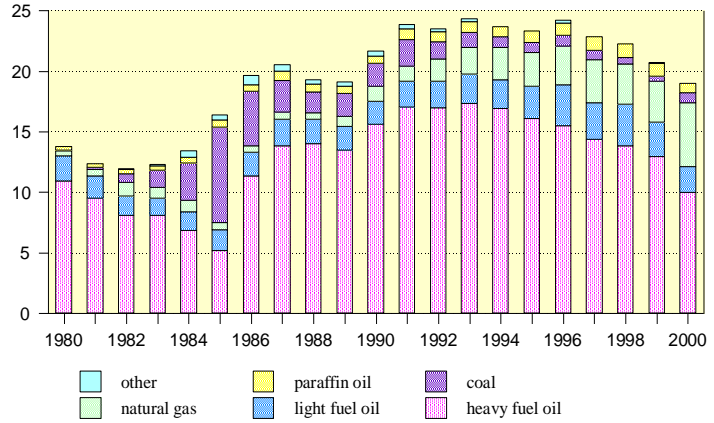


### MULTIDIMENSIONAL SCALING

COMPONENT LOADINGS INFLUENCING FACTORS



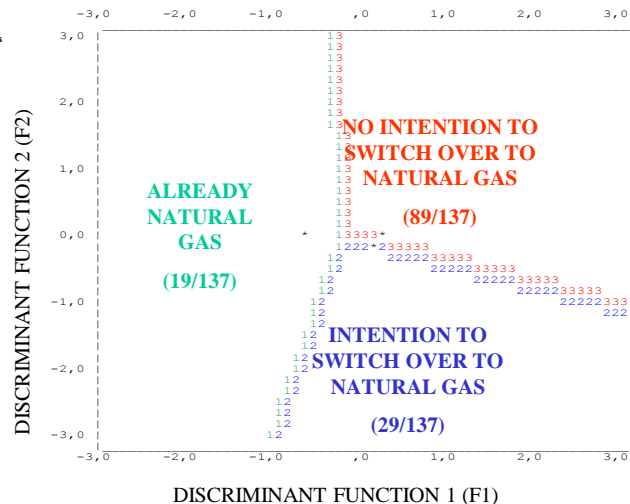
ENERGY CONSUMPTION IN BELGIAN GLASSHOUSE HORTICULTURE (Petajoule)



### 3.2. INFLUENCING FACTORS

- **METHOD** : MULTIDIMENSIONAL SCALING DISCRIMINANT ANALYSIS
- **DATA** : INTERVIEWS 137 GLASSHOUSE MANAGERS
- **SAMPLE** : 79 PRODUCERS OF ORNAMENTAL PLANTS  
58 PRODUCERS OF VEGETABLES
- **RESULTS** : 89 / 137 : **NO INTENTION TO SWITCH OVER TO NATURAL GAS**  
 Why ??? 38 / 89 : too expensive, 28 / 89 : too old  
 17 / 89 : no pipeline, 5 / 89 : low energy use  
 1 / 89 : other reasons

### DISCRIMINANT ANALYSIS



### STRUCTURE MATRIX

	F1	F2
D1	0,996	-0,091
D2	0,083	0,997