

The impact of policy reform on the level of structural change in the agri-food sector of Ireland, Denmark and the Netherlands

Daragh Clancy¹, Andrius Kazukauskas²,
Carol Newman² and Fiona Thorne¹

¹ Rural Economy Research Centre, Teagasc

² Department of Economics, Trinity College Dublin



Overview

- Motivation
- Structural Change
- Key Indicators
- Results
- Conclusions

Motivation



114th EAAE Seminar
16th April 2010



Motivation

- From 2005 a new financial support mechanism was introduced 'decoupling' farm subsidies from production decisions
- Could possibly have major ramifications for aggregate production, farm practices and the structure of farming
- Relationship between farm structure and agricultural production means the impact of CAP reform on production decisions should give a good indication of the form agricultural structural change will take

Motivation

- Two competing hypotheses of post decoupling agricultural structural change are proposed:
 - Production inducing effect (Burfisher and Hopkins, 2003)
 - Expectations effect (Revell and Oglethorpe, 2003)

Motivation

- Comparable survey (FADN) for Ireland, Denmark and the Netherlands
- Presents a unique opportunity for the Irish experience to be compared with similar regions
- Ideal case studies due to size, recent economic performance and the relative importance of agriculture to the overall economy

Objectives

- Conduct detailed literature review of national and international studies that examine agricultural structural change
- Identify key indicators of such change
- Compile micro-data from the three countries involved in the study
- Produce descriptive report comparing the impact of CAP policy reform on the structure of farms in all three countries

Structural Change



114th EAAE Seminar
16th April 2010



Structural Change

- The definition of *structural change* varies depending on the underlying definition of *agricultural structure* (Zimmermann et al. 2006)
- Essentially there are two components:
 - Productivity
 - Structure of the industry

Structural Change

- First component leads to time series and panel data analysis
- Objective is a descriptive rather than empirical analysis
- Therefore, the component of structural change which relates to the structure of the industry focused on

Key Indicators



114th EAAE Seminar
16th April 2010



Key Indicators

- Can be thought of as statistical constructs which support decision making
- Reveal trends in data which subsequently can be used to analyse the results of policy actions

Key Indicators

- Farm numbers
- Specialisation
- Farm Size
- Economies of Scale
- On-farm Investment
- Off-farm Employment
- Economic Viability

Cross Country Data

- Irish, Danish and Dutch data are obtained from Teagasc, the Institute of Food and Resource Economics (FOI) and the Agricultural Economics Research Institute (LEI) respectively
- Farms are selected to get a representative sample for each agricultural sector.

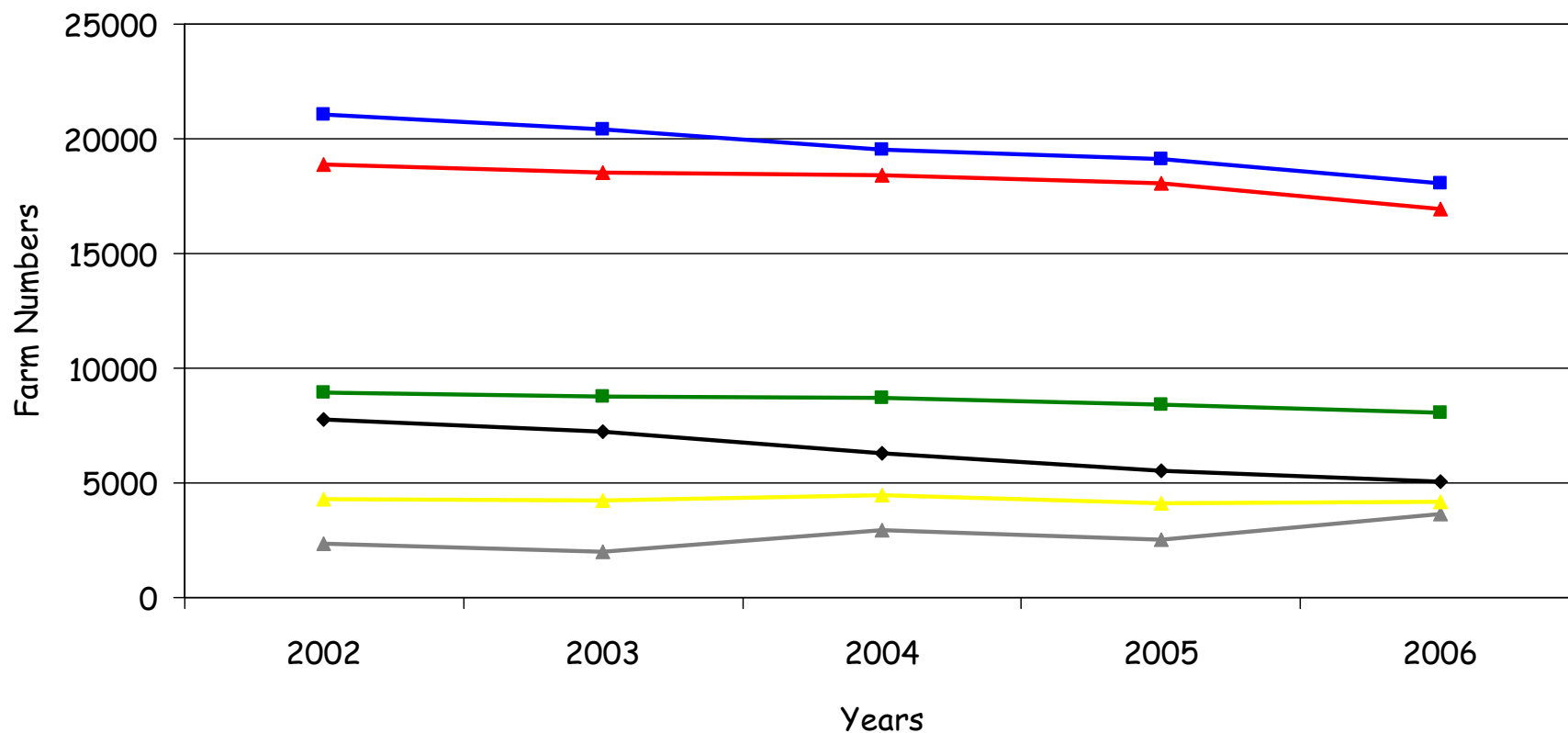
Results



114th EAAE Seminar
16th April 2010



Farm Numbers



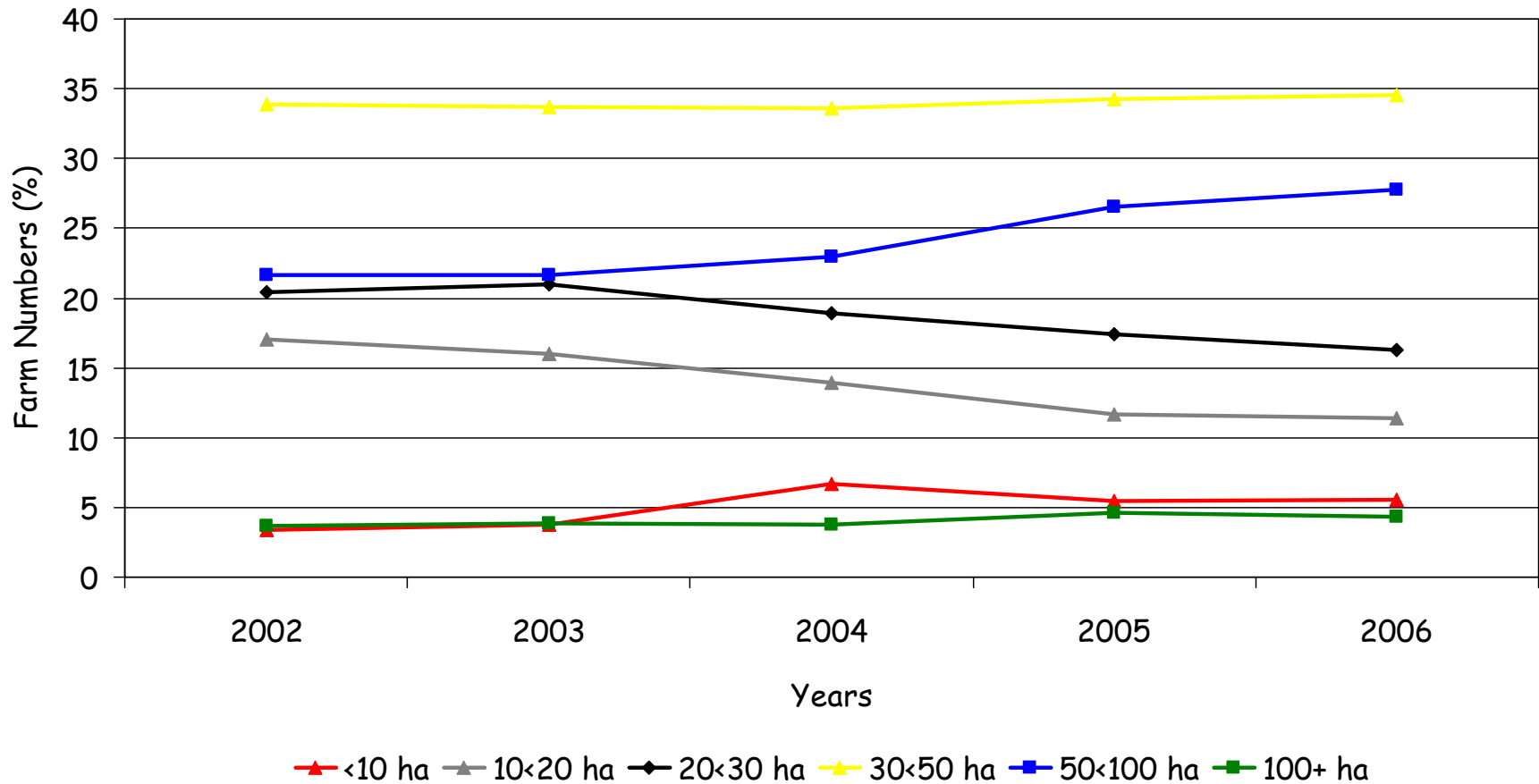
▲ Ire Dairy
 ▲ Ire Tillage
 ◆ Den Dairy
 ▲ Den Tillage
 ■ Ned Dairy
 ■ Ned Tillage



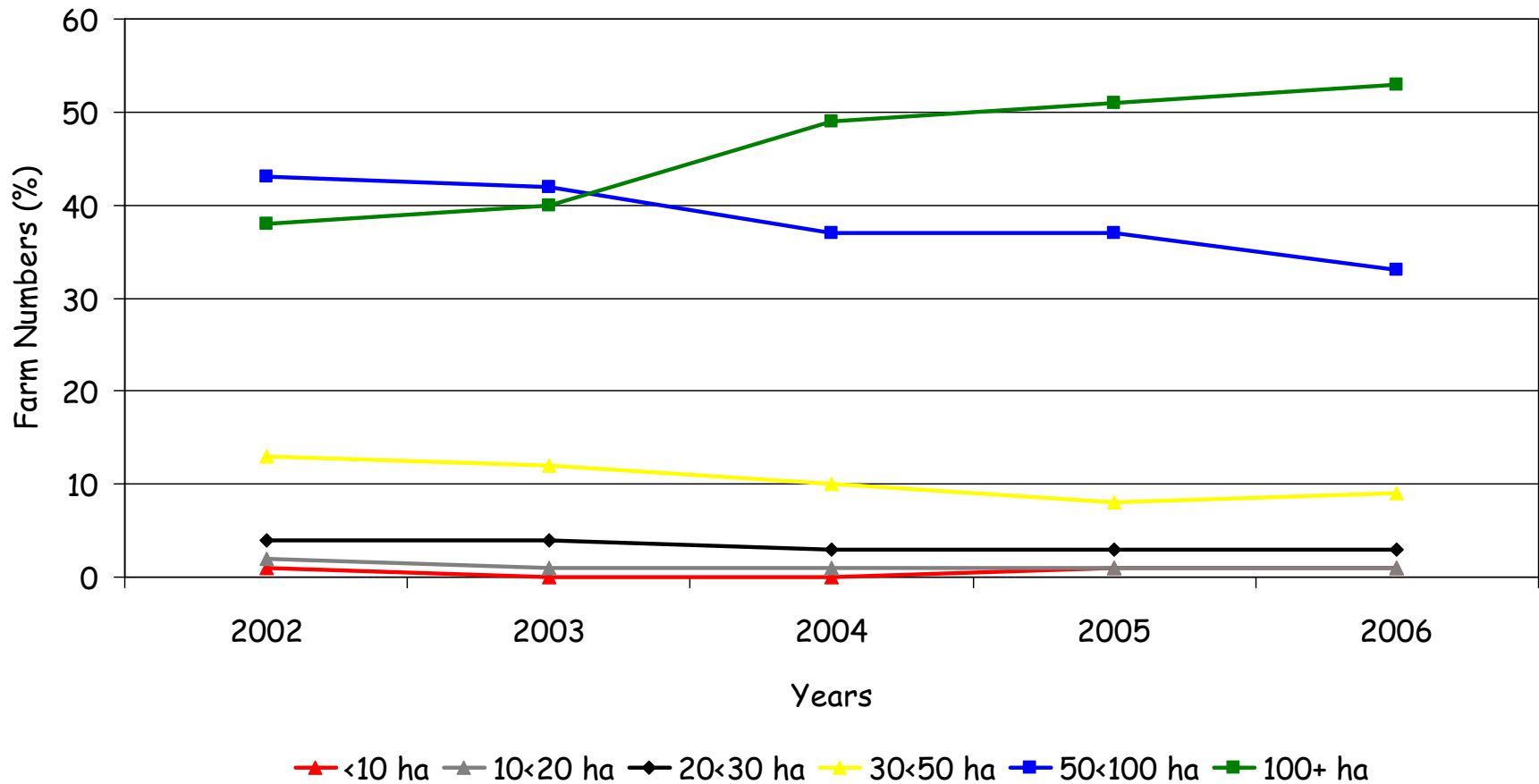
Specialisation

| Gross Output (%) | Ireland | | Denmark | | Netherlands | |
|------------------|---------|------|---------|------|-------------|------|
| | 2002 | 2006 | 2002 | 2006 | 2002 | 2006 |
| Crops | 10.4 | 10.1 | 27.7 | 29.8 | 51.1 | 50.6 |
| Dairy | 42.3 | 37.6 | 20.3 | 16.2 | 20.4 | 17.9 |
| Beef | 30.4 | 37.6 | 3.6 | 3.9 | 1.8 | 2.8 |
| Pig | 2.4 | 3.2 | 35.5 | 29.7 | 12.5 | 11.7 |
| Sheep | 9.4 | 7.6 | 0.0 | 0.1 | 0.5 | 0.4 |
| Other | 3.3 | 3.4 | 5.0 | 7.0 | 5.5 | 7.9 |

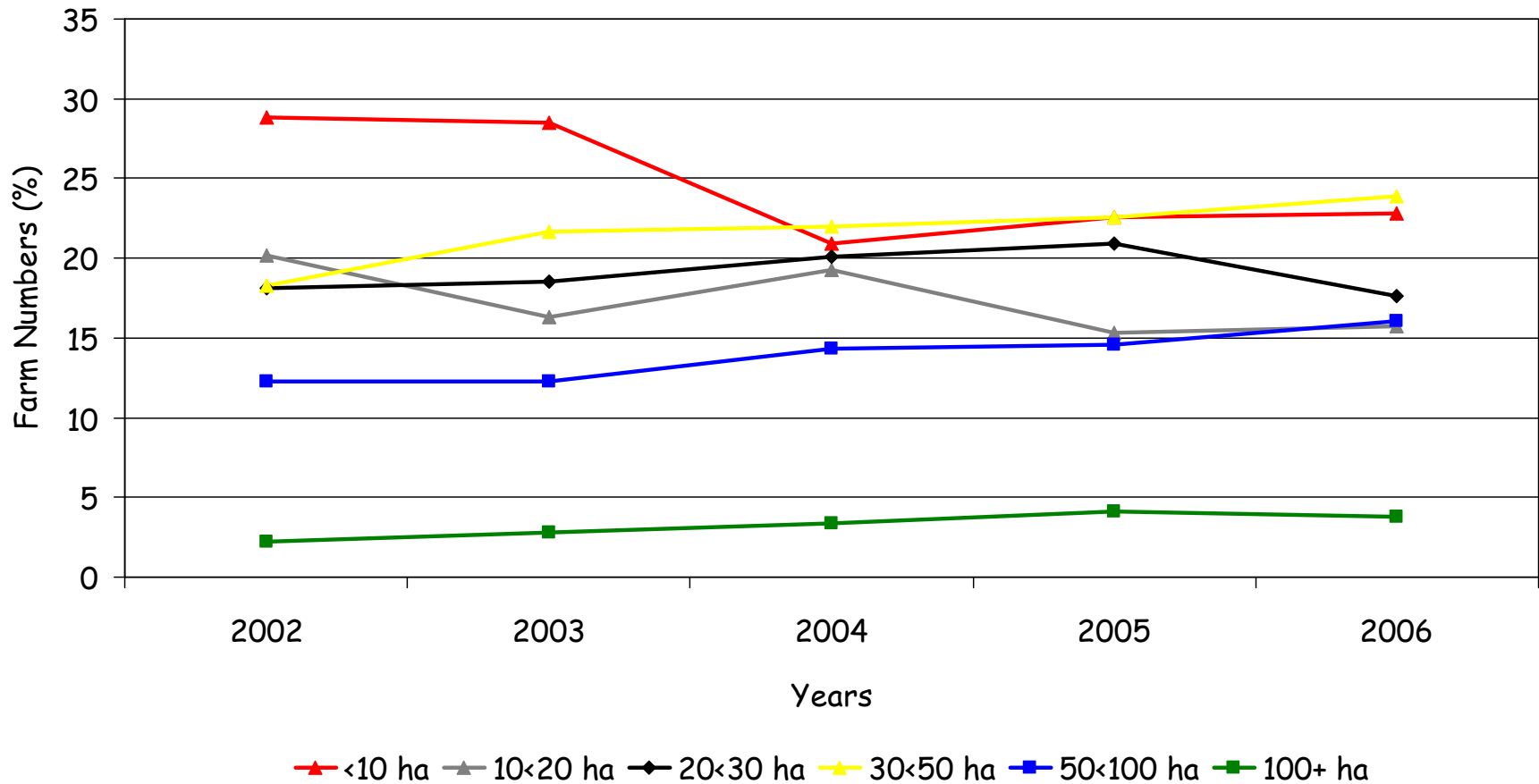
Farm Size: Ireland



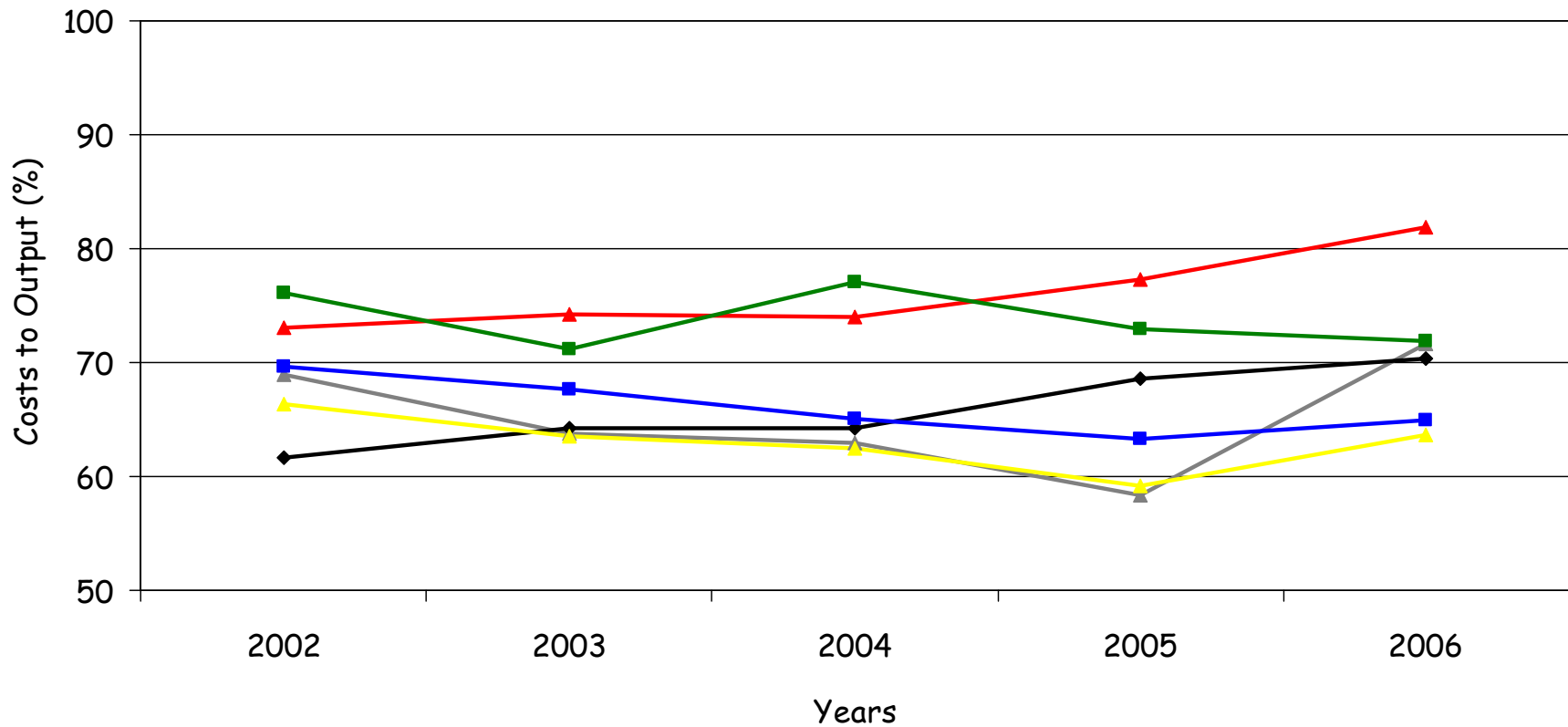
Farm Size: Denmark



Farm Size: Netherlands

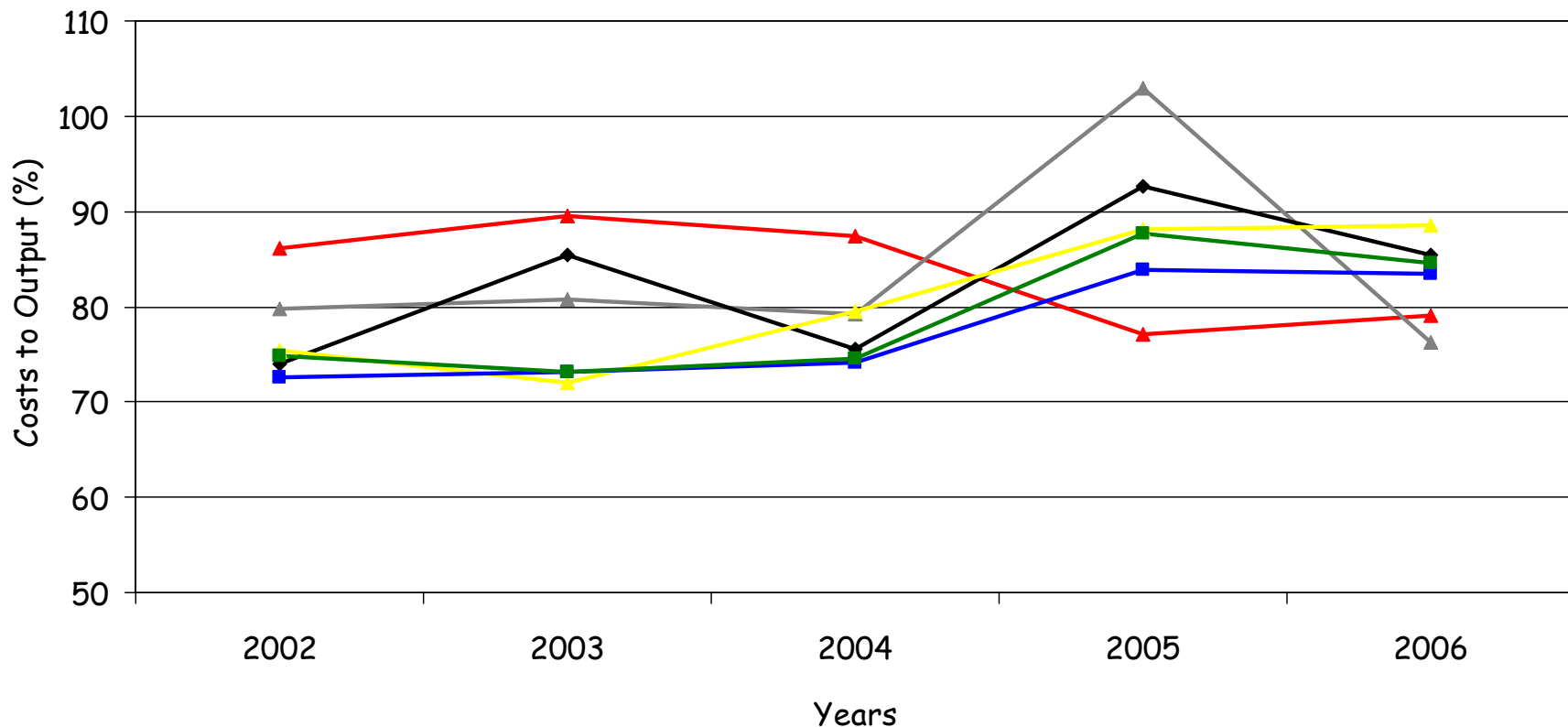


Ireland: Input Costs/Total Output Ratio



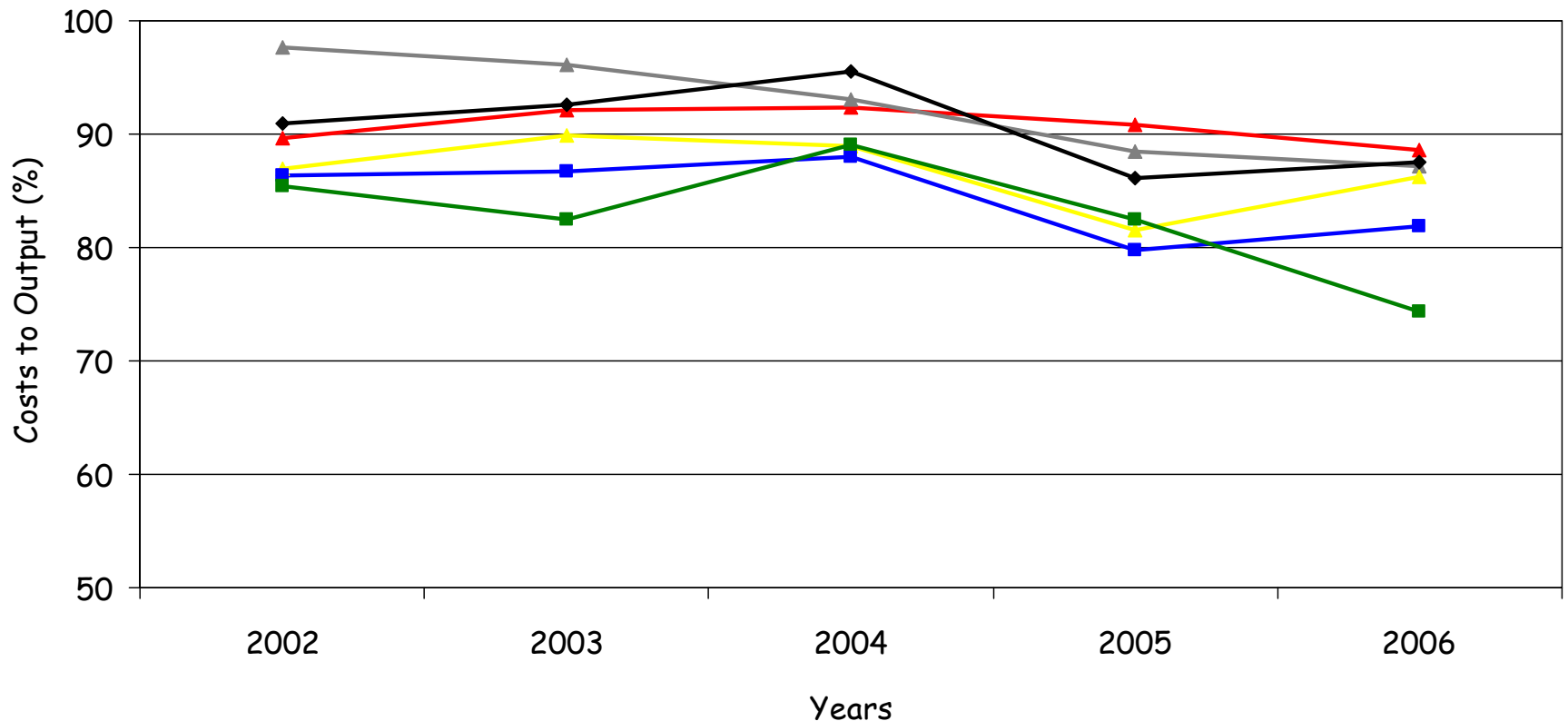
—▲— <10 —▲— 10<20 —◆— 20<30 —▲— 30<50 —■— 50<100 —■— 100+

Denmark: Input Costs/Total Output Ratio



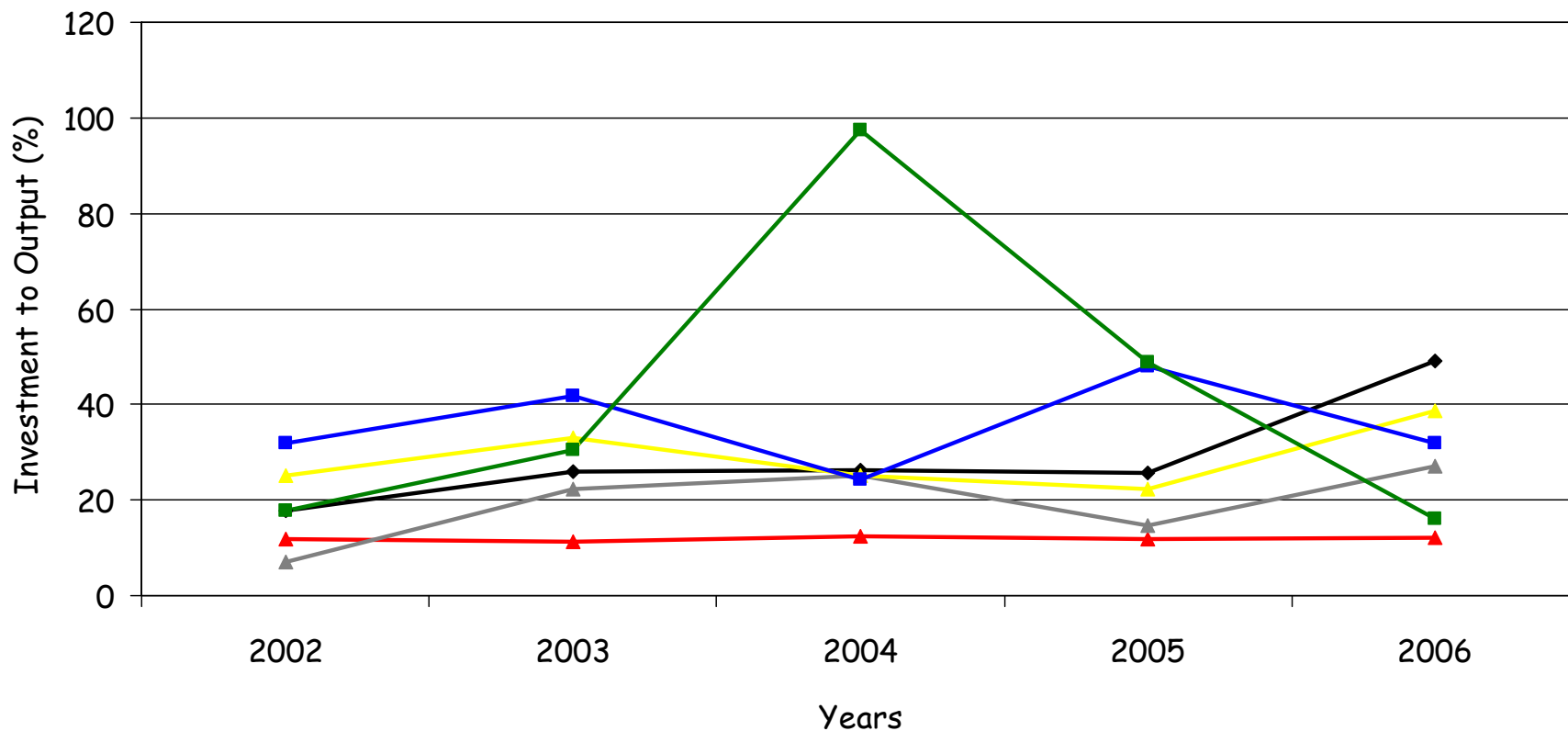
—▲— <10 —▲— 10<20 —◆— 20<30 —▲— 30<50 —■— 50<100 —■— 100+

Netherlands: Input Costs/Total Output Ratio



—▲— <10 —▲— 10<20 —◆— 20<30 —▲— 30<50 —■— 50<100 —■— 100+

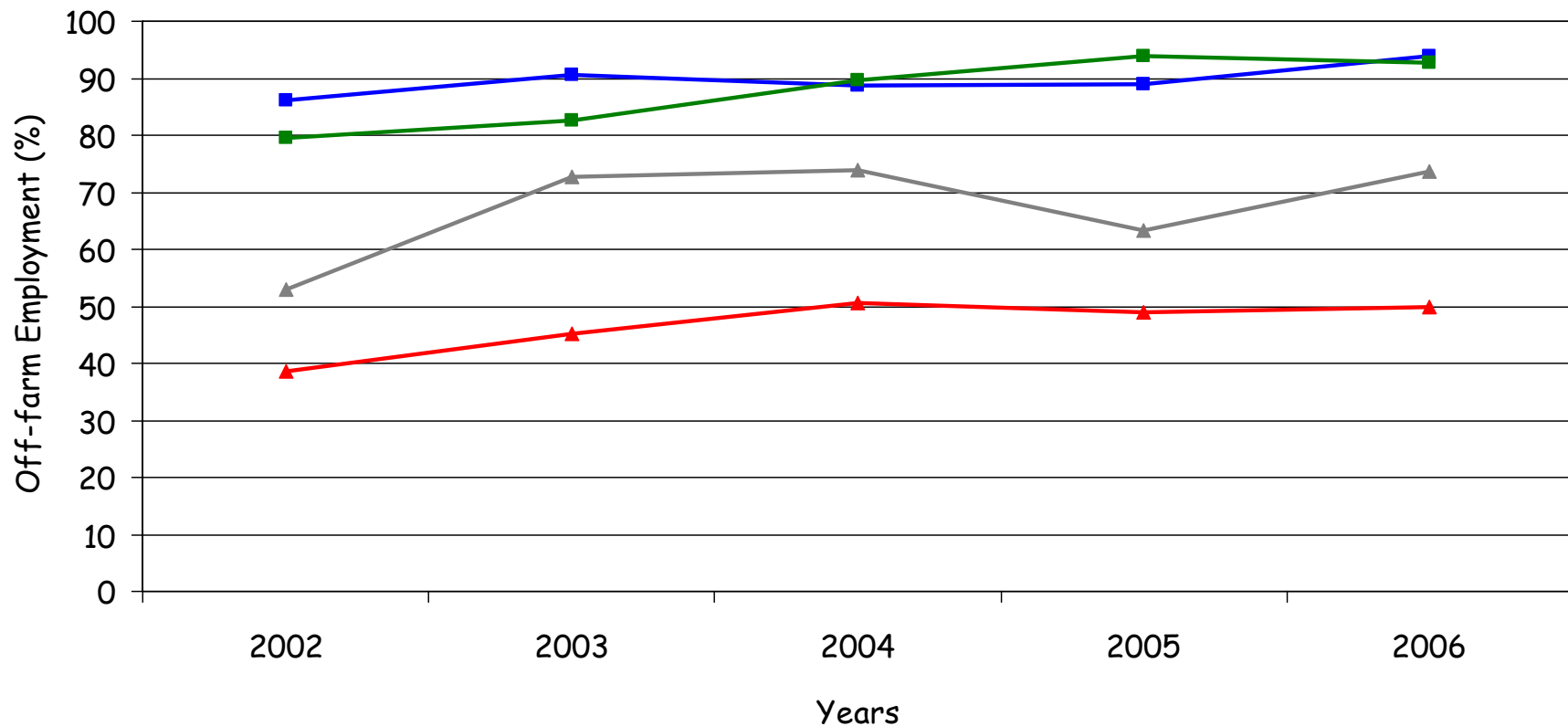
Investment to Output



▲ Ire Dairy
 ▲ Ire Tillage
 ◆ Den Dairy
 ▲ Den Tillage
 ■ Ned Dairy
 ■ Ned Tillage

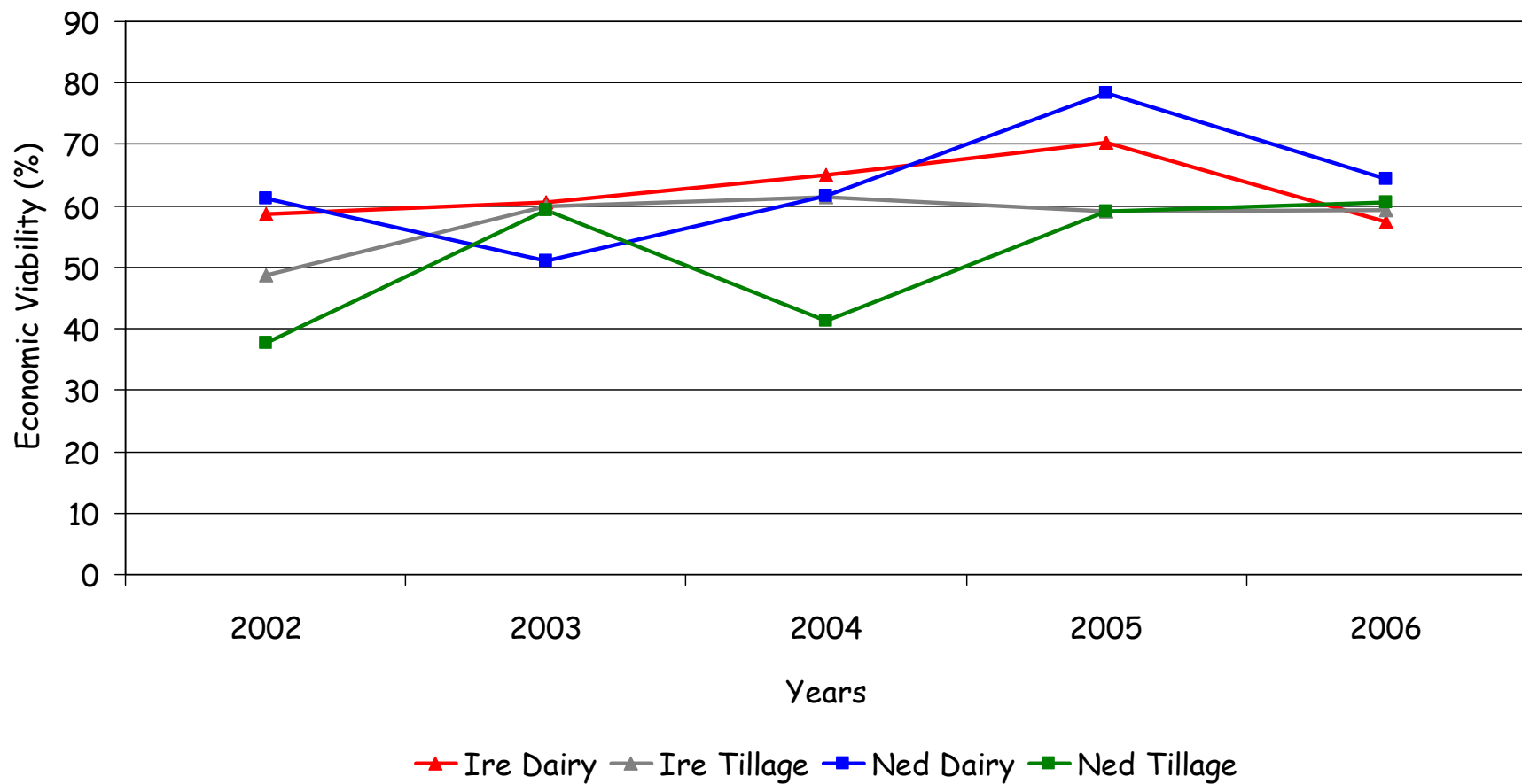


Off-farm Employment



▲ Ire Dairy ▲ Ire Tillage ■ Ned Dairy ■ Ned Tillage

Economic Viability



Conclusions



114th EAAE Seminar
16th April 2010



Conclusions

- That structural change is taking place in agriculture is not in doubt
- Previous regime of direct payments may have had the effect of slowing structural change
- Allowed unprofitable farmers to remain in production
- Acted as a barrier to system switching
- The issue this paper aims to address is whether or not the nature and speed of agricultural structural change has altered as a result of recent policy reforms

Conclusions

- This analysis suggests that recent policy reforms have had little effect on structural change
- Long run trends have continued
- Therefore, the production effect hypothesised by Revell and Oglethorpe (2003) seems to be prevalent
- However, this is based on only two years of data post-decoupling

Thank you for your
attention



114th EAAE Seminar
16th April 2010

