

Is the Irish Model of Dairy Farming Economically Sustainable?

Trevor Donnellan, Thia Hennessy,
Michael Keane & Fiona Thorne

AESI Annual Conference, Ashtown, 24th November 2011



The Irish Agriculture and Food Development Authority 1

Overview

- **Background & Rationale**
 - Methods
- **Competitiveness Results**
 - FADN Results
 - Inter-Country Cost & Returns
 - IFCN Results
 - Inter-Country Cost & Returns
- **Conclusions & Implications of findings**



The Irish Agriculture and Food Development Authority 2

Background & Rationale

- **What do we mean by economically sustainable?**
 - Definition of competitiveness
 - Competitiveness of the current model / scale of Irish dairy farming
- **Why it is important to assess competitiveness?**
 - Food Harvest 2020
 - CAP Reform & WTO Reform (Importance of US, Argentina, NZ in particular)
 - EU Enlargement (Importance of countries such as Poland)
 - Volatility (Ability to withstand cost price pressure)
 - Biofuels (Potential cost implications for grass vs feed)



The Irish Agriculture and Food Development Authority 3

Questions answered

- **How competitive are Irish dairy farms?**
 - At EU level ?
 - At world level ?
 - Distribution of costs and returns within Ireland?
- **“What if” scenarios?**
 - Input price & output price volatility
- **Competitiveness is about survival & not just about being the best**



The Irish Agriculture and Food Development Authority 4

Methods

- **Measures**
 - Partial productivity indicators
 - Costs and Profit
 - Costs per unit of product
 - Costs relative to output value
- **Cost elements**
 - Cash costs (feed, fertiliser, fuel, hired labour, vet services etc.)
 - Economic costs (i.e. Cash Costs + plus cost for owned labour, land and capital)
- **Data**
 - Farm Accountancy Data Network (FADN) from the European Commission
 - International Farm Comparisons Network (IFCN)



Cash Costs Defined

- Usual costs within profit and loss statement
- Variable Costs
- Fixed Costs
 - Excluding depreciation



Economic Costs Defined

- **Cash costs plus**
 - Imputed charges for owned land, labour & capital
- **Imputed land value**
 - Owned land * rental value of land
 - Hence, sale prices not affecting competitive position
- **Imputed labour value**
 - Unpaid labour * paid labour hourly rate
- **Imputed capital value**
 - Owned capital * long term interest rate



Productivity Indicators

Land, labour and capital partial productivity indicators

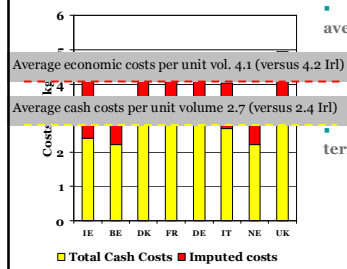
- Milk yield/cow, milk solids/cow, stocking rate/ha., milk production/labour units

Results

- Partial productivity indicators for Ireland were *'worrying'*;
- But, competitiveness and not just productivity is what is important



Costs per kg of milk solids: Specialist Dairy prod. (2008-2010)

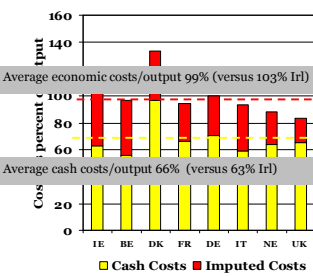


- Ireland well below the average in terms of cash costs:
- Positive outlook for the short to medium term for the average size dairy farm

- Just above the average in terms of economic costs:
- Providing a return to all owned resources means the longer term outlook for the average size farm is not as positive



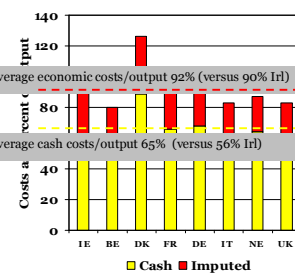
Costs as a percent of output value: Specialist Dairy prod. (2008-2010)



- Similar story to costs per unit of milk produced
- Positive in cash cost terms
- But not so positive in economic cost terms



Costs as a percent of output value: 'Larger' Specialist Dairy prod. (2008-2010)



- Variation between countries on cash costs reduced
- Ireland still well below the average in cash cost terms
- And on a more positive note, still below the average in economic costs
- Positive for the longer term outlook for the larger size Irish dairy farm



Scenario Specification

- **Fertiliser Price**
 - 50% increase & decrease (in isolation)
- **Concentrate Feed Price**
 - 25% increase & decrease (in isolation)
- **Milk Price**
 - 20% increase/decrease for Ireland
 - Food Harvest aims to increase value added
 - 10% increase/decrease for other EU countries



The Irish Agriculture and Food Development Authority 13

Scenario Results

- **Fertiliser & Concentrate Feed Price Scenarios:**
 - Results not surprising or remarkable
 - No major shift in relative competitive position for Ireland
- **Milk Price Scenario:**
 - A sustained milk price decrease: Irish dairy farms would struggle to compete within the EU on cash costs;
 - But, a sustained milk price increase: Irish dairy farms appear in a highly competitive position.



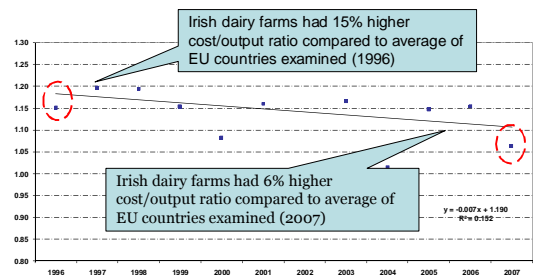
The Irish Agriculture and Food Development Authority 14

Progress over time.....



The Irish Agriculture and Food Development Authority 15

Relative Economic costs as % of output: Ireland relative to the average of EU countries examined



The Irish Agriculture and Food Development Authority 16

Cost Competitiveness & Productivity of Irish Dairy Production – outside EU 15 ('08-'10)





Cost Competitiveness & Productivity of Irish Dairy Production – outside EU 15 ('08-'10)



The Irish Agriculture and Food Development Authority 17


Looking outside EU-15

The Irish Agriculture and Food Development Authority 18

Method - What is an IFCN typical farm ?


- **Specification of a typical farm:**
 - A typical farm represents a farm type in a region and has an average management performance.
 - Choosing farm types: 1st “mode size farm”, 2nd “larger farm”
- **The typical farm is “built” and “validated” based on panels (farmers, advisors knowledge) and farm accounting statistics**



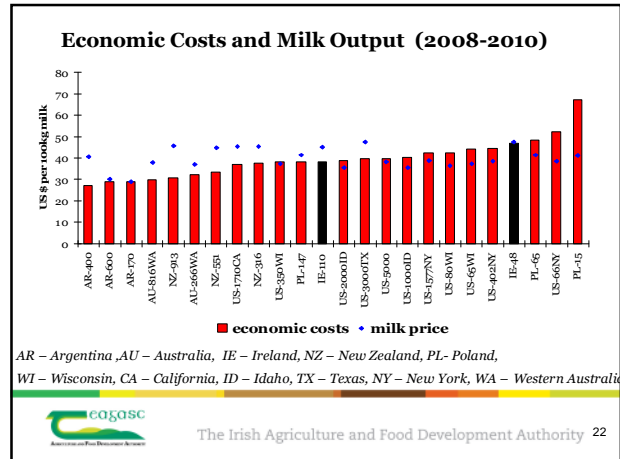
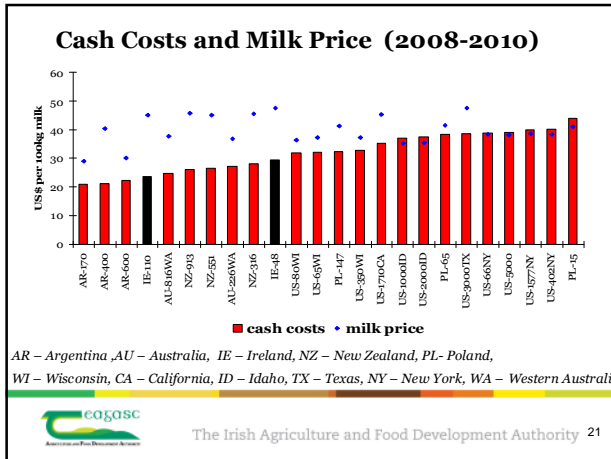
The Irish Agriculture and Food Development Authority 19

IFCN country analysis

- **Comparative countries:**
 - Ireland, Argentina, US, NZ, Australia, Poland
- **Systems of production:**
 - Feedlot systems: Texas, California,
 - Grazing: Argentina, Ireland, NZ, Australia
 - Free stall & stanchion barns: Poland, UK, Wisconsin, Idaho, US – North East,



The Irish Agriculture and Food Development Authority 20



Conclusions

- Very competitive on a cash cost basis
 - Ireland had one of the lowest costs per unit of production
 - Positive outlook in the short to medium term
- Deterioration when total economic costs are calculated
 - Implications for competitiveness in the longer term
 - Warning signal for average size Irish dairy farm
- But, the larger size Irish farm does have a competitive advantage within EU & internationally

The Irish Agriculture and Food Development Authority 23

Take Home Message

- This research shows that in the longer term,
 - as farm size increases, the competitive outlook for the Irish dairy sector could improve
- If economies of scale can be exploited in the Irish dairy sector, average farm unit will grow in size
 - This will in turn improve competitiveness
- Reaffirms the need for the expansion identified in FH2020

The Irish Agriculture and Food Development Authority 24