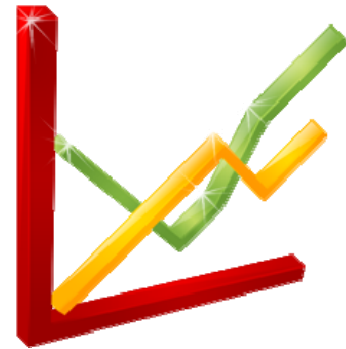


**Project number:** 5496  
**Funding source:** Teagasc

**Date:** November, 2011  
**Project dates:** Jan 2006 – Dec 2010

## Modelling the effect of policy reform at the farm-level: the FAPRI-Ireland farm-level model



### Key external stakeholders:

Policy makers, farmers, farm bodies, industry, national government.

### Practical implications for stakeholders:

This project examined the impact of a number of policy issues that are of critical interest to the agri-food sector, including milk quota elimination and reform to international trade policy (World Trade Organisation through a conclusion of the WTO Doha Round negotiations).

### Main results:

- Results from the FAPRI-Ireland farm level model on the implications of a proposed WTO reform conducted in 2007 concluded that if such a WTO reform was implemented the future of milk quota policy would need to be considered. They report also concluded that with an expected rationalisation in the dairy sector combined with significant restructuring in the tillage and beef sectors it was imperative for the future of the farming sector that resources like land and labour could move freely between farmers through leasing and other resource sharing initiatives.
- Results from the medium term outlook from the FAPRI-Ireland farm level model published in 2008 highlighted the dependence on off-farm income that existed on many Irish farms. Given the economic downturn in the national and global economy this presents concerns over the future availability of this off-farm income to supplement many of Ireland's non-viable farms.
- A number of reports from the FAPRI farm level model during the reporting period have indicated that a significant number of farmers have chosen to use their decoupled payments to subsidise unprofitable production. The implications of this finding is that it raises the question as to whether or not the SFP scheme be considered a green box policy if unprofitable production is subsidised

### Opportunity / Benefit:

This project clearly quantifies the implications of various policy options on some key economic and social indicators for the agri-food sectors. The specific benefits of the farm-level model are measures of the effect of a proposed policy or market development on the following factors, changes in the farming population, in terms of the effect on entry to and exit from the farming sector, the proportion of full and part-time farms, the number of dairy farms, farm production plans, farm incomes, and the viability and sustainability of farm households.

### Collaborating Institutions:

University of Reading, UCD, TCD.

**Teagasc project team:** Dr. Fiona Thorne  
Dr Thia Hennessy  
**External collaborators:** Prof. T. Rehman, University of Reading

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### 1. Project background:

This project, in conjunction with other RMIS projects in the FAPRI-Ireland Partnership, examined the effects of market and policy developments on the Irish agri-food and farming sector. The objective of the FAPRI-Ireland Partnership is to provide timely, evidence-based policy advice to policy-makers. The objective is to show the farm-level effects of a policy reform, in terms of the implications for farm numbers, farm incomes, the intensity and diversification of farm plans and the general viability of farm households. The project plays a major role in contributing to policy decisions in the national interest and involves interaction at a senior level with government departments, state agencies and farm and food organisations.

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### 2. Questions addressed by the project:

What are the possible effects of two policy reform scenarios;

1. the elimination of milk quotas; and
  2. a WTO trade reform agreement as proposed in the so-called Falconer text?
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### 3. The experimental studies:

The project used the FAPRI-Ireland farm level model to examine a number of specific research questions. First, a set of profit maximising farm level linear programming models is solved annually for each farm participating in the Irish National Farm Survey. The linear programming models are supplemented with three exogenously estimated econometric models which are used to model the structural change aspects. The first model estimates the effect of policy on the rate of entry and exit from farming and thus farm numbers. The second model assesses the effect of policy on the allocation of farm labour and in turn on the proportion of full and part-time farmers and finally, and the third model examines the distribution of milk quota following a policy change. The three exogenous models are linked to the LP models in the integrated modelling system.

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### 4. Main results:

A number of reports from the FAPRI farm level model during the reporting period have indicated that a significant number of farmers have chosen to use their decoupled payments to subsidise unprofitable production. The implications of this finding is that it raises the question as to whether or not the SFP scheme be considered a green box policy if unprofitable production is subsidised

Results from the FAPRI-Ireland farm level model on the implications of a proposed WTO reform conducted in 2007 concluded that if such a WTO reform was implemented the future of milk quota policy would need to be considered. They report also concluded that with an expected rationalisation in the dairy sector combined with significant restructuring in the tillage and beef sectors it was imperative for the future of the farming sector that resources like land and labour could move freely between farmers through leasing and other resource sharing initiatives.

Results from the medium term outlook from the FAPRI-Ireland farm level model published in 2008 highlighted the dependence on off-farm income that existed on many Irish farms. Given the economic downturn in the national and global economy this presents concerns over the future availability of this off-farm income to supplement many of Ireland's non-viable farms.

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### 5. Opportunity/Benefit:

This project clearly quantifies the implications of various policy options on some key economic and social indicators for the agri-food sectors. FAPRI-Ireland appreciates the need to be proactive in bringing its results to end users and a strong emphasis will be placed on the dissemination of the output.

The specific benefits of the farm-level model are measures of the effect of a proposed policy or market development on the following factors;

- changes in the farming population, in terms of the effect on entry to and exit from the farming sector
  - the proportion of full and part-time farms
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- the number of dairy farms
  - farm production plans
  - farm incomes
  - the viability and sustainability of farm households.
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#### 6. Dissemination:

The primary stakeholders for this research are the policy making community and research peers.

The results of the project have been presented at numerous seminars and press conferences, attended by key stakeholders, and the wider academic and policy making community.

#### Main publications:

Hennessy, T., Breen, J and Thorne, F. (2007). FAPRI-Ireland Baseline 2007: Farm Level Analysis. DAFF

Breen, J, Hennessy, T. and Thorne, F. (2008). Medium term outlook for the beef, tillage and dairy farm sectors. Teagasc

Hennessy, T. and Thorne, F. (2006). The effect of a WTO Reform on Farming In Ireland. Irish Department of Agric 1 1-45

#### Popular publications:

Donnellan, T. and Hennessy, T. (2007). The Effect of Milk Quota Expansion on EU/Irish Production. In: Proceedings of the Teagasc National Dairy Conference, Kilkenny, 21-Nov-2007

Hennessy, T. (2006). The Outlook for the Agricultural Land Market in Ireland. The Property Valuer 1-25

Hennessy, T. (2007). Prospects for Dairy Expansion. In: ICOS National Conference, CityWest Hotel Dublin, 05-Nov-2007, 1-5

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#### 7. Compiled by: Fiona Thorne

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