FAPRI-Ireland Partnership

The Luxembourg CAP Reform Agreement:

Analysis of the Impact on EU and Irish Agriculture

Teagasc Rural Economy Research Centre

October 14th 2003

ISBN 1 84170 344 3

Tel: + 353 (0)1 637 6000
Fax: + 353 (0)1 668 8443
www.tnet.teagasc.ie/fapri

Teagasc
19 Sandymount Avenue
Dublin 4

Table of Contents

FAPRI-Ireland Partnership

Research Partners

- Teagasc
- NUI Cork
- NUI Dublin
- NUI Galway
- NUI Maynooth
- Trinity College Dublin

Steering Group

Co-Chairs:

Gerry Boyle, (NUI Maynooth) Seamus Sheehy, (UCD)

Members:

Dan Browne	Robert Carey, (Dept. of Finance)	Seamus Crosse (Teagasc)
Michael Cuddy, (NUI Galway)	Matt Dempsey, (Irish Farmers Journal)	Ciaran Dolan, (ICMSA)
Liam Downey	Peter Doyle, (European Commission)	John Fitz Gerald, (ESRI)
Michael Keane, (UCC)	Brendan Kearney	Con Lucey, (IFA)
Tom MacMahon, (CSO)	Damien Mc Donald (Macra na Feirme)	Sinead McPhillips, (DAF)
Alan Matthews, (TCD)	Bob Muldoon (ICCUSA)	Ned O' Callaghan
Edward Punch (ICSA)	Brendan Riordan (Teagasc)	Maurice Roche, (NUI Maynooth)
Kevin Smyth (DAF)	Geraldine Tallon, (Dept. of Environment)	Martin Varley, (ICOS)
Patrick Westhoff (FAPRI)	Abner Womack, (FAPRI)	Robert Young

Project Leader: Paul Kelly (Teagasc)

Observers:

Seamus McErlean, (QUB) Joan Moss, (QUB)
Stanley Mc Burney, (DANI)

Funding Bodies

- Teagasc
- National Development Plan
- International Fund for Ireland

The Partnership's Research Linkages

- FAPRI at the University of Missouri, Columbia, USA
- The Queen's University of Belfast

Contributors

Julian Binfield
binfieldj@missouri.edu

Julian works on the FAPRI EU modelling system. He was a member of the FAPRI-Ireland team at Teagasc with responsibility for the beef and sheep sectors over the period 1997 to 2001, before moving to FAPRI at the University of Missouri, Columbia.

James Breen
jbreen@hq.teagasc.ie

James joined the FAPRI-Ireland team in December 2001. His research is on the modelling of the farm level effects of policy change. This work generates projections of farm level income on various farms.

Trevor Donnellan
tdonnellan@hq.teagasc.ie

Trevor is responsible for the dairy and pig sector modelling as well as for the modelling of agricultural inputs and incomes for the FAPRI-Ireland Partnership. He is a researcher at the Rural Economy Research Centre, Teagasc. He joined the team at Teagasc in 1998. He also manages the FAPRI-Ireland website. His previous research experience was in the area of Input-Output analysis.

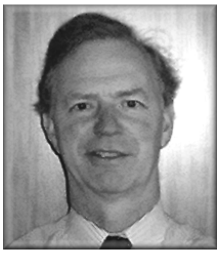
Kevin Hanrahan
khanrahan@hq.teagasc.ie

Kevin specialises in modelling livestock markets. He is responsible for the beef, sheep, poultry and cereals sector projections as part of the FAPRI-Ireland Partnership. Kevin joined the staff of the Rural Economy Research Centre in 1995 and worked at FAPRI-Missouri over the period 1996-2000.

Thia Hennessy
thennessy@hq.teagasc.ie

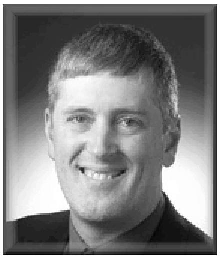
Thia works on farm level analysis and estimates the effects of the scenarios and projections for Ireland on the financial situation of Irish farms. This analysis also involves projecting the likely farmer response to the analysed policy scenario. Thia has been responsible for farm level modelling within the FAPRI-Ireland project since 1998.

Contributors



Paul Kelly pkelly@hq.teagasc.ie

Paul is a researcher in Teagasc, Rural Economy Research Centre and Project Leader of the FAPRI-Ireland Partnership. In research, he specialises in the economics of crop and pig production and collaborates in the modelling of the cereals, pig meat and input sectors.



Patrick Westhoff westhoffp@missouri.edu

Pat is Program Director for International Affairs at the Food and Agricultural Policy Research Institute (FAPRI) at the University of Missouri. Prior to joining FAPRI-Missouri in August 1996, Pat served four years for the chief economist for the Democratic staff of the U.S. Senate Committee on Agriculture, Nutrition and Forestry.

Preface

This publication supplements a number of studies published by FAPRI-Ireland over the last 12 months relating to the reform of the Common Agricultural Policy. The report is produced in conjunction with our partners in the Food and Agricultural Policy Research Institute (FAPRI) at the University of Missouri in the USA.

The background to the report is the 2003 Baseline outlook produced by FAPRI-Ireland in May 2003. This is used to produce a ten-year 'Baseline' projection for the main agricultural producing countries or regions of the world. The EU GOLD (grains, oilseeds, livestock and dairy) model is used to examine the effects of agricultural policy change for various EU Member States including Ireland. It is linked to the FAPRI world modelling system and so takes account of and contributes to, the projections for prices obtained and quantities traded on world markets.

Although the 'Baseline' represents a projection of commodity prices, production and quantities traded, readers should note that these projections of the future are not the main aim of the FAPRI system. The main purpose of the FAPRI system and the FAPRI-Ireland Partnership is the analysis of policy measures, either proposed or actual, and the quantitative measurement of the effects of policy and market changes *relative to the Baseline*. The Baseline projections allow us to highlight key medium term market developments and draw some conclusions about future policy developments and their likely impact on Irish agriculture.

The Mid-Term Review (MTR) of the CAP, agreed in Luxembourg on June 26th 2003 and the Doha Round of the WTO form the basis of the scenario that is examined in this report by our team of economists.

A number of options existing within the Luxembourg Agreement are examined in the scenarios. These policy options principally affect the beef and sheep sectors with more minor consequences for other sectors.

The projections in this publication are not 'forecasts' or 'predictions'. They are projections made by applying a well defined set of assumptions to our commodity models. These models have been designed based on our knowledge of the economics of major commodity markets. For an indication of the world Baseline see the FAPRI-Ireland Outlook 2003 publication.[1]

Acknowledgements

The FAPRI-Ireland Partnership has benefited financially from funds from the National Development Plan and the International Fund for Ireland.

The development of the Baseline and scenarios for the analyses contained in this publication has benefited from the input of a large number of civil servants and industry professionals. In particular we would like to thank staff at the Teagasc Rural Economy Research Centre and the Department of Agriculture and Food.

Thanks are also due to Teagasc staff at the Grange, Oakpark, Moorepark, Athenry and Johnstown Castle Research Centres; Teagasc advisory staff; the Irish Dairy Board, An Bord Bia, the Irish Cattle and Sheep Association, (ICSA), the Irish Creamery Milk Suppliers Association, (ICMSA), the Irish Co-operative Organisation Society, (ICOS), the Irish Farmers Association, (IFA) and the Irish Grain and Feed Association (IGFA). We also thank our colleagues at the University of Dublin (Trinity College, TCD) and the National University of Ireland at Cork (UCC), Dublin (UCD), Galway, (UCG) and Maynooth.

[1] Outlook 2003: Medium Term Analysis for the Agri-Food Sector. Teagasc, Dublin

The work on which this outlook publication is based would not have been possible without the substantial and sustained contributions of Julian Binfield and Patrick Westhoff of FAPRI-Missouri. Thanks also to Robert Young, formerly of FAPRI-Missouri and now with the US Farm Bureau. Without his efforts in developing the FAPRI-Ireland Partnership this research would not have been possible. This research has also benefited from co-operation with our partners at The Queen's University Belfast, who work on a similar project.

Paul Kelly.

Paul Kelly
Project Leader
FAPRI-Ireland Partnership

Published on October 14th 2003

by
Teagasc,
19, Sandymount Avenue
Dublin 4,
Ireland.

ISBN 1 84170 344 3

All the papers in this publication, plus other work from the FAPRI-Ireland Partnership are available on our website at: www.tnet.teagasc.ie/fapri

Executive Summary

Baseline and Scenarios

This report provides analysis of the prospects for the agricultural and food sectors over the period to 2012. As its start point it uses the 'Baseline' (i.e. no policy change) projection for the major agricultural markets which was produced by FAPRI-Ireland in May 2003.[2] A number of policy reform scenarios are analysed against this Baseline.

The scenarios that are examined relative to the Baseline are based on:

- The Council of Ministers June 2003 Luxembourg Agreement on CAP reform (including a number of the decoupling options available to Member States)
- the European Union's Proposals for Modalities in the WTO Agriculture Negotiations

All values presented in this executive summary are presented in **nominal** terms. Inflation should be taken into account when measuring future income levels relative to existing income levels. However, a comparison of the outcome of different policy options relative to a Baseline at a point in the future (2012 for example) can be done in either nominal or real terms. Inflation will be the same under both the Baseline and the scenario. It follows that in comparing two policy outcomes, a higher level of income under one option in nominal terms will also represent a higher income level in real terms compared with the other policy option.

The Baseline and Luxembourg CAP Agreement: Details of the Policies Analysed

- The agricultural policy assumptions in the Baseline are:
  - That Agenda 2000 remains in place to 2012, i.e. the Mid-Term Review does not happen
  - The Uruguay Agreement on Agriculture (URAA) remains in place, i.e. no Doha round
  - Milk Quotas remain in place, and continue to operate beyond 2008
  - The Over Thirty Months Scheme for cattle slaughter and destruction in the UK is phased out between 2004 and 2006

- As well as examining policy changes made in the Luxembourg Agreement with respect to dairy reform, the report's main focus is on the Member State decoupling options that exist in the case of other sectors such as beef, sheep, and cereals. Freedom to implement policies at Member State level multiplies greatly the total number of policy choices that may be made.

  Member States have until August 2004 to inform the EU Commission of their choice, so we do not yet know what the preferred policy options will be. It is important to remember that for Ireland the outcome of the policy choice made is dependent to a degree on the options selected elsewhere in the EU. To make the analysis and its interpretation feasible, three policy scenarios are examined in this report. The options are designed to place a band around the outcomes within which other policy scenarios would lie. The scenarios examined are:

[2] For a detailed discussion of the World Baseline outlook see Westhoff, Young and Binfield (2003)

- Full decoupling of all beef payments, ewe premiums and arable aid payments across all Member States in the EU15. In this report this scenario is referred to as MAX Decoupling.

- Partial decoupling of the slaughter premium, suckler cow premium, ewe premiums and arable aid payments across all Member States in the EU15. In this report this scenario is referred to as MIN Decoupling.

- Full decoupling of beef payments in **14** EU Member States. Full coupling of the slaughter premium in Ireland with all other beef payments decoupled in Ireland. Sheep policy and crops and oilseeds payments in all 15 EU Member States as per the MAX scenario. In this report this scenario is referred to as MAX* decoupling.

- In all three scenarios the EU Proposal for Modalities in the WTO Agriculture Negotiations is implemented.

- The proposal on WTO reform which the EU has made consists of a

  - 36 percent reduction in import tariffs
  - 45 percent reduction in export subsidy expenditures
  - 55 percent reduction in the 'Aggregate Measure of Support' to agriculture
  - All to take place between 2006 and 2012.

- The UK Over Thirty Months Scheme is phased out as in the Baseline.

- Relative to the Baseline, the scenarios are assumed to be neutral in their effect on total Rural Environmental Protection Scheme (REPS) payments to the farm sector. In other words, the Baseline and Scenarios are designed such that none of the difference between Baseline and Scenario agricultural income levels reported here is attributable to REPS.

The Luxembourg CAP Agreement: Implications for EU and Irish Agriculture

Baseline results are the same as those contained in the FAPRI-Ireland analysis of May 2003. These are summarised on a sector by sector basis along with the results of the scenarios. The sector level summaries are followed by a summary of the farm level effects

Milk Sector

- Under the Baseline, by 2012, dairy product prices are projected to decline by 7 percent for cheese, by 22 percent for butter, and by 18 percent for skimmed milk powder (SMP) relative to the average of 2000 to 2002. Cheese production in Ireland is projected to approach 130,000 tonnes per year by 2012. These developments lead to a reduction in the Irish farm milk price of 15 percent by 2012 from the average of 2000 to 2002. A farm level Irish milk price of € 23.10 per 100kg (89p per gallon) by 2012 is projected under the Baseline.

- Under the scenario, the reduction in support prices brought about by the MTR Luxembourg Agreement will lead to reductions in the EU prices for cheese, butter and SMP of 4 percent, 8 percent and 1 percent respectively relative to their respective Baseline levels in 2012.

- Reductions in export subsidy expenditure limits under the EU WTO proposals would constrain EU subsidised exports for cheese and 'other' dairy products by 2012 and this would lead to slight further downward pressure on EU dairy product prices and farm milk prices.

- By 2012 under each of the reform scenarios, the Irish farm level milk price is projected to decline by 5.5 percent relative the level projected to arise with continuation of current (Agenda 2000) policy. Under the Luxembourg Agreement the Irish farm level milk price is projected to reach a level of approximately €22 per 100kg (84p per gallon VAT inclusive) by 2012.

- Decoupled compensation, rising to 16 cent per litre is available for the reduction in milk price.

Beef Sector

- The results for the beef sector at both EU and Irish levels are strongly influenced by the degree to which direct payments are decoupled from production.
- Even with a 36 per cent reduction of EU import tariffs (as proposed in the EU WTO modalities proposal) EU tariffs remain sufficiently high to give almost the same level of protection to the EU beef market. The reductions in the aggregate measure of support (AMS) for agriculture that are contained in the EU WTO proposals do not have an effect, if the MTR is implemented.
- Under the Baseline, by 2012, declines of 4 percent in EU beef prices, 2 percent in suckler cow numbers, 3 percent in beef production, and 16 percent in beef exports are projected. Increases of 30 percent in EU beef imports (from a low base) are projected. The EU is projected to become a net importer of beef in 2007.
- For Ireland, under the Baseline, nominal cattle prices in 2012 are projected to show little change from 2002, suckler cow numbers are projected to decline by 6 percent. Beef production will stay steady after recovering by 4 percent from the low levels caused by BSE and FMD. Beef exports are projected to increase by 7 percent over 2002 by 2012.
- Suckler cow numbers in the EU are projected to decline by about 10 percent relative to the Baseline by 2007 when in all EU member states all direct payments are decoupled to the fullest extent (MAX) and when Ireland retains the link between production and receipt of the slaughter premium (MAX*). This decline in suckler cow numbers that arises with decoupling is not reversed and ending stocks of cows remain at these new lower levels. The decline in the suckler cow herd will be largest in Ireland and the UK as producers in these countries depend most on the direct payments, which, under the MTR will not require the farmer to have an animal in order to claim them.
- Under the scenario in which direct payments are decoupled to the least extent possible under the Luxembourg Agreement (MIN), the reduction in EU suckler cow numbers relative to the Baseline is just 3 percent by 2012. The continued coupling of the suckler cow premium largely maintains the suckler cow herd at close to Baseline levels.
- Under the full decoupling scenarios an initial increase in the slaughtering of cows by EU producers who were previously making a market loss but were keeping the animals in order to claim direct payments leads to a transitory increase in the supply of beef. This increase in the supply of beef leads to an initial fall in EU cattle prices of about 5 percent under the maximum decoupling scenarios.

  After these suckler cows have been slaughtered, with a lower reproductive stock, the supply of calves and ultimately the supply of cattle to the market will have been reduced and the beef price is projected to rise. Relative to the 2012 Baseline level, the beef price will increase to about 9 percent under the maximum decoupling scenario and by 8 percent under the scenario where Ireland alone retains the link between the slaughter premium and production.

  Under the minimum decoupling scenario the smaller reduction in EU suckler cow numbers leads to smaller changes in beef production than under the maximum decoupling scenarios. Ultimately, beef prices increase by just 3 percent relative to the Baseline in 2012.
- In Ireland, under the maximum decoupling scenario (MAX) and the scenario where Ireland retains the link between production and the slaughter premium and all other member states fully decouple (MAX*), the Irish suckler cow herd declines by approximately 18 percent and 14 percent relative to the Baseline by 2012. The projected declines in Irish suckler cow numbers are reflected in projected declines in Irish beef production declines of approximately 7 percent and 6 percent respectively by 2012. In the minimum decoupling scenario suckler cow numbers decline by 3 percent relative to the 2012 Baseline.
- Under the two maximum decoupling scenarios Irish cattle prices are projected to rise relative to the Baseline by 10 percent and 9 percent respectively. This projected increase in price relative to the Baseline (Agenda 2000) level arise from the reduced beef supplies that follow from the reduction in the EU suckler cow herd. The 2012 Irish cattle price, under full decoupling, is projected to be approximately 123 euro per 100kg. The cattle price changes are more modest under the minimum decoupling scenario (116euro per 100kg in 2012, +3 percent) reflecting the smaller change in output.

Outputs, Inputs and Sectoral Income

- Relative to the average of 2000 to 2002, by 2012 there is a decline in livestock value of 6 percent under the Baseline, a decline in milk value of 14 percent, and a decline in crop value. This leads to an overall decline in goods value of 8 percent.

- Compared to the Baseline level in 2012, the value of the cattle sector declines by less than 1 percent under the full decoupling scenario (MAX). Under the scenario where Ireland retains the link between production and the slaughter premium (MAX*) and the scenario where the direct payments are decoupled to the smallest extent allowable under the Luxembourg Agreement (MIN) the value of the cattle sector increases slightly. The value of the dairy sector, under all three scenarios, declines by approximately 5 percent. The value of the cereals sector declines under the maximum decoupling scenario by approximately 4 percent. Overall the value of goods output from agriculture declines by over 1 percent under the full decoupling scenario.

- On the inputs side, relative to the 2000 to 2002 period, Baseline input expenditures increase by 3 percent by 2012. Under the two maximum decoupling scenarios (MAX and MAX*), input expenditures decrease by 8 percent and 7 percent respectively relative to the Baseline in 2012. Reductions in expenditure in the scenario where direct payments are decoupled to the least extent (the MIN scenario) are smaller (down 1 percent relative to the 2012 Baseline) since the level of agricultural activity is closer to Baseline levels.

- Changes in the values of outputs and input mean that under the Baseline between 2000-2002 and 2012, sectoral income is projected to declines by 9 percent. Under the two maximum decoupling scenarios, income levels in 2012 are higher than in the corresponding Baseline period due, in the main, to the reduction in overall input expenditure. Consequently, in 2012 nominal income levels with full and almost full decoupling (the MAX and MAX* scenarios) remains close to the 2000-2002 level. In the minimum decoupling scenario, since reductions in input expenditure are more modest, income levels are closer to the Baseline level in 2012.

Dairy Decoupling Options: Farm Level Analysis

- Two decoupling options are analysed for the dairy sector. The first, DAIRY05 involves the decoupling of the dairy premium from 2005, while DAIRY08 involves decoupling from 2008.
- Structural change in the DAIRY05 scenario is more gradual than in the DAIRY08 scenario. Farmers exiting from production from 2005 onwards will retain their full decoupled payment and this encourages exits and retirements. In the DAIRY08 scenario, farmers must remain in production until 2008 to establish their payment. This causes stagnation in the restructuring scheme in DAIRY08.
- Due to more gradual rates of change, more farmers are retained in the DAIRY05 scenario. By 2012 it is projected that there will be 18,000 dairy farmers in the DAIRY05 scenario, with an average quota size of 65,000 gallons. In DAIRY08 16,000 farmers are projected with an average quota size of 77,000 gallons. Two thousand more farmers go out of business in DAIRY08 than in DAIRY05 because of the difficulty in acquiring quota during the period of stagnation up to 2008.
- With fewer farms, DAIRY08 produces higher average incomes for active dairy farms than DAIRY05. By 2012, farm incomes are projected to be almost 50 per cent higher than present levels in nominal terms. The income increase is slightly less in the DAIRY05 scenario, where the increase by 2012 is almost 40 per cent in nominal terms. This is a sufficient increase to offset the effect of inflation.

Beef Decoupling Options Farm Level Analysis

- The MAX or full decoupling scenario provides the highest Single Farm Payment because all payments are included in its calculation. For some farms, due to their activities in the reference period, the Single Farm Payment is lower in those scenarios where some link between production and the receipt of direct payment is maintained (the MAX* and MIN scenarios).
- In the scenario where the slaughter premium alone remains coupled (MAX*) 56 per cent of farmers have a lower Single Farm Payment than under the full decoupling scenario (MAX) while 81 per cent of farmers have a lower payment in the minimum decoupling scenario (MIN).
- The proportion of farmers experiencing a reduction in their Single Farm Payment in the scenarios where a link between direct payments and production remains (MAX* and MIN) varies substantially be system. For example, 71 per cent of 'cattle other' farms have a lower Single Farm Payment when the slaughter premium remains coupled than when all direct payments are fully decoupled. When compared with the full decoupling scenario (MAX) 98 per cent of cattle farmers have a lower Single Farm Payment in minimum decoupling scenario.
- Whichever of the partial decoupling scenarios (MAX* or MIN) is chosen, it is clear that particular groups of farms will be discriminated against by being compelled to retain animals in order to offset the reduction in their Single Farm Payment because of the coupling of certain payments to production.
- When the slaughter premium is coupled, significant proportions of its value are transmitted back into store and calf prices. Hence, certain farms will have windfall gains. These are farms that will not incur any reduction in their Single Farm Payment but will benefit from higher calf and store prices.
- The results of scenario in which all payments **except** the slaughter premium are decoupled are somewhat ambiguous. One in three farms experience less than a 5 per cent change in their income relative to the full decoupling scenario. However, over 40 per cent of cattle farmers have a 5 per cent or more increase in their income. The main losers are commercial farms with large profits. While only a small number of farms are worse off this still results in a substantial sum of money being redistributed across a large number of small farmers. In other words, there are more gainers than losers but on a per farm basis the loss is more substantial than the gain.

Greenhouse Gas emissions from Agriculture

- Irish Agriculture produces a sizable proportion of Irish Greenhouse Gas (GHG) emissions. Under the Kyoto protocol, Ireland is permitted to increase its GHG emissions across the whole economy by 13 percent relative to the 1990 level.
- Using the projections of agricultural activity already described, projected future GHG emissions from agriculture have been estimated under the Baseline and Scenarios.
- Under the Baseline, emissions of GHG's are projected to fall relative to current levels, as milk yields rise and dairy cow numbers decline. Lower number of drystock and lower fertiliser use also contribute to the reduction.
- Of the policy reform options examined, the MAX scenario results in the lowest level of GHG emissions from agriculture. Relative to the Baseline, emissions are projected to fall by 8 percent by 2012 under the MAX scenario. While not as large a decrease, a broadly similar level of reduction in GHG emissions is projected to be achieved under the MAX* option.
- The reduction in GHG emissions under the MIN scenario is not as substantial as under the MAX or MAX* scenarios since the level of reduction in agricultural activity in the MIN scenario is smaller. However GHG emissions under the MIN scenario are still lower than projected Baseline emissions levels.
- These reductions in GHG emissions from agriculture should ease the pressure to reduce emissions in other sectors of the economy in order to meet the Kyoto target.