FAPRI-Ireland Partnership

Baseline 2007 Outlook for EU and Irish Agriculture

Teagasc Rural Economy Research Centre

October 9th 2007

ISBN XXXXXXXXXXX

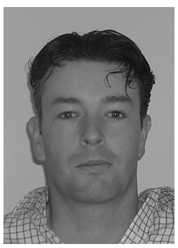
Tel: + 353 (0)91 845 845
Fax: + 353 (0)91 844 296
http://www.teagasc.ie
http://www.tnet.teagasc.ie/fapri

Rural Economy Research Centre
Teagasc
Athenry
Galway
IRELAND

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.

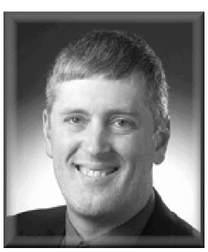


Trevor Donnellan trevor.donnellan@teagasc.ie

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 kevin.hanrahan@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.



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 as the chief economist for the Democratic staff of the U.S. Senate Committee on Agriculture, Nutrition and Forestry.

Preface

This study presents the 2007 Baseline Outlook for Irish and EU agricultural markets by the FAPRI-Ireland Partnership. The report is produced by staff at the Rural Economy Research Centre, Teagasc, Ireland, in conjunction with our partners at the Food and Agricultural Policy Research Institute (FAPRI) at the University of Missouri in the USA. The study presents a baseline (status quo) policy view of the agriculture sector over the next ten years assuming normal weather conditions.

In this study the EU GOLD (grains, oilseeds, livestock and dairy) model is used to produce a ten-year 'Baseline' projection for the main agricultural commodities. 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 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.

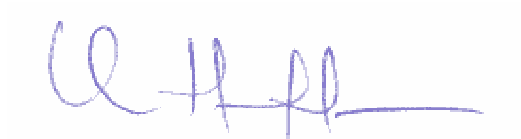
Of course possible policy changes, such as the imminent CAP Health Check and the World Trade Organisation Doha Development round are also on the horizon. Such policy changes have the potential to change the face of the baseline presented here. Another publication will detail the scenarios that have been examined in 2007, which relate to changes in the EU dairy Common market Organisation, specifically changes in milk quota policy.

Since the publication of our 2006 baseline outlook, international commodity markets have experienced considerable change. A series of unrelated factors, including abnormal weather, a surge in biofuel production, depletion of commodity stocks, sustained high energy costs and particularly strong international macroeconomic growth have combined to slow the rate of projected production growth and increase the rate of projected consumption growth for many commodities. Already this has driven a wedge between international supply and demand in a range of commodity markets. The result has been a sharp increase in international commodity prices most notably in the case of dairy products, grains and oilseeds. To some degree these price increases represent a spike in the general price outlook and supply is expected to respond to these higher prices in the short term, which will put downward pressure on prices. However, circumstances are now such that we are likely to see a medium term baseline price outlook which for many commodities is more favourable from a producer perspective than indicated in recent baseline outlooks.

The compilation of this year's baseline has been complicated by the need to 'guesstimate' market data and gather data on market activity from unofficial sources due to the absence of official published data. Every effort has been made to try to ensure that unofficial data sources are matched in definitional terms with the historical official data series used as part of the structure of our economic models. To the extent that these data estimates do not accord with the official sources when they become available this will impact on the baseline we have produced.

Acknowledgements
The development of the Baseline for the analysis contained in this publication have benefited from the input of a large number of industry professionals. In particular we would like to thank James Breen and Thia Hennessy at the Teagasc Rural Economy Research Centre and staff at the Department of Agriculture Food and Fisheries.

Thanks to our colleagues Julian Binfield and Patrick Westhoff of FAPRI-Missouri, and our former colleague Robert Young, without whom the work of the FAPRI-Ireland Partnership would not have been possible.



Trevor Donnellan *Kevin Hanrahan*
FAPRI-Ireland Partnership

Published on October 9th 2007

Rural Economy Research Centre
Teagasc - Athenry
Galway
IRELAND.

ISBN xxxxxxxxxxxxxx

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

Glossary of Terms

AI	Avian Influenza
BSE	Bovine spongiform encephalopathy
CAP	Common Agricultural Policy
DDA	Doha Development Agenda
€	Euro
EU	European Union
EU15	European Union of 15 Member States
EU25	European Union of 25 Member States
FAPRI	Food and Agricultural Policy Research Institute
GDP	Gross Domestic Product
GOLD	Grains, Oilseeds, Livestock and Dairy
Hd	Head
Kg	Kilogramme
Mercosur	Mercado Común del Sur (Southern Common Market)
Mt	Metric Tonne
MTR	Mid Term Review of the Common Agricultural Policy
MS	Member State (EU)
NAMA	Non-Agricultural Market Access
NMS	New Member States (EU)
REPS	Rural Environmental Protection Scheme
SFP	Single Farm Payment
SMP	Skimmed Milk Powder
Teagasc	Irish Agriculture and Food Development Authority
TRQ	Tariff Rate Quota
OECD	Organisation for Economic Co-operation and Development
URAA	Uruguay Round Agreement of Agriculture
UK	United Kingdom
$	US Dollar
WMP	Whole Milk Power
WTO	World Trade Organisation

Executive Summary

Baseline

This report provides analysis of the prospects for the agricultural and food sectors in Ireland and the EU over the period 2006 to 2016. As its start point it uses a 'Baseline' (i.e. no policy change) projection for the major agricultural markets.

- FAPRI-Ireland Baseline 2007 incorporates:
    - Accession of 10 new Member States (NMS) to the EU
    - Differential EU Member State implementation of the reformed Common Agriculture Policy (CAP)
    - Normal 'average' weather conditions

While inflation is taken into account as a factor affecting production costs, all values presented in this executive summary are in **nominal** terms, in keeping with the fact that markets trade in nominal prices. Of course inflation also impacts on purchasing power and thus should be taken into account when measuring future nominal income levels relative to existing nominal income levels.

The Baseline Policies

- The agricultural policy assumptions in the Baseline are:
    - The CAP is that agreed in the Luxembourg Agreement of June 2003.
    - Differential national level implementation of the CAP, as allowed for under the Luxembourg Agreement, is incorporated in the FAPRI-Ireland model.
    - The expansion of the EU that occurred on May the 1st 2004 with the accession of 10 new Member States is incorporated in the Baseline.
    - The Uruguay Agreement on Agriculture (URAA) remains in place, i.e. no Doha Round Agreement occurs.
    - Milk Quotas remain in place and continue to operate beyond 2008, i.e. to the end of the FAPRI-Ireland projection period in 2016.
    - The set-aside derogation agreed by the EU Council of Ministers in September 2007, applies for 2008 and is assumed to be retained for the rest of the Baseline projection period

FAPRI-Ireland Baseline 2007

Milk Sector

- In the short term the sector continues to benefit from the recent surge in international dairy product prices brought about by the short fall in dairy production in major exporting regions, particularly Australia, as well as increased global demand for dairy products.
- Over the medium term, strong international demand, a continuing decrease in EU exports and slower expansion in worldwide production and historically low stock levels, each contribute to higher international dairy commodity prices than have been projected in previous Baseline outlooks.
- Under the Baseline, by 2016, EU dairy product prices are projected to increase when compared with 2006, in spite of a reduction in EU support prices and export refund outlays.
- Under the Baseline the EU cheese price is projected to increase by 13 percent and the EU skimmed milk powder price is projected to increase by over 26 percent relative to price levels observed in 2006, buoyed up by strong international prices, which now place a floor on the EU SMP price. By contrast the EU butter price (which is very high by international standards) is projected to decrease by 5 percent.

- Overall the changes in EU dairy commodity prices lead to an increase in the Irish farm milk price of 12 percent by 2016, when compared with the price observed in 2006. Price developments do not induce any notable shift in dairy product mix over the projection period.
- Population growth ensures that consumption of dairy products in Ireland grows, particularly in the case of cheese where per capita consumption (which is low relative to many of our EU neighbours) continues to increase along a strong trend.
- Irish imports of milk from Northern Ireland are projected to continue to run at 0.6 million tonnes or about 30 percent of total Northern Ireland milk production.
- Dairy cow numbers decrease at a rate of about 1 percent a year, reflecting the increase in milk yields projected over the period and the presence of a fixed milk quota.
- A farm level Irish milk price of € 27.2 per 100kg by 2016 is projected under the Baseline.
- The value of output of the dairy sector is over 7 percent higher in 2016 when compared with 2006.

Beef Sector

- As a consequence of increasing imports and declining exports, the EU beef net trade position become increasing negative in the baseline, providing for a tighter EU beef market and higher EU baseline beef prices.
- Under the Baseline, the decoupling of the beef Commodity Market Organisation direct payments is introduced across the EU, incorporating the differential Member State implementation allowed for under the June 2003 CAP reform agreement.
- Over the Baseline projection period (2006 to 2016) the EU25 suckler cow herd decreases by 2 percent. The small decrease in the suckler cow herd in the EU reflects the influence of strong market prices and the re-coupling of production in some EU Member States (most notably in France).
- In spite of the improved price outlook, decoupling still means that it is more attractive for some Irish producers to cease production and hence the Irish suckler herd contracts by 10 percent over the period.
- In many EU MS the dairy cow herd is more important as a source of beef than the suckler herd. Overall beef production declines in the EU and Ireland mainly due to a decrease in dairy cow numbers in the presence of a fixed milk quota. Over the Baseline period EU25 beef production declines by 8 percent and Irish beef production declines by 14 percent.
- EU beef imports increase as the indigenous EU supply of beef contracts. By 2016 EU beef imports increase by over 39 percent relative to the 2006 level. EU beef exports decline by over 40 percent, reflecting the lower availability of beef for export.
- EU prices increase over the projection period. The European cattle reference price in 2016 is projected to be almost 4 percent higher than the level observed in 2006.
- EU25 domestic use of beef decreases slowly over the projection period so that by the end of the period it is down 4 percent on the 2006 level.
- The Irish beef price increases relative to the levels observed in 2006. By 2016 the Irish cattle reference price is 4 percent higher. This projected development reflects higher beef prices on the EU market.
- By 2016 total Irish domestic use of beef increases by 11 percent relative to levels observed in 2006. The strong projected increase in Irish population offsets the decline in per capita consumption.
- The combination of a decline in the volume of beef produced in Ireland, and increasing cattle prices over the Baseline projection period, produce a modest decline in the value of output from the Irish beef sector. The value of the output produced by the Irish beef sector in 2016, €1,451 m, is over 3 percent lower than the value of output produced by the sector in 2006.

Sheep Sector

- The decoupling of ewe premiums across the EU leads to declining ewe numbers. Under the Baseline, ewe numbers in 2016 at EU level are projected to be 7 percent lower than in 2006. Irish ewe numbers are projected to decline by over 16 percent between 2006 and 2016. In Ireland the perception that sheep systems are more labour intensive than other dry-stock enterprises, also acts as a disincentive to continue sheep production.
- Declining stocks of breeding ewes leads to a decline in overall lamb production in the EU and Ireland. EU sheep meat production is projected to decline by 6 percent over the period 2006—2016. Irish lamb production, under the Baseline, is projected to decline by 20 percent.
- The contraction of indigenous EU supply of lamb, under the Baseline, increases the EU demand for imported lamb. EU lamb imports increase by almost 9 percent over the Baseline period. Irish lamb exports decline almost 28 percent between 2006 and 2016 due to the combination of declining production and increased domestic consumption.
- EU lamb prices are projected to increase over the Baseline projection period as domestic use contracts at a slower rate than the decline in production. The 2016 EU sheep meat reference price is projected to be 2 percent above the level observed in 2006. Irish lamb prices are also projected to increase over the baseline projection period, with the level projected for 2016 over 7 percent higher than the level observed in 2006.
- Overall the value of output from the Irish sheep sector is projected to decline under the Baseline. While sheep meat prices increase, the large decline in the volume of output results in a decrease in the value of output of the sector. By 2016, the value of output produced by the sheep sector is projected to decline by 11 percent relative to the 2006 level.

Pigs

- The Outlook for the pigs sector is heavily conditioned over the short term by the high feed prices, which are set to prevail over the early years of the projection period. These high feed prices lead to a contraction in production at both the EU level and in Ireland over the short term. In response to this decrease in production, prices improve and EU production increases later in the projection period.
- EU pig meat prices are relatively unchanged at the end of the projection period while pig meat prices in Ireland are up 4 percent on the 2006 level by 2016.
- Production in Ireland is projected to struggle to recover from the impact of high feed prices. The onset of the Nitrates Directive in 2011 is set to increase production costs and cause some producers to contract or exit the sector.
- By the end of the projection period EU pig meat production is up 4 percent. Increased domestic consumption means that EU pig meat export decrease by 8 percent. Imports of pig meat remain relatively unchanged by the end of the projection period.
- In Ireland strong population growth and increasing per capita consumption means that domestic consumption increases by 17 percent. With a fall in Irish production of 14 percent over the period, pig meat exports contract by almost 50 percent.
- Overall, under the Baseline, the value of output from the Irish pig sector is projected to decrease by approximately 13 percent between 2006 and 2016.

Cereals and other Arable Crops

- Our previous baseline would have suggested that in response to the decoupling of arable aid payments, Irish wheat and barley areas harvested would decline significantly. However market circumstances have changed considerably in a short period of time and the outlook is for prices to stabilise in the medium term at well above the average price recorded earlier in the decade.
- Over the last three years it is becoming clear that competition from biofuel crop production is impacting on the global growth in cereal production and in tandem with poor harvests and strong feed demand from countries such as China, higher cereals price have prevailed. These

increased prices will have a positive impact on cereal area harvested across the EU and in Ireland over the projection period, offsetting the negative impact which decoupling would have on area harvested.

- The decoupling of arable aid payments under the Baseline is not projected to lead to large changes in cereals area harvested in the EU. However the set-aside derogation agreed for 2008 should lead to an increase in area harvested of cereals. Under the baseline we project that the reasons for the set-aside derogation will persist and on that basis we assume that that the zero rate of set-aside will continue for the rest of the projection period.
- Biofuel policy emerges as a more important driver of change as EU biofuels production increases, although not to the full extent required to meet the targets set out in the EU biofuels directive (Directive 2003/30).
- Over the period 2006—2016 the EU soft wheat area is projected to increase by over 9 percent, maize area increases by almost 7 percent and barley area remains almost unchanged.
- While EU market prices for wheat are currently at very high levels, they are projected to moderate over a number of years. Over the medium term cereal prices remain well above the intervention level which prevailed at the beginning of the decade, but considerably below the highs achieved in 2007.
- Under the Baseline EU soft wheat prices are projected to increase by 16 percent relative the average recorded in the 2004 to 2006 period. EU barley prices by 2016 are expected to be 10 percent higher than the average price prevailing over the period 2004 to 2006. While EU maize prices are projected to be over 15 percent higher in 2016 than over the period 2004 to 2006.
- Between 2006 and 2016 Irish wheat area harvested is projected to increase by 7 percent while the barley area harvested is projected to increase by almost 10 percent. Maize area is also set to increase, although data limitations prevent explicit modelling of maize production in Ireland
- By 2016 under the Baseline Irish wheat and barley prices are projected to be 9 and 6 percent higher than the average of the wheat and barley prices over the period 2004 to 2006.
- Overall, under the Baseline, the value of output from the Irish cereals sector is projected to increase by approximately 30 percent between 2006 and 2016.

Outputs, Inputs and Sectoral Income

- The value of overall agricultural goods output (at producer prices) is more or less unchanged under the Baseline. The level projected for 2016 under the Baseline is €5,217 m.
- Under the Baseline declining levels of agricultural activity, as reflected in declining agricultural output volumes, are reflected in declining aggregate expenditure on inputs by the Irish agricultural sector.
- Declining volumes of input use are in some cases offset by increases in the price of inputs that are determined exogenously to the sector (energy and fertiliser for example).
- Important expenditure items such as Energy and Lubricants and Fertiliser are projected to increase over the projection period. In the case of Expenditure on Energy and Lubricants is projected to increase by 13 percent over the projection period, while fertiliser expenditure increases by just 2 percent due a decline in usage levels.
- Given the operation of the Single Payment System, subsidy payments are largely unchanged. One notable exception is an anticipated increase in REPS expenditure reflecting a projected increase in REPS participation. Total subsidy receipts by Irish agriculture are projected by 2016 to be 77 percent of sectoral income, which is little changed on the 2006 level.
- Overall, when rising agricultural output and declining input expenditure are combined with a modest increase in subsidy receipts, Irish agricultural sector income under the Baseline is projected to increase. By 2016 the projected level of Irish agricultural sector income €2,528 m or almost 4 percent higher than the level observed in 2006

- ENDS -

FAPRI-Ireland

2007 Outlook for EU and Irish Agriculture

J. Binfield, T. Donnellan, K. Hanrahan and P. Westhoff

There is nothing wrong with change if it's in the right direction

Winston Churchill

1 Introduction

Since the publication of our 2006 Baseline outlook, international commodity markets have experienced considerable change. A series of factors, including abnormal weather, a surge in biofuel production, depletion of commodity stocks, sustained high energy costs and strong international macroeconomic growth have combined to alter the rate of projected production growth and increase the rate of projected consumption growth for a number of commodities.

The result has been a sharp increase in international commodity prices, most notably in the case of dairy products, grains and oilseeds. To some degree these price increases represent a spike in the general price outlook and supply is expected to respond to these higher prices in the short term, which will put downward pressure on commodity prices. However, in broad terms the medium term Baseline price outlook for many agricultural commodities is more favourable, from a producer perspective, than indicated in recent FAPRI-Ireland Baseline Outlooks. The Baseline is not a forecast, because, there will be changes in policy, developments in the overall economy, and unanticipated weather events that will impact on production and prices.

This report provides analysis of the prospects for the agricultural and food sectors in Ireland and the EU over the period 2006 to 2016 representing the 'Baseline' (i.e. no policy change) projection for the major agricultural markets.

While inflation is taken into account as a factor affecting production costs, all values presented in this executive summary are in nominal terms, in keeping with the fact that markets operate on the basis of nominal prices. Of course inflation also impacts on purchasing power and thus should be taken into account when measuring future nominal income levels relative to existing nominal income levels.

The rest of this report is presented in the following sections:

- Section 2 provides a background to the Baseline. It also presents some important caveats which need to be borne in mind when interpreting the results that are presented later in the text.
- Section 3 describes the macro economic perspective which underlie the projections
- Section 4 describes the Baseline agricultural and trade policy assumption used in this analysis.
- Section 5 describes the Baseline results with individual commodity level and input expenditure details, as well as an aggregate output, input and income picture. It also comments on the importance of the Baseline in the context of analysis of other policy scenarios.

It is important to emphasise that this is a Baseline. It is analogous to the concept of a control experiment in the physical sciences. Its main purpose is to help us understand where the agricultural sector might be ten years from now. In a related publication (Binfield *et al.*, 2007) we examine the ten year outlook under a series of alternative policy assumption sets that relate to EU milk quota reform, and by reference to this Baseline, we can then infer the impact of the agricultural policy changes analysed.

2 Background

2.1 Recent Events on Agricultural Markets

It is no exaggeration to state that the confluence of factors that have led to high current world agricultural commodity prices is unprecedented. The key question for EU and Irish agricultural commodity markets and agricultural sector incomes is the degree to which these factors can be expected to persist. In considering the likely longevity of the currently high cereal and dairy commodity prices, it is worthwhile considering the drivers behind these high prices.

Biofuels have received a lot of attention and widespread blame for the current high commodity prices. The USA has lead the way in biofuel production and legislation that replaced the additive MSTB with ethanol led to a spike in ethanol prices that prompted even faster development of ethanol production facilities. Subsequent demand for corn increased corn prices, which has prompted a large increase in corn area. Since then, however, a variety of factors have lead to a reduction in ethanol prices and a reduction in confidence in the industry. Nonetheless, FAPRI projects US corn prices of over $3/bushel (over $150 tonne) for the projection period.

The EU has also been rapidly expanding its biofuels output in the form of biodiesel. This has had a direct impact on the oilseed market resulting in large price increases for vegetable oils and oilseeds. The combination of high corn and oilseed prices has pushed up the prices of other crops as they compete for land. As feed costs rise, then so do livestock prices.

There has been a tendency to ascribe all the increase in commodity prices to increased biofuel demand. This presents a misleading picture, however, as there have been severe weather problems internationally in 2006 and 2007 that have impacted on production of crops and livestock. In the case of the dairy sector, there has been strong demand from Asia as incomes rise. In the short term we expect that producers will quickly respond to these higher commodity prices by boosting production. If there are no weather problems then supply should increase and reduce the prices of most commodities. However, biofuels production will continue to increase despite the recent problems in the USA and EU and the long run projection for prices in general is consequently higher than in the past. Although commodity prices are strengthened by biofuels policy, perhaps the real message of the high commodity prices in 2007 is not that a new era of high prices has arrived, rather that successive reforms of the Common Agricultural Policy (CAP) mean that the EU is more exposed to world markets and thus commodity prices *within* the EU will be more volatile than in the past.

2.2 Some Caveats relating to the results

The results presented in this paper should be carefully interpreted. Six caveats that we consider to be important are described in the following sub-sections.

2.2.1 National Data Issues

The compilation of this year's Baseline has been complicated by the need to gather market data on market activity from unofficial sources due to absences of up to date official published data. To overcome these challenges, unofficial data or estimates have been obtained where possible. Every effort has been made to try to ensure that unofficial data sources are matched in definitional terms with the historical official data series used as part of the structure of our economic models. However, to the extent that these data estimates do not accord with the official sources when these data are eventually released, this will impact on the Baseline we have produced.

2.2.2 Impact of Health Check and further WTO reform

The Baseline by definition excludes policies that might come into place, but which have yet to be agreed. A number of significant policy developments are anticipated, including further reforms that may emerge from the upcoming CAP Health Check or from the WTO Doha Round negotiations.

The EU CAP Health check is part of a wider EU budget review that will examine the priority areas for EU policy in the future. The details of the CAP Health Check proposals have not yet been released by the European Commission, although they have been widely leaked (Agra Facts 2007). A communication from the EU Commission is expected in November of 2007, with full proposals following in the spring of 2008. The Agriculture Commissioner, Marianne Fischer Boel, has stressed in a number of speeches that the CAP Health Check will not be “a fundamental reform”. However, for Irish agriculture at least, the ending of the milk quota that is likely to be part of a Health Check CAP reform agreement would represent a major change in agricultural policy. Some possible milk quota reform options are analysed in related papers (Binfield et al.,2007; Hennessy, 2007).

Other suggested elements of the CAP Health Check proposals are increased compulsory modulation of single farm payments, moves to end partially decoupled direct payments, and simplification of the single payment scheme, which would appear to imply a movement towards flat area payment scheme system across the EU (Agra Facts, 2007).[1]

The WTO Doha Round of Multilateral Trade Negotiations continued in 2007. The Chairman of the Agriculture negotiations, Ambassador Falconer, distributed a text in July 2007 that will most likely form the basis of any agreement that is likely to be reached in the negotiations that have been ongoing. In general terms the suggested ranges of cuts in export subsidies and government support to agriculture are within the parameters of EU offers made earlier in the Doha Round negotiations. The proposed cuts in import tariffs and proposed treatment of sensitive products however, arguably go further than the offer made by the EU Trade Commissioner, Peter Mandelson in October 2005. Any agreement that might be reached will lower the barriers to agricultural imports into the EU and negatively affect internal EU prices, since generally EU internal prices tend to be above world price levels.

Whether or not the current negotiations will reach a successful conclusion in the near future is a major uncertainty. Given that 2008 is a Presidential election year in the US, failure to quickly reach an agreement on all of the areas under negotiations at the WTO, will most likely delay any future agreement until at least the second half of 2009. In the absence of multilateral trade reform, it is possible that the EU may enter into bilateral trade agreements with regional blocks such as MERCOSUR or with individual countries such as India. Such bilateral trade agreements would, in all likelihood, also increase market access to EU agriculture markets and have similar impacts on internal EU agricultural markets as a multilateral trade agreement.

2.2.3 The Euro / US Dollar Exchange Rate

Other things being equal, a weaker dollar could have a negative impact on EU third country exports and on internal EU prices by increasing the World /EU price gap and making export subsidy limits binding at an earlier point in time. Conversely a stronger dollar (versus the euro) would have the opposite impact.

Exchange rates may still play a role in the market outlook since they may determine whether higher US$ world prices translate into higher € prices and thus facilitate commercial EU exports and hence lead to higher internal EU prices.

2.2.4 Biofuels and Petroleum Prices

Quite how the EU or Ireland is affected by the changes that arise from increased international biofuel production will depend to a large degree on policy decisions within the EU. Even in the absence of a biofuel sector in the EU, commodity prices in the EU will rise in response to rising international prices. The EU has set targets for biofuel usage and these targets will require that biofuel crops are either grown in the EU or imported and processed in the EU. A third choice would be to import the already processed biofuels. In practice the most likely outcome is some combination of these three options. The greater the extent to which the EU tries to meet its biofuel requirements through the growing and processing of biofuel crops within the EU, the greater the impact will be on EU cereals and oilseeds prices. It should be noted that in the process of producing ethanol results in by-products used as feed for the livestock industry. In addition, increasing biodiesel production increases the volume of oilseed meal available for feed.

[1] Shresthra, Hennessy and Hynes (2007) analyse the impact of a flat are payment system in Ireland.

2.2.5 Second Generation Biofuels

Currently commercial biofuel production sources its raw materials from plant matter that would otherwise enter the food or feed chain – these are so called first generation biofuels. Researchers are currently trying to develop systems for commercial second generation cellulosic biofuel production from the green (waste) part of agricultural plant matter. The objective is to arrive at a technology that will reduce the costs of second generation biofuels to the point where they become economic.

It is possible that these developments may ultimately lead to second generation biofuel production technologies that are lower in cost than first generation biofuels production technologies. Such a development would lead to a scaling back or even an end to first generation biofuel production. If commercial second generation biofuel production comes on stream, this would lead to reduced demand for existing biofuel crops, increased availabilities of such crops for food and feed consumption, a fall in price for such commodities, reduced animal feed costs and an increase in the rate of growth in livestock production.

2.2.6 Weather conditions and climate change

Since it is only possible to accurately forecast weather conditions for a few days in advance, the 10 year forward looking analysis produced here is based on the assumption of normal ‘average' weather.

Unusual weather can play a role in agricultural markets by increasing or decreasing production levels, which in turn impacts on prices, particularly when stock levels are low or non-existent. However such price movements tend to represent fluctuations around a trend as supply and demand usually respond to bring markets back to equilibrium.

Under the Baseline the abnormal weather events of the last few years in Australia are not expected to continue, i.e. normal weather conditions are assumed to prevail. The drought that has afflicted Australia in recent years has had important impacts on the supply of grains, dairy and meat and livestock products onto world markets and has contributed to recent high agricultural commodity prices. The Murray Darling Basin (MDB) in South Eastern Australia accounts for over one half of Australian agricultural output and a significant proportion of this region's agriculture is dependent on irrigation. If "abnormal" weather conditions persist (i.e. the drought continues) the volume of production from the MDB will be negatively affected (Gunasekera, Ford and Tullah, 2007), Lower volumes of exports onto world markets from Australian agriculture can be expected to have positive impacts on the level of world prices for many temperate agricultural commodities.

Weather events such as the run of Australian droughts of recent years may however be evidence of climate change. Globally the impact of climate change on global agricultural production and on the supply and use balances of international agricultural commodity markets is hard to assess due to the continuing uncertainty surrounding the process of climate change itself and its spatial impact.

Research by CSIRO (van Dijk et al., 2007) indicates that climate change is a "major risk" to the water resources of Australia's Murray Darling Basin and by implication to Australia's agricultural productivity. If climate change leads to the reduced rainfall and increased temperatures indicated by the CSIRO research, the recent negative impact on global supplies of agricultural commodities caused by the Australian droughts of recent years may become a feature of "normal" weather. The negative impact on global agricultural output of climate change in Australia may be offset by positive impacts elsewhere on earth. However, Parry et al. (2005) suggest that despite possible positive impacts on agricultural production from climate change, the net impact is likely to be negative at a global level.

Given the high degree of uncertainty surrounding the process of climate change (nature of impact, timeline of impact, spatial distribution of impact) under the Baseline, we have chosen to assume that normal weather patterns occur. However readers should note that small changes in climate can have major effects on agricultural productivity, production and agricultural market prices. It should also be noted that climate change is a gradual, long run process, and the adverse weather that is largely responsible for the current surge in commodity prices may not be part of the process.

3 Macro Economic Projections

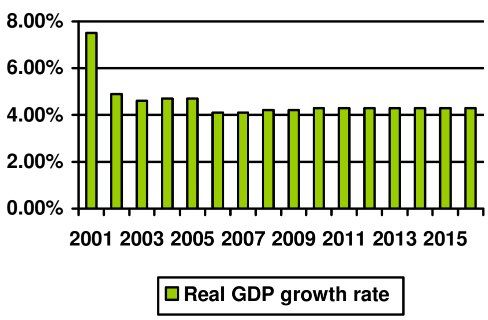
The macro economic backdrop to the Baseline continues to remain very positive in terms of the outlook at a global level. At a domestic level the outlook for Ireland also remains positive, although growth rates are projected to be closer to the EU average than they have been in the past. On the international scene an ongoing feature is the projected continuation of strong economic growth in Asia. Income growth in these countries remains a significant driver of international demand for agricultural commodities.

Real GDP growth rates in the EU-27 are projected to average at 2.3 percent per annum over the Baseline projection period with an annual inflation rate (GDP deflator) of 2.1 percent. While average Irish growth rates over the next 10 years at 4.2 percent are projected to be higher than the EU average, the economy is moving out of the high growth rate path and onto a long term sustainable growth rate. The Irish economy will continue to contend with higher inflation than the EU average.

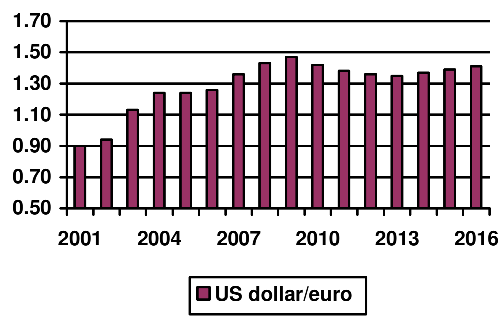
Figure 3-1 illustrates the projections for Irish macroeconomic growth that are used in the analysis and the projected path of the US dollar/euro exchange rate. Under the current Baseline there is a projected weakening in the US dollar over the short term with the US$ approaching 1.50 per euro by 2009. Thereafter there is some recovery in the US dollar to rates in the range of US $1.30 to US $1.40 per euro, which is largely consistent with what has been experienced to date in 2007.

Figure 3-1: Key Macro Economic Projections

Irish Real GDP growth per annum



US dollars per euro



FAPRI-Ireland Model (2007)

4 Baseline Policy Descriptions

The Baseline Policies

The agricultural policy assumptions in the Baseline are:

- The CAP operates broadly as agreed Luxembourg Agreement of June 2003.
  - Sugar reform agreed in 2005 is implemented
  - The EU set–aside rate is set to zero in 2008 and maintained at that level over the entire projection period
- The differential national level implementation of the CAP, as allowed for under the Luxembourg Agreement, is incorporated in the FAPRI-Ireland model.
- Milk Quotas remain in place and continue to operate beyond 2008,
  - i.e. to the end of the FAPRI-Ireland projection period in 2016
- The expansion of the EU that occurred on May the 1st 2004 with the accession of 10 New Member States (NMS) is incorporated in the Baseline.
- The Uruguay Agreement on Agriculture (URAA) remains in place, i.e. no WTO Doha Round Agreement or other bilateral trade liberalisation takes place.
- In later years export subsidies are reintroduced to prevent stock building as prices decline from the highs of 2007

4.1 Baseline

The FAPRI-Ireland 2007 Baseline is based on the continuation of agricultural policy (as currently defined) and the continuation of existing international agreements that regulate the conduct of agricultural policy and agricultural trade policy instruments. The 2007 FAPRI-Ireland Baseline agricultural policy is that defined by the Luxembourg Mid Term Review (MTR) Agreement of June 2003, while trade policy agreed under the Uruguay Round Agreement on Agriculture (URAA) is assumed to remain unchanged. The Baseline also incorporates the recent reforms of the EU sugar regime. Set aside has been set to zero by the European Commission for the 2008/09 crop year and for the purposes of this analysis it is assumed to be retained at that level in future years. High cereal/feed prices are the main reason that set-aside has been set to zero.

The FAPRI-Ireland 2007 Baseline incorporates the differential Member State implementation of the reformed CAP allowed for under the Luxembourg Agreement. The expansion of the EU that occurred with the accession of 10 new Member States in May 2004 is also incorporated in the 2007 FAPRI-Ireland Baseline. Due to difficulties in acquiring accurate data in relation to Bulgaria and Romania, unless otherwise noted, all EU projections under the Baseline refer to the expanded EU25. Under the Baseline it is assumed that no further accessions to the EU take place beyond the existing number of MS. Under the Baseline all of the provisions of the URAA are assumed to continue to hold over the projection period 2006 to 2016.

5 Baseline Results

In the following sections a brief overview of the projections under the current CAP and URAA WTO agreement (the Baseline) are presented for each of the main commodity areas. These are followed by the projections for intermediate consumption (input expenditure) and agricultural sector operating surplus (aggregate agricultural sector income) for the Irish agriculture sector.

5.1 Cereals

Due to lower areas harvested, lower world stocks, and increasing demand for grains and oilseeds due to strong international income growth and the new biofuel demand for agricultural crops, the world wheat price increased considerably in 2004, 2005 and 2006, exceeding US$ 200 per tonne. The increase in wheat prices continued and accelerated in 2007. Higher prices for wheat are projected to lead to a production response, which under the Baseline, moderates the price path for wheat over the medium term. By 2016 the world price of wheat in US dollars is projected to be over 20 percent higher than the average of prices that prevailed on world markets over the period 2004-2006, however projected increases in the value of the euro versus the US dollar mean that by 2016 the euro equivalent of the world price of wheat is projected to only increase by 7 percent relative to the average of the euro equivalent of world prices over the period 2004-2006.

The developments that have led to higher wheat prices on world wheat markets are being felt also in the case of maize. Internationally, there has been an increase in the proportion of maize which is being grown as an energy crop for ethanol production. Under the Baseline world maize prices are set to continue to rise out to 2009 before stabilising at a level of over US$ 150 per tonne. This projected price for maize would represent an increase of over 70 percent relative to the level in 2000.

As in the case of wheat, higher maize prices stimulate higher volumes of maize production over the projection period. By the end of the period the euro equivalent of the world price is projected to be almost 12 percent higher than the average world maize price over the period 2004-2006.

EU Cereals Baseline

Under the Baseline, the increase in prices and the zero rate of compulsory set-aside mean that the area planted with cereals in the EU is projected to expand. By 2016 wheat area harvested in the EU-25 is projected, under the Baseline, to have increased by almost 6 percent on the average of the areas harvested in 2004, 2005 and 2006. EU barley and maize area harvested under the Baseline are projected to increase

Under the Baseline EU-25 barley and maize yields are projected to increase at a faster rate than those for wheat. Barley and maize yields are expected to grow by about approximately 9 and 7 percent respectively between 2016 and the period 2004-2006, while wheat yields are projected to grow by approximately 4 percent over the same period.

Overall, EU production of wheat, barley and maize is projected to increase under the Baseline. EU wheat and barley production in 2016 are projected to be 10 percent higher than the average production for these crops during the period 2004 to 2006. EU maize production is projected to be 7 in 2016 when compared to the average volume of production over the period 2004-2006.

With growing biofuel demands for grains and projections for relatively stable feed and other non-feed demands for cereals within the EU, imports of wheat and barley into the EU fall over the Baseline projection period. Exports of cereals from the EU remain largely unchanged under the Baseline.

The Baseline price in 2016 for soft wheat in the EU of € 137 per tonne is almost 16 percent higher than the average price of wheat obtained over the period 2004 to 2006.

Irish Cereals Baseline

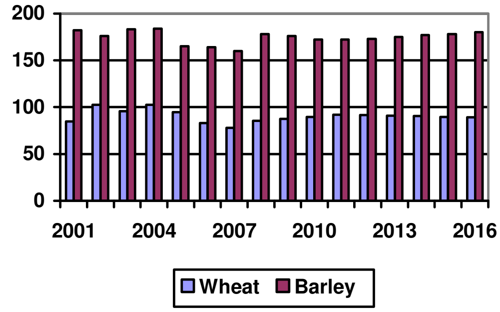
The cereals outlook for Ireland is little different to that at EU level. The very high Irish cereal prices of 2007 are not projected to persist throughout the Baseline. Globally, and within the EU, the historically high grain and oilseed prices of 2007 are projected to give rise to increased supply and reduced demand for cereals over the medium term. Thus, the supply and use balance that has given rise to exceptionally high prices is projected to ease within the EU and international grain markets and lead to some reduction in the prices of grains.

Under the Baseline with the EU set-aside rate at zero, Irish grain area harvested expands strongly in response to the increase in prices projected. The ending of sugar beet production in Ireland also frees up arable land area and further facilitates the expansion of cereal area. By 2016 Irish wheat and barley areas harvested are projected to have increased by 7 and 10 percent respectively on the 2006 level.

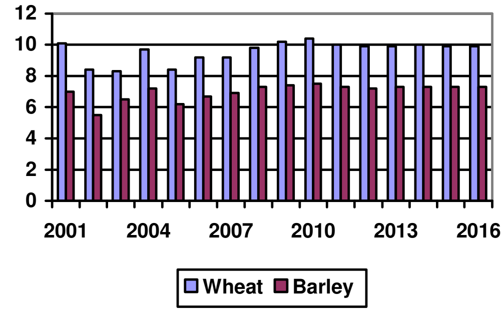
With growth in Irish yields of soft wheat and barley projected to continue under the Baseline, Irish wheat and barley production increases strongly. By 2016 Irish wheat production is projected to have increased by almost 15 percent when compared with 2006, while Irish barley production is projected to increase by over 19 percent between 2006 and 2016.

Figure 5-1: Irish Wheat Production, Yields and Use

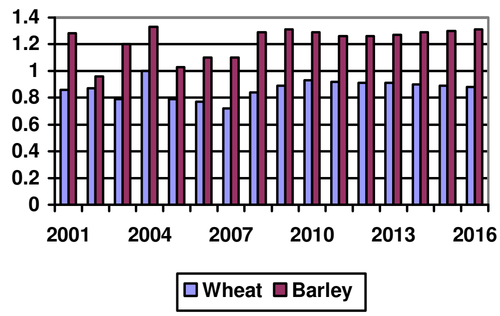
Wheat and Barley Area Harvested ('000 Ha)



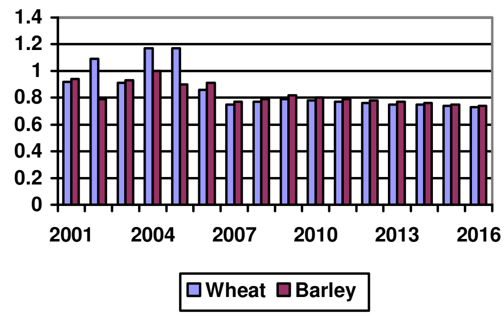
Wheat and Barley Yields (Mt Ha^{-1})



Wheat and Barley Production (million Mt)



Wheat and Barley Feed Use (Million Mt)

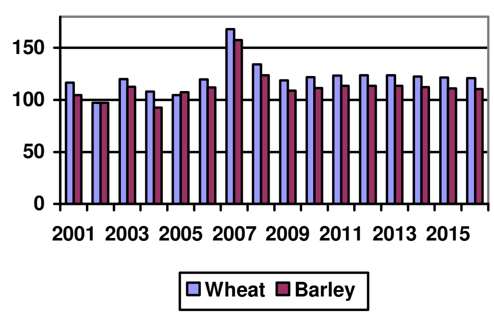


FAPRI-Ireland Model (2007)

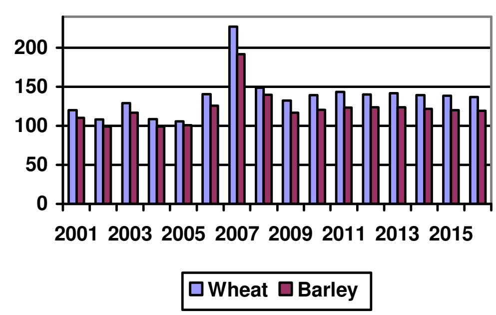
The increased production of grain in Ireland leads to a reduction in Irish grain imports. Under the Baseline Irish barley imports decline, when combined with some increase in Irish exports of barley, means that over the Baseline projection period Ireland once again emerges as a net exporter of barley. Irish imports of wheat also decline due to the increased indigenous production of wheat, with 2016 Irish imports of wheat projected to be almost 14 percent lower than in 2006.

Figure 5-2: Irish and EU Wheat and Barley Prices

Irish Wheat and Barley Prices (€uro/tonne)



EU Wheat and Barley Prices (€uro/tonne)



FAPRI-Ireland Model (2007)

Irish grain prices in 2006 across wheat, barley and oats were higher than average prices for the period 2000-2005. Grains prices in Ireland for 2007 are projected to be significantly higher than the prices observed in 2006, with soft wheat and barley prices over 40 per cent higher than in 2006, while Irish oats prices are projected to be 20 per cent higher than in 2006. As noted above, over the medium term prices are projected to decline from the levels projected for 2007 due to increases in international production and a rebuilding of stocks. Nevertheless, Irish grains prices, like grain prices on EU and international markets, are projected to remain at levels well in excess of those observed over the first

5 years of this decade. By 2016 the price of feed wheat in Ireland is projected to equal €121 per tonne, which is over 9 percent higher than the average price over the period 2004-2006.

The projected decline in cattle and sheep numbers under the Baseline (detailed in later sections) and the relatively high price of wheat and barley compared to other feeds, mean that under the Baseline Irish feed demand for all grains contracts. Over the period 2006 to 2016 Irish feed demand for wheat and barley are projected to decline by 15 percent and 20 percent respectively. Increases in the Irish population mean that non-feed (food and industrial) demand for grains remain relatively buoyant. Under the Baseline, the overall Irish domestic use of barley is projected to decline by approximately 5 percent, while Irish domestic use of wheat is projected to increase by 4 percent.

5.2 Beef

The EU meat sector has moved from one crisis to another over the last decade (BSE, FMD, AI). Historically, over-production relative to internal EU consumption and a series of negative demand shocks, weakened producer confidence in the beef and cattle sector. However, there are now a number of market conditions in place which may facilitate a more favourable Baseline EU and Irish beef sector outlook. These factors (which are detailed in Box 5-1) include continued strength in beef consumption and a continuing decrease in indigenous EU production, are projected under the Baseline to lead to a tightening of the supply demand balance on the EU beef market and a relatively positive Baseline price outlook for the next 10 years.

Box 5-1: Improving prospects in the EU Beef Sector?

Decoupling

The introduction of the Single Farm Payment has reduced the incentives to farm beef cows and some destocking of the EU beef breeding herd has occurred. This process of downward adjustment in EU beef cow numbers is expected to continue in a number of EU Member States.

Declining dairy cow herd

Under the Baseline the EU dairy quota remains in place and this is projected, given increased per cow milk yields, to lead to a continuation of the decline in the EU dairy herd with a concomitant reduction in the supply of calves for beef production. With over two thirds of the EU supply of calves coming from the EU dairy herd, EU beef production is projected to decline.

Higher feed prices

Over the Baseline projection period feed prices are projected to settle at a higher level than in the past. This increases the cost of beef production and will, ceteris paribus, reduce EU beef production. At the same time higher feed prices will push up the price of white meats relative to beef, which promotes beef consumption.

Per capita demand for beef

While the EU27 population is growing only slowly, with an increase of approximately 1 percent projected over the projection period, relatively strong growth in per capita incomes is projected to support per capita consumption of beef in the EU. Beef consumption in the NMS is rising from a low base level, which means that there may be more potential for consumption growth in these markets than in EU-15 Member States.

The beef price outlook in the Baseline is dependent on the evolution of EU per capita consumption of beef. A *more* optimistic outlook for per capita beef consumption within the EU would alter the projected market price evolution. Per capita use of beef in the EU15 in 1990 was over 22 kg per capita. As a result of demand shocks such as BSE and some loss of price competitiveness vis à vis white meats, beef per capita consumption has declined to under 20 kg by 2006. EU beef consumption has trended down in the 1980s and 1990s as a result of changing eating habits and health concerns. There are signs that this trend has stopped (as it has in the US) and if this is the case beef consumption and beef prices could be even stronger. An increase in consumer confidence in beef relative to other meats could reverse this trend and lead to stronger beef prices.

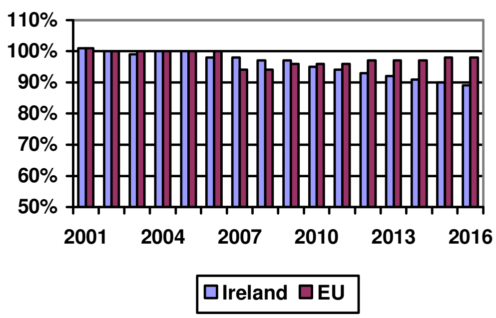
EU beef production contracts by 7 percent over the projection period due to the decline in the EU dairy cow herd (which currently accounts for 2/3 of the EU suckler and dairy cow herd) and reductions in the beef cow herd in Member States such as Ireland and the UK. An increasing gap is projected to emerge between EU consumption and production of beef. This leads to a price increase which leads to an increase in imports of 39 percent. Higher prices reduce consumption and the tighter market leads to prices trending upwards slightly

Relatively strong EU demand for beef, when combined with the projected reduction in EU beef production are expected to lead to an increase in EU beef prices of almost 74 percent over the projection period. Increasing beef prices, when combined with the retention by many Member States of at least some coupled beef direct payments, means that EU beef cow numbers are projected to decrease only marginally over the Baseline projection period, with EU suckler cow ending stocks projected to be approximately 2 percent lower than in 2006.

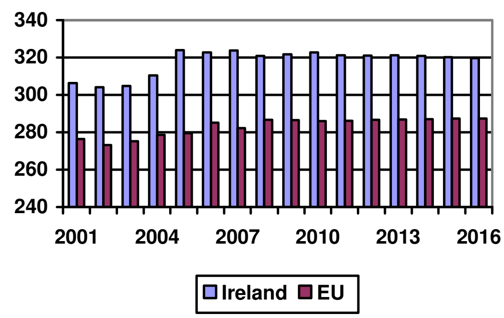
The projected changes in trade flows of beef, into and out of the EU, moderate the impact of the tighter EU beef supply and use balance on EU beef prices. Other things being equal, the greater degree of beef import penetration on the EU market, the more modest the increase in EU beef prices that occurs as a result of contracting EU production.

Figure 5-3: EU and Irish Cattle and Beef Projections (Baseline)

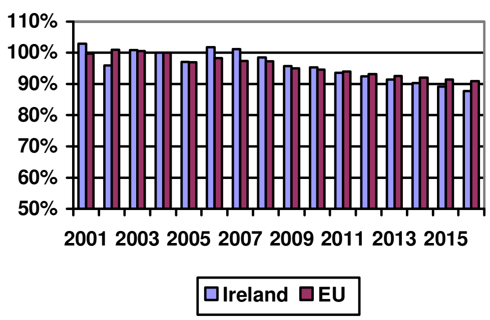
Suckler Cow, Ending Numbers (2004 =100)



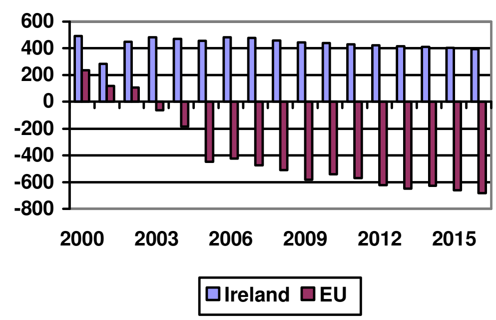
Slaughter Weight (Kg per Head)



Beef Production (2004 = 100)



EU and Irish Net-Exports ('000 Mt)

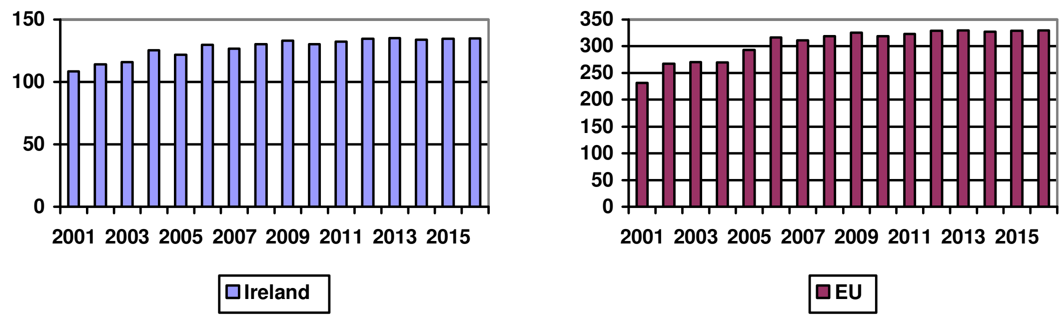


FAPRI-Ireland Model (2007)

The foregoing Baseline discussion precludes a reduction of beef import tariffs, such as might occur under a WTO reform agreement or a bilateral trade reform agreement that might emerge in the event of the WTO negotiation process breaking down. Imports of beef to the EU increase under the Baseline. Baseline beef import volumes are projected to be in excess of the EU tariff rate quota (TRQ) quantities. This means that some EU beef imports are and will continue under the Baseline to enter the EU after paying the full tariff. A reduction in the tariff protection that is currently afforded to the EU beef sector would see EU imports of beef increase. Trade reform (bilateral or multilateral) over the next ten years is a probability rather than a possibility. Such trade reform would almost certainly increase access to the EU beef market, this would, other things equal, have a negative impact on the EU beef prices and on the overall EU beef sector outlook. Ongoing research by FAPRI-Ireland (to be published in early 2008) will examine the consequences for the Irish beef sector and wider agricultural sector of trade liberalisation.

Figure 5-4: Irish and EU Cattle Prices (Baseline)

Irish Cattle Reference Price (€uro/100Kg) ***EU R3 Price (€uro/100Kg)***



FAPRI-Ireland Model (2007)

The Irish Cattle and Beef Baseline

The Outlook for the Irish beef sector is determined by developments on our export markets and in EU agricultural policy. In this Baseline the beef sector outlook is more positive than in recent years due to the decline in the EU beef production and the projected strengthening of EU per capita beef consumption.[2] By 2016 Irish cattle prices are projected to be over 4 percent higher than in 2006.

Under the Baseline, despite the relatively strong prices projected for the Baseline period, the Irish suckler cow herd is projected to decline by 10 percent between 2006 and 2016. The Irish dairy cow herd, with the continuation of the milk quota, is projected to decline by over 13 percent as per cow milk yields increase. As a result, overall cattle slaughter is projected to decline by over 13 percent under the Baseline.

Average slaughter weights are projected to decrease slightly under the Baseline despite the increase in share of beef cows in the Irish cow herd. This decline is due to the increase in feeding costs that is projected under the Baseline. With declining numbers of cattle slaughtered and declining average slaughter cattle weights, Irish beef production under the Baseline is projected to decline, with production projected to be almost 14 percent lower than in 2006.

Irish per capita use of beef declines in response to the higher beef prices, with per capita domestic use of beef declining by 2 percent. With the Irish population projected to grow over the next ten years, Irish total domestic use of beef in 2016 is expected to be over 11 percent higher than in 2006.

Due to the projected growth in total domestic use of beef in Ireland, Irish exports of beef are projected to decline by slightly more than Irish beef production. Under the Baseline Irish exports of beef by 2016 are projected to be almost 16 percent lower than in 2006.

Irish live exports are also projected to decline under the Baseline, with total live exports in 2016 almost 16 percent lower than in 2006. The decline in live exports occurs as a consequence of lower animal availability, with calf exports declining strongly due to the reduction in the supply of calves from the dairy herd. Exports of other cattle are more or less maintained at their 2006 levels over the Baseline projection period.

By 2016 the Irish cattle sector output value at producer prices (when including stock changes) is projected to be over 3 percent lower than in 2006. The higher cattle price in 2016, when combined

---

[2] It should be noted that under the Baseline the expected introduction of the Suckler Cow Welfare Scheme is not incorporated. Other things equal the introduction of this scheme would be expected to positively affect the numbers of suckler cows in Ireland and the associated beef production.

with a lower stock change figures, are insufficient to offset the negative impact of lower beef production volumes that are projected under the Baseline.

5.3 Sheep

EU Sheep Sector Baseline

Under the Baseline the contraction in EU sheep production is projected to continue. In most EU Member States, the ewe premium was fully decoupled and this is projected to lead to a continuation of the decline in the ewe flock in the EU. End of year ewe numbers in the EU are projected to decline under the Baseline by over 7 percent. The decline in ewe numbers is largely matched by a decline in sheep meat production, which between 2006 and 2016 is projected to decrease by approximately 7 percent.

EU domestic use of sheep meat is projected to decline over the Baseline period, with total EU domestic use in 2016 almost 3 percent lower than in 2006. This decline in sheep meat domestic use is due to the projected large decline in per capita consumption of lamb across the EU as a result of increased prices. Per capita consumption in 2016 is projected to be 5 percent lower than in 2006. By 2016 EU sheep meat prices are projected to be over 2 percent higher than in 2006.

Under the Baseline production of sheep meat in the EU declines at a greater rate than domestic use. As a result, EU imports of sheep meat are projected to increase. By 2016 EU imports of sheep meat are projected to be almost 9 percent higher than in 2006, but imports are restricted by the TRQ.

Irish Sheep Sector Baseline

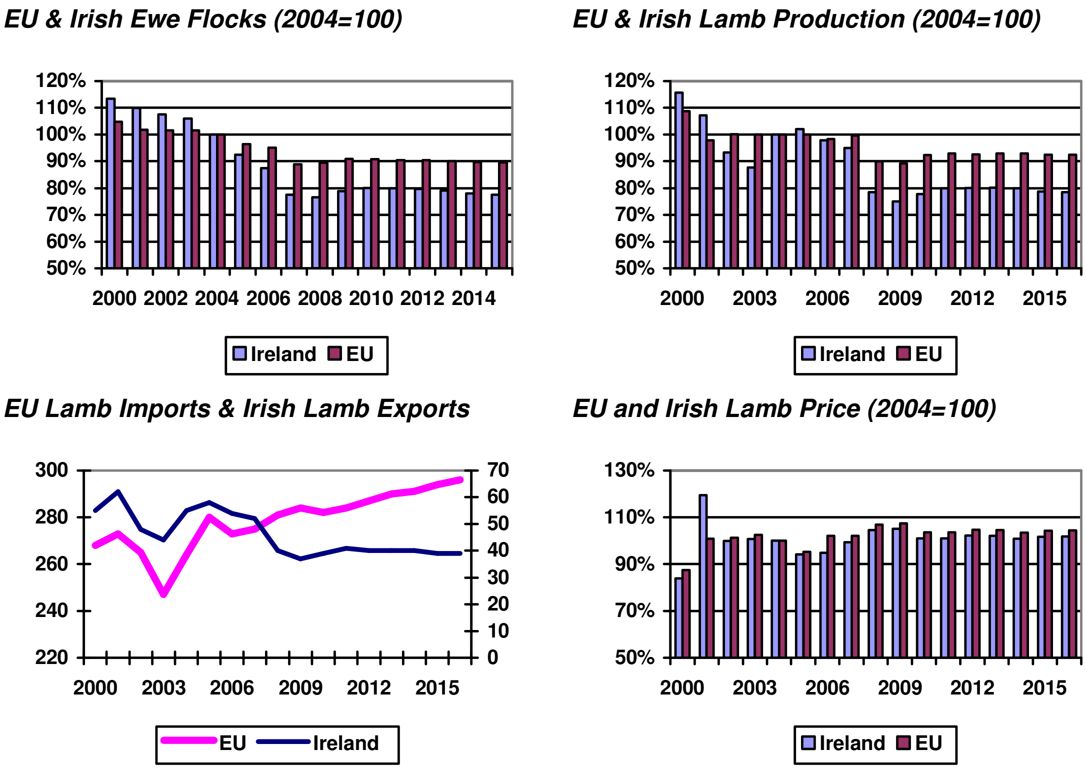
The decoupling of payments and the continuing farmer perception that sheep production systems are necessarily more labour intensive than alternative dry stock enterprises, continue to reduce the incentive to engage in sheep production in Ireland.

Just as in the Irish beef sector, the price outlook for the Irish sheep sector is largely determined by prospects for its export markets. Under the Baseline, market prices for sheep meat are projected to increase from the levels observed in 2006, with the 2016 price level projected to be almost 7 percent higher.

Under the Baseline, the Irish ewe flock is projected to continue to decline. Over the period 2000 to 2006 the ending stocks of ewes in Ireland declined by almost 23 percent. Between 2006 and 2016 the rate of decline in ewe numbers is projected to slow somewhat. The Irish ewe flock is projected to decline by a further 16 percent over the projection period, so that by 2016 ending stocks of ewes are less than 2.7 million head. This compares with an ending stock of ewes in 2000 of over 3.9 million head.

The reduction in ewe numbers is not matched one for one by reduced lamb slaughter. Under the Baseline ewe numbers are projected to decline, however, the average productivity per ewe, in terms of lambs weaned, is expected to be higher on those farms remaining in sheep. As a result, by 2016 the volume of sheep available for slaughter declines by only 14%. The percentage change in total sheep and lamb slaughterings between 2006 and 2016 indicates a more dramatic reduction of almost 20%. This higher number is due to the exceptionally high rates of slaughter that occurred over the period 2004-2006, as farmers culled ewes and exited sheep.

Figure 5-5: EU and Irish Sheep Production, Trade and Prices (Baseline)



FAPRI-Ireland Model (2007)

Lower slaughter and largely unchanged average slaughter weights mean that under the Baseline the volume of Irish lamb production is projected to decline by almost 20% between 2006 and 2016. Irish domestic use of lamb increases by almost 6 percent between 2006 and 2016. The increase in total domestic use of sheep meat in Ireland is entirely due to strong population growth that is sufficient to offset the projected decline of over 7 percent in per capita consumption on sheep meat. With increased domestic use and projected declines in production Irish exports of lamb decline under the Baseline. By 2016 Irish lamb exports are projected to be 28 percent lower than in 2006.

The value of the sheep sector's output (at producer prices) in 2016 is projected to be 11 percent lower than in 2006.

5.4 Pigs

High feed price are now the main challenge facing the pig sector. The increase in feed prices has yet to bring about the decrease in production required to bring about an increase in pig prices. Internationally the pig sector had done well in recent years due to BSE and AI concerns which affected other meats.

Internationally, Japan, Russia and South Korea are set to remain significant net import countries, while Chinese export capacity is projected to decline over time. High feed prices will limit production growth in the short term. The US, Canada and Brazil increase their share of world pigmeat export trade at the expense of the EU where export capacity stagnates.

EU Pigmeat Baseline

The outlook for the pig sector in the EU is not particularly favourable due to animal welfare and environmental regulations and the advent of high feed prices increases the challenge for producers. EU pig meat production increases by just over 3.5 percent which is about a percent below the projected growth rate in EU pig meat consumption. Consumption per capita remains relatively stable over the projection period, so the growth in EU consumption is due to increased population.

Under the baseline the EU loses ground in the international pigment trade with EU pigmeat exports projected to decline by about 8 percent over the period 2006 to 2016.

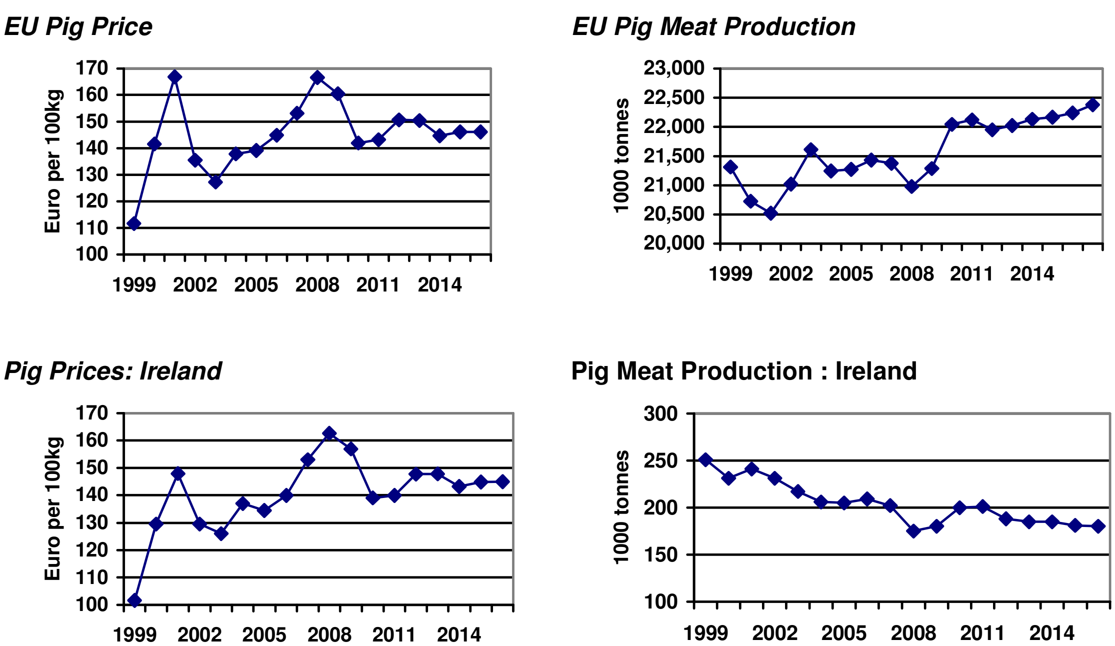
Concerns regarding BSE and Avian Influensa were a driver for increased EU pig meat consumption and in turn the notable increase in EU pig prices in the last couple of years. Over the projection period, EU pigmeat prices strengthen in the short term due to a contraction in production at EU level brought about by high feed prices. By 2010 feed prices are projected to have moderated and this allows a recovery in production and a gradual decrease in prices. EU pig meat prices remain in the range of 145 euro to 150 euro per 100kg range in the medium term.

Ireland Pigmeat Baseline

The recent increase in pig meat and pig feed prices has set the trend for much of the projection period. In Ireland production is set to contract. In addition, international competition and difficulties in sourcing non GMO feed and the Nitrates Directive all act to pressurise margins. The only positive is that pig meat prices are projected to be above the average level which prevailed in the early part of the decade.

Reflecting the story at EU level, Irish pig production contracts over the short term due to the high feed prices which are projected to persist for the next couple of years. Sow productivity and slaughter weights stagnate and the breeding herd contracts. Figure 5.6 shows the EU and Irish pig meat price and pig meat production.

Figure 5-6: EU and Irish Pig Production and Prices (Baseline)



FAPRI-Ireland Model (2007)

The breeding herd stabilises by 2010, in the basis that feed prices moderate and pig meat prices improve. However, thereafter the breeding herd is further adversely affected by the impact of the Nitrates directive which leads to a further decrease in sow number over the remaining years of the projection period. By 2016 pig meat production is down 14 percent on the 2006 level.

Domestic consumption of pigmeat in Ireland grows by 18 percent, mainly due to increases in population but also because of a 3 percent growth in per capita consumption. The increase in domestic consumption, combined with the contraction in production, leads to a sizable fall in exports of close to 50 percent over the projection period.

5.5 *Dairying (Baseline Results)*

World Dairy Baseline

The outlook for international dairy product prices is now quite positive due to a shortfall in anticipated production from Australia, the low general level of international dairy commodity stocks, combined with strong international demand. To a lesser degree a shortfall in EU production has also been a factor.

International dairy product prices have been on the increase over the last 18 months. The rise in prices began with a shortage in milk powder, due to a slowdown in the growth in world milk production, particularly in net exporting regions at a time when international demand for dairy products is growing strongly. Higher powder prices in turn had an impact on the dairy product mix and resulted in reduced levels of production of the other main dairy commodities. Over time the increases in prices moved right through the dairy product range.

The short term outlook for world dairy commodity prices (expressed in US $) remains conditioned by the drought being experienced in Australia where below average levels of rainfall since the late 1990's has culminated in a severe water shortage. The result has been increased production costs and in some cases unplanned culling of dairy cows and the export of replacement heifers. An overall decrease in Australian milk production of over five percent in 2006/07relative to 2005/06 has been the result. Feed availability will remain a problem in the current season and short term prospects for the dairy sector in Australia remain difficult. Even with a return to normal weather conditions it will take a number of years to restore the water reserves in the Murray Darling Basin on which much of Australia's agricultural irrigation is dependent.

Dairy production in the EU has been running below quota in the last two years. Weather, blue tongue and high feed prices have each been contributory factors. At the same time EU consumption continues to increase and the EU's exportable surplus continues to decline, which further reduces supplies to the world market.

For the short term the growth in global dairy product consumption is set to run ahead of global production. It will take two to three years for a recovery in global dairy production to take place, either through a recovery in Australian production or by way of increased production growth in other exporting countries which take up the slack. Already there are signs of further expansion in New Zealand's production capacity (FAS 2007). Consequently the current period of stronger than anticipated prices will be sustained through 2008 and into 2009.

Despite the current high feed prices, high milk prices at present have the capacity to generate a positive supply response from producers, resulting in a medium to long term path for dairy product prices that are lower than their current level but high relative to the historical period.

EU Dairy Baseline

Under the present milk quota, EU milk production is largely stable. Any further increases in milk fat content will erode volume increase in quota allocated under the Mid Term review. Milk yields across the EU are project to continue to increase over the projection period, and result in a decline in dairy cow numbers of over 14 percent across the EU over the period 2006 to 2016.

In 2007 EU dairy product markets have benefited from strong international dairy prices. The European Commission has used this period of strong prices to further reduce support to the dairy sector and at the time of writing (October 2007) dairy export refunds are at zero for butter, cheese, SMP and WMP. Intervention stock levels have also been depleted, and in the presence of a milk quota, the scope for the European Commission to engage in further market management is fairly limited. Hence, over the short term, movements in EU dairy product prices will tend to follow international market trends.

EU SMP prices are at world levels and hence the impact of increased international prices has been felt most in the case of SMP. Up until very recently EU butter prices remained above international price levels, but a recent shortage in butter on the EU market, combined with speculative holding of butter in private storage have driven the European FOB butter price to record levels and up until relatively recently rising international prices have had little impact on the EU internal butter price.

Cheese prices on the EU market were slow to increase largely due to the power of retailers, who were reluctant to absorb price increases.

Over the medium term, the Baseline projection is for higher feed prices to slow the growth in international milk production and raise the equilibrium level of international dairy product prices relative to the previous FAPRI-Ireland Baseline produced in 2006. Consequently, by 2016 the EU average milk price is up 9 percent on the 2006 level.

Under the Baseline, EU milk production is increasingly channelled towards cheese production in line with increased EU cheese consumption. Growth in EU cheese consumption has remained quite robust in spite of the fact that per capita consumption levels are already very high in many Member States. With an increase of 9 percent over the period, growth in cheese production remains the driver of the EU Dairy market, with consumption running in tandem with the growth in production.

While butter prices are projected to weaken, butter production is set to be sustained by the relatively high returns from skimmed milk products. Overall, SMP production and consumption decline over the medium term but much of this is attributable to a reduction in the use of SMP for feed purposes, due to the reduced calf population and the higher price of SMP. EU exports of butter are projected to decrease considerably relative to the levels recorded in the period 2003-2005. Exports of cheese, SMP and WMP also decrease.

Baseline EU dairy product prices provide for quite a good medium term outlook in terms of EU milk prices. While EU milk prices are projected to be down considerably on the 2007 price level, milk prices are still projected to be 3 cents per kg higher than projected in the 2006 Baseline analysis.

Ireland Dairy Baseline

Relative to our 2006 Baseline projections there is a slight reduction in the projected growth path of milk yields based on the relatively higher feed prices that are projected to prevail in this Baseline. Milk yields are set to increase at a rate of just over 1% per annum with a corresponding decline in dairy cow numbers.

The increase in producer milk price in 2007 has been more pronounced in Ireland than in the EU in general as Ireland's commodity focused product mix allowed the sector to particularly benefit from high SMP prices (and latterly) high butter prices. In addition dairy product prices rose sharply in mid 2007 to coincide with our peak season of milk production. Irish milk prices in July 2007 were up 20 percent on the level in July 2006, among the highest rate of increase recorded in the EU over this period

Over the projection period dairy product prices are set to drop back from the current spike. The Irish Dairy Board announced a € 200 per tonne cut in butter prices in late September 2007 which suggests that prices may already have topped out. As in the case of EU milk prices, over the medium term the Baseline price level remains above that projected in our 2006 Baseline by a margin of about 3 cent, providing a price of over 26 cent per kg (3.7 % ex. vat) by the end of the projection period. Over the projection period this would represent an increase of 8 % on the 2006 level.

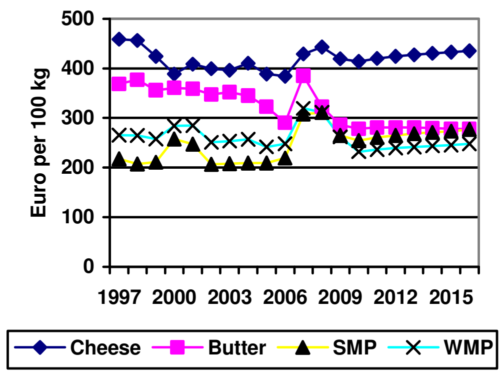
In comparison with recent years, the Baseline commodity price projections are more favourable for butter/SMP production than they are for the production of cheese. Consequently, the Baseline product mix changes relatively little over the projection period (although it should be noted that the 2006 cheese production level was the highest ever achieved).

The strong projected increase in the Irish population is set to support domestic dairy consumption. Drinking milk consumption in Ireland is set to increase in line with this population growth and, unless there are further increases in milk imports from Northern Ireland, this may lead to a reduction in the volume of milk available for manufacturing use in Ireland, particularly as increased fat content is likely to require a butterfat adjusted reduction in deliveries of about 3 percent. Our level of per capita cheese consumption remains low, relative to elsewhere in the EU, but growth in per capita consumption, combined with increased population is projected to continue to be strong over the projection period. Population growth will help boost total domestic butter consumption, even though per capita use is static. For the various dairy commodities, trends in exports generally follow those for production.

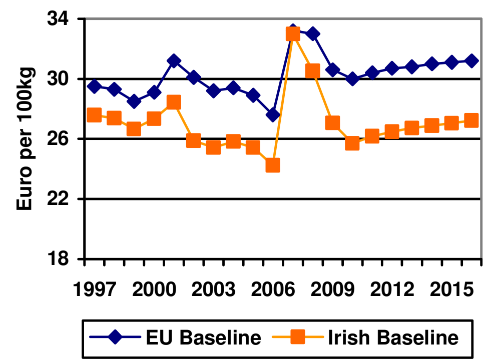
It should be noted that the strong international dairy markets which exist at present may increase internal EU pressure for an early reform of the EU milk quota regime, which on paper is scheduled to remain until 2014/2015. Were the EU milk quota to be expanded then it would impact on the Baseline dairy outlook presented here.

Figure 5-7: EU and Irish Dairy Product and Milk Prices

EU Dairy Product Prices



EU and Irish Milk Price



FAPRI-Ireland Model (2007)

5.6 Intermediate Consumption & Operating Surplus (Baseline)

Under the Baseline, with declining levels of agricultural activity, the utilisation of input items would be expected to contract. However, despite some significant increases in the prices of energy and fertilizers, overall baseline expenditure on agricultural inputs in Ireland is projected to decreases by approximately 4 percent. Between 2006 and 2016 the projected decline in volumes of inputs used in Irish agriculture is sufficient to offset the impact of increased input prices.

Feed Use and Feed Prices

Cereal prices have increased considerably due to the surge in demand for biofuels, poor international harvests and low stock levels and this has had a knock on impact on feed prices. Feed prices are projected to remain high in the short term, even allowing for an increase in the available EU cereal area under a zero set-aside rate. In response to higher feed prices feed use declines, with dairy feed per head in 2016 projected to be down over 4 percent relative to the high level recorded in 2006. Given the projected decline in total dairy cow numbers of over 13 percent, total dairy feed use in Ireland is expected to fall by about 16 percent by 2016 relative to the quite high 2006 level.

Beef feed consumption is projected to fall on both a per head basis and also in aggregate terms. Higher feed prices relative to cattle prices reduce the incentive to feed concentrates to beef cattle. This is reflected in the lower slaughter weighs that are projected under the Baseline. By 2016 beef feed per head is projected to have declined by over 19 percent when compared with 2006. This apparently large percentage decline is due in part to the unusually high levels of feed per head in 2006. When combined with lower cattle numbers in 2016, aggregate volumes of beef feed are projected to decline under the Baseline by more than 27 percent.

With feed prices higher due to increased cereals and oilseed prices expenditure on purchased feeds is projected to decline by over 15 percent under the Baseline.

Fertiliser Application

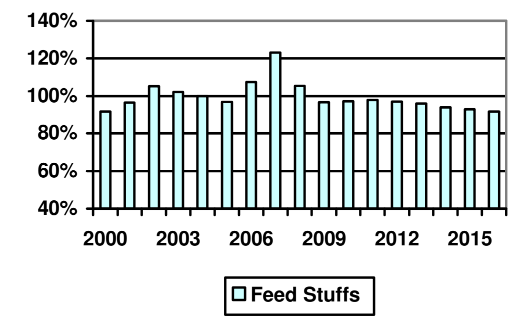
Fertiliser prices are linked closely to natural gas prices, which in turn tend to track petroleum prices. It is projected that over the period fertiliser prices will increase by over 19 percent relative to the 2006 level. Total fertiliser application is expected to decline by about 7 percent over the period 2006 to 2016. This is due to a combination of factors, including the high fertiliser prices, more extensive livestock production and the end of sugar beet production. Nitrogen application per hectare decreases on both grassland and cropland. This decrease in total fertiliser application would be more substantial was it not for the increase in cereal area resulting from relatively higher cereal prices and re-planting of set-aside land due to the zero rate of set-aside.

Energy Expenditure

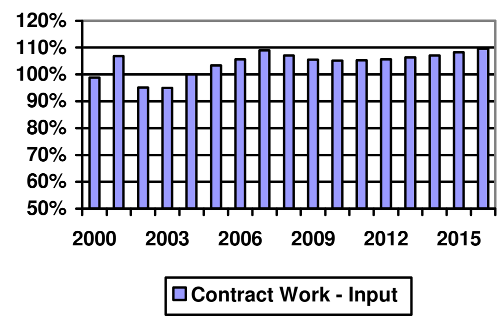
Energy prices have increased substantially since 2003 and this has been reflected in a large increase in the agriculture sector's energy expenditure since that time. In the short term energy prices are projected to remain at their currently high levels. Later in the projection period energy prices and agriculture's energy expenditure increases even further. By 2016, under the Baseline, the Irish agriculture sector's energy expenditure is projected to have increased by over 13 percent relative to the 2006 level.

Figure 5-8: Selected Irish Input Items and Total Intermediate Consumption (2004=100)

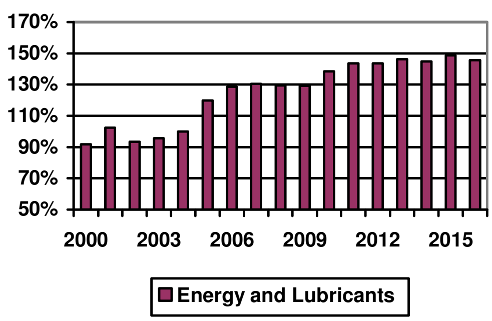
Feeding Stuffs Expenditure



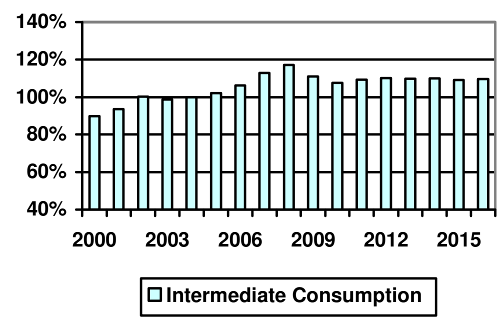
Contract Work – Input Expenditure



Energy and Lubricants expenditure



Intermediate Consumption expenditure



FAPRI-Ireland Model (2007)

Agricultural Output, Input Expenditure and Agricultural Income

Output Value

In broad terms agricultural output prices move upwards in nominal terms over the Baseline projection period. However, there is, in general, a contraction in output volumes due to the ongoing impact of decoupling and the simultaneous increase in the costs of production faced by Irish farmers. The cereals and dairy sectors are exceptions, where the volume of output increases over the Baseline projection period.

Overall the value of Irish agricultural output (at producer prices) over the Baseline projection period remains largely unchanged, with the 2016 level almost equal to the 2006 level. The projected increase in the value of output from the dairy and cereal sectors under the Baseline is sufficient to offset the decline in the value of output from the Irish cattle, sheep and pig sectors.

The total value of the livestock sector is set to decrease between 2006 and 2016 by approximately 3.5 percent. Cattle output values are projected to increase between 2006 and 2016 by about 3.3 percent. A decrease in the volume of beef production of 14 percent is projected to be partially offset by the projected 4 percent increase in cattle prices.

The value of the sheep sector decreases by almost 11 percent by 2016 relative to 2006 due to lower volumes of production. By 2016 the pig sector is expected to decline in value by almost 13 percent relative to 2006, reflecting a decrease in output volume that is driven by higher input costs and the increased costs of compliance with environmental regulation.

The value of the dairy sector is projected to increase by over 7 percent by 2016 relative to 2006. The decrease in the milk support price in Agenda 2000 and MTR agreements have no impact on the milk price. High Irish milk prices are strongly influenced by the sudden shortfall in international dairy product supplies and over the medium term milk prices remain at elevated levels.

Total output value for the crops sector is expected to increase significantly under the Baseline due to increased yields and projected increases in area harvested and increased cereals prices. Under the Baseline the value of cereals sector output is projected to increase by over 29 percent between 2006 and 2016. This increase in the value of cereals production largely offsets the negative impact of the elimination of sugar beet production and the projected reduction in forage output value. By 2016 overall crops output (including fruit and vegetables) is projected to decrease by 3 percent.

Inputs

The intermediate consumption of the Irish Agricultural Sector under the Baseline is expected to decline by almost 5 percent between 2006 and 2016. The usage of most input items is set to fall over the projection period due to falling livestock numbers and a reduction in the intensity of production. In the case of some input items this also leads to an overall reduction in expenditure. However, in other instances the reduction in usage volumes is offset in expenditure terms by higher prices.

The expenditure on purchased animal feed stuffs is projected to fall by 15 percent by 2016 compared with the relatively high levels of expenditure on feed observed in 2006 when volumes were quite high. The decline in animal feed expenditure is due to lower feed use per head and declining animal numbers. Feed prices remain at an elevated level and do not contribute to the reduction in feed expenditure.

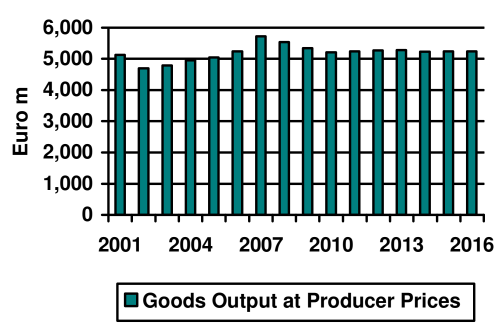
By 2016 energy expenditure is projected to increase by 13 percent relative to the 2006 figure, which itself was a historic high. Declining fertiliser usage is offset by rising prices so that fertiliser expenditure increases by 2 percent over the period 2006 to 2016. By 2016, expenditure on forage plants decreases by 15 percent relative to the high 2006 level.

Subsidies & Operating Surplus

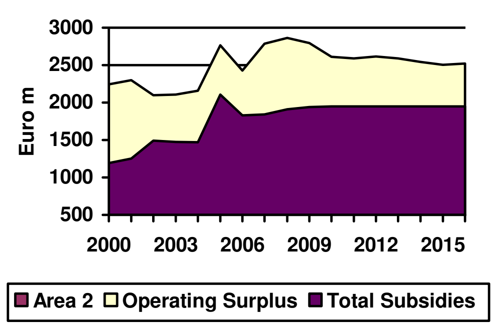
Most subsidy payments to Irish agriculture are projected to remain relatively unchanged over the Baseline projection period. However, payments under the Rural Environmental Protection Scheme (REPS) are an important exception. Total subsidy receipts by Irish agriculture increase by 6 percent between 2006 and 2016.

Figure 5-9: Irish Good Output at Producer Prices and Operating Surplus

Goods Output at Producer Prices



Operating Surplus and Total Net Subsidies



FAPRI-Ireland Model (2007)

Overall, it is projected that there will be an increase in the nominal value of agricultural sector income (operating surplus) of approximately 4 percent in 2016 relative to the corresponding 2006 levels.

References

Agra Facts (2007). “Special Edition – Details of Draft Helath Check Communication.” No 77-07, Brussels.

Binfield J., Donnellan T., Hanrahan K. and Westhoff P. (2007). *FAPRI-Ireland CAP Health Check Analysis: Impact of EU Milk Quota Expansion* FAPRI-Ireland Partnership Teagasc, Carlow, Ireland.

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

FAS (2007). *New Zealand Livestock and Products Annual 2007* GAIN Report NZ2026 United States Department of Agriculture.

FAPRI (2007) *FAPRI 2007 U.S. and World Agricultural Outlook*. Food and Agricultural Policy Research Institute, University of Missouri and Iowa State University.

Gunasekera, D., Ford M. Tulloh, C. (2007). “Climate Change: Issues and Challenges for Australian Agriculture and Forestry.” *ABARE Australian Commodities* September Quarter: 493-495.

Hennessy. T. (2007) *FAPRI-Ireland CAP Health Check: Farm Level Implications of Milk Quota Expansion.* FAPRI-Ireland Partnership Teagasc, Carlow, Ireland.

Parry, M.L, Rosenzweig, C. and Livermore, M. (2005). “Climate change, global food supply and risk of hunger.” *Philosophical Transactions of the Royal Society B, **360***: 2125 – 2136.

Shrestha, S., T. Hennessy and S. Hynes (2007). “The Effect of Decoupling on Farming in Ireland: A Regional Analysis.” Forthcoming in the *Irish Journal of Agricultural and Food Research*.

van Dijk, A., Evans, R., Hairsine, P., Khan, S., Nathan, R., Paydar, Z., Viney, N. and Zhang, L. (2006). *Risks to the Shared Water Resources of the Murray-Darling Basin*. CSIRO and Murray-Darling Basin Commission, Canberra, ACT, Australia.

Annex I Baseline Output Input and Income Table

Table A-I-1: Output Input and Income in Agriculture (Baseline)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 v 2006
	€uro millions													
Livestock (incl. stock changes)	**2,215**	**2,274**	**2,408**	**2,438**	**2,409**	**2,442**	**2,390**	**2,395**	**2,411**	**2,397**	**2,341**	**2,334**	**2,324**	**-3.5%**
of which: *cattle*	1,346	1,413	1,501	1,540	1,520	1,549	1,515	1,512	1,520	1,507	1,476	1,464	1,451	-3.3%
pigs	297	292	321	315	310	310	294	293	294	292	281	280	279	-12.9%
sheep and lambs	200	192	191	181	172	174	172	175	176	175	172	171	169	-11.2%
Livestock Products	**1,418**	**1,379**	**1,372**	**1,846**	**1,701**	**1,499**	**1,416**	**1,437**	**1,450**	**1,458**	**1,463**	**1,466**	**1,472**	**7.3%**
of which: *milk*	1,418	1,337	1,329	1,801	1,657	1,454	1,370	1,391	1,403	1,412	1,417	1,420	1,426	7.3%
Crops (incl. stock changes)	**1,323**	**1,391**	**1,465**	**1,443**	**1,421**	**1,397**	**1,403**	**1,402**	**1,404**	**1,409**	**1,411**	**1,416**	**1,422**	**-2.9%**
Cereals	181	126	160	228	213	196	206	207	208	210	209	208	207	29.7%
Root Crops	167	146	107	81	88	91	92	93	94	95	96	98	99	-7.9%
Forage Plants-Output	683	785	860	793	776	763	754	748	744	741	739	739	739	-14.0%
Goods output producer prices	**4,956**	**5,045**	**5,245**	**5,727**	**5,532**	**5,339**	**5,209**	**5,233**	**5,264**	**5,264**	**5,215**	**5,216**	**5,217**	**-0.5%**
Contract Work	261	270	276	285	280	276	275	275	276	278	280	282	286	3.7%
Subsidies less taxes on products	873	415	-17	-21	-21	-21	-21	-21	-21	-21	-21	-21	-20	15.0%
Ag. Output basic prices	**6,090**	**5,729**	**5,503**	**5,991**	**5,790**	**5,593**	**5,463**	**5,487**	**5,519**	**5,520**	**5,473**	**5,477**	**5,483**	**-0.4%**
Intermediate consumption	**3,443**	**3,583**	**3,812**	**3,952**	**3,745**	**3,631**	**3,683**	**3,714**	**3,693**	**3,695**	**3,660**	**3,670**	**3,632**	**-4.7%**
Feeding stuffs	904	875	970	1,113	951	872	877	882	874	862	843	833	822	-15.3%
Fertilisers	358	363	380	389	383	376	379	383	385	388	388	392	389	2.4%
Energy & Lubricants	237	284	305	309	307	306	328	340	340	346	343	351	344	12.8%
Forage Plants-Input	673	772	846	775	758	744	735	729	724	721	719	719	719	-15.0%
Contract Work-Input	261	270	276	285	280	276	275	275	276	278	280	282	286	3.7%
Gross value added basic prices	**2,647**	**2,147**	**1,691**	**2,038**	**2,045**	**1,962**	**1,779**	**1,773**	**1,826**	**1,825**	**1,814**	**1,807**	**1,851**	**9.4%**
Fixed capital consumption	**654**	**667**	**686**	**672**	**663**	**658**	**656**	**662**	**673**	**688**	**705**	**725**	**737**	**7.5%**
Net value added basic prices	**1,993**	**1,480**	**1,005**	**1,366**	**1,382**	**1,304**	**1,124**	**1,112**	**1,153**	**1,137**	**1,108**	**1,082**	**1,113**	**10.8%**
Subsidies less taxes on production	595	1,692	1,847	1,862	1,932	1,960	1,970	1,970	1,970	1,970	1,970	1,970	1,970	6.7%
Factor income	**2,588**	**3,172**	**2,852**	**3,228**	**3,314**	**3,264**	**3,094**	**3,082**	**3,123**	**3,108**	**3,079**	**3,052**	**3,084**	8.1%
Compensation of employees	429	409	422	443	459	472	483	494	506	518	529	541	556	31.6%
Operating surplus	**2,159**	**2,763**	**2,429**	**2,785**	**2,855**	**2,792**	**2,611**	**2,587**	**2,617**	**2,590**	**2,549**	**2,511**	**2,528**	**4.1%**

Source: FAPRI-Ireland GOLD Model (2007).
Historical data:, CSO Output, Input and Income in Agriculture.

Annex II Baseline Commodity Supply and Use Projections

Table A-II-1 Baseline EU 25 Cereal Supply and Use Projections

EU-25 wheat supply and utilisation

	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	**2006 v 2016**
Soft wheat														%
							thousand hectares							
Area harvested	23,317	22,630	21,829	22,140	24,077	23,723	23,593	23,399	23,715	23,727	23,776	23,795	23,887	9.4%
Yield	5.9	5.5	5.4	5.3	5.5	5.6	5.6	5.7	5.7	5.7	5.7	5.8	5.8	8.4%
							million tonnes							
Production	137	124	117	117	133	132	132	132	135	135	137	137	139	18.7%
Beginning stocks	14	29	30	25	23	24	26	26	26	27	27	27	27	-8.2%
Imports	7	7	7	5	7	6	6	6	7	6	7	7	7	-2.3%
Total supply	159	160	154	148	163	162	164	165	168	169	170	171	173	12.5%
Domestic use	116	117	116	115	122	125	126	127	128	129	130	131	132	14.4%
Feed	50	52	52	51	54	56	55	55	56	56	56	57	57	10.2%
Other	65	65	64	64	68	70	71	71	72	73	74	74	75	17.9%
Exports	14	14	13	10	16	11	11	11	13	13	13	13	13	1.9%
Ending stocks	29	30	25	23	24	26	26	26	27	27	27	27	28	9.2%
Loss, statistical disc.	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net exports	6	7	6	5	9	6	6	6	6	6	6	6	6	6.7%
							percent							
Set-aside rate	5	10	10	10	0	0	0	0	0	0	0	0	0	-100.0%
							euro per tonne, Jan.-Dec.							
Intervention price	101	100	100	101	101	101	101	101	101	101	101	101	101	1.2%
Market price	109	106	141	227	149	133	140	144	140	142	140	139	137	-2.7%

EU-25 barley and maize supply and utilisation

	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	**2006 v 2016**
Barley														%
							thousand hectares							
Area harvested	12,996	13,076	13,267	13,067	13,980	14,074	13,733	13,426	13,247	13,299	13,279	13,226	13,155	-0.8%
							tonnes per hectare							
Yield	4.7	4.0	4.0	4.3	4.3	4.3	4.4	4.5	4.5	4.5	4.6	4.6	4.7	15.5%
							million tonnes							
Production	61	53	54	57	60	61	61	60	60	60	61	61	61	14.5%
Beginning stocks	12	16	15	12	11	10	11	12	12	12	12	12	12	-14.9%
Imports	0	0	0	0	0	1	0	0	0	0	0	0	0	-17.9%
Total supply	74	69	69	69	71	72	72	72	72	72	73	74	74	8.0%
Domestic use	52	48	51	54	53	55	55	55	55	55	55	56	56	9.6%
Feed	40	36	39	41	40	42	42	42	42	42	42	42	42	8.1%
Other	12	12	12	12	12	13	13	13	13	13	14	14	14	14.4%
Exports	7	6	6	5	8	6	5	5	5	5	5	5	6	-0.8%
Ending stocks	16	15	12	11	10	11	12	12	12	12	12	12	13	5.7%
Net exports	6	6	5	4	7	5	5	5	5	5	5	5	5	0.4%
							percent							
Set-aside rate	10	5	10	10	10	0	0	0	0	0	0	0	0	-100.0%
							euro per tonne, Jan.-Dec.							
Intervention price	101	101	100	100	101	101	101	101	101	101	101	101	101	1.2%
Market price	99	101	126	192	140	117	121	124	124	124	122	120	119	-5.1%
Maize for grain														
							thousand hectares							
Area harvested	6,488	5,978	5,677	5,585	5,833	5,936	5,999	6,049	6,017	6,010	6,025	6,046	6,055	6.7%
Yield	8.5	8.5	7.5	7.4	8.2	8.2	8.3	8.4	8.5	8.5	8.6	8.7	8.7	15.6%
							million tonnes							
Production	55	51	43	41	48	49	50	51	51	51	52	52	53	23.3%
Beginning stocks	13	17	18	15	9	10	12	13	14	14	15	15	16	-15.0%
Imports	2	3	4	4	4	4	4	4	4	4	4	4	4	0.8%
Total supply	70	70	65	60	61	64	66	68	69	70	71	72	73	11.1%
Domestic use	52	49	49	50	49	50	51	52	52	53	53	53	54	10.2%
Feed	42	40	39	41	39	39	40	41	41	41	42	42	42	8.2%
Other	9	9	10	9	10	11	11	11	11	11	11	11	11	18.1%
Exports	2	2	2	1	2	2	2	2	3	3	3	3	3	54.2%
Ending stocks	17	18	15	9	10	12	13	14	14	15	15	16	16	9.1%
Net exports	0	-1	-2	-3	-3	-2	-2	-2	-2	-2	-2	-1	-1	-40.9%
							percent							
Set-aside rate	5	10	10	10	0	0	0	0	0	0	0	0	0	-100.0%
							euro per tonne, Jan.-Dec.							
Intervention price	101	100	100	101	101	101	101	101	101	101	101	101	101	1.2%
Market price	111	116	141	214	161	146	148	148	147	148	145	143	141	0.2%

Table A-II-2 Baseline Irish Cereal Supply and Use Projections

Irish wheat supply and utilisation

	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	2006 v 2016
Wheat														%
							thousand hectares							
Wheat area harvested	102.7	94.7	83.0	77.8	85.5	87.4	90.0	92.1	91.9	91.2	90.7	90.1	89.2	7.4%
							tonnes per hectare							
Wheat yield	9.7	8.4	9.2	9.2	9.8	10.2	10.4	10.0	9.9	9.9	10.0	9.9	9.9	7.4%
							thousand tonnes							
Production	1,000.0	791.0	767.7	718.0	842.2	893.8	932.1	919.2	910.1	906.7	903.0	896.2	885.5	15.3%
Beginning stocks	39.5	97.2	41.2	63.4	52.3	56.3	62.0	67.4	68.6	68.0	66.9	65.5	63.8	54.8%
Imports	850.0	907.0	701.1	641.1	589.7	588.0	557.5	573.9	587.7	597.9	609.8	627.5	603.7	-13.9%
Total supply	1,889.5	1,795.2	1,510.0	1,422.5	1,484.2	1,538.0	1,551.5	1,560.5	1,566.4	1,572.6	1,579.7	1,589.2	1,553.0	2.8%
Domestic use	1,470.3	1,500.0	1,188.3	1,111.8	1,169.5	1,217.7	1,225.7	1,233.5	1,240.1	1,247.3	1,255.8	1,267.1	1,233.1	3.8%
Feed	1,168.0	1,171.0	859.7	754.9	771.5	788.6	777.1	769.6	760.2	750.9	741.3	735.2	728.0	-15.3%
Other	302.3	329.0	328.6	356.9	398.0	429.1	448.6	464.0	479.9	496.4	514.5	531.9	505.0	53.7%
Exports	322.0	254.0	258.4	258.4	258.4	258.4	258.4	258.4	258.4	258.4	258.4	258.4	258.4	0.0%
Ending stocks	97.2	41.2	63.4	52.3	56.3	62.0	67.4	68.6	68.0	66.9	65.5	63.8	61.6	-2.8%
Loss, statistical disc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
							Jan.-Dec. average							
Prices							euro/tonne							
Feed wheat	107.8	104.8	119.8	167.9	134.0	118.9	121.5	123.5	123.7	123.6	122.3	121.4	120.8	0.8%

Irish barley supply and utilisation

	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	2006 v 2016
														%
Barley														
							thousand hectares							
Barley area harvested	184	165	164	160	178	176	172	172	174	175	177	178	180	9.8%
							tonnes per hectare							
Barley yield	7.2	6.2	6.7	6.9	7.3	7.4	7.5	7.3	7.2	7.3	7.3	7.3	7.3	8.7%
							thousand tonnes							
Production	1,327	1,025	1,096	1,101	1,293	1,312	1,293	1,256	1,258	1,274	1,287	1,298	1,308	19.3%
Beginning stocks	118	162	97	111	120	135	141	141	138	137	138	138	139	43.6%
Imports	44	100	206	124	63	75	83	101	101	95	90	88	64	-68.9%
Total supply	1,489	1,287	1,399	1,336	1,476	1,522	1,517	1,498	1,498	1,506	1,515	1,525	1,511	8.0%
Domestic use	1,243	1,107	1,210	1,057	1,120	1,173	1,175	1,178	1,179	1,180	1,183	1,191	1,151	-4.9%
Feed	999	904	914	769	792	816	800	789	776	763	750	742	732	-20.0%
Other	244	203	296	288	328	357	375	388	402	417	433	449	420	41.6%
Exports	84	83	78	160	221	209	201	183	182	188	193	195	220	182.4%
Ending stocks	162	97	111	120	135	141	141	138	137	138	138	139	140	26.2%
Market prices							euro per tonne, Jan.-Dec.							
Feed barley	92.7	107.2	111.8	157.8	123.8	108.8	111.4	113.3	113.5	113.5	112.2	111.2	110.6	-1.1%
Malt barley	103.0	119.1	129.6	175.5	141.6	126.5	129.2	131.1	131.3	131.3	129.9	129.0	128.4	-1.0%

Table A-II-3 Baseline EU 25 Livestock and Meat Supply and Use Projections

EU 25 livestock supply and utilisation

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	**2006 v 2016**
														%
Cattle														
Beginning inventories	87.49	86.52	85.85	84.93	83.81	82.62	81.97	81.36	80.73	80.17	79.64	79.11	78.60	-8.4%
Dairy cows	23.96	23.39	22.97	22.35	22.17	21.78	21.63	21.33	21.03	20.77	20.51	20.26	20.03	-12.8%
Suckler cows	12.00	12.03	11.98	11.98	11.32	11.32	11.50	11.52	11.55	11.62	11.68	11.71	11.76	-1.9%
Cattle slaughter	29.07	28.10	27.90	27.94	27.49	26.85	26.81	26.60	26.33	26.14	25.98	25.79	25.62	-8.2%
Slaughter weight	278.64	279.47	285.19	282.38	286.64	286.49	285.94	286.08	286.66	286.81	286.90	287.24	287.51	0.8%
Pigs														
Beginning inventories	152.90	151.23	151.69	154.32	149.90	146.39	153.94	156.49	153.97	153.43	154.42	154.36	154.09	1.6%
Sows	15.20	14.91	14.90	14.97	13.52	14.26	14.96	14.64	14.38	14.48	14.52	14.39	14.40	-3.3%
Pig slaughter	241.19	238.86	242.41	243.86	234.75	236.91	247.28	247.85	244.61	244.97	246.13	245.78	245.98	1.5%
Slaughter weight	88.09	89.05	88.40	87.66	89.36	89.83	89.13	89.25	89.74	89.90	89.91	90.19	90.41	2.3%
Sheep														
Beginning inventories	89.57	89.24	87.17	86.37	82.06	81.18	81.95	81.90	81.52	81.28	81.00	80.62	80.42	-7.7%
Ewes	66.62	65.59	63.27	62.36	58.37	58.72	59.68	59.57	59.33	59.27	59.10	58.83	58.74	-7.2%
Sheep slaughter	64.69	64.62	64.35	65.97	59.34	58.34	60.12	60.33	59.93	59.91	59.83	59.38	59.24	-7.9%
Slaughter weight	16.45	16.47	16.27	16.07	16.14	16.27	16.35	16.40	16.46	16.51	16.55	16.58	16.62	2.2%

EU 25 meat supply and utilisation

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	**2006 v 2016**
														%
Beef and veal														
Production	8,099	7,852	7,956	7,891	7,879	7,693	7,666	7,611	7,549	7,499	7,453	7,409	7,366	-7.4%
Non-EU imports	584	599	540	561	596	661	631	651	693	718	701	730	750	38.8%
Domestic use	8,339	8,301	8,379	8,363	8,387	8,274	8,204	8,176	8,168	8,145	8,076	8,065	8,044	-4.0%
Non-EU exports	400	150	117	87	85	78	88	82	71	68	73	69	67	-43.0%
Stock change	-55	0	0	3	3	2	5	4	3	4	5	4	4	
Intervention/SPS stocks	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pig meat														
Production	21,247	21,270	21,429	21,376	20,978	21,282	22,039	22,119	21,951	22,021	22,130	22,168	22,239	3.8%
Non-EU imports	20	21	22	22	22	22	22	22	22	22	22	22	22	0.0%
Domestic use	19,823	19,904	19,980	20,070	19,741	20,003	20,666	20,748	20,599	20,676	20,783	20,832	20,895	4.6%
Non-EU exports	1,439	1,386	1,470	1,337	1,277	1,288	1,356	1,382	1,379	1,363	1,354	1,352	1,361	-7.5%
Stock change	5	0	0	-9	-17	13	40	11	-5	4	15	5	6	
Poultry														
Production	10,273	9,943	10,094	10,012	10,078	10,308	10,299	10,367	10,517	10,625	10,367	10,444	10,575	4.8%
Non-EU imports	519	642	542	575	578	579	580	582	583	585	586	588	590	8.9%
Domestic use	9,908	10,092	9,895	9,884	9,887	10,088	10,061	10,128	10,269	10,365	10,699	10,738	10,827	9.4%
Non-EU exports	883	492	740	739	757	780	806	816	828	839	228	289	333	-55.0%
Stock change	1	0	0	-36	11	18	12	4	3	6	25	5	5	
Sheep meat														
Production	1,064	1,064	1,047	1,060	958	949	983	990	987	989	990	985	985	-5.9%
Non-EU imports	264	280	273	275	281	284	282	284	287	290	291	294	296	8.5%
Domestic use	1,320	1,335	1,315	1,326	1,234	1,228	1,259	1,269	1,269	1,273	1,276	1,273	1,276	-3.0%
Non-EU exports	8	9	5	5	5	5	5	5	5	5	5	5	5	0.0%
Stock change	0	0	0	0	0	0	1	0	0	0	0	0	0	
Consumption						kilograms per capita, cwe								
Beef and veal	16.4	16.3	16.3	16.2	16.2	16.0	15.8	15.7	15.6	15.6	15.4	15.4	15.3	-6.2%
Pig meat	39.1	39.0	38.9	39.0	38.2	38.6	39.8	39.8	39.5	39.5	39.7	39.7	39.8	2.2%
Poultry meat	19.5	19.8	19.3	19.2	19.1	19.5	19.4	19.4	19.7	19.8	20.4	20.5	20.6	7.0%
Sheep meat	2.6	2.6	2.6	2.6	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	-5.1%
Total	77.6	77.6	77.1	77.0	75.9	76.4	77.3	77.4	77.2	77.4	78.0	78.0	78.2	1.4%
Prices						euro per 100 kilograms								
Cattle reference	270	293	316	312	317	325	319	323	329	330	327	329	330	4.2%
Pig meat reference	138	139	145	153	166	161	142	143	151	150	145	146	146	0.8%
Chicken	148	149	151	181	173	166	163	165	167	166	151	154	153	1.6%
Sheep meat reference	409	389	417	418	437	440	424	424	428	428	423	426	427	2.2%
Beef intervention	156	156	156	156	156	156	156	156	156	156	156	156	156	0.0%

Table A-II-4 Baseline Irish Livestock Supply and Use Projections

Irish livestock supply and utilisation

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	**2006 v 2016**
														%
Cattle							million head							
Beginning inventories	6.22	6.21	6.19	6.00	5.92	5.83	5.76	5.70	5.64	5.58	5.52	5.46	5.40	-12.9%
Dairy cows	1.14	1.12	1.10	1.09	1.05	1.04	1.03	1.02	1.00	0.99	0.97	0.96	0.95	-13.4%
Suckler cows	1.14	1.15	1.15	1.13	1.12	1.12	1.11	1.10	1.09	1.07	1.06	1.05	1.04	-9.8%
Other cattle	3.94	3.94	3.94	3.79	3.75	3.67	3.63	3.59	3.55	3.52	3.48	3.45	3.40	-13.6%
Calf crop	2.13	2.12	2.10	2.07	2.03	2.01	2.00	1.98	1.95	1.93	1.90	1.88	1.86	-11.6%
Cattle imports	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-6.6%
Total supply	8.36	8.34	8.30	8.07	7.96	7.84	7.76	7.68	7.59	7.51	7.42	7.34	7.26	-12.5%
Cattle slaughter	1.82	1.69	1.78	1.76	1.73	1.67	1.66	1.64	1.62	1.60	1.58	1.57	1.54	-13.2%
Cow slaughter	0.34	0.34	0.36	0.35	0.34	0.32	0.33	0.32	0.31	0.30	0.30	0.29	0.28	-21.5%
Calf slaughter	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.0%
Other slaughter	1.47	1.34	1.42	1.40	1.38	1.35	1.33	1.31	1.31	1.29	1.28	1.27	1.26	-11.2%
Cattle exports	0.13	0.18	0.25	0.22	0.22	0.23	0.23	0.23	0.22	0.22	0.22	0.21	0.21	-16.0%
Destruction, death loss	0.20	0.28	0.27	0.18	0.18	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	-40.5%
Ending inventories	6.21	6.19	6.00	5.92	5.83	5.76	5.70	5.64	5.58	5.52	5.46	5.40	5.34	-11.0%
							kilograms per head							
Slaughter weight	310.4	324.0	322.7	323.8	320.7	321.8	322.7	321.3	321.0	321.1	320.7	320.2	319.7	-0.9%
							1000 head							
Live cattle exports	130	185	251	215	224	227	228	226	223	220	216	213	210	-16.0%
Calves	37	60	112	88	82	79	77	74	70	67	64	60	58	-48.2%
Non-calves to the EU	82	115	138	126	141	147	150	151	152	152	152	152	152	10.1%
Non-calves to the ROW	12	10	1	1	1	1	1	1	1	1	1	1	1	-24.1%
Pigs							million head							
Beginning inventories	1.73	1.76	1.68	1.62	1.51	1.56	1.69	1.67	1.54	1.48	1.44	1.40	1.37	-18.1%
Sows	0.176	0.179	0.174	0.167	0.159	0.163	0.168	0.166	0.162	0.160	0.160	0.158	0.157	-9.7%
Other pigs	1.56	1.58	1.50	1.45	1.35	1.40	1.52	1.50	1.38	1.32	1.28	1.24	1.22	-19.1%
Pig crop	3.23	3.04	3.06	2.89	2.75	2.89	3.01	2.93	2.81	2.79	2.77	2.74	2.73	-10.8%
Pig imports	0.02	0.05	0.05	0.02	-0.03	-0.01	0.01	-0.01	-0.02	-0.02	-0.01	-0.01	-0.01	-122.9%
Total supply	4.98	4.85	4.79	4.53	4.23	4.43	4.70	4.59	4.33	4.25	4.20	4.12	4.09	-14.5%
Pig slaughter	2.73	2.68	2.69	2.62	2.28	2.33	2.59	2.62	2.45	2.41	2.42	2.37	2.35	-12.5%
Pig exports	0.46	0.50	0.45	0.40	0.40	0.42	0.44	0.43	0.40	0.40	0.39	0.38	0.38	-15.7%
Destruction, death loss	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Ending inventories	1.76	1.68	1.62	1.51	1.56	1.69	1.67	1.54	1.48	1.44	1.40	1.37	1.36	-16.0%
							kilograms per head							
Slaughter weight	75.3	76.7	77.8	77.1	77.1	77.2	77.0	76.7	76.7	76.7	76.6	76.7	76.8	-1.3%
Sheep							million head							
Beginning inventories	4.85	4.56	4.26	3.83	3.47	3.37	3.41	3.42	3.40	3.36	3.31	3.24	3.19	-25.0%
Ewes	3.68	3.47	3.21	3.04	2.70	2.67	2.75	2.80	2.79	2.78	2.75	2.71	2.69	-16.3%
Other sheep	1.17	1.09	1.05	0.79	0.77	0.70	0.66	0.63	0.60	0.58	0.56	0.53	0.51	-51.6%
Lamb crop	3.74	3.53	3.26	3.15	2.80	2.78	2.86	2.90	2.90	2.89	2.86	2.82	2.79	-14.4%
Sheep imports	0.32	0.28	0.25	0.26	0.24	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	6.4%
Total supply	8.91	8.36	7.77	7.23	6.52	6.42	6.54	6.60	6.56	6.51	6.43	6.33	6.25	-19.5%
Sheep slaughter	3.57	3.61	3.49	3.38	2.80	2.68	2.78	2.87	2.87	2.87	2.86	2.81	2.80	-19.7%
Sheep exports	0.07	0.11	0.10	0.09	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	-30.1%
Destruction, death loss	0.72	0.39	0.35	0.30	0.27	0.26	0.26	0.27	0.26	0.26	0.26	0.25	0.25	-30.3%
Ending inventories	4.56	4.26	3.83	3.47	3.37	3.41	3.42	3.40	3.36	3.31	3.24	3.19	3.13	-18.2%
							kilograms per head							
Slaughter weight	20.1	20.3	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	0.0%

Table A-II-5 Baseline Irish Meat Supply and Use Projections

Irish meat supply and utilisation

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	**2006 v 2016**
														%
Beef and veal							thousand tonnes							
Production	563	546	572	569	554	539	536	526	520	514	508	502	494	-13.8%
Imports	30	32	33	37	38	39	39	39	39	39	39	40	40	20.5%
Domestic use	94	90	89	92	95	96	97	97	98	98	99	99	99	11.3%
Exports	499	488	516	514	497	481	478	468	461	455	449	442	434	-15.9%
Intervention stocks	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pig meat														
Production	206	205	209	202	175	179	200	201	188	185	185	181	180	-13.7%
Imports	59	58	53	57	50	51	59	60	54	53	54	52	51	-3.1%
Domestic use	146	150	150	160	165	167	170	173	174	175	175	175	176	17.3%
Exports	119	113	109	101	60	64	89	88	68	63	64	58	56	-48.8%
Ending stocks	15	16	19	15	15	15	15	15	15	15	15	15	15	-17.3%
Broiler meat														
Production	95	95	75	71	76	78	78	79	80	80	80	81	82	8.7%
Imports	48	44	24	27	25	24	25	26	29	32	36	39	42	76.3%
Domestic use	65	86	78	89	93	93	92	94	98	101	104	108	112	43.7%
Exports	78	52	21	9	8	10	11	11	11	12	12	12	12	-43.4%
Ending stocks	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other poultry meat														
Production	36	37	38	36	38	40	40	40	40	41	40	41	41	8.7%
Imports	5	10	12	13	13	12	12	13	15	16	18	19	21	76.3%
Domestic use	24	33	38	27	25	27	28	29	31	33	35	36	38	0.6%
Exports	17	14	12	23	26	25	24	24	24	24	24	24	24	100.4%
Ending stocks	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sheep meat														
Production	72	73	70	68	57	54	56	58	58	58	58	57	56	-19.7%
Imports	3	3	3	3	3	3	3	3	3	3	3	3	3	0.0%
Domestic use	20	18	19	20	19	19	19	20	20	20	20	20	20	5.5%
Exports	55	58	54	51	40	38	40	41	41	41	40	39	39	-27.6%
Stock change	0	0	0	0	0	0	0	0	0	0	0	0	0	
Consumption							kilograms per capita, cwe							
Beef and veal	23	22	21	22	22	22	22	22	22	21	21	21	21	-2.2%
Pig meat	36	36	36	38	38	38	38	38	38	38	38	37	37	3.0%
Broiler meat	16	21	19	21	21	21	21	21	21	22	22	23	23	26.2%
Other poultry meat	6	8	9	6	6	6	6	6	7	7	7	8	8	-11.6%
Sheep meat	5	4	5	5	5	4	4	4	4	4	4	4	4	-7.3%
Total	86	91	89	91	92	92	92	92	92	93	93	93	93	4.6%
Market prices							euro per 100 kilograms							
Cattle reference	125.3	121.6	129.7	127.5	129.4	132.8	130.2	132.0	134.6	135.1	134.0	134.7	135.0	4.1%
Pig meat	137.0	134.4	139.9	153.2	162.4	157.0	139.2	139.9	147.7	147.9	143.2	144.9	145.0	3.7%
Sheep meat representative	357.6	336.5	339.3	355.6	373.1	375.7	361.2	361.1	365.3	364.8	360.6	363.6	363.9	7.2%
							euro per pair							
Chicken	3.26	3.16	3.12	3.41	3.27	3.16	3.11	3.15	3.18	3.16	2.91	2.95	2.95	-5.5%

Table A-II-6 Baseline EU 25 Dairy Commodity Supply and Use Projections

EU 25 dairy supply and utilisation

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	**2006 v 2016**
Dairy cows	23,963	23,389	22,971	22,207	21,931	21,697	21,414	21,122	20,854	20,592	20,342	20,106	19,869	-13.5%
Production/cow	5,928	6,084	6,095	6,346	6,473	6,565	6,613	6,683	6,761	6,835	6,911	6,985	7,061	15.9%
Fluid milk														
Cow's milk Production	142.04	142.30	140.00	140.91	141.96	142.45	141.62	141.16	140.98	140.74	140.58	140.44	140.29	0.2%
Milk quota	138.01	138.04	138.30	138.78	139.26	139.50	139.50	139.50	139.50	139.50	139.50	139.50	139.50	0.9%
Other milk production	4.20	4.11	4.11	4.12	4.13	4.14	4.15	4.16	4.17	4.18	4.19	4.20	4.21	2.4%
Fluid consumption	39.85	39.95	39.68	39.67	39.61	39.92	39.92	39.72	39.54	39.37	39.20	39.02	38.84	-2.1%
Manufacturing use	99.94	99.94	98.97	98.99	100.21	100.52	99.75	99.57	99.67	99.70	99.80	99.92	100.03	1.1%
Feed use, net exports	6.46	6.52	5.46	6.38	6.27	6.14	6.10	6.02	5.94	5.86	5.78	5.70	5.62	2.9%
Cheese														
Production	8,333	8,481	8,652	8,789	8,892	9,058	9,143	9,184	9,238	9,288	9,338	9,390	9,439	9.1%
Imports	106	88	90	88	89	94	97	99	101	103	105	107	109	21.5%
Domestic use	7,967	8,091	8,231	8,409	8,427	8,664	8,786	8,830	8,883	8,938	8,997	9,055	9,110	10.7%
Exports	472	478	512	484	560	476	445	449	454	451	444	439	435	-15.1%
Ending stocks	498	498	498	482	476	488	497	500	503	505	508	512	515	3.4%
Butter														
Production	2,162	2,179	2,081	2,100	2,066	2,086	2,098	2,094	2,096	2,096	2,097	2,098	2,099	0.9%
Imports	93	74	80	80	80	80	80	80	80	80	80	80	80	0.0%
Domestic use	1,968	1,947	1,925	1,809	1,870	1,913	1,919	1,911	1,906	1,900	1,896	1,891	1,885	-2.0%
Exports	339	338	276	409	295	257	259	263	269	275	280	286	293	6.1%
Ending stocks	255	224	184	146	126	123	123	123	124	125	126	127	128	-30.3%
Skim powder														
Production	956	959	838	967	1,001	867	839	827	817	807	796	786	777	-7.2%
Imports	30	9	22	22	22	22	22	22	22	22	22	22	22	0.0%
Domestic use	829	834	760	769	723	760	766	757	750	744	738	733	727	-4.4%
Exports	297	199	140	267	332	141	100	96	92	87	81	76	73	-48.0%
Ending stocks	262	197	157	111	79	67	61	57	54	52	50	50	49	-68.7%
Whole powder														
Production	824	793	774	746	846	696	528	522	518	511	505	499	497	-35.8%
Imports	20	20	20	15	15	16	16	16	16	16	17	17	17	-16.2%
Domestic use	332	302	306	303	308	322	334	335	336	338	339	341	342	11.9%
Exports	512	511	488	467	556	384	203	200	197	189	182	175	171	-64.9%
Ending stocks	42	42	42	33	30	35	43	46	48	48	49	49	49	16.6%
Consumption														
Fluid milk	78.53	78.26	77.31	77.01	76.64	77.01	76.81	76.25	75.76	75.29	74.85	74.43	73.99	-4.3%
Cheese	15.70	15.85	16.04	16.33	16.30	16.71	16.91	16.95	17.02	17.09	17.18	17.27	17.35	8.2%
Butter	3.88	3.81	3.75	3.51	3.62	3.69	3.69	3.67	3.65	3.63	3.62	3.61	3.59	-4.2%
Prices							euro per 100 kilograms							
Milk, 3.7% fat	29.4	28.9	27.6	33.1	33.0	30.6	30.0	30.4	30.7	30.8	31.0	31.1	31.2	13.2%
Cheese market	410.3	388.2	384.4	427.9	442.8	419.3	413.9	420.1	424.5	427.7	430.3	432.6	435.0	13.2%
Butter market	344.8	322.5	290.3	382.3	322.5	285.8	278.4	280.3	280.7	280.3	279.1	277.9	277.0	-4.6%
SMP market	208.8	209.0	219.4	307.1	311.0	264.8	254.1	260.3	264.5	267.9	270.7	273.0	276.1	25.8%
WMP market	257.2	242.0	247.9	319.1	311.7	261.8	231.9	236.1	239.1	241.1	243.0	244.6	246.9	-0.4%
Butter intervention	305.2	282.3	259.3	246.2	246.2	246.2	246.2	246.2	246.2	246.2	246.2	246.2	246.2	-5.1%
SMP intervention	195.2	185.0	174.7	174.7	174.7	174.7	174.7	174.7	174.7	174.7	174.7	174.7	174.7	0.0%

Table A-II-7 Baseline Irish Dairy Commodity Supply and Use Projections

Irish dairy supply and utilisation

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	**2006 v 2016**
							thousand head, end of year							
Dairy cows	1,122	1,101	1,087	1,051	1,036	1,026	1,015	1,000	987	974	961	954	941	-13.5%
Production/cow	4,638	4,507	4,787	4,882	4,925	4,949	4,982	5,034	5,088	5,142	5,197	5,220	5,276	10.2%
Fluid milk							million tonnes							
Cow's milk Production	5.95	5.86	6.05	6.10	6.05	6.04	6.02	5.99	5.98	5.96	5.95	5.94	5.93	-2.1%
Milk quota	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	0.0%
Other milk production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fluid consumption	0.54	0.59	0.60	0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.69	0.70	15.5%
Manufacturing use	5.22	5.08	5.26	5.31	5.25	5.23	5.20	5.17	5.15	5.13	5.11	5.09	5.07	-3.6%
Feed use, net exports	0.19	0.19	0.19	0.18	0.18	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	-14.1%
Cheese							thousand tonnes							
Production	101	119	137	128	131	134	135	136	136	136	136	137	137	0.2%
Imports	23	19	15	18	18	19	20	22	24	25	27	28	29	91.6%
Domestic use	35	37	38	39	41	43	45	46	48	50	53	55	56	47.0%
Exports	88	100	111	107	109	111	111	111	111	111	111	110	109	-1.5%
Ending stocks	28	29	29	29	29	28	29	29	29	29	29	29	29	1.7%
Butter														
Production	160	155	150	159	154	151	150	150	149	149	148	148	148	-1.7%
Imports	1	1	3	1	1	2	1	1	1	1	1	1	1	-70.8%
Domestic use	17	17	17	18	18	19	19	19	19	20	20	20	21	17.6%
Exports	155	150	140	144	136	131	129	130	130	129	129	128	127	-9.3%
Ending stocks	88	77	73	71	72	76	80	82	83	84	84	85	86	18.9%
Skim powder														
Production	95	69	74	91	90	85	83	82	81	80	80	79	79	7.5%
Imports	4	4	4	5	5	5	5	5	5	6	6	6	6	46.4%
Domestic use	11	11	11	10	10	10	10	10	10	10	10	10	10	-4.4%
Exports	96	78	72	93	89	79	76	77	76	76	75	75	75	4.1%
Ending stocks	68	64	62	54	49	51	52	53	52	52	52	52	52	-16.3%
Whole powder														
Production	30	39	39	38	39	38	37	37	37	37	37	37	37	-5.8%
Imports	2	2	2	2	2	2	2	2	2	2	2	2	2	0.0%
Domestic use	1	1	1	1	1	1	1	1	1	1	1	1	1	0.0%
Exports	31	40	40	39	40	39	38	38	38	38	38	38	38	-5.6%
Ending stocks	1	1	1	1	1	1	1	1	1	1	1	1	1	0.0%
Consumption							kilograms per capita							
Fluid milk	134.12	143.66	144.07	143.13	143.59	144.22	144.66	144.85	145.07	145.31	145.56	145.82	146.09	1.4%
Cheese	8.35	8.71	9.00	9.16	9.40	9.74	10.05	10.34	10.64	10.95	11.26	11.59	11.80	31.1%
Butter	4.14	4.17	4.22	4.13	4.20	4.24	4.25	4.26	4.27	4.27	4.28	4.29	4.30	1.9%
Milk price, 3.7% fat														
euro/100 kg	25.8	25.4	24.2	32.9	30.5	27.1	25.7	26.2	26.5	26.7	26.9	27.0	27.2	12.1%
Casein							thousand tonnes							
Production	43	44	47	44	43	44	45	45	46	46	46	46	46	-2.2%
Imports	2	2	2	2	2	2	2	2	2	2	2	2	2	0.0%
Exports	39	39	43	39	39	40	41	41	41	41	41	42	42	-2.1%
Domestic Uses & Stock change	4	4	5	4	4	5	5	5	5	5	5	5	5	-2.6%

Table A-II-8 Baseline Irish Input Use and Expenditure Projections

Irish Input Utilisation

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	**2006 v 2016**
														%
Feed														
Price							IR£/tonne							
Dairy	168.11	163.16	168.05	220.49	181.77	164.55	167.55	169.75	169.97	169.95	168.42	167.38	166.64	-0.8%
Beef	171.22	166.12	171.10	226.17	185.51	167.42	170.57	172.89	173.11	173.09	171.49	170.39	169.62	-0.9%
Price							euro per tonne							
Dairy	213.46	207.17	213.39	279.97	230.80	208.93	212.74	215.54	215.81	215.79	213.86	212.52	211.59	-0.8%
Beef	217.41	210.93	217.26	287.18	235.54	212.58	216.58	219.52	219.81	219.78	217.75	216.35	215.37	-0.9%
Per head							kg/head							
Dairy	701	717	823	771	783	784	777	779	782	784	786	784	787	-4.4%
Beef	208	209	252	185	210	222	215	213	212	210	208	206	204	-19.1%
Total							000 tonnes							
Dairy	792	797	900	823	824	817	800	791	783	774	766	759	751	-16.5%
Beef	1,174	1,182	1,400	1,027	1,152	1,200	1,151	1,127	1,107	1,086	1,064	1,045	1,022	-27.0%
All animals & poultry	3,083	3,094	3,410	2,888	3,025	3,079	3,025	2,993	2,953	2,907	2,866	2,842	2,810	-17.6%
Fertilizer														
Nitrogen Application							kg/ha							
Per Ha of Grassland Area	106	98	99	97	96	96	95	95	94	94	94	95	94	-5.0%
Per Ha of Crop Area	175	145	149	134	133	134	134	131	129	128	127	126	126	-15.4%
							000 tonnes							
Total NPK Application	516	492	475	495	491	482	472	463	457	452	449	445	440	-7.3%
							million Euro							
Intermediate Consumption of Inputs	3375	3443	3583	3812	3952	3745	3631	3683	3714	3693	3695	3660	3670	2.4%
of which:														
feedingstuffs	904	875	970	1113	951	872	877	882	874	862	843	833	822	-15.3%
fertilisers	358	363	380	389	383	376	379	383	385	388	388	392	389	2.4%
energy and lubricants	237	284	305	309	307	306	328	340	340	346	343	351	344	12.8%
forage work	673	772	846	775	758	744	735	729	724	721	719	719	719	-15.0%
contract work	261	270	276	285	280	276	275	275	276	278	280	282	286	3.7%