

FAPRI-Ireland Partnership



**CAP Health Check Analysis:
Impact of EU Milk Quota
Expansion**

Teagasc Rural Economy Research Centre

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Preface

This study presents an analysis of the impact of an increase in the EU milk quota in advance of its expected elimination in 2015. 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, USA. The study should be read in conjunction with the baseline (status quo) policy outlook for the agriculture sector over the next ten years which has also been produced by FAPRI-Ireland (Binfield et al., 2007).

The Common Agricultural Policy (CAP) Health Check will provide a review of CAP policy in 2008 and early indications are that CAP dairy policy will be central to the proposals for reform. It is unlikely that milk quotas in the EU would be removed overnight and emphasis has been placed the need to ensure a 'soft landing' for the dairy sector when milk quotas are removed.

Of course other possible policy changes, such as an agreement the World Trade Organisation (WTO) Doha Development Round are also on the horizon. Such policy reforms have the potential to influence the results presented here. An upcoming FAPRI-Ireland research report will detail the impact of a WTO reform occurring in addition to a milk policy reform.

The projections in this publication are not 'forecasts' or 'predictions' of the future. 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.

International commodity markets have recently 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. 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. Much of the scenario outlook presented here is conditioned by these events.

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.



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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 Powder
WTO	World Trade Organisation

Executive Summary

FAPRI-Ireland Quota Scenarios

This report provides analysis of the prospects for the agricultural and food sectors in Ireland and the EU under a set of scenarios which involve an increase in EU milk quotas. The report should be read in conjunction with the baseline analysis (Binfield *et al* 2007)

- FAPRI-Ireland Scenarios incorporate:
 - 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 Scenario Policy changes examined

We examine two milk quota scenarios. The first scenario might be interpreted as anticipating the choice of Member States to allow an increase in milk quota in advance of agreement on the Health Check. This issue has been discussed at the EU Council of Ministers in September 2007. In of itself this scenario would not be sufficient to bring about the much sought soft landing elimination of milk quotas

Consequently a second scenario was developed which involved successive annual increases in the EU milk quota up to the point when it is eliminated in 2014/15. Such a scenario might be the outcome of the EU Health Check reform process beginning in 2008.

Both scenarios are specified below.

Scenario 1: Additional 3% increase in quota in 2008/09

- Increase in 2008/09 quotas as per Council Reg No 1788/2003
- Plus a further 3% increase from April 1st 2008
- Milk quotas are removed on April 1st 2015

Scenario 2: Series of 3% per annum increases

- Increase in 2008/09 quotas as per Council Reg No 1788/2003
- Plus a series of 3% annual increases from 2008/09 to 2014/15 (total quota increase of close to 20%)
- Milk quotas are removed on April 1st 2015

Related Assumptions in operation in the Scenarios

- Agricultural Policy assumptions other than those related to milk policy are unchanged from the Baseline Assumptions detailed below:
 - The CAP is that agreed in the Luxembourg Agreement of June 2003 with differential national level implementation of the CAP, as allowed for under the Luxembourg Agreement
 - 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.
 - The set-aside derogation agreed by the Council of Minister's in September applies in 2008 and is assumed to be retained for the rest of the Baseline projection period

Milk Quota Scenario 1: Impact on the EU and Irish Dairy Sector

- Increases in EU milk quota, as implemented in the scenario, are largely taken up by EU Member States (MS). The modelling tool used examines Ireland and the larger EU MS individually. Specific country results for some minor milk producing countries are unavailable since these countries are examined collectively.
- Throughout much of the EU, continuing increases in milk fat content necessitate increasing butter fat reference quantity adjustments, which offset some of the increase in milk quota. This is particularly the case in Ireland. At the same time fat and protein availability increases and dairy product production increases.
- Overall EU milk production increases by 1.6 percent and by 2014 the average EU milk price is projected to be 3.5 percent lower than the 2014 baseline milk price.
- Ireland takes up its full 3 percent quota increase in the scenario. However, the volume of milk processed in Ireland increases by a little less than 3 percent relative to the baseline. This is due to a reduction in the volume of milk imported from Northern Ireland (NI). By 2015 it is projected that the volume of milk exported to Ireland from NI will decrease by close to 10 percent relative to baseline levels.
- An expansion in milk quota would probably be seen as a signal from the Commission that producers should prepare for quota elimination, reduced dairy supports and lower milk prices. In this context it is unlikely that any of the increase in quota would be allowed to accumulate in intervention stocks. However, under projected market conditions no adjustment to intervention prices is necessary to accommodate the 3 percent quota increase examined here.
- For the purposes of this analysis the increase in milk quota in Ireland does not induce any marked change in the rate of growth in milk yields relative to the baseline. Consequently, the increase in milk production is largely met through a slow down in the rate of decrease in the number of dairy cows relative to the baseline.
- In Ireland, in this scenario, more dairy cows are required and more dairy calves are born than in the baseline. On the other hand there are fewer suckler cows in the scenario than there are in the baseline. Overall, the knock-on impact of the dairy quota expansion on Irish beef production and Irish beef prices is negligible.
- In the scenario the additional milk produced, is allocated to cheese, butter and SMP production. Projections of relative price movements favour allocating more of the increase to butter and SMP than to cheese. However, it is not possible to say with a high level of confidence exactly how the product mix might evolve and it is conceivable that export opportunities that arise in other MS states might lead to Irish milk being allocated to dairy products in a different way
- The projected impact of the scenario on Irish milk prices is a reduction of 4 percent relative to the baseline price level in 2014 or € 25.7 per 100kg.
- By the end of 2016 quotas will have been gone for almost two years. Milk production expands by a further 8 percent relative to the 2014 production level. The Irish milk price decreases a further 3 percent.
- Overall by 2016 the value of the Irish milk sector is projected to be €1,511m, up 8 percent on the value under the baseline.

Milk Quota Scenario 2: Impact on the EU and Irish Dairy Sector

- Increases in EU milk quota, as implemented in the scenario, are not fully taken up by any EU Member States (MS) modelled individually with the exception of Ireland.
- Overall EU milk production increases by 3.7 percent by 2014 and the average EU milk price is projected to be 7 percent lower than the 2014 baseline milk price.
- However, what is most notable is the modest impact of the elimination of quota on the milk price in the following couple of years. Relatively little change occurs at aggregate EU level beyond 2014/15; in the post quota period production increases in some MS tend to be offset by post quota contractions in other MS. As a consequence EU milk production is more or less unchanged and accordingly prices are virtually unchanged between 2014 and 2016.
- For Ireland milk production continues to increase once quotas are removed (up 3.4 percent between 2014 and 2016) while milk prices at this point remain stable at € 25 per 100 kg.
- Effectively at this point production increases in only a few MS (those with low cost structure). Consequently it is only these MS that have the capacity to bring about a decrease in EU milk prices. For MS with higher marginal costs of milk production, the milk prices prevailing post quota will preclude increases in their milk production and may even lead to further declines in specific MS production.
- The increase in Irish milk production is achieved through a combination of increased milk yields, which grow at a higher rate than in the baseline and an increase in dairy cow numbers.
- Under the scenario dairy cow numbers in Ireland in 2016 at 1.1 million are actually up 2 percent on the 2006 level. Under the baseline, projected dairy cow number declined due to increasing milk yields in the presence of a quota. With quota expansion and ultimate elimination, yield growth does not equate with a decrease in dairy cows numbers.
- The additional milk produced in Ireland is mostly absorbed in butter and SMP production, with some small additional volume of cheese produced. The projected price for Irish milk reflects this choice of product mix.
- Ultimately it will be for processors in Ireland to decide how the additional milk volume should be processed. Additional processing capacity will need to be put in place in Ireland to handle the additional 1 million tonnes of milk that would be available. It is possible that export opportunities might arise in other MS markets that cannot be anticipated through this analysis. Therefore it is conceivable that the product mix could be different to that specified here.
- Given that the number of producers in Ireland is projected to decline, at farm level the extent of the increase in individual farm milk deliveries will exceed the rate of the national increase in production.
- Overall by 2016 the value of the Irish milk sector is projected to be €1,686m, up 18 percent on the value under the baseline.

Milk Quota Scenarios: Impact on Other Sectors of Agriculture

- At an aggregate EU level the impact of Scenario 1 and Scenario 2 on other sectors of agriculture is relatively trivial.
- EU beef production continues to mainly come from the dairy herd under these scenarios.
- Declining milk production in some MS is associated with reductions in beef output, however as noted above these declines are offset at an EU level by increased milk and beef production elsewhere within the EU.
- The impact of Scenario 1 and Scenario 2 on meat prices is very limited, with the impact on prices of beef less than 1 percent under both scenarios.
- EU milk production increases under both Scenarios 1 and Scenario 2. The scenarios do not give rise to significant increases in feed demand or changes in cereals and oilseed prices at aggregate EU level.
- In Ireland increased milk production allows for an increase in both overall cattle numbers and beef production relative to the Baseline.
- By 2016 Irish beef production under Scenario 1 is projected to be relatively unchanged, while under Scenario 2 production is projected to be approximately 2 percent higher.
- Feed use in Ireland increases relative to the baseline under Scenario 2 reflecting the greater dairy cow population.
- Suckler cow numbers in Ireland are projected under Scenario 1 to be almost 2 percent lower than under the Baseline, while under Scenario 2 Irish suckler cow numbers are 4 percent lower.

Milk Quota Scenarios: Impact on Input Expenditure and Income in Ireland

- Under Scenario 1 the value of overall *Agricultural Goods Output* (at producer prices) by 2016 increases by 3 percent when compared with the Baseline
- Under Scenario 2 the value of overall agricultural goods output (at producer prices) by 2016 increases by 5 percent when compared with the Baseline
- Under both Scenario 1 and Scenario 2 increased milk production is associated with increased expenditure on inputs. Relative to the baseline level in 2016, under Scenario 1 total intermediate consumption increases by 1.5 percent, while under Scenario 2 it increases by 4 percent
- The main source of the increase *Intermediate Consumption* is increased expenditures on purchased animal feed, reflecting both increased feed usage per head and increased dairy cow numbers relative to the baseline.
- Expenditure on *Veterinary and Pharmaceutical Products and Services* shows an increase relative to the baseline under both scenarios, again due to the higher number of animals in the system.
- Under Scenario 1 the increase in output value is sufficient to more than offset the increase in input expenditure. By 2016 agricultural sector income is up 4 percent relative to the baseline.
- Similarly under Scenario 2, by 2016 *agricultural income* is higher than in the baseline by 6 percent.

- ENDS -

FAPRI-Ireland CAP Health Check Analysis: Impact of EU Milk Quota Expansion

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

The farmer has to be an optimist or he wouldn't still be a farmer

Will Rogers

1 Introduction

This report examines the impact on the EU and Ireland of an increase in the EU milk quota in advance of its anticipated abolition at the end of the 2014/15 milk quota year.

Section 2 of the report presents a brief history of the EU milk quota system and its evolution over time. It continues with a summary of the ongoing policy debate at EU level concerning how milk quotas will be removed. A discussion then follows on the possible dairy element of the CAP Health Check which will be a major topic in 2008.

Section 3 provides specific details of the scenarios examined in the paper. Related assumptions, which are important in interpreting the analysis, are also detailed.

Section 4 summarises the Methodology used in the analysis. It describes how the world commodity prices used in this analysis were produced. It also details the challenges involved in addressing the impact of milk quota expansion.

Section 5 presents the results of the two scenarios for the dairy sector and follows that with a summary of the impact on other sectors of agriculture.

Section 6 completes the report with conclusions regarding the results of the analysis.

2 Background

2.1 The Evolution of the EU Milk Quota System

Ireland joined the EU in 1973 and in the early years of Irish membership there was an exceptional expansion and modernisation of the Irish dairy sector at both farm and processing level and milk production increased significantly. A similar picture emerged in other Member States (MS). Milk production throughout the EU at this time increased at a rate which led to surpluses which were a significant cost to the EU budget, and which generated negative publicity for the CAP.

This growing milk surplus was initially managed through intervention buying, but it was never the purpose of the intervention system to handle a persistent and growing surplus, which began to be experienced in the late 1970's. Reacting to this, in 1977 the Council introduced the co-responsibility levy. The purpose of this levy, which was paid by producers, was to finance market development measures and some disposal measures such as the school milk scheme.

Intervention stocks continued to grow however. In 1984 the milk quota system was introduced for an initial period of four years. The stated purpose of the milk quota system was to contain the growth in milk production so that the EU's agriculture budget could manage the cost of the price support framework. The alternative to the milk quota system would have been a cut in support prices for dairy products - a policy which it was felt would have had a considerable negative effect on agricultural incomes.

Under the quota arrangement, each MS has a reference quantity, with each producer in turn having an individual reference quantity. Milk delivered is tested against a reference milk fat level and if the milk delivered exceeds the reference milk fat level, then for quota purposes, an adjusted milk volume is calculated. If the adjusted milk volume exceeds the reference volume then this will trigger a superlevy payment.¹ For milk produced in excess of the reference quantity, a superlevy fine is payable which, on a per kg basis, currently stands at 115 percent of the target price for milk.

When the quota system was introduced in 1984, the initial milk quotas were fixed at 1981 deliveries plus 2 percent for most MS, with Ireland and Italy being exceptions. Ireland was allowed to use the 1983 milk delivery volume, which was then 5.28 million tonnes, supplemented by an additional 245,000 tonne allocation from the Community reserve.

The drop in EU milk production, which occurred in 1985 and 1986, did not have the desired effect of restoring a balance to the dairy sector. In April 1986, under a programme known as the Community Cessation Scheme, the Council decided to further reduce the total guaranteed quantities in the 1987/88 milk year by 2 percent and in the 1988/89 by 1 percent. More importantly, a temporary quota cessation scheme was introduced in 1987/88. Under this scheme 4 percent of the quota was suspended in 1987/88, 5.5 per cent in 1988/89 and 4.5 percent in 1989/90, 1990/91 and 1991/92 after which time it was decided that the "temporary" cessation would continue indefinitely.

The quota system was renewed again in 1992 and extended until the end of the century. As part of the MacSharry CAP reforms in 1992, it was initially proposed to reduce the quota by a further 3 percent, but ultimately this policy was not contained in the reforms that were finally agreed. However, the co-responsibility levy was abolished at this time. There were no further changes to the quota system through the rest of the 1990's.

Originally many producers were strongly against milk quotas, because it constrained expansion, which was particularly an issue as increasing dairy yields per cow meant that fewer dairy cows (and less land) were required to produce a given milk quota. However, the milk quota found favour with some producers after a time, as they regarded it as a license to produce milk which they could ultimately sell in order to provide a retirement income.

Additionally, the milk quota began to be identified in some EU MS as a policy with social objectives. In Ireland, for example, the milk quota was ring fenced and allocated to specific milk processors, which tended to mean it could not move either to or from defined geographic regions. In this way areas within Ireland where milk production was less competitive did not 'lose' quota to regions that were more competitive.

In 1999, Agenda 2000 (Berlin Agreement) provided for increases in milk quotas in the EU15. Ireland was among five EU MS which were granted quota increases in the 2000/01 and 2001/02 milk years. The Irish milk quota increased by 2.9 percent over this period with no change in the butterfat reference level. Quotas in four other EU MS were also increased at this time. The remaining EU MS each received a quota increase of 1.5 percent to be spread over a three year period later in the decade. In total these quota increases represented a further 2.4 percent increase in the quota available to the EU15.

While a majority of EU MS supported the continuation of the milk quota system, at this point there also was pressure from Britain, Denmark, Sweden and Italy for quota elimination on the basis that it inhibited the EU's access to growing export markets. As a compromise it was agreed that the milk quota system would be reviewed in 2003, noting the intention to retain quotas until at least 2006. However, by 2003 sentiments had changed little and political support for retention of the milk quota

¹ For each 0.1 gram deviation from the reference fat content the volume of delivered milk is adjusted by 0.18%.

remained quite strong. As part of the Mid Term Review of the Agenda 2000 (Luxembourg Agreement), it was agreed that milk quotas would continue to 2014/15 and that there would be a review of the system in 2008.

In 2004 10 New Member States (NMS) joined the EU. Milk quotas for these NMS were negotiated as part of the accession process. Of these 10 countries only Poland had a significant level of dairy product exports. Similar quota arrangements were made for the EU accession of Bulgaria and Romania in 2007.

2.2 The EU CAP Health Check

In 2006 EU Commission officials began to indicate that they could see no prospect for the continuation of milk quotas beyond 2014/15 on the basis that the required level of political support for their extension would not be forthcoming. Attention then began to turn to the mechanism by which milk quotas would be removed.

Reform of dairy policy may form a central plank of the 2008 review of EU agricultural policy, known as the CAP Health Check and several mechanisms for the relaxation of the milk quota, have been proposed. They include:

- Gradual quota expansion
- Overnight quota elimination
- Quota trading between EU MS
- Reduction in the rate of quota superlevy

Of these four options the one which seems most practical is the prospect of a gradual quota expansion (the so called 'soft landing' approach). By contrast overnight elimination might involve rapid change and would not allow producers and processors sufficient time to adjust. Quota trading between MS might face legal impediments. A reduction in the rate of superlevy might unnecessarily complicate the milk production decision process at farm level, with an adverse impact on farm management and farm efficiency.

The rapid and dramatic improvement in international dairy commodity prices which emerged in mid 2006 and has continued to date, has led to a debate about an immediate increase in EU milk quotas in the 2008/09 milk quota year. Effectively this would be a pre Health Check change in dairy policy. The issue was addressed at the Agriculture and Fisheries Council in Brussels on September 26th and 27th 2007. While there was outright opposition to an increase in milk quotas in these discussions from only three EU MS, some of the more influential MS were relatively non-committal on the basis that further research on the issue was required.

Overall, the balance of opinion at the Council seemed to favour an increase in milk quotas of the order of 3 percent in 2008/09. At the time of writing (October 2007) it remains unclear whether an increase in the milk quotas from April 1st 2008 will be agreed.

The CAP Health Check is likely to cover a range of other issues in addition to the Dairy Common Market Organisation (CMO). 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 a flat area payment scheme system across the EU (Agra Facts, 2007).² Proposals for the CAP Health Check will be published in Brussels on November 21st 2007. A decision in relation to the details of the CAP Health check is expected by June 2008.

² Shresthra, Hennessy and Hynes (2007) analyse the impact of a flat area payment system in Ireland.

3 Milk Quota Scenarios and Related Assumptions

The FAPRI-Ireland milk quota scenario analysis presented here serves a dual role. It is intended to provide an indication of the likely impact of such scenarios, but additionally it also seeks to draw out topics which may require further analysis. Such topics are as relevant to policy makers, producers and processors as they are to the FAPRI-Ireland research team and would include issues such as dairy product mix, seasonality of milk production, potential growth in milk yields, the cost of expansion at farm level and the manner of allocation of additional milk quota in future years.

The milk quota scenarios examined in this report were developed through a process of consultation with a variety of stakeholders, taking account of the direction of the current policy debate on milk quotas at EU level. In November 2006, as part of this process Teagasc, with the support of the Department of Agriculture and Food, hosted a stakeholder forum in Cork on *The Future of Milk Quotas in the EU Beyond 2008*. The objective of the forum was to facilitate and encourage an informed debate on the future of milk quotas, with a view to identifying the appropriate strategy to be adopted by Ireland at EU level in the quota review process. The forum was addressed by a senior official of the EU Commission DG Agri and by a number of key stakeholders in the Irish dairy sector who also addressed the forum. Subsequently an international milk quota workshop took place in Dublin in February 2007 to discuss the modelling of milk quota reform. The workshop included researchers from around the EU, the USA and the EU Commission was also represented

Ultimately, it was decided to examine the following scenarios set out in Box 3-1:

Box 3-1: Milk Quota Scenarios and Related Policy Assumptions

The first scenario anticipates a decision by MS to allow an increase in milk quota such as discussed at the EU Council of Ministers in September 2007 (in advance of the Health Check). In of itself this scenario would not be sufficient to bring about the much sought soft landing elimination of milk quotas.

Consequently a second scenario was developed which would involve successive annual increases in the EU milk quota up to the point when it is eliminated in 2014/15. Such a scenario might reflect one of the outcomes of the EU Health Check reform process. Both scenarios are specified below.

Scenario 1: Additional 3% increase in EU milk Quota in 2008/09

- Increase in 2008/09 EU milk quota as per Council Reg No 1788/2003
- Plus a further 3% increase from April 1st 2008
- Milk quotas are removed on April 1st 2015

Scenario 2: Series of 3% per annum increase in EU Milk Quota

- Increase in 2008/09 EU milk quota as per Council Reg No 1788/2003
- Plus a series of 3% annual increases from 2008/09 to 2014/15 (total quota increase of close to 20%)
- Milk quotas are removed on April 1st 2015

Related Assumptions in operation in the Scenarios

- Agricultural Policy assumptions other than those related to milk policy are unchanged from the Baseline Assumptions detailed below:
- The CAP is that agreed in the Luxembourg Agreement of June 2003 with differential national level implementation of the CAP, as allowed for under the Luxembourg Agreement
- The expansion of the EU that occurred on May the 1st 2004 with the accession of 10 NMS is incorporated in the Baseline.
- The Uruguay Agreement on Agriculture (URAA) remains in place, i.e. no Doha Round Agreement occurs.
- The set-aside derogation agreed by the Council of Minister's in September applies in 2008 and is assumed to be retained for the rest of the Baseline projection period
- In later years export subsidies are reintroduced to prevent stock building as prices decline from the highs of 2007

4 Methodology

International commodity prices have undergone significant change in 2006 and 2007 and it is projected that world prices will change considerably in the future also. Here the origins of the world price projections used in the analysis are explained. In addition details on the quota rents used for the analysis are provided.

4.1 World Prices

Every year FAPRI produces a Global Outlook using its suite of international commodity models. The production of these projections with the various models is a detailed task and is carried out once a year. Consequently the model simulations are based on information that is available at the time when the models projections are finalised (usually January of each year).

The world price projections that are generated as part of that process usually differ from what transpires, even in the very short run, as a result of the vagaries of the weather or due to other unpredictable shocks on both the production and consumption side. Recent international examples for the meat sector of such shocks would include the various BSE, FMD and Avian Influenza (AI) occurrences, each of which impacted on both production and consumption. To address such shocks FAPRI-Missouri produces a baseline update in July, without running the entire global FAPRI model system.

The most recent FAPRI world price projections come from the July 2007 update and reflect some of the long run behaviour of the January Global Projections. Further updated market information has become available since July and along with spot and future commodity prices, this information has been used to modify the July 2007 projections used in this report. The intention is to reflect the spirit of the update – to adjust the projections from the earlier modelling effort with current market information. The next round of official FAPRI World price projections from the global models will be available early in 2008.

4.2 Milk Quotas and Milk Quota Rents

In an unregulated market prices for a commodity are determined by the supply and demand. The price of a commodity can be altered by regulation and there are many means by which this can be achieved. In the CAP, intervention and disposal has been used in the past to remove commodities from the market in order to support the milk price and ultimately improve dairy farmer incomes.

Policy makers may find that intervention and disposal measures are an expensive way to regulate the price of a commodity and for the dairy CMO this was the case in the 1970s. From a budgetary perspective a cheaper alternative is to regulate the supply of the commodity and this was the basis for the introduction of the EU milk quota.

Generally the lower the level at which the quota is set relative to the unregulated level of production, the greater will be the difference between the price of the commodity under quotas and the price under an unregulated (or less regulated) market. It follows that if a quota is set a level higher than the unregulated level of production it will have no impact on the price level of the commodity. In the EU at present quotas limit milk production. Their removal would allow some increase in milk production. This study quantifies the increase in production and the resulting decrease in milk prices.

Economists measure the extent to which quotas restrict production below the level that would be achieved given the equilibrium market price using a measure referred to as a 'quota rent'. This is an economic term which should be confused with the rental price paid for milk quota.

Quota rents vary between MS and over time and depend on prevailing market prices and input costs. In some EU MS the price of traded quota is to some extent indicative of the *quota rent* while in some other MS this may not be the case. Each country has its own peculiarities as to how the milk quota system is implemented and this may complicate the assessment of the quota rent. An indication of the complexities involved is illustrated by just three MS examples provided in 4-1.

Box 4.1: Examples of the challenges in measuring quota rents across the EU

UK

In the UK there is minimal regulation of milk quota sale and purchase, so the market price of milk quota gives some indication of the quota rent. In the UK milk production has been below quota in some recent years and unsurprisingly, the price of traded milk quota in the UK has been very low. An expansion of quota in the UK in 2005 or 2006 would have had no impact on production levels. Accordingly, it is reasonable to assume that the UK quota rent is very low (positive, but not large).

Ireland

The quota rent in Ireland is positive. This means that if quotas were removed in Ireland and milk prices were maintained, production would expand. In Ireland the trade in milk quota had been heavily regulated up until the introduction of the quota exchange system in 2006. While trade in milk quotas is now more liberalised in Ireland, the ring-fencing of milk quotas to processing regions, (which prevents trade in milk quota between farmers in different regions) still continues. There are also controls on the quota bidding process which impact on the equilibrium price of quota in the Irish milk quota exchange. These factors have to be taken into consideration when drawing conclusions about the quota rent and mean that the quota sale price may be a less useful guide than in the UK.

France

France failed to fill its milk quota in 2006. Does this mean that the quota rent for France is zero? Were milk production costs too high relative to milk price to allow French farmers to fill the quota? The answer to both of these questions is probably 'No'.

Milk production in France fell in 2006 for a number of reasons. Weather conditions were poor, input prices increased and the manner in which milk quota is administered in France also probably prevented producers from filling the unused quota. Thus, in 2006 the quota rent for France may have been positive, even though quota was unfilled.

The empirical determination of quota rents is a study area in itself and ideally requires very detailed MS level farm specific micro data. In general such data cannot be easily produced on a consistent basis for many EU MS. Accordingly, this study avails of quota rents developed in other studies and combines these with some additional assumptions.

There have been many studies as to the level of quota rents in the EU-15. The study that has been used as the basis for the rents used here is by Lips and Rieder (2005). The results that these generate are in line with the findings of recent studies, and in the experience of the FAPRI-Europe projects they have been acceptable to industry experts. In this study rents grow in 2007 and 2008 with the higher world prices, but as prices fall, the high levels of cereals and oil prices means that future quota rents decline.

There are different estimates of the level of quota rents in other studies and if these other estimates were used this would alter the results of the scenarios examined in this study. A further complication is that there are no studies on quota rents in the NMS. Of particular interest is the milk production potential Poland. In the 1980's Poland had a level of milk production that was about double its level of current production. In addition accession to the EU has resulted in significantly higher dairy prices in Poland. However, the costs associated with dairy production in Poland have also risen due to the introduction of EU quality standards. In this study a large positive rent is assumed for Poland based on the increase in its milk prices relative to the pre accession period, and the fact that the country has filled its deliveries quota more rapidly than most expected. This evidence is taken as an indication that the strong production potential implied by the rents used is well justified.

4.3 Member State Model Coverage

Most international modelling organisations now treat the EU as a single entity (EU27) or they combine the various MS to form two blocks (EU15/NMS10). Agricultural policy models are then designed around these definitions. The milk sector across the EU differs considerably between EU MS. Differences exist in terms of milk production systems, (pasture, feed grain and hybrid systems), production costs (land, labour and other inputs) and milk utilisation (fresh products, specialist food ingredients and basic commodities).

The models used for this analysis address this heterogeneity by examining the agricultural sector in so far as is practical at a MS level. The model comprises both MS level models France, Germany, Ireland, Italy, Hungary, Poland and United Kingdom as well as models representing MS aggregations, Other EU15 and Other NMS. Due to difficulties in compiling a useable dataset, models for Bulgaria and Romania have yet to be developed and these MS are not considered within this analysis. Some notable dairy producing countries, such as the Netherlands and Denmark are modelled as part of the other EU15 block.

5 EU Milk Quota Scenario Results

The analysis of the impact of the milk quota scenarios begins with the generation of a baseline outlook for the next ten years. Full details of that baseline outlook are contained in (Binfield et al 2007). A very brief summary is provided below to provide a frame of reference for the Scenario outcomes. This is then followed by sections summarising the impact of the scenarios on the dairy sector and then a section detailing the impact of the scenarios on other sectors of agriculture.

5.1 Key Points of the Baseline Outlook

In general EU and Irish agricultural commodity prices increase over the Baseline projection period. Milk, dairy commodity and meat prices are all projected to increase between 2006 and 2016 under the Baseline. Cereal prices decline from the high prices observed in 2007 but by the end of the projection period are well above the intervention price levels experienced in the early years of this decade.

The volume of Irish agricultural sector output with the exception of milk and dairy products and cereals declines between 2006 and 2016. The decoupling of direct payments, increased costs of compliance with environmental regulation, and increases in other production costs offset the positive impact of higher nominal output prices.

With quota remaining in place, the projected Irish milk price increase of 12 percent over the period 2006 to 2016 leads to an increase in the value of the output of the Irish dairy sector to € 1,426m. Overall the value of Irish agricultural sector output at producer prices remains unchanged with gains in the cereals and milk sector being offset by declines in the value of output from the livestock sectors.

Reduced agricultural activity levels are however associated with reduced use and expenditure on inputs. By 2016 Irish input expenditure in agriculture is projected under the Baseline to decline by almost 4 percent. Total agricultural subsidy receipts are projected to increase slightly so that over the next 10 years so that overall Irish agricultural sector income is projected to increase under the Baseline by close to 4 percent.

5.2 Quota Expansion Scenario 1 (3 percent increase in 2008/09)

Under this scenario the increase in the quota prior to elimination is very modest and therefore the impact on production prior to quota removal is modest. The expansion of quota has two effects. In the first instance it relaxes the constraint on low cost producers and there is an increase in milk production. However, the expansion in milk production reduces the price of milk. Lower milk prices lead some higher cost producers to reduce or cease production.

The current projection period extends to 2016, which is only 21 months after quota elimination. This period is insufficient for the model to reach the long run equilibrium regarding dairy production that would prevail in the absence of quotas.

EU Level

The first scenario is relatively limited in its policy scope, involving an addition of only 3 percent to the EU milk quota up to the time of the anticipated elimination in 2014/15. Consequently, this quota increase has only a modest impact in terms of both milk production and prices across the EU. Many EU MS have the capacity to produce this increase in production. In many cases the quota increase is required to keep pace with the increase in dairy product domestic use which is largely driven by cheese consumption growth.

In recent years some EU MS have demonstrated difficulty in filling their existing milk quota and in the analysis the quota expansion is not met by increased production from a number of MS. At an aggregate EU level the 3 percent quota increase provides only a 2 percent increase in milk production by 2014. Relative to the 2015 baseline milk price, the milk price in scenario 1 in 2015 is down about 5 percent at EU level.

Thereafter quotas are removed and milk production continues to increase in some MS, while production actually contracts in other MS. The impact of these positive and negative movements in production is that by 2016 aggregate EU milk production increases by an additional 1 percent once milk quotas are removed. The milk price under Scenario 1 in 2016 is 6 percent below the 2016 price in the Baseline. Overall, Scenario 1 means little change in the location of EU milk production.

Ireland

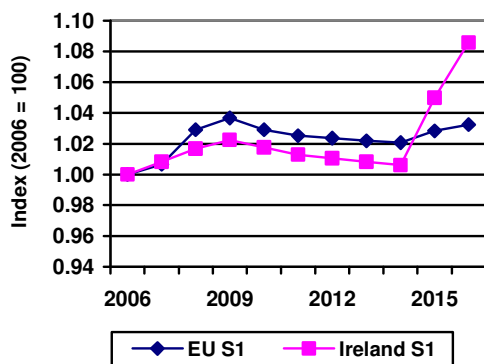
Ireland takes up the full increase in milk quota, although in the early years of the projection period the increase in Irish milk production may appear to be below the 3 percent quota increase. However, this is due to a projected continuation of the increase in milk fat content (which requires a butter fat adjustment), as well as a slight decrease in imports of milk from Northern Ireland.³

Of greater interest is that Irish milk production expands by 6 percent in the two years after milk quota elimination. By 2016 the Irish milk price is just under €25 per 100kg or 26 cent per litre, which is 8 percent below the corresponding baseline level. The price reduction that takes place in the last couple of years of the projection period is due to the expansion in EU milk production post quotas and it reflects the fact that Irish milk production is still increasing by the end of the projection period and has not reached its long run equilibrium level. Figure 5-1 illustrates the path of milk production and milk prices under Scenario 1.

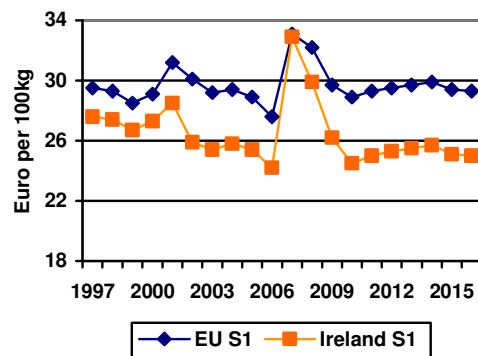
The increase in milk production in Scenario 1 slows the historical rate of reduction in the number of dairy cows, since cows are required to produce the additional milk produced. The growth in milk yields in Ireland in Scenario 1 is more or less unchanged relative to the baseline.

Figure 5-1: EU and Irish Dairy Product and Milk Prices under Scenario 1

Index of Milk Production (fat adjusted)



EU and Irish Milk Price



FAPRI-Ireland Model (2007)

³ For statistical purposes imports of milk are included in Irish milk production although they are not part of the Irish milk quota.

Milk prices decline over the projection period in both the EU and Ireland. The decrease in Ireland over the short term is quite pronounced, but it should be understood that relative to 2006, the Irish milk price increase in 2007 will far exceed the increase in the EU average milk price.

Overall the value of the milk sector in Ireland increases relative to the baseline. Lower milk prices are offset by higher production so that the value of the Irish milk sector at €1,533m is up 8 per cent relative to the baseline by 2016.

5.3 Quota Scenario 2 (3 percent annual increase 2008/09-2014/15)

It is likely that if the milk quota was increased as described in Scenario 1, a further increase in quotas would be required in due course in advance of the elimination of the quota system. A series of annual milk quota increases might better achieve the 'soft landing' sought by policy makers.

Scenarios 2 therefore may represent a more likely path towards quota elimination, in that it involves a series of annual milk quota increases. In Scenario 2 the milk quota is increased by an additional 3 percent each year against the base 2008/09 level up to the assumed point of elimination in 2015. This would represent an increase in milk quotas of close to 20 percent in advance of quota elimination. Equally, policy makers might choose a smaller or larger annual percentage quota increase and select a shorter period over which to implement these increases.

EU Level

While most MS take up the increase in quota in the first couple of years of expansion, in successive years, the annual increase in milk quota in Scenario 2 is taken up by relatively fewer MS. Among the MS for which there are individual MS models in this analysis, only Ireland takes up the full increase in quota offered up to 2014/15. Overall EU milk production increases by just 4 percent by 2014 and the average EU milk price is projected to be almost 7 percent lower than the 2014 baseline milk price. Over the projection period, none of the larger milk producing countries in the EU is in a position to take up a significant portion of the quota increase and hence, at an aggregate EU level, the expansion in milk production is relatively limited. A key feature of Scenario 2 is the negligible impact of quota removal given that much of the EU in aggregate will have achieved its productive capacity in the quota expansion phase preceding the elimination.

Relatively little change in price or production occurs at aggregate EU level beyond 2009/10; as production increases in some MS tend to be offset by production contractions in other MS. As a consequence, when the milk quota is removed, aggregate EU milk production is more or less unchanged on the preceding couple of years. Accordingly, milk prices are virtually unchanged between 2010 and 2016.

Ireland

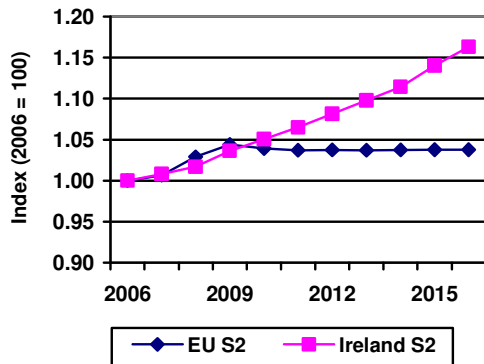
Irish milk production continues to increase once quotas are removed (up 3.4 percent between 2014 and 2016) while milk prices at this point remain stable at approximately €25 per 100 kg. The increase in Irish milk production is achieved through a combination of increased milk yields, which grow at a higher rate than under the baseline, and an increase in dairy cow numbers. This higher rate of increase in yields is achieved mainly through improved herd productivity and increased feed utilisation. Given that the number of producers in Ireland is projected to decline, the increases in milk production will typically exceed the rate of the national increase in production (Hennessy, 2007).

Overall by 2016 the Irish milk sector is projected to be worth €1,686m, up over 18 percent on the value under the baseline. Figure 5-1 illustrates the path of milk production and milk prices under Scenario 2.

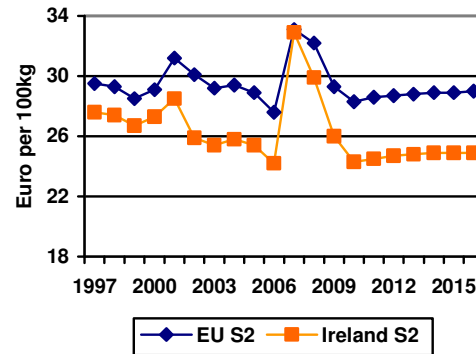
The additional milk produced in Ireland is mostly absorbed in butter and SMP production, with some small additional volume of cheese produced. The projected price for Irish milk reflects this choice of product mix. Ultimately it will be for processors in Ireland to decide how the additional milk volume should be processed. Additional processing capacity will need to be put in place in Ireland to handle the additional 1 million tonnes of milk that would be available. It is possible that export opportunities might arise in other MS markets that cannot be anticipated through this analysis. Therefore it is conceivable that the product mix could be different to that projected here.

Figure 5-2: EU and Irish Dairy Product and Milk Prices under Scenario 2

Index of Milk Production (fat adjusted)



EU and Irish Milk Price



FAPRI-Ireland Model (2007)

Under Scenario 2 dairy cow numbers in Ireland in 2016, at 1.12 million, are actually up 2 percent on the 2006 level. Yields grow at a rate closer to 2 percent per year, compared with just 1 percent per year in both the Baseline and in Scenario 1. This additional rate of yield increase in Scenario 2 represents an extra 300 kg of milk per cow by 2016 (compared with the baseline yield in 2016) and is achieved through a better rate of improvements in overall herd genetics, a modest increase in feed grain usage of the order of 100kg per head and a decrease in the amount of milk fed on farms.

The relatively positive post quota outlook for the dairy sector in Ireland under Scenario 2 can be attributed to a number of factors and these are detailed in Box 5-1.

Box 5.1 Factors facilitating the expansion of Irish Milk Production

- Over the projection period there is an increase in the cost of producing milk from feed grains relative to pasture.
- For continental EU milk producers, higher feed costs erode much of the improvement in the milk/feed ratio that would otherwise emerge and this reduces the expansion capacity to feed grain dairy producers.
- However, in Ireland the system of milk production is focused on low input costs, whereby most of the dairy cow's energy intake is in the form of grazed grass (and grass silage), which grow well in Irish weather conditions. Feed grain supplementation is generally only used to maintain body condition. Hence, Irish milk producers benefit from the improved outlook for international dairy commodity prices, without incurring the significant cost increases of grain based dairy producers.
- Increased fertiliser and energy costs mean that it also becomes more expensive to produce grass, but ultimately high feed grain prices mean that the competitiveness of Irish producers improves relative to those in feed grain systems.
- Ireland's milk production (and exports) are small relative to total EU dairy market, which means that increases in Irish milk production represent a small addition to the overall EU milk supply
- With a lack of expansion capacity in milk production across much of the EU, a continuing expansion in the volume of Irish production is possible with minimal impact on the EU dairy market or the Irish milk price.
- Increases in national milk output of the scale projected to occur in Ireland, would have a more appreciable impact on the EU dairy market were they to come from one of the large EU MS, such as France or Germany. A large scale expansion in French or German milk production would increase EU milk production by a greater percentage and would have a more depressing impact on EU dairy product and milk prices.

5.4 Impact of Scenario 1 and Scenario 2 on other sectors of agriculture

The impact of Scenarios 1 and Scenario 2 on the non-dairy agricultural sectors of the EU and Ireland is very limited. The magnitude of the impact of the Scenarios analysed on the EU and Irish beef sectors is greater than the impact of the scenarios analysed on other non-dairy components of EU and Irish agriculture. In aggregate terms both scenarios analysed are projected to lead to increases in the total income arising in the Irish agricultural sector when compared with the Baseline.

EU Level: Other Commodities

Under both Scenario 1 and Scenario 2 some of the projected increase in EU milk production is achieved through increases in dairy cow milk yields, but the bulk is achieved through increases in dairy cow numbers. However, at an aggregate EU level the changes in cow numbers compared to the Baseline are relatively minor. The ending numbers of dairy cows in 2016 under Scenario 1 is only 2 percent higher than under the Baseline, and ending numbers of dairy cows are only 3 percent higher than under the Baseline in Scenario 2.

In tandem with the projected increases in the EU dairy cow herd, some decline in the numbers of beef cows is projected to occur under Scenario 1 and Scenario 2 when compared with the Baseline. Therefore, the overall total inventory of cattle in the EU, under both Scenario 1 and Scenario 2, is only marginally higher than in the Baseline. As a result, the positive impact on beef production of the scenarios analysed is small. The impact of the small increase in numbers of cattle slaughtered is partially offset by projected declines in the average slaughter weights of cattle under Scenario 1 and Scenario 2 when compared with the Baseline. This decline in slaughter weight is due to the increasing share of the overall EU cow herd accounted for by dairy cows.

Thus, we can conclude at an EU level, that the impact of the milk quota scenarios examined on the volume of beef produced is very modest. Under both Scenario 1 and Scenario 2 EU beef production is less than 1 percent higher relative to the Baseline in 2016.

With such a small impact on the supply of beef at an EU level the impact on market clearing prices of beef in the EU when compared with the Baseline are also projected to be marginal. By 2016 under both Scenario 1 and Scenario 2 the change in the EU cattle reference price is less than 1 percent. Under both Scenario 1 and Scenario 2 cattle prices are projected to be slightly lower than under the Baseline. With such small impacts on the price of cattle, the cross price effects on the prices of other meats are negligible. Total feed use of cereals in 2016 under Scenario 1 is only 0.7 percent higher than under the Baseline, with the increase under Scenario 2 a little higher at slightly less than 1 percent. As a result the impact of the scenarios analysed on cereal prices at an EU level are also negligible.

Ireland: Other Commodities

Part of the reason why the impact of the milk quota scenarios appear relatively trivial at an EU level is that, many MS changes in production are in opposing directions and offset each other. By 2016 aggregate EU milk production expands in Scenario 2 by just 4 percent relative to the Baseline, but at MS level the changes are more dramatic. The impact of Scenario 2 on the Irish dairy sector (described above) illustrates this point. Under Scenario 2 Irish milk production is projected to be 18 percent higher relative to the Baseline by 2016. Such large increases in Irish milk production are largely offset by reductions in the total milk output of other MS. In Ireland the sizable increase in the volume of milk produced might be expected to have a non-trivial impact on the Irish cattle and beef sector, however, this is not the case.

With Irish milk production increasing under both Scenario 1 and Scenario 2, by 2016 Irish dairy cow numbers are projected to be 12 percent higher in Scenario 1 and 17 percent higher in Scenario 2 when compared with the Baseline. Irish suckler cow numbers decline when compared with the Baseline. EU cattle prices are not greatly altered under both Scenario 1 and Scenario 2 relative to the Baseline. Consequently there is no price incentive to significantly reduce suckler cow numbers in Ireland. The total change in beef cow numbers under both scenarios when compared with the Baseline is not very large. Under Scenario 2, 2016 suckler cow numbers are 3 percent lower in than

under the Baseline, while suckler cow numbers under Scenario 1 are a little less than 2 percent lower than under the Baseline in the same year.

By 2016 under Scenario 2 total cattle slaughtered are projected to increase by almost 3 percent relative to the Baseline, while total live exports are projected to increase by almost 8 percent when compared to the Baseline. With the increases in dairy cow numbers and projected reductions in beef cow numbers under both of the scenarios, by 2016 average cattle slaughter weights are slightly more than 1 percent lower under both Scenario 1 and Scenario 2. The drop in slaughter weights partially offsets the positive impact of the increase in overall cow numbers on total cattle slaughter.

The changes in total numbers of cattle slaughtered under Scenario 1 and Scenario 2 may appear to be small by comparison with the large positive changes in dairy cow numbers and small decreases projected in suckler cow numbers. The explanation for this seemingly anomalous result is that over the entire projection period, the growth in the dairy cow herd absorbs considerable amounts of animals as replacements and additional cows when compared with the Baseline. By the end of the period dairy cow numbers in Ireland are still growing. This strong growth in the dairy cow herd reduces considerably the volumes of heifers available for feeding and slaughter in the cattle system.

Under each of the milk quota reform scenarios overall Irish beef production changes only slightly by comparison with the Baseline. The volume of beef output in 2016 under Scenario 1 is more or less equal to that under the Baseline with decreases in average slaughter weights offsetting any increase in disposals. Under Scenario 2 Irish beef output is projected to be 1.6 percent higher than under the Baseline.

The value of overall beef sector output under Scenario 1 and Scenario 2 is higher than under the Baseline, since the small decrease in the price of cattle is offset by the increases in the volume of beef produced. Compared to the Baseline, beef sector output is 2 percent higher under Scenario 1 and 4 percent higher under Scenario 2.

The changes in the value of agricultural output in other sub-sectors of Irish agriculture, under Scenarios 1 and 2, are smaller than the impacts on the beef sector. The value of the Irish cereal sector, under both Scenario 1 and 2, increases slightly due to the marginally higher grain prices that result from the increased feed demand from the dairy sector in the EU.

Ireland: Output Input and Income

The overall change in the value of agricultural output, other than in the dairy sector, is very small. Under Scenario 1 the total value of agricultural output (excluding milk), is just over 1 percent higher than under the Baseline. Under Scenario 2 the increase in the total value of agricultural output (excluding milk) is just over 3 percent higher when compared to the Baseline.

Under Scenario 1 and Scenario 2 the projected volume of inputs used by Irish agriculture and the expenditure on these inputs increases when compared with the Baseline. The increased volumes of inputs used are driven by the large increases in the numbers of dairy cows under Both Scenario 1 and Scenario 2 and by some projected increases in input use per head.

Overall, input expenditure under Scenario 1 is, by 2016, projected to be 1.4 percent higher than under the Baseline, while under Scenario 2 input expenditure is projected to be 3.6 percent higher. The increased expenditure is largely driven by large increases in spending on purchased feed, fertilisers and services such as veterinary services. The projected increase in expenditure on purchased feed is due to both increases in total feed per head, which are necessary to achieve the projected increases in yield per cow, and the projected increase in numbers of dairy cows under both Scenario 1 and Scenario 2. Expenditure on purchased feed in 2016 under Scenario 1 is projected to be over 3 percent higher than under the Baseline. While in Scenario 2 expenditure on feed is projected to almost 7 percent higher.

Under both Scenario 1 and Scenario 2 the projected increases in expenditure on inputs are insufficient to offset the gains in agricultural sector revenue that are projected to arise due to increased milk production. By 2016 Irish agricultural sector income is projected to be over 4 percent higher under Scenario 1 when compared with the Baseline. Under Scenario 2, by 2016 agricultural sector income in Ireland is projected to be over 6 percent higher than under the Baseline.

6 Conclusions

The balance of opinion suggests that the EU milk quota will not persist beyond 2015. This report has examined two options relating to the removal of the EU milk quota, varying the rate of quota increase in advance of its removal. Even so it is possible to draw a number of conclusions that would also apply in the case of other rates of quota removal. These points are summarised below.

- Aggregate EU Milk production will not expand in line with a large quota increase
- Expansion of milk production in some EU MS tends to be offset by contraction elsewhere
- Other than Poland, large EU MS will not see any major increase in their milk production
- Ireland would seem to be well positioned to expand its milk production when quotas are relaxed or removed
- High feed costs have improved the competitive position of Ireland relative to feed grain based milk producers in the EU
- A slow rate of increase in the milk quota will depress milk prices while still constraining Irish milk production over the short term.
- A more rapid rate of quota increase will make the milk quota largely redundant (even before its abolition) in much of the EU and will allow Ireland the scope to increase production and reach its potential more quickly

The caveats set out in our baseline analysis (Binfield et al 2007) relating to WTO reform, exchange rates and the impact of weather vents on agricultural markets, apply equally to the scenarios analysed.

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Annex I Output Input and Income Tables

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
	Euro millions													
Livestock	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: <i>cattle</i>	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%
<i>pigs</i>	297	292	321	315	310	310	294	293	294	292	281	280	279	-12.9%
<i>sheep and lambs</i>	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: <i>milk</i>	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	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%
Total 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%
Feedingstuffs	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.

Table A-I-2: Output Input and Income in Agriculture (Quota Reform Scenario 1)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 v 2006
	Euro millions													
Livestock	2,215	2,274	2,408	2,438	2,426	2,459	2,396	2,395	2,413	2,399	2,343	2,341	2,364	-1.9%
of which: <i>cattle</i>	1,346	1,413	1,501	1,540	1,535	1,564	1,519	1,509	1,519	1,506	1,475	1,467	1,487	-0.9%
<i>pigs</i>	297	292	321	315	310	311	294	294	295	292	282	282	281	-12.4%
<i>sheep and lambs</i>	200	192	191	181	173	175	173	176	178	177	173	173	171	-10.3%
Livestock Products	1,418	1,379	1,372	1,846	1,707	1,507	1,397	1,417	1,431	1,440	1,444	1,512	1,578	15.1%
of which: <i>milk</i>	1,418	1,337	1,329	1,801	1,663	1,461	1,350	1,371	1,385	1,393	1,398	1,467	1,533	15.3%
Crops	1,323	1,391	1,465	1,443	1,422	1,398	1,404	1,404	1,406	1,412	1,415	1,421	1,427	-2.6%
Total Cereals(Barley, Wheat and Oats)	181	126	160	228	214	196	208	209	210	212	212	212	211	32.2%
Root Crops(Potatoes and Sugarbeet)	167	146	107	81	88	91	92	93	94	95	97	98	99	-7.2%
Forage Plants-Output	683	785	860	793	776	763	755	749	744	742	740	740	740	-14.0%
Goods output producer prices	4,956	5,045	5,245	5,727	5,555	5,363	5,196	5,215	5,250	5,251	5,202	5,275	5,369	2.4%
Contract Work	261	270	276	285	280	276	275	275	276	278	280	283	286	3.8%
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	5,813	5,618	5,450	5,469	5,505	5,507	5,461	5,536	5,635	2.4%
Intermediate consumption	3,443	3,583	3,812	3,952	3,753	3,641	3,686	3,721	3,708	3,711	3,675	3,701	3,683	-3.4%
Feedingstuffs	904	875	970	1,113	957	878	883	889	882	870	851	850	848	-12.6%
Fertilisers	358	363	380	389	384	376	379	383	385	388	388	392	391	3.1%
Energy & Lubricants	237	284	305	309	307	307	328	340	340	346	343	352	345	13.1%
Forage Plants-Input	673	772	846	775	758	744	735	729	724	722	720	719	720	-14.9%
Contract Work-Input	261	270	276	285	280	276	275	275	276	278	280	283	286	3.8%
Gross value added basic prices	2,647	2,147	1,691	2,038	2,060	1,976	1,764	1,748	1,797	1,796	1,786	1,835	1,952	15.5%
Fixed capital consumption	654	667	686	672	663	658	656	662	673	687	705	725	738	7.6%
Net value added basic prices	1,993	1,480	1,005	1,366	1,397	1,318	1,108	1,087	1,125	1,109	1,081	1,110	1,214	20.8%
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	3,329	3,278	3,079	3,057	3,095	3,079	3,051	3,080	3,184	11.7%
Compensation of employees	429	409	422	443	459	472	483	494	506	518	529	541	556	31.8%
Operating surplus	2,159	2,763	2,429	2,785	2,870	2,806	2,596	2,562	2,589	2,561	2,522	2,539	2,628	8.2%

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

Table A-I-3: Output Input and Income in Agriculture (Quota Reform Scenario 2)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016 v 2006
	Euro millions													
Livestock	2,215	2,274	2,408	2,438	2,426	2,467	2,408	2,415	2,443	2,437	2,386	2,386	2,387	-0.9%
of which: <i>cattle</i>	1,346	1,413	1,501	1,540	1,535	1,571	1,530	1,529	1,549	1,544	1,521	1,517	1,517	1.1%
<i>pigs</i>	297	292	321	315	310	311	295	294	296	293	283	282	281	-12.3%
<i>sheep and lambs</i>	200	192	191	181	173	175	173	176	177	175	169	167	164	-13.9%
Livestock Products	1,418	1,379	1,372	1,846	1,707	1,523	1,429	1,479	1,525	1,567	1,606	1,650	1,691	23.3%
of which: <i>milk</i>	1,418	1,337	1,329	1,801	1,663	1,477	1,383	1,433	1,479	1,521	1,561	1,604	1,646	23.8%
Crops	1,323	1,391	1,465	1,443	1,422	1,398	1,405	1,404	1,407	1,412	1,414	1,418	1,423	-2.8%
Total Cereals(Barley, Wheat and Oats)	181	126	160	228	214	197	209	209	210	212	211	210	208	30.2%
Root Crops(Potatoes and Sugarbeet)	167	146	107	81	88	91	92	92	94	95	96	97	98	-8.9%
Forage Plants-Output	683	785	860	793	776	763	755	749	745	742	741	740	741	-13.9%
Goods output producer prices	4,956	5,045	5,245	5,727	5,555	5,387	5,242	5,298	5,374	5,415	5,407	5,454	5,501	4.9%
Contract Work	261	270	276	285	280	276	275	275	276	278	280	283	287	3.9%
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	5,813	5,642	5,496	5,552	5,629	5,672	5,666	5,716	5,767	4.8%
Intermediate consumption	3,443	3,583	3,812	3,952	3,753	3,647	3,700	3,739	3,736	3,758	3,744	3,777	3,762	-1.3%
Feedingstuffs	904	875	970	1,113	957	882	891	901	899	895	884	882	878	-9.5%
Fertilisers	358	363	380	389	384	376	379	384	387	391	392	396	394	3.9%
Energy & Lubricants	237	284	305	309	307	307	328	340	341	347	344	354	347	13.8%
Forage Plants-Input	673	772	846	775	758	744	735	729	725	722	720	720	720	-14.8%
Contract Work-Input	261	270	276	285	280	276	275	275	276	278	280	283	287	3.9%
Gross value added basic prices	2,647	2,147	1,691	2,038	2,060	1,995	1,796	1,813	1,893	1,914	1,922	1,940	2,005	18.6%
Fixed capital consumption	654	667	686	672	663	658	656	662	674	689	707	728	741	8.0%
Net value added basic prices	1,993	1,480	1,005	1,366	1,397	1,337	1,139	1,151	1,219	1,225	1,215	1,212	1,264	25.8%
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	3,329	3,297	3,110	3,121	3,190	3,195	3,185	3,182	3,234	13.4%
Compensation of employees	429	409	422	443	459	472	483	495	507	519	531	543	558	32.2%
Operating surplus	2,159	2,763	2,429	2,785	2,870	2,825	2,626	2,626	2,683	2,676	2,654	2,639	2,676	10.2%

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

Table A-I-4: Percentage Change from Baseline (Quota Reform Scenario 1)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	Percentage change (scenario relative to Baseline)												
Livestock	0.0	0.0	0.0	0.4	0.3	0.5	0.1	-0.3	-0.3	-0.5	-0.6	-0.5	0.7
of which: <i>cattle</i>	0.0	0.0	0.0	0.5	0.3	0.6	-0.1	-0.7	-0.8	-1.0	-1.2	-1.2	0.8
<i>pigs</i>	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.5	0.5
<i>sheep and lambs</i>	0.0	0.0	0.0	0.2	0.6	1.0	1.0	1.4	1.6	1.6	1.4	1.3	0.8
Livestock Products	0.0	0.0	0.0	-0.3	0.3	0.5	-1.4	-1.4	-1.3	-1.3	-1.3	3.1	7.1
of which: <i>milk</i>	0.0	0.0	0.0	-0.4	0.3	0.5	-1.5	-1.4	-1.4	-1.3	-1.4	3.2	7.4
Crops	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.3	0.4	0.4
Total Cereals	0.0	0.0	0.0	0.1	0.2	0.3	0.8	0.9	1.1	1.3	1.5	2.0	2.2
Root Crops	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.6	0.8	1.0
Forage Plants-Output	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Goods output producer prices	0.0	0.0	0.0	0.0	0.2	0.4	-0.3	-0.5	-0.5	-0.5	-0.6	0.7	2.4
Contract Work	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Subsidies less taxes on products	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
Ag. Output basic prices	0.0	0.0	0.0	0.0	0.2	0.4	-0.3	-0.4	-0.4	-0.5	-0.5	0.7	2.3
Intermediate consumption	0.0	0.0	0.0	0.1	0.2	0.2	-0.1	0.0	0.1	0.0	-0.2	0.1	0.4
Feedingstuffs	0.0	0.0	0.0	0.2	0.5	0.6	0.5	0.5	0.6	0.4	0.3	1.3	2.1
Fertilisers	0.0	0.0	0.0	0.0	0.0	0.1	0.0	-0.1	-0.1	-0.1	-0.1	0.1	0.4
Energy & Lubricants	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1
Forage Plants-Input	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Contract Work-Input	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Gross value added basic prices	0.0	0.0	0.0	0.0	0.3	0.6	-0.8	-1.4	-1.5	-1.4	-1.3	2.0	6.0
Fixed capital consumption	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.1
Net value added basic prices	0.0	0.0	0.0	0.0	0.5	0.9	-1.3	-2.2	-2.3	-2.3	-2.0	3.3	10.0
Subsidies less taxes on production	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
Factor income	0.0	0.0	0.0	0.0	0.2	0.4	-0.5	-0.8	-0.9	-0.8	-0.7	1.2	3.6
Compensation of employees	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.1
Operating surplus	0.0	0.0	0.0	0.0	0.2	0.4	-0.6	-0.9	-1.0	-1.0	-0.9	1.4	4.4

Source: FAPRI-Ireland GOLD Model (2007).

Table A-I-5: Percentage Change from Baseline (Quota Reform Scenario 2)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Percentage change (scenario relative to Baseline)													
Livestock	0.0	0.0	0.0	0.4	0.3	0.8	0.6	0.6	0.9	1.1	1.2	1.4	1.6
of which: <i>cattle</i>	0.0	0.0	0.0	0.5	0.3	1.1	0.6	0.6	1.2	1.5	1.8	2.2	2.8
<i>pigs</i>	0.0	0.0	0.0	0.1	0.1	0.3	0.4	0.4	0.6	0.6	0.6	0.6	0.6
<i>sheep and lambs</i>	0.0	0.0	0.0	0.2	0.6	1.1	1.1	1.3	0.9	0.1	-0.9	-2.0	-3.2
Livestock Products	0.0	0.0	0.0	-0.3	0.3	1.6	0.9	2.9	5.2	7.4	9.7	12.5	14.8
of which: <i>milk</i>	0.0	0.0	0.0	-0.4	0.3	1.6	0.9	3.0	5.3	7.7	10.1	12.9	15.3
Crops	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1
Total Cereals(Barley, Wheat and Oats)	0.0	0.0	0.0	0.1	0.2	0.4	1.1	1.2	1.3	1.3	1.3	1.0	0.7
Root Crops(Potatoes and Sugarbeet)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.2	-0.5	-0.8
Forage Plants-Output	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2
Goods output producer prices	0.0	0.0	0.0	0.0	0.2	0.8	0.6	1.1	1.9	2.6	3.3	4.2	4.9
Contract Work	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2
Subsidies less taxes on products	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
Ag. Output basic prices	0.0	0.0	0.0	0.0	0.2	0.8	0.5	1.1	1.8	2.5	3.2	4.0	4.7
Intermediate consumption	0.0	0.0	0.0	0.1	0.2	0.4	0.3	0.5	0.9	1.3	1.7	2.1	2.6
Feedingstuffs	0.0	0.0	0.0	0.2	0.5	1.0	1.4	1.8	2.6	3.3	4.1	5.0	5.8
Fertilisers	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.5	0.7	0.9	1.1	1.3
Energy & Lubricants	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	-0.1	0.0	0.1	0.2	0.4	0.5
Forage Plants-Input	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2
Contract Work-Input	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2
Gross value added basic prices	0.0	0.0	0.0	0.0	0.3	1.6	0.9	2.3	3.8	5.0	6.3	7.8	8.9
Fixed capital consumption	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.3	0.4
Net value added basic prices	0.0	0.0	0.0	0.0	0.5	2.3	1.5	3.6	5.9	8.0	10.1	12.8	14.5
Subsidies less taxes on production	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
Factor income	0.0	0.0	0.0	0.0	0.2	0.9	0.5	1.3	2.2	2.9	3.6	4.5	5.2
Compensation of employees	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4
Operating surplus	0.0	0.0	0.0	0.0	0.2	1.1	0.6	1.5	2.6	3.5	4.3	5.4	6.3

Source: FAPRI-Ireland GOLD Model (2007).

Annex II

Quota Reform Scenario 1: Commodity Supply & Use Projections

**Table A-II-1
Quota Reform Scenario 1: EU 25 Cereal Supply & 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	23,728	23,623	23,416	23,729	23,737	23,794	23,811	23,909	9.5%
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	8.5%
	million tonnes													
Production	137	124	117	117	133	132	133	133	135	136	137	138	139	18.8%
Beginning stocks	14	29	30	25	23	24	26	26	26	27	27	27	27	-8.3%
Imports	7	7	7	5	6	6	6	6	6	6	6	6	6	-5.2%
Total supply	159	160	154	148	162	162	164	164	168	169	170	171	173	12.5%
Domestic use	116	117	116	115	122	125	127	127	129	129	130	131	133	14.7%
Feed	50	52	52	51	55	56	56	55	56	56	57	57	58	11.0%
Other	65	65	64	64	68	70	71	71	72	73	74	74	75	17.8%
Exports	14	14	13	10	15	11	11	11	12	12	13	12	13	-1.2%
Ending stocks	29	30	25	23	24	26	26	26	27	27	27	27	28	9.0%
Loss, statistical disc.	0	0	0	0	0	0	0	0	0	0	0	0	0	
Net exports	6	7	6	5	9	5	5	5	6	6	6	6	6	3.5%
	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	134	141	145	141	143	141	140	139	-1.3%

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	14,068	13,713	13,428	13,257	13,314	13,286	13,234	13,166	-0.8%
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%
	tonnes per hectare													
Production	61	53	54	57	60	61	60	60	60	60	61	61	61	14.6%
Beginning stocks	12	16	15	12	11	10	11	12	12	12	12	12	12	-15.4%
Imports	0	0	0	0	0	0	0	0	0	0	0	0	0	-21.1%
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	56	55	55	55	56	56	56	10.1%
Feed	40	36	39	41	41	42	42	42	42	42	42	42	43	8.9%
Other	12	12	12	12	12	13	13	13	13	13	13	14	14	14.2%
Exports	7	6	6	5	7	5	5	5	5	5	5	5	5	-4.6%
Ending stocks	16	15	12	11	10	11	12	12	12	12	12	12	13	5.0%
Net exports	6	6	5	4	7	5	5	5	5	5	5	5	5	-3.5%
	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	122	125	125	125	123	122	121	-3.6%
Maize for grain														
	thousand hectares													
Area harvested	6,488	5,978	5,677	5,585	5,833	5,943	6,011	6,063	6,029	6,021	6,036	6,057	6,071	6.9%
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	15.7%
	million tonnes													
Production	55	51	43	41	48	49	50	51	51	51	52	52	53	23.7%
Beginning stocks	13	17	18	15	9	10	12	13	14	14	15	15	16	-15.4%
Imports	2	3	4	4	4	4	4	4	4	4	4	4	4	1.4%
Total supply	70	70	65	60	61	64	66	68	69	70	71	72	73	11.3%
Domestic use	52	49	49	50	50	50	51	52	52	53	53	54	54	10.8%
Feed	42	40	39	41	39	39	41	41	41	42	42	42	43	9.0%
Other	9	9	10	9	10	10	11	11	11	11	11	11	11	17.9%
Exports	2	2	2	1	2	2	2	2	3	3	3	3	3	50.5%
Ending stocks	17	18	15	9	10	12	13	14	14	15	15	16	16	8.3%
Net exports	0	-1	-2	-3	-3	-2	-2	-2	-2	-2	-2	-2	-1	-36.9%
	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	162	148	150	149	148	149	146	145	144	2.0%

Table A-II-2
Quota Reform Scenario 1: Irish Cereal Supply & 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														%		
Wheat area harvested	102.7	94.7	83.0	77.8	85.5	thousand hectares		87.4	90.0	92.2	92.2	91.7	91.4	90.9	90.0	8.4%
Wheat yield	9.7	8.4	9.2	9.2	9.8	tonnes per hectare		10.2	10.4	10.0	9.9	10.0	10.0	10.0	9.9	7.5%
Production	1,000.0	791.0	767.7	718.0	842.2	thousand tonnes		893.5	931.8	921.4	914.5	913.1	911.1	905.8	895.3	16.6%
Beginning stocks	39.5	97.2	41.2	63.4	52.3	56.3	61.9	67.4	68.8	68.4	68.4	67.6	66.5	65.1		58.0%
Imports	850.0	907.0	701.1	641.1	593.6	592.3	558.2	573.9	587.1	595.6	587.1	595.6	627.7	609.7		-13.0%
Total supply	1,889.5	1,795.2	1,510.0	1,422.5	1,488.1	1,542.2	1,552.0	1,562.7	1,570.4	1,577.1	1,570.4	1,577.1	1,584.2	1,600.1	1,570.1	4.0%
Domestic use	1,470.3	1,500.0	1,198.3	1,111.8	1,173.4	1,221.8	1,226.2	1,235.5	1,243.6	1,251.1	1,259.3	1,276.6	1,248.7			5.1%
Feed	1,168.0	1,171.0	859.7	754.9	775.5	792.9	778.1	771.9	764.0	755.0	745.2	745.3	744.3			-13.4%
Other	302.3	329.0	328.6	356.9	397.9	428.9	448.1	463.6	479.6	496.1	514.1	531.3	504.4			53.5%
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	61.9	67.4	68.8	68.4	67.6	66.5	65.1	63.0			-0.6%
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%
Prices	Jan.-Dec. average															
Feed wheat	107.8	104.8	119.8	167.9	134.2	euro/tonne		119.2	122.3	124.1	124.2	124.2	122.9	122.4	121.9	1.8%

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														%		
Barley area harvested	184	165	164	160	178	thousand hectares		176	172	172	174	176	177	179	181	10.2%
Barley yield	7.2	6.2	6.7	6.9	7.3	tonnes per hectare		7.4	7.5	7.3	7.3	7.3	7.3	7.3	7.3	8.8%
Production	1,327	1,025	1,096	1,101	1,293	thousand tonnes		1,312	1,293	1,257	1,262	1,279	1,293	1,305	1,314	19.9%
Beginning stocks	118	162	97	111	120	135	141	141	138	137	138	137	138	139	140	44.5%
Imports	44	100	206	124	66	78	83	102	102	96	90	92	72			-65.1%
Total supply	1,489	1,287	1,399	1,336	1,478	1,525	1,517	1,501	1,502	1,512	1,521	1,536	1,526			9.1%
Domestic use	1,243	1,107	1,210	1,057	1,125	1,179	1,175	1,180	1,184	1,186	1,188	1,204	1,173			-3.1%
Feed	999	904	914	769	797	822	801	792	782	769	755	756	754			-17.5%
Other	244	203	296	288	328	357	374	388	402	417	433	448	419			41.4%
Exports	84	83	78	160	218	206	200	182	181	188	194	192	212			172.3%
Ending stocks	162	97	111	120	135	141	141	138	137	138	139	140	141			27.0%
Market prices	euro per tonne, Jan.-Dec.															
Feed barley	92.7	107.2	111.8	157.8	124.0	109.0	112.2	113.9	114.1	114.1	112.8	112.2	111.8			-0.1%
Malt barley	103.0	119.1	129.6	175.5	141.8	126.8	130.0	131.7	131.9	131.8	130.5	130.0	129.5			0.0%

Table A-II-3
Quota Reform Scenario 1: EU 25 Livestock and Meat Supply & 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	82.81	82.33	81.76	81.10	80.49	79.92	79.36	78.91	-8.1%
Dairy cows	23.96	23.39	22.97	22.35	22.17	22.01	21.93	21.61	21.29	21.02	20.76	20.51	20.44	-11.0%
Suckler cows	12.00	12.03	11.98	11.98	11.32	11.32	11.47	11.45	11.44	11.50	11.54	11.57	11.60	-3.1%
Cattle slaughter	29.07	28.10	27.90	27.94	27.34	26.89	26.98	26.79	26.50	26.29	26.10	25.84	25.71	-7.8%
Slaughter weight	278.64	279.47	285.19	282.38	286.66	286.15	285.47	285.65	286.30	286.46	286.56	286.89	286.91	0.6%
Pigs														
Beginning inventories	152.90	151.23	151.69	154.32	149.90	146.42	153.93	156.35	153.79	153.30	154.33	154.26	153.98	1.5%
Sows	15.20	14.91	14.90	14.97	13.52	14.27	14.95	14.62	14.37	14.47	14.51	14.38	14.39	-3.4%
Pig slaughter	241.19	238.86	242.41	243.86	234.76	236.94	247.18	247.56	244.34	244.79	245.98	245.61	245.77	1.4%
Slaughter weight	88.09	89.05	88.40	87.66	89.37	89.82	89.11	89.24	89.74	89.89	89.90	90.18	90.40	2.3%
Sheep														
Beginning inventories	89.57	89.24	87.17	86.37	82.06	81.19	81.93	81.84	81.46	81.24	80.96	80.58	80.37	-7.8%
Ewes	66.62	65.59	63.27	62.36	58.37	58.73	59.66	59.53	59.30	59.24	59.08	58.80	58.71	-7.2%
Sheep slaughter	64.69	64.62	64.35	65.97	59.33	58.39	60.11	60.29	59.89	59.88	59.80	59.36	59.27	-7.9%
Slaughter weight	16.45	16.47	16.27	16.07	16.14	16.28	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	7,838	7,694	7,702	7,653	7,587	7,530	7,480	7,414	7,376	-7.3%
Non-EU imports	584	599	540	561	610	662	620	639	677	704	689	731	749	38.7%
Domestic use	8,339	8,301	8,379	8,363	8,365	8,276	8,226	8,201	8,186	8,160	8,089	8,073	8,054	-3.9%
Non-EU exports	400	150	117	87	81	78	92	86	74	71	75	69	67	-42.8%
Stock change	-55	0	0	3	2	2	5	5	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	20,981	21,281	22,025	22,093	21,926	22,003	22,115	22,149	22,216	3.7%
Non-EU imports	20	21	22	22	24	22	22	22	22	22	22	22	22	0.0%
Domestic use	19,823	19,904	19,980	20,070	19,747	20,002	20,652	20,723	20,577	20,659	20,769	20,816	20,874	4.5%
Non-EU exports	1,439	1,386	1,470	1,337	1,276	1,287	1,355	1,381	1,377	1,361	1,353	1,350	1,358	-7.6%
Stock change	5	0	0	-9	-18	13	40	11	-5	5	15	5	5	
Poultry														
Production	10,273	9,943	10,094	10,012	10,085	10,309	10,296	10,366	10,518	10,626	10,369	10,448	10,577	4.8%
Non-EU imports	519	642	542	575	578	579	580	582	584	585	586	588	591	9.0%
Domestic use	9,908	10,092	9,895	9,884	9,888	10,078	10,045	10,112	10,256	10,352	10,685	10,719	10,806	9.2%
Non-EU exports	883	492	740	739	764	792	819	831	842	853	845	842	857	-51.8%
Stock change	1	0	0	-36	11	17	12	4	3	6	25	5	5	
Sheep meat														
Production	1,064	1,064	1,047	1,060	958	950	983	989	986	989	990	984	985	-5.9%
Non-EU imports	264	280	273	275	281	284	282	284	288	290	291	294	296	8.5%
Domestic use	1,320	1,335	1,315	1,326	1,234	1,229	1,259	1,268	1,268	1,273	1,275	1,273	1,276	-2.9%
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	15.7	15.6	15.4	15.4	15.3	-6.0%
Pig meat	39.1	39.0	38.9	39.0	38.2	38.6	39.7	39.8	39.4	39.5	39.7	39.7	39.8	2.1%
Poultry meat	19.5	19.8	19.3	19.2	19.1	19.4	19.3	19.4	19.6	19.8	20.4	20.4	20.6	6.8%
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	77.9	78.0	78.1	1.3%
Prices														
euro per 100 kilograms														
Cattle reference	270	293	316	312	320	325	316	320	327	329	326	329	330	4.2%
Pig meat reference	138	139	145	153	167	161	142	144	151	151	145	147	147	1.4%
Chicken	148	149	151	181	173	166	164	166	168	167	152	155	155	2.5%
Sheep meat reference	409	389	417	418	437	440	424	424	429	428	423	427	427	2.3%
Beef intervention	156	156	156	156	156	156	156	156	156	156	156	156	156	0.0%

Table A-II-4
Quota Reform Scenario 1: Irish Livestock Supply & 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	5.82	5.78	5.74	5.68	5.62	5.55	5.49	5.42	-12.4%
Dairy cows	1.14	1.12	1.10	1.09	1.05	1.06	1.05	1.04	1.03	1.01	1.00	0.99	1.03	-6.6%
Suckler cows	1.14	1.15	1.15	1.13	1.12	1.11	1.11	1.09	1.08	1.06	1.05	1.03	1.02	-11.3%
Other cattle	3.94	3.94	3.94	3.79	3.75	3.65	3.62	3.60	3.58	3.54	3.51	3.47	3.37	-14.4%
Calf crop	2.13	2.12	2.10	2.07	2.03	2.03	2.02	1.99	1.96	1.94	1.91	1.89	1.92	-9.0%
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	-6.7%
Total supply	8.36	8.34	8.30	8.07	7.96	7.85	7.81	7.73	7.65	7.56	7.47	7.38	7.34	-11.6%
Cattle slaughter	1.82	1.69	1.78	1.76	1.73	1.67	1.66	1.65	1.63	1.61	1.59	1.58	1.52	-14.3%
Cow slaughter	0.34	0.34	0.36	0.35	0.35	0.33	0.34	0.33	0.32	0.31	0.30	0.29	0.29	-18.3%
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	1.33	1.32	1.32	1.31	1.30	1.29	1.28	1.23	-13.3%
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	0.22	-13.0%
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	-40.2%
Ending inventories	6.21	6.19	6.00	5.92	5.82	5.78	5.74	5.68	5.62	5.55	5.49	5.42	5.43	-9.5%
Slaughter weight	310.4	324.0	322.7	323.8	320.7	321.8	322.2	320.5	320.2	320.3	319.9	319.4	318.1	-1.4%
Live cattle exports	130	185	251	215	224	230	232	229	225	221	218	214	218	-13.0%
Calves	37	60	112	88	82	81	80	77	72	69	65	62	65	-41.4%
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	1.66	1.54	1.48	1.44	1.39	1.37	-18.2%
Sows	0.176	0.179	0.174	0.167	0.159	0.163	0.168	0.166	0.161	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	1.31	1.28	1.24	1.21	-19.2%
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	-0.04	-0.01	0.01	-0.01	-0.02	-0.02	-0.01	-0.01	-0.01	-126.1%
Total supply	4.98	4.85	4.79	4.53	4.23	4.44	4.70	4.59	4.33	4.24	4.20	4.12	4.09	-14.6%
Pig slaughter	2.73	2.68	2.69	2.62	2.27	2.33	2.60	2.62	2.45	2.41	2.41	2.36	2.35	-12.6%
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	-15.6%
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	1.66	1.54	1.48	1.44	1.39	1.37	1.36	-16.2%
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	76.7	-1.3%
Sheep	million head													
Beginning inventories	4.85	4.56	4.26	3.83	3.47	3.39	3.42	3.44	3.42	3.39	3.34	3.28	3.23	-24.0%
Ewes	3.68	3.47	3.21	3.04	2.70	2.69	2.76	2.81	2.82	2.81	2.78	2.74	2.72	-15.3%
Other sheep	1.17	1.09	1.05	0.79	0.77	0.70	0.66	0.63	0.61	0.58	0.56	0.54	0.52	-50.8%
Lamb crop	3.74	3.53	3.26	3.15	2.80	2.79	2.87	2.92	2.93	2.92	2.89	2.85	2.82	-13.4%
Sheep imports	0.32	0.28	0.25	0.26	0.24	0.27	0.27	0.27	0.27	0.27	0.27	0.26	0.27	6.5%
Total supply	8.91	8.36	7.77	7.23	6.52	6.44	6.56	6.64	6.62	6.58	6.50	6.39	6.32	-18.6%
Sheep slaughter	3.57	3.61	3.49	3.38	2.79	2.70	2.78	2.88	2.89	2.90	2.89	2.83	2.87	-17.8%
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	-28.1%
Destruction, death loss	0.72	0.39	0.35	0.30	0.27	0.26	0.26	0.27	0.27	0.26	0.26	0.25	0.25	-29.4%
Ending inventories	4.56	4.26	3.83	3.47	3.39	3.42	3.44	3.42	3.39	3.34	3.28	3.23	3.13	-18.1%
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
Quota Reform Scenario 1: Irish Meat Supply & 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	555	536	536	529	523	517	510	504	485	-15.2%
Imports	30	32	33	37	38	38	39	39	39	39	40	40	40	20.7%
Domestic use	94	90	89	92	94	96	97	98	98	98	99	99	100	11.5%
Exports	499	488	516	514	498	478	478	470	464	458	451	444	425	-17.6%
Intervention stocks	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pig meat														
Production	206	205	209	202	175	180	200	201	188	185	185	181	180	-13.7%
Imports	59	58	53	57	49	51	59	59	54	53	54	52	51	-3.8%
Domestic use	146	150	150	160	164	167	170	173	174	175	175	176	176	17.5%
Exports	119	113	109	101	60	64	89	87	68	62	64	57	55	-49.5%
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	76.7%
Domestic use	65	86	78	89	93	93	92	94	98	101	104	108	112	43.8%
Exports	78	52	21	9	8	10	11	11	11	12	12	12	12	-43.5%
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	76.7%
Domestic use	24	33	38	27	25	27	28	29	31	33	35	36	38	0.7%
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	56	54	56	58	58	58	58	57	58	-17.8%
Imports	3	3	3	3	3	3	3	3	3	3	3	3	3	0.0%
Domestic use	20	18	19	20	20	19	19	20	20	20	20	20	20	5.7%
Exports	55	58	54	51	40	38	40	41	41	41	41	40	40	-25.2%
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	-2.1%
Pig meat	36	36	36	38	38	38	38	38	38	38	38	37	37	3.2%
Broiler meat	16	21	19	21	21	21	21	21	21	22	22	23	23	26.3%
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	-7.2%
Total	86	91	89	91	92	92	92	92	92	93	93	93	93	4.7%
Market prices														
	euro per 100 kilograms													
Cattle reference	125.3	121.6	129.7	127.5	130.8	132.9	129.3	131.0	134.0	134.5	133.5	134.7	135.0	4.1%
Pig meat	137.0	134.4	139.9	153.2	162.8	157.2	139.4	140.3	148.2	148.3	143.6	145.5	145.8	4.2%
Sheep meat representative	357.6	336.5	339.3	355.6	373.7	375.6	361.2	361.3	365.6	365.0	360.9	364.1	364.2	7.3%
	euro per pair													
Chicken	3.26	3.16	3.12	3.41	3.29	3.17	3.12	3.16	3.19	3.18	2.92	2.98	2.97	-4.7%

Table A-II-6
Quota Reform Scenario 1: EU 25 Dairy Commodity Supply & 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	22,110	21,977	21,691	21,387	21,113	20,847	20,596	20,454	20,331	-11.5%
Production/cow	5,928	6,084	6,095	6,346	6,516	6,604	6,642	6,711	6,788	6,862	6,938	7,039	7,109	16.6%
Fluid milk														
Cow's milk Production	142.04	142.30	140.00	140.91	144.06	145.13	144.08	143.52	143.31	143.05	142.90	143.97	144.53	3.2%
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	39.76	40.12	40.15	39.94	39.76	39.58	39.41	39.35	39.22	-1.1%
Manufacturing use	99.94	99.94	98.97	98.99	102.18	102.97	101.93	101.67	101.74	101.75	101.87	103.18	103.99	5.1%
Feed use, net exports	6.46	6.52	5.46	6.38	6.25	6.18	6.15	6.07	5.98	5.89	5.81	5.64	5.53	1.2%
Cheese														
Production	8,333	8,481	8,652	8,789	9,017	9,208	9,304	9,340	9,393	9,443	9,494	9,626	9,712	12.2%
Imports	106	88	90	88	89	93	96	98	100	102	104	106	108	19.6%
Domestic use	7,967	8,091	8,231	8,409	8,512	8,775	8,908	8,949	9,001	9,056	9,116	9,234	9,319	13.2%
Exports	472	478	512	484	593	512	482	485	489	486	479	492	495	-3.2%
Ending stocks	498	498	498	482	482	497	507	510	512	515	518	524	529	6.3%
Butter														
Production	2,162	2,179	2,081	2,100	2,113	2,145	2,160	2,153	2,153	2,153	2,156	2,190	2,212	6.3%
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	1,883	1,930	1,932	1,926	1,920	1,915	1,910	1,916	1,915	-0.5%
Exports	339	338	276	409	327	298	301	307	313	318	323	355	375	35.8%
Ending stocks	255	224	184	146	128	125	132	132	132	132	135	134	137	-25.5%
Skim powder														
Production	956	959	838	967	1,046	924	868	853	842	831	821	823	822	-2.0%
Imports	30	9	22	22	22	22	22	22	22	22	22	22	22	0.0%
Domestic use	829	834	760	769	725	763	779	769	761	755	750	749	747	-1.7%
Exports	297	199	140	267	375	195	115	109	105	100	95	95	95	-31.8%
Ending stocks	262	197	157	111	80	68	64	61	58	57	56	56	57	-63.6%
Whole powder														
Production	824	793	774	746	907	776	559	552	547	540	534	542	546	-29.4%
Imports	20	20	20	15	15	16	16	16	17	17	17	17	17	-15.0%
Domestic use	332	302	306	303	308	323	337	338	339	340	342	345	347	13.5%
Exports	512	511	488	467	617	463	231	227	223	215	208	213	215	-55.9%
Ending stocks	42	42	42	33	30	36	44	48	50	51	51	52	53	24.1%
Consumption														
Fluid milk	78.53	78.26	77.31	77.01	76.93	77.38	77.25	76.68	76.18	75.70	75.26	75.05	74.71	-3.4%
Cheese	15.70	15.85	16.04	16.33	16.47	16.93	17.14	17.18	17.25	17.32	17.41	17.61	17.75	10.7%
Butter	3.88	3.81	3.75	3.51	3.64	3.72	3.72	3.70	3.68	3.66	3.65	3.65	3.65	-2.7%
Prices														
	euro per 100 kilograms													
Milk, 3.7% fat	29.4	28.9	27.6	33.1	32.2	29.7	28.9	29.3	29.5	29.7	29.9	29.4	29.3	6.0%
Cheese market	410.3	388.2	384.4	427.9	428.4	402.2	395.6	402.0	406.4	409.6	412.1	405.5	403.8	5.0%
Butter market	344.8	322.5	290.3	382.3	311.9	273.6	268.6	269.8	270.1	269.9	269.3	260.1	256.4	-11.7%
SMP market	208.8	209.0	219.4	307.1	309.0	262.5	243.3	249.9	254.1	257.4	259.7	257.1	256.7	17.0%
WMP market	257.2	242.0	247.9	319.1	310.3	260.2	222.7	227.0	230.0	231.9	233.6	231.0	231.3	-6.7%
Butter intervention	305.2	282.3	259.3	246.2	246.2	246.2	246.2	246.2	246.2	246.2	246.2	233.8	233.8	-9.8%
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
Quota Reform Scenario 1: Irish Dairy Commodity Supply & 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	1,057	1,055	1,042	1,026	1,012	999	986	1,028	1,052	-3.2%
Production/cow	4,638	4,507	4,787	4,882	4,956	4,989	5,019	5,071	5,126	5,179	5,234	5,366	5,512	15.2%
	million tonnes													
Fluid milk														
Cow's milk Production	5.95	5.86	6.05	6.10	6.15	6.19	6.16	6.13	6.11	6.10	6.09	6.35	6.57	8.6%
Milk quota	5.40	5.40	5.40	5.40	5.52	5.56	5.56	5.56	5.56	5.56	5.56	10.79	10.79	100.0%
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	15.7%
Manufacturing use	5.22	5.08	5.26	5.31	5.36	5.38	5.34	5.30	5.28	5.26	5.24	5.50	5.70	8.3%
Feed use, net exports	0.19	0.19	0.19	0.18	0.18	0.18	0.18	0.18	0.17	0.17	0.17	0.17	0.17	-6.3%
	thousand tonnes													
Cheese														
Production	101	119	137	128	131	134	136	136	136	137	137	138	140	2.1%
Imports	23	19	15	18	18	19	21	22	24	25	27	28	28	88.7%
Domestic use	35	37	38	39	41	43	45	47	49	51	53	55	57	47.9%
Exports	88	100	111	107	109	111	111	111	111	111	111	111	111	0.0%
Ending stocks	28	29	29	29	29	29	29	29	29	29	29	29	30	3.1%
	thousand tonnes													
Butter														
Production	160	155	150	159	159	158	156	155	155	154	154	165	174	16.2%
Imports	1	1	3	1	1	1	1	1	1	1	1	1	1	-70.8%
Domestic use	17	17	17	18	18	19	19	19	19	20	20	20	21	18.2%
Exports	155	150	140	144	140	133	133	135	135	135	134	146	153	9.6%
Ending stocks	88	77	73	71	73	80	85	88	89	90	91	90	92	26.0%
	thousand tonnes													
Skim powder														
Production	95	69	74	91	92	87	83	83	82	81	81	84	87	18.9%
Imports	4	4	4	5	5	5	5	5	5	6	6	6	6	44.2%
Domestic use	11	11	11	10	10	10	11	11	11	11	11	11	11	1.1%
Exports	96	78	72	93	91	81	76	77	76	77	76	80	82	14.2%
Ending stocks	68	64	62	54	50	51	53	54	54	54	53	54	54	-12.8%
	thousand tonnes													
Whole powder														
Production	30	39	39	38	39	39	37	37	37	37	37	37	38	-3.1%
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	40	38	38	38	38	38	38	39	-3.1%
Ending stocks	1	1	1	1	1	1	1	1	1	1	1	1	1	0.0%
	kilograms per capita													
Consumption														
Fluid milk	134.12	143.66	144.07	143.13	143.66	144.33	144.82	145.01	145.23	145.47	145.72	146.08	146.40	1.6%
Cheese	8.35	8.71	9.00	9.16	9.43	9.78	10.10	10.38	10.68	10.99	11.30	11.65	11.87	31.9%
Butter	4.14	4.17	4.22	4.13	4.21	4.25	4.26	4.27	4.28	4.29	4.29	4.31	4.32	2.4%
Milk price, 3.7% fat														
euro/100 kg	25.8	25.4	24.2	32.9	29.8	26.2	24.5	25.0	25.3	25.5	25.7	25.1	25.0	2.9%
	thousand tonnes													
Casein														
Production	43	44	47	44	44	45	46	46	47	47	47	48	49	3.8%
Imports	2	2	2	2	2	2	2	2	2	2	2	2	2	0.0%
Exports	39	39	43	39	39	41	41	41	42	42	42	43	44	3.7%
Domestic Uses & Stock change	4	4	5	4	4	5	5	5	5	5	5	5	5	4.6%

Table A-II-8
Quota Reform Scenario 1: Irish Input Use & Expenditure Projections

Irish Input Utilisation														
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2006 v 2016
														%
Feed														
Price														
Dairy	168.11	163.16	168.05	220.49	181.98	164.84	168.45	170.46	170.62	170.59	169.11	168.49	167.98	0.0%
Beef	171.22	166.12	171.10	226.17	185.73	167.72	171.51	173.63	173.80	173.77	172.21	171.57	171.03	0.0%
Price														
Dairy	213.46	207.17	213.39	279.97	231.07	209.30	213.88	216.44	216.65	216.61	214.72	213.94	213.30	0.0%
Beef	217.41	210.93	217.26	287.18	235.83	212.97	217.78	220.47	220.68	220.64	218.66	217.84	217.16	0.0%
Per head														
Dairy	701	717	823	771	779	781	774	777	779	781	783	775	782	-4.9%
Beef	208	209	252	185	211	222	212	211	211	209	207	205	203	-19.6%
Total														
Dairy	792	797	900	823	836	837	818	809	800	791	783	808	835	-7.2%
Beef	1,174	1,182	1,400	1,027	1,157	1,199	1,138	1,121	1,109	1,088	1,065	1,045	1,020	-27.1%
All animals & poultry	3,083	3,094	3,410	2,888	3,043	3,097	3,029	3,004	2,972	2,927	2,885	2,892	2,891	-15.2%
Fertilizer														
Nitrogen Application														
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	127	127	-14.4%
Total NPK Application	516	492	475	495	492	483	472	463	457	452	449	446	443	-6.7%
Intermediate Consumption of Inputs	3375	3443	3583	3812	3952	3753	3641	3686	3721	3708	3711	3675	3701	3.3%
of which:														
feedingstuffs	904	875	970	1113	957	878	883	889	882	870	851	850	848	-12.6%
fertilisers	358	363	380	389	384	376	379	383	385	388	388	392	391	3.1%
energy and lubricants	237	284	305	309	307	307	328	340	340	346	343	352	345	13.1%
forage work	673	772	846	775	758	744	735	729	724	722	720	719	720	-14.9%
contract work	261	270	276	285	280	276	275	275	276	278	280	283	286	3.8%

Annex III

Quota Reform Scenario 2 Commodity Supply & Use Projections

**Table A-III-1
Quota Reform Scenario 2: 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														%			
Area harvested	23,317	22,630	21,829	22,140	24,077	thousand hectares			23,728	23,634	23,425	23,738	23,745	23,806	23,823	23,915	9.6%
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	8.5%			
Production	137	124	117	117	133	million tonnes			132	133	133	135	136	137	138	139	18.8%
Beginning stocks	14	29	30	25	23	24	26	26	26	27	27	27	27	-8.4%			
Imports	7	7	7	5	6	6	6	6	6	6	6	6	6	-5.8%			
Total supply	159	160	154	148	162	162	164	164	168	168	170	171	173	12.5%			
Domestic use	116	117	116	115	122	125	127	127	129	130	130	131	133	14.8%			
Feed	50	52	52	51	55	56	56	56	57	57	57	57	58	11.1%			
Other	65	65	64	64	68	70	71	71	72	73	74	74	75	17.8%			
Exports	14	14	13	10	15	11	11	11	12	12	12	12	12	-1.8%			
Ending stocks	29	30	25	23	24	26	26	26	27	27	27	27	28	8.9%			
Loss, statistical disc.	0	0	0	0	0	0	0	0	0	0	0	0	0				
Net exports	6	7	6	5	9	5	5	5	6	6	6	6	6	2.9%			
Set-aside rate	5	10	10	10	0	0	0	0	0	0	0	0	0	-100.0%			
Intervention price	101	100	100	101	101	euro per tonne, Jan.-Dec.			101	101	101	101	101	1.2%			
Market price	109	106	141	227	149	134	141	145	142	144	142	141	139	-1.0%			

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														%			
Area harvested	12,996	13,076	13,267	13,067	13,980	thousand hectares			14,067	13,706	13,429	13,261	13,321	13,291	13,240	13,170	-0.7%
Yield	4.7	4.0	4.0	4.3	4.3	tonnes per hectare			4.3	4.4	4.5	4.5	4.5	4.6	4.6	4.7	15.5%
Production	61	53	54	57	60	million tonnes			61	60	60	60	60	61	61	61	14.6%
Beginning stocks	12	16	15	12	11	10	11	12	12	12	12	12	12	-15.7%			
Imports	0	0	0	0	0	0	0	0	0	0	0	0	0	-21.9%			
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	56	55	55	56	56	56	56	10.2%			
Feed	40	36	39	41	41	42	42	42	42	42	42	42	43	9.0%			
Other	12	12	12	12	12	13	13	13	13	13	13	14	14	14.1%			
Exports	7	6	6	5	7	5	5	5	5	5	5	5	5	-5.6%			
Ending stocks	16	15	12	11	10	11	12	12	12	12	12	12	13	4.8%			
Net exports	6	6	5	4	7	5	5	4	5	5	5	5	5	-4.5%			
Set-aside rate	10	5	10	10	10	0	0	0	0	0	0	0	0	-100.0%			
Intervention price	101	101	100	100	101	euro per tonne, Jan.-Dec.			101	101	101	101	101	1.2%			
Market price	99	101	126	192	140	117	123	125	126	126	124	122	122	-3.4%			
Maize for grain																	
Area harvested	6,488	5,978	5,677	5,585	5,833	thousand hectares			5,943	6,014	6,069	6,037	6,031	6,047	6,069	6,080	7.1%
Yield	8.5	8.5	7.5	7.4	8.2	million tonnes			8.2	8.3	8.4	8.5	8.5	8.6	8.7	8.7	15.8%
Production	55	51	43	41	48	million tonnes			49	50	51	51	51	52	53	53	24.0%
Beginning stocks	13	17	18	15	9	10	12	13	14	14	15	15	16	-15.7%			
Imports	2	3	4	4	4	4	4	4	4	4	4	4	4	1.5%			
Total supply	70	70	65	60	61	64	66	68	69	70	71	72	73	11.4%			
Domestic use	52	49	49	50	50	50	51	52	53	53	53	54	54	10.9%			
Feed	42	40	39	41	39	39	41	42	42	42	42	42	43	9.2%			
Other	9	9	10	9	10	10	11	11	11	11	11	11	11	17.8%			
Exports	2	2	2	1	2	2	2	2	2	3	3	3	3	50.0%			
Ending stocks	17	18	15	9	10	12	13	14	14	15	15	16	16	8.2%			
Net exports	0	-1	-2	-3	-3	-3	-2	-2	-2	-2	-2	-2	-1	-36.5%			
Set-aside rate	5	10	10	10	0	0	0	0	0	0	0	0	0	-100.0%			
Intervention price	101	100	100	101	101	euro per tonne, Jan.-Dec.			101	101	101	101	101	1.2%			
Market price	111	116	141	214	162	148	151	150	149	150	148	146	144	2.2%			

Table A-III-2
Quota Reform Scenario 2: 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														%		
Wheat area harvested	102.7	94.7	83.0	77.8	85.5	thousand hectares		87.4	89.9	92.1	92.0	91.3	90.7	89.9	88.7	6.9%
Wheat yield	9.7	8.4	9.2	9.2	9.8	tonnes per hectare		10.2	10.4	10.0	9.9	10.0	10.0	10.0	10.0	7.7%
Production	1,000.0	791.0	767.7	718.0	842.2	thousand tonnes		893.5	931.4	920.7	912.9	909.9	905.3	896.8	883.6	15.1%
Beginning stocks	39.5	97.2	41.2	63.4	52.3	56.3	61.9	67.3	68.7	68.2	68.2	67.3	65.9	64.0	55.4%	
Imports	850.0	907.0	701.1	641.1	593.6	595.0	563.0	581.7	600.0	615.6	634.0	659.7	644.6	644.6	-8.1%	
Total supply	1,889.5	1,795.2	1,510.0	1,422.5	1,488.1	1,544.9	1,556.3	1,569.7	1,581.5	1,593.7	1,606.5	1,622.5	1,592.3	1,592.3	5.4%	
Domestic use	1,470.3	1,500.0	1,198.3	1,111.8	1,173.4	1,224.5	1,230.6	1,242.7	1,254.9	1,268.0	1,282.3	1,300.1	1,272.4	1,272.4	7.1%	
Feed	1,168.0	1,171.0	859.7	754.9	775.5	795.7	782.8	779.3	775.7	772.3	772.3	768.5	769.0	768.1	-10.7%	
Other	302.3	329.0	328.6	356.9	397.9	428.9	447.8	463.3	479.3	495.7	513.7	531.1	504.3	504.3	53.5%	
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	258.4	0.0%	
Ending stocks	97.2	41.2	63.4	52.3	56.3	61.9	67.3	68.7	68.2	67.3	65.9	64.0	61.6	61.6	-2.9%	
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	0.0%	
Prices	Jan.-Dec. average															
Feed wheat	107.8	104.8	119.8	167.9	134.2	119.3	122.8	124.6	124.8	124.8	123.6	122.7	122.1	122.1	1.9%	

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														%		
Barley area harvested	184	165	164	160	178	thousand hectares		176	172	172	173	175	176	177	177	8.1%
Barley yield	7.2	6.2	6.7	6.9	7.3	tonnes per hectare		7.4	7.5	7.3	7.3	7.3	7.3	7.3	7.3	8.9%
Production	1,327	1,025	1,096	1,101	1,293	thousand tonnes		1,312	1,292	1,256	1,258	1,272	1,281	1,287	1,290	17.7%
Beginning stocks	118	162	97	111	120	135	141	141	138	137	137	137	138	138	138	42.6%
Imports	44	100	206	124	66	80	87	108	112	111	112	111	117	100	100	-51.5%
Total supply	1,489	1,287	1,399	1,336	1,478	1,527	1,520	1,505	1,508	1,520	1,530	1,542	1,529	1,529	9.2%	
Domestic use	1,243	1,107	1,210	1,057	1,125	1,182	1,182	1,190	1,199	1,209	1,220	1,237	1,206	1,206	-0.4%	
Feed	999	904	914	769	797	825	807	803	798	793	788	788	787	787	-13.9%	
Other	244	203	296	288	328	357	374	388	402	416	433	448	419	419	41.4%	
Exports	84	83	78	160	218	204	197	176	172	173	172	167	184	184	136.3%	
Ending stocks	162	97	111	120	135	141	141	138	137	137	138	138	139	139	24.7%	
Market prices	euro per tonne, Jan.-Dec.															
Feed barley	92.7	107.2	111.8	157.8	124.0	109.1	112.6	114.4	114.6	114.7	113.5	112.6	112.0	112.0	0.1%	
Malt barley	103.0	119.1	129.6	175.5	141.8	126.9	130.4	132.2	132.4	132.5	131.2	130.4	129.7	129.7	0.1%	

Table A-III-3
Quota Reform Scenario 2: EU 25 Livestock and Meat Supply & 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	82.81	82.41	81.92	81.34	80.79	80.28	79.77	79.28	-7.7%
Dairy cows	23.96	23.39	22.97	22.35	22.17	22.01	22.05	21.78	21.51	21.29	21.06	20.84	20.63	-10.2%
Suckler cows	12.00	12.03	11.98	11.98	11.32	11.32	11.47	11.43	11.40	11.43	11.45	11.45	11.48	-4.2%
Cattle slaughter	29.07	28.10	27.90	27.94	27.34	26.82	27.00	26.85	26.57	26.38	26.21	26.02	25.84	-7.4%
Slaughter weight	278.64	279.47	285.19	282.38	286.66	286.15	285.31	285.38	285.97	286.06	286.09	286.37	286.61	0.5%
Pigs														
Beginning inventories	152.90	151.23	151.69	154.32	149.90	146.42	153.94	156.32	153.71	153.21	154.24	154.16	153.88	1.4%
Sows	15.20	14.91	14.90	14.97	13.52	14.27	14.96	14.61	14.36	14.46	14.50	14.37	14.38	-3.4%
Pig slaughter	241.19	238.86	242.41	243.86	234.76	236.94	247.18	247.49	244.19	244.63	245.82	245.44	245.62	1.3%
Slaughter weight	88.09	89.05	88.40	87.66	89.37	89.82	89.10	89.23	89.73	89.88	89.90	90.18	90.40	2.3%
Sheep														
Beginning inventories	89.57	89.24	87.17	86.37	82.06	81.19	81.93	81.82	81.42	81.17	80.87	80.47	80.24	-8.0%
Ewes	66.62	65.59	63.27	62.36	58.37	58.73	59.66	59.51	59.24	59.17	58.98	58.68	58.57	-7.4%
Sheep slaughter	64.69	64.62	64.35	65.97	59.33	58.39	60.14	60.29	59.87	59.83	59.73	59.26	59.11	-8.1%
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	7,838	7,676	7,703	7,662	7,599	7,546	7,498	7,452	7,407	-6.9%
Non-EU imports	584	599	540	561	610	669	621	637	673	698	683	713	734	35.9%
Domestic use	8,339	8,301	8,379	8,363	8,365	8,267	8,227	8,208	8,193	8,169	8,100	8,088	8,066	-3.7%
Non-EU exports	400	150	117	87	81	76	92	86	75	72	76	72	70	-40.4%
Stock change	-55	0	0	3	2	2	5	5	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	20,981	21,282	22,023	22,084	21,912	21,988	22,099	22,134	22,203	3.6%
Non-EU imports	20	21	22	22	24	22	22	22	22	22	22	22	22	0.0%
Domestic use	19,823	19,904	19,980	20,070	19,747	20,004	20,650	20,715	20,564	20,646	20,754	20,801	20,862	4.4%
Non-EU exports	1,439	1,386	1,470	1,337	1,276	1,287	1,355	1,380	1,376	1,360	1,351	1,350	1,358	-7.6%
Stock change	5	0	0	-9	-18	13	40	11	-6	5	15	5	6	
Poultry														
Production	10,273	9,943	10,094	10,012	10,085	10,312	10,298	10,367	10,519	10,627	10,370	10,446	10,573	4.8%
Non-EU imports	519	642	542	575	578	579	580	582	584	585	586	588	591	9.0%
Domestic use	9,908	10,092	9,895	9,884	9,888	10,077	10,037	10,103	10,246	10,341	10,672	10,711	10,802	9.2%
Non-EU exports	883	492	740	739	764	797	829	842	854	866	259	318	357	-51.8%
Stock change	1	0	0	-36	11	17	12	4	3	6	25	5	5	
Sheep meat														
Production	1,064	1,064	1,047	1,060	958	950	983	989	985	988	988	983	982	-6.1%
Non-EU imports	264	280	273	275	281	284	282	284	288	290	291	294	296	8.6%
Domestic use	1,320	1,335	1,315	1,326	1,234	1,229	1,260	1,268	1,268	1,272	1,274	1,272	1,274	-3.1%
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	15.9	15.8	15.8	15.7	15.6	15.5	15.4	15.4	-5.9%
Pig meat	39.1	39.0	38.9	39.0	38.2	38.6	39.7	39.8	39.4	39.5	39.6	39.7	39.7	2.1%
Poultry meat	19.5	19.8	19.3	19.2	19.1	19.4	19.3	19.4	19.6	19.8	20.4	20.4	20.6	6.7%
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	-5.3%
Total	77.6	77.6	77.1	77.0	75.9	76.3	77.3	77.4	77.2	77.3	77.9	78.0	78.1	1.3%
Prices														
														euro per 100 kilograms
Cattle reference	270	293	316	312	320	326	316	320	327	328	326	328	328	3.8%
Pig meat reference	138	139	145	153	167	161	142	144	152	151	146	147	147	1.6%
Chicken	148	149	151	181	173	167	164	167	168	168	152	155	155	2.6%
Sheep meat reference	409	389	417	418	437	440	424	424	429	428	424	427	428	2.5%
Beef intervention	156	156	156	156	156	156	156	156	156	156	156	156	156	0.0%

Table A-III-4
Quota Reform Scenario 2: Irish Livestock Supply & 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	5.82	5.78	5.75	5.73	5.71	5.69	5.67	5.65	-8.8%
Dairy cows	1.14	1.12	1.10	1.09	1.05	1.06	1.07	1.08	1.08	1.08	1.09	1.09	1.11	0.7%
Suckler cows	1.14	1.15	1.15	1.13	1.12	1.11	1.11	1.09	1.07	1.05	1.04	1.02	1.00	-12.6%
Other cattle	3.94	3.94	3.94	3.79	3.75	3.65	3.61	3.59	3.58	3.57	3.56	3.55	3.53	-10.3%
Calf crop	2.13	2.12	2.10	2.07	2.03	2.03	2.04	2.02	2.01	2.00	1.99	1.98	1.98	-6.1%
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	-7.4%
Total supply	8.36	8.34	8.30	8.07	7.96	7.85	7.82	7.78	7.74	7.71	7.68	7.65	7.62	-8.1%
Cattle slaughter	1.82	1.69	1.78	1.76	1.73	1.67	1.66	1.64	1.63	1.62	1.61	1.60	1.58	-10.9%
Cow slaughter	0.34	0.34	0.36	0.35	0.35	0.33	0.34	0.33	0.32	0.31	0.31	0.30	0.29	-18.7%
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	1.33	1.31	1.30	1.30	1.30	1.30	1.30	1.29	-8.9%
Cattle exports	0.13	0.18	0.25	0.22	0.22	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	-9.6%
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	0.17	0.17	-37.7%
Ending inventories	6.21	6.19	6.00	5.92	5.82	5.78	5.75	5.73	5.71	5.69	5.67	5.65	5.64	-6.0%
Slaughter weight	310.4	324.0	322.7	323.8	320.7	321.8	322.0	319.9	319.1	318.9	318.2	317.3	316.4	-1.9%
Live cattle exports	130	185	251	215	224	230	234	233	231	230	228	227	227	-9.6%
Calves	37	60	112	88	82	81	82	81	79	77	76	74	74	-33.8%
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	1.66	1.54	1.47	1.43	1.39	1.37	-18.3%
Sows	0.176	0.179	0.174	0.167	0.159	0.163	0.168	0.166	0.161	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	1.31	1.27	1.23	1.21	-19.3%
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	-10.9%
Pig imports	0.02	0.05	0.05	0.02	-0.04	-0.01	0.01	-0.01	-0.02	-0.02	-0.01	-0.01	-0.01	-126.6%
Total supply	4.98	4.85	4.79	4.53	4.23	4.43	4.70	4.58	4.32	4.24	4.20	4.12	4.09	-14.7%
Pig slaughter	2.73	2.68	2.69	2.62	2.27	2.33	2.60	2.62	2.45	2.41	2.41	2.36	2.35	-12.7%
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	-15.6%
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	1.66	1.54	1.47	1.43	1.39	1.37	1.36	-16.2%
Slaughter weight	75.3	76.7	77.8	77.1	77.1	77.2	77.0	76.7	76.7	76.6	76.6	76.7	76.7	-1.3%
Sheep	million head													
Beginning inventories	4.85	4.56	4.26	3.83	3.47	3.39	3.42	3.44	3.41	3.35	3.28	3.19	3.11	-27.1%
Ewes	3.68	3.47	3.21	3.04	2.70	2.69	2.76	2.81	2.80	2.77	2.72	2.65	2.60	-18.9%
Other sheep	1.17	1.09	1.05	0.79	0.77	0.70	0.66	0.63	0.61	0.58	0.56	0.53	0.50	-51.9%
Lamb crop	3.74	3.53	3.26	3.15	2.80	2.79	2.87	2.92	2.91	2.88	2.83	2.76	2.70	-17.1%
Sheep imports	0.32	0.28	0.25	0.26	0.24	0.27	0.27	0.27	0.27	0.27	0.26	0.26	0.26	5.7%
Total supply	8.91	8.36	7.77	7.23	6.52	6.44	6.57	6.64	6.58	6.49	6.37	6.21	6.07	-21.8%
Sheep slaughter	3.57	3.61	3.49	3.38	2.79	2.69	2.79	2.89	2.89	2.88	2.86	2.79	2.75	-21.0%
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	-31.7%
Destruction, death loss	0.72	0.39	0.35	0.30	0.27	0.26	0.27	0.27	0.26	0.26	0.25	0.25	0.24	-32.2%
Ending inventories	4.56	4.26	3.83	3.47	3.39	3.42	3.44	3.41	3.35	3.28	3.19	3.11	3.01	-21.3%
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-III-5
Quota Reform Scenario 2: Irish Meat Supply & 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	555	536	534	525	521	517	512	508	501	-12.4%
Imports	30	32	33	37	38	38	39	39	39	39	40	40	40	20.9%
Domestic use	94	90	89	92	94	96	97	98	98	99	99	99	100	11.7%
Exports	499	488	516	514	498	479	476	466	462	458	453	449	442	-14.4%
Intervention stocks	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pig meat														
Production	206	205	209	202	175	180	200	201	188	185	185	181	180	-13.8%
Imports	59	58	53	57	49	51	59	59	54	52	54	51	51	-4.2%
Domestic use	146	150	150	160	164	167	170	173	174	175	175	176	176	17.6%
Exports	119	113	109	101	60	64	89	87	67	62	63	57	55	-50.0%
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	8.6%
Imports	48	44	24	27	25	24	25	26	29	32	36	39	42	77.1%
Domestic use	65	86	78	89	93	93	92	94	98	101	104	108	112	43.9%
Exports	78	52	21	9	8	10	11	11	11	11	12	12	12	-43.5%
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	8.6%
Imports	5	10	12	13	13	12	12	13	15	16	18	20	21	77.1%
Domestic use	24	33	38	27	25	27	28	29	31	33	35	36	38	0.8%
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	56	54	56	58	58	58	58	56	56	-21.0%
Imports	3	3	3	3	3	3	3	3	3	3	3	3	3	0.0%
Domestic use	20	18	19	20	20	19	20	20	20	20	20	20	20	5.3%
Exports	55	58	54	51	40	38	40	42	41	41	40	39	38	-29.3%
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	-1.9%
Pig meat	36	36	36	38	38	38	38	38	38	38	38	37	37	3.3%
Broiler meat	16	21	19	21	21	21	21	21	21	22	22	23	23	26.4%
Other poultry meat	6	8	9	6	6	6	6	6	7	7	7	8	8	-11.5%
Sheep meat	5	4	5	5	5	4	4	4	4	4	4	4	4	-7.5%
Total	86	91	89	91	92	92	92	92	92	93	93	93	93	4.8%
Market prices														
	euro per 100 kilograms													
Cattle reference	125.3	121.6	129.7	127.5	130.8	133.5	129.3	130.8	133.8	134.3	133.3	134.0	134.4	3.6%
Pig meat	137.0	134.4	139.9	153.2	162.8	157.4	139.5	140.5	148.6	148.7	144.0	145.8	145.9	4.4%
Sheep meat representative	357.6	336.5	339.3	355.6	373.7	375.9	361.2	361.4	365.9	365.5	361.5	364.6	365.0	7.6%
	euro per pair													
Chicken	3.26	3.16	3.12	3.41	3.29	3.18	3.13	3.17	3.20	3.19	2.93	2.98	2.98	-4.7%

Table A-III-6
Quota Reform Scenario 2: EU 25 Dairy Commodity Supply & 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	22,110	22,060	21,825	21,569	21,340	21,114	20,904	20,704	20,492	-10.8%
Production/cow	5,928	6,084	6,095	6,346	6,516	6,626	6,666	6,730	6,805	6,876	6,947	7,016	7,088	16.3%
Fluid milk														
Cow's milk Production	142.04	142.30	140.00	140.91	144.06	146.17	145.48	145.16	145.22	145.18	145.23	145.27	145.25	3.7%
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	39.76	40.19	40.26	40.09	39.93	39.76	39.60	39.44	39.28	-1.0%
Manufacturing use	99.94	99.94	98.97	98.99	102.18	103.97	103.26	103.23	103.58	103.83	104.16	104.49	104.75	5.8%
Feed use, net exports	6.46	6.52	5.46	6.38	6.25	6.16	6.11	6.00	5.88	5.77	5.65	5.53	5.42	-0.7%
Cheese														
Production	8,333	8,481	8,652	8,789	9,017	9,266	9,386	9,440	9,506	9,565	9,624	9,685	9,743	12.6%
Imports	106	88	90	88	89	93	96	97	99	101	103	105	107	19.4%
Domestic use	7,967	8,091	8,231	8,409	8,512	8,816	8,969	9,024	9,086	9,149	9,215	9,281	9,344	13.5%
Exports	472	478	512	484	593	525	501	509	516	515	509	506	503	-1.8%
Ending stocks	498	498	498	482	482	500	511	516	519	522	525	528	531	6.8%
Butter														
Production	2,162	2,179	2,081	2,100	2,113	2,170	2,200	2,195	2,205	2,212	2,222	2,229	2,233	7.3%
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	1,883	1,935	1,937	1,939	1,936	1,932	1,928	1,927	1,926	0.1%
Exports	339	338	276	409	327	314	327	344	352	361	370	383	386	39.7%
Ending stocks	255	224	184	146	128	129	144	137	133	132	136	135	136	-26.2%
Skim powder														
Production	956	959	838	967	1,046	947	886	870	861	852	844	835	825	-1.6%
Imports	30	9	22	22	22	22	22	22	22	22	22	22	22	0.0%
Domestic use	829	834	760	769	725	764	787	776	770	764	760	755	749	-1.5%
Exports	297	199	140	267	375	216	124	118	115	111	107	101	98	-30.1%
Ending stocks	262	197	157	111	80	68	65	63	61	60	60	60	60	-61.8%
Whole powder														
Production	824	793	774	746	907	805	575	570	567	561	555	551	550	-28.9%
Imports	20	20	20	15	15	16	16	17	17	17	17	17	17	-14.9%
Domestic use	332	302	306	303	308	323	338	339	341	342	344	346	347	13.7%
Exports	512	511	488	467	617	492	245	244	241	234	227	221	219	-55.1%
Ending stocks	42	42	42	33	30	36	45	49	51	52	53	53	53	25.7%
Consumption														
Fluid milk	78.53	78.26	77.31	77.01	76.93	77.52	77.46	76.96	76.49	76.04	75.63	75.23	74.82	-3.2%
Cheese	15.70	15.85	16.04	16.33	16.47	17.01	17.26	17.32	17.41	17.50	17.60	17.70	17.80	11.0%
Butter	3.88	3.81	3.75	3.51	3.64	3.73	3.73	3.72	3.71	3.70	3.68	3.67	3.67	-2.2%
Prices														
	euro per 100 kilograms													
Milk, 3.7% fat	29.4	28.9	27.6	33.1	32.2	29.3	28.3	28.6	28.7	28.8	28.9	28.9	29.0	5.0%
Cheese market	410.3	388.2	384.4	427.9	428.4	396.0	386.8	391.1	394.1	396.2	397.8	398.8	400.2	4.1%
Butter market	344.8	322.5	290.3	382.3	311.9	269.9	265.2	260.7	259.5	257.8	256.3	253.0	248.9	-14.3%
SMP market	208.8	209.0	219.4	307.1	309.0	261.6	236.8	243.4	246.5	248.9	250.4	252.1	255.1	16.3%
WMP market	257.2	242.0	247.9	319.1	310.3	259.6	219.5	221.9	224.3	225.9	227.2	228.2	230.0	-7.2%
Butter intervention	305.2	282.3	259.3	246.2	246.2	246.2	246.2	233.8	233.8	233.8	233.8	227.7	221.5	-14.6%
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-III-7
Quota Reform Scenario 2: Irish Dairy Commodity Supply & 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	1,057	1,070	1,077	1,080	1,085	1,089	1,093	1,109	1,113	2.4%
Production/cow	4,638	4,507	4,787	4,882	4,956	5,023	5,098	5,197	5,298	5,399	5,500	5,567	5,670	18.5%
	million tonnes													
Fluid milk														
Cow's milk Production	5.95	5.86	6.05	6.10	6.15	6.27	6.36	6.44	6.54	6.64	6.74	6.86	6.97	15.1%
Milk quota	5.40	5.40	5.40	5.40	5.52	5.68	5.84	6.00	6.16	6.33	6.49	10.79	10.79	100.0%
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	15.8%
Manufacturing use	5.22	5.08	5.26	5.31	5.36	5.46	5.53	5.61	5.70	5.78	5.87	5.98	6.08	15.5%
Feed use, net exports	0.19	0.19	0.19	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.19	0.19	0.19	1.8%
	thousand tonnes													
Cheese														
Production	101	119	137	128	131	134	136	137	138	139	140	141	141	3.3%
Imports	23	19	15	18	18	19	21	22	23	25	26	27	28	85.4%
Domestic use	35	37	38	39	41	43	45	47	49	51	53	55	57	48.0%
Exports	88	100	111	107	109	111	112	112	112	113	113	113	112	1.2%
Ending stocks	28	29	29	29	29	29	29	29	29	30	30	30	30	3.5%
	thousand tonnes													
Butter														
Production	160	155	150	159	159	162	164	168	172	176	181	186	190	26.9%
Imports	1	1	3	1	1	1	1	1	1	1	1	1	1	-70.8%
Domestic use	17	17	17	18	18	19	19	19	20	20	20	20	21	18.4%
Exports	155	150	140	144	140	136	141	149	153	156	160	167	171	22.3%
Ending stocks	88	77	73	71	73	81	87	88	89	90	91	91	90	24.2%
	thousand tonnes													
Skim powder														
Production	95	69	74	91	92	89	86	87	87	89	90	92	93	27.0%
Imports	4	4	4	5	5	5	5	5	5	6	6	6	6	43.5%
Domestic use	11	11	11	10	10	10	11	11	11	11	11	11	12	5.4%
Exports	96	78	72	93	91	82	77	81	81	83	84	87	88	22.4%
Ending stocks	68	64	62	54	50	51	54	54	55	55	55	54	54	-11.8%
	thousand tonnes													
Whole powder														
Production	30	39	39	38	39	39	37	38	38	38	38	38	39	-1.4%
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	40	38	39	39	39	39	39	40	-1.4%
Ending stocks	1	1	1	1	1	1	1	1	1	1	1	1	1	0.0%
	kilograms per capita													
Consumption														
Fluid milk	134.12	143.66	144.07	143.13	143.66	144.37	144.91	145.13	145.37	145.62	145.89	146.17	146.46	1.7%
Cheese	8.35	8.71	9.00	9.16	9.43	9.80	10.12	10.41	10.71	11.02	11.34	11.66	11.88	32.0%
Butter	4.14	4.17	4.22	4.13	4.21	4.26	4.27	4.28	4.29	4.30	4.31	4.32	4.33	2.6%
Milk price, 3.7% fat														
euro/100 kg	25.8	25.4	24.2	32.9	29.8	26.0	23.9	24.2	24.3	24.4	24.5	24.5	24.6	1.3%
	thousand tonnes													
Casein														
Production	43	44	47	44	44	45	47	47	48	49	50	50	51	6.7%
Imports	2	2	2	2	2	2	2	2	2	2	2	2	2	0.0%
Exports	39	39	43	39	39	41	42	43	44	44	44	45	45	6.5%
Domestic Uses & Stock change	4	4	5	4	4	5	5	5	5	5	5	5	5	8.0%

Table A-III-8
Quota Reform Scenario 2: Irish Input Use & Expenditure Projections

Irish Input Utilisation

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2006 v 2016
														%
Feed														
Price														
Dairy	168.11	163.16	168.05	220.49	181.98	164.94	168.98	171.03	171.27	171.31	169.92	168.91	168.21	0.1%
Beef	171.22	166.12	171.10	226.17	185.73	167.84	172.07	174.23	174.48	174.53	173.06	172.00	171.26	0.1%
Price														
Dairy	213.46	207.17	213.39	279.97	231.07	209.43	214.56	217.16	217.47	217.52	215.75	214.47	213.58	0.1%
Beef	217.41	210.93	217.26	287.18	235.83	213.11	218.49	221.23	221.54	221.60	219.74	218.40	217.46	0.1%
Per head														
Dairy	701	717	823	771	779	779	771	777	783	789	796	797	805	-2.1%
Beef	208	209	252	185	211	222	212	209	208	207	206	205	204	-19.2%
Total														
Dairy	792	797	900	823	836	847	843	852	862	872	883	897	910	1.1%
Beef	1,174	1,182	1,400	1,027	1,157	1,201	1,136	1,115	1,106	1,095	1,085	1,078	1,068	-23.7%
All animals & poultry	3,083	3,094	3,410	2,888	3,043	3,110	3,052	3,041	3,030	3,014	3,004	3,013	3,014	-11.6%
Fertilizer														
Nitrogen Application														
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	135	131	130	130	129	129	129	-13.0%
Total NPK Application	516	492	475	495	492	483	473	464	459	456	453	451	447	-5.9%
Intermediate Consumption of Inputs	3375	3443	3583	3812	3952	3753	3647	3700	3739	3736	3758	3744	3777	5.4%
of which:														
feedingstuffs	904	875	970	1113	957	882	891	901	899	895	884	882	878	-9.5%
fertilisers	358	363	380	389	384	376	379	384	387	391	392	396	394	3.9%
energy and lubricants	237	284	305	309	307	307	328	340	341	347	344	354	347	13.8%
forage work	673	772	846	775	758	744	735	729	725	722	720	720	720	-14.8%
contract work	261	270	276	285	280	276	275	275	276	278	280	283	287	3.9%