2 The MTR and the EU Commission Proposal for the WTO: - An analysis of their effect on the EU and Irish agricultural sector*

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It will not do to leave a live dragon out of your plans if you live near one.

J.R.R.Tolkien

Introduction

In the short history of the FAPRI-Ireland Partnership there has been no shortage of policy proposals to analyse. As part of the Agenda 2000 process the CAP is undergoing significant reform following the agreement made at the European Council in Berlin in 1999. This agreement had widespread implications for agriculture in Ireland, particularly for the beef sector. The changes that were agreed at that time have not even been fully implemented and there is already another reform document on the table, containing even more radical proposals for reform.

As part of the Agenda 2000 process, the Commission was committed to produce a "Mid-Term Review" (MTR) of agricultural policy in the EU. Few expected that the MTR proposals, when released, would include such a wide-ranging reform of the CAP. As well as a continuation of the reforms that were introduced in Agenda 2000, there is also the proposal to replace most of the current direct payments with a single, decoupled payment. The reaction to the MTR was mixed. Many countries, such as France and Spain opposed the changes, whilst the UK and Germany were more favourable.

In January 2003, the EU Commission published the results of several studies on the likely impact of the July 2002 MTR changes.[1] One of these studies was produced by FAPRI (FAPRI, 2003). The study showed that the impact of decoupling will be greatest for the cattle and sheep sectors, where payments are most coupled at the moment. At present, in order to claim direct payments producers must have cattle or ewes. A similar study produced by the FAPRI-Ireland Partnership, that focused on the specific issue of decoupling (FAPRI-Ireland, 2003), showed that the impact of the proposed policy changes would be particularly significant for Ireland, given the relative importance of the cattle and sheep sectors, and the relatively high reliance on direct payments.

The legislative proposals released in January (European Commission, 2003a) contained some changes to the MTR, but maintained the radical thrust of the original document. In particular, it retained the proposal for de-coupling most of the direct payments. The most significant modification was that the document released in January included proposals for the dairy sector, whereas the July 2002 document made no reference to the dairy sector. The Commission has since released a study of the impact of the new January 2003 proposals, and showed that for the sectors other than dairy, they expect the impacts to be similar to those flowing from the MTR of July 2002 (European Commission, 2003b).

In addition to likely changes resulting from the further reform of the CAP, the WTO negotiations are likely to have important implications for the agricultural sector in the EU. In January 2003 the EU made a submission to the WTO detailing the modalities (targets) it would seek to achieve in the Doha Round negotiations. The submission provided for a significant movement by the EU on the issue of market protection compared with the position it previously held. Other WTO signatories have also made their submissions on the modalities.

* The authors would like to acknowledge the assistance of Prof. Robert E. Young II, Mr Eamonn Pitts, Dr Paul Kelly in the preparation of this document. All remaining errors and omissions remain the responsibility of the authors.

[1] These reports can be viewed on http://www.europa.eu.int/comm/agriculture/mtr/docs/index_en.htm.

Subsequently, the Chair of the WTO Agriculture Committee, Stuart Harbinson, produced the so- called Harbinson document. This aimed to provide a compromise based on the various submissions made on the modalities by the various WTO signatories. In the EU, his document was poorly received, since it was felt that his effort to strike a compromise was too far from the EU proposal and gave no credit to the EU for softening its opening position. In practical terms, the negotiations have currently ground to a stalemate and the next real hope of progress will come at the 5th WTO Ministerial Meeting meeting to be held in Cancun, Mexico in September 2003. Given Ireland's relatively heavy dependence on export subsidies and export markets in general, it is likely that any changes that are made to the governance of the international trading system are likely to have a larger impact on Ireland than in other countries of the EU.

In this paper the results of the Baseline simulation of the FAPRI-Ireland modelling system is presented, along with a simulation of the proposed CAP reform legislation and European proposal on modalities presented to the WTO. The Baseline simulation is generated in order to evaluate policy scenarios. It provides the results of the model under assumptions of current policy, normal weather, and external macroeconomic projections. It should not be interpreted as a forecast.

Similarly, the scenario is based on a specific interpretation of the legislative proposals of the MTR and the EU submission to the WTO on trade reform. In the current MTR and WTO negotiations, the hard talking has yet to be done. Bearing in mind the absence of definite information on the eventual agreement, in this paper we assess the consequences of an agreement along the lines of the current stated position of the EU.

At the time of writing (May 2003), it is unlikely that these proposals will be adopted in their current form. The CAP reform proposals seem likely to be diluted. The final outcome of the WTO negotiations, on the other hand, could result in greater trade liberalisation than specified in the EU proposal. Therefore, the scenario examined in this paper should not be interpreted as a forecast, or as the best guess by FAPRI or Teagasc as to the shape of the eventual MTR and WTO agreements.

2.1 Motivation for the MTR and WTO Doha Round Reform

A number of factors have motivated the EU to seek this reform. The EU is keen to enhance the competitiveness of EU agriculture. It needs to reduce prices in the EU as part of this process so that they are closer to international price levels. Therefore it is proposed that intervention price levels should be further reduced.

The EU is also keen to see a better match between production in the EU and the requirements of the consumer. Layer upon layer of previous policies (subsidies, price supports and direct payments) have resulted in a situation where the production in some sectors is largely unrelated to price developments or the level of market place demand. Therefore the EU is seeking to make agriculture more market oriented by breaking the link between production and the receipt of direct payments.

In its place, the EU seeks to protect farm incomes by proposing to decouple payments. The reform may come with strings attached - such as the maintenance by farmers of a pleasant rural landscape (cross compliance).

The EU Commission argues that a better balance of supports will provide a more successful means for developing rural areas in the future. It is therefore proposing to 'degress' or reduce the payments made over time and devote a proportion of the funds raised towards rural development (with a portion also going towards the budget for new market supports).

The MTR may also be needed to cope with the pressures of a potential WTO agreement that could lower border protection measures and lead to reductions in export subsidies. For many agricultural commodities, domestic EU prices are still higher than prices in international markets. Export subsidies facilitate higher levels of EU exports in these circumstances but also lower the world price of agricultural products. Countries advocating freer trade see this as a policy that reduces the income levels of their farmers.

A reduction or elimination of export subsidies would, *a priori*, be expected to reduce EU third country exports. With reduced volumes of subsidised third country exports, EU products, which would otherwise have been shipped to third countries, must instead find markets in the EU. The

maintenance of internal EU supply and demand balance then would ultimately require a fall in internal EU prices. Reduced export volumes from the EU would mean the volume of product in world trade would decline and thus world prices would increase. Similarly import tariffs (import taxes) protect the higher price EU markets from lower priced imports produced outside the EU.

The Doha WTO meeting in 2001, which marked the start of the latest negotiations, made it clear that pressure persists for further trade reform. Continued reductions and even the elimination of export subsidies and the lowering of tariffs continue to be sought by the Cairns group and other WTO members advocating freer trade.[2] To cope with potential reforms of this kind the EU would need to close at least some of the gap between world and EU prices.

2.2 Macroeconomic Assumptions

The Baseline projection is made under the assumption that currently agreed policy prevails. In the United States, for example, the provisions of the 2002 Farm Bill are assumed to prevail over the projection period. As the Bill is amended over time, these changes are reflected in the Baseline.

For the EU, the Agenda 2000 agreement is incorporated. It is important to remember that this includes the reductions in intervention support prices and future increases in quota that have already been politically agreed. The impact of enlargement has not been incorporated into the Baseline, or into the scenario. Work is ongoing to expand the EU models to incorporate 25 countries. Some of the implications of enlargement are discussed later in this paper.

The projections for the baseline and the scenario outlook are dependent on projections of various macroeconomic indicators. The most important of these indicators are macroeconomic growth rates and inflation rates around the world and key currency exchange rates such as the euro/US dollar.

Global Insight (formerly DRI-WEFA) based in Boston, continues to provide the FAPRI-Missouri team with its international macroeconomic data. These macroeconomic projections are presented in Appendix II. For Ireland, the FAPRI-Ireland team uses Irish macroeconomic projections from the HERMES model maintained by the Economic and Social Research Institute (ESRI) in Dublin.

Despite the recent slowdown in the growth of the Irish economy, it is projected that the Irish real economic growth rate will continue to outpace that of the EU in general over the period to 2012. France and Germany are projected to grow at a slightly slower rate of around 2.3 per cent. However, the Irish inflation rate is also set to run higher than the EU average over the same period.

Table 2-1 presents the average real GDP growth rates and inflation rates for the EU and Ireland as well as the dollar/euro and sterling/euro exchange rates that have been used in the analysis presented below.

Table 2-1: Projections for Macroeconomic Variables over period 2002 and 2012

Growth rate	Annual Average % per year 2002-2012	
	EU-15	Ireland
Real GDP	2.2	4.5
Inflation:	1.8	2.8
Exchange Rate	Percentage Change 2002 – 2012	
Dollar/euro	+ 22	
Sterling/euro	+ 11	

Sources: Global Insight, ESRI and FAPRI-Ireland Partnership Model (2003).

The exchange rate path between the euro and the dollar remains an important factor for many sectors of EU agriculture given that much international trade is denominated in US dollars. This key exchange rate affects the competitiveness of EU exports to third countries. The recent strengthening of the euro

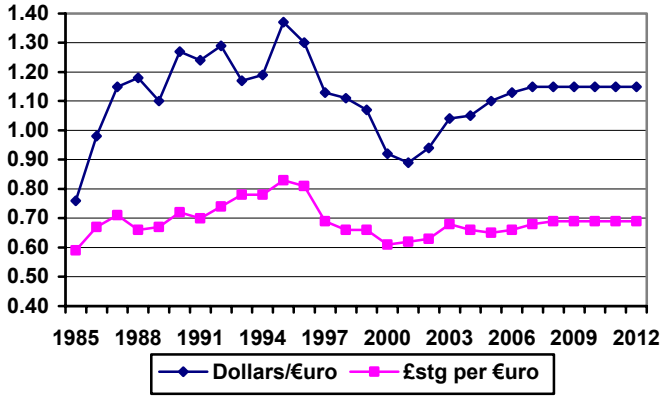
[2] Several of the submissions to the WTO in the current Millennium Round have identified export refunds as an immediate target for future reforms. See for example agriculture proposal documents G/AG/NG/W/11 and G/AG/NG/W/15 submitted to WTO.

against the US dollar and the necessity to increase export refunds for a number of commodities is an illustration of the impact of this currency relationship.

A weak euro has positive budgetary implications for the EU Commission, allowing either higher levels of third country exports and higher internal prices or alternatively allowing savings on the cost of export subsidies by way of lower EU commodity prices. Conversely, a stronger euro puts more pressure on the EU agriculture budget but lowers inflationary pressure on the rest of the economy.

Figure 2-1 shows the projected exchange rate between the euro and both the US dollar and sterling over the period to 2012. The euro appreciated against both currencies in 2002 and is projected to continue to do so to 2007, when it reaches US$ 1.15 and 69p sterling, after which the rate of exchange stabilises. Particularly with respect to the US dollar this represents a significant strengthening of the euro over the projection period relative to the projection in the 2002 baseline. The path of world prices when expressed in euro terms for many commodities is consequently not as favourable as in last year's outlook.

Figure 2-1: Euro exchange rates: Historical and Projected



Source: Global Insight (with revision for 2003)

2.3 Baseline Projections

This section of the paper presents the Baseline. The purpose of the Baseline is not as a forecast of the future but to establish a yardstick against which policy simulations can be judged. Detailed results of the Baseline simulation are presented in Appendix III.

Although the 1992 MacSharry reforms and the changes made under Agenda 2000 have resulted in a movement of EU prices towards world price levels, the EU Commission still maintains some degree of control over market developments for several of the more highly supported commodities. In particular, the Commission is able to use export refunds in order to support the internal price of many commodities, particularly in the dairy and beef sectors. The Baseline and the results of the scenario are therefore, to a large extent, dependent on the assumptions made regarding the Commission's market management behaviour. This behaviour is ultimately constrained by the Uruguay Round Agreement on Agriculture (URAA). However, with subsidised exports not reaching the URAA limits in the case of several commodities, the Commission still has some discretion. Political influences and budgetary constraints will condition management decisions over time. The issue is discussed in depth in Box 2-1.

2.3.1 European Dairy Sector Baseline

The year 2002 saw the prices of dairy products fall substantially on world markets – in line with the expectations of many commentators. World prices dipped for all four dairy commodities and the reduction in third country export prices was accentuated within the EU by a strengthening of the euro against the dollar.

Given this market weakness, there was a notable increase in production of the intervention products, with butter and SMP production at their highest level since 1999. As a consequence, EU intervention stocks grew rapidly over the course of 2002. By year-end public butter stocks had almost reached

200,000 tonnes, an increase of about 150,000 on the previous year. When SMP intervention opened in March stocks accumulated quickly and the 109,000 tonne trigger point for tendering to intervention was reached by mid-summer. By the year-end 160,000 tonnes of SMP was bought into intervention whereas there had been no stocks at the beginning of 2002.

Following the trend of recent years, EU cheese production increased again in 2002, although the rate of growth was quite low – possibly as a consequence of the sharp production increase in 2001. Cheese consumption growth also slowed in 2002. It appears that consumer fears about BSE have begun to recede and the extra boost this formerly gave to cheese consumption has begun to dissipate.

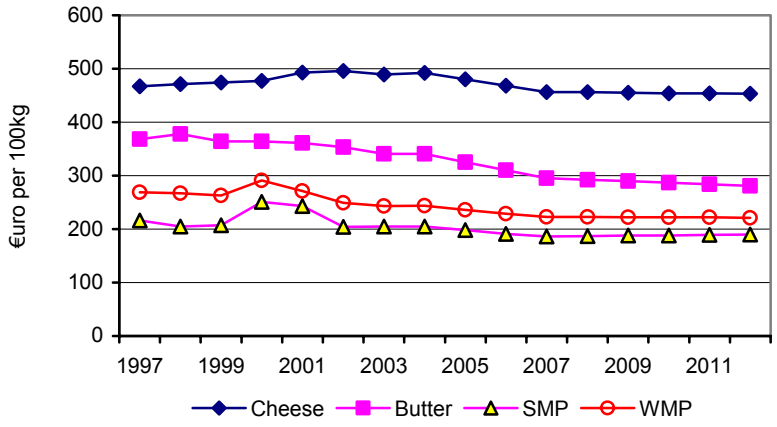
Looking ahead under the Baseline, the EU quota regime is maintained with the remaining 11 Member States, that had yet to receive their Agenda 2000 1.5 percent quota increase, receive their allocation. This will represent another 1.2 percent increase in the EU quota. By 2012 milk yields increase by about 14 percent against the three-year average for 2000 to 2002 and cow numbers decline at a slightly lower rate due to the growth in quota.

By 2012 cheese production and consumption increase by about 11 per cent and 13 percent respectively relative to the average volumes over the last three years. SMP production continues to decline reflecting a general pattern of falling consumption in the EU in recent years.

Third country exports of butter grow slightly in response to improved demand, particularly from Russia. With SMP exports growing from Australia and New Zealand, EU SMP exports are projected to remain well below the URAA maximum of 273,000 tonnes. Cheese exports are projected to fall also.

Under the baseline, lower support prices will put downwards pressure on dairy product and farm milk prices from 2005 onward, however, butter and SMP prices do not fully track intervention prices downward. This issue is discussed in more detail in Box 2-1. In the short term the recent build up of stocks will overhang the market and a relatively strong euro versus the dollar will (in euro terms) offset some of the improvement in international prices. Collectively, these effects prevent internal EU prices lifting above 2002 levels to any great degree.

Figure 2-2: Baseline projections EU dairy product prices



Source: FAPRI Ireland Partnership Model (2003).

2.3.2 Irish Dairy Sector Baseline

The weak market conditions of 2002 saw significant volumes of Irish dairy output sold to intervention. Almost 50,000 tonnes of butter and 40,000 tonnes of SMP were purchased into intervention from Ireland. Milk prices fell sharply from the relatively high level of 2001. Central Statistics Office (CSO) estimates suggest there was a decrease in milk price of about 8 percent in 2002 relative to 2001. With several cost items showing an increase in 2002, overall incomes in dairying declined on the levels achieved in 2001.

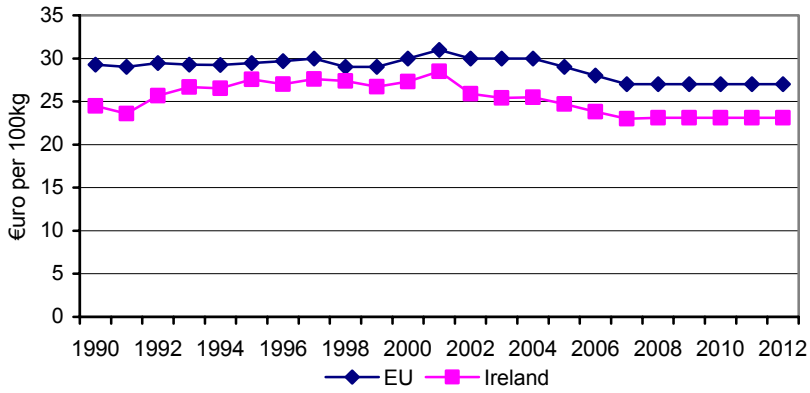
Under the baseline much of what occurs at an EU level is reflected in Ireland. While most other EU Member States will receive an increase in their milk quota, Ireland already has received its allocation under Agenda 2000, so production remains relatively fixed. By 2012, in the presence of a static milk quota, a continuing increase in yields of about one percent per annum leads to a reduction in the number of dairy cows of about 12 percent versus the average number for 2000 to 2002.

There is some movement in the product production profile. By the end of the projection period, cheese production is projected to reach close to 130,000 tonnes per year in response to a more favourable outlook for cheese prices relative to the intervention products and better export opportunities in the UK market following developments in UK milk processing capacity. This represents an increase in production of about 15 percent against the average for 2000 to 2002 and is probably approaching the limit of what is feasible given existing processing capacity and milk delivery patterns.

There is a corresponding decline in the production of butter and skimmed milk, down 8 percent on the years 2000-02 and a further slight shift in favour of casein over SMP manufacture. WMP production shows a decline in the projection period due in the main to the relocation of some processing capacity to Northern Ireland.

On the home market a continuing growth in cheese consumption is the main feature. A projected increase of 10 percent in the Irish population over the projection period should benefit sales for dairy products whose consumption is static or in decline on a per capita basis.

Figure 2-3: EU and Irish Milk Price Baseline Scenario



Source: FAPRI Ireland Partnership Model (2003).

2.3.3 European Beef Sector Baseline

A summary of the main variables for the beef sector in the EU is given in Table 2-2. The beef market in recent years has seen widespread disruption from both the BSE crisis and Foot and Mouth disease (FMD). The BSE crisis saw beef consumption fall dramatically in the latter half of 2000 and in 2001. In previous projections, FAPRI based the projected consumption recovery on the experience of the UK after BSE, where consumption took over three years to recover. It appears that the EU market has recovered more rapidly than this, taking many by surprise. Consumption has recovered to close to its pre-BSE levels already, albeit at lower prices. In the projections it is assumed that consumption recovers, and then returns to its long run downward trend. The disruption of recent years mean that it is impossible to decompose the trend in beef consumption in the EU, but if the downward trend is not as strong as expected it will further improve an already balanced market.

The cattle herd in the EU has been shrinking in recent years. Increasing dairy yields and milk quotas mean that dairy cow numbers fall each year further reducing the calf crop. The last two years have also seen a reduction in the number of suckler cows. There are a number of reasons for this. The BSE crisis and FMD outbreak produced poor market conditions and widespread cullings. Agenda 2000 introduced the possibility of being able to claim a certain proportion of suckler premia on heifers. The Commission reacted to the glut of beef by introducing its “Seven-Point Plan” that made claiming premia on heifers compulsory. In the future it is projected that there is a slight recovery of beef animals

driven by relaxing of these constraints, improved prices, and the continued reduction of the dairy herd. Overall cattle numbers continue to fall, however, and therefore beef production falls too.

Box 2-1: Beef and dairy prices. The role of the Commission.

The area of the projections that tend to attract the most comment and attention in Ireland are the projections for the most important commodities – beef and dairy. The prices for beef and dairy are supported by a number of measures, intervention prices, border protection and export subsidies. As noted in the text, the Commission has some ability to manipulate these markets by changing export subsidies. Therefore the projections of prices in the model are dependent on assumptions regarding this behaviour.

The example of the beef sector

Agenda 2000 contained significant reductions to intervention prices in the beef sector. The changes to the intervention price were motivated by a long term fear that a continued imbalance in the beef market would lead to a large build up of intervention stocks with the unwanted associated budgetary implications. In 2003 the intervention price now stands at 156 Euro/100 Kg, less than half its level in 1999. However, in order to export beef the EU must still subsidise all of its exports.

The Commission, should it wish, could cease to subsidise exports of beef and let internal EU beef prices fall. Producers were compensated for some of the reduction in support prices. However, after reductions to intervention prices were implemented as part of the MacSharry reforms, prices did not fall along with intervention prices. In 2002, cattle prices in the EU rose, and stand at levels well above prevailing intervention prices. Even if the Commission eliminated export refunds it is unlikely that the market price would fall to the new intervention price levels in place from July 2002 onwards.

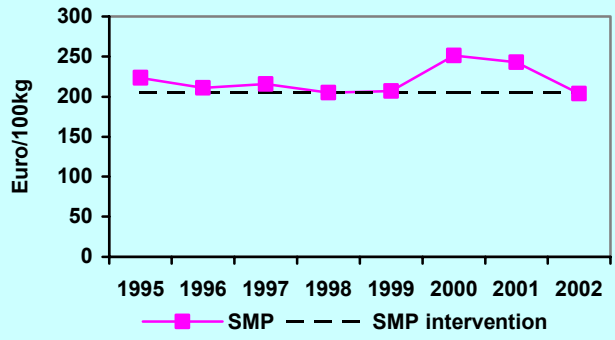
Previous Baseline projections by the FAPRI-Ireland Partnership have shown beef prices staying above intervention prices, and it is considered to be a significant advantage of this type of modelling approach that such an analysis can develop. In the Baseline the level of subsidised exports is chosen in a manner consistent with past behaviour of the Commission. The prevailing beef price does not fall to intervention levels.

The Commission could behave differently than in the manner assumed here. Subsidised exports could be lower, resulting in a lower beef price, or vice versa. It should be remembered that the Baseline does not constitute a forecast, and we are merely endeavouring to replicate behaviour consistent with policy and past behaviour.

The example of the dairy sector

Reductions in intervention prices in the dairy sector are scheduled to be phased in under Agenda 2000 from 2005 onwards. In a situation where there were no intervention stocks and internal EU prices above intervention levels then these changes would have little effect. However, 2002 saw a build up of both butter and SMP stocks in the EU, and prices in many cases dipped below intervention. Under these circumstances we expect that market prices will track intervention prices, falling over the period and therefore leading to a reduction in the milk price. As in the case of the beef sector, however, it would be expected that there would be situations whereby one would not expect market prices to fall to the full extent of the reduction in intervention. As Figure 2-4 shows, there have been periods when the price of SMP has been significantly above its intervention level.

Figure 2-4: SMP prices, 1995-2002.



Whether prices fall to their intervention levels depends on a variety of factors, including how supply and internal demand might change as well as the path of world prices and exchange rates. A stronger Euro, and a weaker world market, could result in prices falling to support levels. Under these conditions, the prices of dairy products would be lower than presented here, both in the baseline, and under the scenario.

Table 2-2 Baseline projections for the EU beef sector

	2000-2002 Average	2012	Change	% Change
		Euro/100kg		
R3 Cattle Price	255.2	244.8	-10.4	-4.1
		'000 Head		
Beef Cows	12,057	11,854	-203	-1.7
		'000 Tonnes		
Production	7,349	7,151	-198	-2.7
Imports	388	508	120	30.9
Domestic Use	7151	7209	58	0.8
Exports	536	450	-86	-16.0
Intervention	210	0	-	-

Source: FAPRI-Ireland Partnership Model (2003).

Perhaps the most striking aspect of this beef Baseline is the fact that over the course of the projections the EU is moving from being a beef net exporter to a net importer. Several years ago this would have been unthinkable, but beef exports have steadily fallen, and in the last year beef imports have grown, with even some beef entering the market having paid the full tariff.

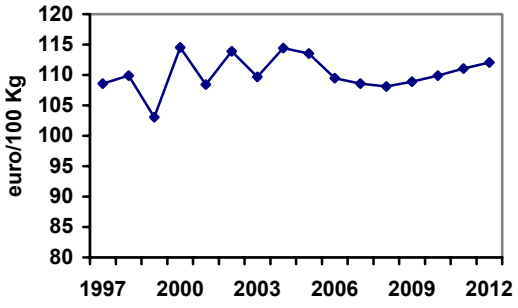
The price path that results from the developments in the market is relatively static, with prices at the end of the period down somewhat on the 2000-2002 average, but still above 2001 levels. As has been noted above, the path of prices is partly dependent on the behaviour of the Commission in particular in its use of export refunds. Here, strengthening exchange rates and developments in world prices means that to maintain current export levels would require increased expenditure on refunds. In the baseline it is assumed that the Commission holds constant, but does not increase, spending in these overall restitution levels, thus leading to a fall in exports.

2.3.4 Irish Beef Sector Baseline

The Irish beef market in 2002, when compared to those of recent years, was characterised by what could be termed a return to some state of normality. Beef exports, which in recent times have been affected by BSE and FMD crises at home and in the wider EU, increased on the levels observed in 2001. As a consequence of improved export markets for Irish beef and for Irish live cattle, Irish cattle prices improved on the levels observed in 2001.

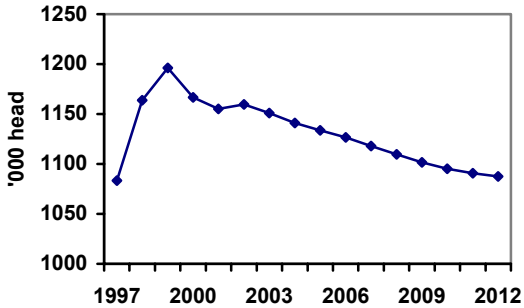
Figure 2-10: Baseline Irish Cattle price and Irish Suckler Cow Numbers 1997-2012

Cattle Reference Price (Euro/100 Kg)



Source: FAPRI-Ireland Partnership Model (2003).

Suckler Cow Numbers ('000 head)



Source: FAPRI-Ireland Partnership Model (2003).

Under the Baseline, Irish cattle prices in 2003 are projected to decline from the levels observed during 2002 due to the running down of EU stocks of beef (accumulated under the Special Purchase Scheme). Despite the reintroduction of over thirty month beef from the UK to the EU beef market prices recover somewhat through 2004 and 2005 as the negative price impact of overhanging stocks of SPS beef is removed. Irish beef prices subsequently decline as EU consumption of beef declines.

Some decline in supply towards the end of the projection period leads to a modest increase in prices. Irish cattle prices, by the end of the projection period, are projected, under the Baseline, to be relatively unchanged from the levels observed over the period 2000-2002. This base period, one of considerable turmoil in Irish cattle markets and prices, does not represent a particularly high benchmark. The Baseline projections for prices thus indicate that the beef sector's problems are unlikely to be ameliorated under a continuation of current policy.

Under the Baseline Irish suckler cow numbers are projected to decline. This decline is driven by a number of factors. The erosion of the real value of Agenda 2000 direct payments by cost inflation reduces the incentive that they provide to farmers to hold cattle. Agenda 2000 stocking rate restrictions, the existing encouragement from Agenda 2000 policies to extensify production, combined with provisions under which suckler cow premia can be claimed on heifers all act to lower the Irish suckler cow herd. By 2012 under the Baseline the Irish suckler cow herd is projected to be marginally (15,000 head) less than the Irish national ceiling on suckler cow premium claims.

Table 2-3: Irish Baseline projections for the beef sector.

	2000-2002 Average	2012	Change	% Change
		Euro/100kg		
Cattle Reference Price	88.4	88.3	-0.1	-0.1
		'000 Head		
Beef Cows	1,161	1,087	-74	-6.4
		Kg/head		
Slaughter Weight	304	307	3	1.0
		'000 Tonnes		
Production	513	537	24	4.7
Imports	15	19	4	26.7
Domestic Use	65	65	0	0
Exports	456	492	36	7.3
Intervention	3	0	-3	-100.0
Value of Output	1,259	1,206	-53	-4.2
Direct Payments	471	526	55	11.7
Sector Revenue	1730	1732	2	0.1

Source: FAPRI-Ireland Partnership Model (2003).

A lower suckler cow herd when combined with a declining dairy cow herd (due to ongoing improvements in milk yields) leads to lower animal numbers. Table 2-3 provides data on supply and use of beef in the reference period and projected levels of these variables in 2012 under the Baseline. The unusual reference period leads to the seemingly contradictory developments in the volume of production and exports (which increase) and the projected decline in both the suckler and dairy herds under the baseline. This apparent contradiction is explained by the reference period (2000-2002) during which large amounts of beef were removed from the markets and destroyed under the Purchase for Destruction Scheme. This beef was not classed as production and because it was destroyed was not available to either export or consume domestically. Against levels of production and exports in 2000, Irish beef production and exports are projected (under the baseline) to decline by 2012 by 7 and 6 percent respectively. The increasing share of suckler cows in the Irish cow herd causes average slaughter weights to increase slightly, this partially offsets the effect of the declines in cow numbers on the volume of beef production. From the very low levels observed over the period 2000-2002 live cattle exports are, under the Baseline, projected to recover to approximately 200,000 head by 2012.

Irish cattle prices at the end of the Baseline projection period are largely unchanged in nominal terms from the average level over the period 2000-2002. As noted in the discussion of the EU Baseline, the path of prices in the EU and Ireland is partially dependent on the behaviour of the Commission, in particular on its use of export refunds. Under the Baseline the appreciation of the euro and developments in world prices mean maintenance of current levels of exports would require increased expenditure on refunds. In the Baseline we are assuming that the Commission does not want to spend

more and so exports of beef from the EU fall. Greater willingness on the part of the Commission to support EU exports through the provision of subsidies would, *ceteris paribus*, lead to higher EU and Irish beef prices than those projected under the Baseline. A Commission decision to reduce the level of expenditure on the subsidisation of EU beef exports would of course have the opposite effect on price levels (see Text Box 2-1 for further discussion of this important issue).

The combination of declining output volumes and a static price projection under the Baseline means that by 2012 the value of output from the sector is projected to decline by over 4 percent relative to the reference period of 2000-2002. It should be noted that the value of output concept used here includes a valuation of the changes in stocks of livestock on farms in addition to the conventional outputs of animals disposed through export and slaughter. This makes direct comparison of changes in production and changes in output less than straightforward. Despite the decline in the value of output under the Baseline policies (Agenda 2000) the value of direct payments increases by almost 12 percent. The combination of increased direct payments receipts and lower output value means that beef sector revenue under the Baseline is largely unchanged in nominal terms by the end of the Baseline projection period.

2.3.5 European Sheep Sector Baseline

A summary of the main variables for the sheep sector in the EU is given in Table 2-4. The number of ewes in the EU has fallen dramatically by five million head in the last three years. As with the beef sector it is difficult to disentangle the cause of this, with the FMD crisis, changes made under Agenda 2000, and a general move out of the sector as likely contributors. The reduction in numbers has resulted in an increase in prices over the last two years, however, this combined with the relatively generous ewe premia should result in a stabilisation of the flock. The projections show a small further reduction in numbers that stand at 64 million in 2012.

Table 2-4: EU Baseline projections for the sheep sector.

	2000-2002 Average	2012	Change	% Change
		Euro/100kg		
Representative Price	395.2	364.8	-30.4	-7.7
		'000 Head		
Ewes	68,321	63,968	-4,353	-6.4
		'000 Tonnes		
Production	1,107	1,083	-24	-2.2
Imports	257	274	17.5	6.8
Domestic Use	1,362	1,355	-7.0	-0.5
Exports	3.3	3	-0.3	-10

Source: FAPRI-Ireland Partnership Model (2003).

Consumption of sheep meat is projected to remain largely constant over the projection period. Increasing incomes and population growth will increase demand, but a return to more normal meat consumption patterns in relation to the 2000 to 2002 reference period results in a slight reduction in lamb domestic use by the end of the projection period. The projected fall in production is taken up in part by an increase in imports as a result of better utilisation of existing Tariff Rate Quotas and the Agreements with Central European countries.

The net result of these changes is that the representative price falls from its very high levels of 2001 and 2002, but remains high in terms of recent history at 365 Euro/100kg.

2.3.6 Irish Sheep Sector Baseline

The exceptionally high Irish lamb prices that occurred in 2001 as a result of the exclusion of UK exports of lamb from continental markets were reversed in 2002. Despite these high prices the ongoing decline in the Irish ewe flock has continued and under the Baseline is projected to continue

with knock-on consequences both for the value of output from the sector and for the value of direct payment receipts.

Developments in the Irish economy, as well as elements of agricultural policy that apply to other livestock sectors, play a crucial role in shaping the future of the sheep sector. Sheep systems are, on the whole, relatively labour intensive. The projected growth in incomes outside the farming sector increases the opportunity cost of farmers' time, as well as the cost of hired labour. This is likely to mean that sheep systems will increasingly be unattractive, as the number of part-time farmers increases. The incorporation of sheep numbers in the calculation of total farm livestock units when assessing eligibility for extensification payments means that on mixed cattle and sheep farms, policy incentives are such that most of the adjustment in animal numbers falls on sheep. The sector could also be threatened by alternative enterprises with a lower labour requirement, particularly forestry.

Over the Baseline projection period the path of sheep prices in Ireland largely reflects the projected path of EU prices. The percentage price changes by 2012 relative to the reference period of 2000-2002 that are reported in Table 2-4 and Table 2-5 for the EU and Irish sheep sectors indicates that the price decline is greater in Ireland. This is largely due to the fact that during the period 2000-2002 Irish lamb prices increased due to the exclusion of UK lamb from continental EU markets. The percentage increases in Irish lamb prices during this period were greater than those observed in continental EU markets. The decline from those "higher highs" means that the price decline over the Baseline period in Ireland is greater. Nevertheless, despite the projected decline in prices under the Baseline, the price level in Ireland over the entire projection period represents an improvement in nominal terms over the prices observed during the 1990s.

This relatively benign price projection, and the advent of a fixed ewe premium following the reforms of the EU sheep sector, are not sufficient to offset the forces that, under the Baseline, are projected to lead to a continuing decline in the ewe flock. The high prices, and fixed ewe premium, moderate the rate of decline from that observed in recent years. By 2010 ewe numbers in Ireland are projected to be almost 22 per cent lower than their level in the reference period of 2000-2002. The decline that is projected for ewe numbers is largely reflected in declining production of lamb and in exports of lamb. Production and exports of lamb are projected to decline by approximately 20 and 18 percent respectively between the reference period of 2000-2002 and 2012.

Table 2-5: Irish Baseline projections for the sheep sector.

	2000-2002 Average	2012	Change	% Change
		Euro/100kg		
Reference Price	284.8	257.9	-26.9	-9.4
		'000 Head		
Ewes	3,976	3,064	-912	-22.9
		'000 Tonnes		
Production	76	61	-15	-19.7
Imports	2	2	0	0
Domestic Use	28	23	-5	-17.9
Exports	49	40	-9	-18.4
Value of Output	230	150	-80	-34.7
Direct Payments	84	80	-4	-4.8
Sector Revenue	314	230	-84	-26.8

Source: FAPRI-Ireland Partnership Model (2003)

The large decline in the volume of output and lower prices is reflected in lower output value from the sector under the Baseline. The value of sheep sector output is projected to have declined by almost 35 percent by 2012 relative to the reference period of 2000-2002. The value of direct payments receipts, despite the increase that occurred during the reference period, declines over the projection period due to the significantly lower ewe numbers. Overall the value of direct payment receipts declines over the projection period by close to 5%. By 2012, sheep sector revenue declines by almost

27 per cent relative to the reference period 2000-2002. The main variables for the sector are outlined in Table 2-5.

2.3.7 European Pig Sector Baseline

A summary of the main variables for the pig sector in the EU is given in Table 2-6. The size of the pig breeding herd in the EU has been falling in recent years, an experience it shares with the cattle and sheep sector. The overall drop in sow numbers masks more significant herd reductions in particular countries'. Some Northern European countries have cut their herds as a result of environmental restrictions, while in Spain numbers have risen. In the pork sector, however, increases in productivity can offset breeding herd declines more easily than in cattle and sheep.

Table 2-6: Baseline projections for the pig sector to 2012.

	2000-2002 Average	2012	Change	% Change
		Euro/100kg		
Reference Price	148	129	-19	-12.7
		000 Head		
Sows	12,500	12,408	-92	-0.7
		000 Tonnes		
Production	17,598	18,806	1,208	6.9
Imports	50	61	11	2.1
Domestic Use	16,476	17,440	964	5.9
Exports	1,181	1,422	242	21.0

Source: FAPRI-Ireland Partnership Model (2003).

The projections show the sow herd as stable over the period. Productivity improvements result in an increase in production. The reduction in prices coupled with income and population growth result in a 6 per cent increase in consumption. Exports grow to account for the difference between the increase in production and consumption.

2.3.8 Irish Pig Sector Baseline

The boost which the sector received in 2001 due to a switch in consumption away from beef in favour of other meats was not present in 2002. There was a further contraction in the Irish breeding herd last year. Slaughterings were down in 2002 but this was due to capacity constraints following the Rooskey processing plant fire that resulted in animals being shipped to Northern Ireland for processing.

Irish pig meat production fell slightly in 2002 due to the lower level of slaughterings. A strong sterling helped maintain export demand to the UK but exports to continental Europe declined as BSE fears in beef receded. Increased exports to other markets helped to maintain the overall level of exports.

The Irish pig price declined in 2002 in line with reductions in pig prices across the EU. The average Irish price for the year was down 12 percent.

Table 2-7 shows the main Irish pig sector variables under the baseline. Over the course of the projection period there is a gradual decline in the Irish pig price in line with the decrease in the EU generally. Relative to the average of 2000 to 2002 price is down 13 percent. Output is unchanged in volume terms relative to the average recorded for 2000 to 2002. By 2012, in the Baseline analysis, the projected output value of the pig sector at € 275 million is a reduction on the 2000 level in nominal terms.

Table 2-7: Main Irish Pig Variables With Baseline Projections for 2012.

	2000-2002 average	2012	%change
		€uro / kg	
Irish Pig Price*	136	118.5	- 12.7
		000 Head	
Volume of output	3,341	3,295	-1.4
		€uro Million	
Value of output	313	275	-12

Source: FAPRI-Ireland Partnership Model (2003).
Note: * Price of finished pigs at licensed curers

2.3.9 European Crops Baseline

Projections of world prices for the cereal sector are shown in Table 2-8. The early part of 2003 has seen a significant strengthening of the Euro against the dollar, and the projection is for the Euro dollar exchange rate to remain strong relative to 2002. This has important consequences for the cereals sector where the reduction of intervention prices over time has resulted in cereals prices close to world levels. In recent years the EU has been able to export wheat without subsidy. With the strengthening of the Euro, however, this is not projected to be the case in the short to medium term.

Table 2-8: Baseline projections for the cereals sector.

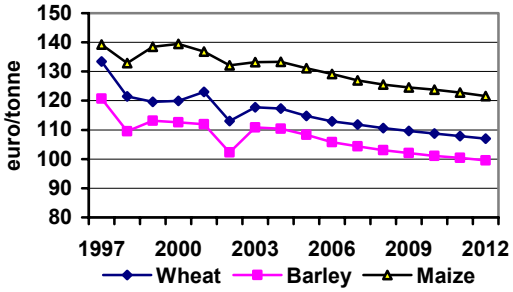
	2000-2002 Average	2012	Change	% Change
Wheat US Gulf (US$/tonne)	137.9	150.9	13.00	9.4
Wheat US Gulf (€)	150	131.2	-18.80	-12.5
Barley, Portland (US$/tonne)	117.7	126.6	8.90	7.6
Barley, Portland (€/tonne)	127.9	110.1	-17.80	-13.9
Maize, U.S. Gulf (US$/tonne)	98.9	106	7.10	7.2
Maize, U.S. Gulf (€/tonne)	105.4	92.2	-13.20	-12.5

Source: FAPRI-Ireland Partnership Model (2003).

The strength of the euro is the main factor that keeps cereals prices in the latter part of the projection period close to intervention levels. Yield increases are projected over the period that and depress prices. The net effect of yield increases and price declines is that overall returns to the sector are static and there are no large shifts in cereal area. Slightly higher yields for wheat over the period make that crop more attractive to producers resulting in an increase in wheat area.

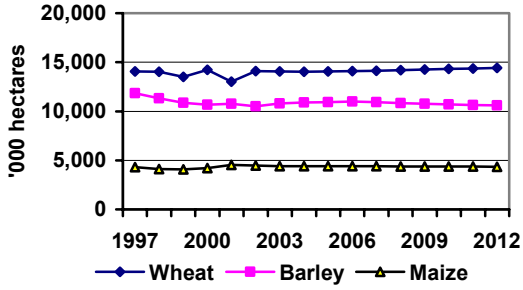
Figure 2-5: EU Cereal Prices and Areas Harvested: 1997-2012

Cereals Prices (Euro/tonne)



Source: FAPRI-Ireland Partnership Model (2003).

Cereals Areas Harvested



Source: FAPRI-Ireland Partnership Model (2003).

An important area of uncertainty with the cereals outlook are the projections of feed consumption, which has increased dramatically in recent years as a result of the fall in cereals prices. A continued growth in feed consumption is projected, but at a reduced rate given that much of the shift away from

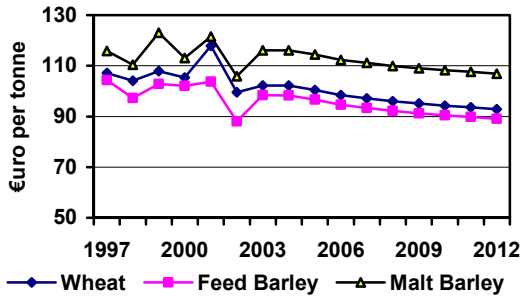
alternate feeds has already occurred and that further price falls are limited by support prices, and the drop in cattle and sheep numbers in the Baseline.

2.3.10 Irish Crop Sector Baseline

The outlook for the Irish cereals sector under the Baseline is for cereals prices to recover from the low prices observed in 2002, but not to return to the high price levels observed in 2001. Developments on international grain markets and in the euro/dollar and euro/sterling exchange rates mean that Irish and EU cereals prices are projected to decline under the Baseline. Prices for feed barley and feed wheat are projected to decline by 9 and 14 percent respectively.

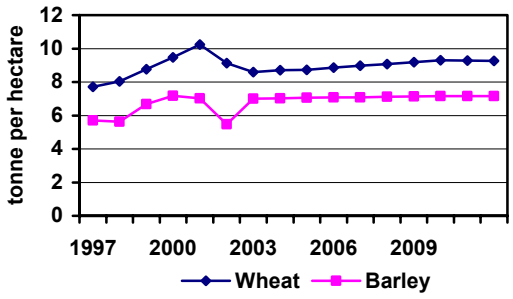
Figure 2-6: Irish Cereals Prices and Yields

Irish Cereals Prices



Source: FAPRI-Ireland Partnership Model (2003).

Irish Cereals Yields



Source: FAPRI-Ireland Partnership Model (2003).

Irish cereal prices and yields are shown in Table 2-9. Irish cereal yields are projected to increase steadily over the projection period. The unusually low yields for winter and especially spring barley in 2002 are not expected to reoccur.

Table 2-9: Baseline projections for the Irish cereals sector.

	2000-2002 Average	2012	Change	% Change
Wheat		'000 Hectares		
Area	88.68	81.47	-7.21	-8.1
		Million Tonnes		
Production	0.85	0.75	-0.10	-11.8
Stocks	0.05	0.03	-0.02	-40.0
Imports	0.70	0.94	0.24	34.3
Exports	0.18	0.17	-0.01	-5.6
		Euro/ Tonne		
Feed Wheat	107.6	92.9	14.7	-13.7
Barley		'000 Hectares		
Area	179.53	180.35	0.82	0.5
		Million Tonnes		
Production	1.18	1.29	0.11	9.3
Stocks	0.10	0.14	0.04	40.0
Imports	0.12	0.22	0.10	83.3
Exports	0.16	0.02	-0.14	-87.5
		Euro/ Tonne		
Feed Barley	98.0	89.1	-8.90	-9.1
Malting Barley	113.5	106.8	-6.70	-5.9

Source: FAPRI-Ireland Partnership Model (2003).

By the end of the period, relative to the reference period of 2000-2002, barley yields are expected to increase by 9 percent while, from what were historically very high levels over the reference period of 2000-2002, Irish wheat yields are expected to decline marginally under the Baseline.

The relatively static outlook for Irish cereal prices over the 2003-2012 period and the unusually high wheat area planted in 2002, results in total cereal area declining between the reference period and 2012. Under the Baseline, declining area harvested and the yield changes shown in Figure 2-3, result in wheat production in 2012 being over 15 percent lower than during the reference period. Barley production, by contrast, due to both yield growth and a low area harvested in the reference period, increases under the Baseline by over 6 percent by 2012. Overall, relative to a 2000-2002 reference period, Irish cereal output values under the baseline are projected to decline by almost 13 percent.

2.4 The Baseline Outlook for Intermediate Consumption

In 2002 expenditure on intermediate consumption (inputs) increased on the 2001 level by about 2 percent. Expenditure on feed was up due to higher feed prices and to increased usage because of poor mid-year weather conditions. There was a slight decline in fertiliser usage, and together with a reduction in price, this led to a 2 percent reduction in expenditure. Energy costs, the other main expenditure item showed an increase of about 3 percent.

Table 2-10: Baseline Irish Agricultural Input Use and Expenditures to 2012

	2000 – 2002 average	2012	% Change
Animal Feed Consumption (per head)	Kg/head		
Dairy	728	600	-18
Beef	213	182	-15
Total Fertilizer Applications	'000 tonnes		
Nitrogen	387	367	-5
	€uro Million		
Total Input Expenditures	3,034	3,130	3
of which			
Feeding stuff	887	716	-19
Fertiliser	343	355	3
Energy	302	401	33
Forage plants	455	443	-3
Agricultural services	312	306	-2

Source: FAPRI-Ireland Partnership Model (2003).

*Other inputs include, *inter alia*, veterinary services, agricultural services and energy

As Table 2-10 indicates most input applications are expected to fall in volume terms over the projection period. In particular the feed and nitrogen applications are expected to decline. The fall in feed consumption can be traced both to changes in both the scale and the intensity of production in the various output sectors. For instance dairy cow and suckler cow numbers are expected to fall by 12 per cent and 6 per cent respectively. Total nitrogen application rates are projected to decline by eight per cent, mainly due to the fall off in numbers of cattle in the dairy sector.

Energy expenditure is projected to increase over the projection period by 33 percent. The projections this year incorporate downward revisions to historical energy expenditure estimates made by the CSO – so they are not comparable with last year's projections.

While nitrogen application rates are projected to decline, the anticipated increase in energy prices over the projection period results in total fertiliser expenditure actually increasing over the projection period.

2.5 The Outlook for Agricultural Output and Income (Baseline)

In this section we bring together the output projections from the various commodity sectors and the expenditures on intermediate consumption (inputs) to provide estimates of Agricultural Gross Value Added under a baseline (or no policy change) scenario.

2.5.1 Goods Output at Producer Prices: Baseline

Goods Output at producer prices is made up of values for the livestock sectors (cattle, sheep, pigs and poultry), livestock products (milk) and the crop (cereals and other crops) sectors.[3] Table 2-11 summarises the Baseline projections for the different sectors.

Table 2-11: Baseline Sectoral Output Values to 2012 relative to average for 2000 to 2002

	Average of 2000 to 2002	Baseline 2012	2000/02 – 2012 % Change
		€uro million	
Livestock			
of which			
Cattle	1,259	1,206	-4
Sheep	230	150	-35
Pigs	313	275	-12
Livestock Products			
of which			
Milk	1,476	1,272	-14
Crops			
of which			
Cereals	166	145	-13
Root Crops	150	163	9
Forage Plants	459	448	-2
GAO	**4,689**	**4,328**	**-8**

Source: FAPRI-Ireland Partnership Model (2003).

These output values represent the market return to the producer for produce actually sold i.e. it excludes payment receipts. Overall Gross Agricultural Output at producer prices (GAO) is expected to decline by about seven per cent over the projection period.

Beef price levels remain relatively unchanged over the projection period, while the value of output from the sector increases relative to the reference period. The removal and destruction of beef under the SPS and PFD schemes during the reference period and the effect of the BSE and FMD crises on the value of beef sector output makes the 2000-2002 reference period deceptive. The volume of animals slaughtered declines in line with the decline in cow numbers that occurs over the Baseline projection period. A comparison of the value of output in 2000 with that projected under the baseline for 2012 indicates a decline of almost 12% in value.

Under the Baseline, a dramatically reduced ewe flock and associated lamb production, combined with prices that decline from the very high reference period level, lead to a large decline in the value of the output from the sector.

The decline in the value of the pig sector over the baseline period is mainly due to projections of lower pig prices. Although the breeding herd shows a decrease, this is largely offset by increased sow productivity, leaving overall pig output volume relatively unchanged. By 2012 pig sector value is down 12 percent relative to the reference period.

Under the baseline, the value of the Irish dairy sector is projected to decline over the next ten years. A progressive fall in milk price occurs due to Agenda 2000 reductions in intervention prices for SMP and butter. By 2012 dairy sector value is down 14 percent relative to the reference period.

The value of output in the cereals sector declines slightly over the projection period due largely to a static overall area harvested, declining prices and increasing yields.

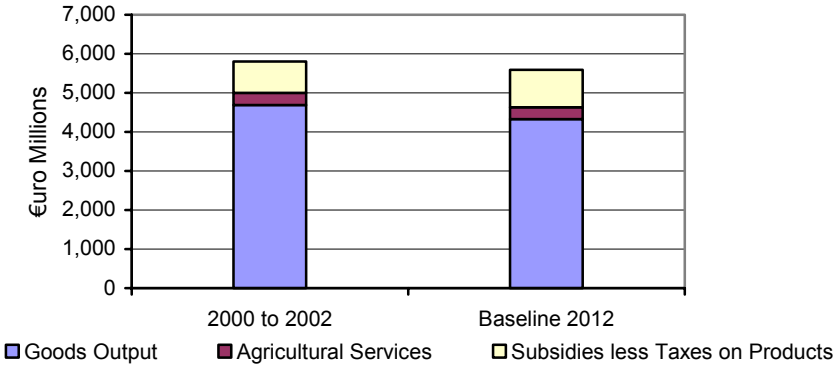
[3] The value of output refers specifically to the value of produce sold off the farm. It is exclusive of any subsidy or direct payment. These are included in revenues.

2.5.2 Agricultural Output at Basic Prices: Baseline

The modern CSO accounts decompose the total subsidies to agriculture figure into two components. The first component "subsidies on products" relates to subsidies that are directly tied to production. These payments include special beef premiums, suckler cow premiums, dairy and beef payments, beef national envelope and slaughter premiums. These payments are added to GAO to give Agricultural Output at basic prices. The second component – "subsidies on production" consists of all other subsidy payments and includes REPs payments, headage, arable aid and extensification payments.

Over the period 2000 to 2002 out to 2012 subsidies on products are set to increase by 20 per cent. Most of this increase is set to arise from changes in policy brought in under the Agenda 2000 reforms. The main increases in the payments are in the beef sector and are for slaughter premia and the beef national envelope, which are both set to rise considerably. Agricultural Output at basic prices is shown in Figure 2-7.

Figure 2-7: Agricultural Output at Basic Prices to 2012: Baseline



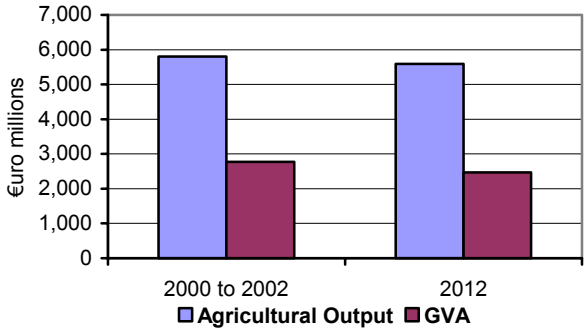
Source: FAPRI-Ireland Partnership Model (2003).

Agricultural output at basic prices is set to decline by four per cent over the projection period. The expected decline in output values is not quite offset by the projected increase in subsidies on products accruing to the agricultural sector.

2.5.3 Gross Value Added: Baseline

Gross value added (GVA) at basic prices is defined as "Agricultural Output less intermediate consumption". With expenditure on intermediate consumption set to increase marginally by three per cent between by 2012, GVA is set to fall by just over one per cent over the same period. The values of agricultural output and gross value added are shown in Figure 2-8.

Figure 2-8: Agricultural Output and Gross Value Added to 2012:Baseline



Source: FAPRI-Ireland Partnership Model (2002).

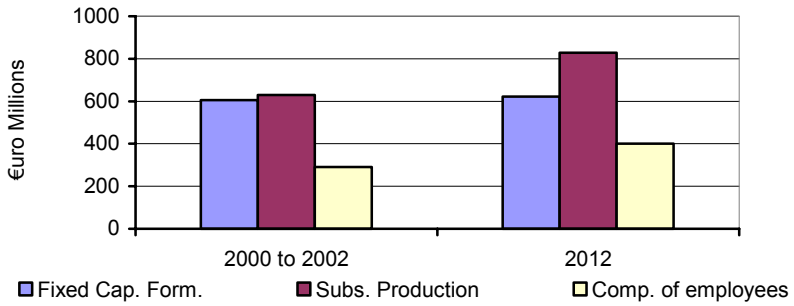
2.5.4 Operating Surplus (Agricultural Income): Baseline

To calculate the operating surplus (agricultural income) from agriculture, GVA must be adjusted by subtracting fixed capital consumption (depreciation) and compensation of employees and adding

subsidies on production. As Figure 2-9 illustrates, subsidies on production increase by 30 per cent by 2012 relative to the reference period. As with subsidies on products, most of the increase in subsidies on production are due to changes brought about by the Agenda 2000 CAP reform. The main increases are in the levels of the beef national envelope, extensification payments and the introduction of direct payments for milk production.

Depreciation levels within Irish agriculture are projected to increase very slightly over the projection period while compensation of employees is set to rise by close to 40 per cent over the projection period.

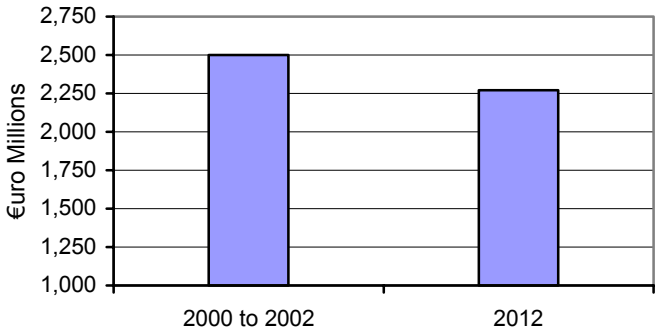
Figure 2-9: Fixed Capital Formation, Subsidies less taxes on Production and Compensation of Employees: Baseline



Source: FAPRI-Ireland Partnership Model (2003).

Given these trends in subsidies, output values, and input costs, total operating surplus is projected to decrease by close to nine per cent by 2012 relative to the average for 2000 to 2002. It is evident from the projections that an increasing proportion of the income figure will be coming from subsidy payments rather than market returns. As a proportion of operating surplus, total subsidies (on products and on production) are projected to rise from 68 per cent in 2002 to over 78 per cent in 2012. The projection for operating under the baseline projection is illustrated Figure 2-10.

Figure 2-10: Operating Surplus under Baseline Assumptions in 2000 and 2012



Source: FAPRI-Ireland Partnership Model (2003).

A more detailed presentation of the Output, Input and Income position in agriculture under the Baseline is contained in Table A 1, Appendix I.

2.6 Scenario Assumptions

The scenario includes the impact of the implementation of the Commission's legislative proposals for CAP reform ("Long Term Perspective" or LTP), along with the EU proposal on modalities submitted to the WTO in January. Both of these documents form part of a negotiation process that is likely to result in a different policy environment than would prevail if both of these proposals were adopted.

2.6.1 Mid-Term Review – A Long Term Perspective (MTR-LTP)

Box 2-2 summarises the main detail of the reform. It is clear from the description of the proposals above that the LTP comprises a substantive reform of the way that agriculture is supported in the EU. Some of the proposed changes are small in scale and can therefore be modelled with a degree of confidence – such as the changes in the payments and intervention prices for the cereals.

Box 2-2: Mid-Term Review – A Long Term Perspective (MTR-LTP)

The proposals that were contained in the LTP were for the most part similar to those in the original (July 2002) MTR Communication document. The biggest change is the inclusion of a detailed proposal for the dairy sector – the earlier MTR document contained a discussion of several options. The details of the LTP proposals of interest to are outlined briefly here:

Crops: The intervention price for cereals is reduced by 5 per cent to 95.35 Euro/tonne from 2004/05. Intervention for rye is abolished. Compensation payments are increased by 3 Euro/tonne to 66 Euro/tonne.

The supplement paid for durum production in traditional areas is reduced to 250 Euro/tonne, the specific aid payment is phased out, and a 40 Euro/ha quality payment is introduced.

The current set-aside requirements are replaced by a permanent set-aside of 10 per cent.

Dairy: The quota system is retained until 2014/15. The reductions in intervention prices are brought forward a year with asymmetric reductions commencing in 2004. The intervention price of skimmed milk powder is reduced by 3.5 per cent a year and the butter intervention price is reduced by 7 per cent. The total price reductions are therefore 17.5 per cent and 35 per cent respectively. This results in a reduction of the target price for milk of 28 per cent. It should of course be recalled that the Agenda 2000 Agreement will bring about a 15 percent increase in quota.

As well as the quota increases already outlined in Agenda 2000, there is an additional increase of 1 per cent per year in 2007 and 2008. Compensation payments are increased according to the formula agreed in Agenda 2000.

Decoupling: With the exception of the durum quality supplement and some commodity specific payments, direct payments are converted to a single farm payment. The entitlement is calculated by dividing the historical level of claims by the area of land upon which the claims were made. With the exception of dairy, the years 2000 to 2002 are used as the historical basis for the calculation of these entitlements.

Cross-Compliance: The single farm payment does not constitute a fully decoupled payment from production. In order to continue to receive the payment producers must meet a series of European standards in terms of the environment, food safety, animal health and welfare, for example. In addition the producer must maintain land in "good agricultural condition". The interpretation of this is vague in the LTP document, but it appears that the land still needs to be farmed, and Annex IV refers to a "minimum level of maintenance" which includes "minimum stocking rates or/and appropriate regimes". In addition, the volume of land that can be moved from pasture to arable land is restricted.

Degression and modulation: The budgetary framework agreement that was reached between the France and Germans as part of the enlargement negotiations meant that if the sugar and dairy regimes were to be reformed the finances to do this would have to come from reductions in other areas. The LTP therefore proposes that the single farm payment be reduced by up to 19 percent in order to provide funds for the plans for the dairy sector, future reform of the sugar sector, and to fund the modulation of payments into rural development schemes.

In the FAPRI-Ireland modelling system the impacts of the introduction of the single payment are captured by reducing the supply inducing effect of payments to approximately 70 per cent of their level under the Baseline. Thus, in the analysis presented below payments retain some of their production inducing effect. This assumption reflects the fact that payments are still tied to land, that receipt in the future will be associated with the satisfaction of cross compliance restrictions, and the fact that making payments to farmers influences their behaviour, with regard to risk for example.[4] The value of the payments is also reduced so as to reflect the degressivity and modulation elements of the Commission's proposals using analysis based on FADN data (European Commission, 2003).

The single farm payment and the introduction of decoupled direct payments for milk production could result in fundamental changes in the agricultural practices of many producers in the EU. Under these circumstances the results of our analysis must be treated with caution. The fact that the results that are presented here are broadly in line with those that were produced to analyse the July 2002 MTR, and the Commission's analysis of the January 2003 MTR-LTP proposals (produced using different methodologies) provides some confidence regarding the results. However, farm level analysis provides very valuable additional information that should also be examined, see Hennessy and Breen (2003).

2.6.2 WTO: European Proposal on Modalities

The scenario also attempts to include the impact of *one particular interpretation* of the paper that the Commission submitted regarding the establishment of modalities at the WTO negotiations. It is important to note that this interpretation does not reflect the feelings of either Teagasc or FAPRI as to any outcome of the WTO negotiations, or how the EU proposal would be implemented. For example in designing the scenario we did not consider the possibility that tariff reductions for some 'sensitive' products could be lower than the 36 percent rate. In practice for some products lower rates of tariff reduction might be implemented in any agreement. In fact Ireland entered a declaration in the minutes of the Council that Irish acceptance of the Commission's proposal on modalities was on the basis that, at most, minimal tariff reductions will be applied to sensitive sectors, especially beef and butter.

Implementation of the proposal is assumed to occur over six years from 2006. The main features of the EU proposal that are relevant to the analysis are detailed in Box 2-3.

Box 2-3: Summary of EU European Proposal on Doha Round Modalities submitted to WTO

Market Access: That tariff rates for imports are reduced by 36 per cent. The proposal is actually for an average of a 36 per cent drop and a minimum reduction of 15 per cent. In the analysis all tariffs are reduced by 36 per cent, but it might be expected that the most sensitive products such as beef and dairy would only see the 15 per cent cut. Tariff rate quotas are maintained at their URAA levels.

Export Subsidies: The EU proposal does not specify the reduction in the allowed quantity of goods that are exported with the aid of subsidy. Rather it specifies an average cut in budgetary outlays of 45 per cent. As in the case of tariff reductions, it would be likely that in practice this would mean that the reduction for sensitive or vulnerable commodities would be less than this amount. In the scenario, the permitted expenditure on export refunds for all commodities is assumed to fall to 55 per cent of its URAA limit.

Domestic Support: The other major component of the EU proposal is the reduction of the permitted Aggregate Measure of Support (AMS) of 55 per cent. The changes that have been made under Agenda 2000 mean that the EU has significantly reduced its AMS by switching payments to the "blue" box. The LTP proposals would further shift payments, and calculations show that the EU would not have to make significant changes to reach the 55 per cent target. The reduction of AMS, therefore, has no impact on the scenario.

Applying these policy changes in the model is problematic, given the plethora of different tariff rates that are applied in reality. A rate that is appropriate or representative of the commodity concerned is selected. Given the commodity aggregation of the model, it is impossible to capture the detailed workings of the system for each specific tariff line.

[4] See Hennessy (1998) for the theoretical basis for the arguments concerning the impact of decoupled income payments on producer decisions in a world characterised by the presence of risk. Empirical evidence of the degree to which decoupled payments affect production decisions can be found in Adams et al. (2001).

The analytical system used in this analysis does not explicitly calculate export subsidy expenditure, since to a degree these expenditures are decided by the Commission, it is possible to provide estimates of future export subsidy outlays based on known historical expenditure data, projected world and EU price changes, and projected export levels. These can then be assessed against the relevant export subsidy spending limits under the EU proposal.

In addition it is assumed that the changes proposed in the EU modalities proposal are implemented only in the EU. There has been no simulation of the world modelling system. It can be safely assumed that if such a simulation were carried out, then there would be a positive effect on world prices, and this would have an additional positive impact on the results for the EU.

There are a number of other changes suggested in the EU proposal. Some of these have greater relevance for other trading blocks, such as proposed changes to the policing of export credits, a trade support mechanism favoured by the US, that would benefit the EU if implemented. The effect of some other proposals are difficult to quantify, such as the proposal for recognition of geographical indications regulations. The fact that these have not been included in the scenario should not be taken to imply that these are considered unimportant, rather that they are beyond the scope of the present analysis.

Text Box 2-4: EU Enlargement under the Baseline and Scenario

The Baseline and scenario do not include the accession of the 10 central and eastern European countries to the EU that will take place on 1st of May 2004. Previous studies have suggested that the expansion of the EU to the east will not have a major effect on the agricultural sectors of the existing EU (Fabiosa et al., 2002).

Under the terms of the accession of these countries to the EU the new member states have been allocated milk quotas that are below the historical levels of production in these countries. In terms of dairy products this will constrain their ability to expand production and to increase export trade. Once their domestic use requirements have been satisfied it is likely that for the foreseeable future any exportable surplus from these countries will be small.

Due to the fact that beef production in these countries is largely derived from the dairy herd and that the dairy cow herd in these countries is likely to decline due to the restriction of milk quota and increasing milk yields per cow, the outlook for beef production from these countries is not positive, while increases in exportable surplus are considered highly unlikely.

2.7 Scenario Results

In this section we summarise the key features of the MTR and WTO scenario analysed in this paper. We are still some way away from knowing the ultimate outcome of these negotiations and the results are an indication of the effects bearing in mind the assumptions about the conclusion of the negotiations.

2.7.1 EU and Irish Scenario Results: Dairy

Box 2-5: Main features of Dairy MTR for Ireland

- Agenda 2000 would begin a year earlier in 2004/05
- Intervention butter and SMP prices reduced by approximately 23 percent and 3 per cent respectively relative to Agenda 2000 reductions.
- 30,000 tonne limit on intervention (before tendering)
- Direct payments of approximately € 41.66 per tonne (4.3 cent per litre or 15p per gallon)
- Payments to be modulated and degressed

Under the scenario examined in this paper there are could be more potential policy levers in operation than in any other sector. The MTR would bring direct payments into milk production for the first time. These are by way of compensation for the proposed reduction in butter and SMP intervention prices. It is proposed that these payments be decoupled from production. Although it has yet to be officially confirmed, it appears that from April 1st 2004 producers would be

free to exit milk production and retain the right to receive the new compensatory payments subject to specific criteria. The main features of the dairy MTR are summarised in Box 2-5.

The reduction in intervention support will lead to a further decrease in farm milk prices over and above the decrease projected to occur due to the current Agenda 2000 policy.

About two thirds of the decoupled payment will be paid on the basis of quota held at the end of the 2003/04 quota year and it will be up to national governments to decide using objective criteria how to allocate the remaining third of the compensation.

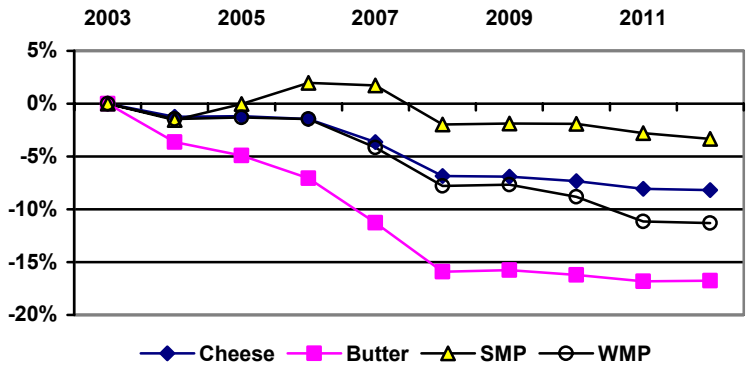
If milk payments are coupled to production (as specified in the Berlin Agreement) they can effectively be treated as a top up on the milk price and the fact that the payment comes from a different source to the milk cheque is of little consequence in economic terms to the production of the associated milk. However, the decoupling of payments changes producer's incentives to produce milk.

Under a decoupled payments system the cost of producing the milk must be met by the milk price alone as the decoupled payment would be received regardless of any production decision. In economic terms the marginal revenue from production will be lower than in a situation of coupled payments whereas the marginal cost is relatively unchanged. For some producers across the EU this may mean that it is no longer economically rationale to produce milk. They may exit the system and choose to only take the decoupled direct payment instead. The greater the decrease in milk price under the scenario the more likely this type of decision may prove rational. Consequently, the model suggests that under the scenario we will see a slight under-fill of the milk quota in some Member states as we move toward the end of the projection period.

Under the MTR scenario the asymmetric reduction in the intervention prices of butter and SMP will mean a very different path for the prices of the two products. Butter prices will fall quite sharply relative to the baseline and by 2012 are projected to be almost 17 percent below the baseline level. On the other hand, the reduction in SMP prices relative to the Agenda 2000 baseline is projected to be quite small. In fact in the early years of the scenario it is projected that SMP prices would be above baseline levels as the reduction in butter production leads to lower production of SMP than in the baseline and a slower rate of decline in SMP prices.

Of course products which are not subject to intervention are not immune to these reductions. The decline in cheese and WMP prices relative to the baseline are projected to be in the eight to 11 percent range. Figure 2-11 illustrates the projected change in EU dairy product prices under the scenario.

Figure 2-11: EU Dairy Product Prices: Scenario Change from Baseline



FAPRI-Ireland Partnership Model (2003).

Beyond the change in dairy product mix projected in the baseline (rising cheese production and declining butter and SMP production) the reform process is not projected to have a huge influence on the product mix in the EU or Ireland. Production of all the main commodities will see an increase (relative to the baseline) due to the increase in quota.

The fall in product prices in the EU stimulates increases consumption relative to the baseline and reduces the volumes available for export. This assists the EU in trying to meet the objectives of its WTO proposal.

Under the WTO trade reform element of the scenario, the expenditure limit for export subsidies would be reduced by 45 per cent on average relative to the final year limits of the URAA. In addition, we have assumed that the bound (or out of quota) tariffs for dairy products are reduced by 36 percent. Both of these reductions are assumed to take place gradually over the period 2006 to 2012 as specified in the EU proposal.

With respect to export subsidies the proposed reforms would lower considerably the limit on the amount of expenditure or outlays that can be made. Export subsidies bridge the gap between world and EU prices and make EU exports competitive with product traded by countries with a lower cost base. The URAA reduced the limit on the amount that could be spend on export subsidies and the volume (tonnage) of such exports that could be made. In practice for the EU dairy sector it is the export subsidy volume limits and not the outlay limits that have generally been the binding constraint in recent years.

In the scenario, internal EU prices fall due to the reduction in support which form part of the MTR, reducing the gap between world and EU prices that must be bridged by the export subsidy. Consumption of dairy products in the EU increases with these lower prices and (given the EU milk quota) the volumes available for export fall thereby reducing the total volume of product requiring subsidy. This reduction in EU exports leads to an increase in world prices over and above the baseline level that further reduces the gap between world and EU prices.

However, even though per unit export subsidies and the volume of product requiring an export subsidy declines, we find that the EU export outlay limits for cheese and 'other' dairy products will become binding in the scenario. EU internal prices must then fall further to accommodate any product which could otherwise have been exported had the now lower export limit not existed.

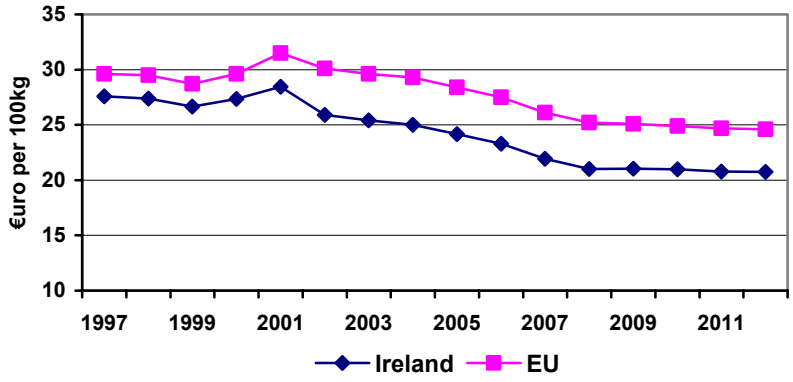
With respect to the proposed tariff reductions we find that under the projected world prices, the projected euro versus dollar exchange rate and projected EU internal prices, the EU is not under immediate threat in the case of butter, SMP, cheese and WMP imports. EU tariffs can be described as 'watery', which means that the tariffs exceed the gap between the domestic and world price. This gap between world and EU prices is an important question for this analysis because lowering the tariff will not increase market access until the tariff equals the gap between domestic and world price.

In the scenario, world prices generally increase in US dollar terms but this is offset to an extent by a strengthening euro. At the same time EU internal prices fall due to the implementation of the MTR. When the EU border tariffs are added to world prices we find that the entry price for imports in to the EU would still be higher than EU internal prices – in other words the tariffs are still bigger than the price gap and the imports do not occur. In percentage terms, by 2012 the margin of difference between EU prices and tariff paid import prices is larger for butter SMP and WMP than for cheddar.

It must be stressed that a different exchange rate path could effect this model result. For example, other things equal, a stronger euro against the dollar could narrow the gap between the tariff paid import price and the EU price, while a weaker euro against the dollar would increase the level of protection afforded to the EU, making out of quota imports even less likely.

The combined effect of the reforms examined in this scenario is to reduce the EU average milk price by 9 percent relative to the 2012 baseline position and the Irish milk price by over 10 percent relative to the baseline position. Compensation of 4.3 cents per litre (15 p per gallon) is available for the reduction in support prices under the MTR but this does not offset the decline in the value of milk sold relative to current levels. The overall effect on EU and Irish milk prices of the scenario is summarised in Figure 2-12.

Figure 2-12: EU and Irish farm Milk Price under MTR/WTO Scenario to 2012



FAPRI-Ireland Partnership Model (2003).

2.7.2 European Scenario Results: Beef

Unlike the dairy sector, for beef the effects of the MTR-LTP elements have a greater impact than do the trade elements of the scenario analysed. This outcome is due to a number of factors. Firstly, the proposed reforms of the CAP involving decoupling of direct payments from production, this will mean that the aggregate measure of support (AMS) to the EU agricultural sector reduces dramatically and that the proposed cuts in the AMS are non-binding. Similarly in the beef sector the level of water in the EU tariffs on beef imports means that despite the 36% cut examined in the scenario imports of beef though increasing under the scenario relative to the Baseline do not grow to a level that dramatically reduces the price differential between EU and world beef prices. Finally the historically low level of EU beef exports relative to the limits agreed as part of the URAA together imply that the reduction in the levels of expenditure on export subsidies proposed by the EU would not be binding on the EU under the scenario analysed.

A summary of the main variables under the Baseline and in the scenario for the beef sector in the EU is given in Table 2-12. The changes that have been made to the way that the beef sector is supported in the MacSharry reforms of 1992 and in Agenda 2000 agreement have meant that the sector is highly dependent on the receipt of direct payments. These direct payments are directly linked to production in that an animal (be it a suckler cow or male bovine animal) must be owned for the payment to be claimed. In the cereals sector, by contrast, in some cases area need not be cultivated in order to get payment, and there is some flexibility over crop choice. This is not the case in the EU beef sector. It would be expected, therefore, that impact on beef of the decoupling elements of the MTR would be greater than on other sectors, with the possible exception of sheep.

The MTR-LTP changes have the effect of reducing the number of suckler cows in the EU as a whole by approximately 11 per cent by 2012. The impact on EU member states is expected to vary, depending on their dependence on the currently coupled direct payments. Suckler cow numbers decline the most in Ireland, while the decline in Italian suckler cow numbers is the lowest of the countries that are modelled explicitly, see Figure 2-11. In the short run the extra cow slaughter pushes up production and reduces prices. Given that suckler cows in the EU only account for a third of the total herd, beef production in 2012 is only down 3.5 per cent on its Baseline level for that year.

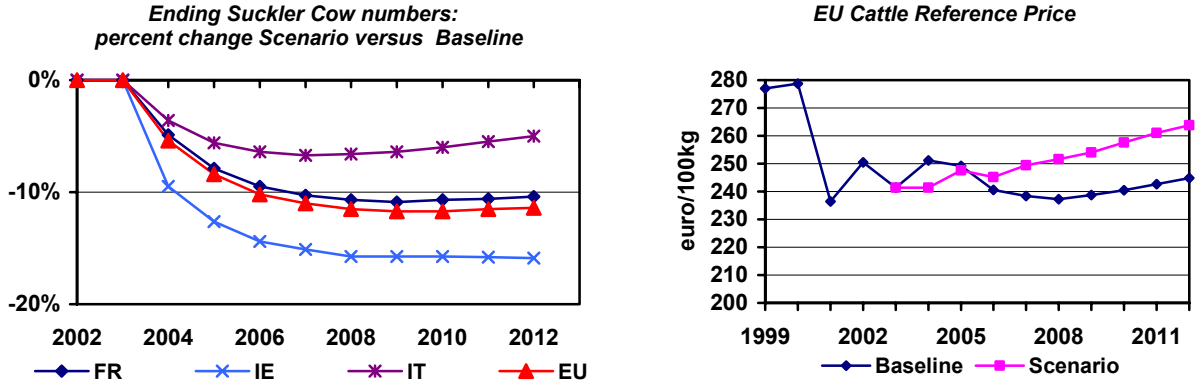
Table 2-12: Scenario results for the EU beef sector.

	2004 Baseline	2004 Scenario	% Change	2012 Baseline	2012 Scenario	% Change
	Euro/100kg			Euro/100kg		
R3 Cattle Price	251.2	241.4	-3.9	244.8	263.8	7.8
	(000) head			(000) head		
Beef Cows (Ending)	11,853	11,214	-5.4	11,909	10,549	-11.4
	(000) tonnes			(000) tonnes		
Production	7,396	7,559	2.2	7,152	6,899	-3.5
Imports	464	454	-2.2	508	524	3.1
Domestic Use	7386	7,443	0.8	7,209	7,085	-1.7
Exports	517	608	17.6	451	338	-25.1
Intervention	0	4	-	0	0	-

Source: FAPRI-Ireland Partnership Model (2003).

The reduction in production has the effect of pushing up prices. Consumption falls slightly, but a significant proportion of the adjustment in the market comes from a change in net trade. Stronger prices increases imports, and reduce exports. As prices rise, the budgetary cost of export subsidies increases. As a consequence EU beef exports are reduced under the assumption that the Commission would not want to increase expenditure. The consequent changes in net EU beef trade have the effect of pushing up the world beef price by 1.3 per cent.

Figure 2-13: The Impact of the MTR-WTO Scenario on the EU Beef Sector



Source: FAPRI-Ireland Partnership Model (2003).

Current tariffs on imports of beef are very high. Although there is beef coming in over TRQ into the EU at the moment it is not clear whether this is reflective of the fact that world prices plus tariff are close to EU prices, or whether it is merely the exploitation of the way that the tariffs are set up. It should be remembered that the Baseline incorporates this trade in the high level of imports that it shows. Given the low level of exports relative to the URAA limits (about 822 thousand tones) the implied expenditure on export subsidies does not approach the value limitations, even with a 45 per cent reduction.

Again it must be emphasised that the price increase that results from the scenario is dependant on Commission behaviour. There is scope for the Commission to spend more or less on subsidies under the scenario, and that would influence price. In their analysis of the MTR-LTP, the Commission projected a 7 per cent increase in beef prices, implying that they would be willing to see the price rise to a moderate extent. Note also that the price in 2012 is still below 2000 levels for the EU, even with the price increase that occurs under the scenario.

2.7.3 Irish Scenario Results: Beef

The price and volume changes described above for EU markets are reflected in the analysis of the impact of the decoupling scenario on the Irish beef sector. As was noted above, the decline in the Irish suckler cow herd (down16 percent) is the largest of those projected to occur in the EU because of decoupling.

In response to the decoupling of direct payments in the beef sector, cow slaughter increases and heifer additions to the suckler cow herd decline. The increase in cow slaughter is reflected in increased supplies of beef through 2004 and 2005. Increased beef supply at an EU level pushes down EU and Irish prices to levels below those projected under the Baseline. However, by 2006 with the productive capacity of Irish and EU beef sectors reduced and the supply of finished cattle reflecting the lower cow numbers, prices improve as indigenous supply contracts relative to the baseline. Despite the increased volume of imports of beef into the EU under the scenario, prices in Ireland and the EU are in excess of baseline prices throughout the latter half of the projection period.

The large decline in the Irish suckler cow herd and the greater dependence of Irish beef production on calves from the suckler cow herd than in other EU member states leads, by 2012, to a decline in the volume of slaughtering in Ireland of approximately 6 percent. Exports under the scenario decline by almost 7 percent, and domestic Irish consumption declines due to the increased level of Irish beef prices and the long-term decline in Irish consumption of red meats. Table 2-13 provides a summary of the impact of the scenario for the main variables for the Irish beef sector.

Table 2-13: Scenario results for the Irish beef sector.

	2004 Baseline	2004 Scenario	% Change	2012 Baseline	2012 Scenario	% Change
	Euro/100kg			Euro/100kg		
Cattle Reference Price	114.4	109.0	-4.7	112.1	122.1	8.9
	(000) head			(000) head		
Beef Cows (Ending)	1,134	1,026	-9.5	1,085	913	-15.9
	(000) tonnes			(000) tonnes		
Production	585	661	13.0	537	503	-6.3
Imports	20	20	0	19	19	0
Domestic Use	67	68	1.5	65	63	-3.1
Exports	539	614	13.9	492	459	-6.7
Value of Output	1,322	1,252	-5.3	1,206	1210	0.3

Source: FAPRI-Ireland Partnership Model (2003).

The reduction in the volume of beef production that occurs under the scenario (relative to the Baseline) is offset by the projected increase in Irish cattle prices that results under the scenario. By 2012 Irish cattle prices are almost 9 percent higher than under the Baseline. The combination of the price increase and the reduction in the volume of beef produced means that overall output value from the sector remains almost constant in nominal terms due to the policy changes examined under the scenario.

2.7.4 European Scenario Results: Sheep

A summary of the impact of the scenario on the main variables for the cereals sector in the EU is given in Table 2-14. Like the beef sector the sheep sector has a high relative dependency on direct payments. The ewe premium generally accounts for a significant proportion of producers' income, and in order to receive the payment the producer must have a ewe. It is reasonable to assume, therefore that if the payment is decoupled, as under the scenario, then this would have a dramatic effect on ewe numbers. By the end of the projection period the number of ewes in the EU is 5 per cent below the baseline.

Table 2-14: Scenario results for the sheep sector.

	2004 Baseline	2004 Scenario	% Change	2012 Baseline	2012 Scenario	% Change
	Euro/100kg			Euro/100kg		
Representative Price	378.1	339.9	-10.1	364.8	408.5	12.0
	'000 Head			'000 Head		
Ewes (Ending)	65,778	61,769	-6.1	63,702	60,564	-4.9
	'000 Tonnes			'000 Tonnes		
Production	1,110	1,164	4.9	1,083	1,030	-4.9
Imports	258	248	-3.9	274	284	3.7
Domestic Use	1,365	1,409	3.2	1,355	1,312	-3.2
Exports	3	3	0	3	3	0

Source: FAPRI-Ireland Partnership Model (2003).

This reduction when compared with that in EU suckler cow numbers may appear low and there are two reasons that explain this difference. Sheep production systems in the EU can be roughly divided in two, a Northern European system which produces lambs for fattening and slaughter and a Southern European system in which lambs and milk are a joint product, and lamb slaughter occurs at light weights. The impact of the decoupling of ewe premia in light lamb-milk system is projected to be less than in heavy lamb system due to a lower dependence on direct payments. The lower drop in ewe numbers is also partly due to the greater price increase for sheep meat that occurs under the scenario. Since the EU market is highly protected imports cannot respond to the higher prices. There is more than sufficient "water" in the sheep meat import tariff to prevent large amounts of imports outside of the TRQ. Also, in the cattle example, the Commission reduces the volume of subsidised exports of beef in response to the higher cost of refunds, in the sheep sector there are no subsidised exports and the absence of this policy lever means that EU lamb prices increase to a greater extent than EU beef prices.

It is clear from these conclusions that the sheep meat sector results would be very different if there were more significant cuts in tariffs as a result of WTO trade reform than those in the EU proposal, or if the TRQ agreed as part of the URAA were to be increased. The current EU WTO modalities proposal does not propose any increase in TRQ and such increases were not analysed as part of the scenario. A WTO outcome that incorporated increased TRQ, significantly larger cuts in tariffs (or a combination of the two) would likely lead to significantly lower prices than are projected under the scenario.

2.7.5 Irish Scenario Results: Sheep

The impact of the scenario on the Irish sheep sector largely reflects that at the EU level, the large decline in Irish ewe number under the Baseline that is projected in Ireland means that under the scenario the rate of decline in Ireland is not disproportionately greater than that in other EU countries that produce heavy lambs.

The initial decline in ewe numbers (as ewes are culled) is reflected in an increase in the volume of production. The decline in ewes is very quickly reflected in a reduced volume of production at both an Irish and EU level. This reduced level of production leads to the improvement in Irish and EU lamb prices described above. A summary of the impact of the scenario for the main variables for the cereals sector in the EU is given in Table 2-15.

The declines in EU lamb production in continental EU countries are filled by greater exports of lamb from countries such as Ireland (which are up 2.5 percent) and from ex-EU suppliers. The large increase in prices for lamb moderates the degree to which ewe numbers decline under the scenario. Despite the decline in the volume of lamb produced the follows from the reduced ewe flock under the scenario the strong increase in prices that is projected leads to an increase in the value of output from the Irish sector relative to the Baseline.

Table 2-15: Scenario results for the Irish sheep sector.

	2004 Baseline	2004 Scenario	% Change	2012 Baseline	2012 Scenario	% Change
	Euro/100kg			Euro/100kg		
Representative Price	268.0	238.9	-10.9	257.9	291.3	13.0
	'000 Head			'000 Head		
Ewes (Ending)	3,514	3,395	-3.4	3,019	2,866	-5.1
	'000 Tonnes			'000 Tonnes		
Production	72	74	2.8	61	58	-4.9
Imports	2	2	0	2	2	0
Domestic Use	25	29	16	23	19	-17.4
Exports	49	47	-4.1	40	41	2.5
Value of Output	194	171	-11.9	150	160	6.7

Source: FAPRI-Ireland Partnership Model (2003).

2.7.6 European Scenario Results: Pigs

A summary of results of the scenario for the main variables for the pig sector in the EU is given in Table 2-16. The impact of the scenario on the pig sector is not significant, and any changes come from the cross effects from meat demand of the changes in the cattle and sheep sector, and from the fact that a small amount of imports are triggered by the tariff reduction in the EU proposal.

Table 2-16: Scenario results for the pig sector.

	2004 Baseline	2004 Scenario	% Change	2012 Baseline	2012 Scenario	% Change
	Euro/100kg			Euro/100kg		
Reference Price	143.1	141.8	-0.9	129.2	129.6	0.3
	000 Head			000 Head		
Sows	12,400	12,354	-0.4	12,363	12,416	0.4
	000 Tonnes			000 Tonnes		
Production	17,845	17,823	-0.1	18,806	18,906	0.5
Imports	53	53	0	61	61	0.4
Domestic Use	16,688	16,659	-0.2	17,439	17,534	0.5
Exports	1,213	1,252	0.2	1,422	1,428	0.4

Source: FAPRI-Ireland Partnership Model (2003).

2.7.7 Irish Scenario Results: Pigs

Given that the scenario has relatively little effect on the EU it is not surprising a similar conclusion can be drawn with respect to the sector in Ireland. Overall there is a very marginal increase in pig output and slaughterings. Even though pig prices increase slightly relative to the baseline, there is a slight increase in domestic consumption of pigmeat relative to the baseline due to the cross commodity price effect of much larger increases in beef and sheepmeat prices relative to the baseline.

2.7.8 European Scenario Results: Crops

A summary of the impact of the scenario for the main variables for the cereals sector in the EU is given in Table 2-17. The impact of production of the decoupling on the cereals sector is less than that in the cattle and sheep sectors. Although the payments are an important source of income for crops producers, the payments are more decoupled than for other sectors. Producers are free to choose which of the supported crops that they grow on their land, and may voluntarily set aside land in many cases if they wish.

Part of the MTR-LTP proposal requires permanent set aside. This requirement will tend to reduce area planted as industrial crops currently planted on set-aside will be planted elsewhere. It might be expected, however, that the land put into the permanent set aside would be the least productive land, and this would have a positive effect on yields.

The results of the scenario differ from previous analyses by FAPRI of the MTR in that wheat area drops more than that of other cereals. This is due to the fact that in the current baseline barley prices are at intervention levels at the end of the period, which means that wheat prices can fall further. Whilst there is a general reduction in land planted to crops, wheat therefore reduces its area by more than the other cereals.

The biggest changes from the LTP are in the durum wheat and rye sectors. In durum wheat direct payments are reduced significantly. In rye, it is proposed that intervention is eliminated. The result of these changes is that the area of both crops is reduced (although part of the change to the rye area is already captured in the baseline where producers in Germany have already responded to the proposals by planting less area.

The changes in the cereals sector result in a 2 per cent increase in world soft wheat prices, with barley and maize world prices increasing by slightly less than one per cent.

Table 2-17: Scenario results for the cereals sector.

	2004 Baseline	2004 Scenario	% Change	2012 Baseline	2012 Scenario	% Change
Price	Euro/100kg			Euro/100kg		
Soft Wheat	117.3	117.9	0.5	107	105.9	-1
Barley	110.4	109.3	-1	99.5	98.7	-0.8
Maize	133.3	133.9	-0.5	121.6	121.4	-0.2
Area	000 Ha			000 Ha		
Wheat	17,851	17,544	-1.7	18,210	17,732	-2.6
Barley	10,855	10,765	-1.1	10,610	10,565	-0.4
Maize	4,390	4,366	-0.5	4,353	4,361	0.2
Production	Mil Tonnes			Mil Tonnes		
Wheat	104.4	103.7	-0.7	120.1	117.7	-2
Barley	51.3	50.83	-0.9	54.1	53.95	-0.3
Maize	10.57	40.42	-0.4	43.88	43.99	0.2

Source: FAPRI-Ireland Partnership Model (2003).

Whilst the strengthening of the Euro means that the prospect of unsubsidised cereal exports recedes, the changes that have been made to the cereal sector intervention prices under the reforms means that the value limit on refunds, even with the reductions under the EU proposal, is unlikely to be exceeded. The impact of the reduction on import tariffs is difficult to quantify. 2002 saw a large volume of imports of feed wheat and barley entering the EU at zero duty. The quirk in the tariff calculation that caused this has been fixed by imposing a quota system with a prohibitive out of quota duty.

2.7.9 Irish Scenario Results: Crops

The MTR-WTO scenario has only a limited impact on the Irish cereal sector. Relative to the Baseline areas harvested decline for both wheat and barley over the projection period. By the end of the period area of wheat harvested is projected to decline by 2.6 percent while barley area is projected to decline by 3.8 percent. This decline occurs due to both the decline in cereal prices that occurs under the scenario and the permanent set-a-side element of the MTR-LTP proposal. The slightly lower prices that pertain under scenario leads to a lower growth in yields for both wheat and barley, though this effect is moderated by the reduction in area harvested which leads ceteris paribus to increased average yields per hectare. Overall the volume of production of both Barley and wheat in Ireland declines under the scenario. The value of sector output declines by approximately 4.8 percent relative to the Baseline in 2012. Table 2-18 summarizes the impact of the policy change scenario analysed on the Irish cereals sector.

Table 2-18: Scenario results for the Irish cereals sector.

	2004 Baseline	2004 Scenario	% Change	2012 Baseline	2012 Scenario	% Change
Price	Euro/100kg			Euro/100kg		
Soft Wheat	102.1	100.3	-1.8	92.9	92.1	-1.0
Feed Barley	98.3	96.4	-1.9	89.1	88.3	-0.9
Malt Barley	116.1	114.2	-1.6	106.8	106.0	-0.7
Area	'000 Ha			000 Ha		
Wheat	82	81.9	-0.1	82	78	-2.6
Barley	181	181	-01	180	173	-3.8
Production	'000 Tonnes			'000 Tonnes		
Wheat	714	713	-0.1	754	721	-4.4
Barley	1274	1273	-1.4	1291	1246	-3.5
	Million euro			Million euro		
Sector Output Value	153	152	-0.7	145	138	-4.8

Source: FAPRI-Ireland Partnership Model (2003).

2.7.10 Intermediate Consumption: Scenario Results

In the scenario, the reduction in animal numbers and production intensity that occurs leads to a significant reduction in the overall volume of feed use relative to the baseline position in 2012. Lower output prices relative to dairy and beef feed costs tends to reduce feed usage by about 13 percent on a per head basis. Similarly there is a reduction in fertiliser use of about 8 percent relative to the 2012 baseline position. These changes are summarised in Table 2-19.

Table 2-19: Scenario Intermediate Consumption: Scenario Results

	2000 – 2002 Average	2012 Scenario	% Change 2000/02 - 2012	% change 2012 baseline versus 2012 scenario
Animal Feed Consumption / head	Kg/head			
Dairy	728	518	-29	-13
Beef	213	158	-26	-13
Total Fertilizer Applications	000 tonnes			
Nitrogen	387	337	-13	-8
	€uro Million			
Total Input Expenditures	3,034	2922	-4	-7
of which				
Feeding stuff	887	658	-26	-8
Fertiliser	343	322	-6	-10
Energy	302	374	24	-7
Forage plants	455	444	-2	0.2
Agricultural services	312	300	-4	-0.8

Source: FAPRI-Ireland Partnership Model (2003).

*Other inputs include, *inter alia*, veterinary services, agricultural services and energy

2.7.11 Gross Agricultural Output: Scenario Results

Overall Gross Agricultural Output at producer prices (GAO) is expected to decline by about 2 per cent relative to the projected 2012 baseline value. Table 2-20 summarises sectoral output under the scenario.

Table 2-20: GAO under Baseline and Scenario

	Average of 2000 to 2002	Scenario 2012	2000/02 – 2012 % Change Scenario	% change 2012 baseline versus 2012 scenario
		€uro million		
Livestock				
of which				
Cattle	1,259	1,210	-4	0.4
Sheep	230	160	-30	6.6
Pigs	313	277	-12	0.7
Livestock Products				
of which				
Milk	1,476	1,167	-21	-9.0
Crops				
of which				
Cereals	166	138	-17	-5.6
Root Crops	150	171	-14	4.6
Forage Plants	459	448	-2	0.2
GAO	**4,689**	**4,242**	**-10**	**-2**

Source: FAPRI-Ireland Partnership Model (2003).

The decoupling of payments in the beef and sheep sectors leads to a reduction in the numbers of breeding animals in Ireland and the EU that is reflected in lower levels of beef and lamb production. The lower supply of beef and lamb under the scenario leads to increases in prices that in Ireland largely offset the impact of the reductions in the volume of beef and lamb produced on the total value of the two sector's output.

Under the scenario, the value of the Irish dairy sector is projected to decline relative to the baseline. Reductions in support prices over and above those in the Baseline form are part of the MTR. A progressive fall in farm milk price occurs due to these reductions in intervention prices for SMP and butter. In addition, the impact of reduced limits on export subsidies that form part of the WTO scenario causes prices to fall further. By 2012 the value of the dairy sector is down 9 percent relative to the baseline 2012 position, which is itself 14 percent down on the 2000-2002.

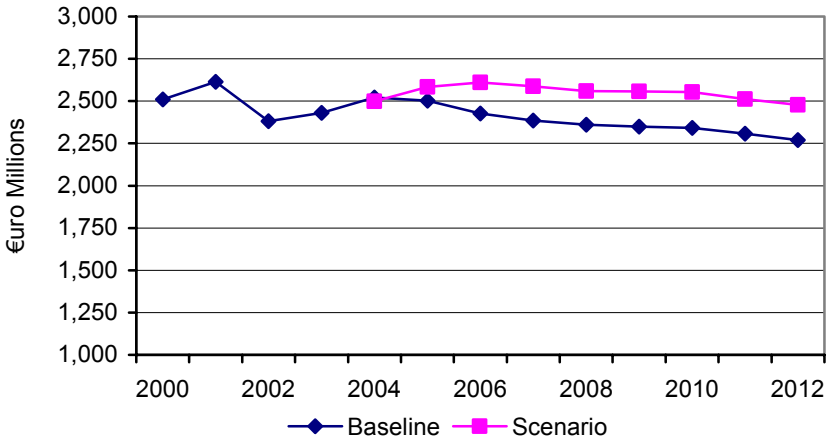
2.7.12 Operating Surplus: Scenario Results

As part of the MTR a portion of the payments paid to producers through the decoupled single farm payment system are to be recouped by Brussels so as to provide additional financing for new market reforms, including *inter alia* the new dairy payments. A portion of the amount deducted will also be used to fund the rural development budget. In the case of Ireland it is estimated that the total amount to be modulated will be just over € 100m. Of this amount a little over half will be used for new market reforms while the remainder will be used to finance rural development initiatives. The Commission have established criteria for the allocation of the rural development funding. The mechanism to be used to allocate this funding across member states relies on measures of agricultural area, agricultural employment and GDP per capita. In this analysis the payments under the scenario have been reduced in line with the projected operation of this mechanism.

Under the scenario there is little change in the overall agricultural output value. Input expenditure declines in the scenario so the overall income position under the scenario is more favourable than under the baseline as illustrated in Figure 2-14 given the only modest declines in the total aggregate value of the sectors direct payment receipts even when modulation and degressivity are accounted for.

Under the scenario operating surplus or agricultural income in 2012 is down less than one percent on the 2000 to 2002 reference period whereas in the baseline by 2012 income had fallen by 9 percent. The scenario income level in 2012 therefore represents an overall improvement in agricultural income of 8 percent relative to the baseline 2012 position.

Figure 2-14: Operating Surplus under Baseline and Scenario



Source: FAPRI-Ireland Partnership Model (2003).

A more detailed presentation of the Output, Input and Income position in agriculture under the scenario is contained in Table A 2, Appendix I.

2.8 Conclusion

The scenario analysed in this paper is one that combines the MTR proposals and the EU Modalities proposal to the WTO of January 2003. The analysis presented above illustrates that this scenario has important and serious implications for Ireland, especially for its two largest agricultural sectors – beef and dairy.

Under the scenario examined, there is a pronounced decline in milk prices and the value of milk sector output. The extent of the decline is such that it is unlikely that the compensatory payments being made available will be sufficient to offset the reduction in the output value of the sector. The decoupling of the direct payments being introduced in the dairy sector will change the decision making process at the producer level. Since the payments can be received irrespective of whether milk is produced. It is possible that in some member states the expansion of quota will not be completely filled.

The analysis conducted also suggests that the restrictions on the value of export subsidies that are proposed under the WTO modalities proposal would create difficulty for cheese and “other” dairy product exports from the EU. This implies that exports from the EU may be constrained and in order that the surplus output can be absorbed within the EU, internal EU prices would have to decline further so as to bring the EU market into balance.

Under the scenario in which the January 2003 MTR proposals are adopted, the EU WTO Modalities proposal is not projected to have a large impact on the EU beef sector. The impact of the January 2003 MTR proposal by contrast is dramatic. Suckler cow numbers are projected to decline across the EU with the largest declines expected to occur in Ireland. Relative to the Baseline of no policy change the reduction in suckler cow numbers reduces EU beef supply and brings EU beef market into greater balance and leads to prices that are some 8 to 9 percent above Baseline levels. Following initial declines in the value of output relative to the Baseline, the value of the Irish beef sector by the end of the projection period is relatively unchanged despite the lower volume of production.

Despite the reduction in the value of dairy sector output, reduced expenditure on inputs associated with the production of the lower volumes of output that occur under the scenario, when combined with largely unchanged direct payment receipts leads to increases in agricultural operating surplus under the combined WTO-MTR scenario.

The analysis here suggests that the effects on non-dairy sectors of EU and Irish agriculture of the WTO elements of the scenario analysed would be somewhat modest. The changes that arise under the scenario relative to the baseline in these sectors arise largely due to the MTR elements of the scenario analyses. With regard to the trade reforms that may occur a number of points are noteworthy.

- The EU proposal for WTO reform is quite modest relative to the position taken by other trading blocks such as the Cairns group of countries. It is not at all clear that the eventual WTO agreement will necessarily resemble closely the EU WTO proposal.

- Should a more extensive trade reform be agreed this might have a more widespread impact on agriculture in the EU and Ireland.

- The results of this analysis and any other analysis involving that examines barriers to trade such as import tariffs and export subsidies are sensitive to projected exchange rates.

- Were the US dollar to depreciate significantly against the euro over the next decade this would mean that the EU would have greater difficulty in complying with any reform that would be agreed.

All results presented in this paper are in nominal terms. Consequently with inflation projected to rise by about three per cent annually over the projection period, real agricultural income is set to decline over the period 2003-2012. However, farmer numbers are expected to fall during the same period with various different reports such as the Agri-Food 2010 committee (Department of Agriculture, Food and Rural Development, 2000) suggesting that farmer numbers could fall by up to three per cent per annum depending on the prevailing agricultural policy climate. Should this trend prevail, then on a per farm basis, real income levels in agriculture might be expected to remain, on average, relatively static.

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Appendix I

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

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2012 v 2000 to 02
	€uro millions													
Livestock	**2173**	**2178**	**2,005.3**	**2,106**	**2,159**	**2,127**	**2,042**	**2,014**	**1,992**	**1,987**	**1,985**	**1,988**	**1,987**	-6.2
of which: cattle	1366	1246	1,164.2	1,270	1,322	1,304	1,241	1,214	1,195	1,193	1,195	1,200	1,206	-4.2
pigs	295	350	295.8	315	319	311	301	298	294	292	287	283	275	-12.2
sheep and lambs	203	284	203.3	204	194	184	170	168	164	159	156	153	150	-35.1
Livestock Products	**1485**	**1602**	**1,455.9**	**1,421**	**1,427**	**1,380**	**1,335**	**1,295**	**1,301**	**1,304**	**1,307**	**1,308**	**1,309**	-13.6
of which: milk	1446	1564	1,416.7	1,390	1,397	1,349	1,303	1,262	1,266	1,269	1,271	1,271	1,272	-13.8
Crops	**1060**	**1097**	**1,010.9**	**1,011**	**1,014**	**1,015**	**1,016**	**1,019**	**1,023**	**1,026**	**1,029**	**1,031**	**1,033**	-2.2
of which: cereals	185	170	144.3	153	153	150	148	148	148	148	148	147	145	-12.7
root crops	139	162	149.3	140	144	147	151	154	158	160	162	163	163	8.7
forage plants	463	474	441.2	451	451	450	450	449	449	448	448	448	448	-2.6
Goods output at producer prices	**4719**	**4876**	**4,472.1**	**4,538**	**4,601**	**4,521**	**4,393**	**4,328**	**4,316**	**4,317**	**4,321**	**4,326**	**4,328**	-7.7
														-7.6
Agricultural services	288	317	330.9	327	321	322	319	312	307	305	305	306	306	-2.0
Subsidies less taxes on products	844	686	876.8	880	872	907	943	981	976	972	968	964	960	19.7
Agricultural output at basic prices	**5851**	**5879**	**5,679.8**	**5,745**	**5,793**	**5,750**	**5,654**	**5,621**	**5,599**	**5,595**	**5,595**	**5,596**	**5,594**	-3.6
Intermediate consumption	**2925**	**3056**	**3,121.5**	**3,149**	**3,131**	**3,117**	**3,101**	**3,097**	**3,090**	**3,091**	**3,097**	**3,110**	**3,130**	3.2
of which: feeding stuffs	831	876	953.9	909	879	843	813	792	773	757	743	725	716	-19.3
fertilizers	337	350	343.8	327	326	326	327	330	333	337	341	348	355	3.3
energy	299	298	308.0	336	351	354	359	364	369	375	383	392	401	33.0
forage plants	459	470	437.3	447	446	446	445	445	444	444	444	443	443	-2.7
agricultural services	288	317	330.9	327	321	322	319	312	307	305	305	306	306	-2.0
Gross value added at basic prices	**2926**	**2832**	**2,558.2**	**2,596**	**2,662**	**2,633**	**2,553**	**2,524**	**2,509**	**2,504**	**2,498**	**2,485**	**2,464**	-11.1
Fixed capital consumption	583	612	622.2	622	622	622	622	622	622	622	622	622	622	2.7
Net value added basic prices	**2343**	**2222**	**1,936.0**	**1,974**	**2,040**	**2,011**	**1,931**	**1,902**	**1,887**	**1,882**	**1,876**	**1,863**	**1,842**	-15.0
Subsidies less taxes on production	451	694	743.4	751	778	808	823	824	825	827	828	828	828	31.5
Factor income	2794	2906	2,679.4	2,725	2,818	2,819	2,754	2,726	2,713	2,709	2,704	2,691	2,670	-4.4
Compensation of employees	284	292	298.0	294	297	316	328	341	352	359	363	384	400	37.3
Operating surplus	**2510**	**2614**	**2,381.4**	**2,431**	**2,521**	**2,503**	**2,426**	**2,385**	**2,361**	**2,350**	**2,341**	**2,307**	**2,270**	-9.3

Source: FAPRI-Ireland GOLD Model.
Historical data, CSO.

Table A 2: Output Input and Income in Agriculture (MTR & EU WTO Proposal Scenario)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2012 v 2000 to 02
	€uro millions													
Livestock	**2,173**	**2,178**	**2,005**	**2,106**	**2,060**	**2,044**	**2,001**	**1,995**	**1,989**	**1,989**	**1,996**	**2,002**	**2,004**	**-5.4%**
of which: cattle	1,366	1,246	1,164	1,270	1,249	1,205	1,169	1,173	1,177	1,179	1,191	1,202	1,210	-3.9%
pigs	295	350	296	315	316	315	305	300	297	294	289	284	277	-11.7%
sheep and lambs	203	284	203	204	171	195	197	186	176	171	167	164	160	-30.5%
Livestock Products	**1,485**	**1,602**	**1,456**	**1,421**	**1,398**	**1,353**	**1,314**	**1,255**	**1,213**	**1,217**	**1,215**	**1,205**	**1,204**	**-20.5%**
of which: milk	1,446	1,564	1,417	1,390	1,367	1,324	1,282	1,222	1,179	1,182	1,179	1,168	1,167	-20.9%
Crops	**1,060**	**1,097**	**1,011**	**1,011**	**1,016**	**1,019**	**1,023**	**1,030**	**1,036**	**1,041**	**1,042**	**1,039**	**1,034**	-2.1%
of which: cereals	185	170	144	153	152	147	143	142	142	142	141	139	138	-17.3%
root crops	139	162	149	140	147	155	163	171	177	181	182	179	171	14.1%
forage plants	463	474	441	451	450	450	450	449	449	449	448	448	448	-2.4%
Goods output at producer prices	**4,719**	**4,876**	**4,472**	**4,538**	**4,474**	**4,416**	**4,339**	**4,279**	**4,238**	**4,246**	**4,253**	**4,246**	**4,242**	**-9.5%**
Agricultural services	288	317	331	327	318	316	312	307	303	301	300	300	300	-3.7%
Subsidies less taxes on products	844	686	877	875	917	971	1,016	1,050	1,062	1,056	1,051	1,045	1,047	30.5%
Agricultural output at basic prices	**5,851**	**5,879**	**5,680**	**5,740**	**5,709**	**5,704**	**5,667**	**5,636**	**5,603**	**5,603**	**5,604**	**5,592**	**5,589**	**-3.7%**
Intermediate consumption	**2,925**	**3,056**	**3,122**	**3,149**	**3,082**	**3,002**	**2,938**	**2,918**	**2,902**	**2,896**	**2,898**	**2,907**	**2,922**	**-3.7%**
of which: feeding stuffs	831	876	954	909	862	808	765	741	721	703	686	666	658	-25.9%
fertilizers	337	350	344	327	311	302	300	301	303	307	311	316	322	-6.2%
energy	299	298	308	336	350	350	341	343	345	350	356	365	374	24.0%
forage plants	459	470	437	447	446	446	445	445	444	444	444	444	444	-2.5%
agricultural services	288	317	331	327	318	316	312	307	303	301	300	300	300	-3.7%
Gross value added at basic prices	**2,926**	**2,832**	**2,558**	**2,591**	**2,627**	**2,702**	**2,729**	**2,719**	**2,701**	**2,707**	**2,706**	**2,685**	**2,667**	**-3.8%**
Fixed capital consumption	583	612	622	622	622	622	622	622	622	622	622	622	622	2.7%
Net value added basic prices	**2,343**	**2,222**	**1,936**	**1,969**	**2,004**	**2,080**	**2,106**	**2,096**	**2,079**	**2,085**	**2,084**	**2,063**	**2,045**	-5.6%
Subsidies less taxes on production	451	694	743	751	789	819	833	833	833	833	833	833	833	32.3%
Factor income	**2,794**	**2,906**	**2,679**	**2,720**	**2,794**	**2,899**	**2,939**	**2,929**	**2,912**	**2,918**	**2,917**	**2,896**	**2,878**	**3.0%**
Compensation of employees	284	292	298	294	297	316	328	341	352	359	363	384	400	37.3%
Operating surplus	**2,510**	**2,614**	**2,381**	**2,426**	**2,497**	**2,583**	**2,611**	**2,588**	**2,560**	**2,559**	**2,554**	**2,512**	**2,478**	**-1.0%**

Source: FAPRI-Ireland GOLD Model.
Historical data, CSO.

Table A 3: Percentage Change from Baseline under MTR & EU WTO Proposal Scenario

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
	Percentage change (scenario relative to baseline)												
Livestock	0.0	0.0	0.0	0.0	-4.6	-3.9	-2.0	-1.0	-0.1	0.1	0.5	0.7	0.9
of which: cattle	0.0	0.0	0.0	0.0	-5.5	-7.5	-5.8	-3.3	-1.5	-1.2	-0.3	0.1	0.4
pigs	0.0	0.0	0.0	0.0	-1.0	1.0	1.2	0.6	0.8	1.0	0.8	0.5	0.7
sheep and lambs	0.0	0.0	0.0	0.0	-11.9	5.8	15.7	10.9	7.4	7.4	7.4	6.9	6.9
Livestock Products	0.0	0.0	0.0	0.0	-2.0	-1.9	-1.5	-3.1	-6.8	-6.7	-7.0	-7.8	-8.0
of which: milk	0.0	0.0	0.0	0.0	-2.1	-1.9	-1.6	-3.2	-6.9	-6.9	-7.2	-8.1	-8.3
Crops	0.0	0.0	0.0	0.0	0.1	0.4	0.5	0.6	0.7	0.5	0.0	-0.8	-1.9
of which: cereals	0.0	0.0	0.0	0.0	-1.1	-2.3	-3.6	-3.8	-3.8	-4.1	-4.6	-5.2	-5.3
root crops	0.0	0.0	0.0	0.0	2.3	4.9	6.6	7.4	7.5	6.4	3.7	-0.9	-7.7
forage plants	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.4
Goods output at producer prices	0.0	0.0	0.0	0.0	-2.8	-2.3	-1.3	-1.2	-1.9	-1.9	-1.9	-2.2	-2.5
Agricultural services	0.0	0.0	0.0	0.0	-1.0	-1.7	-2.1	-1.6	-1.5	-1.7	-1.9	-2.0	-2.2
Subsidies less taxes on products	0.0	0.0	0.0	-0.6	5.2	7.0	7.8	7.0	8.7	8.7	8.6	8.4	9.0
Agricultural output at basic prices	0.0	0.0	0.0	-0.1	-1.5	-0.8	0.2	0.2	0.0	0.0	-0.1	-0.4	-0.5
Intermediate consumption	0.0	0.0	0.0	0.0	-1.6	-3.7	-5.3	-5.8	-6.2	-6.4	-6.6	-6.8	-7.0
of which: feeding stuffs	0.0	0.0	0.0	0.4	-1.9	-4.1	-5.8	-6.5	-6.8	-7.2	-7.6	-8.1	-8.2
fertilizers	0.0	0.0	0.0	0.0	-4.7	-7.4	-8.6	-8.9	-9.2	-9.2	-9.3	-9.5	-9.9
Energy	0.0	0.0	0.0	0.0	-0.3	-1.2	-5.0	-6.0	-6.6	-6.9	-7.0	-6.9	-6.9
forage plants	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.4
agricultural services	0.0	0.0	0.0	0.0	-1.0	-1.7	-2.1	-1.6	-1.5	-1.7	-1.9	-2.0	-2.2
Gross value added at basic prices	0.0	0.0	0.0	-0.5	-1.3	2.6	6.8	7.6	7.5	7.9	8.0	7.6	7.7
Fixed capital consumption	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
Net value added at basic prices	0.0	0.0	0.0	-0.6	-1.7	3.4	9.0	10.1	9.9	10.5	10.7	10.2	10.3
Subsidies less taxes on production	0.0	0.0	0.0	0.0	1.4	1.4	1.2	1.1	0.9	0.7	0.6	0.6	0.6
Factor income	0.0	0.0	0.0	-0.5	-0.9	2.8	6.7	7.3	7.2	7.5	7.6	7.2	7.3
Compensation of employees	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
Operating surplus	0.0	0.0	0.0	-0.5	-1.0	3.1	7.6	8.4	8.3	8.7	8.8	8.4	8.6

Source: FAPRI-Ireland GOLD Model.
Historical data, CSO.

Background notes to the Output, Input and Income Table

Introduction	The historical estimates and projections are based on a new methodology arising from the revision of the System of National Accounts in 1995.
National farm	The concept of the "National farm" has been dropped. With this change, certain transactions between farms and between different enterprises within the same farm are now valued as both output and intermediate consumption.
Basic prices	Output is now valued added at basic prices. The basic price corresponds to the producer (ex-farm) price plus any subsidies directly linked to a product minus any taxes on products. VAT is excluded. Subsidies and taxes linked to production are not included in output.
Forage plants	The production of forage plants is now valued as a part of output. Silage and hay are the main items in this category. These items are also treated as intermediate consumption with minor exceptions such as sales of straw to racing stables.
Agricultural services	Activities performed by agricultural contractors directly related to the production of agricultural products (e.g. harvesting) are an integral part of agriculture. The value of such work is included as output and also as intermediate consumption.
Fixed capital consumption	This relates to foreseeable wear and tear and obsolescence of fixed capital goods. It is calculated on the basis of the probable economic life of the asset. It is not calculated for breeding livestock or for non-produced assets such as land.
Compensation of employees	This includes remuneration in cash and in kind. It does not include the remuneration of work undertaken by the farmer or by non-salaried family farm members.
Operating surplus	This indicator is an approximation for the income indicator used under the old agricultural accounts methodology. It is calculated before deductions for interest payments on borrowed capital and before deductions for land annuities and for rent paid by farmers to landowners for the use of their land.
Land rental	This mainly corresponds to rents paid by farmers to the landowners. Land annuity payments as well as rentals for under and over one year are included.
Interest paid	This concerns interest payable on a capital loan granted to finance agricultural activity.
Entrepreneurial income	This is before payment by farmers of taxes on income.

Source: Adapted from the CSO Output, Input and Income In Agriculture Release (2003)

Appendix II. Macroeconomic Projections

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Real GDP growth								percent						
EU-15	2.7%	3.5%	1.6%	0.9%	1.8%	2.7%	2.6%	2.4%	2.6%	2.5%	2.5%	2.4%	2.4%	2.4%
France	3.2%	4.2%	1.8%	1.0%	1.8%	2.9%	2.4%	2.3%	2.7%	2.3%	2.5%	2.3%	2.3%	2.3%
Germany	1.9%	3.1%	0.7%	0.3%	1.1%	2.5%	2.6%	2.4%	2.3%	2.2%	2.3%	2.3%	2.2%	2.3%
Ireland	7.8%	7.5%	7.5%	4.9%	4.6%	4.7%	4.7%	4.1%	4.1%	4.2%	4.2%	4.3%	4.3%	4.3%
Italy	1.6%	2.9%	1.8%	0.3%	1.4%	2.6%	2.5%	2.3%	2.3%	2.3%	2.2%	2.2%	2.2%	2.3%
United Kingdom	2.4%	3.1%	2.0%	1.5%	2.6%	2.8%	2.5%	2.5%	2.9%	3.2%	2.6%	2.5%	2.7%	2.5%
Other EU	3.8%	3.8%	1.7%	1.4%	2.1%	2.7%	2.6%	2.5%	2.5%	2.5%	2.5%	2.4%	2.5%	2.5%
Inflation (GDP deflator)								percent						
EU-15	1.3%	1.1%	1.9%	2.1%	1.5%	2.0%	1.9%	1.7%	1.8%	1.8%	1.7%	1.7%	1.7%	1.6%
France	0.5%	0.5%	1.4%	2.1%	0.6%	1.9%	2.1%	1.2%	1.7%	1.7%	1.5%	1.6%	1.6%	1.3%
Germany	0.5%	-0.2%	1.4%	1.3%	1.1%	1.6%	1.5%	1.4%	1.4%	1.3%	1.2%	1.0%	1.2%	1.0%
Ireland	2.0%	6.0%	5.0%	3.0%	2.9%	2.8%	2.8%	2.8%	2.8%	2.7%	2.8%	2.7%	2.7%	2.7%
Italy	1.7%	2.1%	2.6%	2.1%	2.4%	2.6%	2.2%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.8%
United Kingdom	2.5%	2.2%	1.9%	2.7%	1.7%	1.9%	2.0%	2.1%	2.3%	2.2%	2.3%	2.3%	2.2%	2.3%
Exchange rate vs. dollar								currency per dollar						
EU-15	0.94	1.09	1.12	1.07	0.96	0.95	0.91	0.88	0.87	0.87	0.87	0.87	0.87	0.87
France	6.16	7.12	7.33	6.99	6.30	6.26	5.98	5.80	5.71	5.70	5.70	5.70	5.70	5.70
Germany	1.84	2.12	2.19	2.08	1.88	1.87	1.78	1.73	1.70	1.70	1.70	1.70	1.70	1.70
Ireland	0.74	0.85	0.88	0.84	0.76	0.75	0.72	0.70	0.69	0.68	0.68	0.68	0.68	0.68
Italy	1,817	2,102	2,164	2,063	1,859	1,847	1,765	1,712	1,687	1,684	1,684	1,684	1,684	1,684
United Kingdom	0.62	0.66	0.69	0.67	0.65	0.63	0.60	0.58	0.59	0.60	0.60	0.60	0.60	0.60
Exchange rate vs. euro								currency per euro						
France	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56
Germany	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96
Ireland	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Italy	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936	1,936
United Kingdom	0.66	0.61	0.62	0.63	0.68	0.66	0.65	0.66	0.68	0.69	0.69	0.69	0.69	0.69
Other exchange rates														
Dollars per euro	1.07	0.92	0.89	0.94	1.04	1.05	1.10	1.13	1.15	1.15	1.15	1.15	1.15	1.15
Dollars per Br. pound	1.61	1.51	1.44	1.50	1.53	1.59	1.68	1.72	1.69	1.67	1.67	1.67	1.67	1.67
Euro per British pound	1.52	1.64	1.61	1.60	1.47	1.52	1.53	1.52	1.47	1.45	1.45	1.45	1.45	1.45
Irish pound/Br. pound	1.19	1.29	1.27	1.26	1.16	1.19	1.21	1.20	1.16	1.14	1.14	1.14	1.14	1.14
Population								million						
EU-15	375.24	375.56	377.15	378.03	378.50	378.87	379.23	379.58	379.87	380.13	380.36	380.55	380.68	380.79
France	58.64	58.92	59.22	59.44	59.46	59.46	59.46	59.46	59.46	59.46	59.46	59.46	59.46	59.46
Germany	82.09	82.19	82.37	82.44	82.43	82.39	82.32	82.27	82.20	82.11	82.00	81.85	81.67	81.47
Ireland	3.75	3.79	3.82	3.85	3.89	3.92	3.96	4.00	4.04	4.08	4.13	4.17	4.21	4.25
Italy	57.62	57.76	57.92	58.08	58.21	58.29	58.36	58.43	58.50	58.57	58.64	58.71	58.79	58.86
United Kingdom	59.22	59.35	59.47	59.59	59.70	59.80	59.91	60.01	60.10	60.20	60.30	60.40	60.49	60.58
Other EU	113.92	113.55	114.34	114.63	114.82	115.00	115.22	115.42	115.56	115.71	115.83	115.96	116.07	116.17

Source: Global Insight January forecast. 2003 Euro projection amended.

Appendix III. Baseline Projections

Baseline Projections

EU-15 cereal supply and utilisation

	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
Soft wheat and durum														
							thousand hectares							
Area harvested	17,134	17,946	16,785	17,947	17,910	17,851	17,859	17,871	17,929	17,993	18,062	18,118	18,170	18,210
							tonnes per hectare							
Yield	5.69	5.87	5.48	5.82	5.75	5.85	5.95	6.04	6.13	6.22	6.32	6.41	6.50	6.59
							million tonnes							
Production	97.44	105.33	91.96	104.37	102.98	104.39	106.18	107.97	109.93	112.00	114.09	116.12	118.12	120.07
Beginning stocks	17.39	14.09	14.14	13.98	14.24	14.37	14.62	15.07	15.70	16.58	17.60	18.65	19.65	20.64
Imports	26.87	28.31	31.92	34.12	34.77	34.82	34.97	34.95	34.73	34.49	34.28	34.09	33.91	33.73
Total supply	141.70	147.73	138.01	152.47	151.99	153.58	155.76	158.00	160.36	163.06	165.96	168.85	171.68	174.44
Domestic use	84.28	90.68	90.67	97.11	96.41	97.46	98.76	99.77	100.53	101.30	102.16	103.04	103.94	104.78
Feed	36.84	42.38	42.30	47.45	46.74	47.50	48.49	49.25	49.76	50.29	50.91	51.57	52.22	52.81
Other	47.43	48.30	48.37	49.66	49.67	49.96	50.27	50.52	50.76	51.01	51.25	51.47	51.72	51.97
Exports	43.85	43.06	33.36	41.12	41.21	41.50	41.93	42.53	43.25	44.16	45.16	46.16	47.10	48.04
Ending stocks	14.09	14.14	13.98	14.24	14.37	14.62	15.07	15.70	16.58	17.60	18.65	19.65	20.64	21.62
Loss, statistical disc.	-0.51	-0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net exports	16.98	14.75	1.44	7.00	6.43	6.69	6.97	7.57	8.52	9.68	10.88	12.07	13.19	14.31
							percent							
Set-aside rate	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Market prices							euro per tonne, Jan.-Dec.							
Soft wheat	119.6	119.9	123.0	113.0	117.7	117.3	114.8	112.9	111.8	110.6	109.6	108.8	107.9	107.0
Durum wheat	159.1	149.7	172.6	173.9	156.8	160.9	159.4	159.5	158.4	159.0	159.2	160.4	160.4	159.2
Barley, maize, and rye														
							thousand hectares							
Area harvested	16,071	16,123	16,499	16,050	16,114	16,232	16,276	16,338	16,267	16,190	16,106	16,034	15,970	15,919
							tonnes per hectare							
Yield	5.70	5.90	5.75	5.81	5.89	5.94	6.00	6.06	6.13	6.20	6.26	6.33	6.40	6.46
							million tonnes							
Production	91.67	95.16	94.83	93.29	94.88	96.43	97.68	98.95	99.68	100.34	100.88	101.48	102.15	102.87
Beginning stocks	24.68	17.76	19.02	20.52	22.07	21.75	21.89	22.42	23.36	24.35	25.38	26.34	27.26	28.23
Imports	22.50	23.66	25.27	19.83	20.63	20.68	21.00	21.25	21.52	21.70	21.92	22.17	22.47	22.71
Total supply	138.84	136.58	139.12	133.64	137.58	138.85	140.57	142.62	144.56	146.39	148.18	150.00	151.88	153.80
Domestic use	82.61	84.05	88.92	86.01	87.65	88.27	89.19	90.05	90.70	91.23	91.78	92.35	92.91	93.42
Feed	63.44	64.28	65.19	62.49	63.97	64.53	65.35	66.14	66.74	67.22	67.74	68.27	68.81	69.30
Other	19.17	19.77	23.72	23.52	23.68	23.74	23.83	23.91	23.96	24.01	24.05	24.07	24.10	24.13
Exports	38.58	33.55	29.69	25.56	28.19	28.69	28.95	29.20	29.49	29.76	30.03	30.36	30.72	31.05
Ending stocks	17.76	19.02	20.52	22.07	21.75	21.89	22.42	23.36	24.35	25.38	26.34	27.26	28.23	29.30
Net exports	16.08	9.89	4.42	5.73	7.56	8.01	7.95	7.95	7.97	8.06	8.11	8.19	8.25	8.34
							percent							
Set-aside rate	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Market prices							euro per tonne, Jan.-Dec.							
Barley	113.1	112.6	111.9	102.3	110.8	110.4	108.3	105.8	104.4	103.0	102.0	101.1	100.4	99.5
Maize	138.5	139.5	136.8	132.1	133.2	133.3	131.1	129.1	127.0	125.5	124.5	123.8	122.7	121.6
Rye	104.9	105.3	99.2	93.5	96.7	97.0	97.3	97.4	97.5	97.4	97.3	97.2	97.1	97.0

Source: FAPRI-Ireland Partnership Model (2003)

Baseline Projections

EU-15 soft wheat supply and utilisation

	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
							thousand hectares							
Area harvested	13,519.1	14,240.4	13,019.9	14,084.8	14,059.4	14,029.5	14,058.2	14,084.3	14,135.2	14,197.0	14,263.6	14,319.0	14,368.2	14,407.8
							tonnes per hectare							
Yield	6.6	6.7	6.4	6.7	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4	7.5	7.6
							million tonnes							
Production	89.0	95.9	83.8	94.9	93.6	95.0	96.7	98.5	100.3	102.3	104.3	106.2	108.1	110.0
Beginning stocks	16.2	12.9	13.0	12.8	13.1	13.2	13.4	13.9	14.5	15.4	16.4	17.4	18.4	19.4
Imports	22.5	23.6	26.8	29.4	29.9	29.9	30.0	30.0	29.8	29.5	29.3	29.1	29.0	28.8
Total supply	127.7	132.5	123.6	137.2	136.6	138.1	140.2	142.3	144.6	147.2	150.0	152.8	155.5	158.2
Domestic use	75.8	82.1	82.4	88.5	87.6	88.6	89.8	90.7	91.4	92.1	92.9	93.7	94.5	95.2
Feed	36.3	41.7	41.6	46.7	45.9	46.7	47.7	48.4	48.9	49.5	50.1	50.7	51.4	52.0
Other	39.6	40.4	40.8	41.8	41.6	41.9	42.1	42.3	42.4	42.6	42.8	42.9	43.1	43.3
Exports	39.4	37.5	28.4	35.5	35.8	36.1	36.6	37.1	37.8	38.7	39.7	40.7	41.6	42.5
Ending stocks	12.9	13.0	12.8	13.1	13.2	13.4	13.9	14.5	15.4	16.4	17.4	18.4	19.4	20.4
Loss, statistical disc.	-0.5	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net exports	16.9	13.8	1.6	6.1	5.9	6.2	6.5	7.1	8.1	9.2	10.4	11.5	12.6	13.8
							percent							
Set-aside rate	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
							euro per tonne, Jan.-Dec.							
Intervention price	119.2	110.3	101.3	101.3	101.3	101.3	101.3	101.3	101.3	101.3	101.3	101.3	101.3	101.3
Market price	119.6	119.9	123.0	113.0	117.7	117.3	114.8	112.9	111.8	110.6	109.6	108.8	107.9	107.0
France														
Area harvested	4,775.2	4,910.5	4,462.8	4,900.0	4,880.8	4,924.7	4,944.4	4,966.7	4,976.2	4,993.0	5,011.0	5,025.2	5,036.8	5,047.9
Yield	7.4	7.3	6.8	7.6	7.4	7.5	7.6	7.7	7.8	7.9	8.0	8.1	8.2	8.4
Production	35.5	35.7	30.2	37.3	36.0	36.9	37.5	38.2	38.8	39.5	40.2	40.9	41.5	42.2
Germany														
Area harvested	2,589.1	2,960.3	2,892.5	3,011.8	2,965.5	2,899.3	2,913.5	2,918.1	2,925.4	2,933.2	2,942.8	2,950.9	2,957.4	2,962.1
Yield	7.4	7.3	7.9	6.9	7.3	7.4	7.6	7.7	7.8	7.9	8.1	8.2	8.3	8.4
Production	19.3	21.6	22.8	20.7	21.6	21.6	22.1	22.4	22.9	23.3	23.7	24.2	24.6	25.0
Italy														
Area harvested	696.0	658.8	625.2	686.2	626.3	634.3	635.3	638.8	634.3	632.4	630.9	629.1	626.5	624.2
Yield	4.7	4.7	4.5	4.8	4.6	4.7	4.8	4.9	5.0	5.0	5.1	5.2	5.3	5.4
Production	3.2	3.1	2.8	3.3	2.9	3.0	3.0	3.1	3.1	3.2	3.2	3.3	3.3	3.4
UK														
Area harvested	1,846.0	2,085.0	1,635.0	1,989.0	1,958.4	1,950.9	1,938.0	1,927.3	1,925.7	1,928.3	1,931.9	1,933.6	1,934.3	1,933.3
Yield	8.0	8.0	7.1	8.0	7.8	7.9	8.1	8.2	8.3	8.4	8.6	8.7	8.8	8.9
Production	14.9	16.7	11.6	16.1	15.3	15.5	15.6	15.8	16.0	16.3	16.5	16.8	17.0	17.2

Source: FAPRI-Ireland Partnership Model (2003)

Baseline Projections

EU-15 barley supply and utilisation

	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
								thousand hectares						
Area harvested	10,857.3	10,679.6	10,754.5	10,508.6	10,790.9	10,884.9	10,934.1	10,998.1	10,915.0	10,843.4	10,770.2	10,709.0	10,651.5	10,609.7
								tonnes per hectare						
Yield	4.5	4.8	4.5	4.6	4.7	4.7	4.8	4.8	4.9	4.9	5.0	5.0	5.0	5.1
								million tonnes						
Production	48.8	51.3	48.4	48.1	50.4	51.3	52.0	52.8	53.0	53.2	53.3	53.6	53.8	54.1
Beginning stocks	14.2	8.8	8.8	9.3	11.4	12.0	12.6	13.4	14.5	15.4	16.3	17.1	17.8	18.6
Imports	6.9	7.4	8.3	5.1	4.4	4.4	4.5	4.6	4.8	5.0	5.1	5.3	5.6	5.8
Total supply	69.9	67.6	65.5	62.5	66.2	67.6	69.1	70.9	72.2	73.6	74.8	76.0	77.2	78.4
Domestic use	40.2	41.6	43.4	40.1	41.5	41.9	42.4	42.9	43.2	43.4	43.7	44.0	44.2	44.5
Feed	30.3	31.5	31.0	28.1	29.4	29.8	30.2	30.7	30.9	31.1	31.4	31.7	31.9	32.1
Other	9.9	10.1	12.4	12.1	12.1	12.1	12.2	12.2	12.3	12.3	12.3	12.3	12.4	12.4
Exports	20.9	17.2	12.7	11.0	12.7	13.1	13.3	13.5	13.6	13.8	14.0	14.2	14.4	14.6
Ending stocks	8.8	8.8	9.3	11.4	12.0	12.6	13.4	14.5	15.4	16.3	17.1	17.8	18.6	19.4
Net exports	14.0	9.8	4.5	5.9	8.2	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
								percent						
Set-aside rate	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
								euro per tonne, Jan.-Dec.						
Intervention price	119.2	110.3	101.3	101.3	101.3	101.3	101.3	101.3	101.3	101.3	101.3	101.3	101.3	101.3
Market price	113.1	112.6	111.9	102.3	110.8	110.4	108.3	105.8	104.4	103.0	102.0	101.1	100.4	99.5
France														
Area harvested	1,500.4	1,533.8	1,704.8	1,643.0	1,725.6	1,732.1	1,746.6	1,767.5	1,763.7	1,761.0	1,757.2	1,754.8	1,753.0	1,753.9
Yield	6.4	6.3	5.8	6.7	6.4	6.5	6.5	6.6	6.7	6.8	6.8	6.9	7.0	7.1
Production	9.5	9.7	9.8	10.9	11.0	11.2	11.4	11.7	11.8	11.9	12.0	12.1	12.3	12.4
Germany														
Area harvested	2,210.4	2,067.6	2,111.8	1,978.1	2,095.0	2,124.3	2,135.8	2,143.9	2,125.2	2,108.2	2,091.5	2,079.0	2,068.3	2,061.0
Yield	6.0	5.8	6.4	5.5	6.0	6.0	6.1	6.2	6.2	6.3	6.4	6.4	6.5	6.6
Production	13.2	12.1	13.5	11.0	12.5	12.8	13.0	13.2	13.2	13.3	13.3	13.4	13.4	13.5
Italy														
Area harvested	353.2	343.7	333.1	345.1	372.3	369.2	367.5	369.3	364.0	359.8	355.5	351.9	348.3	345.4
Yield	3.7	3.7	3.4	3.6	3.5	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.7
Production	1.3	1.3	1.1	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
UK														
Area harvested	1,178.0	1,128.0	1,245.0	1,066.0	1,101.6	1,126.4	1,142.7	1,158.9	1,155.7	1,153.3	1,149.9	1,147.1	1,144.4	1,142.6
Yield	5.6	5.8	5.4	5.8	5.6	5.7	5.8	5.9	5.9	6.0	6.1	6.2	6.3	6.4
Production	6.6	6.5	6.7	6.2	6.2	6.4	6.6	6.8	6.9	7.0	7.1	7.1	7.2	7.3

Source: FAPRI-Ireland Partnership Model (2003)

Baseline Projections

EU-15 maize for grain supply and utilisation

	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
							thousand hectares							
Area harvested	4,084.6	4,203.9	4,527.1	4,464.1	4,415.6	4,389.5	4,395.3	4,391.7	4,396.5	4,385.4	4,372.1	4,361.6	4,358.3	4,352.8
							tonnes per hectare							
Yield	9.2	9.1	8.9	9.1	9.1	9.2	9.4	9.5	9.6	9.7	9.8	9.9	10.0	10.1
							million tonnes							
Production	37.4	38.3	40.1	40.4	40.3	40.6	41.1	41.5	42.1	42.4	42.7	43.1	43.5	43.9
Beginning stocks	6.1	5.0	5.6	5.5	5.7	5.6	5.6	5.7	5.8	5.9	6.0	6.1	6.1	6.2
Imports	15.2	15.9	16.6	14.5	15.9	16.0	16.2	16.3	16.4	16.4	16.5	16.5	16.6	16.6
Total supply	58.7	59.2	62.3	60.5	61.8	62.2	62.9	63.5	64.2	64.8	65.2	65.7	66.2	66.7
Domestic use	38.9	38.8	41.0	41.2	41.5	41.7	42.2	42.6	43.0	43.3	43.6	43.9	44.3	44.6
Feed	31.5	31.0	32.2	32.2	32.5	32.7	33.1	33.4	33.8	34.1	34.3	34.6	34.9	35.2
Other	7.4	7.8	8.9	9.1	9.0	9.0	9.1	9.1	9.2	9.2	9.3	9.3	9.4	9.4
Exports	14.9	14.9	15.8	13.6	14.7	14.9	15.0	15.2	15.3	15.4	15.5	15.6	15.7	15.8
Ending stocks	5.0	5.6	5.5	5.7	5.6	5.6	5.7	5.8	5.9	6.0	6.1	6.1	6.2	6.3
Net exports	-0.3	-1.0	-0.8	-0.9	-1.1	-1.1	-1.2	-1.1	-1.1	-1.0	-1.0	-0.9	-0.9	-0.8
							percent							
Set-aside rate	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
							euro per tonne, Jan.-Dec.							
Intervention price	119.2	110.3	101.3	101.3	101.3	101.3	101.3	101.3	101.3	101.3	101.3	101.3	101.3	101.3
Market price	138.5	139.5	136.8	132.1	133.2	133.3	131.1	129.1	127.0	125.5	124.5	123.8	122.7	121.6
France														
Area harvested	1,715.4	1,764.8	1,913.8	1,817.0	1,852.5	1,839.2	1,841.2	1,843.2	1,847.1	1,842.7	1,836.7	1,831.5	1,829.9	1,827.1
Yield	9.1	9.1	8.6	8.8	8.9	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8
Production	15.6	16.1	16.5	16.1	16.4	16.5	16.8	17.0	17.2	17.3	17.5	17.6	17.8	17.9
Germany														
Area harvested	370.7	360.8	396.5	394.5	396.2	393.1	391.5	390.5	390.8	389.6	388.4	387.6	387.5	387.2
Yield	8.8	9.2	8.8	9.1	9.0	9.1	9.2	9.3	9.4	9.6	9.7	9.8	9.9	10.0
Production	3.3	3.3	3.5	3.6	3.6	3.6	3.6	3.6	3.7	3.7	3.8	3.8	3.8	3.9
Italy														
Area harvested	1,027.9	1,063.6	1,109.3	1,166.3	1,191.4	1,190.5	1,196.4	1,194.1	1,193.8	1,190.5	1,186.9	1,184.2	1,183.0	1,181.5
Yield	9.7	9.5	9.5	9.6	9.8	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7
Production	10.0	10.1	10.6	11.2	11.7	11.8	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7

Source: FAPRI-Ireland Partnership Model (2003)

Baseline Projections

EU-15 rapeseed sector supply and utilisation

	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
Rapeseed														
							thousand hectares							
Area harvested	3,573.0	3,044.0	3,004.0	3,106.0	3,200.6	3,082.2	2,999.2	2,918.0	2,920.2	2,924.0	2,940.1	2,961.5	2,982.1	3,006.2
							tonnes per hectare							
Yield	3.2	3.0	3.0	3.0	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.4	3.4	3.4
							thousand tonnes							
Production	11,484.0	9,043.0	8,873.0	9,363.0	10,109.4	9,834.7	9,656.4	9,487.2	9,568.9	9,655.0	9,779.8	9,921.8	10,062.2	10,214.7
Beginning stocks	240.0	279.0	311.0	343.0	265.0	274.2	271.5	270.8	269.8	270.2	270.6	271.1	271.7	272.3
Imports	2,872.0	3,230.0	3,125.0	2,354.0	1,996.4	2,210.3	2,247.2	2,265.5	2,162.2	2,072.4	1,961.4	1,843.1	1,722.8	1,597.1
Total supply	14,596.0	12,552.0	12,309.0	12,060.0	12,370.8	12,319.2	12,175.2	12,023.5	12,000.9	11,997.7	12,011.7	12,035.9	12,056.8	12,084.1
Domestic use	10,081.0	9,640.0	9,760.0	9,265.0	9,467.2	9,569.4	9,514.4	9,419.7	9,340.5	9,282.6	9,225.9	9,169.7	9,110.0	9,050.8
Crush	9,290.0	8,817.0	9,158.0	8,594.0	8,812.2	8,914.3	8,856.1	8,759.6	8,679.6	8,621.0	8,563.7	8,506.6	8,446.4	8,386.5
Other	791.0	823.0	602.0	671.0	654.9	655.2	658.3	660.0	660.9	661.6	662.2	663.1	663.6	664.2
Exports	4,236.0	2,601.0	2,206.0	2,530.0	2,629.5	2,478.2	2,390.0	2,334.0	2,390.2	2,444.5	2,514.8	2,594.5	2,674.5	2,760.3
Ending stocks	279.0	311.0	343.0	265.0	274.2	271.5	270.8	269.8	270.2	270.6	271.1	271.7	272.3	273.0
Net exports	1,364.0	-629.0	-919.0	176.0	633.1	267.9	142.8	68.5	228.0	372.1	553.4	751.4	951.7	1,163.2
							euro per tonne, marketing year basis							
Hamburg price	178.3	219.3	245.9	312.2	248.6	253.8	243.5	238.1	236.4	236.1	236.7	236.3	237.4	237.5
France														
Area harvested	1,343.0	1,225.0	1,096.0	1,040.0	1,056.0	997.5	954.0	919.7	918.6	918.3	923.0	929.6	936.0	944.1
Yield	3.3	2.9	2.6	3.2	3.2	3.2	3.3	3.3	3.3	3.4	3.4	3.4	3.5	3.5
Production	4,454.0	3,569.0	2,890.0	3,350.0	3,364.8	3,221.6	3,119.8	3,044.0	3,071.9	3,102.0	3,148.6	3,202.0	3,254.9	3,314.0
Germany														
Area harvested	1,198.0	1,078.0	1,138.0	1,300.0	1,357.2	1,319.3	1,290.4	1,266.8	1,270.5	1,274.6	1,282.7	1,292.7	1,302.2	1,312.7
Yield	3.6	3.3	3.7	3.0	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.6	3.6	3.6
Production	4,285.0	3,585.0	4,160.0	3,850.0	4,617.6	4,523.2	4,455.6	4,404.2	4,441.7	4,480.8	4,533.4	4,592.4	4,650.5	4,711.7
Italy														
Area harvested	72.0	46.0	53.0	35.0	40.1	36.6	34.3	32.6	32.5	32.3	32.4	32.6	32.8	33.1
Yield	0.4	0.9	0.9	0.9	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0
Production	30.0	41.0	46.0	33.0	33.0	30.7	29.3	28.4	28.7	29.1	29.6	30.3	30.9	31.7
UK														
Area harvested	537.0	402.0	451.0	430.0	450.9	438.4	431.4	423.0	424.8	426.3	429.3	432.9	436.6	440.6
Yield	3.2	2.9	2.6	3.4	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.3
Production	1,737.0	1,157.0	1,159.0	1,470.0	1,387.6	1,359.8	1,347.8	1,331.2	1,345.0	1,358.3	1,375.8	1,395.6	1,415.6	1,436.7

Source: FAPRI-Ireland Partnership Model (2003)

Baseline Projections

EU-15 area harvested

	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	11-Sep	12-Sep	13-Sep
EU-15 totals							thousand hectares							
Soft wheat	13,519	14,240	13,020	14,085	14,059	14,029	14,058	14,084	14,135	14,197	14,264	14,319	14,368	14,408
Durum	3,615	3,705	3,765	3,862	3,851	3,821	3,801	3,787	3,794	3,796	3,798	3,799	3,801	3,802
Barley	10,857	10,680	10,754	10,509	10,791	10,885	10,934	10,998	10,915	10,843	10,770	10,709	10,652	10,610
Maize for grain	4,085	4,204	4,527	4,464	4,416	4,390	4,395	4,392	4,397	4,385	4,372	4,362	4,358	4,353
Rye	1,129	1,240	1,217	1,078	908	957	946	948	955	962	964	963	961	957
Rice	394	401	395	404	396	397	399	398	397	396	394	390	387	385
Rapeseed	3,573	3,044	3,004	3,106	3,201	3,082	2,999	2,918	2,920	2,924	2,940	2,961	2,982	3,006
Sunflowers	2,036	1,913	1,925	1,663	1,818	1,821	1,792	1,745	1,730	1,718	1,716	1,720	1,722	1,724
Soybeans	367	345	391	297	321	317	308	301	302	304	306	307	308	309
9-crop totals														
EU-15	39,575	39,772	38,999	39,467	39,760	39,699	39,633	39,571	39,546	39,526	39,524	39,531	39,539	39,552
France	10,636	10,613	10,359	10,491	10,686	10,674	10,661	10,652	10,656	10,661	10,673	10,686	10,701	10,719
Germany	7,164	7,345	7,407	7,444	7,394	7,377	7,366	7,356	7,355	7,353	7,356	7,362	7,366	7,373
Ireland	266	267	269	281	265	265	264	264	264	264	264	264	264	263
Italy	4,561	4,507	4,517	4,524	4,569	4,550	4,533	4,517	4,508	4,498	4,489	4,481	4,475	4,469
United Kingdom	3,570	3,623	3,337	3,492	3,516	3,522	3,518	3,515	3,512	3,514	3,517	3,520	3,521	3,522
Other EU	13,378	13,418	13,112	13,241	13,329	13,312	13,292	13,267	13,252	13,236	13,226	13,218	13,211	13,207
Soft wheat and durum														
EU-15	17,134	17,946	16,785	17,947	17,910	17,851	17,859	17,871	17,929	17,993	18,062	18,118	18,170	18,210
France	5,104	5,248	4,769	5,234	5,219	5,260	5,278	5,299	5,309	5,325	5,343	5,357	5,369	5,380
Germany	2,601	2,969	2,897	3,017	2,971	2,904	2,918	2,923	2,930	2,938	2,948	2,956	2,962	2,967
Ireland	68	84	85	103	82	82	82	81	81	82	82	82	82	81
Italy	2,387	2,322	2,289	2,378	2,308	2,300	2,292	2,290	2,291	2,291	2,292	2,293	2,292	2,292
United Kingdom	1,847	2,086	1,636	1,990	1,959	1,952	1,939	1,928	1,927	1,929	1,933	1,935	1,935	1,934
Other EU	5,127	5,236	5,110	5,230	5,371	5,352	5,350	5,350	5,392	5,427	5,464	5,496	5,529	5,555
Barley, maize, and rye														
EU-15	16,071	16,123	16,499	16,050	16,114	16,232	16,276	16,338	16,267	16,190	16,106	16,034	15,970	15,919
France	3,252	3,330	3,647	3,488	3,607	3,600	3,616	3,639	3,639	3,632	3,622	3,614	3,611	3,609
Germany	3,329	3,271	3,345	3,102	3,038	3,122	3,125	3,134	3,122	3,109	3,093	3,081	3,070	3,061
Ireland	192	181	182	176	182	181	181	181	181	180	180	180	180	180
Italy	1,385	1,411	1,445	1,515	1,566	1,562	1,567	1,566	1,561	1,553	1,545	1,539	1,534	1,530
United Kingdom	1,186	1,135	1,250	1,072	1,106	1,131	1,148	1,164	1,161	1,158	1,155	1,152	1,149	1,148
Other EU	6,726	6,796	6,629	6,698	6,615	6,635	6,640	6,654	6,604	6,559	6,511	6,468	6,427	6,393
Rice														
EU-15	394	401	395	404	396	397	399	398	397	396	394	390	387	385
France	18	20	19	19	19	19	20	21	21	21	21	20	20	20
Italy	221	220	218	226	225	223	222	220	219	218	216	215	213	212
Other EU	156	161	159	159	152	155	156	157	158	157	157	155	154	153
Rape, sun, and soya														
EU-15	5,976	5,302	5,320	5,066	5,340	5,219	5,099	4,964	4,953	4,947	4,962	4,989	5,012	5,039
France	2,262	2,014	1,924	1,750	1,841	1,795	1,746	1,694	1,687	1,683	1,686	1,695	1,702	1,710
Germany	1,234	1,105	1,164	1,325	1,386	1,351	1,322	1,299	1,303	1,307	1,315	1,325	1,335	1,345
Ireland	6	2	2	2	2	2	2	2	2	2	2	2	2	2
Italy	568	554	565	405	471	464	452	440	437	436	435	436	435	435
United Kingdom	537	402	451	430	451	438	431	423	425	426	429	433	437	441
Other EU	1,369	1,225	1,214	1,154	1,190	1,170	1,145	1,106	1,098	1,093	1,094	1,099	1,102	1,106

Source: FAPRI-Ireland Partnership Model (2003)

Baseline Projections

EU-15 Cattle

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EU-15								million head						
Beginning inventories	82.92	82.74	81.33	80.36	78.69	78.31	77.81	77.33	76.82	76.29	75.71	75.14	74.60	74.12
Dairy cows	21.49	21.11	20.40	20.15	19.52	19.35	19.12	18.98	18.82	18.66	18.44	18.23	18.02	17.82
Suckler cows	11.83	12.05	12.12	12.00	11.85	11.81	11.85	11.88	11.84	11.81	11.79	11.79	11.81	11.85
Suckler cow quota	11.37	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82
Cattle slaughter	27.87	26.93	25.85	26.47	26.09	26.23	26.25	26.35	26.19	26.06	25.83	25.62	25.41	25.22
								kilograms per head						
Slaughter weight	275.4	274.9	279.1	280.7	280.8	281.9	282.2	281.8	281.8	282.0	282.3	282.7	283.1	283.5
France								million head						
Beginning inventories	20.06	20.22	20.09	20.28	19.73	19.26	18.89	18.61	18.37	18.16	17.96	17.79	17.63	17.51
Dairy cows	4.43	4.42	4.15	4.19	4.13	4.09	4.04	4.02	3.99	3.97	3.92	3.88	3.85	3.81
Suckler cows	4.04	4.07	4.21	4.20	4.08	4.07	4.08	4.09	4.08	4.07	4.05	4.05	4.05	4.07
Suckler cow quota	3.89	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78
Cattle slaughter	5.72	5.48	5.58	5.94	5.73	5.58	5.48	5.42	5.36	5.32	5.25	5.19	5.14	5.10
								kilograms per head						
Slaughter weight	281.1	278.9	280.7	280.3	277.5	277.1	276.1	274.7	273.9	273.5	273.4	273.3	273.3	273.4
Germany								million head						
Beginning inventories	14.94	14.66	14.57	14.23	13.70	13.36	13.08	12.86	12.67	12.52	12.36	12.21	12.08	11.95
Dairy cows	4.83	4.71	4.56	4.47	4.37	4.30	4.24	4.20	4.16	4.12	4.06	4.01	3.96	3.91
Suckler cows	0.75	0.79	0.82	0.80	0.76	0.74	0.74	0.74	0.74	0.74	0.75	0.75	0.76	0.77
Suckler cow quota	0.65	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Cattle slaughter	4.56	4.29	4.36	4.33	4.11	3.99	3.87	3.81	3.74	3.71	3.65	3.60	3.56	3.51
								kilograms per head						
Slaughter weight	301.3	304.2	312.5	300.4	304.8	305.9	306.0	305.4	305.5	305.6	306.1	306.6	307.1	307.6
Italy								million head						
Beginning inventories	7.32	7.36	7.40	7.40	7.26	6.92	6.74	6.59	6.47	6.37	6.29	6.21	6.15	6.10
Dairy cows	2.12	2.13	2.17	2.17	1.91	1.97	1.95	1.92	1.90	1.87	1.84	1.82	1.79	1.77
Suckler cows	0.69	0.71	0.65	0.63	0.60	0.57	0.55	0.53	0.52	0.52	0.51	0.52	0.52	0.52
Suckler cow quota	0.79	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Cattle slaughter	4.51	4.43	4.26	4.27	4.26	4.13	4.05	3.97	3.91	3.86	3.81	3.77	3.74	3.71
								kilograms per head						
Slaughter weight	256.3	259.0	265.3	260.1	262.5	261.9	261.5	260.8	260.9	261.0	261.5	261.9	262.5	263.1
UK								million head						
Beginning inventories	11.24	11.28	10.88	10.16	10.39	10.73	10.89	10.94	10.94	10.91	10.86	10.80	10.75	10.71
Dairy cows	2.47	2.44	2.34	2.20	2.24	2.19	2.18	2.17	2.16	2.15	2.13	2.11	2.09	2.08
Suckler cows	1.93	1.91	1.78	1.67	1.69	1.68	1.69	1.68	1.67	1.66	1.65	1.65	1.65	1.65
Suckler cow quota	1.81	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70
Cattle slaughter	2.29	2.43	2.17	2.28	2.11	2.43	2.68	2.90	2.91	2.90	2.89	2.87	2.85	2.84
								kilograms per head						
Slaughter weight	295.7	291.1	301.1	303.3	302.4	303.3	303.1	302.1	302.8	303.3	303.9	304.4	305.1	305.6

Source: FAPRI-Ireland Partnership Model (2003)

Baseline Projections

EU-15 Pigs

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EU-15							million head							
Beginning inventories	125.5	124.5	122.0	122.2	122.7	122.4	123.2	124.4	124.6	124.4	124.7	125.4	126.2	126.8
Sows	13.1	12.6	12.5	12.4	12.3	12.3	12.4	12.4	12.3	12.3	12.3	12.4	12.4	12.4
Pig slaughter	209.0	203.0	200.2	202.0	201.8	202.0	203.9	205.4	205.5	205.5	206.4	207.8	209.2	210.2
							kilograms per head							
Slaughter weight	86.1	86.6	87.5	87.6	88.0	88.3	88.5	88.5	88.6	88.8	89.1	89.2	89.4	89.4
France							million head							
Beginning inventories	15.9	16.0	15.2	15.3	14.5	14.7	14.6	14.6	14.6	14.5	14.5	14.6	14.7	14.8
Sows	1.5	1.5	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Pig slaughter	27.2	27.0	26.5	26.6	25.4	25.6	25.5	25.5	25.4	25.4	25.4	25.6	25.7	25.9
							kilograms per head							
Slaughter weight	86.4	85.7	87.5	86.5	86.9	87.1	87.1	86.9	87.0	87.1	87.2	87.2	87.3	87.2
Germany							million head							
Beginning inventories	26.3	26.0	25.8	26.0	26.5	26.1	26.2	26.4	26.3	26.2	26.1	26.2	26.3	26.3
Sows	2.7	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.4
Pig slaughter	44.6	43.2	44.0	44.7	45.5	45.2	45.4	45.5	45.4	45.2	45.2	45.3	45.5	45.5
							kilograms per head							
Slaughter weight	92.0	92.1	92.5	92.2	92.5	92.8	92.8	92.7	92.8	93.0	93.1	93.2	93.3	93.3
Italy							million head							
Beginning inventories	8.3	8.4	8.3	8.4	8.3	8.3	8.4	8.4	8.5	8.4	8.5	8.5	8.5	8.5
Sows	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Pig slaughter	13.0	12.9	13.2	13.3	13.2	13.2	13.4	13.5	13.5	13.5	13.5	13.6	13.6	13.7
							kilograms per head							
Slaughter weight	113.0	114.3	115.4	114.2	115.0	115.4	115.5	115.4	115.6	115.9	116.1	116.3	116.5	116.5
UK							million head							
Beginning inventories	7.6	7.0	5.9	5.7	5.3	5.1	5.0	5.0	4.9	4.8	4.9	4.9	4.9	4.9
Sows	0.8	0.8	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5
Pig slaughter	14.7	12.7	10.6	10.6	9.2	8.8	8.7	8.6	8.5	8.4	8.5	8.5	8.6	8.6
							kilograms per head							
Slaughter weight	71.1	72.7	73.5	72.3	74.3	74.8	75.0	75.2	75.5	75.9	76.2	76.5	76.8	77.0

Source: FAPRI-Ireland Partnership Model (2003)

Baseline Projections

EU-15 Sheep

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EU-15							million head							
Beginning inventories	98.44	96.36	94.93	90.31	90.63	91.15	91.03	90.51	89.95	89.71	89.52	89.20	88.81	88.44
Ewes	70.21	70.23	69.32	65.42	65.85	66.07	65.78	65.35	64.96	64.87	64.72	64.47	64.20	63.97
Sheep slaughter	69.85	69.68	63.99	66.29	66.60	67.45	67.54	67.13	66.46	66.32	66.28	66.08	65.77	65.54
							kilograms per head							
Slaughter weight	16.2	16.3	17.1	16.5	16.4	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
France							million head							
Beginning inventories	9.55	9.51	9.32	9.24	9.12	8.90	8.73	8.61	8.54	8.51	8.48	8.47	8.45	8.45
Ewes	7.50	7.39	7.31	7.13	7.01	6.82	6.70	6.61	6.56	6.54	6.53	6.51	6.50	6.50
Sheep slaughter	7.28	7.39	7.42	7.35	7.31	7.09	6.92	6.80	6.71	6.68	6.66	6.64	6.62	6.62
							kilograms per head							
Slaughter weight	19.0	19.0	19.1	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.1
Germany							million head							
Beginning inventories	2.28	2.17	2.17	2.12	2.07	2.03	1.99	1.97	1.96	1.96	1.96	1.96	1.97	1.98
Ewes	1.64	1.62	1.61	1.57	1.53	1.49	1.47	1.45	1.45	1.45	1.45	1.45	1.46	1.46
Sheep slaughter	2.17	2.16	2.20	2.15	2.11	2.06	2.01	1.98	1.97	1.96	1.97	1.97	1.97	1.98
										kilograms per head				
Slaughter weight	20.3	20.7	20.6	20.5	20.4	20.4	20.4	20.5	20.5	20.5	20.5	20.5	20.5	20.5
Italy							million head							
Beginning inventories	10.89	11.02	11.09	10.95	10.97	10.92	10.85	10.78	10.73	10.70	10.67	10.64	10.61	10.58
Ewes	8.13	8.23	8.33	8.22	8.25	8.20	8.15	8.11	8.08	8.06	8.04	8.01	7.99	7.97
Sheep slaughter	7.39	7.00	6.66	6.69	6.78	6.76	6.72	6.68	6.63	6.62	6.61	6.59	6.57	6.56
							kilograms per head							
Slaughter weight	9.9	9.9	10.9	10.7	10.6	10.6	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.8
UK							million head							
Beginning inventories	31.08	29.74	27.59	24.43	24.90	25.68	25.90	25.77	25.56	25.51	25.50	25.40	25.24	25.06
Ewes	20.33	19.88	18.51	16.08	16.43	16.82	16.84	16.71	16.58	16.60	16.58	16.50	16.39	16.28
Sheep slaughter	19.12	18.38	12.88	14.99	15.11	16.07	16.40	16.33	16.04	16.01	16.06	16.03	15.90	15.78
							kilograms per head							
Slaughter weight	18.9	19.6	20.7	20.5	20.4	20.3	20.3	20.4	20.4	20.5	20.5	20.5	20.5	20.5

Source: FAPRI-Ireland Partnership Model (2003)

Baseline Projections

EU-15 meat supply and utilisation

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Beef and veal							thousand tonnes							
Production	7,678	7,403	7,214	7,431	7,326	7,396	7,408	7,425	7,381	7,347	7,293	7,242	7,194	7,151
Non-EU imports	391	385	330	450	458	464	469	473	484	491	498	503	506	508
Domestic use	7,645	7,274	6,788	7,390	7,444	7,386	7,369	7,387	7,382	7,370	7,340	7,300	7,258	7,209
Non-EU exports	872	579	500	530	569	517	507	511	482	468	451	444	442	450
Stock change	-448	-65	257	-39	-228	-42	0	0	0	0	0	0	0	0
Intervention/SPS stocks	117	52	309	270	42	0	0	0	0	0	0	0	0	0
Pig meat														
Production	18,002	17,586	17,519	17,690	17,757	17,845	18,037	18,172	18,217	18,262	18,381	18,538	18,696	18,806
Non-EU imports	67	49	52	50	52	53	54	55	57	58	58	59	59	61
Domestic use	16,345	16,384	16,503	16,540	16,644	16,687	16,826	16,980	17,041	17,091	17,140	17,221	17,310	17,440
Non-EU exports	1,522	1,260	1,082	1,200	1,150	1,213	1,256	1,233	1,229	1,229	1,301	1,375	1,443	1,422
Stock change	202	-8	-15	0	15	-3	9	14	3	0	-1	1	2	5
Poultry meat														
Production	8,756	8,799	9,073	8,972	8,858	8,945	9,043	9,119	9,220	9,328	9,442	9,552	9,663	9,766
Non-EU imports	391	577	732	711	742	748	754	759	764	768	773	778	782	787
Domestic use	8,179	8,456	8,799	8,582	8,602	8,703	8,805	8,884	8,989	9,098	9,212	9,321	9,431	9,532
Non-EU exports	1,012	974	961	1,093	992	987	983	984	987	992	997	1,002	1,008	1,014
Stock change	-44	-53	45	8	6	2	9	10	7	7	6	6	6	6
Sheep meat														
Production	1,131	1,135	1,096	1,091	1,094	1,110	1,112	1,105	1,095	1,093	1,094	1,091	1,087	1,083
Non-EU imports	257	263	252	255	258	258	259	261	264	265	267	269	272	274
Domestic use	1,387	1,400	1,346	1,342	1,349	1,365	1,368	1,363	1,355	1,356	1,358	1,358	1,356	1,355
Non-EU exports	3	4	3	3	3	3	3	3	3	3	3	3	3	3
Stock change	-1	-6	-1	2	0	0	0	0	0	0	0	0	0	0
Consumption							kilograms per capita, cwe							
Beef and veal	20.37	19.37	18.00	19.55	19.67	19.49	19.43	19.46	19.43	19.39	19.30	19.18	19.07	18.93
Pig meat	43.56	43.62	43.76	43.75	43.97	44.04	44.37	44.73	44.86	44.96	45.06	45.25	45.47	45.80
Poultry meat	21.80	22.51	23.33	22.70	22.73	22.97	23.22	23.40	23.66	23.93	24.22	24.49	24.77	25.03
Sheep meat	3.70	3.73	3.57	3.55	3.56	3.60	3.61	3.59	3.57	3.57	3.57	3.57	3.56	3.56
Total	89.42	89.24	88.65	89.55	89.93	90.11	90.63	91.19	91.52	91.85	92.15	92.50	92.87	93.32
Premia							euro per head							
Male bovine premium	135.0	160.0	185.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0
Suckler cow premium	145.0	163.0	182.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
Prices							euro per 100 kilograms							
Young cattle R3	277.0	278.7	236.4	250.5	241.4	251.2	249.2	240.6	238.4	237.2	238.6	240.5	242.7	244.8
Pig meat reference	111.7	141.6	166.8	135.8	139.7	143.0	139.8	134.7	134.0	133.7	133.8	132.9	131.8	129.2
Chicken	124.4	132.7	157.0	137.1	132.8	135.1	133.2	130.7	129.4	128.2	127.4	126.4	125.5	124.5
Sheep meat reference	324.4	357.5	412.7	415.2	384.5	378.0	372.5	369.1	372.2	369.9	367.6	366.3	366.5	364.8
Beef intervention	347.5	324.2	301.3	278.0	156.0	156.0	156.0	156.0	156.0	156.0	156.0	156.0	156.0	156.0

Source: FAPRI-Ireland Partnership Model (2003)

Baseline Projections

EU-15 dairy supply and utilisation

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
							thousand head, end of year							
Dairy cows	21,111.0	20,395.2	20,152.6	19,516.7	19,352.2	19,124.0	18,975.2	18,818.0	18,661.6	18,435.6	18,227.3	18,022.5	17,822.4	17,625.8
							kilograms							
Production/cow	5,751.7	5,918.3	6,054.8	6,271.7	6,311.4	6,379.6	6,445.9	6,512.2	6,579.4	6,648.8	6,717.0	6,784.5	6,852.2	6,919.9
Fluid milk							million tonnes							
Cow's milk production	121.4	120.7	122.0	122.4	122.1	122.0	122.3	122.5	122.8	122.6	122.4	122.3	122.1	122.0
Milk quota	117.5	118.7	119.2	119.2	119.2	119.2	119.7	120.1	120.6	120.6	120.6	120.6	120.6	120.6
Other milk production	4.1	3.8	4.1	4.1	4.1	4.1	4.1	4.1	4.2	4.2	4.2	4.2	4.2	4.2
Fluid consumption	33.0	32.5	32.6	32.8	32.6	32.6	32.7	32.7	32.8	32.6	32.5	32.4	32.3	32.2
Manufacturing use	88.3	87.5	88.9	89.1	89.1	89.1	89.3	89.5	89.8	89.7	89.8	89.8	89.8	89.8
Feed use, net exports	4.2	4.5	4.6	4.6	4.5	4.5	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.2
Cheese							thousand tonnes							
Production	6,710.4	6,884.5	7,179.7	7,219.4	7,273.2	7,326.0	7,427.8	7,519.5	7,611.1	7,645.3	7,686.8	7,727.1	7,767.9	7,806.3
Non-EU imports	142.0	144.0	169.0	133.0	152.4	153.7	155.6	157.3	159.0	161.0	162.9	164.8	166.7	168.6
Domestic use	6,497.5	6,561.4	6,896.9	6,931.1	6,960.2	7,006.9	7,103.2	7,191.6	7,280.8	7,320.1	7,362.2	7,402.5	7,443.6	7,482.5
Non-EU exports	376.0	436.0	447.0	463.0	464.0	472.4	475.0	479.4	483.6	484.8	487.2	489.4	491.0	492.8
Ending stocks	447.8	478.8	483.6	441.9	443.2	443.7	448.8	454.6	460.2	461.6	461.9	461.9	461.9	461.5
Butter														
Production	1,886.4	1,851.4	1,825.2	1,869.8	1,847.4	1,839.6	1,827.7	1,815.3	1,805.1	1,802.6	1,799.7	1,796.4	1,793.0	1,790.4
Non-EU imports	106.0	106.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0
Domestic use	1,760.9	1,770.8	1,748.1	1,704.9	1,725.1	1,719.3	1,723.1	1,725.4	1,727.2	1,720.5	1,713.7	1,706.5	1,699.7	1,693.0
Non-EU exports	169.0	185.0	179.0	185.0	207.1	220.3	222.6	217.4	210.7	205.2	204.4	205.7	207.7	210.7
Ending stocks	127.5	129.2	142.3	237.2	267.4	282.4	279.4	267.0	249.1	241.0	237.7	236.8	237.5	239.2
Skim powder														
Production	1,116.1	1,049.2	974.0	1,062.9	1,018.0	995.7	958.4	919.9	886.2	878.8	869.4	859.6	849.1	841.2
Non-EU imports	71.0	75.0	48.0	59.0	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8	56.8
Domestic use	953.6	924.3	835.1	881.9	852.3	846.5	842.1	837.2	830.4	820.5	810.6	801.3	791.9	781.4
Non-EU exports	272.0	356.0	140.0	150.0	174.6	182.5	179.7	173.0	159.6	146.4	138.4	132.2	127.3	124.2
Ending stocks	273.3	117.2	164.1	254.1	302.0	325.5	318.8	285.4	238.3	207.0	184.2	167.0	153.8	146.2
Whole powder														
Production	901.6	870.2	814.2	835.9	824.5	819.7	821.1	826.8	832.3	830.2	829.2	828.0	826.8	825.4
Non-EU imports	8.0	8.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
Domestic use	311.1	341.1	342.0	352.4	349.8	348.4	349.7	350.4	350.7	348.5	346.6	344.6	342.7	340.6
Non-EU exports	577.0	576.0	478.0	500.0	489.3	486.9	487.1	492.3	497.6	498.0	499.1	500.0	500.8	501.4
Ending stocks	70.8	32.0	42.2	41.7	43.1	43.5	43.7	43.9	43.9	43.6	43.1	42.5	41.9	41.2
Consumption							kilograms per capita							
Fluid milk	87.9	86.5	86.6	86.7	86.2	86.0	86.2	86.2	86.3	85.8	85.5	85.1	84.8	84.5
Cheese	17.3	17.5	18.3	18.3	18.4	18.5	18.7	18.9	19.2	19.3	19.4	19.5	19.6	19.6
Butter	4.7	4.7	4.6	4.5	4.6	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.4
Prices							euro per 100 kilograms							
Milk, 3.7% fat	28.7	29.6	31.5	30.1	29.6	29.8	28.9	28.1	27.3	27.3	27.2	27.2	27.1	27.1
Cheese market	473.5	477.4	493.0	496.3	488.8	491.8	480.1	467.9	456.2	456.0	455.3	454.4	453.6	452.8
Butter market	364.3	363.5	361.2	352.9	341.0	340.6	325.1	309.6	294.6	292.0	289.6	287.2	284.5	281.3
SMP market	207.0	251.1	242.7	204.0	204.7	205.0	197.6	191.0	185.6	187.2	187.8	188.3	188.9	190.1
WMP market	262.5	290.8	271.1	248.7	243.0	243.8	236.1	229.2	222.5	222.6	222.3	222.0	221.7	221.4
Butter intervention	328.2	328.2	328.2	328.2	328.2	328.2	311.8	295.4	279.0	279.0	279.0	279.0	279.0	279.0
SMP intervention	205.5	205.5	205.5	205.5	205.5	205.5	195.2	185.0	174.7	174.7	174.7	174.7	174.7	174.7

Source: FAPRI-Ireland Partnership Model (2003)

Appendix IV. Scenario results

Scenario Results: Change against Baseline Projections

EU-15 cereal supply and utilisation

	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
Soft wheat and durum														
								thousand hectares						
Area harvested	0.00	0.00	0.00	0.00	0.00	-307.17	-299.87	-238.46	-230.47	-390.79	-442.36	-474.86	-476.02	-477.86
								tonnes per hectare						
Yield	0.00	0.00	0.00	0.00	0.00	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
								million tonnes						
Production	0.00	0.00	0.00	0.00	0.00	-0.68	-0.82	-0.53	-0.56	-1.54	-1.92	-2.20	-2.28	-2.34
Beginning stocks	0.00	0.00	0.00	0.00	0.00	0.00	-0.12	-0.19	-0.28	-0.63	-1.26	-1.86	-2.41	-2.97
Imports	0.00	0.00	0.00	0.00	0.00	-0.02	-0.04	0.01	0.16	0.38	0.54	0.67	0.67	0.57
Total supply	0.00	0.00	0.00	0.00	0.00	-0.70	-0.99	-0.71	-0.69	-1.80	-2.64	-3.39	-4.03	-4.74
Domestic use	0.00	0.00	0.00	0.00	0.00	-0.23	-0.34	-0.06	0.42	0.37	0.47	0.59	0.52	0.23
Feed	0.00	0.00	0.00	0.00	0.00	-0.12	-0.24	-0.02	0.44	0.41	0.49	0.59	0.53	0.27
Other	0.00	0.00	0.00	0.00	0.00	-0.11	-0.10	-0.05	-0.02	-0.05	-0.02	0.00	-0.01	-0.04
Exports	0.00	0.00	0.00	0.00	0.00	-0.35	-0.45	-0.36	-0.48	-0.90	-1.25	-1.57	-1.58	-1.39
Ending stocks	0.00	0.00	0.00	0.00	0.00	-0.12	-0.19	-0.28	-0.63	-1.26	-1.86	-2.41	-2.97	-3.59
Loss, statistical disc.	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	0.00
Net exports	0.00	0.00	0.00	0.00	0.00	-0.33	-0.41	-0.38	-0.64	-1.28	-1.79	-2.24	-2.25	-1.95
								percent						
Set-aside rate	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	0.00
Market prices								euro per tonne, Jan.-Dec.						
Soft wheat	0.00	0.00	0.00	0.00	0.00	0.56	0.94	-0.86	-1.66	-0.87	-1.87	-2.83	-2.59	-1.16
Durum wheat	0.00	0.00	0.00	0.00	0.00	17.61	14.27	13.08	12.15	13.22	13.21	13.27	13.04	12.97
Barley, maize, and rye														
								thousand hectares						
Area harvested	0.00	0.00	0.00	0.00	0.00	-258.02	-265.22	-322.57	-340.60	-177.64	-120.73	-90.58	-101.70	-104.35
								tonnes per hectare						
Yield	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.03	0.04	0.02	0.02	0.02	0.02	0.02
								million tonnes						
Production	0.00	0.00	0.00	0.00	0.00	-1.17	-1.18	-1.46	-1.53	-0.74	-0.47	-0.32	-0.35	-0.36
Beginning stocks	0.00	0.00	0.00	0.00	0.00	0.00	-1.23	-2.45	-4.07	-5.02	-5.56	-5.98	-6.28	-6.61
Imports	0.00	0.00	0.00	0.00	0.00	0.28	0.31	0.36	0.29	0.25	0.21	0.16	0.12	0.09
Total supply	0.00	0.00	0.00	0.00	0.00	-0.89	-2.10	-3.55	-5.31	-5.51	-5.82	-6.13	-6.51	-6.88
Domestic use	0.00	0.00	0.00	0.00	0.00	0.42	0.30	0.26	-0.19	0.10	0.16	0.19	0.24	0.42
Feed	0.00	0.00	0.00	0.00	0.00	0.36	0.23	0.16	-0.16	0.11	0.13	0.14	0.20	0.37
Other	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.09	-0.04	-0.02	0.02	0.04	0.04	0.05
Exports	0.00	0.00	0.00	0.00	0.00	-0.06	0.06	0.28	-0.09	-0.05	0.00	-0.03	-0.13	-0.16
Ending stocks	0.00	0.00	0.00	0.00	0.00	-1.23	-2.45	-4.07	-5.02	-5.56	-5.98	-6.28	-6.61	-7.13
Net exports	0.00	0.00	0.00	0.00	0.00	-0.35	-0.26	-0.07	-0.38	-0.30	-0.21	-0.19	-0.25	-0.25
								percent						
Set-aside rate	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	0.00
Market prices								euro per tonne, Jan.-Dec.						
Barley	0.00	0.00	0.00	0.00	0.00	-1.12	-0.23	-0.60	-0.04	0.30	0.17	-0.30	-0.75	-0.81
Maize	0.00	0.00	0.00	0.00	0.00	0.64	0.85	0.23	0.44	0.74	0.20	-0.34	-0.53	-0.26
Rye	0.00	0.00	0.00	0.00	0.00	-9.54	-13.70	-17.68	6.82	-0.12	-7.28	-8.28	-4.18	-6.67

Source: FAPRI-Ireland Partnership Model (2003)

Scenario Results: Change against Baseline Projections

EU-15 Cattle

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EU-15								million head						
Beginning inventories	0.00	0.00	0.00	0.00	0.00	0.00	-0.69	-1.47	-2.18	-2.63	-2.89	-3.09	-3.23	-3.32
Dairy cows	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.13	0.24	0.22	0.22	0.22
Suckler cows	0.00	0.00	0.00	0.00	0.00	0.00	-0.64	-1.00	-1.21	-1.30	-1.36	-1.38	-1.38	-1.37
Suckler cow quota	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	0.00
Cattle slaughter	0.00	0.00	0.00	0.00	0.00	0.60	0.18	-0.18	-0.57	-0.73	-0.75	-0.83	-0.88	-0.90
								kilograms per head						
Slaughter weight	0.00	0.00	0.00	0.00	0.00	-0.20	-0.21	0.21	0.35	0.22	0.11	0.18	0.17	0.10
France								million head						
Beginning inventories	0.00	0.00	0.00	0.00	0.00	0.00	-0.15	-0.38	-0.61	-0.80	-0.93	-1.05	-1.14	-1.20
Dairy cows	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.03	0.06	0.06	0.06	0.06
Suckler cows	0.00	0.00	0.00	0.00	0.00	0.00	-0.20	-0.32	-0.39	-0.42	-0.43	-0.44	-0.44	-0.43
Suckler cow quota	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	0.00
Cattle slaughter	0.00	0.00	0.00	0.00	0.00	0.11	0.05	-0.04	-0.13	-0.18	-0.19	-0.22	-0.24	-0.26
								kilograms per head						
Slaughter weight	0.00	0.00	0.00	0.00	0.00	0.46	0.63	0.55	0.04	-0.68	-1.14	-1.52	-1.88	-2.19
Germany								million head						
Beginning inventories	0.00	0.00	0.00	0.00	0.00	0.00	-0.02	-0.06	-0.09	-0.09	-0.07	-0.06	-0.06	-0.05
Dairy cows	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06	0.06	0.06	0.06
Suckler cows	0.00	0.00	0.00	0.00	0.00	0.00	-0.03	-0.05	-0.06	-0.06	-0.07	-0.07	-0.07	-0.07
Suckler cow quota	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	0.00
Cattle slaughter	0.00	0.00	0.00	0.00	0.00	0.02	0.01	-0.01	-0.04	-0.05	-0.01	-0.01	-0.01	-0.01
								kilograms per head						
Slaughter weight	0.00	0.00	0.00	0.00	0.00	-0.91	-0.15	0.55	1.12	1.21	1.21	1.48	1.59	1.59
Italy								million head						
Beginning inventories	0.00	0.00	0.00	0.00	0.00	0.00	-0.02	-0.05	-0.07	-0.08	-0.08	-0.07	-0.07	-0.06
Dairy cows	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
Suckler cows	0.00	0.00	0.00	0.00	0.00	0.00	-0.02	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03
Suckler cow quota	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	0.00
Cattle slaughter	0.00	0.00	0.00	0.00	0.00	0.01	0.01	-0.01	-0.03	-0.04	-0.03	-0.03	-0.03	-0.03
								kilograms per head						
Slaughter weight	0.00	0.00	0.00	0.00	0.00	-0.92	-0.10	0.49	0.96	1.11	1.19	1.42	1.53	1.59
UK								million head						
Beginning inventories	0.00	0.00	0.00	0.00	0.00	0.00	-0.09	-0.24	-0.37	-0.47	-0.52	-0.55	-0.57	-0.58
Dairy cows	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.02	0.02	0.02
Suckler cows	0.00	0.00	0.00	0.00	0.00	0.00	-0.11	-0.18	-0.21	-0.23	-0.24	-0.24	-0.24	-0.24
Suckler cow quota	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	0.00
Cattle slaughter	0.00	0.00	0.00	0.00	0.00	0.07	0.04	-0.01	-0.08	-0.12	-0.14	-0.15	-0.16	-0.17
								kilograms per head						
Slaughter weight	0.00	0.00	0.00	0.00	0.00	-1.22	-0.18	0.64	1.32	1.52	1.58	1.82	1.90	1.85

Source: FAPRI-Ireland Partnership Model (2003)

Scenario Results: Change against Baseline Projections

EU-15 Sheep

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EU-15								million head						
Beginning inventories	0.00	0.00	0.00	0.00	0.00	0.00	-4.39	-6.00	-4.90	-4.52	-4.78	-4.79	-4.65	-4.62
Ewes	0.00	0.00	0.00	0.00	0.00	0.00	-4.01	-4.05	-3.01	-3.03	-3.28	-3.22	-3.12	-3.12
Sheep slaughter	0.00	0.00	0.00	0.00	0.00	3.53	-2.83	-5.34	-3.70	-3.10	-3.56	-3.63	-3.43	-3.39
								kilograms per head						
Slaughter weight	0.00	0.00	0.00	0.00	0.00	-0.05	0.02	0.06	0.04	0.04	0.05	0.05	0.05	0.05
France								million head						
Beginning inventories	0.00	0.00	0.00	0.00	0.00	0.00	-0.38	-0.42	-0.27	-0.22	-0.24	-0.23	-0.21	-0.21
Ewes	0.00	0.00	0.00	0.00	0.00	0.00	-0.36	-0.32	-0.19	-0.17	-0.19	-0.18	-0.17	-0.17
Sheep slaughter	0.00	0.00	0.00	0.00	0.00	0.31	-0.32	-0.45	-0.23	-0.16	-0.20	-0.19	-0.17	-0.16
								kilograms per head						
Slaughter weight	0.00	0.00	0.00	0.00	0.00	-0.10	0.08	0.17	0.12	0.10	0.12	0.13	0.12	0.12
Germany								million head						
Beginning inventories	0.00	0.00	0.00	0.00	0.00	0.00	-0.10	-0.12	-0.09	-0.08	-0.09	-0.09	-0.09	-0.09
Ewes	0.00	0.00	0.00	0.00	0.00	0.00	-0.09	-0.09	-0.06	-0.06	-0.07	-0.06	-0.06	-0.06
Sheep slaughter	0.00	0.00	0.00	0.00	0.00	0.08	-0.10	-0.14	-0.09	-0.08	-0.09	-0.09	-0.08	-0.08
										kilograms per head				
Slaughter weight	0.00	0.00	0.00	0.00	0.00	-0.10	0.08	0.16	0.12	0.10	0.11	0.12	0.11	0.11
Italy								million head						
Beginning inventories	0.00	0.00	0.00	0.00	0.00	0.00	-0.38	-0.52	-0.45	-0.43	-0.46	-0.46	-0.45	-0.44
Ewes	0.00	0.00	0.00	0.00	0.00	0.00	-0.35	-0.37	-0.30	-0.30	-0.32	-0.32	-0.31	-0.31
Sheep slaughter	0.00	0.00	0.00	0.00	0.00	0.33	-0.11	-0.33	-0.23	-0.19	-0.23	-0.24	-0.23	-0.22
								kilograms per head						
Slaughter weight	0.00	0.00	0.00	0.00	0.00	-0.05	0.04	0.08	0.05	0.05	0.05	0.05	0.05	0.05
UK								million head						
Beginning inventories	0.00	0.00	0.00	0.00	0.00	0.00	-1.69	-2.48	-2.07	-1.83	-1.88	-1.87	-1.80	-1.79
Ewes	0.00	0.00	0.00	0.00	0.00	0.00	-1.50	-1.53	-1.15	-1.11	-1.17	-1.14	-1.09	-1.10
Sheep slaughter	0.00	0.00	0.00	0.00	0.00	1.32	-1.06	-2.20	-1.64	-1.34	-1.45	-1.45	-1.36	-1.34
								kilograms per head						
Slaughter weight	0.00	0.00	0.00	0.00	0.00	-0.10	0.08	0.17	0.13	0.11	0.12	0.13	0.12	0.12

Source: FAPRI-Ireland Partnership Model (2003)

Scenario Results: Change against Baseline Projections

EU-15 meat supply and utilisation

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Beef and veal							thousand tonnes							
Production	0.00	0.00	0.00	0.00	0.01	162.32	45.44	-45.14	-150.78	-201.17	-207.48	-229.75	-244.19	-251.65
Non-EU imports	0.00	0.00	0.00	0.00	-0.02	-10.49	-1.65	4.54	10.55	13.41	13.71	14.94	15.62	16.24
Domestic use	0.00	0.00	0.00	0.00	-0.11	57.25	28.45	-11.34	-70.17	-97.52	-100.46	-112.29	-120.72	-123.10
Non-EU exports	0.00	0.00	0.00	0.00	0.11	90.86	15.34	-29.26	-70.06	-90.24	-93.30	-102.52	-107.85	-112.31
Stock change	0.00	0.00	0.00	0.00	-0.01	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Intervention/SPS stocks														
Pig meat														
Production	0.00	0.00	0.00	0.00	0.03	-22.33	-30.77	4.87	61.69	79.04	73.21	81.03	97.57	100.60
Non-EU imports	0.00	0.00	0.00	0.00	0.00	-0.03	0.04	0.03	0.04	0.41	0.31	0.14	0.00	0.27
Domestic use	0.00	0.00	0.00	0.00	-0.01	-28.34	-21.20	10.10	58.05	75.68	71.47	77.58	90.93	94.67
Non-EU exports	0.00	0.00	0.00	0.00	0.05	2.70	-3.82	-3.58	1.47	3.06	2.63	3.67	5.84	6.15
Stock change	0.00	0.00	0.00	0.00	-0.01	3.28	-5.71	-1.62	2.21	0.71	-0.58	-0.08	0.80	0.05
Poultry meat														
Production	0.00	0.00	0.00	0.00	0.03	-32.10	-2.89	30.89	40.76	41.67	51.28	62.05	64.28	60.33
Non-EU imports	0.00	0.00	0.00	0.00	0.00	-0.14	0.15	0.12	0.03	0.04	-0.02	-0.12	-0.18	-0.12
Domestic use	0.00	0.00	0.00	0.00	0.03	-35.22	1.59	32.62	40.66	42.47	51.04	60.52	62.29	59.54
Non-EU exports	0.00	0.00	0.00	0.00	0.01	1.22	-1.29	-1.04	-0.22	-0.34	0.17	1.04	1.54	1.05
Stock change	0.00	0.00	0.00	0.00	0.00	1.76	-3.04	-0.57	0.34	-0.41	0.06	0.37	0.26	-0.39
Sheep meat														
Production	0.00	0.00	0.00	0.00	0.00	54.36	-45.25	-84.43	-58.07	-48.60	-55.69	-56.76	-53.58	-53.01
Non-EU imports	0.00	0.00	0.00	0.00	0.00	-10.19	8.38	16.37	11.45	9.72	10.93	11.05	10.36	10.17
Domestic use	0.00	0.00	0.00	0.00	0.00	44.17	-36.86	-68.05	-46.63	-38.88	-44.76	-45.71	-43.22	-42.84
Non-EU exports	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	0.00
Stock change	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	0.00
Consumption							kilograms per capita, cwe							
Beef and veal	0.00	0.00	0.00	0.00	0.00	0.15	0.08	-0.03	-0.18	-0.26	-0.26	-0.30	-0.32	-0.32
Pig meat	0.00	0.00	0.00	0.00	0.00	-0.07	-0.06	0.03	0.15	0.20	0.19	0.20	0.24	0.25
Poultry meat	0.00	0.00	0.00	0.00	0.00	-0.09	0.00	0.09	0.11	0.11	0.13	0.16	0.16	0.16
Sheep meat	0.00	0.00	0.00	0.00	0.00	0.12	-0.10	-0.18	-0.12	-0.10	-0.12	-0.12	-0.11	-0.11
Total	0.00	0.00	0.00	0.00	0.00	0.10	-0.07	-0.10	-0.05	-0.05	-0.06	-0.05	-0.03	-0.03
Premia								euro per head						
Male bovine premium	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	0.00
Suckler cow premium	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	0.00
Prices							euro per 100 kilograms							
Young cattle R3	0.00	0.00	0.00	0.00	0.02	-9.79	-1.60	4.61	10.96	14.43	15.32	17.13	18.24	19.02
Pig meat reference	0.00	0.00	0.00	0.00	0.00	-1.29	1.24	1.46	0.43	0.33	0.64	0.63	0.29	0.34
Chicken	0.00	0.00	0.00	0.00	0.00	-0.82	0.77	0.77	0.56	0.80	0.75	0.58	0.49	0.73
Sheep meat reference	0.00	0.00	0.00	0.00	0.01	-38.20	32.02	63.59	45.29	39.14	44.75	46.01	43.87	43.80
Beef intervention	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	0.00

Source: FAPRI-Ireland Partnership Model (2003)

Scenario Results: Change against Baseline Projections

EU-15 dairy supply and utilisation

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
								thousand head, end of year						
Dairy cows	0.00	0.00	0.00	0.00	0.00	17.59	10.33	12.21	126.61	242.52	222.18	221.92	224.28	220.34
								kilograms						
Production/cow	0.00	0.00	0.00	0.00	0.00	-9.38	-9.98	-9.67	2.67	9.14	10.17	9.12	5.27	3.84
Fluid milk								million tonnes						
Cow's milk production	0.00	0.00	0.00	0.00	0.00	-0.07	-0.12	-0.10	0.88	1.78	1.68	1.67	1.63	1.59
Milk quota	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	1.23	2.41	2.41	2.41	2.41	2.41
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	0.00
Fluid consumption	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.13	0.28	0.52	0.52	0.55	0.60	0.61
Manufacturing use	0.00	0.00	0.00	0.00	0.00	-0.18	-0.24	-0.24	0.58	1.21	1.09	1.06	0.96	0.91
Feed use, net exports	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.05	0.07	0.07	0.07	0.07
Cheese								thousand tonnes						
Production	0.00	0.00	0.00	0.00	0.00	29.43	26.47	19.69	58.00	123.83	106.61	102.08	102.67	100.73
Non-EU imports	0.00	0.00	0.00	0.00	0.00	-0.21	-0.21	-0.37	-0.82	-1.53	-1.71	-1.94	-2.30	-2.23
Domestic use	0.00	0.00	0.00	0.00	0.00	24.50	23.42	29.63	76.34	147.97	150.10	160.47	178.35	182.10
Non-EU exports	0.00	0.00	0.00	0.00	0.00	2.40	2.38	-10.83	-22.80	-31.83	-46.82	-61.19	-79.13	-83.90
Ending stocks	0.00	0.00	0.00	0.00	0.00	2.31	2.76	3.27	6.91	13.08	14.71	15.57	16.72	17.01
Butter														
Production	0.00	0.00	0.00	0.00	0.00	-20.31	-21.84	-18.79	7.84	15.58	16.25	23.38	31.85	30.79
Non-EU 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	0.00
Domestic use	0.00	0.00	0.00	0.00	0.00	7.79	11.95	19.22	34.63	49.03	48.14	49.79	51.97	51.34
Non-EU exports	0.00	0.00	0.00	0.00	0.00	-9.30	-19.00	-25.21	-20.87	-20.12	-24.89	-24.54	-21.27	-21.06
Ending stocks	0.00	0.00	0.00	0.00	0.00	-18.80	-33.60	-46.40	-52.31	-65.64	-72.64	-74.52	-73.37	-72.86
Skim powder														
Production	0.00	0.00	0.00	0.00	0.00	-39.93	-41.20	-36.69	-3.32	-7.28	-5.14	6.92	20.68	18.25
Non-EU 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	0.00
Domestic use	0.00	0.00	0.00	0.00	0.00	0.45	-2.47	-7.74	-8.46	-1.90	0.20	-0.80	0.61	2.18
Non-EU exports	0.00	0.00	0.00	0.00	0.00	-8.24	-17.99	-23.35	-16.24	-8.72	-7.69	-2.81	5.75	8.63
Ending stocks	0.00	0.00	0.00	0.00	0.00	-32.14	-52.88	-58.47	-37.10	-33.77	-31.41	-20.88	-6.57	0.86
Whole powder														
Production	0.00	0.00	0.00	0.00	0.00	4.92	5.50	6.56	13.42	23.80	23.84	5.66	-30.71	-31.48
Non-EU 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	0.00
Domestic use	0.00	0.00	0.00	0.00	0.00	1.30	1.17	1.31	3.78	7.23	7.08	8.16	10.35	10.44
Non-EU exports	0.00	0.00	0.00	0.00	0.00	3.44	4.26	5.20	9.34	16.04	16.52	-2.72	-41.40	-42.09
Ending stocks	0.00	0.00	0.00	0.00	0.00	0.18	0.24	0.29	0.59	1.12	1.36	1.59	1.92	2.09
Consumption								kilograms per capita						
Fluid milk	0.00	0.00	0.00	0.00	0.00	0.28	0.28	0.34	0.75	1.37	1.36	1.44	1.58	1.60
Cheese	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.08	0.20	0.39	0.39	0.42	0.47	0.48
Butter	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.05	0.09	0.13	0.13	0.13	0.14	0.13
Prices								euro per 100 kilograms						
Milk, 3.7% fat	0.00	0.00	0.00	0.00	0.00	-0.48	-0.47	-0.57	-1.19	-2.13	-2.12	-2.23	-2.44	-2.47
Cheese market	0.00	0.00	0.00	0.00	0.00	-6.12	-5.63	-6.80	-16.57	-31.30	-31.49	-33.31	-36.57	-37.05
Butter market	0.00	0.00	0.00	0.00	0.00	-12.38	-15.98	-21.82	-33.21	-46.42	-45.60	-46.58	-47.84	-47.12
SMP market	0.00	0.00	0.00	0.00	0.00	-3.20	-0.03	3.75	3.22	-3.71	-3.51	-3.61	-5.25	-6.31
WMP market	0.00	0.00	0.00	0.00	0.00	-3.52	-3.07	-3.35	-9.23	-17.31	-17.03	-19.60	-24.72	-25.01
Butter intervention	0.00	0.00	0.00	0.00	0.00	-22.97	-29.55	-36.12	-42.70	-65.67	-65.67	-65.67	-65.67	-65.67
SMP intervention	0.00	0.00	0.00	0.00	0.00	-7.19	-4.07	-1.06	2.05	-5.15	-5.15	-5.15	-5.15	-5.15

Source: FAPRI-Ireland Partnership Model (2003)

Scenario Results: Percentage change against Baseline Projections

EU-15 cereal supply and utilisation

	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
Soft wheat and durum														
								thousand hectares						
Area harvested	0.0%	0.0%	0.0%	0.0%	0.0%	-1.7%	-1.7%	-1.3%	-1.3%	-2.2%	-2.4%	-2.6%	-2.6%	-2.6%
								tonnes per hectare						
Yield	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.9%	0.9%	0.8%	0.8%	0.8%	0.7%	0.7%	0.7%
								million tonnes						
Production	0.0%	0.0%	0.0%	0.0%	0.0%	-0.7%	-0.8%	-0.5%	-0.5%	-1.4%	-1.7%	-1.9%	-1.9%	-2.0%
Beginning stocks	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.8%	-1.3%	-1.8%	-3.8%	-7.1%	-10.0%	-12.3%	-14.4%
Imports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.5%	1.1%	1.6%	2.0%	2.0%	1.7%
Total supply	0.0%	0.0%	0.0%	0.0%	0.0%	-0.5%	-0.6%	-0.4%	-0.4%	-1.1%	-1.6%	-2.0%	-2.3%	-2.7%
Domestic use	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.3%	-0.1%	0.4%	0.4%	0.5%	0.6%	0.5%	0.2%
Feed	0.0%	0.0%	0.0%	0.0%	0.0%	-0.3%	-0.5%	0.0%	0.9%	0.8%	1.0%	1.1%	1.0%	0.5%
Other	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.2%	-0.1%	0.0%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Exports	0.0%	0.0%	0.0%	0.0%	0.0%	-0.8%	-1.1%	-0.9%	-1.1%	-2.0%	-2.8%	-3.4%	-3.4%	-2.9%
Ending stocks	0.0%	0.0%	0.0%	0.0%	0.0%	-0.8%	-1.3%	-1.8%	-3.8%	-7.1%	-10.0%	-12.3%	-14.4%	-16.6%
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%
Net exports	0.0%	0.0%	0.0%	0.0%	0.0%	-5.0%	-5.9%	-5.0%	-7.5%	-13.2%	-16.4%	-18.6%	-17.0%	-13.7%
								percent						
Set-aside rate	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%
Market prices								euro per tonne, Jan.-Dec.						
Soft wheat	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.8%	-0.8%	-1.5%	-0.8%	-1.7%	-2.6%	-2.4%	-1.1%
Durum wheat	0.0%	0.0%	0.0%	0.0%	0.0%	10.9%	9.0%	8.2%	7.7%	8.3%	8.3%	8.3%	8.1%	8.1%
Barley, maize, and rye														
								thousand hectares						
Area harvested	0.0%	0.0%	0.0%	0.0%	0.0%	-1.6%	-1.6%	-2.0%	-2.1%	-1.1%	-0.7%	-0.6%	-0.6%	-0.7%
								tonnes per hectare						
Yield	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.4%	0.5%	0.6%	0.4%	0.3%	0.3%	0.3%	0.3%
								million tonnes						
Production	0.0%	0.0%	0.0%	0.0%	0.0%	-1.2%	-1.2%	-1.5%	-1.5%	-0.7%	-0.5%	-0.3%	-0.3%	-0.4%
Beginning stocks	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-5.6%	-10.9%	-17.4%	-20.6%	-21.9%	-22.7%	-23.0%	-23.4%
Imports	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	1.5%	1.7%	1.3%	1.1%	0.9%	0.7%	0.5%	0.4%
Total supply	0.0%	0.0%	0.0%	0.0%	0.0%	-0.6%	-1.5%	-2.5%	-3.7%	-3.8%	-3.9%	-4.1%	-4.3%	-4.5%
Domestic use	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.3%	0.3%	-0.2%	0.1%	0.2%	0.2%	0.3%	0.4%
Feed	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.4%	0.2%	-0.2%	0.2%	0.2%	0.2%	0.3%	0.5%
Other	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.3%	0.4%	-0.1%	-0.1%	0.1%	0.2%	0.2%	0.2%
Exports	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	0.2%	1.0%	-0.3%	-0.2%	0.0%	-0.1%	-0.4%	-0.5%
Ending stocks	0.0%	0.0%	0.0%	0.0%	0.0%	-5.6%	-10.9%	-17.4%	-20.6%	-21.9%	-22.7%	-23.0%	-23.4%	-24.3%
Net exports	0.0%	0.0%	0.0%	0.0%	0.0%	-4.3%	-3.2%	-0.9%	-4.7%	-3.7%	-2.6%	-2.4%	-3.0%	-3.0%
								percent						
Set-aside rate	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%
Market prices								euro per tonne, Jan.-Dec.						
Barley	0.0%	0.0%	0.0%	0.0%	0.0%	-1.0%	-0.2%	-0.6%	0.0%	0.3%	0.2%	-0.3%	-0.7%	-0.8%
Maize	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.6%	0.2%	0.3%	0.6%	0.2%	-0.3%	-0.4%	-0.2%
Rye	0.0%	0.0%	0.0%	0.0%	0.0%	-9.8%	-14.1%	-18.2%	7.0%	-0.1%	-7.5%	-8.5%	-4.3%	-6.9%

Source: FAPRI-Ireland Partnership Model (2003)

Scenario Results: Percentage change against Baseline Projections

EU-15 Cattle

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EU-15								million head						
Beginning inventories	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.9%	-1.9%	-2.8%	-3.5%	-3.8%	-4.1%	-4.3%	-4.5%
Dairy cows	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.7%	1.3%	1.2%	1.2%	1.3%
Suckler cows	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-5.4%	-8.4%	-10.2%	-11.0%	-11.5%	-11.7%	-11.7%	-11.5%
Suckler cow quota	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%
Cattle slaughter	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	0.7%	-0.7%	-2.2%	-2.8%	-2.9%	-3.2%	-3.5%	-3.6%
								kilograms per head						
Slaughter weight	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.0%
France								million head						
Beginning inventories	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.8%	-2.0%	-3.3%	-4.4%	-5.2%	-5.9%	-6.5%	-6.8%
Dairy cows	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.8%	1.5%	1.4%	1.4%	1.5%
Suckler cows	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-4.9%	-7.9%	-9.5%	-10.3%	-10.7%	-10.9%	-10.7%	-10.6%
Suckler cow quota	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%
Cattle slaughter	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	0.9%	-0.7%	-2.5%	-3.3%	-3.5%	-4.3%	-4.7%	-5.0%
								kilograms per head						
Slaughter weight	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%	0.2%	0.0%	-0.2%	-0.4%	-0.6%	-0.7%	-0.8%
Germany								million head						
Beginning inventories	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.5%	-0.7%	-0.7%	-0.5%	-0.5%	-0.5%	-0.4%
Dairy cows	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.8%	1.5%	1.4%	1.4%	1.5%
Suckler cows	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-3.9%	-6.3%	-7.5%	-8.3%	-8.9%	-9.2%	-9.2%	-9.2%
Suckler cow quota	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%
Cattle slaughter	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.3%	-0.2%	-1.2%	-1.3%	-0.3%	-0.4%	-0.4%	-0.4%
								kilograms per head						
Slaughter weight	0.0%	0.0%	0.0%	0.0%	0.0%	-0.3%	-0.1%	0.2%	0.4%	0.4%	0.4%	0.5%	0.5%	0.5%
Italy								million head						
Beginning inventories	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.3%	-0.8%	-1.2%	-1.3%	-1.2%	-1.2%	-1.1%	-1.1%
Dairy cows	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	0.4%	0.7%	0.6%	0.6%	0.6%
Suckler cows	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-3.6%	-5.6%	-6.4%	-6.7%	-6.6%	-6.4%	-6.0%	-5.5%
Suckler cow quota	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%
Cattle slaughter	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.1%	-0.3%	-0.8%	-0.9%	-0.7%	-0.8%	-0.7%	-0.7%
								kilograms per head						
Slaughter weight	0.0%	0.0%	0.0%	0.0%	0.0%	-0.3%	0.0%	0.2%	0.4%	0.4%	0.5%	0.5%	0.6%	0.6%
UK								million head						
Beginning inventories	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.8%	-2.2%	-3.4%	-4.3%	-4.8%	-5.1%	-5.3%	-5.4%
Dairy cows	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.5%	1.2%	1.1%	1.1%	1.2%
Suckler cows	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-6.4%	-10.4%	-12.8%	-13.9%	-14.4%	-14.7%	-14.6%	-14.4%
Suckler cow quota	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%
Cattle slaughter	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	1.7%	-0.4%	-2.7%	-4.2%	-4.7%	-5.3%	-5.7%	-5.8%
								kilograms per head						
Slaughter weight	0.0%	0.0%	0.0%	0.0%	0.0%	-0.4%	-0.1%	0.2%	0.4%	0.5%	0.5%	0.6%	0.6%	0.6%

Source: FAPRI-Ireland Partnership Model (2003)

Scenario Results: Percentage change against Baseline Projections

EU-15 Sheep

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EU-15								million head						
Beginning inventories	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-4.8%	-6.6%	-5.4%	-5.0%	-5.3%	-5.4%	-5.2%	-5.2%
Ewes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-6.1%	-6.2%	-4.6%	-4.7%	-5.1%	-5.0%	-4.9%	-4.9%
Sheep slaughter	0.0%	0.0%	0.0%	0.0%	0.0%	5.2%	-4.2%	-8.0%	-5.6%	-4.7%	-5.4%	-5.5%	-5.2%	-5.2%
								kilograms per head						
Slaughter weight	0.0%	0.0%	0.0%	0.0%	0.0%	-0.3%	0.1%	0.3%	0.3%	0.2%	0.3%	0.3%	0.3%	0.3%
France								million head						
Beginning inventories	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-4.4%	-4.9%	-3.1%	-2.6%	-2.8%	-2.7%	-2.5%	-2.5%
Ewes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-5.4%	-4.9%	-2.8%	-2.6%	-2.9%	-2.7%	-2.5%	-2.6%
Sheep slaughter	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	-4.6%	-6.6%	-3.4%	-2.4%	-2.9%	-2.9%	-2.5%	-2.5%
								kilograms per head						
Slaughter weight	0.0%	0.0%	0.0%	0.0%	0.0%	-0.5%	0.4%	0.9%	0.6%	0.5%	0.6%	0.7%	0.6%	0.6%
Germany								million head						
Beginning inventories	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-5.0%	-6.1%	-4.6%	-4.3%	-4.5%	-4.5%	-4.4%	-4.4%
Ewes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-6.1%	-6.0%	-4.2%	-4.2%	-4.5%	-4.4%	-4.3%	-4.3%
Sheep slaughter	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	-4.9%	-7.0%	-4.5%	-3.9%	-4.5%	-4.5%	-4.2%	-4.2%
										kilograms per head				
Slaughter weight	0.0%	0.0%	0.0%	0.0%	0.0%	-0.5%	0.4%	0.8%	0.6%	0.5%	0.6%	0.6%	0.6%	0.5%
Italy								million head						
Beginning inventories	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-3.5%	-4.9%	-4.2%	-4.0%	-4.3%	-4.3%	-4.2%	-4.2%
Ewes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-4.3%	-4.6%	-3.7%	-3.7%	-4.0%	-4.0%	-3.9%	-3.9%
Sheep slaughter	0.0%	0.0%	0.0%	0.0%	0.0%	4.9%	-1.6%	-4.9%	-3.5%	-2.9%	-3.5%	-3.6%	-3.4%	-3.4%
								kilograms per head						
Slaughter weight	0.0%	0.0%	0.0%	0.0%	0.0%	-0.4%	0.3%	0.7%	0.5%	0.4%	0.5%	0.5%	0.5%	0.5%
UK								million head						
Beginning inventories	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-6.5%	-9.6%	-8.1%	-7.2%	-7.4%	-7.3%	-7.1%	-7.1%
Ewes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-8.9%	-9.2%	-7.0%	-6.7%	-7.1%	-6.9%	-6.7%	-6.7%
Sheep slaughter	0.0%	0.0%	0.0%	0.0%	0.0%	8.2%	-6.5%	-13.5%	-10.3%	-8.4%	-9.0%	-9.1%	-8.6%	-8.5%
								kilograms per head						
Slaughter weight	0.0%	0.0%	0.0%	0.0%	0.0%	-0.5%	0.4%	0.8%	0.6%	0.5%	0.6%	0.6%	0.6%	0.6%

Source: FAPRI-Ireland Partnership Model (2003)

Scenario Results: Percentage change against Baseline Projections

EU-15 meat supply and utilisation

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Beef and veal							thousand tonnes							
Production	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	0.6%	-0.6%	-2.0%	-2.7%	-2.8%	-3.2%	-3.4%	-3.5%
Non-EU imports	0.0%	0.0%	0.0%	0.0%	0.0%	-2.3%	-0.4%	1.0%	2.2%	2.7%	2.8%	3.0%	3.1%	3.2%
Domestic use	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.4%	-0.2%	-1.0%	-1.3%	-1.4%	-1.5%	-1.7%	-1.7%
Non-EU exports	0.0%	0.0%	0.0%	0.0%	0.0%	17.6%	3.0%	-5.7%	-14.5%	-19.3%	-20.7%	-23.1%	-24.4%	-24.9%
Stock change	0.0%	0.0%	0.0%	0.0%	0.0%	-8.9%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Intervention/SPS stocks														
Pig meat														
Production	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.2%	0.0%	0.3%	0.4%	0.4%	0.4%	0.5%	0.5%
Non-EU imports	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.7%	0.5%	0.2%	0.0%	0.4%
Domestic use	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.1%	0.1%	0.3%	0.4%	0.4%	0.5%	0.5%	0.5%
Non-EU exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	-0.3%	-0.3%	0.1%	0.2%	0.2%	0.3%	0.4%	0.4%
Stock change	0.0%	0.0%	0.0%	n.a.	-0.1%	-122.0%	-64.3%	-11.5%	73.1%	157.7%	64.7%	-6.7%	39.1%	0.9%
Poultry meat														
Production	0.0%	0.0%	0.0%	0.0%	0.0%	-0.4%	0.0%	0.3%	0.4%	0.4%	0.5%	0.6%	0.7%	0.6%
Non-EU imports	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%
Domestic use	0.0%	0.0%	0.0%	0.0%	0.0%	-0.4%	0.0%	0.4%	0.5%	0.5%	0.6%	0.6%	0.7%	0.6%
Non-EU exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.1%	0.2%	0.1%
Stock change	0.0%	0.0%	0.0%	0.0%	-0.1%	79.0%	-33.3%	-5.6%	4.8%	-6.2%	0.9%	6.0%	4.5%	-6.6%
Sheep meat														
Production	0.0%	0.0%	0.0%	0.0%	0.0%	4.9%	-4.1%	-7.6%	-5.3%	-4.4%	-5.1%	-5.2%	-4.9%	-4.9%
Non-EU imports	0.0%	0.0%	0.0%	0.0%	0.0%	-3.9%	3.2%	6.3%	4.3%	3.7%	4.1%	4.1%	3.8%	3.7%
Domestic use	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	-2.7%	-5.0%	-3.4%	-2.9%	-3.3%	-3.4%	-3.2%	-3.2%
Non-EU exports	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%
Stock change	0.0%	0.0%	0.0%	0.0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Consumption							kilograms per capita, cwe							
Beef and veal	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.4%	-0.2%	-1.0%	-1.3%	-1.4%	-1.5%	-1.7%	-1.7%
Pig meat	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.1%	0.1%	0.3%	0.4%	0.4%	0.5%	0.5%	0.5%
Poultry meat	0.0%	0.0%	0.0%	0.0%	0.0%	-0.4%	0.0%	0.4%	0.5%	0.5%	0.6%	0.6%	0.7%	0.6%
Sheep meat	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	-2.7%	-5.0%	-3.4%	-2.9%	-3.3%	-3.4%	-3.2%	-3.2%
Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%
Premia								euro per head						
Male bovine premium	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%
Suckler cow premium	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							euro per 100 kilograms							
Young cattle R3	0.0%	0.0%	0.0%	0.0%	0.0%	-3.9%	-0.6%	1.9%	4.6%	6.1%	6.4%	7.1%	7.5%	7.8%
Pig meat reference	0.0%	0.0%	0.0%	0.0%	0.0%	-0.9%	0.9%	1.1%	0.3%	0.2%	0.5%	0.5%	0.2%	0.3%
Chicken	0.0%	0.0%	0.0%	0.0%	0.0%	-0.6%	0.6%	0.6%	0.4%	0.6%	0.6%	0.5%	0.4%	0.6%
Sheep meat reference	0.0%	0.0%	0.0%	0.0%	0.0%	-10.1%	8.6%	17.2%	12.2%	10.6%	12.2%	12.6%	12.0%	12.0%
Beef intervention	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%

Source: FAPRI-Ireland Partnership Model (2003)

Scenario Results: Percentage change against Baseline Projections

EU-15 dairy supply and utilisation

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
								thousand head, end of year						
Dairy cows	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.7%	1.3%	1.2%	1.2%	1.3%	1.3%
								kilograms						
Production/cow	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.2%	-0.1%	0.0%	0.1%	0.2%	0.1%	0.1%	0.1%
Fluid milk								million tonnes						
Cow's milk production	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.1%	0.7%	1.5%	1.4%	1.4%	1.3%	1.3%
Milk quota	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Other milk 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%	0.0%
Fluid consumption	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.3%	0.4%	0.9%	1.6%	1.6%	1.7%	1.9%	1.9%
Manufacturing use	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.3%	-0.3%	0.6%	1.3%	1.2%	1.2%	1.1%	1.0%
Feed use, net exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.3%	0.3%	0.4%	1.1%	1.6%	1.6%	1.7%	1.7%
Cheese								thousand tonnes						
Production	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.4%	0.3%	0.8%	1.6%	1.4%	1.3%	1.3%	1.3%
Non-EU imports	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.2%	-0.5%	-0.9%	-1.0%	-1.2%	-1.4%	-1.3%
Domestic use	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.3%	0.4%	1.0%	2.0%	2.0%	2.2%	2.4%	2.4%
Non-EU exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.5%	-2.3%	-4.7%	-6.6%	-9.6%	-12.5%	-16.1%	-17.0%
Ending stocks	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.6%	0.7%	1.5%	2.8%	3.2%	3.4%	3.6%	3.7%
Butter														
Production	0.0%	0.0%	0.0%	0.0%	0.0%	-1.1%	-1.2%	-1.0%	0.4%	0.9%	0.9%	1.3%	1.8%	1.7%
Non-EU imports	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%
Domestic use	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.7%	1.1%	2.0%	2.8%	2.8%	2.9%	3.1%	3.0%
Non-EU exports	0.0%	0.0%	0.0%	0.0%	0.0%	-4.2%	-8.5%	-11.6%	-9.9%	-9.8%	-12.2%	-11.9%	-10.2%	-10.0%
Ending stocks	0.0%	0.0%	0.0%	0.0%	0.0%	-6.7%	-12.0%	-17.4%	-21.0%	-27.2%	-30.6%	-31.5%	-30.9%	-30.5%
Skim powder														
Production	0.0%	0.0%	0.0%	0.0%	0.0%	-4.0%	-4.3%	-4.0%	-0.4%	-0.8%	-0.6%	0.8%	2.4%	2.2%
Non-EU imports	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%
Domestic use	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.3%	-0.9%	-1.0%	-0.2%	0.0%	-0.1%	0.1%	0.3%
Non-EU exports	0.0%	0.0%	0.0%	0.0%	0.0%	-4.5%	-10.0%	-13.5%	-10.2%	-6.0%	-5.6%	-2.1%	4.5%	7.0%
Ending stocks	0.0%	0.0%	0.0%	0.0%	0.0%	-9.9%	-16.6%	-20.5%	-15.6%	-16.3%	-17.1%	-12.5%	-4.3%	0.6%
Whole powder														
Production	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.7%	0.8%	1.6%	2.9%	2.9%	0.7%	-3.7%	-3.8%
Non-EU imports	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%
Domestic use	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.3%	0.4%	1.1%	2.1%	2.0%	2.4%	3.0%	3.1%
Non-EU exports	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.9%	1.1%	1.9%	3.2%	3.3%	-0.5%	-8.3%	-8.4%
Ending stocks	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.6%	0.7%	1.3%	2.6%	3.1%	3.7%	4.6%	5.1%
Consumption								kilograms per capita						
Fluid milk	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.3%	0.4%	0.9%	1.6%	1.6%	1.7%	1.9%	1.9%
Cheese	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.3%	0.4%	1.0%	2.0%	2.0%	2.2%	2.4%	2.4%
Butter	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.7%	1.1%	2.0%	2.8%	2.8%	2.9%	3.1%	3.0%
Prices								euro per 100 kilograms						
Milk, 3.7% fat	0.0%	0.0%	0.0%	0.0%	0.0%	-1.6%	-1.6%	-2.0%	-4.4%	-7.8%	-7.8%	-8.2%	-9.0%	-9.1%
Cheese market	0.0%	0.0%	0.0%	0.0%	0.0%	-1.2%	-1.2%	-1.5%	-3.6%	-6.9%	-6.9%	-7.3%	-8.1%	-8.2%
Butter market	0.0%	0.0%	0.0%	0.0%	0.0%	-3.6%	-4.9%	-7.0%	-11.3%	-15.9%	-15.7%	-16.2%	-16.8%	-16.8%
SMP market	0.0%	0.0%	0.0%	0.0%	0.0%	-1.6%	0.0%	2.0%	1.7%	-2.0%	-1.9%	-1.9%	-2.8%	-3.3%
WMP market	0.0%	0.0%	0.0%	0.0%	0.0%	-1.4%	-1.3%	-1.5%	-4.1%	-7.8%	-7.7%	-8.8%	-11.1%	-11.3%
Butter intervention	0.0%	0.0%	0.0%	0.0%	0.0%	-7.0%	-9.5%	-12.2%	-15.3%	-23.5%	-23.5%	-23.5%	-23.5%	-23.5%
SMP intervention	0.0%	0.0%	0.0%	0.0%	0.0%	-3.5%	-2.1%	-0.6%	1.2%	-2.9%	-2.9%	-2.9%	-2.9%	-2.9%

Source: FAPRI-Ireland Partnership Model (2003)