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Reform of the EU Sugar Regime: Impacts on Sugar Production in Ireland

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Abstract: The EU Common Market Organisation has remained largely unchanged since its inception nearly 40 years ago. Reform has become inevitable due to changes to other sectors in the Common Agriculture Policy and pressure arising from international commitments. The current system provides sufficient support for all Member States to produce sugar, regardless of their efficiency. The proposed reform will therefore affect the least efficient producing regions most strongly. This paper examines the case of Ireland in light of the competitive position of its sugar sector in the EU context. Calculation of the likely impact on sugar beet gross margins and farm income suggest that many producers will want to exit sugar beet production. In light of this, the implications and possible strategies for growers and Irish Sugar are discussed.

JEL: Q18, Q12

Key Words: EU sugar policy, Irish agriculture, farm income

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1. Introduction

The EU common market organisation (CMO) for sugar is unique in having remained largely unreformed since its inception nearly 40 years ago. Reform has now become necessary both as a result of changes within the EU itself and because of outside pressures. Previous reforms of the CAP have left the sugar CMO out of line with other agricultural products. The prospect of increased sugar imports arising from enhanced preferential access for least developed country sugar exporters, negotiations in the ongoing Doha round of the World Trade Organisation (WTO), as well as the consequences of litigation brought by Brazil, Thailand and Australia against the sugar CMO, are also forcing change.

These factors culminated in the first reform proposal released by the European Commission in July 2004, followed by legislative proposals in June 2005. The latter includes deeper price cuts than those originally proposed and greater changes to the quota system. These revisions arose from consultations among Agriculture Ministers and sugar industry groups on the first proposal, as well as the need to take account of the adverse finding of the WTO dispute panel on the Brazilian *et al.* complaint in the intervening period.

The current EU sugar CMO runs out on 30 June 2006. The Commissioner for Agriculture, Mariann Fischer Boel, has indicated that her hope is that agreement will be reached on the reform package by November 2005 in time for the WTO Ministerial Council meeting in Hong Kong in December 2005. The underlying purpose of the reform is to reduce sugar production within the European Union. This will impact on the sugar industry in all sugar-producing Member States.

Ireland has had a sugar industry since 1851, although the modern phase of the industry was inaugurated in the 1930s following the introduction of tariff protection. Indications are that the Irish industry will be a casualty of the reform due to the negative impact that it will have on the profitability of growing sugar beet. The Irish sugar industry is not likely to survive in its present form if the current proposals are accepted. This paper provides the background to decisions now facing the Irish industry.

This paper forms part of a trilogy examining the impacts of sugar policy reform on different groups. The other two papers focus on the effects on countries with preferential trade agreements with the EU (Chaplin & Matthews, 2005b) and the position of non-preference countries with regard to the reform (Chaplin & Matthews, 2005a). Ireland has committed itself to ensuring coherence between its agricultural policy and development policy objectives. In the case of sugar, there will be an aggregate gain to all developing countries as a result of EU sugar policy reform. However, developing countries with preferential access, including some countries targeted by the Development Co-operation Ireland aid programme, may lose out. This paper takes the perspective of Irish growers and examines the consequences of the Commission's reform proposals on them.

The paper is structured as follows. In Section 2, the position of the Irish sugar industry within the EU sugar regime is described. Section 3 describes the EU reform proposal and the reasons for it. Section 4 discusses reactions to the proposal while Section 5 outlines developments in the 2005/06 season. In Section 6, studies which have attempted to simulate the impact of the 2004 and 2005 reform proposals are reviewed. We calculate the likely impact of the Commission's reform proposal on the average gross margin and farm income of beet growers in Ireland. Section 7 discusses the implications for growers and possible strategies for both them and Irish Sugar are discussed. Section 8 sets out the conclusions. There is a full description of the pre-reform EU sugar regime in Annex A.

2. The Irish Sugar Industry

Development of the sugar industry

The Irish sugar industry began with the establishment of the Royal Irish beet-root factory in Mountmellick in 1851. However, the sugar produced was not able to compete with sugar imports and the factory closed ten years later. A second attempt to establish the industry was made in 1926 when the Irish Sugar Manufacturing Company opened its first factory in Carlow. It too suffered financial difficulties, and was bought out by the state in 1933 (Foy, 1976). The industry was able to benefit from the 1932 interventionist government of de Valera which increased protection levels: one index of the average tariff levels across all merchandise imports shows an increase from 9% to 45% over the period 1931-6.[1] This protected sugar from cheap imports and 12 months after the buy-out, three further plants were opened in Mallow, Thurles and Tuam. This stimulated national production to the extent that, by 1936, there were 28,000 producers. Increasing domestic production resulted in declining imports which fell from 85,000 tonnes in 1934 to just 156 tonnes in 1945. On Ireland's entry into the European Economic Community in 1973, the EU sugar CMO was applied to the Irish sugar sector. Rationalisation of the industry in 1982/3 led to the expansion of the plants at Mallow and Carlow and closure of those at Tuam and Thurles. The Sugar Company was privatised in 1991, becoming part of the Greencore plc group and operating as Irish Sugar (Siúicre Eireann). In March 2005, the sector rationalised further by closing the Carlow plant and concentrating processing at the remaining plant in Mallow.

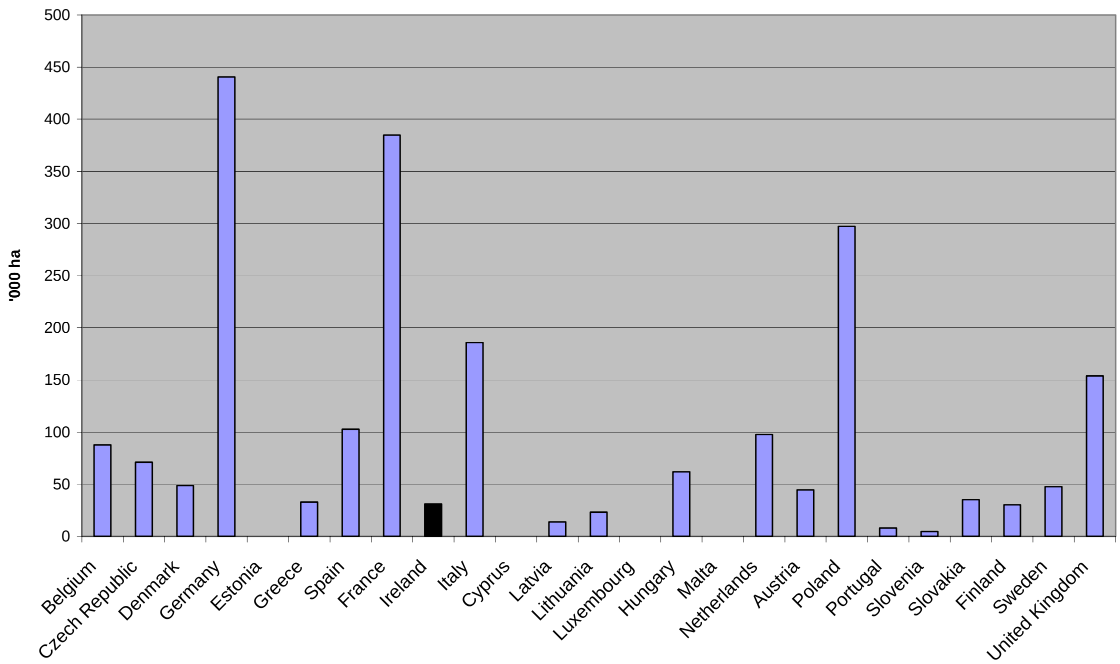
Structure of the Irish sugar industry within the context of the EU

National production stands at around 1.6 million tonnes of beet, from which approximately 200,000 tonnes of sugar are produced. The industry is worth €82.5m annually to growers. Sugar beet is grown on 31,200 ha (0.7% of utilisable agricultural area (UAA[2])) on 3,716 farms, with an average of 8.4 ha being grown per farm (personal communication Martin Ryan, Irish Sugar). The total area of sugar beet grown is low compared to other member states (Figure 1). In terms of the average area of sugar beet grown per holding in production, Ireland lies mid-way amongst the EU-15, suggesting that Irish producers are less able to benefit from economies of scale than growers in some

[1] http://www.cepr.org/pubs/Bulletin/dps/dp117.htm
[2] 4,370,200 ha (CSO, 2004)

other Member States such as the UK (Figure 2). Within the Irish context, sugar beet tends to be grown on larger farms. This becomes more evident when the distribution of sugar beet growing by farm area in Ireland is compared with that for the EU-25. However, when compared to the EU-15, Irish farms growing beet are smaller, with most being 50-100 ha, as compared to over 100 ha for the EU-15 (Figure 3). In terms of economic size units, sugar beet is grown on the largest farms, and most sugar beet growers fall into the categories of 16-40 ESU and 40-100 ESU (CSO Agricultural Census, 2000).[3]

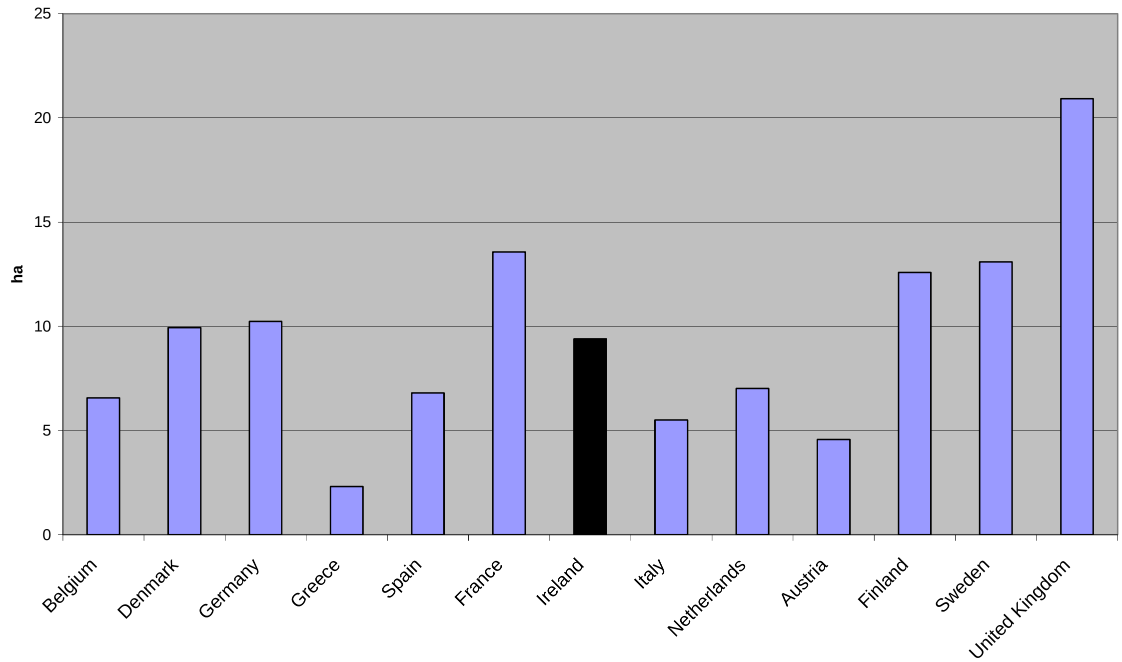
Figure 1: Total area of sugar beet grown by Member State of the EU-25



Source: Eurostat, 2004

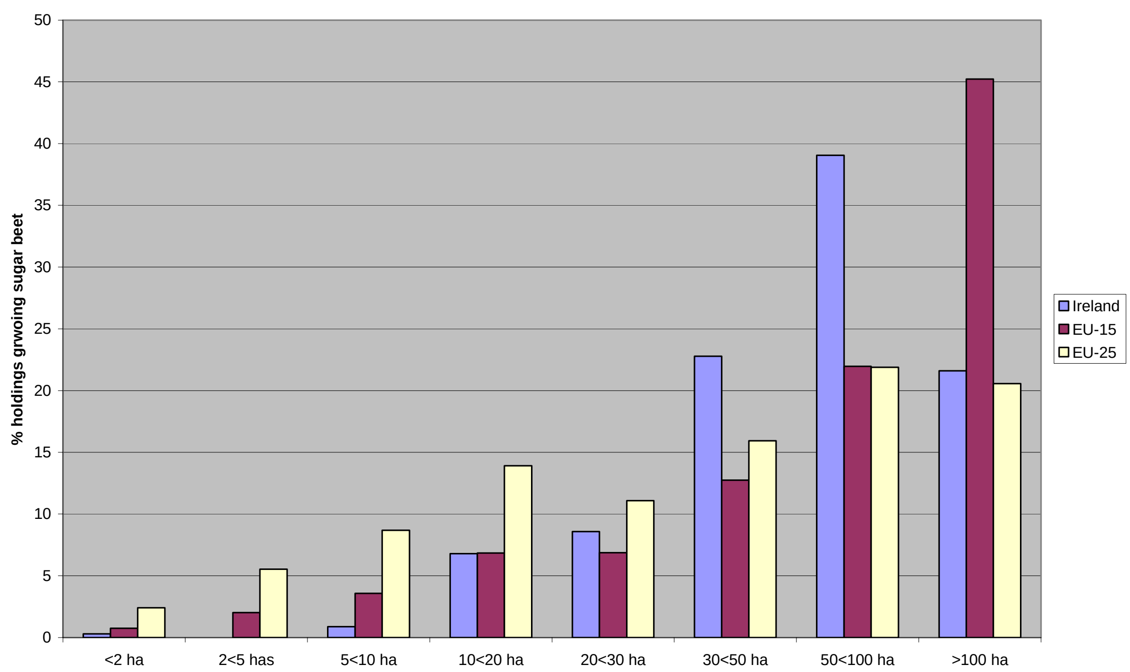
[3] European Size Units (ESU) are a measure of the economic size of farms. An ESU is defined as a fixed number of ECUI of farm gross margin, current equivalent to €1200. Over time, the number of ECU per ESU changes to reflect inflation.

Figure 2: Average areas of sugar beet grown per farm across Member States (EU-15)



Source: Eurostat, 2004

Figure 3: Comparison of the distribution of sugar beet growers by farm area between Ireland, the EU-15, and the EU-25



Source: own calculations based on Eurostat, 2003.

Sugar beet is predominantly grown on arable farms on which it acts as an important break crop since it is far more profitable than alternatives such as peas, beans and oil seed rape. Indeed, it has the highest gross margin of all crops grown (Table 1). One important point to note when comparing the gross margins is that, due to the unreformed nature of the sugar CMO, it is the only crop listed where support is exclusively channelled through its market price. All the other crops listed were, until the 2005-6 marketing year, in receipt of direct payments. Under the new Single Farm Payment, the difference in gross margins will be even greater. Those crops which received direct support will no longer have this included in their gross margins because the payments are no longer linked directly to the crops grown. This payment is decoupled and based on the direct payments received by a farmer in a historical period. Put differently, a farmer who could acquire additional beet growing rights could receive the SFP as well as the existing gross margin. The Commission fears that this could provide an incentive to grow C sugar if the sugar regime were not reformed.

Table 1: Gross margins for Ireland for a range of crops in 2003 (including area payments)

	Winter wheat	Winter barley	Winter oats	Spring wheat	Malting barley	Spring feeding barley	Spring oats	**Sugar beet**	Peas	Beans	Oil-seed rape
Gross Margin €/ha	809	741	787	653	676	506	754	**1279**	737	442	222

Source: National Farm Survey 2003

The importance of sugar beet to tillage farms can be illustrated by an example of an 85 ha arable farm growing 8.4 ha sugar beet, 32.6 ha winter wheat, 36 ha of spring barley and with 8 ha of set aside. Table 3 shows the gross margins for this scenario. Arable area payments have been subtracted in order to reflect the decoupled nature of the Single Farm Payment. Fixed costs are apportioned on a per hectare basis.

Table 2: Gross and net margins for a sample farm growing sugar beet

Crop	Gross Margin €	Net Margin €
Sugar Beet	10,744	7,265
Winter Wheat	13,888	387
Spring Barley	4,428	-10,481
Set Aside	0	-3,313
Total	29,059	-6,143

Source: own calculation based on AGA (2005)

In this scenario, sugar beet accounts for 37% of the total gross margin. When net margin is considered, sugar beet is the only enterprise generating a significant profit. When the single farm payment is excluded from the calculation and sugar beet is replaced with winter wheat, the net margin falls to -€ 9,995.

Mixed farms are the other major farming system in which sugar beet is grown. On these farms, sugar beet forms an important part of the arable rotation but it has the additional benefit that the livestock may feed on the beet tops. Ireland is unusual among Member States in not processing excess sugar beet into C-sugar, rather, the beet is fed to livestock. This has implications for calculating yields since official bodies such as the CSO use the total area sown and the total level of sugar production. Thus, excess sugar beet that is not processed is excluded, resulting in under reporting of yields. The processing of sugar beet results in the by-product sugar beet pulp, which is sold as a livestock feed for which producers receive a payment from Irish Sugar.

Compared to other Member States, when official figures supplied by the Central Statistical Office are observed, Ireland has low yields (Tables 3 and 4). In 2004, the quantity of unprocessed sugar beet was approximately 500,000 tonnes. When sugar produced per tonne of sugar beet processed is used as an indicator, yields increase substantially compared to CSO estimates. The year 2001/2 was possibly the poorest year in the history of Irish production with yields averaging 7.1t/ha; in 2002/3 these were 9.6t/ha and in 2003/4, 9.45t/ha. When these figures are used, Irish yields compare more favourably with those of other Member States.

Table 3: EU-15 Area and Yields of Sugar

	Sugar Beet Production area 1000 ha	**Sugar Yield t/ha**	
	Average 2001/2002	2001/2002	2002/3
France	426	9.4	11.8
Germany	453	8.3	8.7
United Kingdom	173	8.2	9.7
Italy	239	5.8	5.7
Spain	118	8.3	10.5
Netherlands	109	8.7	9.4
Belgium	94	8.8	10.4
Denmark	58	8.5	8.9
Austria	44	8.9	9.6
Sweden	55	7.4	8.0
Greece	45	7.3	7.1
Ireland	32	6.7	6.4
Finland	31	4.7	5.1
Portugal	7	[4]	

Source: EC 2003

[4] Yields for Portugal not available since they include sugar from Spanish beets

Table 4: Accession Countries Area and Yields of Sugar

	Production area 1000ha	**Sugar Yield t/ha**
	2002/3	2002/3
Poland	310	6.7
Czech Republic	70	6.7
Hungary	56	6.2
Slovakia	33	5.6
Lithuania	27	4.9
Latvia	15	3.7
Slovenia	8	5.2

Source: http://www.strubedieckmann.de/inhalt/7_international/aroundthebeet/euosterweiterung_en.html

Sugar processing

Ireland is among seven Member States with only one national sugar processor company: Irish Sugar (Siúicre Eireann). Prior to 1991, the sugar sector was a nationalised industry. It was privatised in 1991 when it became part of Greencore plc. The government retains a link with the company through a golden share. This is held by the Minister for Agriculture and Food, through which the Minister holds rights and powers as a shareholder (*Sugar Bill, 1990: Second Stage*, 1991). The share has the same monetary value as any other in the company but provides the Minister with some unique powers: a single shareholder or group of shareholders are prevented from obtaining control of Greencore plc; the controlling interest in Irish Sugar Ltd cannot be disposed of nor can more than 20% of the fixed assets used in the production and processing of sugar without the permission of the Minister. However, it does not provide the Minister with any control over operational matters nor commercial decisions made by the board (Dáil Debate, 2005).

The throughput of the Mallow and Carlow plants was about 9,000 tonnes of beet per each day during the campaign. This compared favourably with other EU-15 Members whose average capacity is 8,400 tonnes per day (NEI, 2000). Throughout the EU-15, throughput has increased significantly since the late 1960s (NEI, 2000). In Ireland, average capacity also increased. This was due to the rationalisation of the industry with the closure of two plants and investment in the remaining two at Mallow and Carlow which allowed greater economies of scale to be achieved. With the closure of the plant at Carlow, capacity at Mallow was increased to 11,500t/day (Donald, 2005a).

Employment in the sugar factories during the campaign averaged 690 employees. The campaign itself requires an additional 200 workers, so that employment year-round is 490.

Sugar beet is delivered to the factories by road and rail. Approximately 25-30% is delivered by the growers themselves either using tractors and trailers or their own lorries. Usually, this is done by growers who are located closest to the factories: it was as high as

50% of growers in Carlow. Hauliers are the alternative, and are the most common means of road transport. Rail currently accounts for about 10% of sugar beet deliveries. Growers in Wexford have access to the Wellington Bridge depot from which beet is delivered to Mallow. Wexford growers also supplied the Carlow plant which is accessed by road. The delivery of beets, therefore, plays a role in employment in the haulage sector.

The sugar beet price

Irish growers receive what is known as a pooled price for their beet: a single price for all beet within the national quota (see Annex A). This does not differentiate between A and B –quota beets, unlike some Member States such as France, Germany and Sweden where different prices are paid for each (Blume et al., 2002). The EU reference price plus the premiums outlined below give a price of €54.42/t.

Growers pay transport costs with the aid of transport subsidies which are provided by Irish Sugar from a pool of funds specifically for this use. The average subsidy is €5.40/t but allocation is related to proximity to the factories with higher subsidies being paid to those growers which are further away. Regions are zoned with a level of payment being allocated to each zone. This subsidy pool is to be increased in light of the Carlow closure but this increase will be phased out over a four-year period.

Irish growers receive a price premium of €5.49/t. Part of this (€2.32/t) is derived from the value of the beet pulp component of sugar beet which is processed by the factory. In some other countries, the pulp remains the property of the growers to process and sell as they see fit. The remainder arises from bargaining on the part of growers to share in the premium price above the intervention equivalent that Irish Sugar is able to charge its customers. However, this payment will fall to €3.99/t in the 2006/7 season.

In addition to these payments, under the terms of the four-year package agreed in 2005, growers are eligible for tare bonus or malus. This is paid or deducted according to the band in which a delivery falls. At the top end of the scale, the bonus is €2.50/t while at the bottom, the malus (deduction) is €1.30/t.

Organisation of the quota

The sugar quota allocated by the EU to Ireland stands at 199,000 tonnes (of which 181,145.2 tonnes are A quota, and 18,114.5 tonnes are B-quota), which represents approximately 1.1% of the total EU sugar quota allocated to sugar producing Member States. The limits on both expenditure and allowed quantities of export subsidies which were agreed in the Uruguay Round have affected these quota amounts. The cost of export subsidies varies according to changes in the world price relative to the EU price. A lower world price infers a greater cost per tonne of sugar exported with subsidies. Thus, caps on expenditure will result in lower volumes exported with subsidies when the world price is low, and *vice versa*. Consequently, quota may increase or decrease depending on the world price and the strength of the Euro. Since 2001, this has resulted in several changes to the Irish quota: a cut of 4,078.3 tonnes in 2001 (Maguire, 2001) and 7,052 tonnes in 2002/3.[5] The first cut did not have a direct impact on the sector due to growers opting for the cut to be applied to the quota pool arising from the restructuring scheme (Maguire, 2001). In 2003/4, quota was increased by 2,000 tonnes[6], followed by a further increase in 2004/5 of 5,290 tonnes (Greencore, 2003). However, in an attempt to reduce its domestic stocks in order to facilitate compliance with the WTO dispute panel ruling, the EU has recently made the decision to declassify 1.806 million tonnes of in-quota sugar to C-sugar which is to be sold on the world market. This means that EU quota is being reduced by an equivalent quantity, and the Irish quota will be cut by 8% (15,634 tonnes) (Mooney, 2005a).

In Ireland there is one sugar processing company, namely Irish Sugar Ltd (a subsidiary of Greencore) to which the sugar quota is allocated. In turn, it holds annual contracts with growers to produce specific tonnages of sugar beet. The contracts between producers and the factories specify that failure on the part of the producer to deliver 90% of the contracted quantity can lead to a cut in their subsequent contract. If a grower fails to deliver 95% of their contracted quantity in 2 out of 3 years, the contract is reduced by the existing shortfall.

In 2001/2 a sugar beet restructuring scheme was introduced in order to redistribute delivery rights to existing growers and new entrants. These rights, which traded at around £40-50/t, had become available through farm sales; the Early Retirement Scheme; and exits from the industry. The purpose of the restructuring scheme was to eliminate subletting of contracts which, despite being illegal, was common with levels as high as 40% of quota being sublet in some areas. In an effort to eliminate this practice, from 2001/2 contracts between Irish Sugar and producers stipulate that the former can request area aid applications, leases and similar documentation from the producer in order to cross-check these with areas under sugar beet (Maguire, 2000).

Under the terms of the 2005 negotiations between Irish Sugar and beet producers, the contract is to change from a sugar beet contract to a sugar contract. This means that rather than contracting to deliver a set tonnage of beet, the contract determines a set quantity of sugar. The actual tonnage delivered will therefore depend on the sugar content of the beet itself. The aim of this is to eliminate the current over supply of around 11,000 tonnes of sugar to the factories. This effectively will further reduce the volume of C-sugar produced in Ireland.

Once the sugar reform is implemented, Irish Sugar intends to allow free trading of delivery rights with neither ring fencing nor size restrictions.

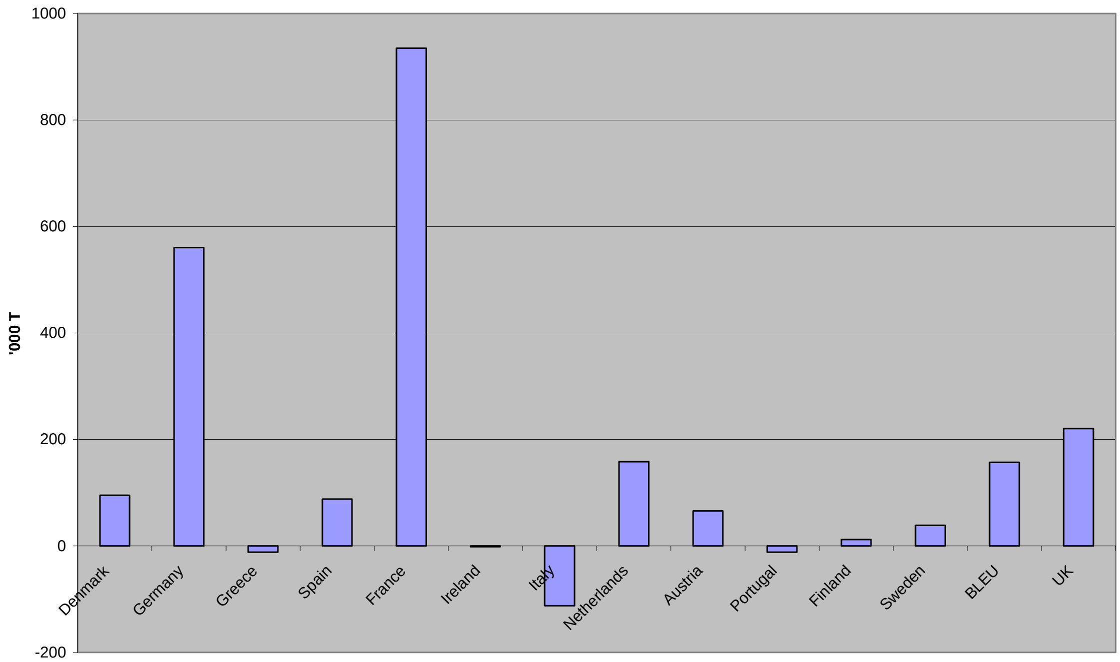
The Irish sugar market

Amongst the EU-15, only a few countries overshoot their quota. The major producers of C-sugar are France and Germany: the two countries which are regarded as the most

[5] http://www.foodnavigator.com/news/news-ng.asp?id=45589-mixed-results-for
[6] http://www.agriculture.gov.ie/publicat/agannual_review2003_2004.pdf

competitive producers (Figure 7). Ireland is not a significant C-sugar producer (Figure 4). A factor influencing this is the policy of Irish Sugar to discourage sugar beet deliveries in excess of the contracted quantities. This does not eliminate C-sugar production since the actual level of sugar production will depend on the sugar content of the processed beets. Irish Sugar changed to a sugar contract this season as opposed to a sugar beet contract. This should reduce C-sugar production even further.

Figure 4: C-sugar production by Individual Member State 2002/3 (`000 tonnes)



Source: European Commission (2004d)

When it acceded to the EU in 1973, Ireland negotiated its A-quota above the level of consumption (it was originally offered just 135,000 tonnes of quota) (Foy, 1976): as a result it has a significant sugar surplus. Intra-EU exports are almost exclusively to Northern Ireland (UK), however, like many other sugar companies, it has recently sought to export to other Member States. Irish Sugar itself exports approximately 48,000 tonnes annually (The Competition Authority, 2004).

Table 5: Sugar Supply Balance for Ireland

000 tonnes	1996	1997	1998	1999	2000	2001	2002	2003
Usable production	**222**	**222**	**205**	**219**	**216**	**219**	**208**	**198**
Total imports	84	91	82	87	105	118	136	134
Intra-EU imports	80	87	77	83	99	112	129	129
Production +imports	306	313	287	306	321	337	344	332
Total exports	167	148	178	196	194	227	223	210
Intra-EU exports	125	114	126	132	143	150	155	149
Net intra-EU trade	**45**	**27**	**49**	**49**	**44**	**38**	**26**	**20**
Consumption	**142**	**134**	**135**	**120**	**125**	**126**	**101**	**122**
Production - consumption	**80**	**88**	**70**	**99**	**91**	**93**	**107**	**76**
Change in stocks	**-3**	**31**	**-26**	**-10**	**2**	**-16**	**20**	**0**
Final stocks	77	108	82	72	74	58	78	78

Source: Eurostat 2003

Intra-EU imports have increased at a greater rate than intra-EU exports, so that the balance of intra-EU trade has declined. Increased competition is occurring in the sugar sector with between 20 and 25% of consumption needs being met by imports, mostly from France (Dáil Debate, 2005). It is estimated that Ireland imports 12,000 tonnes from the UK (Northern Ireland) and 20,000 tonnes from France. Import levels have risen in recent years due to a Commission finding that Irish Sugar engaged in anti-competitive practices under EU competition law. Irish Sugar and its subsidiary Sugar Distributors Limited were found to have attempted to limit competition from imports by offering selectively low prices to customers of an importer of French sugar and selective rebates to customers of packaged sugar close to the border with Northern Ireland. The company also provided rebates to industrial customers who exported part of their final product to other Member States (EC, 1997). Irish Sugar also restricted competition from small sugar packers in Ireland. From 1993, it offered rebates to selected wholesalers and food retailers, impeding the ability of small competitors to gain a foothold in the market.

These actions by Irish Sugar have contributed to the above average (for the EU-15) market price of sugar in Ireland. It was the fourth highest, at €75.5/100kg in January 2001 compared to the EU-15 average of €74.5 (Blume et al., 2002). As an island, transport costs from other member states, with the exception of Northern Ireland (UK) with whom it shares a land border, are relatively high. This raises the price at which imports can be sold profitably in Ireland, and, therefore, contributes to a high market price.

3. Commission reform proposals

The need for reform

The CMO has undergone little change since its inception in 1968, remaining unaffected by the MacSharry and Agenda 2000 reforms. The few changes which have occurred have been associated with the accession of new Member States which have been allocated quota. In some cases, such as the UK and Finland, membership resulted in the introduction or extension of preferential trade agreements. Currently there are strong pressures for reform from both within and outside the EU. In summary, these include:

1. The accession of 10 new member states in 2004, some of which are sugar exporters. More importantly, the EU reference price is greater than the domestic prices prior to accession. This creates an incentive to produce sugar beet and could encourage the production of C-sugar by these countries;
2. The complaint put forward by Australia, Thailand and Brazil which argued that C-quota contravenes the Agreement on Agriculture due to C-quota being effectively cross-subsidised by the support offered to A and B quota production. Further, the EU currently subsidises export of an equivalent volume (1.6 million tonnes) of sugar to what it imports under the ACP/India agreement. It does not subject this volume to the reductions agreed under the Uruguay Round Agreement. The complainants argued that this should be included and be subject to reductions. In both cases, the WTO dispute panel ruled against the EU and this decision was upheld on appeal.
3. The CAP has shifted from price and production support towards direct payments and it is desirable for sugar to be aligned with this dynamic (EC, 2004a). Failure to do so would further increase the gross margin of sugar beet relative to alternatives which previously received area aid payments. This could make intentional C-sugar production more attractive;
4. The Everything But Arms (EBA) trade preferences initiative in favour of the world's 50 least developed countries could substantially increase imports from these countries. EBA sugar imports admitted duty-free are currently controlled by quota, but the quota restrictions will be lifted after 2008/09, when these countries will benefit from full duty-free and quota-free access to the EU market for their sugar exports.
5. Further strains could arise from reciprocal free trade agreements being negotiated by the EU. Economic Partnership Agreements are being negotiated with ACP countries; if these countries were offered a similar deal to the LDCs, ACP exports to the EU could reach 3.5 million tonnes. Indeed, if their entire production was exported to the EU, this would represent 6 million tonnes. Negotiations with Mercusor could further increase this quantity (EC, 2003);
6. Turkey and Israel have an agreement for the import of fructose. This could result in the displacement of 0.3 million tonnes of sugar from the EU market (EC, 2003);
7. The Doha Round of the WTO is in progress. Possible outcomes of an agreement are the removal of export subsidies and further tariff cuts.

Of these issues, the most immediate and important are the prospect of increased EBA imports and the possible outcome of the WTO Doha Round negotiations. The key issue with regard to EBA is that, without reform, the reference price for EU sugar will remain 2-3 times that of the world price. The likely effect of this on full implementation of the EBA in 2009 is that the EU will act as a 'suction pump' for sugar production in EBA countries, fuelling growth in the industry which would further increase the volumes of sugar entering the EU through the agreement (EC, 2003). Various estimates of the possible volumes involved have been made. An initial estimate suggested that 2.7 million tonnes could be imported, of which 1.3 million would arise from increases in LDC production (ASSUC, 2001; EC, 2000). This was subsequently revised down to 900,000 tonnes after account was taken of infrastructure costs and constraints to expansion faced by countries which are land-locked, politically unstable or face other such problems (EC, 2001). More recent estimates which take account of the post-reform prices and include possible swap-trade have suggested a maximum level of imports of 2.2 million tonnes (EC, 2005a).

Two recent events have exacerbated the potential problems arising from EBA imports: the WTO dispute and the Doha negotiation Framework Agreement of 31st July 2004. The former implies that exports must be severely reduced. Total exports in 2002 were 4.7 million tonnes. In the marketing year 2001/2, the quantity commitments for EU export subsidies stood at 1,273,500 tonnes (WTO, 2003). The difference is the additional 1.6 million tonnes arising from ACP sugar as well as C-sugar production which was 1.85 million tonnes in 2002 (FAOSTAT). This suggests a need to reduce exports by approximately 3.5 million tonnes. When even the lowest estimate of EBA sugar is added to this, this indicates the need to reduce EU production by 4.4 million tonnes; if the higher estimate is used, the reduction required would be 6.2 million tonnes.

The current WTO Doha round will impact on two elements of the CMO: export subsidies and tariff levels. The July 2004 Framework Agreement foresaw the eventual elimination of export subsidies which will require an even greater reduction in domestic production for the EU to comply. When EBA import estimates are added to total 2002 exports of 4.7 million tonnes (including both C sugar as well as subsidised exports), this suggests the need to cut exports and, therefore, production by between 5.6 million and 7.4 million tonnes. The assumption here is that tariffs remain sufficiently high to keep out all non-preferential sugar imports.

The likely effect of a Doha Agreement on tariff protection is still unclear because of the absence of numbers in the Framework Agreement and the possibility that sugar might be classified as a sensitive product which would be subject to a smaller rate of tariff reduction. Also of importance in this respect is the future of the special agricultural safeguard (SSG). This currently allows the EU to add a further levy on top of the normal tariff on sugar imports from third countries. The future use of this safeguard mechanism by developed countries remains under discussion. If the Doha Round tariff reductions are sufficiently deep, this will require a corresponding reduction in the EU internal reference price. Thus, this will add to the pressures for reform of the sugar CMO.

Reform impact assessment 2003

The EU has several objectives for a reformed sugar CMO which include guaranteeing regular supplies of sugar, protecting the domestic market from extreme price fluctuations, and improving the competitiveness of the sector, while ensuring that farmers still have a fair standard of living, good environmental practice is used in sugar production and that the market becomes more transparent. In developing a reform proposal, four options were evaluated in 2003 as part of an impact assessment exercise. Two of these represented the extreme cases: maintaining the status quo and full liberalisation. The status quo option included a fall in price in order to accommodate the outcome of WTO negotiations. Its main disadvantages are that it would not correct elements of the CMO which other countries consider controversial and the cost to consumers would remain high. Under the liberalisation option, tariff restrictions on trade would be abolished, as would price support and quotas. This option would increase transparency considerably but would have a severe impact on the EU sugar industry and the profitability of farms in some regions. Compensation costs would therefore be high.

The other options were a cut to either quotas and prices or both. Quota restrictions would provide a predictable situation for investors but could create problems internationally since quotas would also need to be imposed on preferential imports which would require the EU to renege on its EBA commitment. Cuts to the minimum price could allow the abolition of quotas once the market stabilised. This option would not only affect domestic production levels but would also reduce imports as the EU market would become less attractive. The downside of this option is that compensation payments would be costly.

The July 2004 proposal

The EU put forward a proposal for reform on 14th July 2004, prior to the outcome of the WTO dispute. Under this proposal, EU production was to be brought into line with domestic consumption, necessitating a quota cut of 2.8 million tonnes over a four-year period to 2008/09. Quotas were to be transferable between EU member states. EU sugar prices were to be cut by 20% in 2005/096, increasing to a 33% cut in 2007/08. Compensation would be paid to European beet producers equivalent to 60% of the reduction in beet revenues. This compensation would be paid as a decoupled payment integrated into the Single Farm Payment, allowing EU beet producers to switch into alternative production without affecting their compensation entitlement. The Commission proposed that a further review of the sugar policy would take place in 2008/09, once the requirements of the Doha Round were known, and there was greater clarity regarding the supply response of LDC sugar producers (EC, 2004a). It is evident that the quota cut sought was much smaller than the required cut in production estimated above.

Table 6: Main elements of the Commission reform proposal of 14 July 2004 and 22 June 2005

July 2004	June 2005
A and B quota combined. 16% reduction in EU sugar quotas.	A and B quota combined. No compulsory quota cuts until at least 2010. Additional 1 million tonnes of quota to be made available to 'C-sugar' producing Member States.
33% reduction in the white sugar guide price by 2007/8.	39% reduction in the white sugar guide price over 2 years (by 2007/8).
Cut in the raw sugar price from €523.7/tonne to €329. Raw sugar price to be cut over 3 years by 2008/09.	Cut in the raw sugar price from €523.7/tonne to €319.5. Raw sugar price to be cut over 4 years to 2009/10.
37% reduction in the sugar beet price, 60% will be offset by direct payments to farmers.	42.6% reduction in the sugar beet price. 60% compensation to EU producers.
EU sugar quotas previously allocated by country to be freely tradable Europe-wide.	Quota restructuring scheme in which closing sugar factories will renounce their quota.
Maximum Supply Needs abolished from 2009/10.	Maximum Supply Needs to remain in place. Between 2006-2009, 75% to be derived from ACP countries/India. Beyond 2008/9 this will hold for only the first 3 months of the marketing year. Other sugar processors to be allowed to import and refine raw sugar.
Increase in isoglucose quotas of 300,000 tonnes (+ 60%).	Increase in isoglucose quotas of 300,000 tonnes (+ 60%) of which 10,000 will be applied each year for three years starting in 2006/7.
Further review of CMO in 2008/09.	Proposal for further review dropped.

These July 2004 proposals met with a hostile reaction from EU Agricultural Ministers. Many queried the need for price and quota cuts of the magnitude proposed by the Commission. Less competitive countries were critical of the proposal to allow quota movement across national borders. However, the need to bring the EU sugar regime into compliance with the WTO panel report meant that the July 2004 proposals were not sufficiently radical to allow the EU to meet all its commitments, both to other WTO members and to developing countries, in the future. As a result, a further set of revised proposals was released by the Commission in June 2005.

The June 2005 proposal

The new proposal differs from the first in two key ways: the price cuts are larger though they take effect slightly later, and a quota restructuring scheme, rather than cuts and transferability, is proposed.

The new price cuts to be implemented comprise: a 39% cut in the white sugar guide price, 36% for raw sugar and 42.6% for sugar beet. The sugar beet cut is to be implemented over 2 years, the reference price for white sugar is set to be reduced over four years. A degressive restructuring charge is to be made on each tonne of in-quota sugar between 2006/7 and 2008/9 which will aid in financing the restructuring scheme (Table 7). The application of this charge will result in the white sugar reference price net of the restructuring amount in 2007/8 being equal to the institutional price after the full price cut. Therefore, the price cut effectively takes place over two, rather than four years (EC, 2005b).

Table 7: Price cuts under the June 2005 reform proposal

	Reference Period	2006/7	2007/8	2008/9	2009/10
Institutional/reference white sugar price (€/t)	631.9	631.9	476.5	449.9	385.5
Reference raw sugar price (€/t)	523.7	496.8	394.9	372.9	319.5
Restructuring amount (€/t)	-	126.4	91.0	64.5	-
Institutional/reference white sugar price, net of restructuring amount (€/t)	631.9	505.5	385.5	385.5	385.5
Minimum sugar beet price (€/t)	43.63	32.86	25.05	25.05	25.05

From 2007/8, in addition to the restructuring amount, a production charge of €12 per tonne of sugar quota and inulin syrup quota, and €6 for isoglucose quota. While this is payable by sugar factories, the proposal indicates that 50% of this charge may be levied on sugar beet producers.

An additional one million tonnes of sugar quota is to be made available to C-sugar producing Member States, for which they will make a one-off per tonne payment which will equal the level of restructuring aid in the first year of implementation, i.e. €730/t. This will incorporate this volume of C-sugar into the quota system, thereby eliminating one million tonnes of out-of quota production, i.e. C-sugar. The price cut should also lower the quantity of C-sugar produced since the potential for cross-subsidisation will be reduced because of the lower profitability of in-quota sugar. Together with the introduction of a 'surplus charge' on excess production which is not carried over to the following marketing year, this measure should effectively eliminate existing C-sugar production.

However, elimination of C sugar production will require a sufficient reduction in A and B quotas to bring EU production plus imports into line with internal consumption. The Commission has moved away from compulsory quota cuts and instead is relying on a voluntary restructuring scheme to achieve this. The restructuring scheme is to operate for four years between 2006/7 and 2009/10. Its aim is to encourage the least competitive producers to exit the industry; to provide funds to mitigate the social and environmental effects of factory closures; and to make funds available to the most affected regions. In line with these objectives, from 2008/9 part of the restructuring aid may be utilised to encourage diversification in the most affected regions. For the duration of the scheme, a high, degressive per-tonne aid will be given to sugar factories, isoglucose and inulin syrup manufacturers within the European Union which are closed down. The aid in the first year of the scheme is set at €730/tonne of quota falling gradually to €420/t of quota in the final year. What remains to be established is whether there will be sufficient interest in the voluntary restructuring scheme across Europe to ensure that a sufficient volume of A and B quota is surrendered without the necessity to make compulsory quota cuts.

Maximum Supply Needs[7] for sugar refining is to remain in place with a limit of 1,796 351 tonnes. Between 2006 and 2009, 75% of this quantity must be derived from ACP countries/India. Beyond the 2008/9 marketing year (that is after full implementation of EBA), this provision will only hold for the first 3 months of the marketing year. Once EBA is fully implemented, sugar producers other than dedicated refineries subject to MSN will be able to import and refine raw sugar. The Mallow plant, being close to the port at Ringaskiddy, could potentially make use of this facility and import raw sugar for refining. However, if it were to do so, it would be ineligible for restructuring funds.

Two instruments will still be available to attempt to overcome market imbalance: a) a private storage scheme which would allow sugar to be withdrawn from the market may be implemented if the market price falls below the reference price during a ‘representative period’ and is likely to remain at that level; b) a carry-over mechanism will allow surplus volume to be carried through to the following campaign while counting against the quota of the sugar producer.

Direct income support for sugar beet producers

The price cuts outlined above will bring about a fall in income for sugar beet producers. In order to offset this loss, a direct payment system is to be set up for the sector which will transfer part of the EAGGF expenditure for sugar into funding of the single farm payment scheme. It is to be introduced in 2 stages; the first will be payable in 2006/7, while the second will be payable from 2007/8. Payments will only be made to farmers who produced sugar beet under quota in a historical reference period (2000-2002) which will not be affected by any subsequent quota transfers. These payments will be incorporated into the single farm payment.

[7] This is a limit on raw sugar imports which applies to 7 raw cane sugar refineries: 2 in each of the UK, France and Portugal; and 1 in Finland. Under the agreement, penalties can be imposed on the refining industry for exceeding the import levels set out under its terms.

In calculating compensation, farmers of all member states are to be treated equally. National envelopes amount to 60% of the estimated loss in revenue taking into account the change in weighted sugar beet price according to the proportions of A and B quota in each member state. The level of compensation per hectare in Ireland will be €351.8 in 2006 and €576.3 from 2007.

In Ireland, restructuring in 2001 allowed some growers to increase their quota holdings. Growers who have increased their quota holding since the reference years on which the compensation payment is proposed to be based (2000, 2001, 2002) may therefore not be fully compensated. However, the legislative proposal indicates that there will be some flexibility for individual members states to use different periods. As this is still a proposal, such details at the Irish level are yet to be worked out.

The June 2005 proposal also includes a radical shift in the direction of spending of the CMO budget. Whereas currently this is mostly directed towards preference countries (€802 million of a total budget of €1,721 million in 2004) under the reform scenario, this will be largely utilised to provide compensation to EU growers to cover 60% of their income loss resulting from the price cut. Compensation will reach €1,542 million (2007/8) compared to a total budget of €1,721 million in 2004.

4. Reaction to the Commission's proposal

Although the need for reform of the CMO has not been questioned by Member States, the reform proposal has provoked strong debate among two groups: those concerned with effects at European level and those for whom the impacts on preference countries are an issue. These groups are not mutually exclusive. Those worried about the effects on farming communities in Europe are pushing for a weaker reform as are those concerned with reform impacts on preference countries.

Country positions

From the perspective of the impacts of the proposed reform at European level, several groups of countries have emerged with different positions with regard to the various elements of the proposal. Given the variation in the levels of competitiveness in sugar production across Member States it is inevitable that the reform will result in both winners and losers. This influences the position of each country with respect to the proposal. At the EU Agriculture Council at which the proposal was discussed in July 2005, the different positions were apparent. Ireland is one of the strongest opponents to the proposal due to the effect it will have on the Irish sugar sector. Joining Ireland in declaring the proposal unacceptable were Spain, Finland, Greece, Italy, Poland and Portugal. Several others (Austria, Belgium, Latvia and Lithuania) have also raised significant objections to the proposal.

There are three positions with regard to the price cuts. At one extreme lie Sweden, Denmark and Estonia which have suggested even stronger cuts, possibly linked to cross-border quota transfer or even quota abolition. In the middle are the Czech Republic, Germany, France, Holland, Malta and the UK who prefer the 39% option to that of the 2004 proposal of 33% with quota cuts. Also lying in the middle are Austria, Belgium, Cyprus, Hungary, Latvia, Lithuania, Slovenia and Slovakia who have hinted that a lower price reduction could be acceptable. At the other extreme are Spain, Finland, Greece, Ireland, Italy, Poland and Portugal who find the proposed price cut unacceptable (Agra-Europe, 2005). Poland is an odd-man out in this group. Whereas the others are expected to experience a drastic effect on their sugar industries, Poland, as a lower cost producer, is expected to only suffer a limited contraction of its industry. Its position on the issue of reform is more likely to be due to the strong position of the farming lobby in the country.

The proposal relating to quota merger elicited differing reactions due to the unequal distribution of B quota between Member States and the differing levels of C-sugar produced. A number of countries, most notably Finland, Latvia, Lithuania and Poland, argued that merging of quotas should focus first on B-quota and C-sugar as opposed to just combining A and B-quota (Agra-Europe, 2005). Under such a scenario, the most efficient producers with higher B quota and who produce greater quantities of C-sugar such as France and Germany would be affected more if quota cuts were to take place. Under the 2005 proposal, any cuts will only occur as a measure of last resort if production does not fall as much as expected in response to the price cuts and restructuring scheme. Due to the fact that quota is to be merged, there is no differentiation in the production charge to be made on sugar. Presumably these countries would wish to see a differentiated production charge. Altering the proposal to take account of these wishes would move against the direction of improving the competitiveness of sugar production within the EU.

More dissent is present over the compensation element of the proposal. One group (Belgium, Cyprus, Germany, Estonia, France, Holland, Slovakia and the UK) support the proposed decoupled approach but some of the net budget contributors indicated that the proposed rate of compensation was high. On the other hand, others (Austria, Spain, Hungary, Ireland, and Latvia) feel it to be insufficient and want it increased. In contrast to the first group, Austria, the Czech Republic, Finland, Hungary and Poland would prefer either full or partial coupling of aid payments in order to maintain production. Italy indicated that it is considering providing some national aid to the most affected regions (Agra-Europe, 2005).

Unsurprisingly, the price cuts are opposed by sugar beet producers in the EU and by sugar processors. The European Confederation of Sugar Beet Growers has criticised the EU for its apparent reluctance to continue to export sugar despite it being permitted to subsidise 1.2 million tonnes of exports until the WTO agrees on their eventual elimination. Stakeholders from industry are unhappy about the retention of quotas. The Committee of Industrial Users of Sugar and the European Consumer's Organisation BEUC suspect that it will allow the continuation of tacit price collusion between sugar processors, while the latter is also concerned that it will continue to limit competition within the industry.

The reform proposal has sparked strong debate with respect to its impacts on preference countries (see Chaplin and Matthews 2005a for the full debate). The main issues for these countries are the sharp price reduction and inadequate compensation. The LDCs and ACP countries called for an extension of quotas on EBA imports with the rationale that this would lessen the need for such a steep price cut. This has been echoed by the European Confederation of Sugar Producers which is calling for limitations on EBA imports after 2008/09.

Are the Commission's production figures realistic?

The proposed reform is projected to decrease EU-25 production from 19.7 million tonnes to 12.2 million tonnes by 2012/13. Total preferential imports are expected to increase by 3.9 million tonnes after full implementation of EBA (EC, 2005a). This includes a projected figure of 2.2 million tonnes for EBA imports and 1.3 million tonnes for ACP/India. The projected fall in EU production of 7.5 million tonnes would be sufficient for the EU to comply with the WTO ruling, to eventually remove export subsidies and to absorb EBA imports with scope to absorb an additional 0.4 million tonnes above the projected level (EC, 2005a). The price cut will reduce the attractiveness of the EU market for some LDCs, and so result in lower levels of imports than would be expected if the CMO were to remain unreformed. However, considerable uncertainty remains as to the likely EBA volumes reaching the EU. This is due to the potential for EBA countries to export all their own production and import from the world market to meet domestic requirements or for triangular trade where imports from the world market will be exported as LDC sugar. Such trade patterns will depend on the EU price relative to the world price and the ability for the EU to monitor the origin of sugar imported under the EBA.

If EBA imports do rise above 2.6 million tonnes, then the reform may not be sufficient for the EU to meet its international commitments. One of the key questions is how successful the voluntary restructuring scheme will prove to be, and the rate at which the projected fall in EU production will occur. The reform proposal provides incentives for the fall to occur within the first four years of reform during which restructuring aid will be available. The countries which are expected to be affected drastically (Greece, Ireland, Italy and Portugal) are only responsible for 1.5 million tonnes of in–quota production. Much of the remaining reduction is projected to come from a second tier of countries which are likely to be significantly affected. These are expected to close some, but not all factories and are responsible for 2.8 million tonnes of in-quota production. The remaining cut in production will come from the third tier of countries which are the most competitive producers in the EU-25. The rate of factory closure amongst these latter two groups is difficult to predict since they may attempt to survive as long as possible under pressure from farmers, particularly where factories which are owned by farmer co-operatives. Thus, even if the reform reduces production sufficiently to comply with the WTO ruling by 2012/13, it is not clear whether sufficient factories will close in time to comply with the ruling by the end of the implementation period to be set in October 2005 by the WTO. In case the restructuring scheme does not achieve the desired fall in production, the proposal does provide scope for (uncompensated) quota cuts to be implemented in order to achieve the desired production level.

Is the Commission's price cut too high?

One function of the price cut of 39% is to reduce the attractiveness of the EU market to preferential imports. Another function is to ensure that beet growing becomes sufficiently unattractive in particular EU regions so that sufficient interest is expressed in the voluntary restructuring scheme. A third angle is that the Commission wants to be in a position to accommodate a possible reduction in sugar tariffs arising from a Doha Round agreement on agriculture.

Currently, average tariff reductions of the order of 24.5%- 36.4% are being discussed in the run-up to the Hong Kong Ministerial Council (Bridges Weekly, 2005). Tariff reductions are to be harmonising, with higher tariffs being reduced by more than the average, though a lower reduction could apply to a limited number of sensitive products provided substantial improvement in market access is ensured through increased tariff rate quotas. Given the high level of the current EU sugar tariff, sugar is likely to be placed in the highest band for reductions. While the reduction coefficient is not yet know, it is very likely to be in the range 40-60%. The 60% figure is that suggested in the Harbinson paper on the draft modalities in March 2003.

Assuming a world white sugar price equal to the average for the period 2001-2005 and scenarios of a strong, weak and median Euro compared to the US dollar, there appears limited scope to weaken the proposed price cut. At the October 2005 US dollar-euro exchange rate, and assuming that the 39% intervention price cut is implemented, this would allow the EU to reduce its tariff by 55% while still ensuring that it would be unattractive to import below the intervention price. If the Euro were to strengthen dollar (not unlikely given that it reached €1 =$1.37 on 31st December 2004[8]), the tariff could only fall 48% before the intervention price would be reached (Table 8). Any tariff reduction greater than 48% would attract imports of non-preferential sugar into the EU market. If the price cut proposed in the 2004 reform were to be implemented, there would only be scope for the tariff to be reduced by 40% under a strong Euro.

Two other options might be open to the EU. One would be to classify sugar as a sensitive product. This would imply a lower tariff reduction commitment, but also a requirement to open further tariff rate quota access. This is intended to be non-discriminatory as between exporting countries, so it is an open question whether the EU's additional EBA imports would count against this requirement. The other option would be to use the special safeguard (SSG) to prevent imports entering the EU below the intervention price. However, it is not clear if developed countries will have access to the SSG after the Doha Round, nor if it will operate in the same way as currently.

Overall, it appears there is little scope for the EU to soften the proposed reduction in price. A smaller price cut now would most likely have to be revisited in the future as a

[8] FX currency converter (http://www.oanda.com/convert/fxhistory)

result of the WTO negotiations. It therefore makes sense for the EU to address the issue of improving the competitiveness of the sector at this point, allowing those currently active in the sector to adjust rather than to prolong the process, with the continuation of investment and activity in a sector for which the death knell has already sounded in some Member States.

Table 8: the proposed price cut in the context of import tariffs under scenarios of a strong, weak and median strength Euro

	Strong Euro (€1= $1.4)	Weak Euro (€1=$0.9)	Median Euro (€1= $1.2)
World price white sugar (average 2001-2005[9]) $/t	237	237	237
World price white sugar (average 2001-2005[10]) €/t	169	263	198
EU intervention price for white sugar after full (39%) price cut €/t	385.5	385.5	385.5
EU white sugar import tariff €/t	419	419	419
EU white sugar import tariff plus the world price $/t	588	682	617
% import tariff can fall while retaining intervention price	48	71	55

Is the voluntary restructuring scheme viable?

To date, there appears to have been little discussion with regard to financing the restructuring scheme. In the text of the legislative proposal, it is implied that it will be budget neutral. The cost of the restructuring aid payment per tonne of sugar produced will be offset by the revenue derived from (a) the 'sale' of the additional one million tonnes of quota for C-sugar producers, and (b) the restructuring charge paid per tonne of sugar produced in the first three years. The actual impact will depend very much on both the quantity of quota renounced under the scheme and the time at which this occurs. The degressive payment provides incentives for factories to close early in the scheme. However, from a budgetary view point, later restructuring would be more beneficial since restructuring payments would accumulate while the amount to be paid out per tonne would decline. It is not altogether clear at what rate the Commission expects restructuring to occur, but it is possible to estimate the parameters under the assumption of budget neutrality.

The number of tonnes of quota for which restructuring aid could be paid in each year (taking account of the additional payment per tonne of €4.68 for growers in the first year of the scheme) can be calculated from the total revenue which will accrue from the restructuring charge (and, in the first year of the scheme, funds derived from the

9 source: OECD outlook
10 source: OECD outlook

allocation of an additional one million tonnes of quota). This allows scope for a total quota reduction of 6.39 million tonnes (Table 9) if the scheme were to be budget neutral and all available funds are used in each year. This is less than the projected reduction of 7.5 million tonnes, but the Commission may be banking that some current producers of C-sugar will voluntary cease production at the lower price even though they would not be eligible for restructuring aid. On the other hand, if the restructuring occurs at a slower rate, then funds would roll over to subsequent years, providing scope for a greater volume of quota to be renounced. As it stands, there should be sufficient funds for the group of highest cost producers (Italy, Ireland, Greece, Portugal, Spain, Finland. Latvia, Lithuania, Slovakia and Slovenia (Table 12)) to renounce their quota in the first year of the scheme, with room for an additional 311,519 tonnes from other Member States. As the scheme stands, as no restructuring amount is payable in 2008/9 there will only be funds for restructuring if funds roll over from previous years. On the basis of these calculations, it appears that the Commission expects most restructuring to occur in the first two years of the scheme.

Table 9: Number of tonnes of quota which could be renounced through the restructuring scheme when all revenues are utilised in each year

	2006/7	2007/8	2008/9	2008/9
Temporary restructuring amount* (€/t)	126.4	91	64.5	0
Restructuring aid (€/t)	730	625	520	420
EU-25 in-quota production (t)	16,412,000	14,002,843	12,223,152	10,874,318
Number of tonnes for which restructuring aid can be paid	3,262,364	1,779,691	1,348,834	0
In-quota production minus quota renounced (t)	14,002,843**	12,223,152	10,874,318	0
Cumulative quota reduction	3,262,364	5,042,055	6,390,889	

*an additional €4.68/t is to be paid to growers who deliver to a factory whose quota is renounced

** in the first year €730 million should enter the restructuring fund from the 'sale' of an additional 1 million tonnes of quota to C-sugar producers: an additional 1 million tonnes of quota can therefore be renounced but the quota for the EU-25 will only fall by that payable through the restructuring amount.

Source: Own calculations

5. Developments in the 2005/06 season

Fallout from the initial proposal of July 2004 has already been felt in Ireland. Together with increasing competition from imports (currently 20% of the market), it was behind the decision by Irish Sugar to close the Carlow plant. The rationale was that by taking early action to consolidate processing, the sugar industry would have a better chance of survival. This resulted in the loss of 189 full-time and 137 seasonal employees at the Carlow plant, although 63 employees will remain in sales, marketing, distribution, packaging and administration (Irish Sugar, 2005). When production was consolidated at the Mallow plant, new flexible working arrangements were negotiated with existing employees that specified only the total hours to be worked in a year. This provides sufficient flexibility for labour needs to be satisfied by the current workforce. The Mallow factory is being upgraded with investment of €25 million (Ryan, 2005).

The consolidation of processing at the Mallow plant will result in a longer campaign of 115-120 days, compared to the present around 90 days. Early and late bonuses are paid to growers who deliver at these times. These are set so as to offset a grower's losses either as growth foregone in the case of early deliveries or loss of sugar for late. The bonuses are designed as compensation without making early or late deliveries advantageous. They are set as follows:

Table 9: Early/Late bonuses paid to growers

Time period	Bonus
19th September- 1st October	€4.16/t on the first day, followed by an accumulative daily cut of 32c
25th December – 14th January	11.5c/t accumulating on a daily basis
From 15th January	12.5c/t accumulating on a daily basis

In light of the June 2005 legislative proposals, the Carlow closure in March 2005 has made it ineligible for restructuring funds, by a few months, the cut-off date being July 2005. This means that the Carlow plant closed too early to obtain such funds, though this does not mean that the sugar industry as a whole has lost out as the quota has simply been moved to Mallow. However, since the requirements for the restructuring scheme are that at least one factory is closed, this means that in the Irish case, sugar production must cease if Ireland were to benefit from these funds.

As a consequence of the closure of the Carlow plant, a rail depot is to be built in the Carlow vicinity for transport of beet by rail to Mallow. Since the beet will still be delivered to Carlow, this closure should have limited impact on the haulage sector, and is estimated to provide an additional 670,000 tonnes of clean beet to be transported by rail, thereby increasing custom for the rail network (Mooney, 2005b).

The closure affects sugar beet producers who formerly delivered to the Carlow plant who will face higher transport costs for delivering their beet to Mallow. As will be shown in the next section, higher transport charges will diminish the attraction of sugar beet production from many growers, on top of the proposed price cut. At the time of the Carlow closure, Irish Sugar planned to construct a rail depot outside Carlow, but this has not been completed in time for the 2005 harvest. Irish Sugar has negotiated transport charges for growers delivering by rail which are €10.18/t from the site of the proposed new Carlow depot and €9.58/t from the Wexford depot (Donald, 2005b). The four-year package agreed between suppliers and Irish Sugar in early 2005 includes an increase in the transport subsidy pool but this is set to decrease over the next four years back to its current level. A further problem is that growers who are close enough to Carlow to have delivered beet themselves will need to use hauliers due to the significantly greater distance involved. This will not only substantially increase their costs but create an additional complication in that the articulated lorries used by hauliers may be too large to enter farm yards. Since transport subsidies were agreed upon, the oil price has increased substantially in Ireland. This means that the costs of transport are now higher than those assumed when making such an agreement, resulting in an even greater erosion of margins. An example of the effect on margins for a Wexford farm is provided below:

Table 10: Transport costs post-Carlow closure for a sample Wexford farm

Farm to Wellington bridge: road 44 miles	€8.41/t
Wellingtonbridge – Mallow: train 100 miles	€7.97/t
Total cost	€16.38/t
Transport subsidy	€11.74/t
Net cost to producer	€4.64/t

Source: Byrne, J. Irish Farmers' Journal (08/09/05)

6. Long-term implications of reform for Irish sugar industry

Evidence from model simulation results

Several modelling exercises have been carried out to simulate the effects of different reform options. The modelling exercise which came closest to the reform which has been proposed by the Commission simulated a 25% price reduction with a 50% compensation payment. This suggests that for the EU-15 there would be a 17% reduction in sugar production, with an 18% decline in sugar beet production (Frandsen et al., 2001). Another study suggested that a price cut of 27% would reduce total sugar beet production by 13% with C-sugar falling by 45% (Witzke & Kuhn, 2003). The former study provided estimates by Member State; it projected that in Ireland sugar beet production would contract by 87% with sugar production reducing by 97%. (Frandsen et al., 2001). Such a sharp reduction in sugar beet production implies exit of Ireland from the sugar sector.

The same conclusion is reached in the impact assessment report of the EU which indicates that the sugar industry in Ireland is one of the most vulnerable to reform (EC, 2003). Another study indicates that under the proposal of quota transfer between Member States beet production would predominately move from the Netherlands, Denmark, Greece and Ireland to Germany, Austria, the UK and France (Eurocare, 2003). This further indicates that the Irish sugar industry is likely to struggle, if not disappear under the proposed reform. A more recent, updated version of the impact assessment confirms that Ireland is expected to demonstrate a drastic decline in sugar production, which will probably mean the eventual cessation of production (EC, 2005a).

Assessment of the impact of cuts in the white sugar price identified groups of countries that would exit if it fell beyond a certain level. Ireland is in the group of countries which are expected to fall into the first wave to exit sugar production if the white sugar intervention price falls below €625/t. At the other extreme, France alone is expected to be able to continue to produce sugar as long as the price remains above €400/t (Table 11).

Table 11: Member States likely to cease production as a result of cuts to the intervention price

EU market price(€/t white sugar)	Member States likely to cease production
725	Greece, Ireland, Italy
700	
675	
650	
625	
600	Spain, Finland, Latvia, Lithuania, Portugal, Slovakia, Slovenia
575	
550	
525	
500	Belgium, Czech Republic, Denmark, Hungary, Netherlands
475	Austria, Germany, Poland, Sweden, UK
450	
425	
400	France
375	
350	

Source EC (2003)

Impact of the reform on farm margins

The effects of the price cut emanating from the 2005 legislative proposals and transport cuts on the sugar beet gross margin are examined in Table 12. In these calculations, farmers are assumed not to alter their mix of enterprises in response to the relative price change. Thus the income losses quoted are maximum figures which could be lessened by substituting other crops for beet.

The gross margin without the price cut is assumed to be €1,343/ha. This was calculated on the basis of Teagasc crop costs and returns for sugar beet for 2005 and using the average sugar beet yield for the period 1999-2003, 49t/ha. In order to fully reflect the reality of the price cut, the price used was the EU institutional sugar price (€43.63/t) plus the average transport subsidy paid by Irish Sugar (€5.40/t) plus the price premium paid to growers by Irish Sugar (€5.49/t). Under the reform scenario, the same assumptions were made with regard to costs and yields but the price used was the proposed sugar beet price under the reform (€25.05/t) plus the same transport subsidy plus the revised price premium of €3.99/t which will be paid from the 2006/7 season. In both cases, revenue from beet tops was included with an assumed value of €60/ha.

Several alternative reform scenarios were considered. These included looking at the effects of the Carlow closure on transport costs, in which those indicated in Table 11 were included. In practice the additional cost will vary widely due to differences in distance from the Carlow depot. The example used was for beet from Wexford, and beet from Carlow will face additional transport charges. This therefore demonstrates a relatively 'favourable' effect of the Carlow closure and the proposed reform. Finally, the effects of receiving the highest possible quality bonus of €2.50/t or a malus of €1.30/t were investigated. In both cases, the no-reform base case did not include a quality related payment or deduction since these payments have only recently been agreed. For each of these scenarios the effects on farm income were examined assuming an average sugar beet area per farm of 8.4 ha. The percentage cut in farm income was calculated for tillage farms and all farms, using average incomes from the National Farm Survey of 2003.

These scenarios illustrate the extent to which additional transport costs have exacerbated the effects of the reform. For an average arable farm, even with the compensation payment, the Commission proposal represents a fall in income of 22%, as compared to farms not facing these additional costs where the equivalent fall would be 15%. When all farm types are considered, due to their lower average annual income than specialist arable farms, this increases to 39% and 26% respectively. This suggests that if producers continue to grow sugar beet, they would see a significant fall in their income. The situation ameliorates slightly if the full bonus is received and worsens under the case of a malus. For the latter, the gross margin is only just positive when transport costs are included. Indeed, even under the basic reform and transport cost scenario it is evident that transport costs would only need to be €1.50/t higher in order for the gross margin to be 0.

This suggests that for growers around Carlow and beyond who formerly delivered to the Carlow factory, their margins could be eroded completely by their additional transport costs. It is therefore likely that the effect of reform on exit from sugar beet production will show regional variation. Carlow suppliers are likely to exit first, particularly those more distant growers such as the few in Dublin and further afield. Next one would expect Wexford growers to be more vulnerable, while the last to exit would be those who are traditional Mallow suppliers. A further factor of concentration of production at the Mallow plant is the longer season. Early and late bonuses are paid to growers to compensate for the effect that timing has on sugar content in beet. However, some growers are concerned about storage losses or losses from frost if they harvest later in the year. This would suggest that the sugar gross margin could fall below that suggested in Table 10. Evidence from the UK, where farmers are required to accept regulation of deliveries by British Sugar which can demand harvest, storage and delivery to take place over a period of 5 months suggests that this acts as a constraint to growers. In some cases this precipitates exit from sugar production (University of Cambridge & R.A.C., 2004). It is therefore conceivable that this will further encourage exit from sugar beet production in Ireland.

The gross margins in Table 13 do not by definition include fixed costs. These are notoriously difficult to allocate amongst agricultural enterprises. One method is simply to apportion a share of fixed costs equal to the share of farm area occupied by a given crop. Using this method and fixed cost approximations from the Farmers' Handbook for a 120 acre farm with 20 acres of beet, fixed costs per hectare for beet are €414/ha. Using this figure, after reform, sugar beet would have a negative net margin except for the case of growers who do not face additional transport costs who obtain the highest quality bonus. This figure for fixed costs does not include rent. Thus, those renting land or paying a mortgage on their land will face even lower margins.

7. Strategies for Coping with the Reform

Options for the grower

Since the compensation payment is based on historical sugar beet production and is not conditional on continued production, a producer will be free to cease production and place the land under an alternative crop. This would be a suitable strategy where the gross margin for the alternative crop is above that for sugar beet.

Comparing gross margins of crops, winter cereals will generate greater gross margins (Table 13). When transport costs to Mallow are included in the gross margin, only beans and oil seed rape would generate lower margins. Thus, the most likely strategy would be widespread exit from sugar beet for growers facing higher transport costs and probable exit elsewhere. However, gross margins may not be the only criteria used to determine a cropping system. If a break crop is still required in a rotation, sugar beet may still be grown due to its favourable position in comparison to beans and oil seed rape but peas would be more profitable where higher transport costs are faced.

The most attractive alternative crop is winter wheat due to its high gross margin. Substituting winter wheat for sugar beet, assuming an average area of sugar beet of 8.4 ha, would result in an income fall of 11% on average for arable farmers and 19% for all farms. This represents a lesser income loss than that experienced under the different sugar quality and transport scenarios (except for that of receiving the top quality bonus) and thus, a possible strategy for coping with the reform. However, replacement of some sugar beet by wheat would introduce second wheats into a rotation. These have lower yields than first wheats so that the gross margin would actually be lower than suggested, and thus, the fall in income would be greater. If a yield reduction of 9% (as suggested from a Teagasc study) is assumed with a wheat price of €95/t, the fall in income would rise to 16% for tillage farmers and 29% for all farms. For some farms the fall in margin as a consequence of exiting sugar beet production would be greater than suggested, e.g. if they produce grain for seed, which attracts a premium. This needs to be grown on clean land, which is provided by sowing after sugar beet. Removal of sugar beet from the rotation could limit the ability to sell grain as seed.

The production of bioethanol from sugar beet is one strategy being voiced in Europe. Whether this would be a viable strategy for Ireland to counteract the effects of the reform is debateable. The problem of high production costs would remain, simply being transferred to the price of bioethanol. Whether Irish bioethanol could compete with that from more competitive sugar beet producing Member States would be questionable. In order for it to compete with petroleum based fuels, bioethanol or a bioethanol/petroleum mix would need to be cheaper. The rising oil price presents an opportunity but in the long term this would need to be sustained. Unless the EU protected its bioethanol market sufficiently, it would be difficult for Irish produced bioethanol to compete against Brazilian imports. Introducing high levels of protection would be unsustainable in the long term due to pressures to reduce protection arising from the WTO. It is therefore, unlikely to be a suitable strategy for the Irish sugar sector.

Options for the processing company

Irish Sugar is likely to find itself in a difficult position when producers begin to exit production. While some growers not facing additional transport costs may wish to increase their contracts with Irish Sugar and so increase their sugar beet area, it is unlikely that sufficient producers would want to do this to make up for the shortfall occurring due to exit. Reductions in sugar beet supply would increase fixed costs per tonne of sugar produced, affecting profits. Beyond a certain point, processing will no longer be economically viable but closure of the plant would be strongly opposed by those still producing beet and wishing to supply the Mallow plant. The price cut will also directly reduce revenues for Irish Sugar itself. It has been estimated that the 2004 reform would result in a decline in profits from €24 million to €4 million if the company retained its present structure (Goodbody, 2004). Under a scenario of significant rationalisation, as achieved by the Carlow closure, profits have been predicted at €14 million (Goodbody, 2004). The 2005 proposal incorporates a greater price cut so profits will be less than this figure. Irish Sugar generates the highest profits (13% margin) within the Greencore Group (Donald, 2004) so the reform will also impact on the group.

If growers do exit sugar beet production, as seems likely, the effects will also be felt by the haulage industry and the rail network since the market for beet transport would no longer exist. The eventual closure of Mallow would also result in a loss of employment. Thus, direct effects will be felt beyond the agriculture sector. The effects of the price cut on farm incomes would be likely to impact on the level of on farm investment made by growers. This will impact on farm suppliers.

The problems faced by Irish Sugar may be avoided by importing raw cane sugar for refining at the Mallow plant, but the viability of this option will depend on the profitability of such an operation. Tate and Lyle, the main sugar refiner in the UK has already indicated that its profits will be significantly affected by the legislative proposals which suggests that this may not be sufficient to sustain the Mallow plant. This option would have to be compared to participation in the voluntary restructuring scheme as the two are mutually exclusive.

If Ireland does exit the sugar sector it will be able to avail of the restructuring scheme. Due to it having only one remaining plant, in order to qualify for the scheme it would have to forego the entire Irish quota by 2009/10, leaving it no scope for a gradual exit under the scheme. The restructuring amount is paid per tonne of quota renounced; since the Carlow closure has not affected the total quota held by Ireland, it will not affect the quantity of restructuring aid received as long as sugar production reaches the quota level: under the terms of the restructuring scheme, if quota is not filled during at least one of the five years preceding closure, the payment will be made on the quantity of produced in the marketing year prior to closure. The restructuring aid is degressive so that Ireland faces a trade off between:

a) maximising the restructuring amount that it can receive by renouncing quota by the end of the 2006/7 marketing year when the amount per tonne will be at its highest (€730) but before production falls below quota;
b) allowing growers to continue to supply sugar beet to Mallow for as long as possible. If this point is reached after 2009/10, no restructuring funds will be available. If not, or if a decision to close is reached beforehand, any decline in production will reduce the number of tonnes on which the amount will be paid, and the amount per tonne will depend on the marketing year in question (€730/t in 2006/7; €625/t in 2007/8; €520/t in 2008/9; €420/t in 2009/10).

The conditions of payment include the dismantling of the factory involved, restoring the site to good environmental condition and aiding in redeploying the workforce. These terms will only apply to the Mallow site since the Carlow factory was closed too early to be eligible for the scheme. Whether there is scope for the funds to be split between the two sites is unclear, or at least the proposal does not explicitly state that this would not be possible. In 2008/9 and 2009/10 part of the restructuring aid may be used for diversification measures in the regions ‘most affected by the measures’. It may feasibly argued that this will not apply to only the Mallow area but could be used in other sugar-producing regions of the country. While the amount that Irish Sugar would receive under the restructuring scheme will depend on the timing of quota renunciation, the compensation received by growers is not degressive. However, if a factory is abandoned during the 2006/7 marketing year, they will receive an additional payment of €4.68/t. Growers who are prepared to remain in beet production have little to gain from an early closure, while Irish Sugar will have. Ultimately, due to the holding of the Golden Share, the decision will rest with the Minister of Agriculture and Food.

8. Conclusion

Reform of the sugar CMO is both necessary and inevitable. Although there has been much debate over the reform proposed in June 2005, the scope for softening the deep price cut is limited due to the likelihood of tariff cuts emanating from the WTO Doha Round, and the need for the EU to reduce production sufficiently to comply with the outcome of the WTO dispute panel and to make room for preferential imports. Production needs to be reduced by around 7.5 million tonnes, although there are different viewpoints on how this should be done.

Ireland has been vociferous in its opposition to the extent of the price cut. It favours the option suggested by LDCs and ACP countries of a smaller cut with quantity restrictions placed on preferential imports from LDCs. However, this is an unlikely outcome because it runs counter to the philosophy behind the EBA agreement and the drive to improve the competitiveness of the EU sugar sector (Chaplin and Matthews, 2005a).

The reform proposals of 2005 will have a significant impact on those farms producing sugar through a reduction in the profitability of sugar. Having acted on the basis of the first reform proposal, put forward in July 2004, by closing the Carlow sugar processing plant; Irish sugar beet producers which formerly delivered to the plant face additional challenges on top of the 2005 proposal through increased transport costs. Even taking advantage of crop substitution possibilities, Irish beet growers face a reduction in income of between 19-36%. The effect at farm level will be considerable given that sugar is currently the most profitable arable crop. Exit from sugar production by farmers will also impact on haulage and up and downstream industries.

The reform proposal also places Irish Sugar in a dilemma as to if and when it will choose to avail of the proposed restructuring scheme. If it does so, this will result in the cessation of sugar production in Ireland.

Table 12: Effects of the July 2005 reform and Carlow plant closure on the Gross Margin of Sugar Beet and Farm Income

	2005 Reform	Reform with additional transport cost to Mallow*	Reform with receipt of highest quality bonus** on all production	Reform with quality bonus and additional transport	Reform but paying quality malus***	Reform with malus and additional transport costs
Gross Margin /ha	300	72	422	195	236	9
Loss in income	1,043	1,271	921	1,149	1,107	1,335
Loss on 8.4 ha	8,769	10,679	7,740	9,650	9,304	11,214
Loss in income with compensation	468	695	345	572	531	759
Loss on 8.4ha with compensation	3,928	5,837	2,899	4,808	4,463	6,373
Fall in arable farm income with comp (%)**	15	22	11	18	16	24
Fall in average farm income (%)	26	39	19	32	20	42

* Additional transport cost for transport from Wexford to Mallow assumed to be €4.64/t
** Highest bonus is €2.50/t
*** Malus is €1.30/t

Yields are assumed to be the average of 1999-2003: 49T/ha
The price received per tonne is the intervention price plus the average transport subsidy (€5.40/t), and a price premium of €5.49/t. Under the reform scenario, the revised premium of €3.99/t is included. In both cases a value of €60/ha is included for beet tops.
Crop costs are taken from Teagasc Crop costs and returns 2005 (http://www.teagasc.ie/publications/2005/cropcostsandreturns.htm) O'Mahoney, J.

Table 13: Income losses resulting from reform

	Winter Wheat	Winter Barley	Winter Oats	Spring Wheat	Malting Barley	Spring Feed Barley	Spring Oats	Sugar Beet with no additional transport costs	Sugar Beet with no additional transport costs	Peas	Beans	Oil Seed Rape
Gross Margin/ha	426	358	404	270	293	123	371	300	72	296	1	-161
Loss per ha when sugar beet replaced with crop at head of column	-917	985	939	1,073	1,050	1,220	972	1,044	1,271	1,047	1,342	1,504
Loss on 8.4 ha	7,707	8,278	7,892	9,017	8,824	10,252	8,169	8,769	10,679	8,797	11,275	12,638
Loss on 1 ha with comp	341	409	363	497	474	644	396	468	695	471	766	928
Loss on 8.4 ha with compensation	2,866	3,437	3,051	4,176	3,983	5,411	3,328	3,928	5,837	3,956	6,434	7,797
fall in arable farm income with comp (%)**	11	13	12	16	15	21	13	15	22	15	24	-30
Fall in average farm income (%)	19	23	20	28	26	36	22	26	39	26	43	-52

* sugar beet GM after reform and with no compensation payment

**average arable farm income in 2003 was €26,300
*** average farm income in 2003 was €15,100
Source: Own calculations using National Farm Survey 2003 crop gross margin

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Annex A. Description of the EU common market organisation for sugar

The sugar CMO was put in place in 1968 and is due for renewal by 30 June 2006. It was established five years after the Common Agricultural Policy (CAP) was agreed due to difficulties in designing a system which provided sugar producers with at least the same level of support as they had been enjoying under their national sugar policies. The instruments which were used to achieve this were:

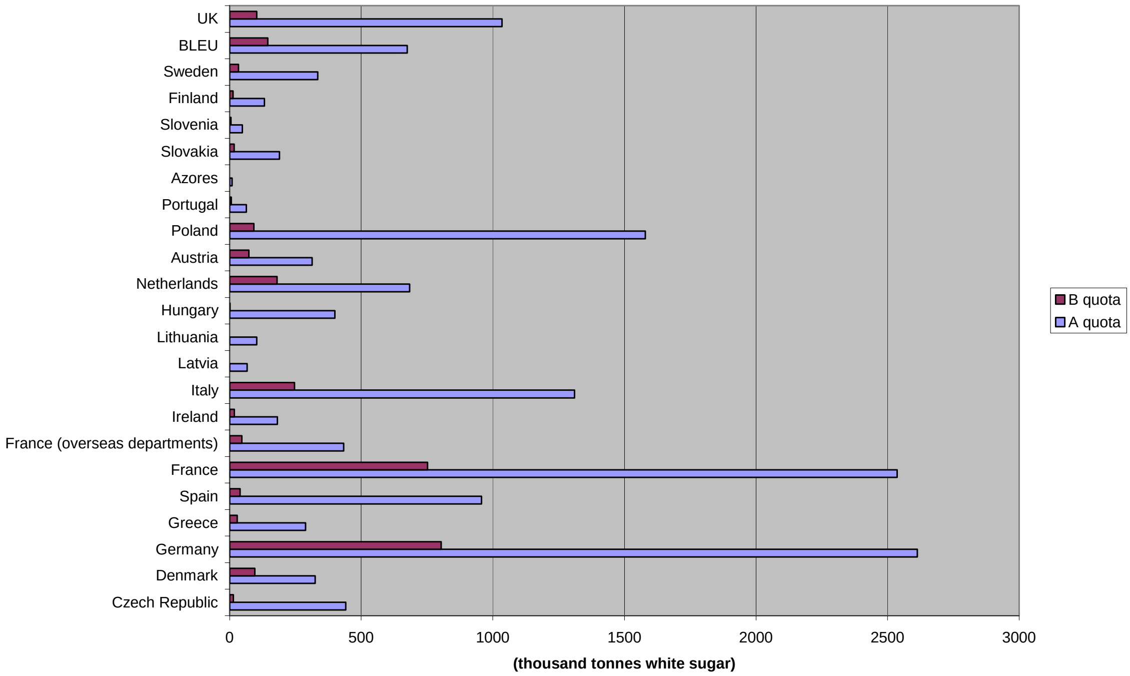
- minimum support prices for white sugar and for sugar beet;
- import duties and export refunds;
- an intervention purchase system which guaranteed the minimum support price;
- a production quota system.

These were the first production quotas applied under the CAP. As well as limiting the costs of intervention purchase by restricting the quantity of sugar eligible for such purchases, it guaranteed each Member State a share of the EU sugar market, thereby allowing the least efficient sugar producing states to continue with their production.

Production Quotas
Nearly all member states produce sugar, apart from Luxemburg, Estonia, Cyprus and Malta. Some Member States also have sugar-cane-producing overseas territories. In the case of Portugal, this includes the Azores, for Spain, the Canaries and for France, Reunion, Guadeloupe, Martinique and French Guiana. These are also allocated quota. The EU allocates quota to Member States which in turn allocate national quota to individual sugar-producing factories. The factories then allocate 'beet delivery rights' to individual farms on the basis of the quota that they have been allocated. Due to the high cost of transporting beets, growers are concentrated around factories and tend to be those with larger farms (NEI, 2000). Thus, the location of factories with quota is the main determinant of the regional distribution of beet production.

There are two types of quota: A and B. At the time of the initial quota allocations, A-quota was set for each individual Member State at a level which was equivalent to national sugar consumption. Yields vary due to weather and disease, so in order to be sure of filling quota in any one year, producers need to allow for a poor year when planting. If yields are average or above, then they will be over quota. In order to allow for this, a supplementary quota was set, which evolved to become B-quota. This is allocated according to comparative advantage in sugar production, thereby allowing some specialisation by certain countries. Germany and France have the largest allocations of B quota which are around 30% of their A quota: these countries are considered to be the most efficient producers in the EU. Conversely, less efficient producers such as Ireland were allocated B-quota at a level around 9% of their A quota (Figure 1). Although producers initially used this as an overflow, its utilisation gradually became ubiquitous. This resulted in the existence of C-sugar which is sugar produced in excess of quota and which must be sold on the world market without subsidies. However a proportion (usually about one-third) of this production may be carried over to the next marketing year, when it is treated as A-quota sugar. Since the introduction of the CMO, C-sugar production has risen from 0 to 2.6 million tonnes, and thus contributes to the position of the EU as the second largest sugar exporter in the world (EC, 2003).

Figure 1: Distribution of A and B-quota across the EU-25, 2004



Source: European Commission (2004b)

In addition to quotas on sugar production, quotas are also allocated for isoglucose and inulin although no intervention mechanism is applied to these products.

Minimum Support Prices

Minimum support prices apply only to in-quota sugar. The guaranteed minimum price for white sugar is the intervention price: this is the price at which the EU buys white sugar offered to the national Intervention Agencies. Intervention buying has been a rare event, but in August 2005 intervention stocks had reached 750,000t and industry sources predicted that stocks could soon reach 1 million tonnes (*Agra Focus*, September 2005). The intervention price forms the base from which the raw sugar and beet and cane prices are derived. The basic beet price refers to beet with a sixteen per cent sugar content, net of levies. The latter are shared between the processors and growers such that producers receive 58% of the beet price (EC, 2004c). Deductions are permitted for sub-standard beets while high quality beets must receive at least the minimum premium. Both this and the maximum deduction are set by the Commission.

The actual price obtained by producers is the minimum price minus production levies, plus any share of any market premium for white sugar earned by the sugar processor which growers can negotiate. The rationale behind the levies is to generate sufficient revenues to pay for export and production refunds. There are three types of levy which are applied in succession until sufficient revenue has been obtained to cover the refund costs:

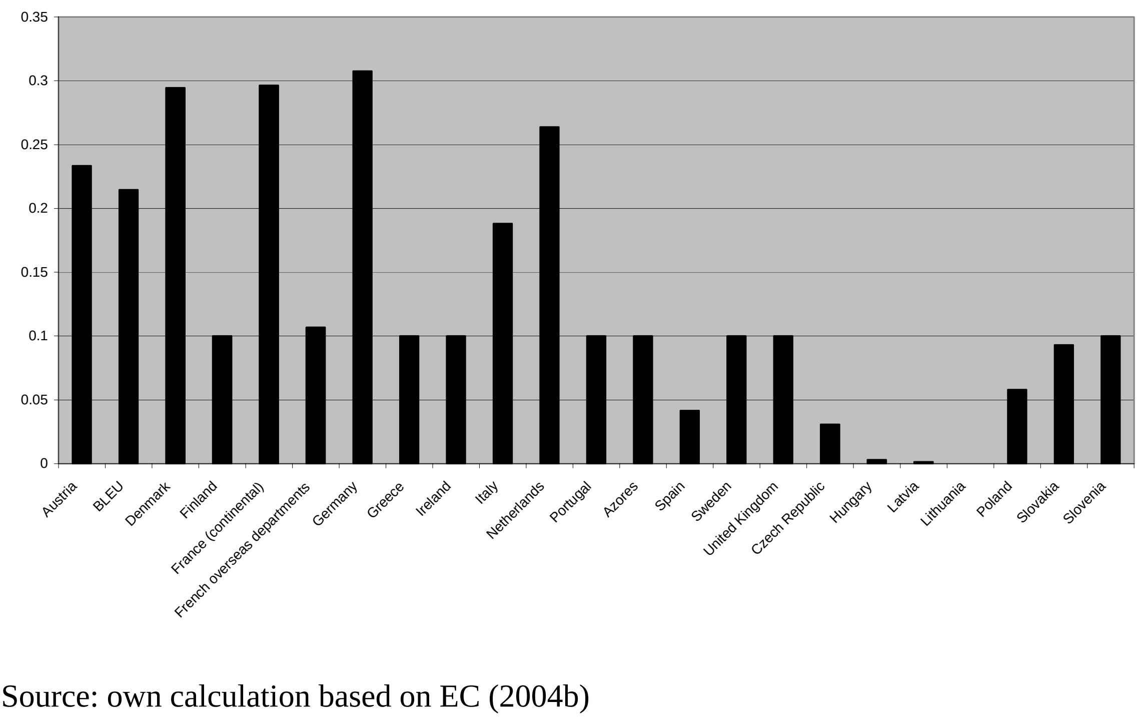
1. A basic levy of 2% of the intervention price on both A and B quota.

2. A variable levy on B-quota sugar which depends upon the total costs of export refunds but has a ceiling of 37.5% of the Intervention Price.
3. An additional levy used when these two levies are insufficient to cover the costs of export and production refunds. It is a percentage of the basic and B levy.

The required revenue is calculated before the end of the marketing year when total production and utilisation of sugar quota, isolglucose and inulin are analysed. The levels which will be eligible for export and production refunds are multiplied by the average export and production refund paid during the marketing season, thereby calculating the total to be collected from levies. From this the B-levy and additional levy are set (NEI, 2000).

The differences in levy for A and B quota mean that a producer receives less for B quota beet than for A. The 'net' minimum price for A beet is €46.70, while it is €29.70 for B-quota beet (EC, 2004). It should be borne in mind that B quota production is always carried out in tandem with A, just as C is always produced by producers of A and B quota sugar. Due to the higher levies paid on B-quota, countries with a higher ratio of B-quota to A-quota production contribute more to the CMO sugar levy income (Figure 2). The main contributors are therefore Germany, France, Denmark and the Netherlands. In some countries, such as Ireland, the net price to growers is a pooled price taking into account the relative shares of A and B quota in the total.

Figure 2: Ratio of B quota to A quota by member state

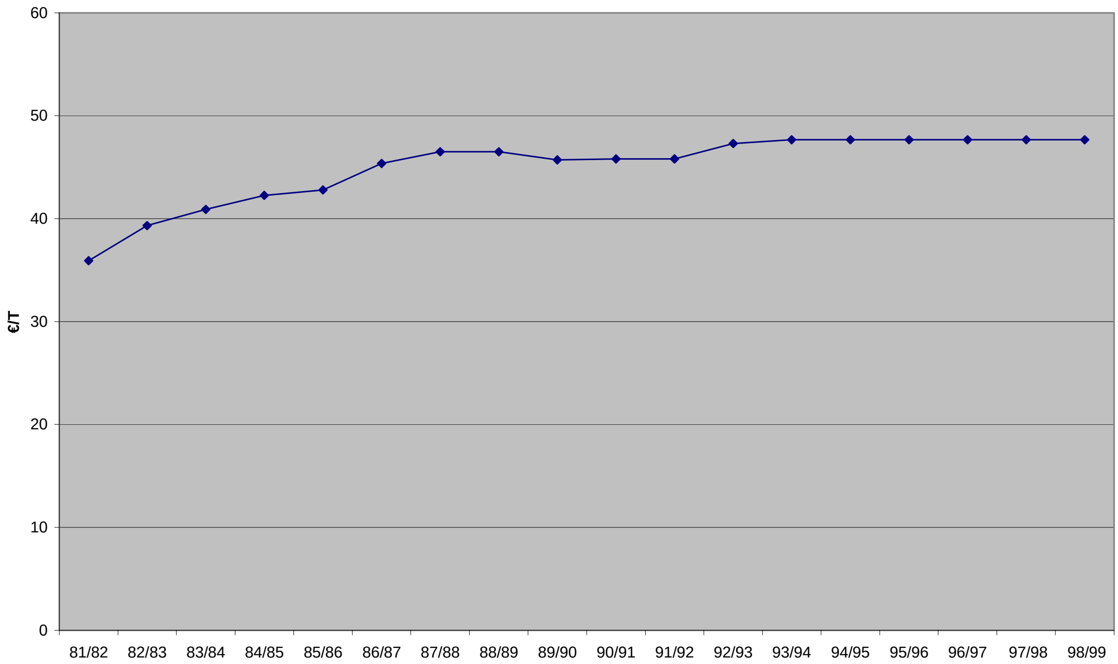


Source: own calculation based on EC (2004b)

The intervention price has been relatively stable, and has been frozen since 1993 (Figure 3). Compared to producers trading on the world market, EU producers of A and B beet have the benefit of a guaranteed and, therefore, risk-free price which has changed very little over time.

One of the problems which has arisen from setting the minimum price such that it covers the costs of production in the least efficient regions is that it makes sugar beet a highly profitable crop in regions with comparative advantage. This has enabled intentional C production (as opposed to that which arises from overshooting quota) to be viable, thereby contributing to export levels (EC, 2003).

Figure 3 Intervention price of sugar beet in financial €/t



Source: OECD Outlook

In addition to the price received as described above, a regional premium is paid to encourage production in sugar deficit areas, but this does have the disadvantage of promoting production in the least competitive regions. The premium is set such that it is approximately equal to the cost of transporting sugar from the nearest region with a sugar surplus to the deficit region. Since 1995/96 they have been set as follows:

- In Finland, Ireland, Portugal and the UK, the premium is 2.31% of the Intervention Price and is equivalent to 14.6€/t white sugar
- In Spain it is 2.67% or equivalent to 16.9€/t white sugar
- In Italy, 3.7% or, 23.4€/t white sugar

These premiums form an important element of sugar beet income for producers in these regions since they aid in making production financially attractive despite low yields.

Import Duties

Import duties insulate the internal EU sugar market from the world market. Initially, in 1968, import levies varied according to the world market price. This equalled the difference between the c.i.f. import price and the minimum import price (the sum of the EU target price, storage levy and freight costs between the area of greatest surplus

(Laon, France) and that of greatest deficit (Palermo, Italy). Subsequent to the URAA, this variable levy was converted to a fixed tariff, originally at a base rate of €524 per tonne of white sugar in 1995/96, reduced to €419 per tonne of white sugar from 2000/01 (the corresponding figures for raw sugar are €424/t in 1995/96 reducing to €339/t from 2000/01).

Further protection against low-cost imports is provided under the special safeguard clause under the WTO, whereby an additional duty is charged on a consignment basis whenever the c.i.f. import price falls below a reference or trigger price fixed in the URAA for the base period 1986-88. The trigger price is the average c.i.f. import price during that period. Because EU sugar imports are dominated by preferential imports from ACP countries, the EU reported reference prices of €531/t for white sugar and €413/t for raw sugar, respectively. This compares to a world price for white sugar in that period of €195/t (Swinbank, 2004). Thus, in each year since the URAA, the EU has imposed a special safeguard duty, in addition to the normal tariff, whenever the c.i.f. consignment value falls below the (high) trigger level. The amount of the special safeguard duty is calculated according to a complex formula set out in the URAA. This combination has maintained the same level of protection for sugar as before the URAA. By and large, it is sufficiently high to prevent imports of non-preferential sugar. Over recent marketing years, the overall tariff protection for white sugar has stood at approximately €500/t (EC, 2004b).

Export refunds

These were implemented from the start of the CMO since the combined A and B production quotas were set at levels above consumption (the A-quota alone is approximately equal to consumption). The intention of the refunds is to cover the difference between the EU price and the world sugar price, so that it can be sold on the world market while the producer still obtains the EU price. Refunds are available for: both beet and cane harvested in the EU; for sugar imported under the ACP protocol and agreement with India; and unprocessed sugar and sugar in certain processed products. The latter measure exists so that food processors are not disadvantaged on the world market by high EU sugar prices (EC, 2004b).

The value of refunds is set on a weekly or fortnightly basis through a tendering system in which exporters bid for export refunds and the corresponding export licences. The level of refund is determined by the Sugar Management Committee of the EU according to the tenders submitted, the current world market price, expected developments with regard to the world price and the maximum quantities to be exported in a given marketing year (NEI, 2000).

In addition, there are small quantities of white sugar which are excluded from tender invitations and other types of sugar (such as raw and sugar syrup, isoglucose and inulin syrup) for which the export refund is fixed at a level equal to the lowest bid of the relevant weekly tender minus €30/t of white sugar equivalent (NEI, 2000).

Export refunds for sugar in processed food and drinks (non-Annex 1 products) are set on a monthly basis, based on the average refund from the invitation for tender minus €30/t.

Under the URAA, export refunds were restricted for unprocessed sugar exports both by quantity and expenditure. These limits include sugar in processed fruit and vegetables which are eligible for export refunds. At present, the expenditure limit is more restrictive than that for quantity. The EU has not included under these limits a quantity equal to imports up to a maximum of 1.6 million tonnes under the ACP Protocol and Agreement with India, a practice which was found contrary to the URAA by a WTO dispute panel. In order to conform to export refund limits, if export refunds appear to be in excess of the ceiling, production quotas for sugar, isoglucose and inulin syrup are reduced accordingly, so that excess A- and B-quota becomes reclassified as C-sugar and thus becomes ineligible for refunds.

In addition, WTO restrictions apply to processed food products including those containing sugar, amongst other ingredients.

Production refunds for chemical industry products

These were implemented at the very beginning of the CMO with the rationale of ensuring that the chemical industry could obtain Community sugar at the world price since, unlike the food industry, it does not benefit from tariff protection for sugar. This mechanism enables the chemical industry to compete with non-member countries which can purchase sugar on the world market. The cost of the refunds is paid for by the sugar levies described in the next paragraph.

Storage Levy

Due to the seasonal nature of sugar beet production, storage is necessary in order to have a constant supply on the market. Increasing costs of storage would mean that as the marketing season advances, sugar would become more expensive. In order to overcome this, the Storage Costs Equalisation Scheme (SCES) exists: sugar producers pay a storage levy for each tonne of white sugar quota produced and for each tonne stored, they receive a storage costs refund. Only approved warehouses operated by sugar beet processors and specialised sugar traders can be used for storage. C-sugar is excluded from the scheme, unless it is being carried over to the following season. Until 1985, white sugar from ACP countries and India was also included (NEI, 2000).

Storage costs are fixed on an annual basis according to interest costs of the capital tied-up in storing the sugar and a nominal amount per tonne for fixed costs. The quantity to be stored is determined according to the average stock at the start and end of a given month. (NEI, 2000).

Uruguay Round

The sugar CMO has remained largely unaffected by the MacSharry and Agenda 2000 reforms and implementation of the Uruguay Round Agreement on Agriculture (URAA) disciplines except for limits imposed by the latter on export subsidies which were cut permanently in 2001 with further cuts being applied to 2005/6 (Table 1).

Table 1: Impacts of the Uruguay Round Agreement on Agriculture on the CMO for sugar

Measure	Impact
Reduced or zero import duties at a minimum of 3% of domestic consumption in 1995/6 rising to 5% in 2000/01.	No changed necessary as fulfilled by existing preference agreements which were further augmented by the accession of Finland in 1995.
Ad valorem import duties changed to fixed duties which were reduced by 20% between 1995/6 and 2000/01.	Fixed duties implemented in 1995. The Special Safeguard Clause was invoked to enable additional duty to be applied when the cif sugar import price fell below 90% of the trigger price of €531/t. This prevented non-preferential imports and left the CMO unaffected.
Reduction in export subsidies by 2000/01 to 21% below levels in the base period (1986/7-1988/89). Cuts to the value of subsidies to be 36%.	No change required until 2000/01 when a temporary cut to the total A and B quota was applied (total export levels were unaffected as C-sugar exports increased). In 2001 a permanent cut of 110,268T to sugar quota was applied. Further cuts continued to 2005/6 (Huan-Niemi, 2003).

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