



Project no.
513705

Project Acronym
CEEK AGRI POLICY

Project title
**Agro economic policy analysis of the new member states,
the candidate states and the countries of the western Balkans**

Instrument Specific Support Action

Thematic Priority Scientific Support to Policies

D12-1 First 6-monthly report
ASSESSMENT AND OUTLOOK IN THE SUGAR SECTOR

Due date of deliverable: December 2005

Actual submission date: December 2005

Start date of project: 01.05.2005

Duration: 24 Months

Organisation name of lead contractor for this deliverable: Drew Associates

Revision Final

Project co-funded by the European Commission within the Sixth Framework Programme (2002-2006)		
Dissemination Level		
PU	Public	X
PP	Restricted to other programme participants (including the Commission	
RE	Restricted to a group specified by the consortium (including the Commission	
CO	Confidential, only for members of the consortium (including the Commission Services)	

Acknowledgement

This report forms part of the deliverables from a project called "CEEC AGRI POLICY" which has been awarded financial support by the European Commission under the 6th Framework Programme.

The project aims to establish a network of experts involved in agricultural policy analysis and rural development in the New Member States, in the Acceding Candidate Countries and in the countries of the Western Balkan. More detailed information on the project can be found at www.agripolicy.net.

The report is based on the individual contributions of experts in Bosnia Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Lithuania, Poland, Romania, Serbia Montenegro, Slovakia, Slovenia and Turkey. It has been prepared between September and November 2005.

DOCUMENT HISTORY

see country reports on www.agripolicy.net for full list of authors

Date	Author	Description
03-12-2005	John Malcolm	First draft
9-12-2005	Olivier Chartier	Final editing

CONTENT

1	Synthesis	4
1.1	New Member States (NMS)	5
1.2	The Candidate Countries	8
1.3	The countries from the Western Balkan.....	10
1.4	Conclusions	11
2	Bosnia Herzegovina	12
3	Bulgaria	16
4	Croatia	17
5	Cyprus	20
6	Czech Republic	21
7	Estonia.....	23
8	Hungary.....	24
9	Lithuania	27
10	Poland	29
11	Romania.....	37
12	Serbia Montenegro.....	39
13	Slovakia	43
14	Slovenia	46
15	Turkey.....	49

1 Synthesis

The Accession of the ten new Member States (NMS) in 2004 added rather more than 3 million tonnes to the EU's production of sugar (in raw sugar equivalent terms) but less than 3 million tonnes to consumption and processing uses. Poland (the largest sugar producer among the NMC) now exports some 20% of its sugar production, and the Czech Republic (the second largest) some 30% of its production. Thus the enlargement has meant a net addition to the EU's already considerable surplus of sugar that has to be disposed of on world markets.

Quite how long these additional surpluses will last is a matter for conjecture, mainly because most of the NMS had aligned their own sugar regimes to the sugar CMO before accession and thus producers in several countries had been well protected from more efficient competitors overseas. The news that the CMO's levels of protection are to be reduced (albeit over a lengthy transition period) seems to have been unexpected by some of the producers and there are comments in the individual country reports to the effect that some NMS producers fear their continued profitability will be in jeopardy.

Particular fears have been raised concerning the likely reactions of foreign-owned sugar processors to changes in the relative price of beet-sugar and cane-sugar, with growers worried that their beet outlets might be closed down over time. Whilst this is a problem for individual beet producers and the sector as a whole, the sugar sector's escape from the major effects of both the McSharry and Agenda 2000 reforms stood out as an anomaly in the world trade discussions and the expectations of significant cuts in the EU sugar supports had been well publicised during the pre-Accession period.

In several NMS there are reports of both the growing and the processing sides of the industry being in need of modernisation and restructuring as is the case also in Bulgaria and Romania. Perhaps the CMO reforms will act as a catalyst for these changes.

Differences in statistical practice also occur in the consumption data, where some countries' estimates of consumption per head include the sugar content of confectionary and others adopted a much more limited measure. Thus, for example, the Bulgarian data is an estimation of refined sugar consumed in the home and does not include sugar consumed in restaurants, at places of work and so on. Hence the Bulgarian figure for consumption per head is little more than one-third of the level in neighbouring countries. This means that one must interpret comparative data with some caution.

In some of the NMS and in most of the candidate and pre-candidate countries, examination of the state of the sugar sector is hindered by the absence of robust official data on production, trade and consumption. This will take some time to overcome, particularly in the candidate countries where there are more pressing issues for the governments' attention and expenditure than improving the economic and financial statistics relating to agriculture.

The table below sets out our best estimates of the average levels of production, trade, processing use and consumption in the countries included in the study. The table is followed by a summary of the main features and issues facing each of the countries covered. Fuller commentaries on each country can be found in the CEECAP Section1 Country reports.

Table 2 Sugar Statistics Averages 2000 to 2004

Country	Area	Production	Imports	Exports	Consumption	Consumption
	000 ha	000 t	000 t	000 t	000 t	per head
Cyprus			34.61		34.61	44.4
Czech Republic	71.9	511.4	38.0	129.7	448.5	40.9
Estonia			68.7		68.7	33.7
Hungary	59.0	589.4	48.3	81.4	462.4	32.5
Latvia	13.0					
Lithuania	26.5	127.6	18.8	39.3	106.1	30.7
Malta			69.7	0.1	69.7	
Poland	306.2	1919.2	61.2	353.4	757.0	41.5
Slovak Republic	32.4	176.6	54.6	48.1	194.4	28.5
Slovenia	5.5	33.8	63.4	22.7	78.9	39.6
Total NMS	514.5	3357.9	457.4	674.6	2220.0	
Bulgaria	1.4	195.1	261.7		68.3	8.7
Romania	38.6	479.0	530.8	4.1	519.0	23.9
Bosnia-Herzegovina			190.9	11.4	100.9	26.3
Croatia	25.0	107.5	80.2	56.8	140.0	30.0
Serbia	53.6	254.1	59.1	110.2	105.3	29.0
Turkey	356.2	2020.0	1.2	371.0	1962.8	26.7
Total Candidates	474.8	3055.7	1123.9	553.5	2896.0	
EU- 15	1800.0	16040.0				

1.1 New Member States (NMS)

The following section of the report summarises the main features of the sugar market in the NMS, fuller comments are included for each country in the Section 1 country reports. Cyprus, Estonia and Malta do not grow or process sugar beet, relying on imports for all their refined sugar needs.

Czech Republic

In the Czech Republic there is some evidence that in the past five years both sugar producers and consumers have acted to alter their behaviour in response to actual and expected changes in the sugar price following EU-Accession.

From 1989 to 2000 the area of sugar beet diminished as a result of the impact of agricultural restructuring and the instability of the sugar market. In the past two or three years, the area of sugar beet has fallen slightly due to higher yields and a limited sugar quota. The longer term trend has been for the number of sugar beet growers to fall as the average area of beet grown per beet farmer and the yield per hectare rises. The number of beet processing factories has also fallen as restructuring and modernisation has taken place.

During the monitored period the export of sugar increased especially after year 2000 as a result of the introduction of minimum prices for sugar beet and sugar, which raised the domestic price and the industry geared up in anticipation EU Accession. The switch-over to the CAP rules occurred without problems. However, in 2002 the minimum sugar price in the Czech Republic was cancelled and the resulting low internal sugar price led to an enormous purchase of sugar by big industry producers.

During recent years, imports of sugar from EU-15 countries increased at the expense of imports from CEFTA but, post-Accession, Slovakia has become the largest trade partner among EU-25.

Hungary

Per capita consumption has declined over recent years, falling from 38.2 kilograms per head in 1990 to 32.6 kg in 2002. This resulted from lower demand by both consumers and manufacturers who now use more isoglucose and artificial sweeteners for their products, due to the low transport cost and input prices.

Until recent years, the Hungarian sugar beet area had fluctuated about a declining trend to a low of 51600 hectares in 2003. However, in 2004, perhaps as a reaction to the low yields of the previous year, but more likely encouraged by the higher prices to be expected under the EU sugar CMO the area rose by more than 20% to 64600 hectares. Three sugar beet processors compete for the output of around some 800 farmers. Hungarian yields are lower than most EU-15 countries but higher than all other NMS.

Hungarian isoglucose production (from maize) amounts to some 140,000 tonnes yearly, being produced in the most modern factory in Europe, at Szabadegyháza.

However, the relatively low beet and sugar yields give rise to concerns within the Hungarian sugar sector that beet growing would not be profitable for the majority of growers at 25 euro/tonne as proposed by the Commission, nor would the processing companies be happy with a refined sugar price lower than 450 Euros/tonne. Some of the problems besetting the industry arise from the current location of growers and processing plants and there is a clear need for rationalisation by both sides of the industry if it is to prosper in future. The present structure of the industry is somewhat ossified with inefficient producers and those distant from sugar beet factories being obliged to grow beet because they are not allowed to sell their quota rights.

Sugar was one of the few agricultural sectors that were expected to benefit from EU membership and indeed at the time of Accession both beet growers and processors were satisfied. However, the Commission's sugar sector reform proposal has caused a huge uncertainty in the market. Hungarian beet growers face an uncertain future because all the sugar factories are owned by foreign companies that might well prefer to close their Hungarian plants rather than those in their mother country.

Lithuania

Lithuania's sugar production quota is 103000 tonnes, thus fully satisfying internal consumption which has recently dropped to below 100000 tonnes per annum as consumption per capita decreased by 20 % from 2001 to 2003. Increased beet yields in recent years has offset the falling sugar beet area and maintained production at levels significantly above domestic demand, resulting in modest quantities of exports.

Some 21000 hectares of sugar beet are currently (2005) being grown, the beet area having fallen by a bout 25% since 2000. Around 40% of the sugar beet area is on large farms with more than 45 ha of sugar beet, but these farms comprise only 3% of farms growing beet. In contrast 85% of beet farms grow less than 10 hectares of beet and together account for 32% of the beet area. The country has three sugar processing plants, one owned by a Lithuanian company and the other two by a Danish company.

The beet growing period in Lithuania averages only some 136 days, hence yields are considerably lower than in Western Europe which enjoys a much longer growing season. In consequence Lithuania suffers a competitive disadvantage vis a vis EU-12 countries. Although at present prices beet growing is profitable compared with growing alternative agricultural products, the sugar CMO reform, will make beet growing unprofitable in future. This will result in a substantial fall in sugar beet and sugar production and a fall in jobs not only in the sugar sector but also in services dependent upon the sugar sector. This is in sharp contrast to Lithuanian producers' legitimate expectations from EU Accession.

Poland

Poland is now a net sugar exporting country with annual production of around 2 million tonnes and consumption of around 1.6 million tonnes. Thus net exports amount to some 20% of domestic production. Traditionally the former Soviet Union's republics represented the major outlets for Polish sugar exports and as late as 2003 they still accounted for 71% but in first year of Poland's EU membership their share declined to 48%, with that of the EU-15 countries rising to 38%. This change was accompanied by a shift from bulk sugar exports to the export of processed products containing sugar, thus allowing Polish firms to gain a larger share of the value-added in production.

Since the mid-1990s, the Polish government has aligned its sugar policy and instruments to those of the EU, including high market price support and production quotas. In anticipation of EU-Accession, the sector underwent significant restructuring in both beet production and processing – the number of farms growing sugar beet falling by almost a half in the space of six years and the number of factories falling by almost as much. Despite this the sugar sector required substantial support and an internal price that has been double the world market price hence further efficiency improvements will be needed if the sector is to survive the increased competition resulting from reform of the sugar regime.

EU-Accession has resulted in a significant improvement in the profitability of the sector and sugar beet production is one of the most profitable crops for Polish farmers. However, the proposed reforms pose problems for the sector, not the least that the current market price signals appear to suggest that the sector should expand, but the future price under the reform proposals may not be sufficient to justify investment in modernizing and increasing capacity. Studies show that Polish sugar beet is produced at lower costs per tonne than German beet, but this is partially offset by lower technical efficiency in the processing of sugar beet, though analyses suggest that sugar production in Poland remains profitable at a sugar price level of around 450 euro per tonne.

Slovakia

In the years 1999 to 2002, the area sown to sugar beet fell by about 10%, but in 2004 the area rose to above the 1999 level, probably in response to the expected higher sugar prices following EU-Accession. Coupled with higher yields, this led to the highest volume of production in the past decade, 233000 tonnes of sugar, exceeding by some 12.5% the national quota of 207400 tonnes and leading to a revival of a substantial level of exports. The processing sector has also experienced a shake-out with the number of factories being reduced from 8 to 4, all of which are foreign owned. The closure of factories led to some sugar beet growers being unable to get their beet processed and the processors to seeking growers located more closely to the remaining factories.

Slovenia

Slovenia is a net importer of sugar and its processed products. In the period 1999-2004, sugar production from domestically produced sugar beet more than halved. In the last three years, domestic production has averaged 32000 tonnes, imports 71000 tonnes and exports 23000 tonnes of sugar per year (in raw sugar equivalent). Around a third of imports were in the form of processed products and a declining share is in white sugar. The remainder is in raw sugar or sugar beet – the former mostly imported from African countries (in 2004: around 70%) and other EU MS (in 2004: 27%) – the latter from neighbouring countries. There is no isoglucose production in Slovenia.

Although adoption of the EU sugar CMO has not caused any great problems thus far and several studies have suggested that Slovenian sugar production is competitive with that in other MS, the imminent reform of the sugar regime has engendered widespread pessimism over the sugar sector's future prospects. Producers, processors and the Slovenian government have called for a smaller reduction in minimum prices, a longer transition period for the reforms and higher compensation for the loss of potential income. However, some experts think that sugar beet producers would be no worse off under the reform than they were in the five or six years before Accession.

Crucial to the future of the Slovenian sugar sector is whether the country's one sugar mill would have enough beet or imported raw sugar to process economically. To date the mill, which is majority owned by a Dutch company, has used its capacity for raw sugar processing which under the reform package will lose its current financial advantage. Thus the possibility of the mill's closure cannot be discounted and could have serious consequences for beet growers.

1.2 The Candidate Countries

Bulgaria

Although growing and processing a small quantity of sugar beet, Bulgaria has always been net importer of sugar, with virtually all of Bulgaria's sugar supplies being processed from imported non-refined cane sugar. Over the last three years imports have averaged some 280000 tonnes of non-refined cane sugar, mainly from Cuba, Brazil and Salvador, of which 250000 tonnes a year is imported under a tariff quota carrying a duty of only 5% compared to the MFN tariff for cane sugar of 50% and 184 euro/tonne for beet sugar.

In two of the last three years, sugar beet production has been influenced by a price premium of 12 leva (6.14 euro) per ton in 2002 and 15 leva (7.67 euro) per ton in 2004.

However, from the sugar processors' point of view, the cost of producing white sugar from imported raw cane sugar is much lower than that of processing it from sugar beet hence there is no real demand for sugar beet.

Croatia

As is noted in the comments about Bosnia and Herzegovina, the lack of robust border controls means that trade data are unreliable and therefore a number of the key statistics are estimates rather than precise figures.

Croatia's sugar needs are usually met from domestic sugar beet processing coupled with sugar processed from imported sugar-cane. Annual total Croatian sugar consumption is estimated to be 150000 tonnes (30 kg per head), with 2/3 as household consumption, and 1/3 going into

industrial production of other products. In the past, Croatia had a negative trade balance in sugar with imports overwhelmingly of raw sugar however, in the most recent years there has been an upsurge in imports of white sugar, mainly from EU-15, coupled with a very rapid increase in exports of refined sugar.

A significant factor in the changing trade pattern seems to have Croatia's Stabilisation and Association Agreement with EU which allows for profitable sugar exporting by Croatian producers. Indeed it appears that during 2003 and 2004 Croatia imported white sugar, mainly from the EU, for domestic consumption at 255 to 270 euro per tonne whilst exporting Croatian sugar in added value form to the EU at some 655 euro per tonne. If these are genuine commercial transactions, then the question of the size of Croatia's A and B quotas will be an important element of the Accession negotiations.

In contrast to the situation suggested by the trade statistics, expert assessments show that Croatia's beet growing and sugar processing sectors are uncompetitive at current world prices because of relatively low yields, low sugar extraction rates, high production costs and a fragmented, economically unsustainable, industry. Consequently, the question arises whether following the 36% reduction in EU sugar support and thus intensification of competition for the EU market, Croatia's sugar industry could maintain its recent position as a minor supplier to the EU market.

Romania

Since the beginning of the 1990s Romania's sugar beet area has continually fallen and at 18800 hectares in 2004 was only 12% of the area cultivated in 1990. The number of processing plants has fallen from 33 factories in 1989 to 10 in 2004. In recent years beet yields have ranged from 13.8 tonnes per hectare in 2000 to 29.3 t/ha in 2004, whilst the sugar content of beet has fluctuated from 10.5% in 1999 to 13.1% in 2004.

Domestic beet production supplies very little of Romania's demand for sugar, the great majority of Romania's annual sugar production is refined in Romania from imported raw cane sugar. This situation is explained by the specialisation of Romania in the former COCOM when Romania processed imported cane sugar from Cuba. - This situation is likely to worsen as the sugar quota allotted to Romania under the Accession agreement amounts to only around 25% of anticipated future consumption levels. As a consequence, Romanian consumers will depend upon imports of sugar from the world market until Accession and from the EU-25 after Accession which will then raise sugar prices to consumers.

Neither the beet growing nor the processing side of the industry is as efficient as competitor countries inside and outside the EU. Hence a policy objective over the next two years is to try to improve the overall productivity of the sugar sector.

Turkey

Turkey's sugar sector has long been regulated through a production quota system which was modified somewhat in 2001, partly to bring it into conformity with the EU sugar CMO. The 2001 "Sugar Law" regulates sugar production, marketing and pricing policies for both domestic consumption and exports of sugar and sweeteners produced from sugar beet and starch. The 2001 regulations required a substantial reduction in the total sugar quota and hence in the sugar beet area, which was reduced by some 20% by 2004.

Inevitably the volume of production varies considerably from year to year with a low of 1.7 million tonnes and a high of 2.5 million tonnes in the past five years. With consumption fairly stable at around 2million tonnes (28 kg per head), Turkey is virtually self-sufficient in sugar regularly importing only speciality sugars. The volume of imports and exports varies considerably from year to year not only because of swings in domestic surpluses or deficits. Turkey's competitiveness on international markets is determined as much by exchange rate fluctuations as by changing internal production costs, though in so far as the latter are influenced by inflation in the economy as a whole, the two are linked.

1.3 The countries from the Western Balkan

Bosnia-Herzegovina

Bosnia and Herzegovina has not produced its own sugar since 1992, all its sugar demands being met from imports, which have been rising rapidly in recent years. There is also a rising volume of re-exports. As the country's borders are not fully controlled, trade statistics in general are not as robust as is desirable. Moreover, it seems that some of the trade in sugar, notably the re-exports, has been illicit hence official sources are not able to capture the whole picture. It seems that some of the imported sugar has been re-exported to the EU, notably to Italy; hence from 1st July 2005 the EU has introduced a quota of 12,000 tonnes for imports from B&H.

Sugar consumption is variously estimated at around 25 kg per head, which is low compared with EU-15. Usage by the food industry is estimated (on the basis of food industry output) to have trebled from 8,210 tonnes in 1999 to 24,026 tonnes in 2004. However, the rate of growth in the food industry's use of sugar has declined and although the food industry is still operating at around only 30% capacity utilisation the growth rate of industrial use of sugar is expected to remain low for the foreseeable future.

In the sugar sector, as in other sectors, the main challenge for B&H is the establishment of reliable monitoring procedures and practices to conform to the sugar CMO.

Serbia & Montenegro

Under normal peacetime conditions, Serbia is a net exporting country well able to satisfy the domestic demand for sugar, though current sugar consumption per head per year amounts some 28 kg, which is below the EU-15 average (some 38 kg). The Serbian sugar industry, like other sectors of Serbia's economy suffered from the political and economic changes of the 1990s. At that time and since, there have been difficulties in collecting data and monitoring trade, hence Serbian statistics have to be viewed with caution.

Serbia's sugar sector can be seen as an industry in transition. The sugar beet area having halved from an average of around 100000 hectares in the 1980s to around 50000 hectares by the mid 1990s has since recovered to above 60000 hectares by 2003/04. Of this total area approximately 62% is grown on the state farms and the remaining 38% on private farms though there is no significant difference in yields between the two sectors.

However, the beet processing facilities are now largely in private hands and located entirely within the Vojvodina province in the north of the country. Four state-owned factories still exist but have not been utilized in the last few years. At present the industry's performance

compares unfavourably with the EU-15 average both in terms of beet yield per hectare and in sugar extraction per tonne of beet, though in the late 1980s Serbian performance stood comparison with several EU-12 countries. Thus there is potential for improved performance but it would require substantial improvement in both on-farm and in factory technical performance.

Factory capacity in Serbia is currently large relative to sugar beet supply. Rationalisation to four or five modern factories should reduce unit costs to more competitive levels. However, the main determinant of the sector's future prosperity could well be its degree of access to the EU market as currently, sugar account for about 12% of total Serbian agricultural exports and is mainly to the EU.

1.4 Conclusions

Due to differences in statistical practice among the NMS and candidate countries and the absence of robust official data in the Western Balkan countries, one must interpret comparative data with some caution. Nonetheless it is clear that the enlargement has meant a net addition to the EU's sugar surplus and the future enlargement will exacerbate the surplus.

In several NMS there are reports of both the growing and the processing sides of the industry being in need of modernisation and restructuring as is the case also in candidate and pre-candidate countries. Beet growers along with some processing companies now face what could be a lengthy period of uncertainty as the EU's sugar regime is reformed and the internal price is brought down.

2 Bosnia Herzegovina

Introduction

In former Yugoslav times Bosnia and Herzegovina produced small quantities of sugar beet (161,129 t in 1991¹) and had one sugar producing plant in Bijeljina (capacity 400,000 tonnes of sugar beet per year). The low sugar import prices and high beet transport costs drastically reduced the competitiveness of this sugar plant and production stopped just before the war (1992-1995). In spite of the fact that plant was not damaged during the war, sugar production has never been restarted. The Bijeljina sugar plant is still state owned. In order to restart sugar beet processing it has to be privatised. The process of change in the state food industry is very slow and is done without any strategic plan. Therefore it is not easy to estimate how long it will take to privatise this sugar plant, but the most optimistic scenario is in two years (2007/08).

That means, today there is no any officially registered sugar beet production in B&H. All B&H sugar needs have to be satisfied by imports (some of which are re-exported by B&H merchants).

2.1 Sugar consumption

It is very hard to follow sugar consumption paths in B&H, because of disorganised official statistics. The official state census due in 2001 was not conducted and all data are more or less estimations. Moreover, it is possible not to report real output levels in order to avoid taxes. Administrative difficulties make it very hard to estimate real sugar consumption (households and processing) as well as to estimate sugar stocks that could be used for illegal trade.

According to FAOSTAT household consumption increased from 13.5 kg per capita in 1999 to 28.9 in 2001 and slightly decreased in 2002 at 28.5 kg per capita. Most recent B&H official sources estimate household consumption at 20 kg per capita. This average consumption per capita is low compared with EU-15 (36 kg per capita in 2002²).

Having in mind those official estimations basic calculations of sugar consumption in two sectors shows that household consumption is still significantly higher than processing (its share in total sugar consumption was about 70% in 2004 - see Annex)

Sugar usage by the food industry was estimated (on the basis of food industry output) to have increased from 8,210 tonnes in 1999 to 24,026 tonnes in 2004. However, the annual increase in sugar processing steadily declined from 44.8% (2000/1999) to 2.76% (2004/2003).

Bearing in mind the fact that average capacity utilisation in the food industry is about 30% and the process of privatisation is not yet finished, it is not expected that industrial consumption will increase significantly in future. The growth rate of sugar industrial use will follow the rate of economical development³.

¹ FAOSTAT

² FAOSTAT

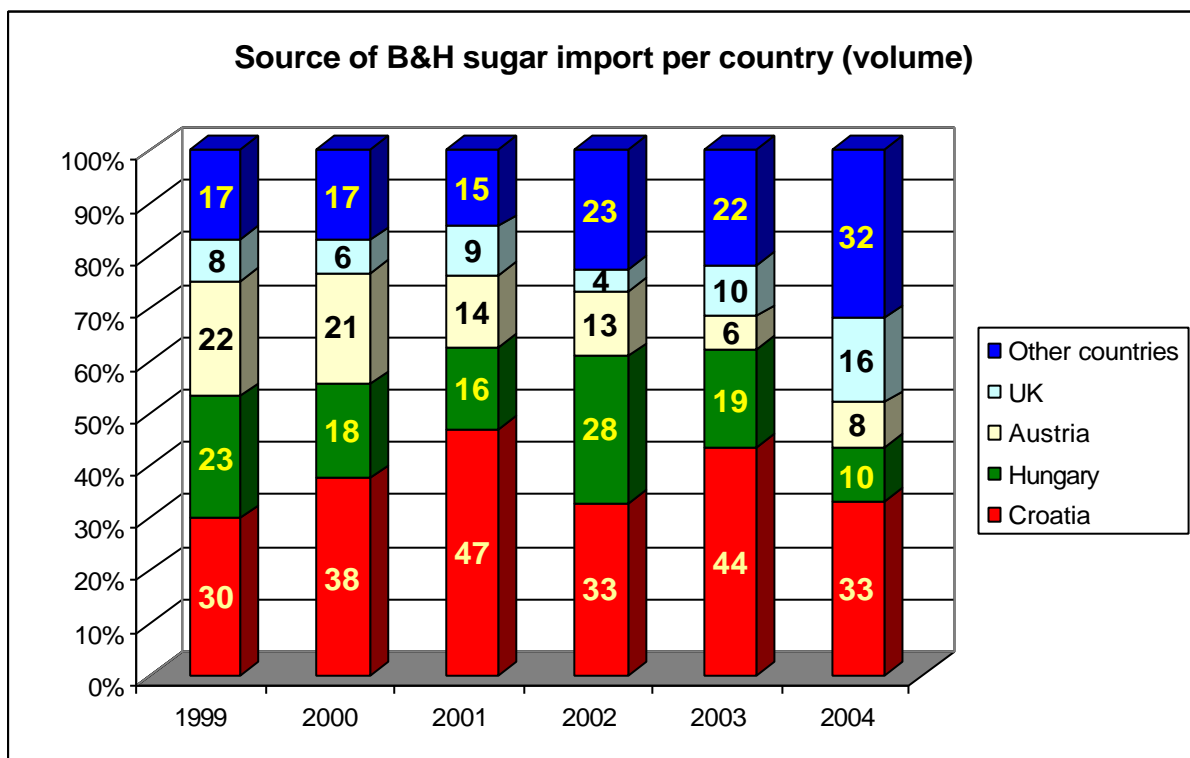
³ "...The food industry cannot be expected to compete on international markets for the time being. For the coming 5 to 10 years, the main task is to strengthen the competitiveness of local companies to be able to compete with imported food products. Some very narrow niche markets as processed fruit or speciality meat products may have limited export potential..." – Agribusiness study for B&H, SEED 2001, pg.2, www.esiweb.org/bridgers

2.2 Sugar import

All B&H's sugar needs have to be met by import. Hence the trend of sugar import increase from 129,471 t (39 million EURO) in 1999 to 213,758 t (65 million EURO) in 2004 is expected to continue. It is interesting that in 2004 sugar import was decreased by 17.8% comparing with sugar import in 2003. The explanation could be either reduced illegal re-exports to Serbia and Montenegro (due to loss of B&H's preferential position) or fewer non-registered exports to others countries or reduced possibilities to declare the imports of other goods as sugar in order to pay less customs duty, which is only 10% on sugar.

Traditionally around one third of the sugar is imported from Croatia another third comes from Hungary, Austria and the UK combined and the remaining third from all other countries.

Chart 1.



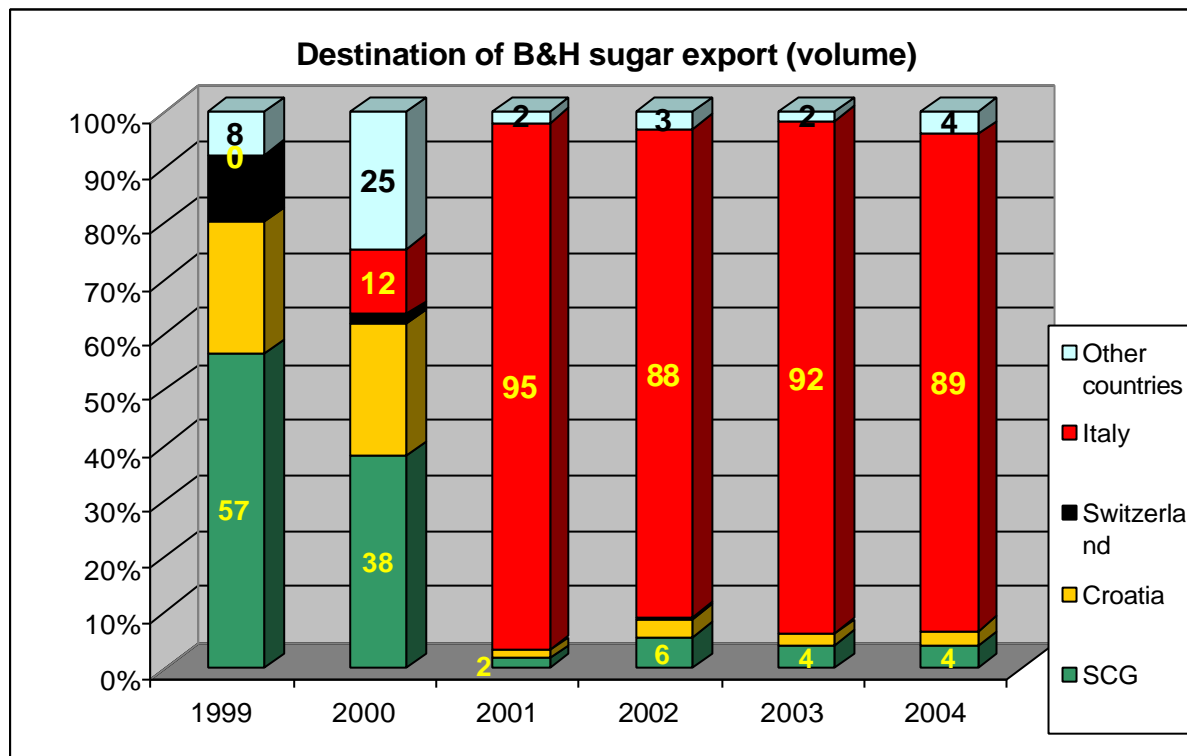
2.3 Re-exports

Bosnia and Herzegovina re-exports small quantities of sugar. From 1999 export was growing from 1,081 tonnes (667,117 EURO) up to 21,907 tonnes (2,450,528 EURO) and then in 2004 decreased to 17,647 tonnes, but value of export increased to 4.5 million EURO. The only explanation of this trend is increase of average sugar export price (from 111.86 EURO/t to 257.52 EURO/t).

Since the millennium around 90% of B&H's re-exports have gone to Italy with actual sending 15,700 tonnes in 2004 exceeding the approved EU quotas for B&H of 12,000 tonnes. Simple logic leads us to conclusion that B&H import sugar from Austria (EU) to re-export it to Italy (EU). However, the situation is more complex. As has been mentioned, B&H borders are not fully controlled. That is why the non-registered, non-traceable (black) sugar import from

neighbouring countries (Croatia and Serbia and Montenegro) is occurring. This non-registered low priced sugar then is re-exported at EU market. The traders are able to earn extra profit selling this sugar at very high EU prices which is misuse of EU funds. Therefore EU Commission has been forced to define B&H exports quota at 12,000 tonnes.

Chart 2.



Having in mind that B&H is not sugar producing country, huge negative sugar trade balance is expected. From 1999 to 2003 this negative sugar trade balance was increasing from – 38.4 mill EURO to –65.2 mill EURO. In 2004 it was –60.1 million EURO (decreased for 7.89% in comparison with 2003).

2.4 Policy issues

The B&H government is still trying to establish proper mechanism to register and control money, people, goods and services flow on the border-crossing. This institutional failure make possible to ensure significant economical benefits for small group of people⁴ and to misuse EU support.

The biggest challenge for B&H is establishment of good, and reliable monitoring of sugar use in order to fulfil the requirements of the EU sugar CMO. Sugar importing and exporting is not currently fully registered in the official statistics.

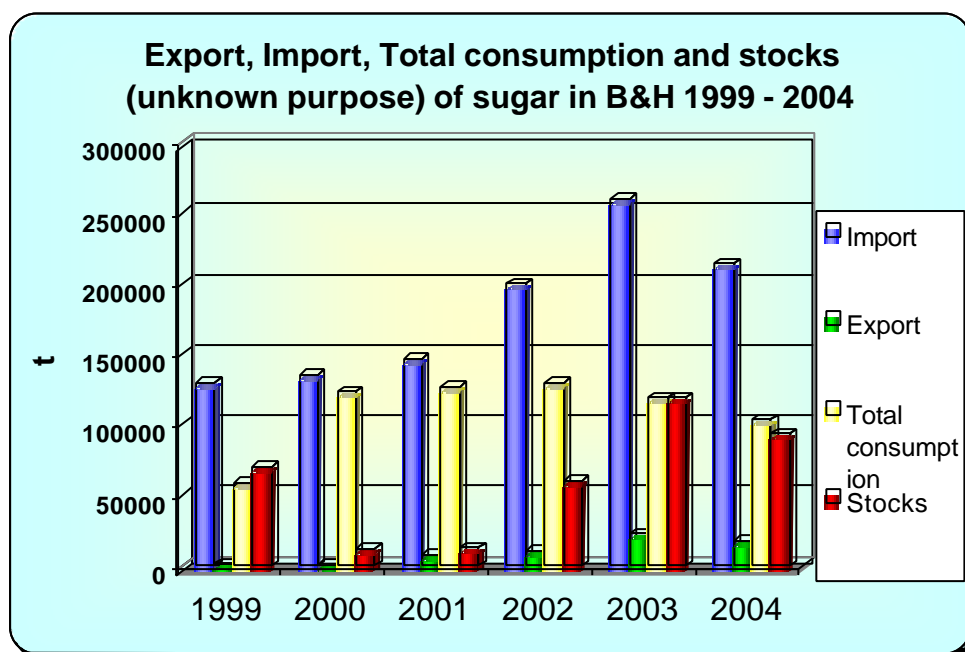
On the state level there is no co-ordination between the two Entities Agencies for commodity reserves appointed to make food consumption balances and provide the proper food (including sugar) stocks. This is another institutional failure preventing reliable sugar consumption monitoring and making possible different misuse of budgetary money. That is why one of the top priorities has to be establishment of State Agency for commodity reserves,

⁴ Caušević, F.: International support policies for South Eastern European Countries – Lessons (Not) Learned in B&H, www.esiweb.org/bridges/bosnia, 9.11.2005

which will be able to calculate proper level of commodity stocks (including sugar). The efficient level of sugar stocks can not be the same like annual total consumption as it is in two last years (see Chart 3.).

From 1st July 2005 B&H sugar exports to EU have been regulated by an import quota of 12,000 tonnes⁵. Having in mind that B&H is not a sugar producer this quota is fair enough and it is one more type of support to reach stability and economic prosperity.

Chart 3.



⁵ <http://europa.eu.int/comm/trade/issues/bilateral/regions/balkans/index.en.htm>

3 Bulgaria

3.1 Sugar consumption

Over the period 1999 to 2004 sugar consumption per capita remained relatively constant. In the figures shown in the annex consumption of households is shown. In addition to the sugar consumption, consumption of sugar products per capita over the period amounts to 1.3 kg. There is no data for sugar consumption out of home (restaurants, coffees, etc.) as well as in the processing industry.

3.2 Sugar import

Bulgaria has always been net importer of sugar. The import of non-refined cane sugar is under the lower tariff quota (a duty of 5% compared to MFN tariff for cane sugar of 50% and 184 euro/tonne for beet sugar). The amount of the quota is 250000 tonnes. Sugar imports have varied from year to year by about 15% without any clear trend. Nearly all the imports are of cane sugar, coming mainly from Cuba, Brazil and Salvador.

3.3 Sugar beet area

The area under sugar beet is very low, varying between 30 and 300 thousand hectares but showing a strongly declining trend. The sugar beet area was at the lowest level in 2003 (0.03 HA) and recovered to some extent in 2004. This is approximately 0.009% of the total arable land in the country.

3.4 Structure of production

Sugar beet production is estimated at 0.04% of the gross crop output and 0.02% of the gross agricultural output over the period. As seen from these figures sugar beet production is not important for the country. The increase in production of sugar beet in 2002 and 2004 could be attributed to the support to sugar beet producers provided by the State Fund "Agriculture" in the form of a price premium in 2002 and 2004. These payments per unit of output amounted to 12 leva per ton in 2002 and 15 leva (7.67 euro) per ton in 2004.

However, from the sugar processors' point of view, the cost of producing white sugar from imported raw cane sugar is much lower than that of processing it from sugar beet hence there is no real demand for sugar beet.

3.5 Yields

After the deviation of the yields at the beginning of the period they have stabilised at the 23 to 24 tonnes per hectare. This stabilisation at a relatively high level compared to the first years of the period could also be attributed to the support to sugar beet producers provided by the State Fund "Agriculture".

3.6 Sugar and isoglucose production

Over the analysed period sugar production in the country has been predominantly processing of imported cane sugar. In recent years sugar production has stabilised at the level of 190000 tonnes which is some 20% lower level than at the beginning of the period. It is also of note that most of the sugar processing enterprises are equipped for processing cane sugar and are not suitable for processing of sugar beet. The equipment and technologies in particular for sugar beet processing are out of dated and practically there is no investment in this field.

3.7 Exports

Practically there is no export of sugar.

4 Croatia

4.1 Sugar consumption

Croatia's sugar consumption needs are met from domestic sugar beet processing part of which comes from imported sugar-cane. Domestic sugar consumption is hard to calculate because of "soft" borders with Bosnia and Herzegovina. Total Croatian annual sugar consumption is estimated to be 150000 tonnes, with 2/3 as household consumption, and 1/3 going into industrial production of other products. Some sugar use competes with substitute artificial sweeteners (glucose syrup, highly fructose syrup etc.). Consumption per capita seems to have been fairly stable in recent times at an estimated 30 kg per year.

4.2 Sugar imports

Croatia's international trade in sugar has fluctuated considerably in recent years. Imports were highest in 2004 (62,898 tonnes) and exports in 2003 (162,317 tonnes). Higher white sugar imports meant reduced imports of sugar cane, which comes mostly from Brazil. Since 2002, foreign trade in sugar has produced a positive balance (the highest one was 77.4 million euro in 2003). In 2004, the main sugar imports came from Germany (7.8 million euro), Belgium (2.9 million euro), Austria (2.8 million euro), France (696 335 euro) and Poland (536 620 euro).

Table 6 Sugar (originated from sugar beet) imports in Croatia in 2004.

Country	Quantity (t)	Value (EUR)
Germany	30644	7830680
Belgium	11351	2859421
Austria	11015	2778039
France	2852	696335
Poland	2262	536620
Other countries	4774	1376420
Total imports	62898	16077515

Source: Statistical Yearbook, Republic of Croatia, Bureau of Statistics

In 2004 Croatia imported from Brazil 42129 tonnes of sugar originated from sugar cane. The value of the imported sugar was 7.6 million euro.

4.3 Sugar beet area

Sugar beet occupies some 1.5 % of Croatia's cultivated area and accounts for one third of total value of industrial plant production, as well as 1.2 % of total agricultural production (without processing which adds another 1%).

Table 7 Sugar beet production 1999-2003

	1999	2000	2001	2002	2003
Harvested area (ha)	27847	20985	23757	25149	27327
Production (t)	1113969	482211	964880	1183445	677569
Yield (t/ha)	40.00	23.00	40.60	47.06	24.80

Source: Statistical Yearbook, Republic of Croatia, Bureau of Statistics

The sugar beet area has risen from 20,985 ha in 2000) to 27,327 ha in 2003. Just over half the area (54% in year 2003) is on family farms, averaging approx. 10 ha of sugar beet, but these are fragmented, causing problems during fieldwork. Most of the sugar beet is grown in the Panonian region, a significant part of which was affected by the war and still suffers very high unemployment, which would be even higher if the sugar beet area fell.

4.4 Structure of production

Some 2000 family farms share half the country's sugar beet area and production.

Croatia has three companies involved in producing and processing sugar beet: VIRO-Virovitica with capacity of 6,000 tonnes, Secerana Zupanja with same capacity and Secerana Osijek with capacity of 6,500 tonnes. Secerana VIRO is privatised, while the other two are in process of privatisation.

4.5 Yields

Sugar beet yields and production depend upon specialist machinery and technology, producer's technical knowledge and climate conditions during crucial growing periods. Sugar beet yields averaged 35.6 tonnes per hectare from 1999 to 2003. The highest yield was in 2002 (47.06 tonnes) and lowest in 2000 (22.98 tonnes). Such large fluctuations result from inadequate agricultural techniques, and poor technology as well as climatic factors. Sugar production depends also on the sugar content of the beet. The average sugar content in the period 1999-2003 amounted to 15%.

4.6 Sugar and isoglucose production

Total sugar production depends on quantity of beet, sugar content and sugar refinery efficiency. Average annual sugar production from sugar beet was 114,974 tonnes for the years 1999 to 2003. The highest production (171,613 tonnes) was in 2002 and the lowest in 2000 (56,729 tonnes). Total sugar refining capacity exceeds Croatia's needs, which indicates that increased production could only be for export.

4.7 Production cost and competitiveness

In analyzed period there were not significant oscillations in costs level and structure for sugar beet production. The biggest changes that affected sugar beet producer's incomes were observed in sugar beet production by hectare and in digestion level.

Sugar beet calculation is based on 40 t/ha production, 15% digestion, 17 % impurities and price of 36.0232 euro/t. Total income is 1,794.7 euro, and total variable cost was 820.5 euro along with rented mechanization costs (319.00 euro) and private mechanization costs (264.05 euro) return was 390.58 euro/ha.

4.8 Exports

Croatia's Stabilisation and Association Agreement with EU allows for profitable sugar exporting by Croatian producers, thus the question of the size of Croatia's A and B quotas will be an important element of the Accession negotiations. In the last 3 years, sugar exports have become significant 65000 tonnes in 2002, 162000 tonnes in 2003 and 49000 tonnes in 2004. In value terms the best year for sugar exports was 2003 (106.1 million euro), when Croatia its largest trade balance in sugar (77.4 million euro). In 2004, the biggest export market by far was Italy (31.4 million euro), with Slovenia (494875 euro), Hungary (333030 euro), and Bosnia Herzegovina (251705) euro) trailing far behind. It is important to

emphasize that total sugar exports from Croatia into EU amounts to less than 1% of EU sugar production.

Table 8 Sugar exports from Croatia in 2004.

Country	Quantity (t)	Value (EUR)
Italy	47215	31444175
Slovenia	733	494875
Hungary	506	333030
Bosnia Herzegovina	404	251705
Other countries	1	4344
Total exports	48859	32528129

Source: Statistical Yearbook, Republic of Croatia, Bureau of Statistics

4.9 Policy issues

To date the sugar beet sector Croatian has made insufficient preparation for EU Accession. Expert's assessments show that currently sugar beet and sugar production is not competitive at prevailing world prices because of relatively low yields, low sugar extraction rates, high production costs and a fragmented, economically unsustainable, industry. Consequently, the question arises whether Croatia may and should secure long-term support for this sector, or it should use the land for other purposes.

If the Croatian sugar sector is to compete in the longer term, there will need to be a dramatic improvement in efficiency both in the field and in the factory. Croatia should speed up structural changes (increase the average production area by producer; reduce the number of producers, consolidate sugar processing only in one factory) adopt more modern equipment and techniques such as improving land drainage and develop its market infrastructure.

5 Cyprus

Cyprus does not produce sugar and does not export or re-export sugar.

The imports of sugar by category for the years 1999-2004 are shown in the table below:

Table 1: Imports of Sugar 1999-2004

H.S.Code	Commodity	1999		2000		2001		2002		2003		2004	
		000 kg	000 £	000 kg	000 £	000 kg	000 £	000 kg	000 £	000 kg	000 £	000 kg	000 £
1701	Cane or beet sugar and chemically pure sucrose in solid form	28,980	4,332	28,567	4,571	29,314	5,792	30,333	5,168	39,517	5,349	38,657	5,224
1701-11	Raw Sugar-Cane	491	98	1,027	214	3,067	713	4,070	816	2,084	368	16	13
1701-12	Raw Sugar-Beet	172	23			619	119	1903	317	3226	433	134	19
1701-91	Refined sugar in solid form containing added flavoring or coloring matter	5	4	18	23	25	26	36	36	128	33	210	70
1701-99	Refined sugar in solid item	28,312	4,207	27,522	4,334	25,603	4,934	24,324	3,999	34,079	4,515	38,297	5,122

There are no figures for the per capita consumption of sugar in Cyprus

6 Czech Republic

6.1 Sugar consumption

Development of sugar consumption for human nutrition in the Czech Republic (kg/person/year)

1999	2000	2001	2002	2003	2004 estim.
37,1	36,1	39,0	41,5	43,0	45,0

Source: Czech Statistical Office

Notice:calendar year

During the last period the consumption of sugar for human nutrition significantly increased. The volume of sugar consumption reflected level of price. Pre-Accession, there was some evidence of consumers buying up sugar in the expectation of price increases post-Accession.

6.2 Sugar import

Development of sugar import volume (incl. sugar substitutes) is reported in detail in the Annex table.

Import of sugar to the Czech Republic (000 tonnes)

1999	2000	2001	2002	2003	2004	2005
54,1	48,3	60,2	36,3	27,7	33,5	15,8

Source: Czech Statistical Office

Notice :calendar years; year 2005 from 1.1.to 30.6. 2005.

During recent years, imports of sugar from EU 15 increased from 20% of total import in 1999 to 935% in 2004,. Post-Accession, Slovakia. has replaced Poland as the largest trade partner.

6.3 Sugar beet area

From 1989 to 2000, the area of sugar beet diminished as a result of the impact of Czech agriculture restructuring and instability in the sugar market. In the past two or three years, the area has been slightly reduced due to higher yields and a limited sugar quota.

6.4 Structure of production

In 2001 there were 1 000 producers of sugar beet with average area 80ha. In 2004 there were 915 producers with average area 75 ha. In the 2005/06 campaign only 11 sugar factories will be in operation and we expect a further decrease to the 4 or 5 factories.

6.5 Yields

Intensity of sugar beet production and sugar production are increasing. Sugar yield development in the Czech Republic (t/ha) is reported in the table.

1999	2000	2001	2002	2003	2004 estimate.
6,70	7,08	6,32	7,19	6,66	8,03

Source: State Agricultural and Intervention Fund, Ministry of Agriculture, Czech Statistical Office

Since 1989 there is produced very efficient variety of sugar beet with high content of sugar. At the same time the modernisation of sugar factories increased the productivity of work and recovery factor of sugar from sugar beet.

6.6 Sugar and isoglucose production

Isoglucose is not produced in the Czech Republic. Development of sugar production is in Annex table. After the privatisation and restructuring of Czech agriculture, surplus sugar was exported but the export price was lower than the production costs. This led to a decline in the sugar beet area and lower sugar production.

6.7 Production cost and competitiveness

The costs per tonne of sugar depend on the sugar beet yield and the sugar content. This reality has been reflected in the rate of sugar beet profitability.

Development of sugar beet costs in the Czech Republic (legal persons)

Indicator	Unit	1999	2000	2001	2002	2003	2004
Costs total	CZK/ha	37 495	36 473	39 401	41 125	37 267	43 488
Costs of main product	CZK/ha	37 495	36 473	39 401	41 125	37 267	43 488
Yield	t/ha	45,55	47,89	48,79	48,89	43,59	45,93
Costs of main product	CZK/t	823	762	808	841	855	947
Revenues	CZK/ha	36 032	49 526	45 286	43 905	40 449	65 073
Average price	CZK/t	799	1 038	961	899	928	1 410
Rate of profitability	%	-2,9	36,2	18,9	6,9	8,5	48,9

Source: FADN

The rate of profitability is calculated as cost per ton/price per ton.

6.8 Exports

The detailed information is set out in the Annex table. The overview is presented in the followed table.

Indicator	1999	2000	2001	2002	2003	2004	2005
Export total (000.t)	18,9	72,5	144,2	87,9	34,1	190,0	119,7
of which to EU(000.t)	5,3	19,1	10,4	11,3	3,6	151,1	74,4
CZK/kg	9,82	9,17	9,59	8,74	9,07	17,46	15,13

Source: CSO

During the monitored period the export of sugar increased especially after year 2000 as a result of the introduction of minimum prices for sugar beet and sugar, which raised the domestic price and the industry geared up in anticipation EU Accession. ,

6.9 Policy issues

The switch-over to the CAP rules occurred without problems.

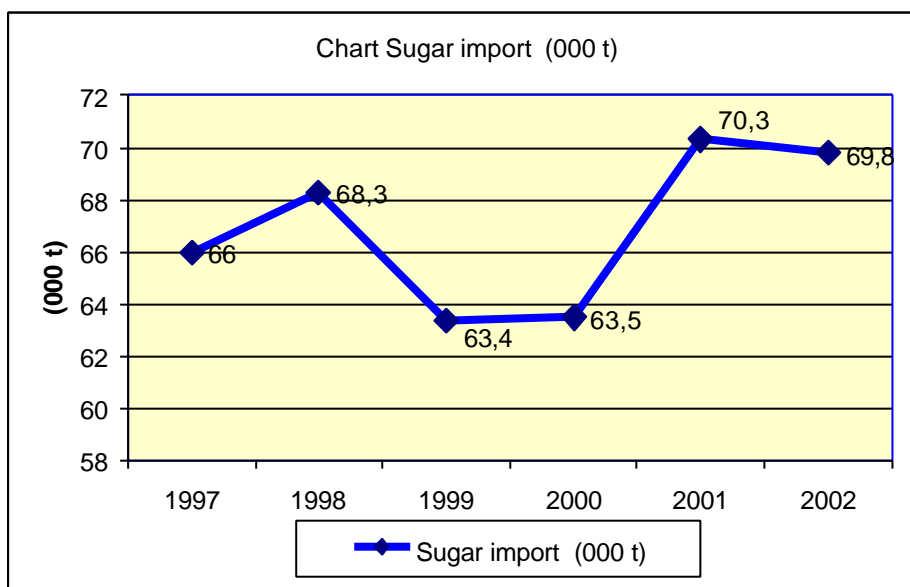
7 Estonia

Non significant sector for Estonian agriculture

7.1 Sugar consumption

Last years (2002-2003) average per capita consumption was 33.7 kg. (pure sugar)

7.2 Sugar import



Last years (2001-2002) sugar import indicated increasing tendencies

Import per capita was 51.3 kg (2002)

8 Hungary

8.1 Sugar consumption

Per capita consumption has declined over recent years, falling from 38.2 kilograms per head in 1990 to 32.6 kg in 2002. This resulted from lower demand by both consumers and manufacturers who now use more isoglucose and artificial sweeteners for their products, due to the low transport cost and input prices.

8.2 Sugar imports

The sugar imports into Hungary have risen from around 15,000 tonnes in 2000 to almost 80,000 tonnes in 2004; it is a huge increase. The majority of import is now of refined rather than raw sugar. :

8.3 Sugar beet area

After fluctuating in the 1990s (between 50,000 and 120,000 hectares), the sugar beet area has now become more stable, averaging 57,537 hectares from 2001 to 2003. However, in 2004, due to adoption of the sugar CMO, 64,616 hectares were planted with sugar beet. The share of sugar beet in total sown area has been increased from 1.3 to 1.5 per cent. Several individual producers increased the sugar beet area over the 25 per cent ceiling. The main areas can be found in the southern-east and in the western part of the country.

8.4 Structure of production

In Hungary, there are 5 main factories (located at Szolnok, Szerencs, Kaposvár, Petoháza, Kaba) in the hands of 3 groups: Nordzucker, Agrana and Eastern Sugar. The combined capacity of these companies is 37,000 tonnes. Their demands for sugar beet are met by 752 farms that have the right to deliver. However, the number of producers is higher (809 farms). On the whole, sugar beet is grown on above-average sized farms. The producers can be classified into two main groups: the large ones (above 1000 hectares) and the smaller ones. The share of sugar beet has increased from 2 to 3.5 per cent in agricultural output. Due to the new proposals, for reform of the sugar CMO, there could be great structural changes in the sector as only the efficient survive.

8.5 Yields

The average yield in tonnes of sugar beet per hectare was around 42-43 in 2001 and 2002, then came a huge fall to 35.12 tonnes in 2003 and then an increase in 2004: 54.3 tonnes. This fluctuation is mainly caused by weather. After the reform, yields below 50 to 55 tonnes per hectare will be barely profitable. In a European comparison, Hungarian yields are lower than in many countries but higher than in Finland, Ireland, Italy and all new member States.

8.6 Sugar and isoglucose production

The sugar production of Hungary is fluctuating, but it is around 400,000 tonnes of refined sugar in an average year. The year of 2003 was disastrous for the whole of agriculture including the sugar sector, with only 250,000 tonnes being produced. However, 2004 was a record year with a total sugar production of around 500,000 tonnes. This year (2005) also seems to be fine. Under the current conditions, Hungary would normally maintain a production level of 400,000 tonnes.

Hungarian isoglucose production was around 140,000 tonnes yearly between 1997 and 2001, and the quota is a little below that. Isoglucose is produced in the most modern factory of

Europe, in Szabadegyháza, which corresponds in size to two Hungarian factories producing the white sugar equivalent output. At present, maize is used for isoglucose production.

8.7 Production cost and competitiveness

The production cost of sugar beet is around 300,000 HUF per hectare (2002: 299405 HUF, 2003: 301,329 HUF, 2004: 305,309 HUF with a 20-30% deviation).

This corresponds to around 1200 Euro/hectare. The Commission's proposal to set the average price at 25.08 Euro/tonne would certainly drive many Hungarian producers out of sugar beet growing as only 35% of them could cover their production costs. According to our calculation, a minimum price of 30 Euro/tonne is needed to supply the needs of the processing capacities. Processing companies would demand the current supplies at a price not lower than 450 Euros/tonnes (refined sugar).

However, the current location of sugar beet producers corresponds to a situation when 12 sugar plants were operating. Since 1997, 7 plants were closed but the producer communities are still supplying; and the transport cost is rather high.

In contrast to other sectors like milk, the government did not regulate the allocation of producer rights but empowered the professional organisation, the Sugar Product Council, where both sugar beet producers and processing companies are represented, to decide about distributing sugar beet production rights. In 2002, the producer rights were distributed mainly to the previous structure, but the rules of buying and selling were not established. Producers would prefer to have transactions, but sugar plants rejected it. Due to this failure, the structure of beet suppliers is frozen since 2002. Far and inefficient producers also have a small return at the current prices; they implement their producer rights as they can not sell it. A rational allocation of sugar beet suppliers would result in a significant decrease of transport cost, which is now 30-40 euro/tonne (refined sugar).

The average size of a sugar plant in Hungary is about 20 per cent lower than in EU-15. However, it is double or nearly double than in Poland, Czech and Slovak republics. In the Product Council's estimations, Hungarian processing costs (230-250 euros per tonne, refined sugar) are much lower than in EU-15 (which is estimated at 270-300 euros per tonne)⁶.

8.8 Exports

Hungarian sugar export has fluctuated in the recent years. In 2000, it was around 30,000 tonnes, in 2001, around 12,000 tonnes, in 2002, 82,000 tonnes. From 2002 we can see a permanent and huge decline: 2003 with its 32,000 tonnes and 2004 with 4,000 tonnes. The amount of raw sugar export has been negligible since 1999, when it was still 5 per cent of the total.

⁶ CUB (2005): The situation of the Hungarian sugar beet sector in the light of the EU reform (in Hungarian)

8.9 Policy issues

Sugar was one of the few agricultural sectors which offered benefits for Hungary. In the first two years after Accession producers and processors were indeed satisfied. However, the Commission's proposal has caused a huge uncertainty in the market. Hungarian actors do not have a clear strategy to adjust. The possible response to the reform is quite uncertain: all owners of sugar plants are foreigners, who certainly prefer to close the plant rather in Hungary than in their mother country. Their strategy is not clear for Hungarian actors in this regard. Management certainly would have interest to maintain the plants, like sugar-beet producers. Nevertheless, the Sugar Product Council has analysed the situation considering the possible responses on the implementation of the reform. The closure of two plants also was considered. In these talks it was assumed that in the worst case each of the three groups would maintain one factory. If Agrana should close one, it would be Petoháza, which is much bigger than Kaposvár, which is supplied by large agricultural enterprises. Petoháza is supplied by individual farms, which are less influential. At the same time, for the plants it is easier to contract less but big farms than more but small suppliers. Nordzucker has other points to consider: Szolnok factory is newer than Szerencs, but suppliers produce on worse area with lower yields; thus certainly Szerencs would be maintained.

Anyway, closures will be decided in an international context. The Product Council also considered the possible responses to increase the competitiveness. In this context, the most important improvement can be a rational reallocation of production rights. In labour, relatively small achievements can be realised, because in the production field it should be offset with high cost of technical improvements; however administration costs could be reduced. Depreciation is more favourable than in EU-15, but the same as in NMS.

9 Lithuania

9.1 Sugar consumption

Sugar consumption in Lithuania amounts to 100000 tonnes.. Lithuania's sugar production quota is 103000 tonnes, thus satisfying internal consumption. To produce the sugar quota, producers have to process 763000 to 800000 tonnes of sugar beet. From 2001 to 2003 sugar consumption per capita decreased by 20 %.

9.2 Sugar import

Lithuania only imports small quantities of high quality white sugar – all other sugar consumption in the country is satisfied by local producers

9.3 Sugar beet area

Over 23300. ha of sugar beet area were grown in 2004. According to provisional data from the national paying agency, 21000 ha of sugar beet was grown in 2005. Since the year 2000 the sugar beet area has decreased about 25%.

9.4 Structure of production

In 2004 40% of the sugar beet area was on large farms with more than 45 ha of sugar beet, 28% of the area was on farms with 10 to 45 ha of beet and 32% was on small farms with less than 10 ha of beet.. Only 3 % of the farms growing beet were large farms, 12% medium-sized farms and 85% small farms (as defined by the areas of sugar beet above).

Lithuania had two companies and three sugar producing plants in 2004. Danish company "Danisco sugar" had two factories in Kedainiai and Panevezys, and the Lithuanian company "Arvi cukrus" had a plant in Marijampole. The "Danisco sugar" plants both had 700 employees. The Marijampole plant had about 400 employees.

9.5 Yields

Average sugar beet yields during the period of 2000 to 2004 increased from 31,9 tonnes/ha to 38,8 t/ha, but this was due mainly to favourable climatic conditions for growing sugar beet as occurred in Western Europe. The sugar beet growing period in Lithuania lasts for about 136 days, while in Western Europe it lasts for 160 to 220 days, hence Lithuanian yields are considerably lower than in Denmark, Germany or France. The average sugar content of the beet was 13.5% to 14.5%.

9.6 Sugar and isoglucose production

Lithuania had 103000 tonnes of sugar production quota in 2004. of which "Danisco sugar" had 81000 tonnes. and actually produced 83000 tonnes of sugar, 23000 tonnes molasses and 9000 tonnes of sugar beet pellets. The Lithuanian sugar producing company "Arvi cukrus" had 22000 tonnes of sugar production quota and produced 28000 tonnes.,

Production cost and competitiveness

Lithuania at present is less competitive than Denmark, France, Germany, Belgium, Netherlands and other EU countries in sugar production. Although at the present sugar beet price beet growing is still profitable compared with growing alternative agricultural products, if the proposed reforms, entailing a fall of 42% in the beet price, are carried through, Lithuanian sugar beet growers would have to cease their production.

9.7 Exports

Lithuanian sugar and sugar by-product exports fell from 2001 when sugar exports amounted to 41700 tonnes, to 17700 tonnes in 2002 and 17300 tonnes in 2003 before rising to 38400 tonnes in 2004.

9.8 Policy issues

The current sugar CMO ensures stable and sufficient incomes for sugar beet farmers and processors within the European Union. However, under the Commission's proposal of 22 June 2005, these incomes will be drastically cut and sugar beet and sugar production in some EU regions may be expected to cease. Lithuania's sugar sector, like those of the other new member states, will face grave consequences in the form of a substantial fall in sugar beet and sugar production and a fall in jobs not only in the sugar sector but also in services dependent upon the sugar sector. This is in sharp contrast to Lithuanian producers' legitimate expectations from EU Accession.

10 Poland

Sugar beet production and processing have a long tradition in Poland. Poland is a net sugar exporting country with total production of around 2 million tonnes and consumption of around 1.6 million tonnes. Thus net exports amount to some 20% of domestic production. Sugar beet accounts for 2 % of total agricultural land utilisation. It is concentrated in several locations/regions with best soil and climatic conditions. Since the mid-1990s, agricultural policy for the sector has been aligned with the instruments of the EU sugar CMO, including high market price support and production quotas.

10.1 Production of sugar beet and its structure

In 2004 the area of sugar beet amounted to 293000 hectares, which is 21.5% below the 1999 level. This decrease was accompanied by an increase in yield from 3.38 tonnes/ha in 1999 to 4.27 tonnes/ha in 2004. The volume produced in 2004 amounted to 12.5 million tonnes which is similar to that in 1999 (12.6 million tonnes). Over that period there were fluctuations in the volume produced attributable mainly to changes in weather conditions (**table 1 in annex**). During that period, the average sugar content of the beet was 17.1% while sugar yield (effectively extracted sugar) averaged 15.3%.

Sugar production in 2004 amounted to 2 million tonnes. Over the last seven years, production dropped substantially below 2 million tonnes, only in 1999 and 2001 primarily due to adverse weather conditions.

Preliminary estimates of the sector performance in the marketing year 2005/06 indicate that the sugar beet area was 270000 ha, which is 7.5% below the level of the previous year. It is estimated that average yield will amount to 43 tonnes/ha, thus the total volume of sugar beet production should reach 11.6 million tonnes and with an effective sugar yield of 15.5% the resulting sugar production will be 1.8 million tonnes.

10.2 Sugar consumption

Out of the 2 million tonnes of domestic sugar production in 2004 1.65 million tonnes was utilised domestically. Direct (household) consumption accounted for 745000 tonnes, while 860000 tonnes were processed and 45,000 tonnes utilised in other ways. The total (including processed products) per capita consumption of sugar equalled 40.5 kg. The following tendencies have occurred since 1999: (i) increase in total domestic utilisation (from 1.58 to 1.65 million tonnes), (ii) decrease in direct (household) consumption (from 800000 tonnes down to 740000 tonnes), (iii) increase in the volume of sugar used in processing (from 735000 up to 860000 tonnes). At the same time per capita consumption decreased from 42.5 kg to 40.5 kg.

10.3 Foreign trade

Over the period 1999 to 2004 average yearly exports amounted to 358667 tonnes and the average yearly import amounted to 59500 tonnes. In the calendar year 2004 Poland exported 428000 tonnes of sugar and imported 44000 tonnes. The lowest volume of exports was in 2002, some 208000 tonnes. Traditionally the Commonwealth of Independent States (former Soviet Union's republics) represented the major outlets for Polish sugar exports, taking 71% of Polish exports in 2003. However in 2004, the first year of Poland's EU membership the CIS share declined to 48%, whilst the share of EU-15 countries increased from 5.7% to 38%.

In recent years exports of processed products containing sugar, such as chocolates, cakes, ice-creams, jams and processed fruits have been systematically increasing. The value of these exports increased in 2004 to 105000 tonnes (sugar equivalent) valued at 505.9 million Euro. In this product group Poland is a net exporting country (value of imports amounted to 241.3 million Euro in 2004). The most significant increase in exports in 2004 was reported for products containing cocoa. The value of exports of this product group to the EU-15 more than doubled from 55.4 million Euro in 2003 to 113.5 million Euro in 2004.

10.4 Structure of sugar beet production

The Polish sugar sector has undergone significant restructuring in both sugar beet production and processing. In 2004 there were 78000 farms growing sugar beet. Yet in 1999 there were 137000 farms, while in 1993 there were as many as 295000 farms. Since the fall in the total sugar beet area is less than that of the number of farms, there has been a steady increase in the sugar beet area per farm (from 2.71 ha in 1999 to 3.75 ha in 2004). Taking into account that the average yield increased from 3.38 tonnes/ha of sugar beet in 1999 to 4.27 tonnes/ha in 2004, the estimated production of sugar beet per farm has increased by 75%, from 9.16 to 16 tonnes. This structural change is mainly attributable to the: (i) ongoing restructuring at the processing level (see the text below), (ii) technological change, (iii) price/cost pressure.

10.5 Structure of sugar beet processing

In the marketing year 2004/05 sugar beet processing was carried out in 43 factories. The Institute of Agricultural Economics in Warsaw (IERiGZ) estimates that in 2005/2006 there will be 40 factories operating. The number of processing factories has fallen from 76 factories in 1999. This decline has been driven by rationalisation of production and has improved the efficiency of the sector. The factories that closed were those with outdated technology and the smallest scale of operation. Only 17 of the remaining factories can be categorised as large scale and they still are much below the size typical in EU-15 countries (**table 2 in annex**).

Foreign owned companies play a major role in the sector: three German (Nordzucker, Sudzucker and Pfeifer und Langen) and one British (British Sugar Overseas) together accounted for 60% of sugar production in the marketing year 2004/05. The Polish Sugar Company (Krajowa Spółka Cukrowa) accounts for the remaining 40%. This ownership structure originates from the privatisation process carried out in the mid-1990s. The foreign owned factories are concentrated in the west and south regions of the country while the Polish Sugar Company's factories are located in the central, north and east regions. Details of the sector structure: (i) number of processing factories, (ii) sugar production and (iii) the length of the processing period for each of the above companies in 2001/02 and in 2004/05 is presented in the **table 3 in annex**.

10.6 Production of isoglucose

Isoglucose has been produced in Poland since 1998 by one enterprise (Cargill) in one factory located in south of the country. Production in the years 1999 to 2004 is presented in **table 9 in annex**. Before EU Accession the production quota amounted to 62200 tonnes but since the 2004/2005 season, in accordance with the Act of Accession, it was reduced to 26780 tonnes. In Poland isoglucose is produced from wheat. In 2004 exports of isoglucose amounted to 6100 tonnes, mainly (3400 tonnes) to Croatia, while imports were 9100 tonnes - from Germany (5000 tonnes), Slovakia (3200 tonnes) and Belgium (800 tonnes).

10.7 Indications of production costs and competitiveness

At the beginning of Poland's economic transformation, the sugar sector was characterised by significant fragmentation and low concentration of production both at the farm/sugar beet level and in processing. To improve its international competitiveness the sector required improvements in scale and technical efficiency and upgrading of technologies. The privatisation process which started at the mid-1990s was meant to provide for progress in this regard.

As in the EU-15, the sugar sector in Poland, to stay profitable, required substantial subsidisation in the form of market price support based on the quota system. While in the EU the internal sugar price was maintained at the level which on average is three times the world price level in Poland pre-Accession the price was twice as high as the world market price. Over recent years the restructuring process resulted in improvement in several technical and technological parameters, suggesting a substantial progress in production efficiency and thus in cost competitiveness. This, in particular, includes:

- At the farm level (**table 1 in annex**):
 - o Increase in the yield of sugar beet,
 - o Increase in the average area of sugar beet farm (scale),
- At the processing level:
 - o Expansion of the period of processing and volume produced (scale),
 - o Decrease in average energy use,
 - o Decrease in losses of sugar beet during processing,
 - o Reduced numbers employed, thus reducing labour costs (**table 6 in annex**).

The above improvements have been mainly achieved by the concentration process. At the farm level the number of farms producing sugar beet declined by two thirds since the mid-1990s. and by half since 1999.

Similarly, sugar beet processing is now carried out in 43 factories compared to 73 in 1999 and 93 in 1994. This process of concentration is not finished yet and there are still substantial efficiency improvements to be made, particularly in the processing efficiency of the Polish Sugar Company.

An analysis of the investment activities carried out by the sugar companies operating in Poland suggest that they were rather moderate and only focused on the indispensable replacement investments, usually associated with the movement of production to a smaller number of locations. Since 1988 the rate of investment (as measured by the relation of investment expenditure to the value of depreciation) was only half of that for the whole agri-food industry as a whole..and in the years 1999-2003 (except for 2001) investment remained below depreciation . Large scale modernisation expenditure has been postponed awaiting reform of the EU sugar CMO.

Comparisons with other EU member states suggest the Polish sugar sector has the following:

- significant cost competitiveness in sugar beet production. For example recent estimates by IERiGZ suggest that variable cost per ton of sugar beet correspond to about 80% of that in Germany (**table 4&5 in annex**);
- lower technical efficiency in sugar beet processing, taking into account relatively higher labour intensity and, in particular, output per factory (scale efficiency)

(**tables 7 in annex**). However, these technical deficiencies are, to a large degree compensated by lower labour and other unit cost in Poland, including effects of movements in the exchange rate;

- relatively high joint cost competitiveness of sugar beet production and processing. Recent analyses by the EU Commission and F.O. Licht's International Sugar and Sweetener Report (No 26), of the likely effects of the Commission's reform proposals suggest that Poland remains competitive above the sugar price level of 425 to 475 Euro/t., similar to the sugar sectors in Germany, Great Britain, Austria and Sweden.

10.8 Policy issues

Since the mid-1990s, Poland's sugar policy has been aligned to the EU wine CMO, including high market price support (roughly double the world market price) and production quotas: A – matching domestic consumption, and B – destined for subsidised export. The Act of Accession provides for A quota amounting to 1.58 million tonnes and B quota of 91930 tonnes (**table 8 in annex**).

Poland's EU accession and implementation of the CAP have resulted in significant improvements in the sector's financial situation.. According to IERiGZ estimates, in 2004 the sugar industry's profits reached 10.7% of turnover compared to a loss of 11.4% in 2003. This enabled enhanced modernisation efforts - in 2004 the rate of investment (relation of investment expenditure to depreciation) rose to 1.29 from 0.87 in 2003.

Similarly, procurement prices of sugar beet within A and B quotas in 2004 corresponded to relevant prices in other EU countries. The average procurement price in 2004 amounted 187 PLN/t (40-45 Euro/t), which was 50% up from 2003. Given the decrease in prices of grains, including wheat, sugar beet production remains one of the most profitable crops in Polish agriculture.

The CAP is being regarded by the sector practitioners as a major factor in the technological catching up process, which is necessary to match competition from the sugar industries of EU-15 member states. The official Polish position on the Commission proposed sugar reforms supports the main reform mechanism namely reducing market price support and giving compensatory direct aid to sugar beet farmers. At the same time Poland criticised reform solutions which determine the allocation of sugar production in accordance with current cost competitiveness at sugar beet processing rather than sugar beet production.

Statistical Annex

Table 1

Number of sugar beet producers

		1999	2000	2001	2002	2003	2004	2005
Number of farms growing sugar beet	units	137,1	111,9	99,4	91,5	85,9	77,9	70,1
Sugar bet area	000 ha	372	333	317	303	286	292	270
Sugar beet area per farm	ha/farm	2,71	2,98	3,19	3,31	3,33	3,75	3,85

Source: Central Statistical Office and Institute of Agricultural Economics

Table 2

Number of processing factories

		1999	2000	2001	2002	2003	2004	2005 (estimates)
Number of processing factories	units	76	76	76	65	57	43	40
Sugar production per factory	000 tons	23,8	26,5	20,3	31	34,1	46,6	45,0

Source: Institute of Agricultural Economics

Table 3

Ownership structure of sugar beet processing industry in Poland

Sugar processing companies	Number of factories		Production of sugar		Period of processing per year	
	Units		000 tons		Days	
	2001/2002	2004/2005	2001/2002	2004/2005	2001/2002	2004/2005
Krajowa Spółka Cukrowa	27	20	629	799	51	66
Slaska Spółka Cukrowa	16	12	244	518	48	85
Sudzucker	6		105		40	
British Sugar Overseas	10	4	153	207	66	91
Nordzucker	6	2	137	159	55	93
Pfeifer und Langen	11	5	273	320	51	100

Source: Institute of Agricultural Economics, Rynek Cukru, 25/2005

Table 4

Comparison of sugar beet production in Poland and EU-15 (2003/2004)

	<i>Unit</i>	Poland	EU-15
Production area	<i>000 ha</i>	297	1704
Number of farms	<i>000</i>	83	224
Average sugar beet area	<i>ha</i>	3,6	7,6
Average sugar beet yield	<i>t/ha</i>	40,3	55,3
Average sugar yield per ha	<i>t/ha</i>	6,48	8,66

Source: J.Rybski, *Sugar industry in Poland- condition and perspectives*, (Gazeta Cukrownicz 2/2005)

Table 5

Comparison of variable costs of sugar beet production in Poland and Germany in 2004

	Poland	Germany	
		PLN/ha	
Yield (t/ha)	41	45	60
Seeds	500	697	697
Mineral fertilisers	645	1072	1207
Pesticides	545	904	904
Insurance		89	119
Mechanical services	160	995	1071
Total of direct costs	1850	3757	3998
Costs of machinery and transport	1200	1105	1280
Land cost		34	34
Interests		110	123
Total of variable costs	3050	5006	5435
Total unit variable costs (PLN/t)	74,4	111,2	90,6
- including direct costs (PLN/t)	45,1	83,5	66,6

Source: Urban, et.al. *Analiza wpływu reformy rynku cukru w UE na polskich producentów żywności* (2005)

Table 6

Employment in the sugar beet factories

Marketing year	2002/2003	2003/2004	2004/2005
During processing period	24679	21288	15174
<i>change in %</i>		-13,7%	-28,7%
Outside processing period	13618	10235	8646
<i>change in %</i>		-24,8%	-15,5%

Source: J.Rybski, *Sugar industry in Poland- condition and perspectives*, (Gazeta Cukrownicza 2/2005)

Table 7

Comparison of sugar industry in Poland and Germany, 2003

	Poland	Germany
Total sugar production (in 000 tons)	1945	3743
Number of factories	55	27
Total employment	21288	6778
Sugar output per factory (in tons)	35364	138630
Sugar output per employee (in tons)	91	552

Source: J.Rybski, *Sugar industry in Poland- condition and perspectives*, (Gazeta Cukrownicz 2/2005)

Table 8

Production quota in Poland before and after EU accession in 000 t

Marketing year		2003/2004	2004/2005
Quota A:	sugar	1529,00	1580,00
	isoglucose	60,00	24,91
Quota B:	sugar	102,20	91,93
	isoglucose	2,20	1,87
Quota A+B:	sugar	1631,20	1671,93
	isoglucose	62,20	26,78
Sugar beet production		1945,50	2008,38

Source: MARD, Warsaw

Table 9

Production of isoglucose in Poland , 1999-2005

	1999	2000	2001	2002	2003	2004	2005*
Production of isoglucose in thousand tonnes	6.5	16.8	27.6	40.5	60.4	30.0	30.0

Source: Institute of Agricultural Economics, *Rynek Cukru*, 23/2003 and 27/2005

- CEEC AGRI POLICY -

Table 10

Major statistics on sugar sector in Poland, 1999-2005

Year	Unit	1999	2000	2001	2002	2003	2004	2005*
Sugar Beet								
Total Area	000 ha	372	333	317	303	286	292	270
Yield	tonnes/ha	33.8	39.4	35.8	44.3	41.0	42.7	43.0
Production	000 t	12564	13134	11364	13432	11739	12499	11600
Processed	000 t	12564	13134	11364	13432	11739	12499	11600
Feed	000 t	0	0	0	0	0	0	0
Sugar (Total Raw Equivalent)		99/00	00/01	01/02	02/03	03/04	04/05	05/06
Sugar content in s.beet (polarisation)	%	16.9	17.56	15.89	16.42	18.00	17.67	17.40
Yield (a) %	%	14.37	15.33	14.10	15.11	16.60	16.02	15.52
Production	000 t	1805	2013	1602	2030	1949	2002	1800
Imports	000 t	51	45	85	85	45	46	n/a
Exports	000 t	385	402	113	408	394	450	n/a
Processed	000 t	780	815	825	835	860	905	n/a
Consumption	000 t	800	780	765	755	740	745	n/a
Stock Changes	000 t	-11	+14	+15	+13	+13		n/a
Consumption pc (b)	000 t	42.5	41.6	41.2	43.6	40.5	40.5	n/a
Value of Trade ©								
Imports	Mio PLN	3	63	75	107	83	92	
Exports	Mio PLN	355	400	334	206	383	727	n/a
Balance of Trade	Mio PLN							

SOURCE: Institute of Agricultural Economics, based on CSO and other data sources, Rynek Cukru (various issues)

Notes: (a) effective yield

(b) per capita per annum

© in local currency (millions) and state approximate euro equivalence

	1999	2000	2001	2002	2003	2004
Exchange rate 1 USD = PLN	3.9675	4.3464	4.0939	4.0795	3.8889	3.654

* estimates for 2005

11 Romania

11.1 Sugar consumption

Sugar consumption has been fairly stable since 2000, varying between 23 and 24.7 kg/capita/year.

11.2 Sugar import

Romania is a net importing country, with the volume of imports varying from year to year. The main trading partners are Brazil, Cuba, Thailand, Moldova, Hungary, Turkey, Germany, Austria, and Czech Republic.

11.3 Sugar beet area

Sugar beet is cultivated on very limited areas. The sugar beet area has continually fallen since the beginning of the 1990s. In recent years the area has declined from 65500 hectares in 1999 to 18800 hectares in 2004 and is now only 12% of the area cultivated in 1990.

11.4 Structure of production

At present 80% of the sugar beet is produced on individual farms and family associations and only 20% by agricultural commercial firms. The average size of the 16000 holdings currently growing sugar beet is estimated to be 6 hectares.

The number of processing plants has fallen from 33 factories in 1989 to 10 in 2004. The number of firms processing sugar beet is now only the next: Oradea, Ludus, Bod, Roman, Corabia and processing capacities have also Pascani, Buzau, and Liesti.

The last three named areas are utilised more for processing the raw sugar imported, while the others are processing primarily sugar beet.

11.5 Yields

The average yield of sugar beet varied between 13.78 (2000) and 29.37 (2004) tonnes per hectare. In the first two years of the period 1999-2004 there was a decreasing tendency to 13.78 tonnes per hectare then the values grew to more than 22 tonnes per hectare remaining stable for the next two years, when in 2003 resulted again a sharp decrease which was due to the weather conditions (16.91 tonnes per hectare). For the next year (2004) the yields doubled.

The yield of sugar varied between 3.76 (1999) and 24.024 (2004) tonnes per hectare. For 2000, 2001 and 2004 the yields had a rising tendency while for the 2002 and 2003 the yields per hectare fell. After 1999, the production doubled for 2000-2003. At the beginning of the 1990's Romania had 300 000 hectares of area for cultivating sugar beet which gradually declined until 2004. The lack of market protection accentuated this evolution which led to that sugar was and still is produced mainly from raw imported sugar (although sugar beet was/is cultivated). In the last two years the sugar beet production decreased in spite of introducing a support program. We can not give a proper answer if there was a rise or fall in efficiency.

11.6 Sugar and isoglucose production

The evolution of sugar production in 1999-2002 grew from 246 000 to 514 000 tonnes, but then declined to 452 000 tonnes in 2004. For 2005 a growth is estimated, but this reaches only the level of the year 2000 (477 000 tonnes).

The efficiency of sugar beet processing remained low.

11.7 Production cost and competitiveness

The production cost of sugar beet in 2005 was 23 €/per tonne. The labour costs per hectare were around 860 €. The costs for sugar were 380 €/per tonne and the subsidy was of 14.2 €/per tonne of sugar beet. The farmers obtain from the processing factory 50 kilogram of sugar for one tonne of sugar beet, which is around 20 €/per one tonne of sugar beet.

11.8 Exports

Being a net importing country, Romania exports only very low quantities of sugar. For the period of 1999-2004 the exported volume of sugar varied between 600 (1999) and 7100 tonnes (2002).

11.9 Policy issues

Having in regard the current low level of beet and sugar production, one of the objectives is to increase the sugar beet area prior to Accession to more than 130000 hectares. The other objectives are to reach a sugar yield equivalent to that of the EU average and to improve the productivity for the sugar sector.

The sugar quota for sugar obtained by Romania as a result of the negotiations is less than 25% of the necessary for consumption. As a consequence to cover the needs Romania will depend on imports of sugar from the global market until Accession and from the EU after Accession – this will raise sugar prices to consumers.

12 Serbia Montenegro

Under normal peacetime conditions, Serbia is a net exporting country well able to satisfy the domestic demand for sugar. The Serbian sugar industry, like other sectors of Serbia's economy suffered from the political and economic changes of the 1990s. At that time and since, there have been difficulties in collecting data and monitoring trade, hence Serbian statistics have to be viewed with caution. Moreover, there was also a ban on foreign trade passed by the UN.

12.1 Sugar consumption

The total domestic sugar consumption amounts between 200000 and 240000 tonnes per annum. Of this amount around 54% is domestic consumption and the remainder is used in the industrial sector. Within the industrial sector, the greatest use is in the beverages and confectionery sectors. Current sugar consumption per head per year amounts some 32 kg, which is below that of the EU (some 38 kg). Key determinant in consumption is per capita income. In the case that Serbian consumption averaged comparable per capita levels as the EU, total annual consumption would rise to over 350000 tonnes.

12.2 Sugar import

Since 2000 Serbia has imported on average less than 50000 tonnes per year of white sugar mainly for the industrial sector and the remainder for domestic consumption. In 2004 the import of white sugar decreased to around 26500 tonnes, because of increased domestic production by nearly 50% in comparison to the previous year.

12.3 Sugar beet area

Serbia's sugar sector can be seen as an industry in transition. The sugar beet area having halved from an average of around 100000 hectares in the 1980s to around 50000 hectares by the mid 1990s has since recovered to above 60000 hectares by 2003/04. Of this total area approximately 62% is grown on the state farms and the remaining 38% on private farms though there is no significant difference in yields between the two sectors.

Sugar beet is mostly grown in the Vojvodina province in the north of Serbia. The pattern of cultivation within this area is determined by elevation and soil type. The most suitable sugar beet soils, with good moisture maintenance during the relatively dry months of July and August, are to be found in the Srem, southern Banat, and southern and central Backa regions.

The principal alternative crops in these regions are maize and soybean. Sunflower and wheat are also extensively grown because of their low input requirements and sunflower's drought tolerance.

12.4 Structure of production

The beet processing facilities are now largely in private hands and located entirely within the Vojvodina province in the north of the country. Four state-owned factories still exist but have not been utilized in the last few years. In 2004, seven factories operated and

another, SFIR's Nova Crnja factory, was commissioned with a view to operating in the future.

MK Commerce is the largest processor, owning over half of the country's operational capacity and producing more than 50% of Serbia's sugar output. Hellenic sugar is the second largest processor, with SFIR lying third. However, if SFIR brings the Nova Crnja factory back into operation, it has the potential to increase output to a level similar to that of Hellenic Sugar.

12.5 Yields

The soil types in Serbia are chernozem and heavy black soil which provide a potential for sugar beet yield similar to yields in the EU-15. However, the average beet yields per hectare in the period 1999 to 2004 were some 37 tonnes per hectare per year, which is significantly lower than in the EU-15 (55 tonnes per hectare).

In comparison with the EU-15 in the most important measure of sugar yields the Serbian field performance is even poorer. However, it is very important to note that, during the late 1980s, Serbian sugar yields were comparable with those of Italy today, while sucrose content compared favourably with all comparison groups today.

Having in mind the soil potential and past performances, it could be concluded that Serbia has the potential to increase beet yields from current levels, probably to between 50 tonnes and 55 tonnes per hectare. It could be assumed that sucrose content could be increased to possibly 16%. A substantial improvement in on-farm technical performance would be the prerequisite for achieving such levels.

12.6 Sugar and isoglucose production

The total sugar production capacity in Serbia is around 450000 tonnes per annum. However, sugar production has fluctuated in recent years between 115000 and 440000 tonnes.

One of the weaknesses of the sugar processing sector in Vojvodina is that a number of factories are poorly located in terms of their sugar beet supply. The best sugar beet regions, that is where sugar beet has its greatest comparative advantage relative to alternative crops, are Srem, southern Vojvodina, central/southern Backa and southern Banat.

All of MK Commerce's factories lie within these regions. SFIR's factories are poorly located in relation to these areas, while Hellenic Sugar's factories are situated on the border of these regions. As a result, SFIR and Hellenic Sugar have to haul sugar beets over relatively long distances, which increase the processing cost. Thus, the geographical location of MK Commerce's factories gives the company a competitive advantage over its competitors.

12.7 Production cost and competitiveness

At present the industry's performance compares unfavourably with the EU-15 average both in terms of beet yield per hectare and in sugar extraction per tonne of beet, though in the late 1980s Serbian performance stood comparison with several EU-12 countries. Thus there is potential for improved performance but it would require substantial improvement in both on-farm and in factory technical performance.

Factory capacity in Serbia is currently large relative to sugar beet supply. Rationalisation to four or five modern factories should reduce unit costs to more competitive levels. However, the main determinant of the sector's future prosperity could well be its degree of access to the EU market as currently, sugar account for about 12% of total Serbian agricultural exports and is mainly to the EU.

In spite of relatively high processing cost, under the European Union Stabilization and Association agreement with the western Balkan countries that started in 2001, Serbia was able to export sugar free of tariffs and custom duties to the EU member countries.

With a rationalisation to four or five factories, Serbia's processing costs would fall by around €80-€85 from 2004/05 levels, to close to €100 per tonne. In the short/medium term, unit costs would fall given greater access to the EU market due to the higher output, which lowers unit fixed costs.

Following rationalisation, costs will be broadly similar both with and without EU access. This is because the number of factories will be reduced further to four factories without EU access, as the sector contracts to the size of the domestic market

Sucrose recovery rates are low by international standards. However, there is no reason why the investment that is now flowing into the sector should not raise performance to the levels approaching those witnessed in Hungary and the EU.

12.8 Exports

Today, the industry has the capacity to produce around 450000 tonnes of sugar. Domestic consumption appears to be growing. This suggests the industry has, at present, the capacity to produce between 210000 and 250000 tonnes for export, depending on the volume that can be sold into the domestic market. Whether or not this sugar can be exported duty-free to the EU will have far-reaching implications for processors' future. This is because the alternative to selling this sugar in the high-priced EU market is to sell it in regional markets where it would earn a far lower price. The overwhelming majority of exports have entered the Italian market.

However, in May 2003, Serbia's privilege to export duty-free sugar to the EU was suspended because of allegations of fraud and violation of trade regulations. Following the suspension of its privilege, Serbia put in place an effective system for issuing sugar export certificates and verifying the origin of its exported sugar. In August 2004, the EU

lifted the suspension and re-instated the duty-free status for Serbian sugar exports to its countries.

12.9 Policy issues

The three key markets for Serbian sugar are the domestic market, the EU market and the world/regional market. The average selling price of Serbian sugar is determined predominantly by sales into the domestic and EU markets. The export and import of sugar is tax free. There are subsidies neither to sugar beet producers, nor to sugar factories.

Serbia has had a supply deficit in sugar for the past ten years or so, and, therefore, in normal circumstances, the price of sugar in the domestic market reflected the price of importing sugar from the EU.

However, after democratic changes in country in 2000 its economy started to recovery and there was a production growth. Moreover, Serbian producers have duty-free access to the EU sugar market, and the industry has been able to expand to produce a surplus of sugar. The export quota for Serbia to the EU for the season 2004/05 amounts 180.000 tones.

The market for sugar in the European Union is tightly regulated, and duty levels are such that imports are effectively restricted to those producers enjoying preferential access terms. The 2004/05 export parity price for sugar is some €600, per tonne. Preferential sugar exports to the EU, therefore, generate revenues of over €100 per tonne more than domestic sales at current prices.

Fundamental reform of the EU sugar regime is currently under discussion and it is accepted that the regime will have to adjust in some manner to the various pressures it now faces. For Serbia, exports under preferential terms to the EU are of great importance. The performances of the Serbian sugar sector over the next few years will be largely determined by two inter-related factors: the future level of sugar production and access to the EU market.

13 Slovakia

13.1 Sugar consumption

Since 1998 refined sugar consumption has declining tendency what is related to rising retail prices and consumer orientation towards healthier life style. While in 1998 consumption of refined sugar per capita was 34,8 kg, in 2003 slumped to 27 kg. Similarly it decreased consumption of goods containing sugar (chocolates and cocoa products). The consumption of cocoa products per capita decreased compare to the year 2002 by 15 %, confectionery products by 10 % and ice cream by 20 %.

13.2 Sugar import

Annual volume of import in marketing years 1998/99 up to 2003/04 ranged from 3500 to 11200 tonnes. During second half-year 2004 trading companies imported 4300 tonnes of sugar into Slovakia, practically all volume from Germany. Import of other sugars (lactose, glucose, maltose, fructose and maple-syrup) during that period represented 6000 tonnes. Import of products containing sugar as sweetener reached 37600 tonnes in marketing year 2003/04 calculated in sugar equivalent. The largest by volume was imports of chocolates, syrups, confectionery goods, malt extracts, bakery products, cereal foodstuffs and fruit juices.

13.3 Sugar beet area

Sown area modified during last 5 years just slightly from 34600 ha in 1999 campaign to 35200 ha in the marketing year 2004/05. Inter-annual difference had range +/- 3 %. Growers of sugar beet noted unexpectedly record production in marketing year 2004/05. Previous marketing season sugar beet farmers achieved sugar content 17,36 % that is record value in Slovak sugar industry. In 2003/04 season sugar content of beet was 16,54 % and year before 14,40 %.

13.4 Structure of production

On the present there are 387 growers of sugar beet in Slovak republic which means by 32 legal entities less compare to the year 2004. From this number 252 growers are recorded in the Slovak Association of sugar beet growers who are delivering into sugar mills around 78 % of total sugar beet crop. Average acreage per grower is 81,7 ha and compare to the year 2001 increased by 34 %.

Since 2000, the number of sugar factories in Slovakia has fallen from 8 to 4, all of them owned by foreign companies. The largest sugar factory is in Dunajska Streda (annual white sugar production 70600 tonnes) and is owned by the Anglo-French company Eastern Sugar. The majority owner of the Slovak sugar mill is the Austrian firm Agrana. Sugar factories in Trnava and Považska Bystrica are owned by the German Nordzucker group.

13.5 Yields

According to Statistical Office of the Slovakia average yield per hectare in marketing season 2004/05 reached 45.03 tonnes of the sugar beet what is 23 % higher compare to previous sugar-beet season. Data obtained from Slovak Sugar Union indicated that average yield of sugar beet in 2004/05 was 46,65 tonnes per hectare. For comparison: yield in 2002 was 43,63 ton per hectare and year before 40,80 tonnes. Poor harvest in the year 2000 has merely yield 30,37 tonnes per hectare.

The growers achieved white sugar crop per hectare 6,81 tonnes in 2004 which is 30 % more compare to previous sugar campaign. White sugar crop per hectare in 2002 was 6,07 tonnes and year before 5,57 tonnes.

13.6 Sugar and isoglucose production

During sugar campaign 2004/05 Slovak sugar industry produced 233000 tonnes of white sugar while national production quota is 207400 tonnes. This surplus can be exported into third countries without subsidies or carry over into next marketing year. The quota "A" quantity designated for domestic consumption represents 189800 tonnes and the rest is quota "B" for export. This year sugar production is 41 % higher compare to 2003/04 and 27 % larger compare to 2002/03 season.

13.7 Production cost and competitiveness

According to EC regulation, on marketing year 2005/06 minimum purchase price of sugar beet on quota "A" is settled 46,72 EUR per tonne and on quota "B" 32,42 EUR per tonne. For the years 2004-05 basic sugar beet price from producers is 1 860 SKK (around 48 EUR/tonne; 1 EUR=38,50 SKK). Compared to 200, the farmgate price for sugar beet deliveries is higher by 84 % but we must take into consideration steep rise of input prices. (Average prices of purchased seeds rose by 7,3 % and agro-chemical services by 23,6 % on year to year comparison.) Total costs per hectare for sugar beet production was 50200 SKK (1304 euro) in 2004 compare to 47500 SKK (1234 euro) in 2003. For interest in the year 2000 total costs per hectare amounted to 41000 SKK (1065 euro). Profitability from sample of 36 selected growers (both sugar beet and maize regions) around Slovakia was 57,8 %.

13.8 Exports

During marketing season 2003/04 trading companies exported 29600 tonnes of sugar, hereof 26,4 % was delivered to Poland, 24,1 % bought Italian companies and 17,8 % importers from Bosnia and Herzegovina. Export of sugar during period July-December 2004 exceeded volume of export for whole marketing season 2003/04. Throughout mentioned period was delivered 50600 tonnes of sugar abroad, especially to Czech republic (32,7 % of total volume), to Austria (23,4 %) and to Italy (22,7 %). In first half of 2005 export of sugar reached 56400 tonnes.

13.9 Policy issues

Following adoption of the EU sugar CMO, the sugar beet processing mills now own the sugar quotas and negotiate with growers the conditions for contracts on future deliveries of sugar beet. Rising transport costs forced the sugar factories to seek growers located close to the factories and this has meant that some growers have been unable to sell their sugar beet due to the closing of several sugar mills in past year.

14 Slovenia

14.1 Sugar consumption

In Slovenia sugar consumption has varied from 34 to 39 kg per inhabitant in recent years (in the white sugar equivalent). After three years of decline, the consumption rose by 8% to 37 kg in 2004. By the assessment made on the basis of the data on average annual quantity of purchased sugar and honey per household member, around 40% is consumed in natural state and the rest in the form of processed products.

14.1 Sugar imports

In recent years, Slovenia imported around 70 thousand tonnes of sugar per year (in raw sugar equivalent). A solid third of imports were processed products. In 2004, total imports were 5% lower than the year before, with an almost halved proportion of white sugar. Only 11 thousand tonnes of sugar were imported in the form of white sugar (in 2003: 20 thousand tonnes), which was the least in the last ten years. Also the imports of raw sugar were smaller than the year before (-16%). On the other hand, for the first time since 1993 an important share of sugar (13 %) was imported in the form of sugar beet. Compared to 2003, the imports of sugar in processed products increased, which points to the continuation of the trend recorded since 1996. Most imports of sugar in natural state come from African countries (in 2004: around 70%) and the EU member states (in 2004: 27%).

14.2 Sugar beet area

Ever since 1999, when the expansion of sugar beet production reached its peak (almost 11 thousand ha), sugar beet area has stabilised at around 5 thousand ha in the last four years. Sugar beet area occupies less than 3 % of all arable land.

14.3 Structure of production

According to the structural survey of 2003, 1999 farms grew sugar beet that year, which was 2.6% of total number of farms. Compared to the survey year 2000, this number was almost halved (in 2000: 3772 farms). At the same time, the average sugar beet area per farm increased from 2.14 ha to 2.60 ha, i.e. by 21%. Since 2000, sugar beet has been cultivated only in the North-East of Slovenia, where the sole sugar mill is located. Sugar Mill Ormož is a joint stock company, majority owned by a Dutch company.

14.4 Yields

Yields of sugar beet and sugar vary considerably from year to year, mostly due to weather conditions. In the period 1999-2004, the average sugar beet yield was 44 tonnes/ha, and the yield of raw sugar 6.3 tonnes/ha. In the same period, the average sugar content was 14.4%. The years 2002 and 2003 deviated the most from usual yield levels, the former with the record high yields (8 t sugar/ha), and the latter with the record low yields (5.3 t sugar/ha). In the year 2004 yields were slightly above average.

14.5 Sugar and isoglucose production

In the period 1999-2004, sugar production from domestically produced sugar beet in Slovenia more than halved (due to the area being halved after 2000) and year to year variations were considerable. In 2004, the Sugar Mill Ormož, in addition to domestically produced sugar beet, also processed 57.7 thousand tonnes of imported beet root, producing 8.6 thousand tonnes of white sugar. This sugar mill is also the only mill for processing of raw sugar. The annual production of white sugar from raw sugar ranges from 22 to 26 thousand tonnes, and total production in white sugar equivalent (from sugar beet and raw sugar) ranges from 48 to 61 thousand tonnes. There is no isoglucose production in Slovenia.

14.6 Production cost and competitiveness

After 1999, the prices of sugar beet for producers were lower than the minimum price set out under the CMO, and producers were eligible for area-based direct payments (2001: 193.4 EUR/ha, 2002: 247.5 EUR/ha, 2003: 239.6 EUR/ha). As a result, the prices of sugar on domestic market were lower, thus increasing the competitiveness of domestic sugar production. Adopting the sugar CMO resulted in a rise in minimum price of sugar beet for producers, abolition of area direct payments and considerable changes in foreign trade regime, which altogether contributed to a rise in prices of sugar on the domestic market. Several expert studies suggest that, under the existing sugar CMO, the production of sugar in Slovenia is competitive with that in other EU Member States.

14.7 Exports

In the last few years, the exports of sugar in raw sugar equivalent averaged at around 23 thousand tonnes, notably exports of processed products. In 2004, total exports of sugar were up by 11% from the year before. For the first time, larger quantity of sugar in natural state was exported (8 thousand tonnes in raw sugar equivalent), whilst the exports of processed sugar products were the lowest in the last five years (16 thousand ton in raw sugar equivalent), down by 22% from 2003.

14.8 Policy issues

Adoption of CMO for sugar has not caused any great problems in Slovenia. Quotas were not fulfilled. The proposed reform of the CMO for sugar was met with a wide response from the sugar beet producers, representatives of the sugar mill and representatives of the state in the EU institutions. Their common conclusion was that if the reform is implemented, sugar production in Slovenia had no real future prospects. They therefore proposed a smaller reduction of minimum prices, a longer period of reform introduction, the possibility of partial production coupling and a higher compensation for the loss of income. No detailed economic analysis of the effects of the reform has yet been made. Some expert assessments indicate that as regards the level of sugar beet production, the reform could be carried through as the situation would be no worse than the economically least favourable level of the last 6 years.

However, there is a serious question of whether the sugar mill would process enough to reach its break even point. As according to the available information, after the reform some sugar mills of similar size will be preserved in neighbouring countries, the issue of sugar production in Slovenia depends largely on the readiness of the owners to preserve the mill despite lower returns. The existing sugar mill has so far used to its advantage the capacity for raw sugar processing and its economic results have largely depended on this. As the reform will abolish many price-related advantages of raw sugar processing, the possibility of closing down the mill and thereby also of abolishing sugar beet production in Slovenia cannot be ignored. In the short term, although this would have little impact on the economic position of agriculture and the food-processing industry as a whole, it would no doubt have many negative effects at the regional level.

15 Turkey

15.1 Sugar consumption

Sugar consumption in Turkey has decreased slightly since 2000 when it totalled two million tonnes; it was down to 1960000 tonnes in 2004 despite Turkey's population increase. Per capita sugar consumption decreased from about 30 kg in 2000 to 27.5 kg in 2004.

15.2 Sugar import

Turkey is mainly self sufficient in sugar. Sugar imports which had been 444000 tonnes in 1995 fell to 694 tonnes in 2003.

15.3 Sugar beet area

Sugar production has been registered in Turkey for decades, with the area, production and producers recorded since there is a production quota system in force. The current sugar law (number 4634) was enacted in 2001 and conforms to the EU's sugar CMO. This new law required a substantial reduction in the total sugar quota and in consequence the sugar production area has steadily fallen from 410000 hectares in 2000 to 330000 hectares in 2004.

15.4 Structure of production

With the exception of coastal areas and the South-Eastern Anatolia Region, sugar beet is produced all over the country. It is a rotation crop and producers are contracted. Sugar beet production accelerated with the establishment of sugar factories in 1926??, was 13000 tonnes in 1994 and reached to the level of 1.9 million tonnes in 2000, due to the price policy and increase in yield. Due to the changes related to rotation system and production quotas in 2001, sugar beet production has decreased. There are 29 sugar plants in Turkey, of which 3 are private. The number of producers contracting with the Turkish sugar company varies from year to year. It was 337 327 in 2000 and increased up to 416 619 in 2002 and decreased again down to 303 428 in 2004. The average size of the holdings producing sugar beet is also varying from year to year between 9.8 hectares in 2000 and 6.34 hectares in 2003.

15.5 Yields

Both sugar beet yield and sugar content varies significantly from year to year due to weather conditions. No clear trend in productivity is discernable.

15.6 Sugar and isoglucose production

Sugar production in Turkey varies from year to year. It was 2.5 million tonnes in 2000 and 2004. However, it was as low as 1.7 million tonnes in 2001 and 2 million tonnes in 2003.

15.7 Production cost and competitiveness

The cost of sugar beet production has increased in Turkish Lira terms. Sugar processing is expensive in some old factories but newly built sugar processing plants are equipped with modern technology, therefore have lower production costs.

Turkey's competitiveness on international markets is determined as much by exchange rate fluctuations as by changing internal production costs, though in so far as the latter are influenced by inflation in the economy as a whole, the two are linked. The world price of sugar is, of course, affected by the subsidies and support measures applied in key producer countries.

15.8 Exports

Turkey used to be a sugar exporter with exports of 579000 tonnes in 2000, but exports in 2004 were only 9000 tonnes.

15.9 Policy issues

Turkey's 2001 "Sugar Law" sets out the regulations on sugar production, marketing and pricing policies for both domestic consumption and export. In order to regulate sugar production and sugar markets, quotas have been determined periodically, if necessary, for each kind of sugar. The quota for sugar produced from starch could not exceed 10% of the quota for sugar beet-based sugar production. The Ministerial Council has responsibility to determine the quota in agreement with the National Sugar Council. The quantity is determined by considering domestic demand, consumption and the processing capacity of sugar factories for each five-year period. Annual "A" and "B" quotas are then allocated to each sugar producing company.

For the 2004/2005 marketing year, the "A Quota" sugar allocation to the Turkish Sugar Factories Corporation (TSFAS) is 1550100 tonnes and to private factories is 556800 tonnes (One of the subsidiaries of TSFAS was privatised in 2004). "B Quota" allocations are 31000 tonnes and 11100 tonnes for TSFAS and private companies respectively. Quota allocation for starch-based sweeteners amounted to 351150 tonnes.

The 2001 Sugar Law was enacted to conform to the EU sugar regulations. Further harmonisation of the Turkish and EU regulations is expected to follow after the EU's sugar CMO is reformed.