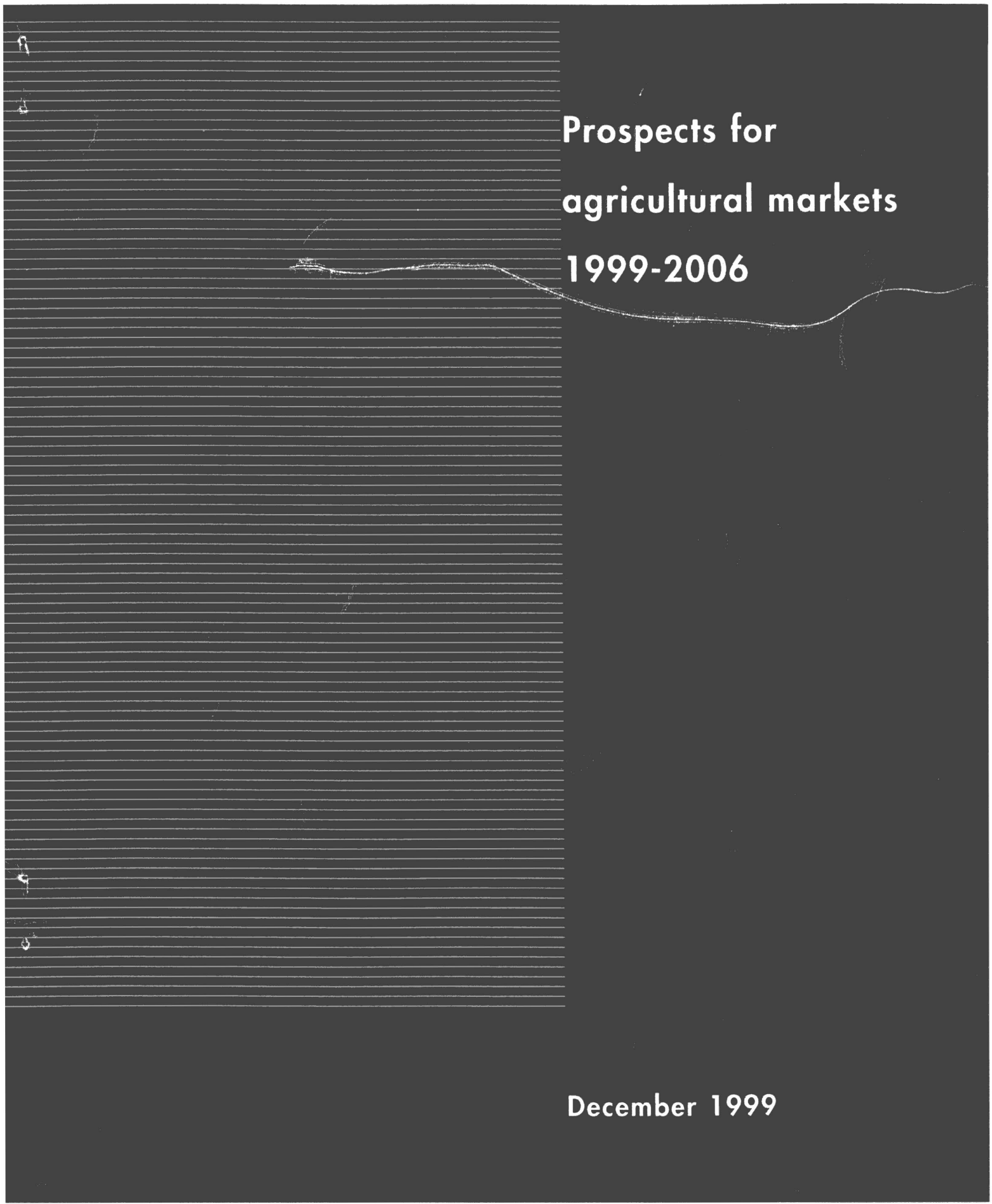
European Commission
Directorate-General for Agriculture

CAP Reports



Prospects for agricultural markets 1999-2006

December 1999

European Commission

Directorate-General for Agriculture

PROSPECTS FOR

AGRICULTURAL MARKETS

1999 – 2006

December 1999

Table of contents

Foreword

The Directorate-General for Agriculture of the European Commission has published in recent years an overview of market trends and long-term projections of supply and demand for the main agricultural commodities. This publication provides a picture of the likely developments of agricultural markets up to 2006, based on a certain number of assumptions and on the statistical information available in November 1999.

This report contains three chapters. The first chapter centres on the market prospects by the year 2006 within the EU and covers the following products: cereals, oilseeds, meat, milk and the main dairy products. Chapter II provides a description of the likely prospects of agricultural markets in the ten Central and Eastern European Countries, which are candidates for accession to the EU. Finally, a presentation of the medium and long-term prospects of agricultural world markets, established by different international organisations and institutes, is given in chapter III.

List of acronyms and abbreviations

BSE	Bovine Spongiform Encephalopathy
CAP	Common Agricultural Policy
cap.	Capita
CEECs	Central and Eastern European Countries
cwe	Carcass weight equivalent
CRP	Conservation Reserve Programme (US)
DG	Directorate-General
EU	European Union
EUROSTAT	Statistical Office of the European Communities
FAO	Food and Agriculture Organisation (of the United Nations)
FAPRI	Food and Agricultural Policy Research Institute
FMD	Foot-and-Mouth disease
FSU	Former Soviet Union
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
ha	Hectare
IGC	International Grain Council
IMF	International Monetary Fund
kg	Kilogram
lw	Live weight
mio	Million
OECD	Organisation for Economic Co-operation and Development
OTMS	Over Thirty Months Scheme
SMP	Skimmed milk powder
t	Metric tonne
URA	Uruguay Round Agreement
US	United States of America
USDA	United States Department of Agriculture
WMP	Whole Milk Powder
WTO	World Trade Organisation

Executive summary

Chapter I Prospects for agricultural markets in the European Union

This chapter summarises the main results and underlying assumptions of long-term perspectives for some key agricultural products (i.e. cereals, oilseeds, meat and milk products) in the European Union for the period 1999 - 2006. The results presented are the final outcome of different approaches (econometric methods, statistical analyses, specific assumptions, expert judgements, etc.), depending on the products and variables concerned, **based on the statistical information available on the 15.11.1999**.

These projections are not intended to constitute a forecast of what the future will be, but instead a description of what may happen under a specific set of assumptions and circumstances. The most important assumptions concern the domestic agricultural policy and trade environment:

(1) As regards agricultural policy, all policy instruments and measures are expected to operate under the current rules or within the changes already decided for the 1999-2006 period. In that perspective, the implementation of the **reform of the Common Agricultural Policy** adopted in the framework of **Agenda 2000** is fully taken into account from 2000 onwards.

(2) The second important assumption relates to trade in agricultural products and, in particular, to the commitments derived from the Uruguay Round Agreement. **It is assumed that all URA commitments regarding market access and subsidised exports will be fully respected.** Thus, subsidised exports are expected not to exceed the annual URA limits, whereas imports under current and minimum access are fully incorporated. **In addition, the URA commitments are assumed to remain unchanged over the 2001-2006 period**.

Arable crops

Cereals

After an estimated decline of 0.7 mio ha from 1998/99 to 1999/00 in line with the rise in the rate of compulsory set-aside, the **total cereal area** would increase slightly in 2000/01 and 2001/02 by more than 0.2 mio ha to reach 36.7 mio ha. Cereal area would benefit from some shift in area from non-textile linseed and oilseed production and would be supported by market prices above support levels in the short-term for soft wheat, maize and durum wheat due to tightly balanced markets. From 2002/03 onwards, the full implementation of the reform across the arable sector should generate a further increase in cereal area of around 0.2-0.3 mio ha as oilseed and non-textile linseed area declines more significantly. After peaking in 2002/03 at 37.0 mio ha, cereal area is expected to stagnate between 36.8 and 37.0 mio ha over the medium term.

Yield trends observed since the beginning of the 1980s are assumed to continue over the projection period, although at a lower rate. Average cereal yields would reach 5.88 t/ha in 2006/07. **Total harvested cereal production** would increase from 199.0 mio t in

1999/00 to 216.7 mio t in 2006/07 driven by increasing yields. In line with higher area and yield projections (above 5 % for both as compared to 1998/99), soft wheat production would rapidly expand over 100 mio t and reach a historical high of 105.4 mio t in 2006/07. Barley production is projected to exhibit a regular decline over the next eight years owing to low profitability prospects.

Following the strong rise in domestic use of cereals generated by the 1992 CAP reform, the implementation of Agenda 2000 is foreseen to provide a further boost to domestic demand by improving cereal competitiveness. **Total cereal demand** is projected to increase steadily over the medium term, from 177.3 mio t in 1998/99 to 192.4 mio t in 2006/07 (i.e. a 15 mio t growth). A larger demand for feed products combined with an improved market share is expected to generate a rise in total feed use of cereals estimated at more than 10 % from 1998/99 to 2006/07, when **total cereal feed usage** would amount to 121.6 mio t (a 11.1 mio t increase as compared to 1998/99). **Non-feed uses** of total cereals are projected to increase by 4.0 mio t, from 66.8 mio t in 1998/99 to 70.8 mio t in 2006/07 (mainly industrial demand).

Total cereal exports are estimated to start increasing beyond the URA limits on subsidised exports from 2003/04 onwards, when world market prices for soft wheat are foreseen to increase above the EU intervention price level. Conditional on the respect of the quality requirements, total cereal exports would reach around 29 mio t in 2006/07. **Total cereal imports** are assumed to remain relatively stable at 5.7 mio t, although some additional quantities of high quality wheat cannot be excluded.

EU cereal markets may be expected over the medium term to be characterised by **high levels of stocks**, mainly for coarse grains. Total cereal stocks would remain above 40 mio t throughout the whole period, compared to 29 mio t on average in the period 1995/96-1997/98. After a short-term decrease up to 2001/02, total cereal stocks are expected to resume rising and reach 44.5 mio t in 2006/07 (of which 22 mio t in intervention stores). This general imbalance masks widely diverging prospects across cereals. Whereas the markets for soft wheat, durum wheat and maize are expected to remain rather tight throughout the whole period, the situation of the markets for other coarse grains (especially of rye) are foreseen to be rather difficult over the medium term.

Oilseeds

The cut in oilseed direct payments and their gradual alignment to the cereal payment from 2000/01 to 2002/03 are foreseen to outweigh the modest expected recovery in world market prices, resulting in a fall in total **"food" oilseed area** by 15 % relative to 1999/00 which would stabilise at 4.3-4.4 mio ha over the medium term. Soya bean would be most affected, its area falling by more than 46 % in 2002/03 relative to 1998/99, then stabilising above 200 000 ha over the medium term. **Non-food oilseed area** is estimated to adapt to the level of the set-aside rate and to stabilise at around 0.8 mio ha over the 2000/01–2006/07 period.

Oilseed yields are expected to increase in the medium term and reach 2.7 t/ha on average in 2006/07. Oilseeds (food) **production** is projected to fall from 13.9 mio t in 1998/99 to 11.1 mio t in 2001/02 as total oilseed area drops. It will then increase slightly over the medium term to reach 12.0 mio t in 2006/07. Non-food oilseed production will evolve together with the level of set-aside and stabilise around 2.2 mio t over the medium term.

Uncertainties

It should be stressed that the projections for the arable crop sector are particularly sensitive to a certain number of assumptions concerning notably future developments on the world cereal and oilseed markets and the medium-term outlook for the euro. While the outlook for world cereal and oilseed prices may be considered as rather conservative, the euro is assumed to strengthen slightly *vis-à-vis* the US $ over medium term. Any change in any if these assumptions could significantly alter the medium-term perspectives.

Beef

Beef/veal **production** is expected to reach its cyclical down in the second half of 1999. In the years after, beef production is expected to resume, reaching its next peak in the year 2002, then entering into a downward phase until the year 2005 before resuming again in 2006. The strong rise of production that is anticipated for the years 2001/02 reflects both the cyclical evolution and the fact that the impact of the different BSE measures, which are still influencing the EU beef sector, progressively fades away.

Beef/veal **consumption** recovered steadily from the big drop experienced in 1996 under the influence of the BSE scare and is now back to its long-term declining trend. It is expected that the Agenda 2000 decisions will positively impact beef/veal consumption by contributing to a more favourable price relation with respect to other meats, in particular pork and poultry. The positive impact should mostly occur in the period 2001-03 when market prices are likely to decrease under the influence of the expected production increase. However, in the medium and long term, it is unlikely that the somewhat improved price competitiveness of beef can surpass the general tendency of consumer preferences in favour of pork and poultry.

Despite the substantial cut of support prices, the bulk of EU beef **exports** will continue to be limited by the URA agreement on subsidised exports. However, it is expected that world market prices for beef will strengthen over the medium term, narrowing somewhat the gap compared to EU prices. Thus, small volumes of exports without refunds can be envisaged at the end of the forecast period. EU beef **imports** are forecast to increase only slightly in the short term, but should remain more or less stable in the medium term.

Overall, the forecasts show that a balanced EU beef market is likely to be achieved over the medium term with, however, continued cyclical movements. Nevertheless, a temporary increase in **stocks** (mostly private stocks) seems to be sufficient in order to cope with the cyclical up and down in beef production. In particular the cyclical up in production that is expected for the years 2001/02 is likely to put the EU beef market under pressure and could lead to some increase in EU beef stocks. Corresponding releases in the following years can be envisaged when beef production is declining.

Pig meat

The recent huge rise of pig meat **production** in the EU, stimulated by two years of high prices due to the BSE crisis in 1996 and the outbreak of the classical swine fever in 1997, has considerably changed the perspectives of the sector in the short and medium term. Nearly 1.6 mio t more pig meat (+10 %) had to be absorbed by the markets over a period of just two years. In the short-term, pig meat production is expected to react to some extent on the low prices that producers are currently experiencing. But there is a risk that production will remain well above the level observed in 1996 and 1997 if there is not a

more drastic fall in pig numbers in the next few months. However, over the medium and long term, there is a certain scope for further growth, driven mostly by demand (internal consumption and exports), but the anticipated growth rates should be lower than in the past, given the new and much higher production level.

For pig meat **consumption,** the medium and long-term outlook is in general positive since pig meat is likely to keep being favoured by consumers, but clearly less than poultry. The growth rates for per capita consumption are anticipated to slow down somewhat in coming years, given the big rise in most recent years and the high level already reached.

Imports are likely to increase slightly over the medium term, assuming mostly unchanged market access commitments, but somewhat better use of it. Compared to the record level expected in 1999, **exports** are forecast to be lower in the short term but should resume over the medium term in line with higher EU production and growing international trade.

Poultry

Despite some signs of slowdown in the short term, reflecting among others the negative impact that the Dioxin scare in Belgium had on the sector, the outlook for poultry in the medium and long term is still positive. Very competitive prices with respect to other meats and strong consumer preferences should continue to play in favour of poultry and allow keeping its relatively strong growth. Mainly driven by demand, EU poultry **production** is forecast to rise from 8.7 mio t in 1998 to around 10.1 mio t by the end of the forecast period.

Per capita **consumption** is forecast to increase from 21.3 kg in 1998 to about 24.3 kg by the year 2006, with a short period of slowing down in 2000/01. This evolution corresponds to the long-term growth of consumption that has been observed in the past.

While poultry **imports** are forecast to increase to around 330 000 t by the end of the forecast period, **exports** are expected to fall in the short-term but should resume in the medium term in line with higher EU production and growing international trade.

Sheep and Goat

Production of sheep/goat meat is recovering from the relatively strong fall that occurred in 1997 and that was due to specific climatic conditions. In the medium and long term, a slight downward trend is anticipated. The same is true for per capita **consumption**, while total consumption is likely to remain more or less at the same level due to a small population increase.

Imports could slightly increase in response to somewhat better use of market access commitments granted to some third countries.

Milk and dairy products

Under Agenda 2000, **milk deliveries** are expected to increase over time as a consequence of the quota increases scheduled for the years 2000-2002 and 2005/06. However, compared to the year 1998, the first quota increase by about 1.4 mio t is not likely to lead fully to higher milk deliveries in the short term. The main reason is that a part of the quota increase corresponds to a production that already exists in 1998. Assuming member states will fully adjust to the available reference quantities for deliveries and direct sales, it is expected that milk deliveries will increase to around 114.4 mio t by the year 2002. This is

about 830 000 t more than in 1998. In the following years, it is expected that milk deliveries will decline slightly each year, reflecting the continuing increase in the milk **fat content** that reduces the margin for milk deliveries to dairies if the historical reference fat content is exceeded. Milk deliveries are forecast to increase again by the end of the forecast period in line with the quota increase in the years 2005 and 2006 which forms part of the second reform step and that is linked to the cut in support prices.

As far as **milk production** is concerned, the impact should be somewhat lower due to the expected evolution of on farm milk use, which is not governed by quotas and that tend to decrease. In addition, direct sales are not concerned because only the quotas for deliveries will be increased.

The higher milk production, which is forecast under Agenda 2000, is likely to slow down somewhat the anticipated decline of the **dairy herd**. Assuming a further increase of milk yields by around 1.70 % per year on average over the forecast period, the number of dairy cows in the EU is forecast to decline from 21.5 mio animals recorded in 1998 (December survey) to around 18.8 mio animals by the year 2006.

Cheese

The medium and long-term outlook for **consumption** is in general positive, but it could well be that the growth is slowing down. Per capita consumption is cautiously forecast to rise from 17.4 kg in 1998 to about 19.0 kg by the year 2006. This represents an annual growth rate of around +1.0 %. Total consumption will increase somewhat faster, i.e. by about +1.2 %, due to the expected small growth of population.

Exports are likely to recover only marginally from the low levels experienced in 1998 and 1999. Over the medium term, it is expected that exports could reach about 450 000 t, with the perspective to increase somewhat at the end of the forecast period. This small increase should be seen against the background of the gradual implementation of the cut in milk support price and of which the full impact will be felt somewhat later, mostly by the years 2007-08. **Imports** are forecast to continue to increase over the medium term, reflecting improved market access granted to third countries within the GATT Uruguay Round and some bilateral trade agreements.

Based on the above trends for domestic use and external trade, cheese **production** is forecast to keep its steady increase, but at a relatively lower rate in comparison to the past. Due to the constraining nature of the GATT commitments for exports, the expected average yearly growth rate for production is only slightly higher than that of total cheese consumption. Without these constraints, cheese production would be higher and absorb more milk, reducing production of other dairy products, in particular butter and skimmed milk powder (which can be sold into intervention).

Butter

Butter **production** is forecast to remain more or less at the level currently observed, reflecting the higher supply of milk fat due to increased milk deliveries and limited scope for use in the manufacturing of other dairy products. Butter **consumption** tends still to a slight decline despite some signs of stabilisation observed over several years. Forecasts for per capita consumption are set at 4.5 kg by the year 2006, compared to around 4.65 kg currently. This forecast implies an annual rate of change of around –0.5 %. The expected

decrease in total consumption is somewhat lower (-0.3 %) due to the anticipated small population increase.

Imports of butter are forecast to continue to increase in the short term before stabilising at around 110 000 t over the medium term, following the GATT outcome (increase in minimum access tariff quotas) and other import commitments. Butter **exports** are set at around 200 000 t each year, after an anticipated recovery in the short term, due to the assumption that in particular the trade with Russia will normalise.

The balance sheet for butter shows that, if in particular exports will not be considerably higher than assumed, especially in the next few years, some pressure on **intervention stocks** can be expected, despite continuous and sustained support of domestic use.

Skimmed milk powder

In the medium and long term, the downward trend both for production and consumption of SMP should continue after a short interruption in 1999. However, there is a risk that SMP **production** will remain relatively high in the short term, reflecting higher milk supply and butter production, especially in the years 2000 and 2001. Over the medium term, the forecast suggests a reduction of SMP production from an estimated 1.16 mio t in 1999 to around 995 000 t by the year 2006. While human **consumption** of SMP is projected to remain more or less stable, the use of SMP in the animal feed sector should continue to decline over time.

Imports are forecast to keep increasing slightly over the medium term. SMP **exports** are set at 250 000 t, a volume that is expected to be the likely maximum that can be reached each year on average over the forecast period, without excluding some fluctuations around.

Overall, the forecasts show a market situation where SMP **intervention stocks** tend to increase in the short term, i.e. up to the year 2003, before the pressure eases somewhat, but only thanks to high exports that have been assumed and further substantial subsidised internal use.

Chapter II Prospects for agricultural markets in the Central and Eastern European countries

This chapter provides an overview of the current and expected longer-term development of a number of the main agricultural commodity sectors in the 10 Central and Eastern European Countries (CEECs) which are candidates for accession to the European Union[1]. The projections are **based on a status-quo policy hypothesis**. This means that the projections are based on current policy and **no assumptions** have been made concerning the date and conditions of entry to the EU by candidate countries[2].

---

[1] Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic and Slovenia.

[2] This is a purely working assumption and does not prejudge the effective entry date of any candidate country or the modalities of accession.

Cereals

The area grown under cereals in the CEECs has been relatively stable above 24 mio ha during the second half of the 1990s. For the projection period, it is expected that the total area under cereals in the CEECs will show a minor annual increase of around 100 000 ha and reach about 25.2 mio ha in 2006, i.e. 5 % above the average cereal area of 1996-1999. It is assumed that the area under cereals will stay rather stable or show small increases in most countries, and that only Poland will see a significant increase of 300 000 ha from 2000 to 2006. It is expected that the average yield for the CEECs will continue to increase, at between 1.5 and 2 % per annum and reach on average 3.6 t/ha in year 2006. Based on the above mentioned assumptions on area and yield an increase in total cereal production is expected, up to about 89 mio t in 2006.

Due to a slight increase in per capita consumption, total human consumption of cereals is projected to go up by around 700 000 t in the period from 1998 to 2006 reaching 17.8 mio t. The total cereal feed use is projected to increase by 6 mio t to 51 mio t in 2006/07. This development is mainly due to increases in Poland, Hungary and Bulgaria and based on the projected development in meat production (pig meat and poultry). These feed and food use patterns combined with relatively stable other cereal use will lead to an increase from 73 mio t in 1999/2000 to 81 mio t in 2006/07.

The above assumptions on production and use during the projection period will leave an increasing amount of cereals available for export, as production is projected to increase at a higher rate than consumption, the net balance of exportable cereals is seen to grow to between 8 and 9 mio t in 2006/07, from 2 mio t in 1998/99.

Oilseeds

The area grown under oilseeds is expected to decrease significantly in the year 2000 to 3.1 mio ha from 3.4 mio ha in 1999. This is due to the current low prices especially for rapeseed and soyabeans and the very large harvested area in 1999. It is projected that the total oilseed area will stay stable at 3.1 mio ha during the projection period. Yield is seen growing at a rate similar to that of cereals at around 1.5 % annually. As in the EU the increase should be higher for rapeseed than for sunflower seed.

Based on the assumptions on area and yields mentioned above, total oilseed production is expected to decrease in 2000 after the record crop in 1999. However as yields improve production should reach 5.7 mio t in year 2006. This is equal to the record crop in 1999.

Internal use/crushing is expected to increase significantly from 4.6 mio t in 1999/2000 to 4.9 mio t in 2006. Oilseed production is projected to increase faster than internal use. The quantities available for exports may increase from 0.5 mio t in 1998 to 0.7 mio t in 2006.

Milk

In the projection period it is assumed that the number of dairy cows will continue to decrease until 2006, but at a slower speed than in previous years (-0.3 to -0.4 % p.a.). The total number of dairy cows is projected to decrease from 7.9 mio in 1999 to 7.7 mio in 2006. It is projected that the average yield per cow should go up on average 1.6 % annually in the projection period (at the same rate as in the EU. The assumed increases in yield per cow coupled with the decrease in cow numbers will lead to an increase in milk

production from 29 mio t in 1998 to 31.7 mio t in 2006. Of this 2.7 mio t increase, 1.3 mio t will be in Poland, 0.4 mio t in Hungary and 0.3 mio t in Romania.

It is assumed that the internal use should increase in the projection period, but less than production. It is expected that most of the increased milk demand in the CEECs will come mainly from an increase in use of fresh milk products and cheese. Total internal use is projected to reach nearly 29 mio t in 2006 compared to 26.4 mio t in 1998, with annual increases of 1.5 to 1.7 % on average during the period.

Based on these trends in production and consumption the CEECs are expected to increase their net export balance from 2.3 mio t in 1998 to 2.8 mio t in 2006. This increase in quantities available for exports mainly arises in the Czech Republic and Hungary and to a lesser extent from other CEECs.

Beef and veal

The production of beef and veal in the CEECs is mainly linked to the dairy herd, as only limited numbers of herds with suckler cows are present in the CEECs. During the projection period it is expected that the number of animals slaughtered will decrease slightly. It is assumed that as the number of dairy cows continues to decrease beef and veal production will do the same. The increase in suckler cow production will not be able to compensate this decrease totally. The average slaughter weight is seen to increase marginally to around 200 kg/head. Total beef and veal production is seen to reach 1.15 mio t down from 1.2 mio t in 1998.

Internal consumption is expected to grow steadily but slowly, with per capita consumption to increase from 11.3 kg in 1998 to 12.1 kg in 2006. It is assumed that total internal use in the CEECs should rise from 1.16 mio t in 1998 and reach 1.23 mio t in 2006, which is the same level of beef and veal consumption in 1995/1996. This development together with the decreased production may lead to a significant number of CEECs becoming net-importers of beef.

Pig meat

Pig meat is the most important meat produced and consumed in the CEECs, and is expected to continue to be so. Total pig meat production is projected to increase from 4.5 to 5.1 mio t, and a significant part of this increased production is estimated to be consumed in the CEECs. Per capita consumption in the CEECs is projected to increase from 41.4 kg in 1999 to 44.2 kg in 2006, or on average 1 % per year. Increases are assumed in all CEECs.

It is expected that the CEECs will be able to continue to be net exporters of pig meat and even increase from around 140 000 t in 1998 to nearly 400 000 t in 2006. The net balance in 1996 and 1997 were around 300 000 t. These net exports will mostly come from Poland and Hungary and only to a lesser extent from Bulgaria and Romania.

Poultry meat

Total production of poultry meat is projected to go beyond 2 mio t in 2006 compared to 1.7 mio t in 1998. This increase is the result of a yearly increase of around 2.5 %, and the most significant increases are assumed to take place in Romania and Poland.

The increase in production is mostly demand driven by the internal market in the CEECs. Per capita consumption, which in 1996, 1997 and 1998 grew by 1 kg, is assumed to grow by 3.5 kg from 1999 to 2006 - or by nearly 3 % annually, and could go beyond 19 kg/capita in 2006. It is not expected that the CEECs will be able to increase their net-exports during the period. Net exports from the CEECs may in fact decline slightly from currently around 100 000 t to 60 000 t in 2006. However, Hungary is projected to continue to be a net exporter of around 130 000 t annually, and Poland should increase its net imports.

Chapter III Prospects for world markets

There is a broad consensus among analysts that the medium-term outlook for agricultural products should be characterised by a **strong growth in demand** that would generate a **sustained expansion in trade**. Prospects for an increased consumption of food products, mainly in the developing countries, combined with the limited possibilities to proportionally increase domestic production are expected to boost world trade and strengthen world prices above their long-term declining trend. If short-term developments are foreseen to be dominated by the aftermath of the Asian crisis and its spread to Latin America and Russia, gradual recovery over the medium term towards a strong and stable economic growth is expected to generate an expansion in demand from the non-OECD regions, in particular in Asia and Latin America, which would constitute the main driving force behind these favourable prospects.

If the situation of agricultural markets is expected to improve as compared to the late 1980s and early 1990s, this positive outlook would nevertheless constitute a **significant downward revision from the very optimistic prospects** that had been forecast by major organisations over the last few years. A combination of over-supply in many markets in response to high prices in recent years and depressed economic conditions in many developing countries (both in terms of income and currency depreciation) led to a general **fall in commodity prices in 1998 and 1999**.

On the assumption that supply will adjust to this low price environment and that the economic prospects do not worsen, world prices and trade of most agricultural commodities are expected to recover. However, prices would remain at low levels in the short-term, whereas **recovery would only take place over the medium term**, but at a lower level than previously foreseen.

Furthermore, these projections are subject to some uncertainties. These include notably factors of policy (future agricultural and trade **policy developments in the US, EU** and emerging markets) and macro-economic nature (future world economic perspectives and currency fluctuations). These uncertainties may be expected to moderate future recovery prospects for agricultural markets.

Cereals

Large global supplies, combined with weaker import demand generated by the deterioration of the economic environment, are foreseen to keep **cereal prices at depressed levels in the short-run**. The expected recovery in the crisis-affected economies as well as supply adjustment in the cereal sector are forecast to provide the basis for a modest recovery in prices and trade over the medium term. Higher cereal consumption, fuelled by economic and population growth as well as dietary changes,

combined with limited production potential is forecast to stimulate cereal imports in a large number of non-OECD countries, including China, North Africa and Latin America.

After 15 years of relative stagnation, the FAPRI and USDA forecast **total cereal trade** to increase between 18 % and 27 % respectively by the year 2006/07, with coarse grains exhibiting a stronger pattern driven by increasing meat consumption in many developing countries and the ensuing expansion of their livestock sector.

After bottoming out in 1998/99, **world market prices** would follow an upward trend up to 2006/07. According to FAPRI and USDA projections, wheat prices are expected to range in 2006/07 between 164 $/t and 175 $/t respectively, whereas maize and barley prices should develop between 105 $/t and 124 $/t. The OECD foresees that wheat and maize prices would strengthen over the medium term and reach 153 $/t and 120 $/t respectively in 2004/05.

Oilseeds

The oilseed sector is expected to exhibit a **gradual recovery** from a current situation characterised by plentiful supplies and weak demand. Over the medium term, most organisations foresee a stronger demand for vegetable oils due to increased human demand as well as for oilseed meals, which should benefit from the expansion of the feed-livestock sector. Higher demand would support prices over the outlook horizon, sustain production and generate further **expansion of trade in oilseeds and oilseed products** (though at a lower pace than in the early 1990s). The prices of oilseeds and oilseed products would remain at depressed levels in the short-term, before strengthening over the rest of the period. By 2006/07, soya bean prices would range between 237 $/t and 271 $/t according to the FAPRI and USDA projections respectively (the OECD foresees a stronger recovery with soya bean prices at 301 $/t by 2004/05). Soya bean meal prices would also trend upward over the medium term, reaching between 165 $/t and 185 $/t in 2006/07.

Palm oil is forecast to capture the greatest share of an expanding demand and trade for vegetable oil. Growth in oilseed oil trade would be stronger than that of oilseeds and oilseed meals, though lower than in the early 1990s. The strong dependence of trade in vegetable oil from developing countries makes the outlook very sensitive to the economic prospects in these countries.

Meat

The prospects for an increase in the **consumption** of meat in response to income growth, in particular in transition economies and rapidly industrialising economies, combined with limited possibilities to proportionally increase domestic production, are expected to stimulate **world trade** and strengthen **world market prices** for meat over the medium and long term. Beef trade is forecast to increase by more than 0.8 mio t over the 1998-2006 period (i.e. +17 %), with most of the growth from Asia and Mexico. Pig meat trade is projected to climb to between 0.5 to 0.7 mio t over the same period (i.e. around 20-34 %). Global trade in poultry meat is also projected to trend upward, with increases in the range of 1.2 to 2.1 mio t (i.e. around 30-40 %) according to different analysts.

Beef and poultry prices should strengthen over the medium term supported by strong demand. The magnitude of the recovery would remain dependent on higher feeding costs as well as the depth of the economic crisis and the speed of recovery in some key

importing countries. **Pig meat prices** are projected to trend upward over the medium term, driven by higher demand and feed prices but largely tempered by continued efficiency gains and increased competition from other meat.

Milk and dairy products

The medium-term outlook for the **milk and dairy markets** appears to be rather favourable as for the other agricultural products. Stimulated by increasing consumption and higher producer prices, milk production is set to expand in a number of countries, mainly outside the OECD area and in those OECD countries that do not use production quotas. According to the OECD, world cow milk production is likely to increase by more than 50 mio t from 1998 to 2004. The greatest increase in milk output is foreseen in India, some other Asian countries (China, Pakistan) and several countries of Latin America (mainly Brazil, Argentina and Mexico).

The OECD and the FAO anticipate that the **gradual shift in world trade** from bulk dairy products (i.e. SMP and butter) towards higher value added products (such as cheese) should continue over the medium term. After a short-term decline, **world market prices** of dairy products are predicted to gradually recover. They would remain below their 1995 level, but above the level experienced in the early 1990s. Price prospects for cheese would exhibit the most favourable development.

Key issues

The outlook for agricultural markets over the next seven years appears fairly positive when compared to the situation in the 1980s and early 1990s. However, it must be stressed that these market projections are particularly sensitive to critical assumptions regarding the economic environment, future supply, demand and policy developments and they remain subject to some uncertainties.

In this regard, three main areas of uncertainties can be identified:

- *The economic perspectives:* concerns remain about the medium-term prospects for many emerging economies (both in terms of income and currency depreciation). If the situation in many of these countries has significantly improved and the economic downturns in Russia and Brazil shallower than expected earlier, some emerging economies remain fragile and vulnerable and the path towards full recovery may turn out to be longer than initially thought.
- *The scope for production growth:* future production growth in the main importing countries is forecast to be outpaced by the rise in consumption. If availability of additional land is expected to be limited in most regions, potential for further improvement in productivity clearly remains a source of uncertainty.
- *The policy and trade environment:* future course of agricultural policy reforms -in the EU and other major producing countries/regions- as well as the new round of WTO multilateral trade negotiations may have important implications for the medium-term outlook of agricultural products.

PROSPECTS FOR AGRICULTURAL MARKETS

IN THE EUROPEAN UNION

1. Introduction and macro-economic environment

1.1 Introduction

This chapter summarises the main results and underlying assumptions of long-term perspectives for some key agricultural products (i.e. cereals, oilseeds, meat and milk products) in the European Union for the period 1999 - 2006. The results presented are the final outcome of different approaches (econometric methods, statistical analyses, specific assumptions, expert judgements, etc.), depending on the products and variables concerned, **based on the statistical information available on the 15.11.1999**.

These projections are not intended to constitute a forecast of what the future will be, but instead a description of what may happen under a specific set of assumptions and circumstances. The most important assumptions concern the domestic agricultural policy and trade environment:

(1) As regards agricultural policy, all policy instruments and measures are expected to operate under the current rules or within the changes already decided for the 1999-2006 period. In that perspective, the implementation of the **reform of the Common Agricultural Policy** adopted in the framework of **Agenda 2000** is fully taken into account from 2000 onwards. A synthetic description of the main market measures of the CAP reform agreement that has been adopted in March 1999 in Berlin is given in Box 1 for the agricultural sectors covered in this publication.

(2) The second important assumption relates to trade in agricultural products and, in particular, to the commitments derived from the Uruguay Round Agreement. **It is assumed that all URA commitments regarding market access and subsidised exports will be fully respected.** Thus, subsidised exports are expected not to exceed the annual URA limits, whereas imports under current and minimum access are fully incorporated. **In addition, the URA commitments are assumed to remain unchanged over the 2001-2006 period**.

1.2 The macro-economic environment

The latest short-term economic forecasts from the Commission[3] from Autumn 1999 confirm that, after a slow down in economic activity from Autumn 1998 to Spring 1999 as a result of the deterioration in the international environment, growth has picked up again. Weaker external demand in the wake of the financial and economic crisis in South East Asia and its spillover to other regions (e.g. Russia and Latin America), and an associated decline in business confidence led to a significant deceleration in economic growth in late 1998.

Sound fundamentals and robust domestic demand should contribute, together with the general improvement in the global economic and financial conditions, to lift the economy to a higher growth path in 2000. In spite of the recent upsurge in the prices of oil and of some other commodities, favourable domestic factors (including moderate wages and continued deregulation) should keep inflationary pressures to low levels. Despite the relatively slow budgetary consolidation, an environment of low inflation and nominal

---

[3] European Commission, Directorate-General for Economic and Financial Affairs (October/November 1999). Autumn 1999 forecasts for 1999-2001. *Economic Trends*, (10/11) Supplement A.

interest rates should sustain consumer confidence and contribute to strengthen the economic recovery.

After a rather robust economic performance in 1998 when GDP growth reached 2.6 %, the outlook for 1999 is estimated to be limited to 2.1 %. The economy is then forecast to pick up again and follow an upward trend with an average GDP growth rate of 3.0 % in 2000 and 2001. Inflation is foreseen to remain subdued, increasing slightly at around 1.5 % in 2000 and 1.6 % in 2001 in line with more dynamic growth, after falling to 1.2 % in 1999.

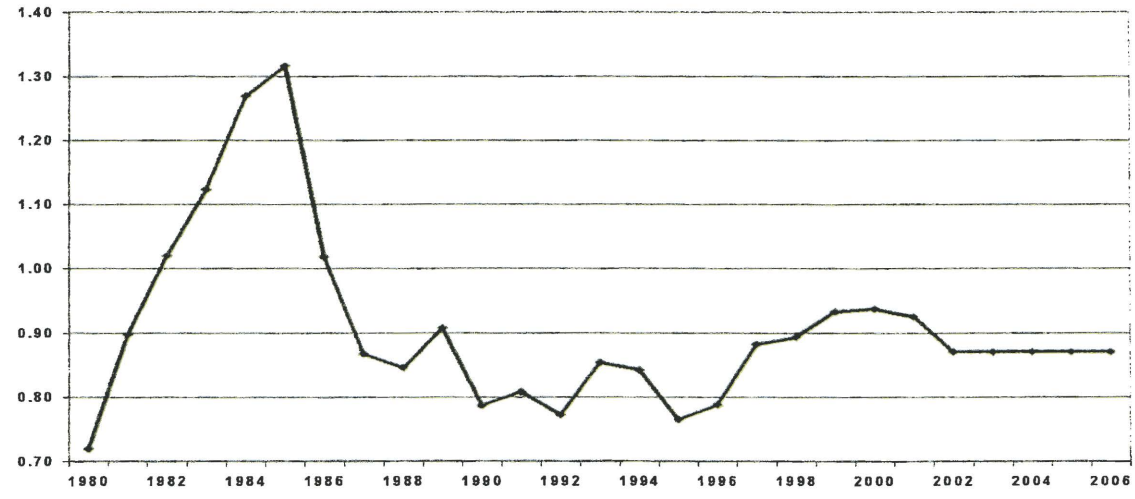
Medium-term prospects for economic growth in the EU will continue to rely on domestic demand, which is forecast to remain relatively strong. Yet, in the context of a more balanced economic growth, the global state of the world economy should also strongly influence the economic situation in the EU over the medium term. The sharp improvement in the economic and financial conditions of most emerging economies recently in crisis should release some downside pressure even if the path towards a stable and sustainable recovery remains fragile and vulnerable. In that perspective, future prospects for the US economy may be expected to be critical.

Table 1.1 Assumptions on macro-economic variables in the European Union, 1997 – 2006

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Population (in mio)	374.1	375.1	376.0	377.0	378.0	379.1	380.1	381.2	381.8	382.5
GDP growth (in %)	2.5	2.6	2.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Inflation (in %)	1.7	1.3	1.2	1.5	1.6	1.6	1.6	1.6	1.6	1.6
€/$ exchange rate	0.88	0.89	0.93	0.94	0.93	0.87	0.87	0.87	0.87	0.87

The achievement of a "soft landing" of the US economy, together with a recovery in Japan and in the emerging economies, and the strengthening in output growth in the EU could set the stage for a gradual improvement in the world economic outlook. In that context, economic growth as well as inflation figures in the EU may be assumed to remain broadly stable over the medium term at 3.0 % and 1.6 % respectively.

Graph 1.1 Medium-term development in the €/$ exchange rate, 1980 – 2006



Future prospects for the €/$ exchange rate will be a key feature in shaping the competitiveness of EU agricultural sector. Although the short-term developments in the €/$ exchange rate may be expected to pursue over the next two years, it is assumed that

Box 1 - CAP reform in Agenda 2000

*In the framework of its decisions on **Agenda 2000**, the European Council adopted, in March 1999 in Berlin, a major new **reform of the Common Agricultural Policy** (CAP). The Agenda 2000 decisions also include the launching of the enlargement procedures, enhancing the pre-accession strategy, a new reform of the EU's Structural Funds' intervention and the definition of new financial perspectives for the period 2000-2006.*

*The CAP reform is designed to prepare European agriculture for the **external and internal challenges** awaiting it in the year 2000 and beyond. External factors include the opportunities offered by the favourable outlook for the world markets of the main agricultural products, the next multilateral trade negotiations and the likely move toward further trade liberalisation as well as the new enlargement of the EU. On the internal front, the main factors are the likelihood of growing imbalances in some agricultural sectors if the CAP remains unchanged, better integration of environmental concerns and consumer interest in food safety, quality and animal welfare.*

*Five major **objectives** are assigned to the new CAP: (1) improving the competitiveness of EU agriculture both internally and externally; (2) guaranteeing and improving food safety and quality in line with consumers expectations; (3) ensuring a fair standard of living for the agricultural community and the stability of farm incomes; (4) integrating environmental goals into the CAP; (5) promoting supplementary or alternative sources of employment and income in rural areas and thus contributing to the economic cohesion within the Union.*

*The **guiding principles of the CAP market reform** can be summarised as follows: (1) reduction in the support prices in the cereals, beef and dairy sectors; (2) increase of existing or granting of new direct payments (defined per hectare, animal or volume of milk quota); (3) introducing horizontal regulations allowing for the subordination of the granting of direct payments to environmental requirements and modulation of direct payments per farm.*

*The **key features of the CAP reform for the agricultural markets** are presented below for the **three sectors** covered in these medium-term perspectives:*

Arable crops sector

- *Reduction in the support price for cereals by 15 % (from 119.19 €/t to 101.31 €/t) in two equal steps for the marketing years 2000/01 and 2001/02 (with monthly increments);*

- *Increase in direct payments per hectare for cereals in two equal steps from 54.34 €/t to 63 €/t multiplied by the historical cereal reference yield;*

- *For oilseeds, progressive adjustments aligning aid per hectare to aid for cereals over a three-year period (2000/01-2002/03) from 94.24 €/t to 63 €/t, multiplied by the historical cereal reference yield; three-steps reduction in non-textile linseed area payments from 105.1 €/t to 63 €/t in 2002/03, multiplied by the historical cereal reference yield; from 2000/01 onwards compensation for set-aside (compulsory and voluntary) at the same rate as for arable crops. From 2002/03 onwards, same direct payments for cereals, oilseeds, non-textile linseed and set-aside; reduction in area payment for protein crops in 2000/01 to 72.5 €/t from 78.49 €/t in 1999/00, multiplied by the historical cereal reference yield;*

- *The base rate of compulsory set-aside set at 10 % for the whole 2000-2006 period; voluntary set-aside allowed;*

- *Other measures include: increase in Italy and Spain reference yields; specific arrangements for grass silage in some countries.*

Beef sector

. Reduction in the price support by 20 % in three steps starting in 2000 (i.e. 2780 €/t to 2224 €/t); public intervention replaced by private storage (when prices fall below 103 % of new support price); ad-hoc intervention in cases of crisis;

. Safety net intervention through buying-in tenders, when prices fall below 1560 €/t;

. Increase in existing premium per animal over three steps starting in 2000 and introduction of a new slaughter premium; introduction of national envelopes to top up payments for male or female bovine (except calves) or to grant a hectare premium for permanent pasture;

. From 2002 onwards, animal premium will amount to (excluding national envelopes):

- special male premium: 210 € (bulls, once); 150 € (steers, max. twice)
- suckler cow premium: 200 € (annual)
- slaughter premium: 80 € (dairy cows, suckler cows, heifers, steers, bulls); 50 € (veal calves)

. Premia subject to individual (suckler cows) or regional/national (special male and slaughter premia) ceilings based on historical data, minimum age (steers and slaughter premia) and other limits partly compulsory (livestock density of 2 livestock units/ha of forage area), partly optional (90 animals per holding for the special premium; 120 000 kg of milk for suckler cow premium);

. Reinforcement of existing extensification premium (top up for male and/or suckler cow premia) linked to more rigorous criteria; choice between two different systems to be made at Member State level.

Dairy sector

. The reform of the dairy sector will enter into force from 2005/06 onwards, with commitment from the Council to proceed to a review of the sector in 2003 "with the aim of allowing the present quota arrangements to run out after 2006";

. Specific additional milk quotas for five Member States in two steps in 2000 and 2001 (Italy, Spain, Ireland, Greece and United Kingdom for Northern Ireland), resulting in an overall quotas increase for the EU of 1.4 mio t (or 1.2 %);

. Reduction in intervention prices for butter and skimmed milk powder by 15 % in three equal steps, starting from 2005/06;

. Increase in milk quotas by 1.5 % in three equal steps for all Member States except Italy, Spain, Ireland, Greece and Northern Ireland, in parallel with the price reduction, starting in 2005/06; together with the specific additional quota in 2000 and 2001, this leads in 2007/08 to a milk quotas increase of approximately 2.8 mio t (or 2.4 %) for the EU as a whole;

. Introduction of a direct payment per tonne of individual reference quantity linked to the global volume of the quota year 1999/00, set in three years starting in 2005/06 and amounting to 17.24 €/t from 2007/08 onwards;

. Introduction of a system of national envelopes starting in 2005/06 to top-up aid in order to take account of specific circumstances in the different Member States;

. Greater flexibility in the management of milk quotas (optional).

Further details are available from the Internet site http://europe.eu.int/comm/*dg06/index.htm*

the euro will slightly strengthen *vis-à-vis* the US dollar over the medium term at around 0.87 (1 $ = 0.87 €).

2. Arable crops

2.1 Cereals

2.1.1 Supply

Area allocation

The impact of the implementation of Agenda 2000 on the area allocated to COP crops (i.e. cereals, oilseeds and protein crops) is foreseen to result mainly from the three following measures

(1) the **cut in cereal support prices**;

(2) the **alignment of direct payments** for all the various uses of the base area **on the cereal payments** from 2002/03 onwards (with the exception of protein crops and durum wheat), implying a drop in oilseed, non-textile linseed and set-aside payments;

(3) the setting of the **base rate for compulsory set-aside at 10 %**.

These factors are expected to generate (i) a rapid expansion in **voluntary set-aside** in regions where the profitability of farming is low and (ii) some shift among arable crops on farmed land, with notably a relative increase in cereal area allocation at the expense of oilseeds, the magnitude of which would become increasingly dependent on the development of world market prices.

Total land set-aside is projected to grow from 4.2 mio ha in 1998/99 to an estimated 5.8 mio ha in 1999/00 in line with the increase in the rate of compulsory set-aside from 5% to 10 % respectively. It would then rise steadily to reach 6.5 mio ha in 2006/07 under the combined increase in land set-aside on a compulsory and voluntary basis.

Compulsory set-aside would expand from 4.1 mio ha in 1999/00 to 4.2 mio ha by 2006/07 as area grown within the general scheme rises. Land under **voluntary set-aside** would in turn increase from 1.7 mio ha in 1999/00 to 2.3 mio ha from 2002/03 onwards in response to the cut in cereal support prices and the fall in oilseed and non-textile linseed direct payments. Yet, the take-up in voluntary set-aside may vary over the medium term depending on market price developments (which may shift land into or out of production) and the change in the rate of compulsory set-aside (cf. table 1.2).

COP crops area would decline from 44.2 mio ha in 1998/99 to 42.8 mio ha in 1999/00 and 42.6 mio ha over the medium term[4]. The distribution of this COP area between cereals, oilseeds and protein crops over the medium term is directly influenced by changes in their profitability and in turn by the developments in world market prices once direct

[4] Protein crops area would maintain their share in the total COP area and reach 1.3 mio ha by 2006/07.

payments are equalised across arable crops[5].

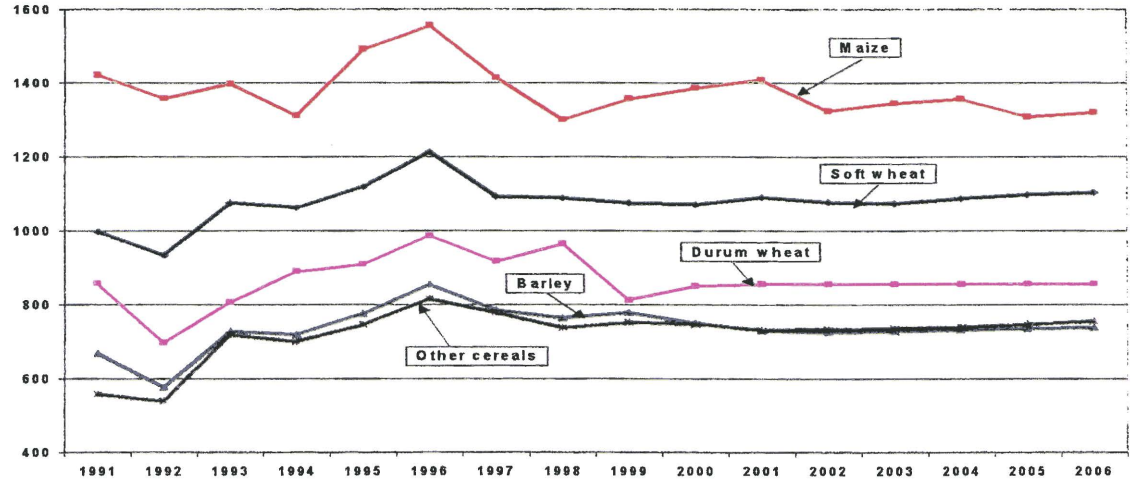
Table 1.2 Distribution of the total area under arable crops and set-aside, 1997/98 – 2006/07 (mio ha)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Cereals	37.9	37.2	36.5	36.7	36.7	37.0	37.0	37.0	36.9	36.8
Oilseeds	5.3	5.6	5.1	4.8	4.6	4.3	4.3	4.4	4.4	4.4
Protein crops	1.4	1.5	1.2	1.3	1.2	1.3	1.3	1.3	1.3	1.3
Linseed + silage	4.6	4.6	4.9	4.7	4.7	4.5	4.5	4.5	4.5	4.5
Total arable crops (a)	49.2	48.9	47.7	47.4	47.2	47.1	47.1	47.1	47.0	47.0
Compulsory set-aside	2.0	2.0	4.1	4.1	4.1	4.1	4.2	4.2	4.2	4.2
Other set-aside	2.0	2.2	1.7	2.0	2.3	2.3	2.3	2.3	2.3	2.3
Total set-aside (b)	4.0	4.2	5.8	6.1	6.4	6.4	6.5	6.5	6.5	6.5
TOTAL (a+b)	53.2	53.1	53.6	53.5	53.5	53.5	53.5	53.5	53.5	53.5

Owing to a lower fall in average receipts, the share of cereals in the total COP area would rise steadily from 84 % in 1998/99 to 86.5 % in 2006/07. Higher direct payments, increasing yields and prices above support levels for some cereals (such as soft wheat and maize[6]) would on average partially outweigh the cut in cereal support prices.

Taking account of the projected level of world and internal prices, the change in total cereal receipts (i.e. market receipts and direct payments) by 2006/07 would range between –9 % for durum wheat and +1 % for soft wheat as compared to the 1997/98-1998/99 average (cf. graph 1.2).

Graph 1.2 Medium-term development in cereal receipts, 1991/92 – 2006/07 (€/ha)



5 Direct payment per crop is calculated on a per Member State basis, taking into account the national reference yields. This allows to identify specific changes in direct payments for crops which are not produced evenly across the EU (such as sunflower, soya bean and durum wheat) and to take full account of the possibility left to Member States to use oilseed regional reference yields over the transitional period (2000/01 and 2001/02).

6 EU domestic prices for cereals are foreseen to benefit from improved medium-term perspectives in world markets which should allow to keep domestic prices above support levels by 2003/04 for some cereals (notably wheat). World cereal prices would bottom out in 1998/99 and 1999/00, following their short-term decline from the peaks of 1995/96, before recovering over the medium term. By 2006/07, world cereal prices would reach around 136 €/t for common wheat, 105 €/t for maize and 91 €/t for barley.

After an estimated decline of 0.7 mio ha from 1998/99 to 1999/00 in line with the rise in the rate of compulsory set-aside, the **total cereal area** would increase slightly in 2000/01 and 2001/02 by more than 0.2 mio ha to reach 36.7 mio ha. Cereal area would benefit from some shift in area from non-textile linseed and oilseed production and would be supported by market prices above support levels in the short-term for soft wheat, maize and durum wheat due to tightly balanced markets. These factors would outweigh the negative impact on area development of the cut in cereal support prices and the rise in voluntary set-aside.

From 2002/03 onwards, the full implementation of the reform across the arable sector should generate a further increase in cereal area of around 0.2-0.3 mio ha as oilseed and non-textile linseed area declines more significantly. After peaking in 2002/03 at 37.0 mio ha, cereal area is expected to stagnate between 36.8 and 37.0 mio ha over the medium term.

However, this increase would not be uniform across cereals. **Soft wheat** would mainly gain with an increase estimated at more than 5 % relative to 1998/99 to reach 14.7 mio ha in 2006/07 (conditional on agronomic possibilities). Soft wheat is expected to benefit from an increased demand (both domestic and external) that would maintain its prices above support levels. **Durum wheat** area would also gain substantially following the implementation of its new common market organisation with an increase estimated at around 15 % over the medium term to reach 3.6 mio ha by 2006/07. This would mainly reflect a strong development in area allocated to durum wheat in Spain, France and Portugal.

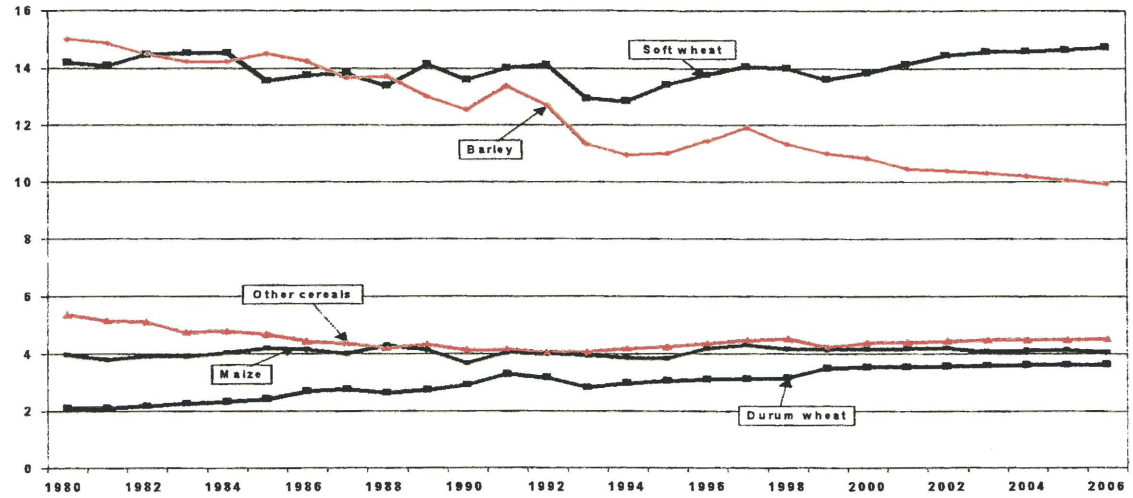
Table 1.3 Cereal area allocation in the European Union, 1997/98 – 2006/07 (mio ha)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Total wheat	17.2	17.1	17.1	17.4	17.7	18.0	18.1	18.2	18.2	18.3
Soft wheat	14.0	14.0	13.6	13.8	14.1	14.4	14.6	14.6	14.6	14.7
Durum wheat	3.1	3.1	3.5	3.5	3.5	3.6	3.6	3.6	3.6	3.6
Total coarse grains	20.7	20.0	19.4	19.4	19.0	19.0	18.9	18.8	18.7	18.5
Barley	11.9	11.3	11.0	10.8	10.5	10.4	10.3	10.2	10.1	9.9
Maize	4.3	4.2	4.2	4.1	4.2	4.2	4.1	4.1	4.1	4.0
Other cereals	4.5	4.5	4.2	4.4	4.4	4.4	4.5	4.5	4.5	4.5
Total cereals	37.9	37.2	36.5	36.7	36.7	37.0	37.0	37.0	36.9	36.8
Set-aside rate	5.0%	5.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%

Coarse grain area would continuously fall over the medium term to reach 18.5 mio ha by 2006/07, a decrease of more than 7 % as compared to 1998/99. Lower growth prospects on the demand side are expected to generate stock increases and keep coarse grain market prices below support levels (with the exception of maize) which should in turn limit their development on the supply side.

The development in coarse grain area would be mainly affected by the fall in **barley** area of 12.4 % between 1998/99 and 2006/07 due mostly to projected lower receipts and agronomic reasons. The **maize** area would slightly decrease over the medium term to reach around 4.1 mio ha by the end of the period, in line with the regular decline in maize prices over the whole period (the latter would nevertheless remain well above support levels).

Graph 1.3 Cereal area allocation in the European Union, 1980/01 – 2006/07 (mio ha)



The area allocated to the heterogeneous group of "**other cereals**" (mainly oats, rye and triticale) is expected to display a steady pattern over the medium term and reach 4.5 mio ha in 2006/07. This growth would be mainly driven by the triticale area, which is expected to continue its rising trend.

Yields

Yield trends observed since the beginning of the 1980s are assumed to continue over the projection period, although at a lower rate. If the fall in market prices is expected to curb the increasing trend in cereal yields, the upsurge in yields in the most recent years as well as the projected increase in the level of land set-aside which should remove the least productive land from production, should contribute to soften the impact[7] of lower prices. Overall, it is estimated that yield trends would be some 2 % lower than under a scenario without CAP reform.

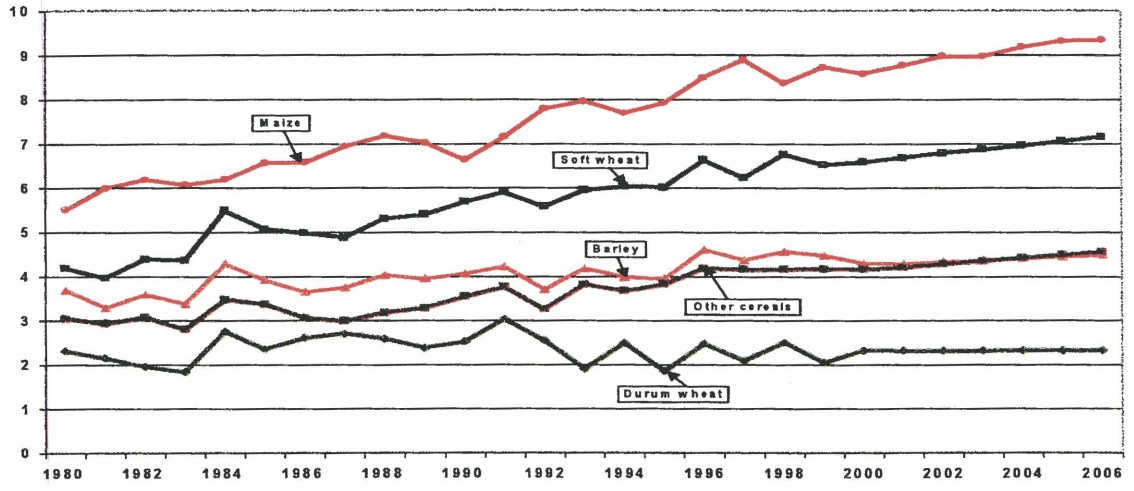
Table 1.4 Cereal yield projections in the European Union, 1997/98 – 2006/07 (t/ha)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Soft wheat	6.2	6.8	6.5	6.6	6.7	6.8	6.9	7.0	7.1	7.2
Durum wheat	2.1	2.5	2.0	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Barley	4.4	4.6	4.5	4.3	4.3	4.3	4.4	4.4	4.4	4.5
Maize	8.9	8.4	8.7	8.6	8.8	9.0	9.0	9.2	9.3	9.4
Other cereals	4.2	4.2	4.2	4.2	4.2	4.3	4.3	4.4	4.5	4.6
Total cereals	5.4	5.6	5.5	5.4	5.5	5.6	5.7	5.7	5.8	5.9

Over the 1996/97-1998/99 period, cereal yields reached above long-term trend levels, averaging 5.51 t/ha. They are estimated to have slightly declined to 5.46 t/ha in 1999/00.

[7] Updated trends have been computed for barley and the "other cereals" group which provide for an upward revision for the medium-term development in the yield of these cereals. On the opposite, recent work on durum wheat statistics appears to show some inconsistencies in the balance between production and consumption (both internal and external) of this cereal at EU level. Preliminary corrections have mainly focused on yield growth in Italy that provide for a significant downward revision in EU durum wheat yields. The latter are now projected to remain rather stable over the medium term.

Graph 1.4 Cereal yields in the European Union, 1980/81 – 2006/07 (t/ha)



Over the medium term, they would resume their upward trend to reach 5.88 t/ha in 2006/07. Maize, soft wheat and "other cereals" would gain most with an average annual increase estimated at around 0.13 t/ha, 0.10 t/ha and 0.07 t/ha respectively (i.e. 1.4 % per annum). Conversely, durum wheat and barley will record the lowest yield increases.

Production

Total harvested cereal production is projected to fall from 207.9 mio t in 1998/99 to 199.0 mio t in 1999/00 in line with the increase in the rate of compulsory set-aside and slightly lower yields. It should then slowly increase up to 2002/03 when it is expected to expand more significantly to reach 216.7 mio t in 2006/07 driven by increasing yields. As compared to 1998/99, the cumulated increase in yields of more than 5 % up to 2006/07 would outweigh the stagnation in total cereal area (-0.8 %).

Table 1.5 Cereal harvested production projections in the EU, 1997/98 – 2006/07 (mio t)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Total wheat	94.0	102.4	95.8	99.2	102.5	106.1	108.2	109.7	111.7	113.8
Soft wheat	87.5	94.5	88.7	91.1	94.3	97.9	100.0	101.4	103.3	105.4
Durum wheat	6.5	7.9	7.1	8.1	8.1	8.2	8.3	8.3	8.4	8.4
Total coarse grains	109.0	105.5	103.2	100.4	100.0	101.7	101.0	102.5	103.3	103.0
Barley	52.1	51.7	49.3	46.6	44.9	45.1	45.0	44.9	44.7	44.5
Maize	38.3	34.9	36.3	35.6	36.6	37.6	36.5	37.7	38.5	37.9
Other cereals	18.6	18.9	17.6	18.3	18.5	19.0	19.5	19.8	20.1	20.6
Total cereals	203.0	207.9	199.0	199.6	202.5	207.9	209.3	212.2	215.0	216.7

In line with higher area and yield projections (above 5 % for both as compared to 1998/99), soft wheat production would rapidly expand over 100 mio t and reach a historical high of 105.4 mio t in 2006/07, overtaking total coarse grain production. In contrast, coarse grain production would fall in the short-term before rising slowly to around 103 mio t over the medium term. Barley production is projected to exhibit a regular decline over the next eight years owing to low profitability prospects.

2.1.2 Internal demand

Following the strong rise in domestic use of cereals generated by the 1992 CAP reform, the implementation of Agenda 2000 is foreseen to provide a further boost to domestic

demand by improving cereal competitiveness *vis-à-vis* their main substitutes in animal feed usage.

Total cereal demand is projected to increase steadily over the medium term, from 177.3 mio t in 1998/99 to 192.4 mio t in 2006/07. Most of this 15 mio t growth in cereal demand would be driven by feed usage, which would increase by about 10 %, by 2006/07.

Table 1.6 Cereal demand projections in the EU, 1997/98 – 2006/07 (mio t)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Feed demand	108.7	110.5	110.5	111.9	113.8	116.6	117.5	118.8	120.3	121.6
Food demand	42.4	41.9	42.1	42.1	42.2	42.5	42.7	42.8	42.9	43.0
Seed demand	6.4	6.3	6.3	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Other demand	18.0	18.6	18.8	19.6	20.2	20.4	21.0	21.2	21.2	21.8
Total cereals demand	**175.5**	**177.3**	**177.7**	**179.6**	**182.3**	**185.4**	**187.1**	**188.7**	**190.4**	**192.4**

Feed demand

Cereal use in animal feed has steadily increased since 1992/93, from 84.0 mio t to 110.5 mio t in 1998/99 (+26.5 mio t). This growth, predominantly driven by soft wheat (+17.1 mio t) and to a lesser extent maize (+6.6 mio t), resulted mainly from the strong development in the total feed demand generated by the rapid growth in pig and poultry meat production over the last eight years (+17 % and +33 % respectively). Furthermore, lower cereal prices after the 1992 CAP reform boosted the competitiveness of cereals on the domestic market and constrained EU imports of cereal substitute products either at lower levels (notably manioc) or to a mere stagnation (particularly for corn gluten feed and soya bean meals). As a result, the cereal market share in the total demand for marketable feed products rose from around 48 % in 1992/93 to some 54 % in 1998/99.

Further increase in feed use of cereals is projected over the 1999/00 – 2006/07 period, though at a lower rate than in recent years due to the slowing down in the growth in total demand for marketable feeds and in the price competitiveness of cereals[8].

Whereas the total demand for marketable feed products rose by more than 11 % from 1990 to 1998, the medium-term prospects of a marked slow down in the growth of white meat production (mainly pig meat) and the declining trend in the size of the total EU cattle herd is expected to limit its growth to some 3 %. Annual growth in total feed demand is foreseen to slow down over the next three marketing years in line with the cyclical downturn in beef production and the short-term adjustment which is foreseen to take place in the pig sector. It would then gather pace to range between 0.4 % and 0.6 % up to 2006/07[9].

Cereals would continue to benefit from an improved price competitiveness *vis-à-vis* their main substitutes. The prices of oilseed meals are foreseen to stagnate in the short-term to around 130-140 €/t, after falling sharply in 1997/98 and 1998/99 from a high level of 219 €/t in 1996/97. They would later strengthen up to 2006/07 when they would reach

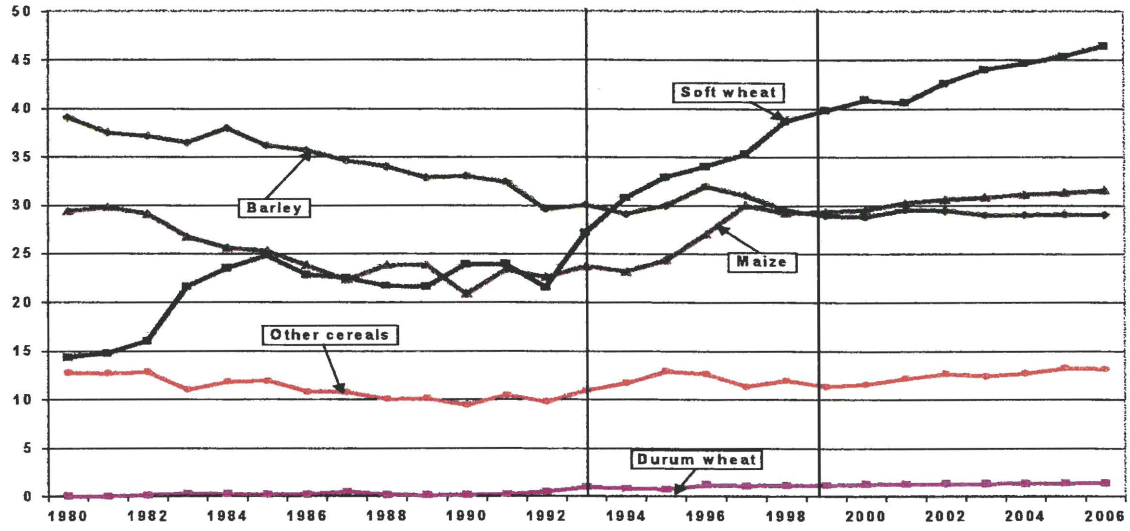
---

[8] Furthermore, nutritional constraints in the feed formulations for further cereal incorporation could also limit somewhat future growth prospects for cereal feed use.

[9] The reform in the beef sector is foreseen to generate a drop in beef market prices, which should boost beef consumption. It should in turn put downward pressure on pork and poultry prices and reduce somewhat growth prospects in pork and poultry meat production over the medium term, in spite of lower cereal feed costs.

about 160 €/t. The prices of corn gluten feed are expected to stagnate over the medium term, whereas manioc prices would decline broadly in line with EU domestic cereal prices.

Graph 1.5 Development in cereal feed demand, 1980/81 – 2006/07 (mio t)



The cut in cereal support prices in 2000 and 2001 is foreseen to generate a drop in the domestic price level for cereals over the medium term. The persistent imbalance in the barley and "other cereals" markets is projected to keep their prices below intervention price levels throughout the whole period. Conversely, soft wheat and maize prices would fall by a much lower magnitude and remain above intervention levels, supported by tightly balanced markets. From 2003/04 onwards, the expected recovery on world markets should boost world market prices for soft wheat above EU support prices, thus keeping EU domestic market prices above support levels since world market prices would act as a new price floor.

More competitive cereals are expected to capture a growing share of the total demand for marketable feed products. The total share of EU cereals would rise regularly and reach 57.8 % in 2006/07 from 54.2 % in 1998/99. Most of the gains would be achieved over the first three years of implementation of the Agenda 2000, when the 15 % cut in support prices translates into an estimated 13 % fall in average cereal market prices. Conversely, the feed market share of the "protein-rich" and "energy-rich" products would drop by 1.4 and 2.2 percentage points respectively[10].

Table 1.7 Total wheat demand projections in the EU, 1997/98 – 2006/07 (mio t)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Feed demand	36.4	39.8	40.9	42.1	41.9	43.9	45.3	46.0	46.7	47.8
Food demand	36.7	36.1	36.4	36.5	36.5	36.7	36.9	37.0	37.1	37.2
Seed demand	3.3	3.3	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4
Other demand	5.4	5.9	6.2	6.9	7.3	7.7	8.2	8.4	8.5	8.9
Wheat demand	**81.8**	**85.2**	**86.9**	**88.8**	**89.0**	**91.7**	**93.8**	**94.8**	**95.8**	**97.3**

A larger demand for feed products combined with an improved market share is thus expected to generate a rise in total feed use of cereals estimated at more than 10 % from 1998/99 to 2006/07, when total cereal feed usage would amount to 121.6 mio t (a

[10] However, a less favourable price development for the main feed substitute products would affect the magnitude of the gains for EU cereals.

11.1 mio t increase as compared to 1998/99). The market share of individual cereals in total cereal feed demand is mainly dependent on the development of their relative market prices, although specific patterns can be identified such as the increasing use of wheat for feed purposes and the continuous decline in feed barley usage. Since barley and other cereals appear to be less price responsive, much should depend from the soft wheat/maize price relationship.

Despite higher prices, the price gap between soft wheat and coarse grains would not be large enough to prevent wheat from confirming its predominance as the main cereal for feed use in the EU. Its share in the total cereal feed use would slightly drop in the short-term, before resuming its steady growth to reach 38.2 % by 2006/07 as soft wheat prices fall. Soft wheat feed usage would increase by 7.7 mio t over the whole period, from 38.7 mio t in 1998/99 to 46.4 mio t in 2006/07. Conversely, feed use of barley would stagnate at 29 mio t, representing at the end of the period less than a quarter of the total cereals consumed by animals. Constrained by relatively firm prices, maize feed consumption would increase modestly by over 2 mio t, its share in the total cereal feed usage exhibiting a slight decline of half a percentage point.

Table 1.8 Total coarse grains demand projections in the EU, 1997/98 – 2006/07 (mio t)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Feed demand	72.3	70.7	69.6	69.8	71.9	72.7	72.2	72.8	73.6	73.7
Food demand	5.7	5.8	5.7	5.7	5.7	5.7	5.7	5.8	5.8	5.8
Seed demand	3.1	3.0	3.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Other demand	12.6	12.7	12.6	12.7	12.9	12.7	12.8	12.8	12.7	13.0
Coarse grains demand	**93.7**	**92.1**	**90.8**	**90.8**	**93.2**	**93.7**	**93.3**	**94.0**	**94.7**	**95.0**

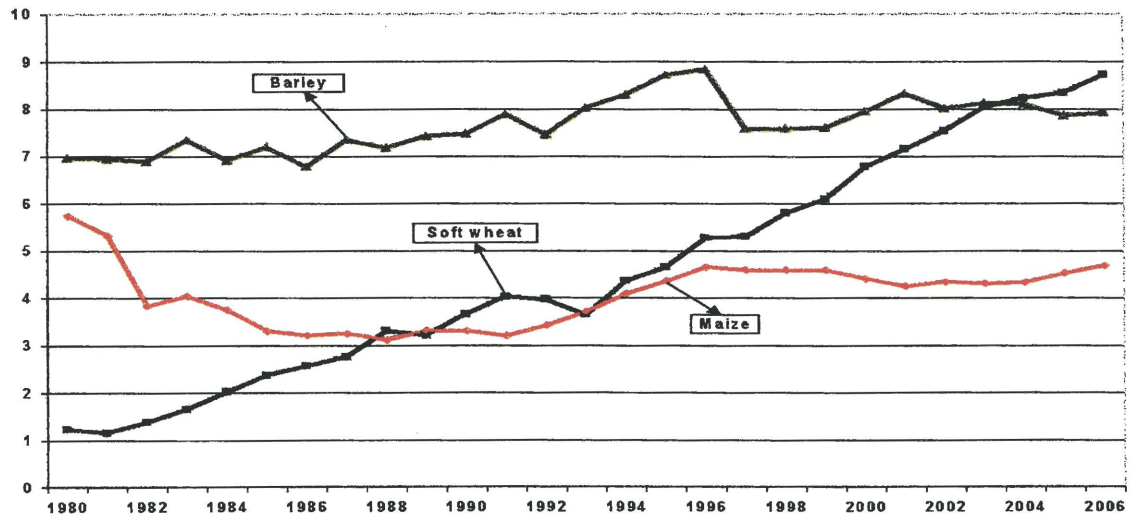
It appears that the general fall in cereal prices in the framework of the implementation of Agenda 2000 would reinforce the trends observed in the EU feed market since the 1992 CAP reform towards an ever greater use of soft wheat for feed purposes detrimentally to coarse grains, notably barley and other cereals.

Non-feed demand

Non-feed uses of total cereals are projected to increase by 4.0 mio t, from 66.8 mio t in 1998/99 to 70.8 mio t in 2006/07. Food demand would only increase in line with population growth due to the very low price responsiveness of this type of demand. Seed demand would stagnate at around 6.0 mio t over the medium term in line with a total cereal area relatively stable at below 37 mio ha.

Conversely, lower cereal prices would boost "other demand" (mainly industrial demand) which would grow by 3.2 mio t from 1998/99 to 2006/07 (i.e. a 17.4 % increase relatively to 1998/99). Most of this growth would be generated by other demand for soft wheat (predominantly for starch production) which would benefit from lower prices. Other demand for barley would expand slightly (+0.4 mio t), whereas other usage of maize would stagnate due to its lower prices competitiveness *vis-à-vis* soft wheat. Here again, the general fall in cereal prices generated by the implementation of Agenda 2000 would appear to strengthen the trend towards greater use of soft wheat detrimentally to coarse grains.

Graph 1.6 Development in "other demand" for soft wheat, maize and barley, 1980/81 – 2006/07 (mio t)



2.1.3 External trade

The level of cereal exports should mainly depend on future developments on world markets (both in terms of price and import demand) and the €/$ exchange rate. Based on projections from international organisations, world cereal market prices are expected to remain at rather depressed levels in the very short-term before recovering slowly over the medium term to reach around 136 €/t for wheat (US Fob Gulf, HRW) and 105 €/t for maize (US Fob Gulf, corn). Under these conditions, the possibility for the EU to export substantial quantities without subsidies seems very limited in the short-term. Therefore, total cereal exports would remain strictly constrained within the annual limit for subsidised exports set by the UR agreement up to 2002/03, i.e. 25.9 mio t for total cereals[11].

From 2003/04 onwards, world market prices for soft wheat are foreseen to increase above the EU intervention price[12] level as recovery on world markets gathers pace. This market situation should allow the EU to export large quantities of soft wheat without subsidies, thus removing any constraints on the level of its soft wheat exports. **Total cereal exports** are then estimated to start increasing beyond the URA limits on subsidised exports and reach around 29 mio t in 2006/07, conditional on the respect of the quality requirements.

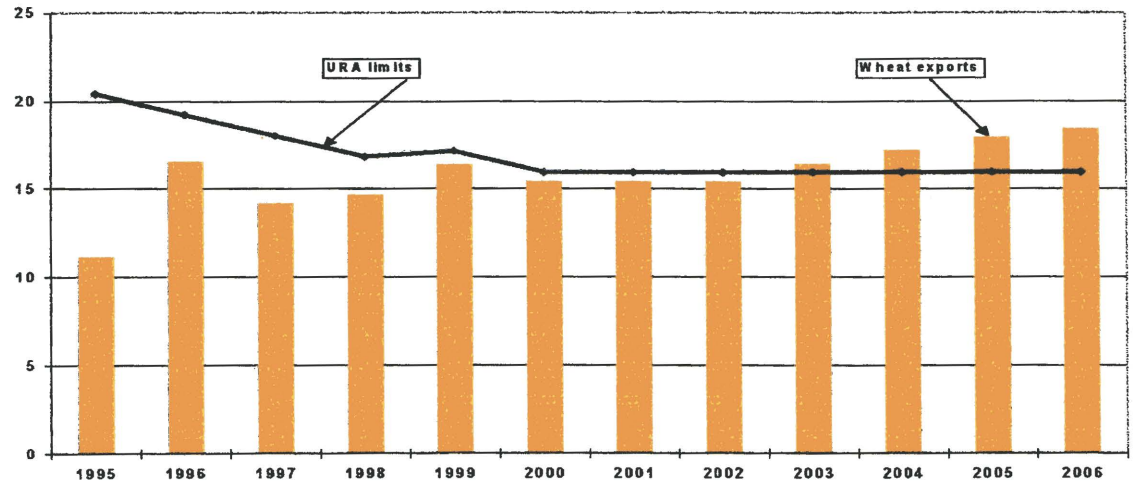
In contrast, **coarse grain exports** would still be limited to their URA limits since their prices would remain above world market prices.

---

[11] This export volume includes an additional 1.0 mio t for food aid (which broadly corresponds to the level of food aid that was reached over the last few years - including free delivery of agricultural products), but excludes 0.4 mio t of exported potato starch.

[12] After taking into account the price differential between HRW (the price reference) and SRW wheat (which broadly corresponds to EU wheat quality), and the fobbing and transport cost, i.e. around 25 €/t.

Graph 1.7 Development in total wheat exports, 1995/96 – 2006/07 (mio t)



Total cereal imports are assumed to remain relatively stable under Agenda 2000 at 5.7 mio t, although some additional quantities of high quality wheat cannot be excluded (some could enter the EU market with low or even nil import duties).

2.1.4 Balance sheet

The balance sheets presented below show that EU cereal markets may be expected over the medium term to be characterised by high levels of stocks, mainly for coarse grains.

Total cereal stocks would remain above 40 mio t throughout the whole period. After a short-term decrease up to 2001/02, total cereal stocks are expected to resume rising and reach 44.5 mio t in 2006/07 (of which 21.8 mio t in intervention stores).

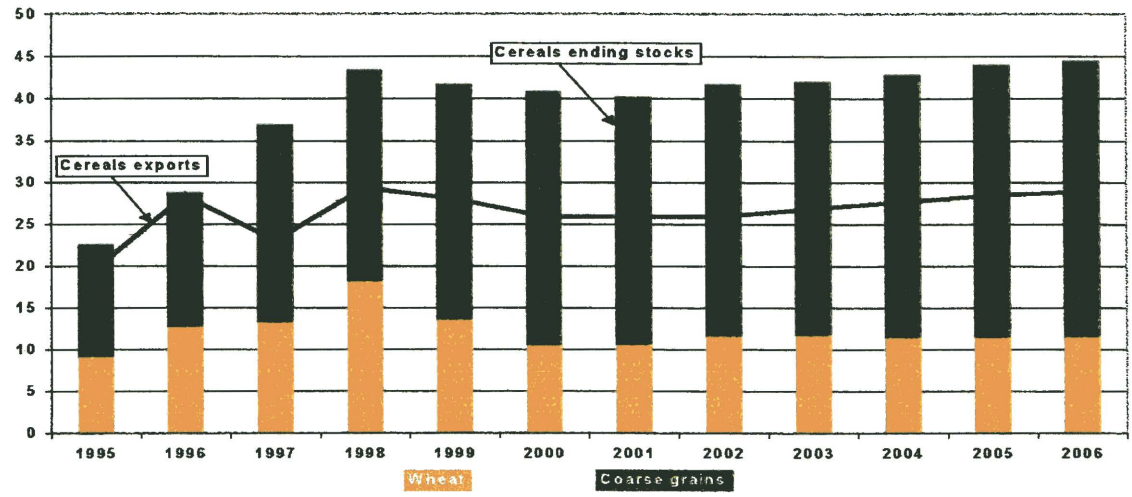
In the short-term, the stability in the rate of compulsory set-aside at 10 %, the transitional arrangements in the oilseed sector and the cut in cereal support prices should all contribute to limit the expansion in cereal production and thus to contain total cereal stocks at around 40 mio t up to 2001/02.

Table 1.9 Total cereals balance sheet in the EU, 1997/98 – 2006/07 (mio t)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Usable production	201.7	207.0	198.0	198.9	201.8	207.2	208.6	211.5	214.3	216.0
Consumption	175.5	177.3	177.7	179.6	182.3	185.4	187.1	188.7	190.4	192.4
Imports	5.1	6.2	6.0	5.7	5.7	5.7	5.7	5.7	5.7	5.7
Exports	23.0	29.4	28.0	25.9	25.9	25.9	26.9	27.6	28.4	28.9
Beginning stocks	28.7	36.9	43.4	41.7	40.8	40.2	41.7	42.0	42.8	44.0
Ending stocks	36.9	43.4	41.7	40.8	40.2	41.7	42.0	42.8	44.0	44.5
of which intervention	13.7	19.8	19.1	19.6	18.7	19.9	19.9	20.6	21.5	21.8

From 2002/03 onwards, the full implementation of the reform across the arable crop sector should generate a shift in the COP area allocation from oilseeds towards cereals. Combined with the continuous growth in yields, it is expected to lead to an upward shift in cereal supplies. Yet, the latter is foreseen to outweigh the increase in demand generated by the improved competitiveness of EU cereals on both internal and external markets. Total stocks would then rise again to more than 44 mio t by 2006/07.

Graph 1.8 Allocation of the total cereal production surplus in the EU, 1995/96 – 2006/07 (mio t)



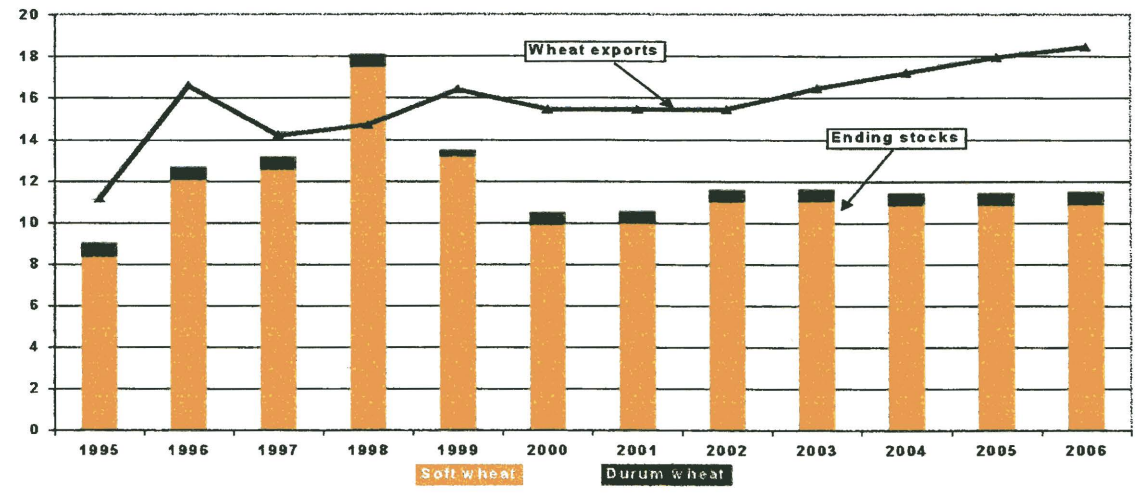
However, this general imbalance in the EU cereal markets masks widely diverging prospects across cereals. The soft wheat, durum wheat and maize markets are expected to remain rather tight throughout the whole period. Despite an increase in production level, these cereals would benefit from a steady domestic and external demand, which is foreseen to keep their market prices above support levels.

Table 1.10 Wheat balance sheet in the European Union, 1997/98 – 2006/07 (mio t)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Usable production	93.4	102.1	95.5	98.9	102.2	105.8	107.9	109.4	111.4	113.5
Consumption	81.8	85.2	86.9	88.8	89.0	91.7	93.8	94.8	95.8	97.3
Imports	3.2	2.7	3.2	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Exports	14.2	14.7	16.4	15.4	15.4	15.4	16.4	17.2	17.9	18.4
Beginning stocks	12.7	13.2	18.1	13.5	10.5	10.6	11.6	11.6	11.4	11.4
Ending stocks	13.2	18.1	13.5	10.5	10.6	11.6	11.6	11.4	11.4	11.5
of which intervention	2.5	7.1	2.8	0.2	0.3	1.0	0.7	0.5	0.3	0.2

Total wheat stocks would stabilise over the medium term at around 11.5 mio t. Maize stocks are also expected to remain at low level over the next eight years (below 5 mio t).

Graph 1.9 Allocation of the wheat production surplus in the EU, 1995/96 – 2006/07 (mio t)



Conversely, the markets for coarse grains (other than maize) are foreseen to deteriorate further, with total stocks increasing from 20.3 mio t in 1998/99 to 28.2 mio t in 2006/07. Most of these stocks would be kept in public stores.

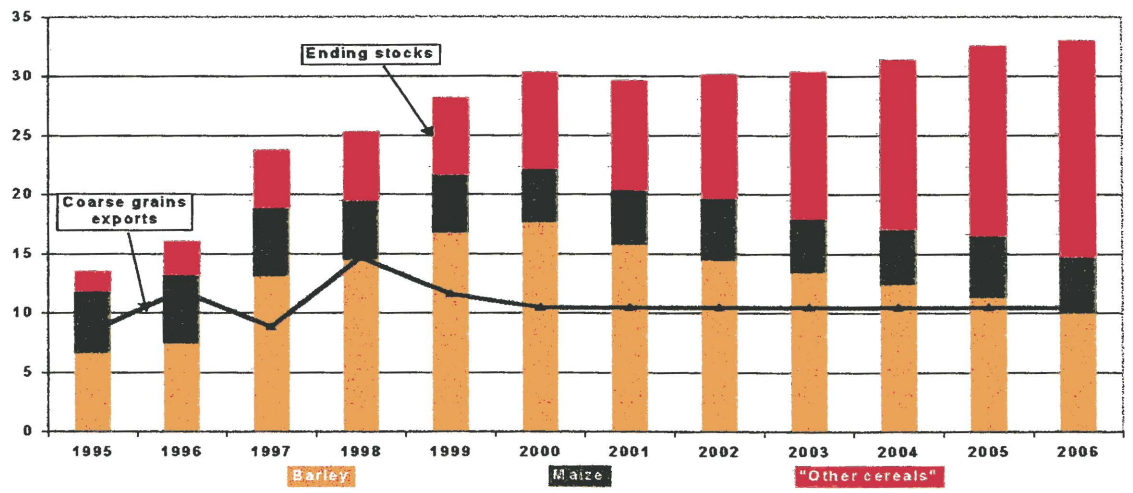
The EU barley market would however slowly improve, the decline in area and production being outweighed by the stagnation in consumption (barley losing ground on the feed market against soft wheat despite lower market prices). After a rapid increase in the short-term when they are expected to peak at 13.0 mio t, intervention stocks of barley should decline over the medium term to reach 5.3 mio t in 2006/07.

Table 1.11 Coarse grains balance sheet in the EU, 1997/98 – 2006/07 (mio t)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Usable production	108.3	104.8	102.5	100.0	99.6	101.3	100.6	102.1	102.9	102.6
Consumption	93.7	92.1	90.8	90.8	93.2	93.7	93.3	94.0	94.7	95.0
Imports	1.9	3.5	2.8	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Exports	8.8	14.7	11.6	10.4	10.4	10.4	10.4	10.4	10.4	10.4
Beginning stocks	16.1	23.8	25.3	28.2	30.3	29.6	30.1	30.4	31.4	32.6
Ending stocks	23.8	25.3	28.2	30.3	29.6	30.1	30.4	31.4	32.6	33.0
of which intervention	11.2	12.7	16.3	19.4	18.4	18.9	19.2	20.1	21.2	21.6

The "other cereals" market would strongly deteriorate over the whole projection period. In spite of a regular increase in domestic consumption favoured by low market prices[13], the increase in area allocated to "other cereals" and rising yields would support production development beyond the internal market absorption capacity. Total stocks would thus rise rapidly from 5.8 mio t in 1998/99 to 18.3 mio t in 2006/07, of which 16.2 mio t of rye in intervention stocks (vs. 3.8 mio t in 1998/99).

Graph 1.10 Allocation of the coarse grain production surplus in the EU, 1995/96 – 2006/07 (mio t)



2.2 Oilseeds

Following the high levels reached in recent years, world oilseed prices are foreseen to fall in the short-term. Over the medium term, they are expected to display a modest recovery and receipt to levels of around 200-220 €/t. Soya bean prices would slowly increase and reach 206 €/t in 2006/07, whereas rape seed and sunflower seed prices would more or less

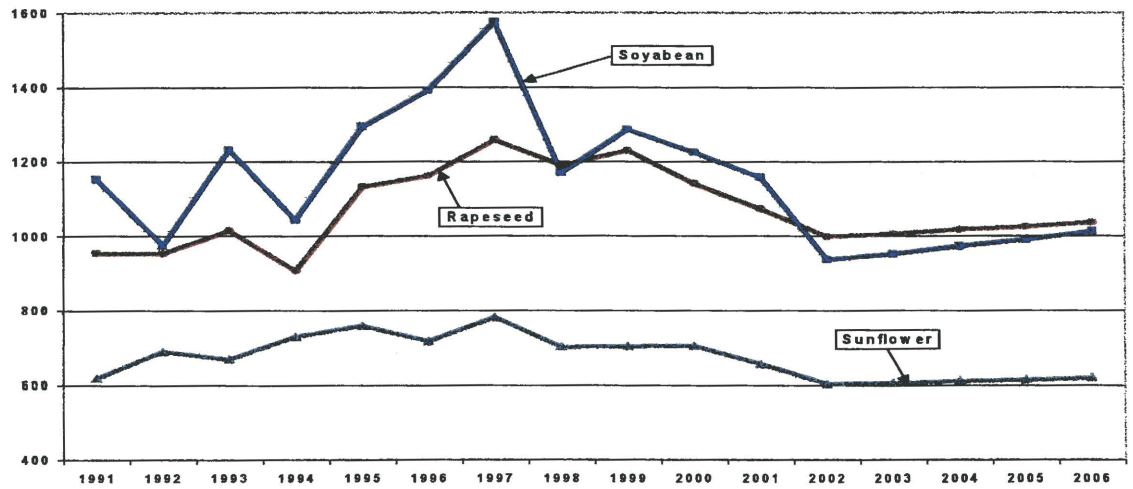
[13] Market prices would fall below support price levels since oats and triticale are not subject to the common intervention mechanisms.

stagnate over the medium term at 213 and 217 €/t respectively. These developments on world markets should contribute to sustain oilseed production in the European Union.

The increase in the set-aside rate in 1999/00, the drop in oilseed prices and the reduction in the oilseed direct payments in 1998/99 (linked to the second successive overshoot of the Blair House limits and the high world prices) have affected in 1999/00 the development in the area allocated to "food" oilseeds[14] which is estimated to have declined to 5.1 mio ha from 5.6 mio ha in 1998/99.

The cut in oilseed direct payments and their gradual alignment to the cereal payment from 2000/01 to 2002/03 is foreseen to outweigh the modest recovery in world market prices and oilseed yield increases, resulting in a drop in oilseed receipts more pronounced than that for cereals. Relatively to the 1997/98-1998/99 average, falls in oilseed receipts would range between 15 % and 20 % over the medium term for rape seed and sunflower seed, whereas soya bean receipts[15] would decline sharply in the short-term (-32 % in 2002/03) before recovering slightly over the later years (-26 % in 2006/07) (cf. graph 1.11).

Graph 1.11 Medium-term development in oilseed receipts, 1991/92 – 2006/07 (€/ha)



Lower oilseed receipts would generate a fall in their relative share in the total COP area from 12.6 % in 1998/99 to 10.4 % in 2006/07 (after falling to a low in 2002/03 to 10.1 %). Total "food" oilseed area would fall by 22 % relative to 1998/99 (or 15 % as compared to 1999/00 with a similar rate of compulsory set-aside) and would stabilise at 4.3-4.4 mio ha over the medium term. The fall in oilseed area would take place gradually between 2000/01 and 2002/03 when it is projected to reach a low as the reform in the oilseed sector is implemented to its full. From 2003/04 onwards, yield growth and higher world market prices should contribute to generate some recovery in total area.

---

[14] The "non food" oilseeds area corresponds to the oilseeds grown on set-aside land, but for which the output is not primarily intended for human or animal consumption. (Additionally, the Blair House agreement foresees that the EU should take appropriate action if the by-products exceed 1 mio t, expressed in soya bean meal equivalent).

[15] The sharp fall in soya bean receipts mainly relates to the specific geographical distribution of this oilseed in the EU. Predominantly produced in Italy, direct payments for soya beans would suffer from both lower direct payment per reference yield –from a theoretical 94.24 € to 63 € per tonne of cereal as for other oilseeds- and from a lower reference yield (from 7.3 t/ha in 2000/01 & 2001/02 to 3.9 t/ha in 2002/03).

Soya bean would be most affected, its share declining from 1 % over recent years to 0.5 %. Soya bean area would fall by more than 46 % in 2002/03 relative to 1998/99, then stabilising above 200 000 ha over the medium term.

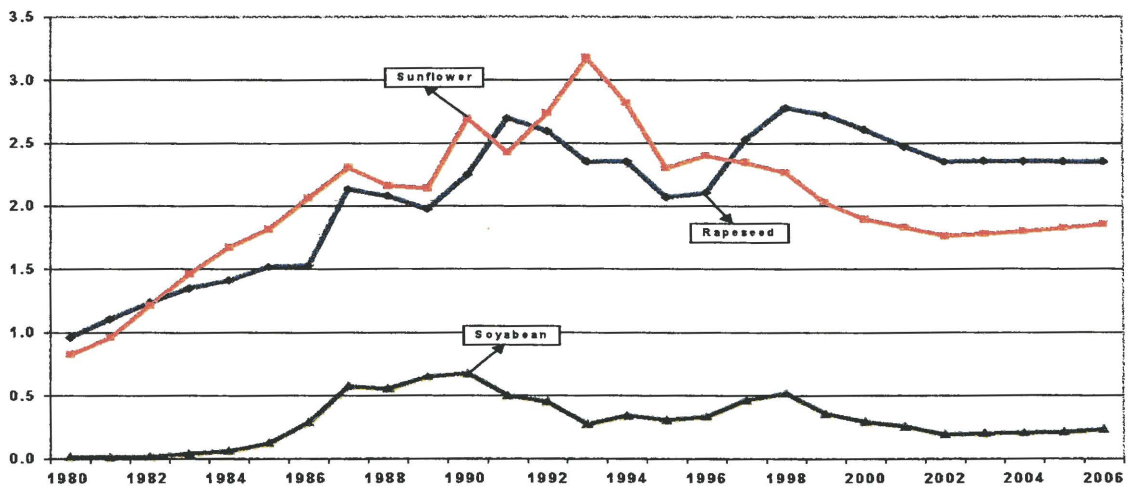
Table 1.12 Oilseed area allocation in the EU, 1997/98 – 2006/07 (mio ha)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Rape seed	2.8	3.1	3.6	3.3	3.2	3.0	3.1	3.1	3.1	3.1
of which food	*2.5*	*2.8*	*2.7*	*2.6*	*2.5*	*2.3*	*2.4*	*2.4*	*2.4*	*2.4*
Sunflower seed	2.4	2.3	2.1	2.0	1.9	1.9	1.9	1.9	1.9	2.0
of which food	*2.3*	*2.3*	*2.0*	*1.9*	*1.8*	*1.8*	*1.8*	*1.8*	*1.8*	*1.9*
Soya beans	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2
Total oilseeds	5.7	6.0	6.1	5.6	5.4	5.1	5.1	5.2	5.2	5.2
Food	5.3	5.6	5.1	4.8	4.6	4.3	4.3	4.4	4.4	4.4
Non food	0.4	0.4	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Overshoot	3%	8%	0%							
Set-aside rate	5.0%	5.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%

The decline in area would be less marked for rapeseed, reaching 14-15 % at the end of the projection period relatively to the 1998/99-1999/00 period (i.e. around 2.35 mio ha). Similarly, area allocated to sunflower seed is foreseen to decline by 18 % at the end of the period as compared to 1998/99 (or –8 % relatively to 1999/00). Sunflower area is foreseen to be affected by the greater attractiveness of voluntary set-aside in Southern Europe. Its area would stabilise above 1.8 mio ha over the medium term.

Non-food oilseed area is estimated to adapt to the level of the set-aside rate. It is estimated to have increased in 1999/00 to 1.0 mio ha (from 0.4 mio ha in 1998/99) and is expected to stabilise at around 0.8 mio ha over the 2000/01–2006/07 period. Among the three oilseeds grown in the European Union, rapeseed is expected to confirm its position as the most important oilseed with a total area of 3.1 mio ha over the projection period.

Graph 1.12 Oilseed (food) area allocation in the EU, 1980/01 – 2006/07 (mio ha)



Despite a certain decline in the late eighties and early nineties, oilseed yields are expected to increase in the medium term and reach 2.7 t/ha on average in 2006/07.

Table 1.13 Oilseed (food) yields in the EU, 1997/98 – 2006/07 (t/ha)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Rape seed	3.0	3.1	3.2	3.1	3.1	3.1	3.2	3.2	3.3	3.3
Sunflower seed	1.7	1.6	1.4	1.7	1.7	1.7	1.7	1.8	1.8	1.8
Soya beans	3.5	3.4	3.1	3.3	3.4	3.4	3.5	3.5	3.6	3.6
Total oilseeds	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.7	2.7

Oilseeds (food) production is projected to drop from 13.9 mio t in 1998/99 to 11.1 mio t in 2001/02 as total oilseed area drops. It will then increase slightly over the medium term to reach 12.0 mio t in 2006/07. Non-food oilseed production will evolve together with the level of set-aside and stabilise around 2.2 mio t over the medium term.

Table 1.14 Oilseed harvested production in the EU, 1997/98 – 2006/07 (mio t)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Rape seed	8.7	9.7	11.2	10.0	9.7	9.4	9.5	9.6	9.7	9.8
of which food	*7.7*	*8.6*	*8.6*	*8.0*	*7.7*	*7.4*	*7.5*	*7.6*	*7.7*	*7.8*
Sunflower seed	4.2	3.7	3.0	3.4	3.3	3.2	3.3	3.4	3.5	3.6
of which food	*4.1*	*3.6*	*2.9*	*3.2*	*3.1*	*3.0*	*3.1*	*3.2*	*3.3*	*3.4*
Soya beans	1.6	1.7	1.1	1.0	0.9	0.7	0.7	0.7	0.8	0.8
Total oilseeds	14.5	15.1	15.4	14.3	13.9	13.2	13.5	13.7	14.0	14.2
Food	13.4	13.9	12.7	12.2	11.7	11.1	11.3	11.5	11.7	12.0
Non food	1.1	1.2	2.7	2.1	2.2	2.2	2.2	2.2	2.3	2.3
Set-aside rate	5.0%	5.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%

2.3 Uncertainties

These perspectives for the EU cereal and oilseed markets are based on a number of assumptions regarding future economic and market developments. In that respect, they are subject to some uncertainties, which could have major implications for EU arable crop markets. The most important uncertainties - which should all have positive implications for EU arable crop markets - can be summarised as follows:

(1) These projections remain conditional on the **medium-term development on the world cereal markets**, both in volume and relative prices, and the ability of the European Union to export significant quantities onto the world market (with or without subsidies) and release some pressure from the internal markets. The medium-term world market prices for cereals used in this outlook exercise are rather conservative and a more favourable outlook for these markets could have a significant (and positive) impact on EU markets. A more favourable outlook should allow higher levels of cereal exports if EU producers can deliver the adequate quality of wheat. It could also shift some domestic demand for feed from soft wheat to coarse grains, thus allowing to reduce production surpluses and stocks of barley and rye. This shift would be reinforced should the quality of soft wheat produced in the EU significantly improve;

(2) Developments on the **world oilseed markets** could also have strong implications for the EU cereal markets by modifying the competitiveness of EU cereals in terms of (a) area allocation and (b) domestic consumption. The medium-term projections for the world market prices for oilseeds and oilseed products used in this exercise may also be considered as rather conservative. Were future prospects on these markets more favourable, the EU cereal production surplus could be significantly reduced by shifting more area into oilseeds and increasing domestic demand for cereals;

(3) Changes in the **€/$ exchange rate** should have pronounced effects on the future prospects for the EU cereal markets. A weaker €, as currently observed on the currency markets, would boost EU cereal competitiveness on the demand side (both domestically and externally). It could also reduce supply-side pressure on the cereal market by favouring the development of EU oilseed production;

(4) Other elements on the supply side include:

(4.1) The effectiveness of the compulsory set-aside instrument could be increased if the **current trends** towards **increased applications by arable crop producers under the general scheme** (generated mainly by structural adjustment) were to continue over the medium term. By removing an increasing level of cereal land out of production, this could reduce the prospects for cereal surplus;

(4.2) The expansion in cereal production and the accumulation of cereal stocks could also be revised downwards should the trends observed over the 1993-1998 period towards a certain **reduction in the total level of area allocated to COP products (and set-aside)** continue over the medium term.

3. Meat and livestock

3.1 Beef and veal

Beef and veal production in the EU is still strongly influenced by the different measures that were taken in 1996 after the BSE scare.

On the one side, the two slaughter schemes adopted in the UK immediately after scientific recognition of a possible link between BSE and the human Creutzfeld-Jakob disease (Over-Thirty-Months-Scheme, selective cull scheme) absorbed nearly 3 mio animals up to the end of 1998, representing around 860 000 t of beef[16]. At the time being, both schemes are still in place, but with a lower uptake of animals. As far as the selective cull scheme is concerned, this reflects the decreasing number of BSE cases in the UK. The Over-Thirty-Months-Scheme (OTMS) is assumed to continue until the year 2001, with an estimated uptake of around 780 000 animals in 1999 and slightly decreasing numbers in the years 2000 and 2001. In total, over the period 1999-2001, an additional 2.3 mio animals is expected to be withdrawn from the food chain, further reducing beef supply by an estimated 640 000 t.

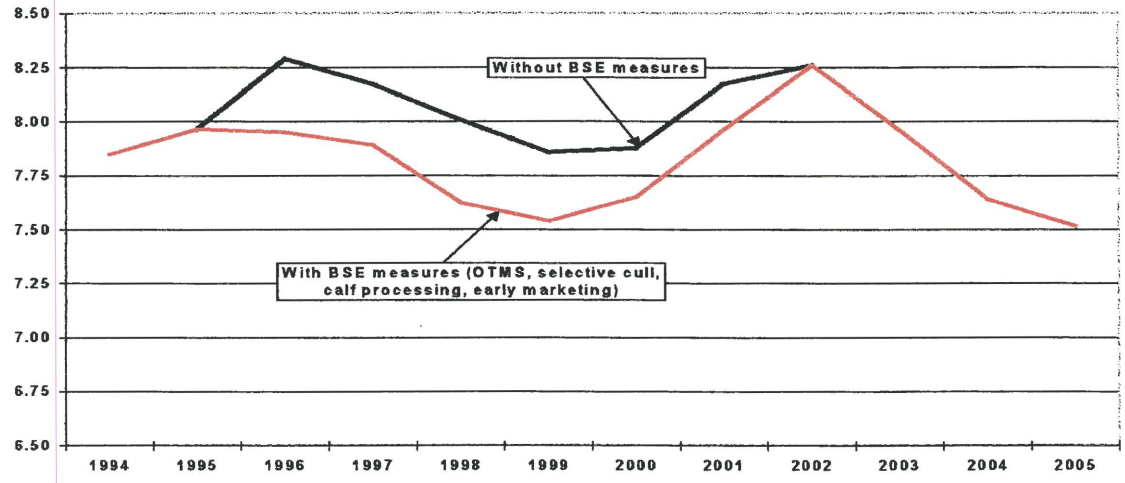
On the other side, there are the emergency supply side measures (calf processing, early marketing), decided in autumn 1996 in the wake of the BSE crisis. Over the period 1996-1998, around 2.3 mio calves passed through the processing scheme, of which the bulk in the UK represented mostly calves that were previously exported to the continent. The scheme continued in a few member states during 1999, at least for some time, but will stop at the end of the year. In total, around 2.7 mio calves are estimated to be concerned

[16] This estimate is based on the weekly figures on the number of animals entering in the different schemes, as communicated by the UK to the Commission services. In order to assess the corresponding carcass weight equivalent, a normal slaughter weight has been assumed (based on historical figures), according to the different categories of animals.

by this measure, causing a small immediate impact (elimination from the food chain), but a much stronger impact on beef production in the short-term (less calves for fattening). Compared to this, the impact on beef production coming from the early marketing scheme, which took up about 3.5 mio calves, is much more limited. The main objective was to increase the number of calves slaughtered for veal production by reducing the average slaughter weight. As a consequence, fewer calves were available for fattening and (all other things being equal) beef production was reduced.

Overall, the quantitative impact of the measures described above is enormous and masks the characteristic cycles in EU beef production. Over the period from spring 1996 to the end of 1998, around 5.3 mio animals have been withdrawn from the market and destroyed[17]. The impact on beef production is estimated at about 1.0 mio t[18]. Over the period 1999-2001, a further 2.3 mio animals are assumed to be concerned by these measures, representing a production impact of about 880 000 t[19]. The fact that production figures for 1996 (7.950 mio t) and 1997 (7.890 mio t) are lower than those for the year 1995 (7.966 mio t) is only due to the exclusion of slaughtering of all animals eliminated from the food chain. If these animals had been included, overall production would have been about 8.290 mio t in 1996 and 8.170 mio t in 1997. The cyclical peak in production can be dated at the end of 1996/beginning of 1997. Since then, production is on its cyclical decline and expected to reach the minimum point in the second half of 1999. Compared to previous cycles, which had a length of between 5.5 (the most recent ones) and 6 years, with a tendency to shorten somewhat, the last cycle will be extremely short at just 5 years. This is very probably due to the influence of the BSE scare in 1996.

Graph 1.13 Impact of the BSE measures on beef/veal production (mio t)



The BSE scare had also a profound impact on beef/veal **consumption**, especially in 1996 when per capita consumption of beef/veal dropped by –7.7 %. However, already in the previous years, beef/veal consumption was negatively affected by the discussions on BSE, in particular in those member states where consumers are very sensitive as far as food safety aspects are concerned. Both in 1997 and 1998, beef consumption recovered from

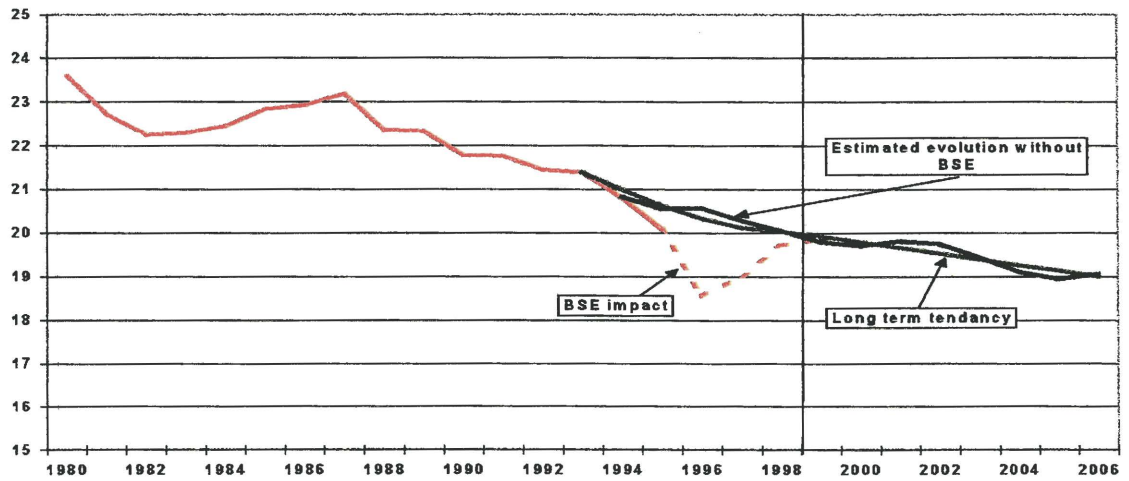
17 Of course, this figure does not include the number of calves in the early marketing scheme.

18 This time, the (relatively small) impact from the early marketing of calves is included.

19 However, a part (about 250 000 t) of the estimated impact for the period 1999-2001 is due to the measures applied in the period 1996-1998. As already mentioned above, the calf processing and the early marketing of calves are influencing beef production with certain time lag.

the very low level experienced in 1996 by respectively +2.5 % and +3.8 %. With a further, but smaller increase by +0.7 % that is expected for 1999, beef consumption has now recovered to its long-term tendency[20]. However, the long-term tendency is declining, and with an estimated per capita level of around 19.9 kg, beef consumption in 1999 is about 1 kg/head lower than in 1994, i.e. before the BSE crisis[21].

Graph 1.14 Impact of the BSE scare on beef/veal per capita consumption (kg cwe)



Beef intervention stocks, nearly empty at the beginning of 1996, increased considerably (but much less than initially expected) in the wake of the BSE crisis as a consequence of the EU market support measures. The peak, with public stocks of around 632 000 t (carcass weight equivalent), was reached in November 1997. Since December 1997, intervention stocks are declining each month despite some quantities bought-in from Ireland and Northern Ireland for market support reasons in both regions, especially after the collapse of the export market in Russia in August/September 1998. Surprisingly big sales from intervention stocks have been achieved in 1999, and it is expected that only a few thousand tons of beef will be available at the end of the year. Physical stocks, which follows with a small time lag the evolution of contractual stocks, are estimated at about 70 000 t at the end of 1999, perhaps even less.

In 1999, **beef production** is expected to continue to decline (by -0.8 % to reach 7.56 mio t) under the influence of the still ongoing cyclical decrease and the impact of the different BSE measures. As already mentioned above, the cyclical down is likely to be reached in the second half of 1999. In the years after, beef production is expected to resume, reaching its next peak in the year 2002, then entering into a downward phase until the year 2005 before resuming again in 2006. The production increase that is expected for the period 2000-2002 looks very strong, but reflects not only the cyclical evolution but also the fact that the impact of the different BSE measures progressively fades away. However, beef production is forecast to be in a long-run downward trend. This can be explained by the expected reduction of the cow herd in the EU. The reduction is mainly

---

20 In fact, beef consumption recovered to its long-term tendency much quicker than initially expected. In the previous forecasts, it has been assumed that the long-term (declining) trend would be reached by the year 2001.

21 It is important to note that the long-term declining trend as it is presented in graph 1.14 does not include the potential positive impact of the Agenda 2000 decisions. The forecast for beef/veal consumption including the impact of Agenda 2000 is presented in graph 1.15.

due to the evolution of the dairy herd that will progressively reduce because of further improving milk yields and despite the increase of the milk reference quantities decided in the context of Agenda 2000. On the other hand, the increase in the number of suckler cows that has been observed in the past is slowing down (individual references for premiums, possibility to claim the suckler cow premium for heifers within certain limits). Therefore, the total cow herd is declining, but somewhat slower than the dairy herd.

On **beef/veal consumption**, it is expected that the substantial price cut by –20 %, decided within the context of Agenda 2000, will contribute to a more favourable price relation with respect to other meats, in particular pork and poultry. However, both will also benefit from the Agenda 2000 proposals, but only indirectly by the lower cereal prices and certainly to a lesser extent than beef. Assuming market prices that fall in line with the price support and the same degree of price transmission from producer to consumer as observed in the past[22], beef consumption should benefit from lower prices and is expected to react positively. The positive impact on consumption should mostly occur in the period 2001-2003 when market prices are likely to decrease in line with the expected increase in beef production. However, in the medium and long term, it is unlikely that the somewhat improved price competitiveness of beef can surpass the general tendency in favour of pork and poultry. The main reason is the clear consumer preference for other meats, in particular white meat, due to convenience and better price competitiveness, despite the fact that beef demand would normally benefit more than other meat from the expected favourable economic prospects in the medium term.

Table 1.15 Beef/veal projections in the EU, 1997 - 2006 ('000 t cwe)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Production (gross)	7937	7668	7616	7698	8004	8195	7976	7723	7605	7978
Import of live animals	42	38	40	42	45	45	45	45	45	45
Export of live animals	89	83	95	90	95	100	100	100	100	100
Production (net)	7889	7624	7560	7650	7954	8140	7921	7668	7550	7923
Consumption	7109	7395	7469	7450	7533	7598	7515	7402	7372	7444
Imports	387	347	365	380	380	380	380	380	380	380
Exports	971	692	900	650	727	722	742	752	772	772
Beginning stocks	434	630	514	70	0	75	275	320	213	0
Ending stocks	630	514	70	0	75	275	320	213	0	88
Stock changes	196	-116	-444	-70	75	200	45	-106	-213	88
Per cap. consumption (kg)	19.00	19.72	19.86	19.76	19.93	20.04	19.77	19.42	19.31	19.46

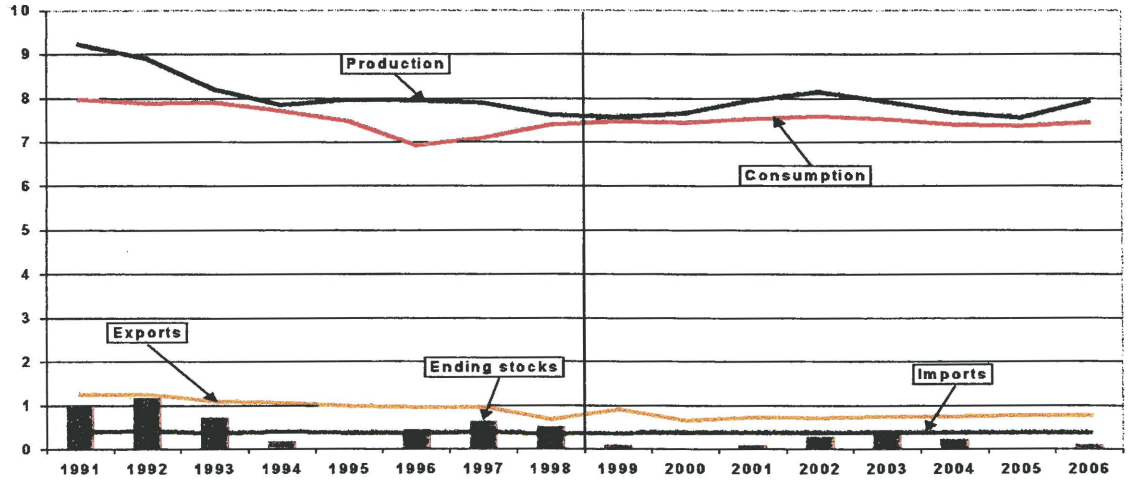
EU **beef imports** are forecast to increase only slightly in the short term and are likely to remain more or less unchanged in the medium term, assuming mostly unchanged market access commitments and border protection. While most of the imports are considered as less price-sensitive with respect to internal market price changes (high quality beef), the lower internal prices could, however, reduce somewhat the interest in the EU market for some other products. In addition, since the BSE scare in the UK and the ongoing discussions on hormone-treated beef, EU consumer's seems to tend more towards local, regional and national products.

Assuming a reduction of market prices that is limited to the cut in support prices, i.e. -20 %, the bulk of EU **beef exports** will continue to be constraint by the URA agreement

[22] Over the period 1973-1995, a long-term price transmission elasticity of +0.37 was estimated for beef, which means that each 1 % increase/decrease in beef producer prices provoked a corresponding increase/decrease in beef consumer prices by 0.37 %. The estimated price transmission elasticity for beef is lower than that obtained for pork (+0.48) and poultry (+0.56).

on subsidised exports. In fact, the export refunds granted represented historically up to 40 % of the market price, for some products even more. However, it is expected that world market prices for beef will strengthen over the medium term. Thus, the gap between EU and world market prices is likely to narrow in the future. Assuming that, at least for some products and/or destinations, the level of refunds can be set at zero, small volumes of unsubsidised exports can be envisaged at the end of the forecast period.

Graph 1.15 Beef/veal projections in the EU, 1991 – 2006 (mio t)



The assumptions and forecasts outlined above suggest that, after the Agenda 2000 decisions, a balanced EU beef market is likely to be achieved over the medium term with, however, continued cyclical movements. Nevertheless, a temporary increase in **stocks** (mostly private stocks) seems to be sufficient in order to cope with the cyclical up and down in beef production. As the balance sheet shows, the cyclical up in production that is expected for the years 2001/02 is likely to put the EU beef market under pressure and could lead to some increase in EU beef stocks. Corresponding releases in the following years can be envisaged when beef production is declining. The forecasts for the volumes, which would be needed to balance the market, suggest about 300 000 t, but the exact figure crucially depends on the actual evolution of production, consumption, trade and, last but not least, prices.

3.2 Pig meat

In most recent years, the pig meat sector was affected by some extraordinary circumstances that are having major consequences for the short- and medium-term evolution of the sector.

Firstly, there was in 1996 the BSE crisis in the beef sector. Like the other types of meat, pork benefited by a strong demand that led to, apart from some immediate increase in consumption, much higher producer prices than experienced in previous years. Then, in 1997, the outbreak of classical swine fever in several member states, in particular in the Netherlands, changed once again completely the short-term outlook for pig meat. Supply was artificially reduced by the slaughter of about 10 mio animals, not only for sanitary reasons but also for market support in the regions concerned. Most of the gap caused by the lower supply, mainly from the Netherlands and Belgium, was filled by higher production in other EU member states. Overall, EU production decreased only slightly by –0.4 % despite the important number of pigs concerned by the disease measures. Prices remained very high for a second consecutive year and provided a strong incentive for

producers to further increase pig herd and production. In fact, production in 1998 continued to go up in almost all member states and, at the same time, producers concerned by the measures to deal with the classical swine fever came back to the market.

In line with the huge expansion of the EU pig herd, never experienced before, production boosted by +8.2 % from 1997 to 1998, representing around 1.3 mio t. A further increase by +1.8 % is estimated for 1999. This means that nearly 1.6 mio t more pig meat (about +10 %) had to be absorbed by the markets over a period of just two years. Despite strong and sustained market support (higher export refunds, private storage aid), producer prices fell to historical low levels at the end of 1998/beginning of 1999 and are still at a level where it is difficult for many producers to return to make profits.

The extremely low prices at the end of 1998 were initially expected to lead to a major downward adjustment by pork producers. However, the cull of breeding sows reported from several member states at that time in order to reduce pig herd and production, seems to have been a temporary phenomenon. Expert forecasts predict lower production in the short term, i.e. the second half of 1999 and the first quarter of the year 2000, but the production forecasts for the second quarter of 2000 are again for an increase by +1.3 %. In fact, pig inventories reported by August 1999 suggest that EU producers were apparently reluctant to cut pig numbers more drastically in response to large losses suffered over the last 12 months. In total, the EU pig herd in August 1999 is estimated to run still +1.0 % higher than last year, with only slightly reduced number of breeding sows[23]. If there is not a more substantial reduction in the pig numbers in coming months[24], EU production in 2000 is likely to be only marginally lower than in 1999.

In 2000, **pig meat production** risks are to remain relatively high compared to the level observed in 1996 and 1997 if there is not a more drastic fall in pig numbers by the end of the year 1999/beginning 2000. The small decline that is currently expected is probably not sufficient to push producer prices quickly back to more profitable levels. If this is the case, a further downward adjustment of production in 2001 seems inevitable since the production level of around 18 mio t, with a spectacular increase by 10 % over just two years, can not be considered as a new short-term equilibrium point[25]. It is likely that the cut of the intervention price for cereals by –15 %, which has been decided in the context of Agenda 2000, eases somewhat the pressure on the margins of pig producers and improves the competitiveness of EU pig meat production by the way of reduced feeding costs. In any case, over the medium and longer term, there is a certain scope for further growth, but the growth rates are anticipated to be lower than in the past, given the new and much higher production level. Pig meat production, which is assumed to be driven

---

[23] The pig census results for August 1999 are not available for all member states due to the derogation for small producer countries allowing only one pig census per year in December. Furthermore, four member states (Germany, Italy, United Kingdom and France) are carrying out their census only twice a year, i.e. in May/June and November/December. For all these countries, the EU 15 results for August 1999 were completed by estimates using the results from the most recent census that was available.

[24] The next pig census in the EU is scheduled for November/December 1999. All member states are this time obliged to carry out the census at that date.

[25] Of course, if pig producer decide to cut back pig numbers in coming months more than indicated above, production in 2000 will be lower and there is a chance for higher prices and more favourable producer margins. However, as already mentioned above, this will become more clear if the figures for the December pig survey will be available.

mostly by demand (internal and external) is, thus, forecast to resume its growth after the short-term adjustment in the period 2000/01 and reach around 18.3 mio t by the end of the forecast period[26].

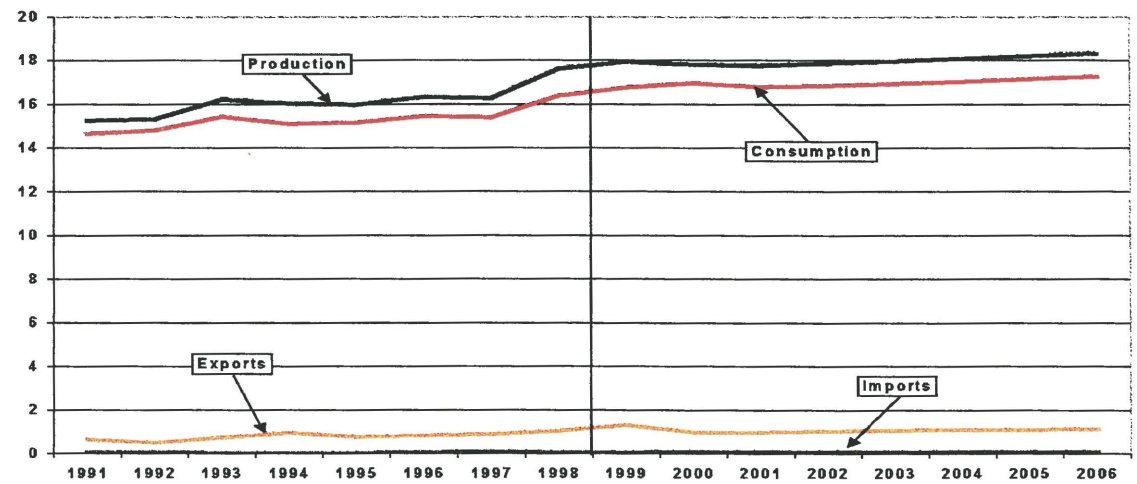
For pig meat **consumption**, the medium- and long-term outlook is in general positive since pig meat is likely to continue to be favoured by consumers, but clearly less than poultry. The growth rates for per capita consumption are anticipated to slowdown somewhat in coming years, given the big rise in most recent years and the high level already reached. Pork per capita consumption is forecast to increase from 43.7 kg in 1998 to around 45.1 kg by the year 2006. The steady increase that normally should happen is only shortly interrupted by a small decrease in the year 2001 due to the expected short-term adjustment of the sector following the recent big increase in production.

Table 1.16 Pig meat projections in the EU, 1997 – 2006 ('000 t cwe)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Production (gross)	16247	17584	17904	17803	17723	17841	17950	18072	18195	18312
Import of live animals	5	1	0	1	1	1	1	1	1	1
Export of live animals	2	4	4	4	4	4	4	4	4	4
Production (net)	16250	17581	17900	17800	17720	17838	17947	18069	18192	18309
Imports	54	44	50	55	58	59	64	69	74	80
Exports	905	1045	1300	1000	1000	1050	1080	1100	1120	1140
Stock changes	-7	200	-100	-100	0	0	0	0	0	0
Consumption	15406	16380	16750	16955	16778	16848	16932	17038	17147	17249
Per cap. consumption (kg)	41.18	43.67	44.55	44.98	44.39	44.44	44.54	44.70	44.91	45.09

Note: The figures on imports and exports are calculated on the base of the definition of pig carcass weight and exclude therefore offals.

Graph 1.16 Pig meat projections in the EU, 1991 – 2006 (mio t)



Imports are forecast to increase slightly over the medium term, assuming mostly unchanged market access commitments, but somewhat better use of it. Compared to the record level expected for 1999, **exports** are likely to be lower in the short-term but should slightly increase over the medium term in line with higher EU production and growing international trade.

[26] It has to be stressed that the forecasts presented above do not take into account the ongoing discussions, in some member states in particular but also at EU level, on eventual compulsory or voluntary measures to reduce pig numbers.

3.3 Poultry

Compared to beef and pork, the poultry sector developed much more continuously, not only over the medium term, driven by steady increasing internal demand and rising exports, but also in the short term. Nevertheless, the sector experienced in the years 1995 and 1996 much higher growth rates than previously observed. In 1997, the growth rate was already lower and in 1998, the historical growth path prevailed again.

The extraordinary evolution in the years 1995 and 1996 can be explained by special circumstances. There is, firstly, the BSE crisis in the beef sector. From all meats, poultry benefited most and consumption increased by +4.2 % in 1995 and +5.2 % in 1996. At the same time, producers benefited from relatively strong prices, in particular in 1996.

For 1999, it was initially expected that the poultry sector would continue to follow the strong upward trend with growth rates of almost 2 % per year on average. However, the most recent expert forecasts suggest only a small increase of production by +0.9 % reflecting, among other factors, the negative impact that the Dioxin scare in Belgium had on the sector.

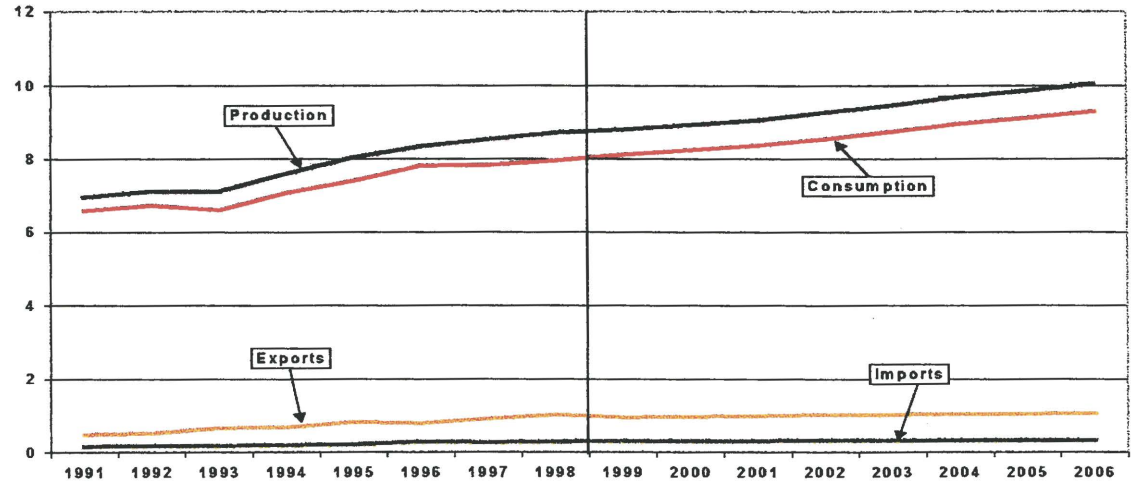
In the medium and long term, the outlook for poultry is still positive and the sector should retain its relatively strong growth. Very competitive prices with respect to other meats and strong consumer preference should continue to play in favour of poultry. The cut of the intervention price for cereals by –15 %, which has been decided in the context of Agenda 2000, improves further the competitiveness of EU poultry production by the way of reduced feeding costs. Mainly driven by demand (internal consumption and exports), **poultry production** is forecast to rise from 8.7 mio t in 1998 to around 10.1 mio t by the end of the forecast period. Per capita **consumption** is forecast to increase from 21.3 kg in 1998 to around 24.3 kg by the year 2006, with a short period of slowing down in 2000/2001. This evolution corresponds to the long-term growth of consumption that has been observed in the past.

Table 1.17 Poultry projections in the EU, 1997 - 2006 ('000 t cwe)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Production (gross)	8549	8731	8807	8930	9064	9268	9475	9693	9866	10051
Import of live animals	1	0	0	0	0	0	0	0	0	0
Export of live animals	4	2	2	2	2	2	2	2	2	2
Production (net)	8546	8729	8806	8929	9063	9267	9474	9692	9865	10050
Imports	267	295	305	310	313	317	320	323	327	330
Exports	927	1027	972	975	1000	1030	1040	1050	1060	1070
Stock changes	39	27	0	0	0	0	0	0	0	0
Consumption	7847	7970	8139	8264	8376	8553	8753	8965	9131	9310
Per cap. consumption (kg)	20.98	21.25	21.65	21.92	22.16	22.56	23.03	23.52	23.92	24.34

Imports are forecast to increase slightly over the medium term. This forecast is based on the assumption that the actual level of border protection and current access will be maintained and that, in addition, imports under GATT minimum access and other market access agreements will increase somewhat. Compared to the record level observed in 1998, **exports** are likely to be somewhat lower in the short run but should resume in the medium term in line with higher EU production and growing international trade.

Graph 1.17 Poultry projections in the EU, 1991 – 2006 (mio t)



3.4 Sheep and goat

Sheep/goat consumption was not negatively affected by the concerns of consumers over scrapie and BSE. On the contrary, in the wake of the BSE crisis in 1996, strong demand has resulted in much higher prices, but production remained mostly unchanged. In 1997, production recorded a relatively big drop by –3.4 %, but this was mainly due to climatic reasons. During the wet summer of 1997, lambs were slower to finish and, as a result, they were carried over into 1998. Consequently, production in 1998 recovered, but only by +2.5 %. It seems that the relatively bad price evolution in the second half of 1998 provoked once again a carrying-over of lambs into the following year, but this time to a much lesser extent. Therefore, the year 1999 should see a further, but more modest increase by +0.8 %, so that production should have now completely recovered from the 1997 decrease.

Overall, the relatively high market prices during the last two years had no incentive to increase production. Producer reactions also depend on the level of premiums, which is reduced if the EU market price is rising and, inversely, increased if the market price falls. This kind of market support contributes to stabilise production, in particular because a significant part of sheep/goat production is concentrated in less favoured areas where premiums play an important role for the income of sheep/goat farmers. The production increase of 1998 and 1999 is certainly a short-term reaction on the special situation in 1997. Production of sheep and goat declined slowly but steadily since the 1992 reform of the common market organisation.

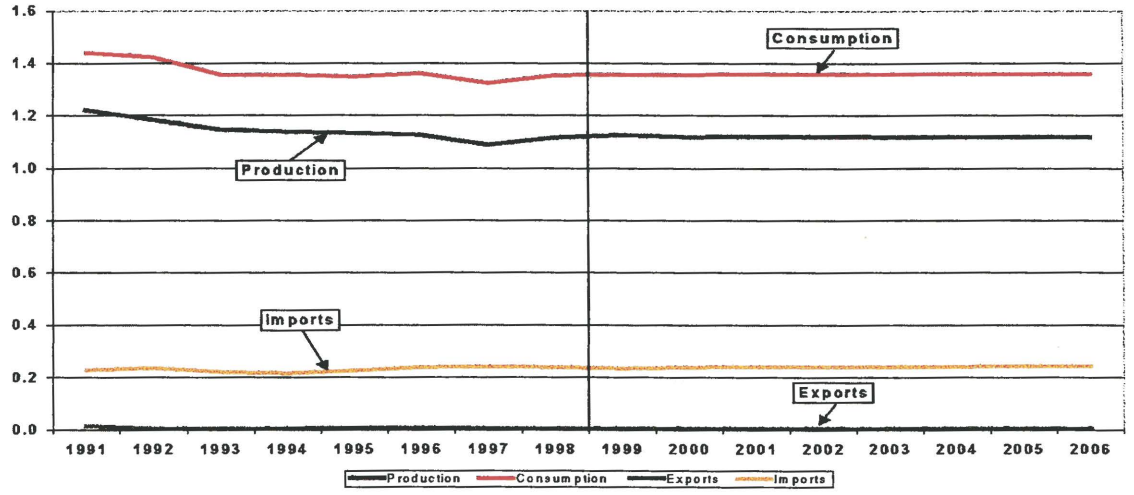
Table 1.18 Sheep/goat projections in the EU, 1997 – 2006 ('000 t)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Production (gross)	1076	1105	1113	1107	1108	1106	1105	1104	1102	1101
Import of live animals	14	12	13	14	15	15	16	17	17	18
Export of live animals	1	1	1	1	1	1	1	1	1	1
Production (net)	1089	1116	1125	1120	1121	1121	1120	1119	1119	1118
Imports	242	241	235	240	242	243	243	244	245	245
Exports	3	3	3	4	4	4	4	4	4	4
Stock changes	3	0	-1	0	0	0	0	0	0	0
Consumption	1324	1354	1358	1357	1360	1360	1360	1360	1360	1360
Per cap. consumption (kg)	3.54	3.61	3.61	3.60	3.60	3.59	3.58	3.57	3.56	3.56

In the medium and long term, a slight downward trend both for **production** and per capita **consumption** is expected. Due to the small population increase, total consumption

is expected to remain more or less at the same level. **Imports** could increase slightly in response to somewhat better use of market access commitments granted to some third countries.

Graph 1.18 Sheep/goat projections in the EU, 1991 – 2006 (mio t)



Although not directly concerned by Agenda 2000, the sheep/goat sector could be indirectly influenced by two elements of it. There is, firstly, the expected lower price for the other types of meat, in particular beef and, secondly, the higher cattle premiums combined with the density factors and the new rules on extensification.

On the first aspect, there is a risk that sheep/goat prices could come under pressure due to increased competition provoked by the likely falling prices for the other types of meat. This is especially true for beef for which the price cut by –20 % is substantial, but also pig meat and poultry prices are expected to decrease to some extent due to the expected lower cereal prices. However, at the time being, there is no information available that allows a quantification of this potential impact. The analysis on meat consumption carried out for the medium-term forecast exercise yields in statistical significant cross price relationships between beef, pork and poultry but not for sheep/goat. The evolution of consumption over the most recent years supports this result because sheep/goat meat consumption appears to be relatively independent from the price and demand situation of the other meat sectors.

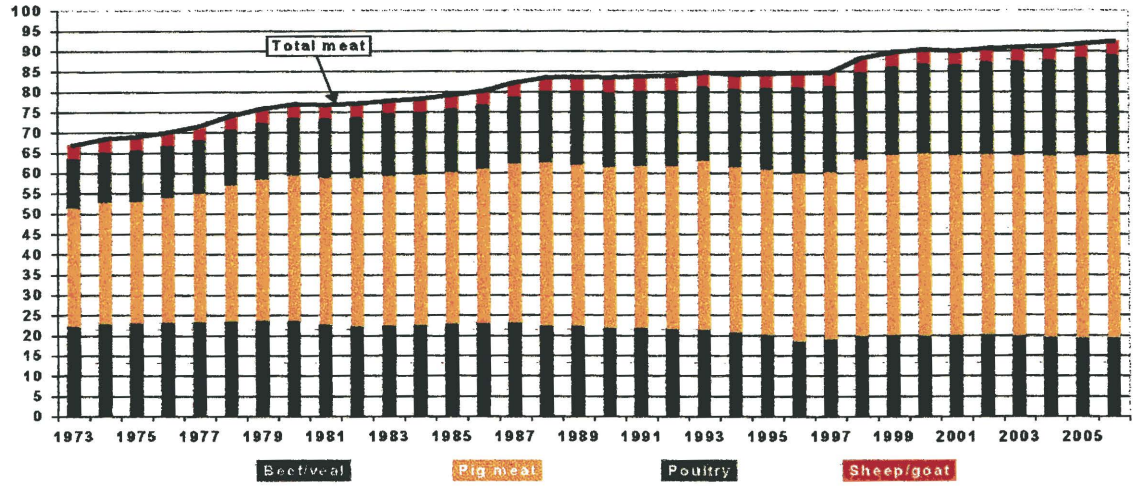
On the second element, there are some fears that the higher cattle premiums, in particular in connection with the reinforced rules on extensification, could provide an incentive for mixed farms (cattle/sheep) to switch from sheep/goat to cattle, especially if the density factors for animals have to be respected. Although this kind of adjustment can theoretically not be excluded, at least not a partial shift, the magnitude is extremely difficult to quantify because it depends mostly on individual circumstances on a given farm. A lot of elements may influence such an adjustment, like for example the number of available premium rights, farm size in ha, individual constraints as far as the density factor is concerned, farmer preferences for the type of farming, expected price and market developments. Therefore, the forecasts presented above do not take account of this potential, but not yet quantifiable impact.

3.5 Overall meat consumption

The following graph shows the evolution of meat consumption per capita in the EU over the period 1973-1998[27] and presents the medium-term projections for the years up to 2006.

As it can be seen from this graph, there is a long-term tendency towards higher per capita consumption of meat that has slowed down at the beginning of the 1990s. It seems that in particular this very flat evolution in most recent years has favoured the popular thesis of saturation as far as overall meat consumption is concerned. It is certainly true that consumer surveys showed signs of stagnating meat consumption, but almost only for some specific population groups, some countries or some types of products. In addition, it may be that the results of these consumer surveys were influenced by the discussion on food safety issues, which focused in most recent years mostly on meat and meat products.

Graph 1.19 Meat per capita consumption in the EU, 1973 – 2006 (kg/head)



The big increase of meat consumption, which is confirmed by the statistical figures for 1998, and the expected further increase in 1999 are difficult to bring in line with the view that meat consumption, in general, is saturated. Until now, this thesis has no empirical evidence and, therefore, it cannot be quantified. On the other hand, a simple comparison with the consumption level in other industrialised countries (US: ca. 120 kg/head, Canada: ca. 100 kg/head, Australia: ca. 97 kg/head) and its extrapolation on the EU can also be put into question as valid approach for quantifying the margin for potential increase of meat consumption. The forecasts for overall EU meat consumption that are presented in this documents were established without imposing any overall constraints and reflect the projected evolution for the individual types of meat as presented above.

According to these forecasts by individual sectors, total meat consumption in the EU is set to increase from 88.3 kg/head in 1998 to around 92.4 kg by the year 2006. About 1.4 kg of this increase is due to the estimated short-term evolution in 1999. The sharp drop in beef/veal consumption in the year 1996 was more than compensated by higher consumption of other meats. Overall, per capita consumption of meat increased slightly by

[27] All figures are referring to EU 15. In order to allow a long-term view, the EU 15 figures for the years before 1995 have been recalculated as weighted average of figures available for EC9, EC12 and the individual country figures for Austria, Sweden and Finland.

+0.2 % from 84.4 kg in 1995 to 84.6 kg in 1996. In 1997, meat consumption recorded a further small increase despite stagnating poultry and somewhat lower pig meat consumption. The strong and spectacular increase in 1998 is mainly due to the evolution in the pig meat sector, reflecting the huge increase of production and the historically low prices. However, consumption in the other sectors was rising, also. The estimates for 1999 show more or less the same picture, but the growth is smaller.

Table 1.19 Overall meat per capita consumption in the EU, 1997 – 2006 (kg/head)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Beef/veal	19.00	19.72	19.86	19.76	19.93	20.04	19.77	19.42	19.31	19.46
Pork	41.18	43.67	44.55	44.98	44.39	44.44	44.54	44.70	44.91	45.09
Poultry	20.98	21.25	21.65	21.92	22.16	22.56	23.03	23.52	23.92	24.34
Sheep/goat	3.54	3.61	3.61	3.60	3.60	3.59	3.58	3.57	3.56	3.56
Total	84.70	88.25	89.67	90.26	90.07	90.64	90.92	91.20	91.69	92.44

Pig meat, with a share of about 50 % is by far the most preferred by EU consumers, followed by poultry, recording a share of around 25 %, which has overtaken beef/veal since 1996. The projections up to the year 2006 imply a steady rise of the share of poultry with corresponding decline for the other types of meat.

4. Milk and dairy products

4.1 Milk production, deliveries and dairy herd

In 1997, **cow milk production** in the EU was 120.6 mio t and estimates for 1998 suggest a slightly higher volume of around 120.7 mio t. Most of the milk produced is delivered to dairies. The delivery ratio has considerably increased over time, reflecting lower use at farm level either in form of direct sales or on farm consumption. Currently, **milk deliveries** represent around 94 % of production and reached 113.5 mio t in 1998. The monthly figures available for 1999 suggest that milk deliveries in 1999 could be somewhat higher and the last estimate stands at about 113.7 mio t.

The deliveries mainly reflect the evolution in the milk reference quantities that are governing the milk sector since their introduction in the year 1984. According to the provisional figures for the milk quota year April 1998/March 1999, there is a net overshooting of the reference quantities for deliveries by around 550 000 t[28]. Bearing this in mind, 1999 milk deliveries should normally be lower than that for 1998. However, it seems that for different reasons producers in some member states are not fully adjusting their milk production and deliveries to the available reference quantities. One of these reasons, for example, could be the fact that milk reference quantities for certain member states will increase in the years 2000 and 2001 as part of the Agenda 2000 reform and producers seem to anticipate to some extent this quota increase. But there are also some other member states not benefiting from a quota increase in 2000/01, where 1999 deliveries run well above of that observed last year.

The long-term evolution of milk production in the EU has to be seen against the evolution of the number of dairy cows and the evolution of the milk yield per dairy cow. In 1984,

[28] Estimate after taking into account the fat adjustment. The figure is the net result of an overshooting of 762.7 thousand t by 10 member states (of which Italy: +294 thousand t, Germany: +185.7 thousand t and Austria: +107.5 thousand t) and an under-use observed in 5 member states of around 212 thousand t.

around 29 mio dairy cows produced around 136.2 mio t of milk. The corresponding figures for 1998 are 19.9 mio dairy cows and a milk production of around 120.7 mio t[29]. Obviously, there was a big increase in milk yield over the same period, i.e. from 4387 kg/dairy cow in 1984 to 5555 kg estimated for 1998. On a yearly base, this represents an average growth rate of around +1.8 % that slowed down somewhat in most recent years.

Table 1.20 Milk production, deliveries and dairy herd in the EU, 1997 – 2006

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Production (mio t)	120.6	120.7	120.8	121.2	121.3	121.2	120.9	120.7	120.8	121.0
Deliveries (mio t)	113.7	113.5	113.7	114.2	114.4	114.3	114.2	114.0	114.3	114.6
Delivery ratio (in %)	94.30	94.08	94.19	94.18	94.30	94.35	94.43	94.49	94.57	94.66
Fat content (in %)	4.09	4.10	4.11	4.11	4.12	4.13	4.13	4.14	4.15	4.16
Milk yield (kg/dairy cow)	5474	5555	5652	5751	5852	5954	6058	6164	6272	6366
Number of dairy cows ('000)	21767	21516	21157	20873	20527	20157	19769	19391	19075	18830

Note: Dairy cow numbers refer to the end of the year (historical figures from the December cattle survey)

Under Agenda 2000, **milk deliveries** are expected to increase over time as a consequence of the quota increases scheduled for the years 2000-2002 and 2005/06. As far as **milk production** is concerned, the impact should be somewhat lower due to the expected evolution of on farm milk use, which is not governed by quotas and that tends to decrease. Direct sales are not concerned because only the quotas for deliveries will be increased. However, compared to the year 1998, the quota increase in the years 2000 and 2001 by about 1.4 mio t is not likely to lead fully to higher milk deliveries in the short term. The main reason is that a part of the quota increase corresponds to a production that already exists in 1998. As already mentioned above, there is a net overshooting of the reference quantities for deliveries by around 550 000 t, according to figures for the quota year April 1998/March 1999. Assuming member states will fully adjust to the available reference quantities for deliveries and direct sales, it is expected that milk deliveries will increase to around 114.4 mio t by the year 2002. This is around 830 000 t more than in 1998.

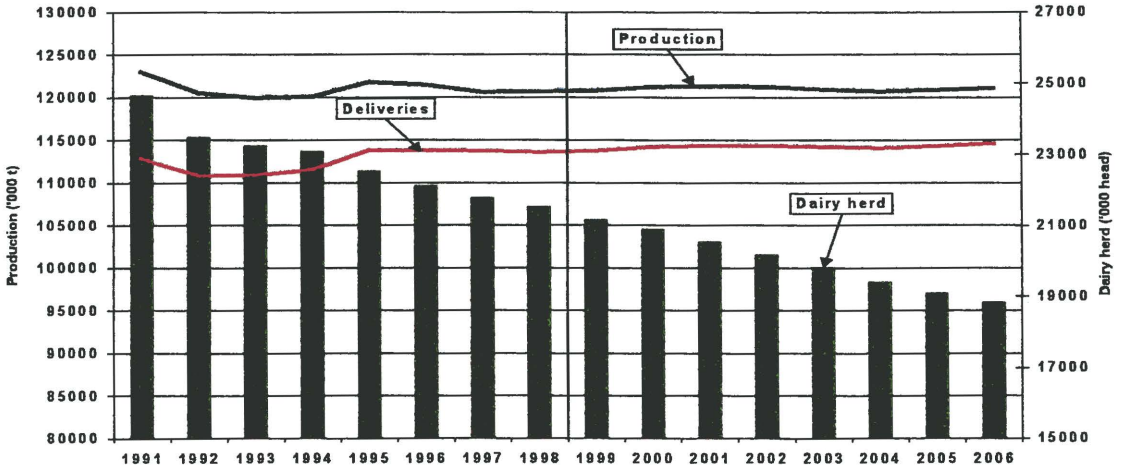
In the following years, it is expected that milk deliveries will decline slightly each year, reflecting the continuing increase in the milk **fat content** that reduces the margin for milk deliveries to dairies if the historical reference fat content is exceeded. Milk deliveries are forecast to increase again by the end of the forecast period in line with the quota increase in the years 2005 and 2006 that forms part of the second reform step and that is linked to the cut in support prices.

As already pointed out above, **milk production** is forecast to follow mostly the expected evolution of deliveries but not to the same extent due to the limitation of the quota changes to deliveries. So far, milk production is expected to increase from 120.7 mio t estimated for 1998 to 121.3 mio t by the year 2002 before declining somewhat until 2004. At the end of the forecast period, i.e. in the years 2005 and 2006, production is forecast to be somewhat higher due to the increase in milk quotas in these years.

[29] All figures refer to EU-15, even before the EU enlargement in 1995. The number of dairy cows is the figure for December of each year. For calculating the average milk yield for dairy cows, it has to be taken into account that statistics on cow milk production include also small quantities of milk produced from "other than dairy cows".

The milk fat content is assumed to continue to increase, but at a much slower rate than in the past. The same is true for the evolution of the milk delivery ratio. Furthermore, the general tendency for further rising milk yields is not expected to change over the next few years.

Graph 1.20 Milk production, deliveries and dairy herd in the EU, 1991 - 2006



The higher milk production, which is forecast under Agenda 2000, is likely to slow down somewhat the anticipated decline of the dairy herd. Assuming a further increase of milk yields by around 1.70 % per year on average over the forecast period, the number of dairy cows in the EU is forecast to decline from 21.5 mio animals recorded in 1998 (December survey) to around 18.8 mio animals by the year 2006.

4.2 Dairy products

4.2.1 Cheese

Over the last 20 years, the EU cheese sector was characterised by a strong and steady growth, both for production and consumption. While internal consumption keeps still increasing by around +1.5 % on average per year, the rise of production has slowed down somewhat in most recent years. It seems that this is due to the current difficulties for exports on some third country markets, in particular Russia, which changed considerably the short-term perspectives of the sector. Exports in 1998 were about 65 000 t lower than in 1997, and a further but smaller decline is expected for 1999. The most recent monthly figures on dairy production suggest that production in 1999 is likely to increase very modestly by only about 20 000 t. However, this should be mostly a short-term reaction and there are perspectives for some recovery over the medium term.

Within the context of medium-term forecasts up to year 2006, it has been assumed that cheese production will be mainly driven by (internal and external) demand. While the medium-term perspectives for consumption still looks relatively good, **exports** are likely to recover only marginally from the low levels experienced in 1998 and 1999. Despite some increase in non-subsidised exports in most recent years, it is not expected that this evolution will continue and could bring back total cheese exports to the levels reached before 1998, at least not in the short term. The scope for additional exports with refunds is small and originates mainly from the fact that in the last two years the available GATT limits could not be fully used. In any case, the possibility to report non-used quantities is limited to the GATT year 1999/2000. Over the medium term, it is expected that exports could reach about 450 000 t, with the perspective to increase somewhat at the end of the

forecast period. This small increase should be seen against the background of the gradual implementation of the cut in milk support price and of which the full impact will be felt somewhat later, mostly by the years 2007-08.

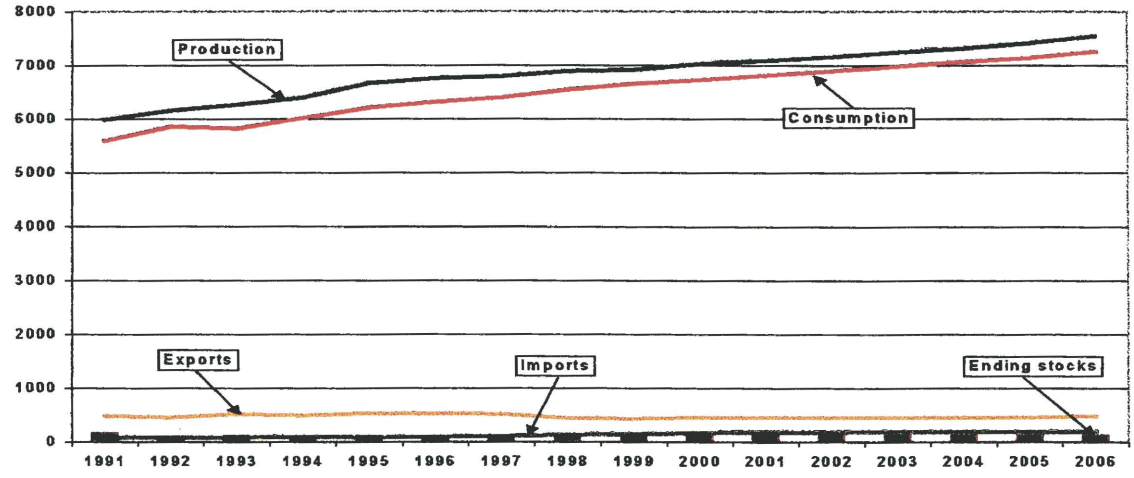
Imports are forecast to continue to increase over the medium term, reflecting improved market access granted to third countries within the GATT Uruguay Round and some bilateral trade agreements.

Table 1.21 Cheese projections in the EU, 1997 - 2006 ('000 t)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Production	6581	6673	6695	6796	6859	6933	7009	7086	7172	7303
Processed cheese impact	214	220	221	222	224	226	228	230	232	234
Imports	111	127	145	166	176	182	185	188	191	194
Exports	512	448	430	457	450	450	450	450	460	480
Consumption	6400	6541	6651	6726	6809	6892	6973	7055	7136	7252
Stock changes	-5	30	-20	0	0	0	0	0	0	0
Per cap. consumption (kg)	17.11	17.44	17.69	17.84	18.01	18.18	18.34	18.51	18.69	18.96
Public stocks (private aided stocks)										
Beginning stocks	121	129	133	130	130	130	130	130	130	130
Ending stocks	129	133	130	130	130	130	130	130	130	130
Stock changes	8	4	-3	0	0	0	0	0	0	0

Note: The figures on imports and exports are referring to total trade, i.e. including inward processing

Graph 1.21 Cheese projections in the EU, 1991 – 2006 ('000 t)



As already mentioned before, the medium and long-term outlook for **consumption** is in general positive, but it could well be that the growth is slowing down. Per capita consumption is cautiously forecast to rise from 17.4 kg in 1998 to about 19.0 kg by the year 2006[30]. This represents an annual growth rate of around +1.0 %. Total consumption will increase somewhat faster, i.e. by about +1.2 %, due to the expected small growth of population.

[30] Compared to the previous documents published, consumption figures for cheese are now higher. This is not only due to the revision of some statistical figures by member states but also the consequence of a methodological change in the calculation of the cheese balance sheet. The figures now include the impact of the manufacturing of processed cheese that represents an important part of EU exports. The impact is expressed in cheese equivalent, i.e. it has been taken into account that processed cheese also contains other ingredients than cheese. The revision has mainly consequences on the level of consumption, but provokes virtually no change concerning the evolution over time.

Consequently, cheese **production** is forecast to resume its steady increase, but at a relatively lower rate in comparison to the past. Due to the constraining nature of the GATT commitments for exports, the expected average yearly growth rate for production is only slightly higher than that of total cheese consumption, i.e. at around +1.3 %. Without these constraints, cheese production would be higher and absorb more milk, reducing production of other dairy products, in particular butter and skimmed milk powder (which can be sold into intervention).

4.2.2 Butter

After the sharp drop in the period 1986-1994, butter production stabilised and is since 1995 only slightly declining. However, it is likely that higher milk deliveries and the problems experienced on the export markets for some other dairy products, for example cheese, will lead to a small increase of production in 1999. More or less the same evolution can be observed for butter consumption. On average over the period 1995-1999, total consumption fluctuated at around 1.76 mio t, with a slight tendency to decline. Like for cheese and some other dairy products, current exports are running at relatively low levels. After the sharp drop in 1998, EU butter exports are expected to decline once again in 1999. The estimate currently stands at 160 000 t. The main reason for this drop are considerably reduced butter imports by Russia.

Butter **production** is forecast to remain more or less at the level currently observed, reflecting the higher supply of milk fat due to increased milk deliveries and limited scope for use in the manufacturing of other dairy products. There is a risk that the bulk of the additional milk delivered to dairies, following in particular the quota increase for the years 2000-02, will be used in the manufacturing of butter and SMP, which can be sold into intervention. The production of other dairy products is likely to absorb only a small part of the additional deliveries due to the evolution on the demand side. A significant increase of the use of milk in cheese production, for example, seems unlikely because of the limited increase of internal demand and the lack of perspectives for higher exports, at least in the short term.

Imports of butter are forecast to continue to increase in the short term before stabilising at around 110 000 t over the medium term, following the GATT outcome (increase in minimum access tariff quotas) and other import commitments. Butter **exports** are set at around 200 000 t each year, after an anticipated recovery in the short term, due to the assumption that in particular the trade with Russia will normalise. World market forecasts for butter trade show some increase in the medium term. But the biggest part of the anticipated increase, mostly by developing countries, is likely to be supplied by New Zealand and Australia, which are continuously expanding milk production and exports of dairy products, while the EU share on world markets is on the decline. Therefore, it is not expected that, over the medium term, EU exports will be considerably higher than around 200 000 t on average per year. Thus, EU butter exports will remain largely below the GATT commitments on subsidised exports. Already by the end of the GATT year 1998/99, subsidised EU butter exports, if cumulated since 1995/96, were about 1 mio t lower than theoretically allowed by the GATT agreement.

As already mentioned, butter **consumption** tends still to a slight decline despite some signs of stabilisation observed over several years. About 30 % of total consumption is subsidised by different disposal measures on internal market. On a per capita basis, the continuous small decline is more obvious than for overall consumption. Taken into account the evolution in most recent years, butter consumption is forecast to continue to

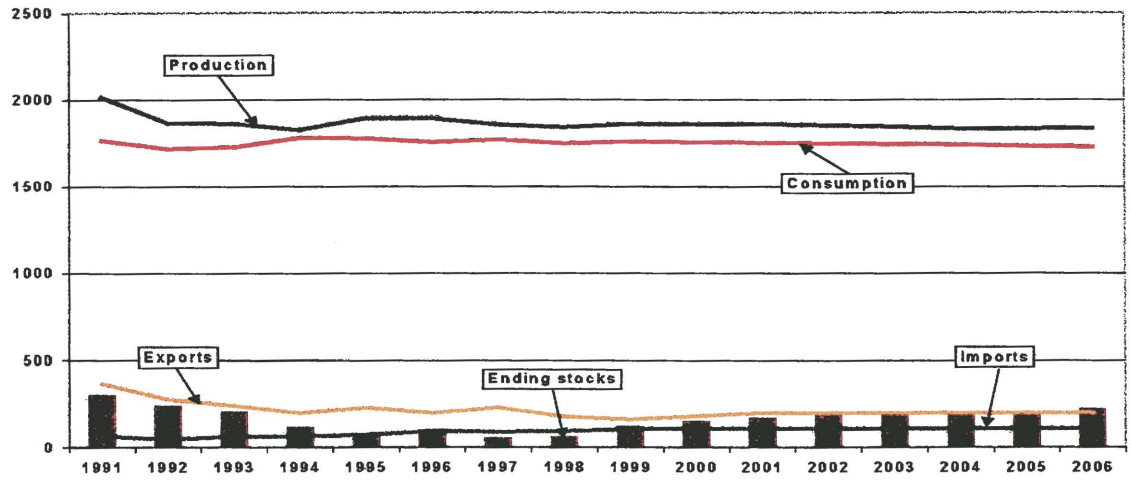
decrease, but much more modestly than in the past. Forecasts for per capita consumption are set at 4.5 kg by the year 2006, compared to around 4.65 kg currently. This forecast implies an annual rate of change of around –0.5 %. The expected decrease in total consumption is somewhat lower (-0.3 %) due to the anticipated small population increase.

Table 1.22 Butter projections in the EU, 1997 – 2006 ('000 t)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Production	1853	1838	1856	1855	1857	1851	1842	1833	1831	1833
Imports	89	93	105	108	110	110	110	110	110	110
Exports	227	175	160	180	200	200	200	200	200	200
Consumption	1766	1746	1756	1752	1749	1745	1742	1738	1732	1727
Stock changes	-50	10	45	31	18	16	10	4	8	16
Per cap. consumption (kg)	4.72	4.65	4.67	4.65	4.63	4.60	4.58	4.56	4.54	4.51
Public stocks (intervention and private aided stocks)										
Beginning stocks	93	52	61	119	150	168	184	194	199	207
Ending stocks	52	61	119	150	168	184	194	199	207	223
Stock changes	-42	9	58	31	18	16	10	4	8	16

Note: The figures on imports and exports are referring to total trade, i.e. including inward processing

Graph 1.22 Butter projections in the EU, 1991 – 2006 ('000 t)



The balance sheet for butter shows that, if in particular exports will not be considerably higher than assumed above, especially in the next few years, some pressure on intervention stocks can be expected, despite continuous and sustained support of domestic use.

4.2.3 Skimmed milk powder (SMP)

After a strong decline during the period 1984-1992, the downward tendency both for SMP production and consumption is still continuing but at a much slower pace. In fact, SMP production and consumption fell by only around 40 000 t on average per year over the period 1995-1998, which is much less than in the past. It is mostly the use of SMP in animal feed that is decreasing, while human consumption is more or less stable. The main reason for the fall of SMP production is, on the one side, lower demand in the animal feed sector due to lower veal production, and, on the other side, the steady increasing use of skimmed milk in the manufacture of other dairy products (fresh products, cheese). However, it seems that the downward trend in SMP production and consumption will be interrupted in 1999. For both, the current estimates suggest an increase compared to 1998.

In the medium and long term, the downward trend both for production and consumption of SMP should continue after the short interruption in 1999. However, there is a risk that SMP **production** will remain relatively high in the short term, reflecting higher milk supply and butter production, especially in the years 2000 and 2001. In fact, the higher milk quotas will lead to additional milk delivered to dairies and, consequently, to higher butter production compared to a situation without the quota increase. Also SMP production is likely to increase due to the additional volume of skimmed milk released in the manufacture of butter. Part of that can be used as input in the manufacture of other dairy products, like cheese, fresh products or casein, but the bulk risks to go in SMP production. Nevertheless, the forecast suggests a reduction of SMP production from an estimated 1.16 mio t in 1999 to around 995 000 t by the year 2006.

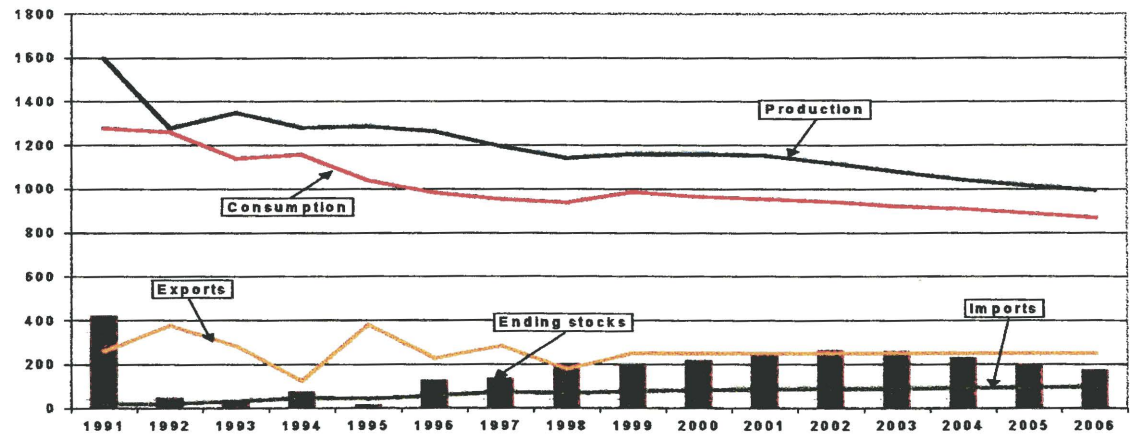
Table 1.23 SMP projections in the EU, 1997 – 2006 ('000 t)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Production *)	1194	1142	1160	1158	1153	1117	1079	1040	1014	994
Imports	73	66	75	82	84	86	89	91	93	95
Exports	283	176	250	250	250	250	250	250	250	250
Consumption	954	937	985	964	953	942	921	910	888	867
— human	335	337	338	339	340	341	342	343	343	344
— anim. feed, etc.	619	600	647	625	613	601	579	567	545	523
Stock changes	30	95	0	26	35	12	-3	-29	-31	-27
Public stocks (intervention and private aided stocks)										
Beginning stocks	125	136	204	190	216	250	262	259	230	199
Ending stocks	136	204	190	216	250	262	259	230	199	172
Stock changes	11	68	-14	26	35	12	-3	-29	-31	-27

*) Including buttermilk powder, i.e. the balance sheet for SMP presented here follows the methodology of EUROSTAT.
Note: The figures on imports and exports are referring to total trade, i.e. including inward processing

Imports are forecast to keep increasing slightly each year over the medium term. SMP **exports** are set at 250 000 t, a volume that is expected to be the likely maximum that can be reached on average over the forecast period, without excluding some fluctuations around. World market forecasts for SMP trade suggest some increase in the medium term. But, like for butter, the biggest part of the anticipated increase, mostly by developing countries, is likely to be supplied by New Zealand and Australia, which are continuously expanding milk production and exports of dairy products, while the EU share on world markets is declining. In any case, compared to the figure of 250 000 t on average that has been retained in the forecasts, the margin for additional exports is very limited due to the GATT agreement. It is not expected that, up to the year 2006, SMP exports can be achieved without refunds, despite prospects for higher world market prices.

Graph 1.23 SMP projections in the EU, 1991 – 2006 ('000 t)



While human **consumption** of SMP is projected to remain more or less stable, the use of SMP in the animal feed sector is forecast to continue to decline over time. An important part of SMP consumption is still subsidised (animal feed), but the share fell from around 70 % in 1991 to about 50 % in 1998. The forecast under Agenda 2000 implies a further reduction of the subsidised use in animal feed, in line with the expected evolution of overall consumption, but less than compared to a situation without the quota increase.

Overall, the assumptions and forecasts presented above show a market situation where SMP intervention stocks tend to increase in the short term, i.e. up to the year 2003, before the pressure eases somewhat, but only thanks to high exports that have been assumed and further substantial subsidised internal use.

METHODOLOGICAL ANNEX

I. Macro-economic variables

The Directorate-General for Economic and Financial Affairs and the Statistical Office - EUROSTAT- of the European Commission are the source for historical data and short-term projections for the exogenous variables, such as inflation, GDP growth, €/$ exchange rate and population. In some cases estimates from DG Agriculture have been added.

II. Arable crops

1. Arable crop supply

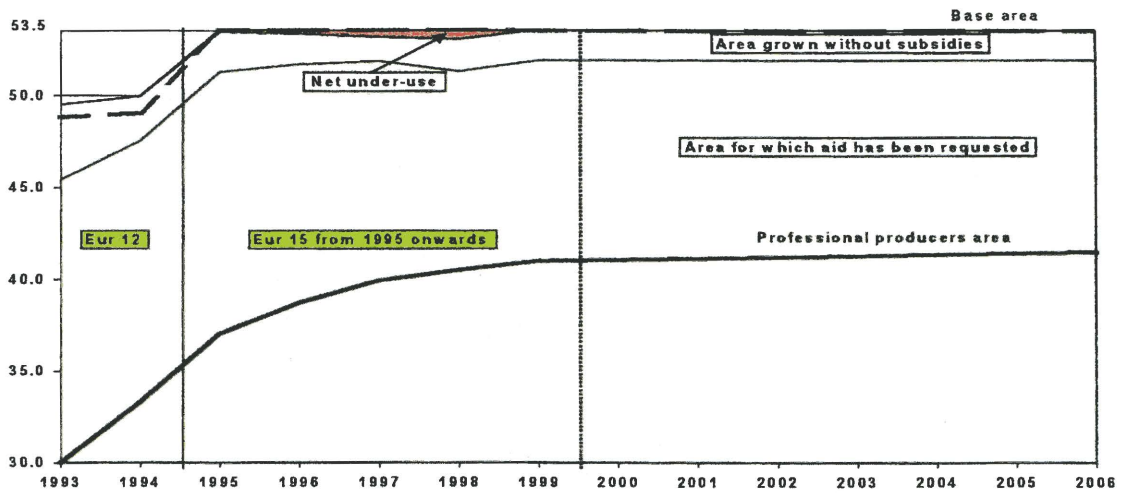
1.1 Area

Area projections are based on the allocation of the base areas as defined in the Council Regulation 1765/92 (et al.) for EUR 12 and EUR 3. This "total base area", upon which compensatory payments are granted, amounts to 53.5 mio ha. It is distributed, as explained hereafter, among the arable crops covered by the 1992 reform (i.e. cereals, oilseeds, protein plants, non-textile linseed), land set-aside (on a voluntary or compulsory basis) and fodder areas (including those under the beef premium regime).

Overall use of the base area

The allocation of the base area takes into account two phenomena that have been observed over the 1993-1998 period: firstly, some **systematic under-utilisation** of the base area (notably in Italy, Spain, Greece, Finland, Portugal and Sweden) as the area for which aid has been requested has always been below the total base area and, secondly, the existence of **some areas grown without support** (in particular in Italy, Spain, France). From 1995/96 to 1998/99, the net impact of these two phenomena displayed a net under-use of the total base area and a continuous decline in total land farmed in arable crops or set-aside in the framework of a support regime.

Graph A.1 Comparison of the "total arable crop" area and land set-aside with the total EU base area, 1993/94 – 2006/07 (mio ha)



The net under-use of the total base area is estimated to have reached more than 400 000 ha in 1998/99 in the European Union as a whole (cf. graph A.1). Early estimates for the 1999/00 marketing year tend to show a marked reduction in the under-utilisation

of the base area to a level similar to the area grown without support, so that the net under-use of the total base area would be close to nil.

It has been assumed that these phenomena would remain stable from 2000/01 onwards at a level close to the observed level of under-utilisation in 1999/00 (1.6 mio ha). Therefore, their net impact on the use of the total base area is assumed to be neutral. However, it should be acknowledged that this assumption may result in some overestimation of the total area allocated to arable crops (or to set-aside) over the medium term, in particular in the framework of the implementation of the Agenda 2000 measures that may result in lower profitability levels for major arable crops.

Set-aside of land

Compulsory set-aside is set at 10 % in 1999/2000 and then from 2000/01 onwards to its base rate of 10 % in the context of the Agenda 2000 CAP reform. Total land set-aside is calculated on the basis of the total area under the general scheme. This area has been steadily increasing over the 1993-1998 period: from 30 mio ha in 1993/94 to 40.0 mio ha in 1997/98 and then 40.5 mio ha in 1998/99. Early estimates for 1999/00 are close to 41 mio ha. This evolution reflects a combination of structural and policy factors. On the one hand, there is the on-going process of structural adjustment in the agricultural sector, which leads to an increase in the average size of farms and in the total land subject to the set-aside obligations. On the other hand, the incentive for arable producers to remain under the simplified regime declined following the regular decrease in the rate of compulsory set-aside.

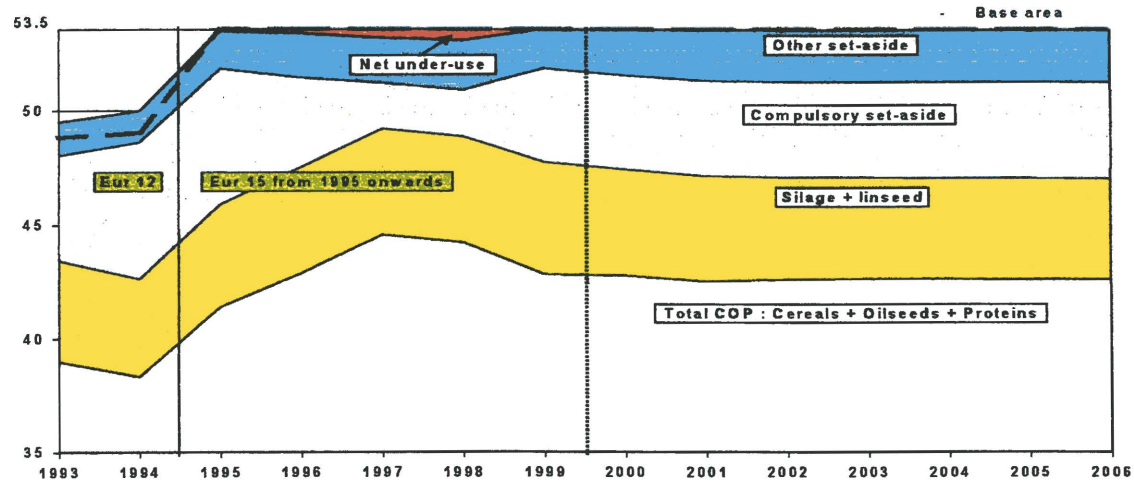
Over the projection period, it is assumed that the structural adjustment will continue, though at a slower pace than in the past, so that the total area under the general scheme will expand to reach 42 mio ha in 2006/07. Therefore, land under compulsory set-aside is estimated to increase from 4.1 mio ha in 1999/00 to 4.2 mio ha in 2006/07. Keeping the impact of the compulsory set-aside at relatively low levels over the medium term may lead to some overestimation of the total land allocated to arable crops.

Voluntary set-aside is assumed to adapt to changes in the rate of compulsory set-aside and in market prices. It is expected to decline from 2.2 mio ha in 1998/99 to 1.7 mio ha in 1999/00. This fall reflects both the increase in the rate of compulsory set-aside (from 5 % in 1998/99 to 10 % in 1999/00) and a short-term increase in total cultivated COP area in some countries. Based on micro-economic analysis, historical trends and market expert judgement, it is then estimated to increase at around 2.0 mio ha in 2000/01, 2.25 mio ha in 2001/02 and 2.3 mio ha from 2002/03 onwards (when the cut in cereal support prices and equalisation of direct payments in the arable crop sector is implemented to its full). The rise in voluntary set-aside would mainly result from the expected fall in profitability of arable crops and from the new eligibility for producers under the simplified regime to the voluntary set-aside scheme.

Non-textile linseed and silage crops

Areas cultivated for non-fibre flax seeds and silage crops have been estimated on the basis of market expert judgement. Over the medium term, area allocated to silage is projected to remain stable at around 4.35 mio ha, whereas area under non-fibre flax seed should drop to 0.1 mio ha in line with the cut in direct payment (as compared to 0.3 mio ha in 1998/99 and an estimated 0.55 mio ha in 1999/00).

Graph A.2 Distribution of the EU base area between the total COP, compulsory and other set-aside, silage and non-fibre flax seed, 1993/94 – 2006/07 (mio ha)



Cereals, oilseeds and protein crops

The base area not covered by the above-mentioned crops or set-aside will be grown either in cereals, oilseeds or protein crops (cf. graph A.2). The area allocation between the different types of cereals, oilseeds and protein crops has been modelled to simulate producers behaviour in terms of land allocation on the basis of the relative changes in the total receipts per hectare of each crop (i.e. market receipts and direct payments). The total receipt elasticities have been econometrically estimated.

Equations are specified for each main cereal and oilseed type (namely soft wheat, durum wheat, barley, maize, "other cereals" -mainly oats, rye and triticale-, rape seed, sunflower seed and soya bean) as well as for the aggregate protein crops.

Some specific features have been taken into account: the impact of the new common market organisation in the durum wheat sector and the Blair House limits on oilseed area allocation. These limitations fixed by the Blair House agreement correspond to a base area of 5.482 mio ha, to which the annual rate of compulsory set-aside for arable crops has to be applied (however, the reduction in the separate oilseed base area cannot be of less than 10 %)[31].

In order to provide a more realistic outlook for the oilseed sector, it has been assumed that oilseeds area projections may exceed the Blair House limits during the first two years of implementation of the CAP reform. However, if the case arises, account is taken of the penalties for overshoot of the base area. From 2002/03 onwards, it is assumed that the limits set in the Blair House agreement do not anymore apply, due to the equalisation of direct payments for cereals and oilseeds.

---

[31] In the calculation of the oilseed area eligible to the oilseed specific payment and subject to the Blair House constraints, account is taken of (1) the oilseeds area grown by the so-called "small producers" that are exempted from set-aside obligations and the Blair House constraints. This area is assumed to represent around 0.1 mio ha; (2) the oilseed area grown without any support and the area for which the oilseed specific support has been claimed but rejected. This additional area is estimated on an historical basis at around 0.12 mio ha.

1.2 Yields

Yields are projected on the basis of logarithmic trends[32] and market price developments. Yield equations have been estimated for each type of cereals on the basis of the most representative period, generally over the 1985-1998 period (in terms of forecasting ability over the historical period and plausibility of projections). Oilseed yield trends are computed over a more recent period in order to take account of the more positive developments observed over the last few years, i.e. after their decline in the wake of the reform of the sector in the late 1980s.

2. Cereal domestic demand

Domestic demand for cereals has been econometrically estimated for each type of cereals (as mentioned above) and by uses (feed, food, seed and other uses), based on the consumer price changes of cereals and of their substitute products, projections of animal production and herd size, forecasts for population as well as historical trends.

The feed forecasting module operates in three stages: the estimation of the total demand for marketable feed products (including their direct use on farm), its allocation between the main feed products (cereals, "energy-rich" products such as corn gluten feed and manioc, "protein-rich" products and other feed products) and the distribution among the cereals.

3. External trade

The level of cereal imports has been fixed exogenously on the basis of expert judgement. Cereal exports are estimated using the projected world market prices for cereals, taking into account the limits on the level of subsidised cereal exports set in the Uruguay Round Agreement.

4. Balance sheet

The cereal balance sheets summarise the projection results for production, consumption and external trade. The disposable surplus that balances these items is attributed either to private or to public (intervention) stocks, with private stockholding set at 12 % of domestic consumption for all cereals, which corresponds to around six to seven weeks of consumption (except for durum wheat for which private stocks are assumed to remain stable at around 600 000 t).

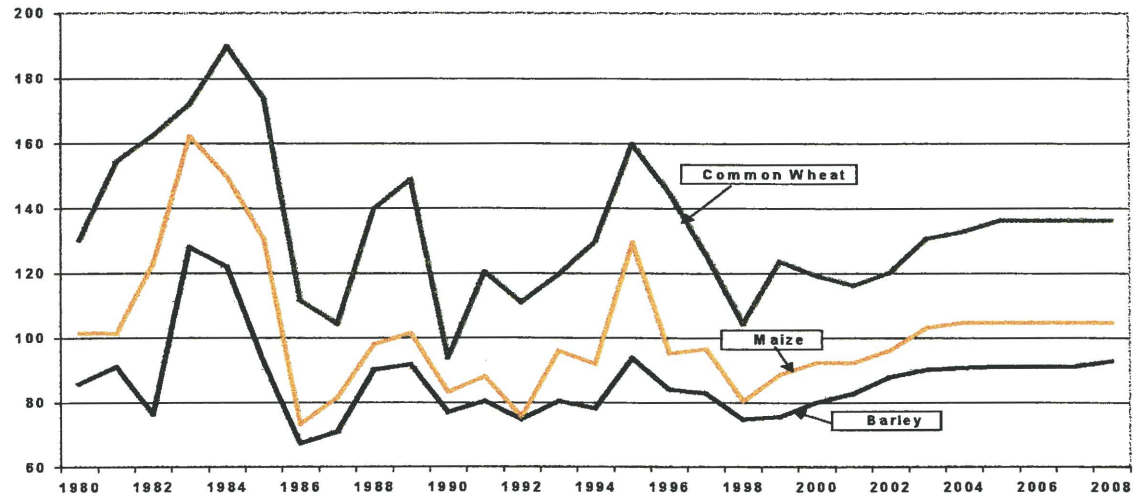
5. Cereals and oilseeds prices

Domestic cereal prices are computed on the basis of the balance between supply and demand for each type of cereals, taking into account the system of intervention prices.

---

[32] The logarithmic trend provides for a decline over the long term in the annual growth rate in yields.

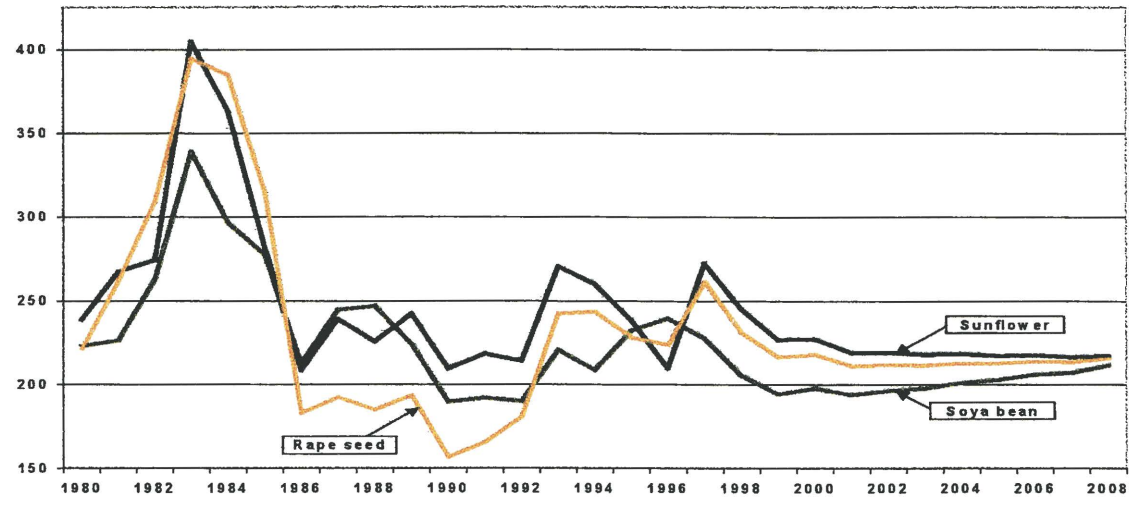
Graph A.3 Assumptions for world market prices for cereals, 1980/01 – 2008/09 (€/t)



Note: Wheat: US No.2, HRW, FOB Gulf; Maize: No.2, yellow corn, US Gulf ports, FOB; Barley, Duluth.

Assumptions for world cereal and oilseeds prices are based on the OECD and FAPRI baseline projections published early Spring 1999 (cf. graphs A.3 and A.4). Taking account of the continuing uncertainties as far as world market developments are concerned, the most conservative projections have been retained in all cases.

Graph A.4 Assumptions for world market price for oilseeds, 1980/01 – 2008/09 (€/t)



Note: Soya bean: CIF Rotterdam; Sunflower seed: CIF Lower Rhine; Rape seed: CIF Hamburg.

Protein crops, corn gluten feed and manioc prices are estimated on the basis of cereal and oilseed meal prices.

III. Meat and livestock

1. Beef supply and demand

The long-term prospects for beef have been obtained on the basis of the results from several approaches. Econometric and statistical models on cyclical production and the long-term evolution of consumption form the basis of the forecasts. However, since the BSE crisis affected the short-term evolution of production and consumption patterns, some additional simulations and estimates have been carried out. They mainly concern the

evolution of consumption (with and without the impact of the BSE crisis) and the impact of the emergency measures (slaughtering for sanitary reason, supply side measures) on production adopted in October 1996.

Beef supply

Forecasts on **beef supply** are based on different models of the beef production cycle, of which the statistical one follows the traditional approach of analysing separately the different components in beef production, i.e. the seasonal pattern, the cyclical movement and the long-term tendency. A more sophisticated econometric approach takes account of additional elements from the beef market, such as market prices, feeding costs and assumptions on the evolution of the cow's herd. The combination of these models form the "baseline projections", which are then used as reference for adjustments in order to incorporate the potential impact of the BSE crisis and the different support measures that have been adopted. These adjustments cover in particular:

- The effect of the different slaughter programs in several member states, in particular the "Over-Thirty-Months-Scheme" (OTMS) in the UK, which is assumed to be applied until the year 2001. In addition, the selective cull programs in several member states are taken into account. The estimates for the potential impact on production are mainly based on administrative data on the number of animals entering in the different schemes and rough assumptions for the average slaughter weight, according to the categories of animals (based on historical figures).
- The estimated impact of the measures the Council decided in October 1996 in order to limit beef production in the short-term. They concern in particular the calf processing scheme (for beef and dairy calves) and the early marketing scheme for veal calves. The early marketing scheme ended in 1998, but the processing scheme continued in a few member states during 1999, at least for some time, but will end this year. Processed or diverted calves (from beef to veal production, in order to compensate for the reduced slaughter weights of veal calves) are assumed to have an impact on beef production over the two following years. Like for the OTMS, the potential impact is estimated on the basis on administrative data on the number of animals concerned by both schemes and assumptions on normal average slaughter weights.

The net impact of these types of measures has been deducted from the potential beef production obtained from the baseline projection.

Beef demand

The forecasts for beef/veal **consumption** are based on an econometric model covering also the other types of meat (mainly pig meat and poultry). It takes account not only of the evolution of consumer prices for beef, pig meat and poultry but also that of other variables, such as the disposable consumer income. The obtained results, which show a long-term declining tendency (without the price cut decided in the context of Agenda 2000) for beef/veal consumption, form the "baseline projections" before taking account adjustments that have been made in order to incorporate the (observed and further expected) impact of the BSE crisis. In the previous forecasts, the adjustment was based on the assumption that beef/veal consumption will gradually recover from the big drop in 1996 towards its long-term trend by the year 2001. However, the evolution in the short-term was much more positive than expected because consumption is in 1998 already back to this long-term trend.

2. Pig meat, poultry and sheep/goat meat

Forecasts for **pig meat and poultry** production were obtained on the basis of demand forecasts and assumptions on net external trade, taking into account the GATT constraints on subsidised exports and expert judgements on the level of non-subsidised exports that can be realised. In both cases, a rather cautious approach has been applied, i.e. the expected level of unsubsidised exports has been mostly set in function of the volumes currently realised. The forecasts for internal demand are coming from the same econometric model that has been used for the beef consumption forecasts. However, as for beef, results from this model have been adjusted in order to take account of the impact of the BSE crisis.

A different approach was followed for **sheep/goat meat** due to the specific characteristics of the sector. Production is mainly determined by the ewe premium system, although some adjustments may happen in response of changes occurring on the demand side, taking into account the quite substantial import volumes.

IV. Milk and dairy products

1. Milk supply and dairy herd

The forecasts for **milk production and deliveries** are to a large extent determined by the milk quota system, which fixes reference quantities for deliveries to dairies and direct sales from farms. In addition, a reference fat content for delivered milk has to be taken into account. The long-term forecasts are based on the assumption that actual deliveries will adapt to the fixed milk reference quantities, according to the volumes fixed by the Agenda 2000 decisions. The fat content in the delivered milk is assumed to continue to increase slightly, thus, reducing the physical quantities of milk that can be delivered to dairies without penalty in the form of the "additional levy". Furthermore, the delivery ratio (the share of delivered milk with respect to total production) is expected to continue its slight increase, as in the past.

The forecasts on **dairy cow numbers** are derived from the forecast results for milk production, assuming a further increase of milk yields that has been fixed at about 1.70 % per year on average. This assumption is based on the past evolution of milk yields (trend estimates).

2. Dairy product balance sheets

The balance sheets for the three most important dairy products (cheese, butter and skimmed milk powder) take into account import and export commitments under the GATT agreement and granted improved market access under other agreements. It is assumed that their **production** is essentially demand-driven (domestic use and exports), but some adjustments have been made in order to incorporate likely responses within dairy manufacture due to the GATT constraints, which are considered to limit a further expansion of some dairy products, such as cheese for example. Therefore, butter and skimmed milk powder production forecasts incorporate some residual elements. The adjustments made are checked against a calculated global balance of milk used in dairies. The forecasts on **internal demand** (domestic use) for the different dairy products are mostly based on historical trends, adjusted if necessary in order to take into account of changed short-term consumption patterns.

PROSPECTS FOR AGRICULTURAL MARKETS IN THE CENTRAL AND EASTERN EUROPEAN COUNTRIES

1. Introduction

This chapter provides an overview of the current and expected longer-term development of a number of the main agricultural commodity sectors in the 10 Central and Eastern European Countries (CEECs) which are candidates for accession to the European Union[33].

As is the case for the EU, projections for production and use are presented for some of the main crop and livestock products in the CEECs for the period up to 2006. The projections presented below are based on different approaches (statistical analysis, expert judgement, etc.) and on different statistical sources (national statistics, international organisations, private information etc.)[34]. The projections are **based on a status-quo policy hypothesis**. This means that the projections are based on current policy and **no assumptions** have been made concerning the date and conditions of entry into the EU by candidate countries[35].

The results for the 10 CEECs as a whole are summarised below. Considerable efforts have been made to establish a coherent, reliable and up to date database on agricultural markets in all CEECs. However, the figures presented in this chapter should be interpreted with care and only as orders of magnitude. This is in particular the case for projections of production and consumption up to 2006, as these countries are still in a post transition period, which renders projections more approximate than in the EU. It should also be underlined that the results presented below are aggregated for all 10 CEECs together. However, it is important to emphasise the relevance from an economic and political point of view of the specific situation of each country. This is particularly important since the entry date for EU membership for the 10 CEECs may vary from one country to another. We have therefore added a set of tables showing simplified balance sheets per country and per product for the period 1996-1999 and the projection for the year 2006 in the annex at the end of this chapter. Estimates for the year 1999 and projections up to 2006 are based on information available at the beginning of November 1999.

2. Economic outlook

Central and Eastern European Countries have showed strong economic growth with few exceptions during the last few years, although the rate has slowed somewhat in 1998 and 1999 compared to previous years. For the years 2000 and 2001, the Commission projects annual average increases in GDP of 3.5 and 4.3 % respectively. For the rest of the projection period, it is assumed that the CEECs will have a similar annual growth of GDP.

The projections for agricultural products are based on the assumption of constant real exchange rates. Any significant movements in exchange rates could have a great influence

---

[33] Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic and Slovenia.

[34] The Services of the European Commission would like to thank the following experts for the help and advice they have given for the updating of the statistical database and the preparation of the projections for the CEECs: Martin Sepp, Andris Miglavs, Natalija Kazlauskiene, Wladislaw Piskorz, Thomas Doucha, Frantisek Vanizek, Gejza Blaas, Mariann Bozik, Tibor Ferenczi, Emil Erjevac, Maria Vinzce and Sophia Davidova.

[35] This is a purely working assumption and does not prejudge the effective entry date of any candidate country or the modalities of accession.

on the production level as well as on the consumption pattern in the CEECs, and consequently on trade.

The population of the CEECs has decreased from 105.8 mio in 1992 to 105.1 mio in 1999. It is projected that this decrease will come to an end, and that the total population figure for the CEECs will rise to 105.7 mio in 2006.

3. Cereals

The **area** grown under cereals in the CEECs has been relatively stable above 24 mio ha during the second half of the 1990s. However, due to unfavourable weather for cereal sowings in some countries and the relatively good oilseed prices in autumn 1998, the cereal area harvested in 1999 was reduced by more than 1 mio ha to 23.6 mio ha. Since last year prices for oilseed have decreased significantly and it is estimated that most of this year's "lost" cereal area will return to cereals. For the projection period, it is expected that the total area under cereals in the CEECs will show a minor annual increase of around 100 000 ha and reach about 25.2 mio ha in 2006, which is 5 % above the average cereal area of 1996-1999. It is assumed that the area under cereals will stay rather stable or show small increases in most countries, and that only Poland will see a significant increase of 300 000 ha from 2000 to 2006. As is the case for the EU, much will depend on the relative prices between cereals and oilseeds. Rapeseed and sunflower seed are the dominant oilseeds grown in the CEECs. Taking into account that the world market prices for rapeseed and sunflower seed are expected to stagnate whereas cereal prices increase, it is assumed that the foreseen area increase in arable crops will predominantly go into cereals. The exact amount will depend on how much area leaves production under other crops, grassland (whether permanent or in rotation) or land which is currently unused.

Since the beginning of the 1990s the **average cereal yield** in the CEECs has increased by more than 15 % from around 2.7 t/ha in 1992 to 3.1 t/ha in 1999. Future development in yields will depend on the possibility for farms to improve their use of inputs and on their ability to afford their use at the same time as introducing new technology. It is expected that the average yield for the CEECs will continue to increase, at between 1.5 and 2 % per annum and reach on average 3.6 t/ha in year 2006. For the more dry regions of the CEECs a slower annual increase in yield than the average is expected, due to the need for irrigation to improve yields in these regions, and to the fact that the financial resources for these investments may be lacking.

Table 2.1 Situation and perspectives of cereal markets in the CEECs, 1996 - 2006

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Area (mio ha)	23.4	24.8	24.3	23.6	24.3	24.6	24.8	24.9	25.1	25.2	25.2
Yield (t/ha)	2.93	3.29	3.10	3.14	3.20	3.26	3.33	3.39	3.45	3.50	3.55
Production (mio t)	68.8	81.5	75.5	74.0	77.7	80.3	82.6	84.7	86.4	88.0	89.5
Total internal use (mio t)	71.5	74.3	73.6	73.4	74.8	76.0	77.2	78.3	79.2	80.1	81.0
Food (mio t)	16.7	16.9	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.7	17.8
Feed (mio t)	43.9	44.7	44.4	44.8	45.8	46.7	47.6	48.5	49.3	50.1	51.0
Balance (mio t)	-2.8	7.3	2.0	0.7	2.9	4.3	5.5	6.4	7.2	7.9	8.5

Total cereal production in the CEECs increased from 62 mio t in 1992 to around 75 mio t in 1998. Based on the above mentioned assumptions on area and yield a further increase in total cereal production is expected, up to about 89 mio t in 2006. Of this production 65 mio t (72 %) will come from just 3 countries: Poland (31 mio t), Romania (19 mio t) and Hungary (15 mio t).

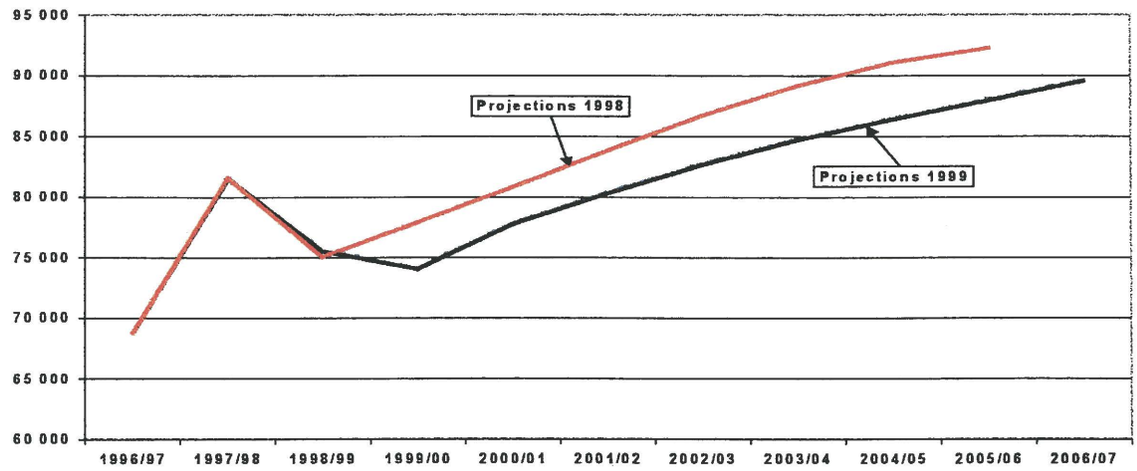
A slight increase in **per capita consumption** is assumed. Per capita consumption has been relatively stable at around 161 kg/head on average in the last 5 years, and even showed increases in some countries such as Hungary and the Czech Republic. Taking into account the expected development in population and a slight increase in per capita consumption, total human consumption of cereals is projected to go up by around 700 000 t in the period from 1998 to 2006 reaching 17.8 mio t at the end of the forecast period.

Total use of **cereals for feed** has been relatively stable above 44 mio t since 1996/97 and is estimated to stay at this level during 1999/2000 as well. An increase in animal production is foreseen in the projection period, which induces further use of cereals for animal feed in the period up to 2006. The total cereal feed use is projected to increase by 6 mio t to 51 mio t in 2006/07. This development is mainly due to increases in Poland, Hungary and Bulgaria and is based on the projected development in meat production (pig meat and poultry). However, this development assumes a close link between poultry and pig meat production in the CEECs and an expected growth in GDP. Should this strong expansion in GDP not materialise, then the expected demand for meat will be reduced and consequently less cereal feed demand will be generated in the CEECs.

These feed and food use patterns combined with relatively stable other cereal use will lead to an increase from 73 mio t in 1999/2000 to 81 mio t in 2006/07 in the total internal use of cereals. Three countries will account for 58 mio t (70 %): Poland 30 mio t, Romania 17 mio t and Hungary 11 mio t.

The above assumptions on production and use during the projection period will leave an increasing amount of **cereals available for export**. During recent years, total exports and imports have fluctuated due to weather related changes in production results, and net exports are estimated to reach a low point of only 1 mio t in 1999/2000. However, as production is projected to increase at a higher rate than consumption, the net balance of exportable cereals is seen to grow to between 8 and 9 mio t in 2006/07. Whereas Hungary, Romania, Bulgaria, Poland and the Czech Republic should have a net exportable balance, the Slovak Republics should remain net importers. It is expected that total imports of cereal into the CEECs will stay relatively stable at the current level of 1.8 to 2.0 mio t annually, half of which is to Poland (mainly maize).

Graph 2.1 Comparison of the 1998 and 1999 projections for total cereal production in the CEECs ('000 t)



In comparison to the projections published in 1998, cereal production is projected 4 mio t less in year 2005. This reduction is due, in spite of a small increase in the area under cereals, to a reduction in the projected yield, which is now foreseen at 3.50 t/ha compared to 3.63 t/ha for the year 2005.

4. Oilseeds

The area grown under oilseeds in the CEECs reached a new peak in 1999. This was the result of the attractive oilseed prices in 1998 compared to cereals prices, as well as weather related problems during cereals sowing (for instance in Hungary). The changes in harvested area during 1999 in the CEECs show that farmers in the CEECs are responding quickly to price signals from the market. The share of oilseed in the total cereal plus oilseed area is estimated to increase marginally from around 10.5 % in the years 1996-1998 to just above 11 % in 2006/07. In 1999 this percentage reached 12.7 %.

The **area grown under oilseeds** is expected to decrease significantly in the year 2000 to 3.1 mio ha from 3.4 mio ha in 1999. This is due to the current low prices especially for rapeseed and soya bean and the very large harvested area in 1999. It is projected that the total oilseed area will stay stable at 3.1 mio ha during the forecast period. This development is based on the assumption that the world market prices for rapeseed and sunflower seed will stagnate in the forecast period. Should the prices for oilseeds increase and thereby increase their price relative to cereals, the area under oilseeds could increase at the expense of cereals.

Yield is seen growing at a rate similar to that of cereals at around 1.5 % annually. As in the EU the increase should be higher for rapeseed than for sunflower seed.

Table 2.2 Situation and perspectives of oilseed markets in the CEECs, 1996 - 2006

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Area (mio ha)	2.8	2.6	3.0	3.4	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Yield (t/ha)	1.47	1.43	1.57	1.69	1.63	1.65	1.68	1.71	1.74	1.77	1.80
Production (mio t)	4.0	3.8	4.6	5.8	5.0	5.1	5.2	5.3	5.4	5.6	5.7
Total internal use (mio t)	3.9	3.6	4.1	4.4	4.4	4.5	4.6	4.7	4.8	4.8	4.9
Balance (mio t)	0.2	0.2	0.5	1.4	0.6	0.6	0.6	0.6	0.7	0.7	0.7

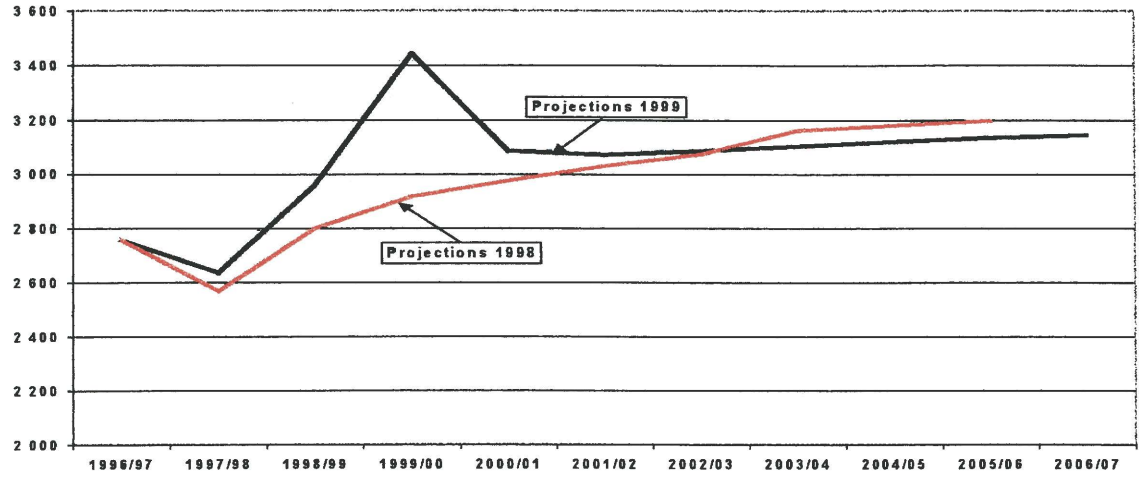
Based on the assumptions on area and yields mentioned above, total oilseed **production** is expected to decrease in 2000 after the record crop in 1999. However as yields improve production should reach 5.7 mio t in year 2006. This is equal to the record crop in 1999.

Internal use/crushing is expected to increase significantly from 4.6 mio t in 1999/2000 to 4.9 mio t in 2006/07. This increase in use comes from growing demand for meal for feed, but also increased use of oils for food. These increases in use will necessitate investment in new crushing capacity.

Oilseed production is projected to increase faster than internal use. The quantities available for **exports** may increase from 0.5 mio t in 1998 to 0.7 mio t in 2006.

The 1999 projections for the level of production in 2005 are very similar to last year's projections. Total oilseed production was projected to reach 5.8 mio t in 1998 compared to 5.7 mio t in this year's projection. The change is mainly due to a minor reduction in oilseed area of less than 100 000 ha.

Graph 2.2 Comparison of the 1998 and 1999 projections for total oilseed area in the CEECs ('000 ha)



5. Milk

The milk sector is of importance for most of the CEECs. Together with the beef sector milk is an area where the CEECs have seen significant reductions since 1990. The CEECs as a group have been net-exporters of milk and are expected to continue to remain so in the projection period. Currently, Poland with 12 mio t and Romania with 5 mio t are the most important producing countries whereas Lithuania is the most important exporter with around 1 mio t milk equivalent.

The number of **dairy cows** has decreased from above 10 mio in 1992 to 8.1 mio in 1998 and a further decrease to 7.9 mio heads is estimated for 1999. In the projection period it is assumed that the number of dairy cows will continue to decrease until 2006, but at a slower rate than in previous years (-0.3 to -0.4 % p.a.). The total number of dairy cows is projected to decrease from 7.9 mio in 1999 to 7.7 mio in 2006. The number of cows is assumed to decrease in most countries, while staying unchanged at the current level of 3.51 mio in Poland, and increasing in Hungary. The development in total herd size may hide some significant structural changes in the different countries. This could be of great importance involving, for example, a switch from household farming to commercial farming.

Despite the decrease in cow numbers in recent years, production has increased due to significant yield increases. It is projected that the average **yield per cow** should go up on average 1.6 % annually in the projection period (at the same rate as in the EU). Some countries such as the Czech Republic, the Slovak Republic and Slovenia have in recent years had some very significant yield increases (more than 5 % annually). However, it appears that these improvement rates cannot be maintained over the coming years. Other countries such as Lithuania have recently introduced support to improve the genetics in their dairy herd, which should initially improve yield in the coming years, but this higher rate of increase cannot be maintained over the full projection period.

The assumed increases in yield per cow coupled with the slight decrease in cow numbers will lead to an increase in **milk production** from 29 mio t in 1998 to 31.7 mio t in 2006. Of this 2.7 mio t increase, 1.3 mio t will be in Poland, 0.4 mio t in Hungary and 0.3 mio t in Romania.

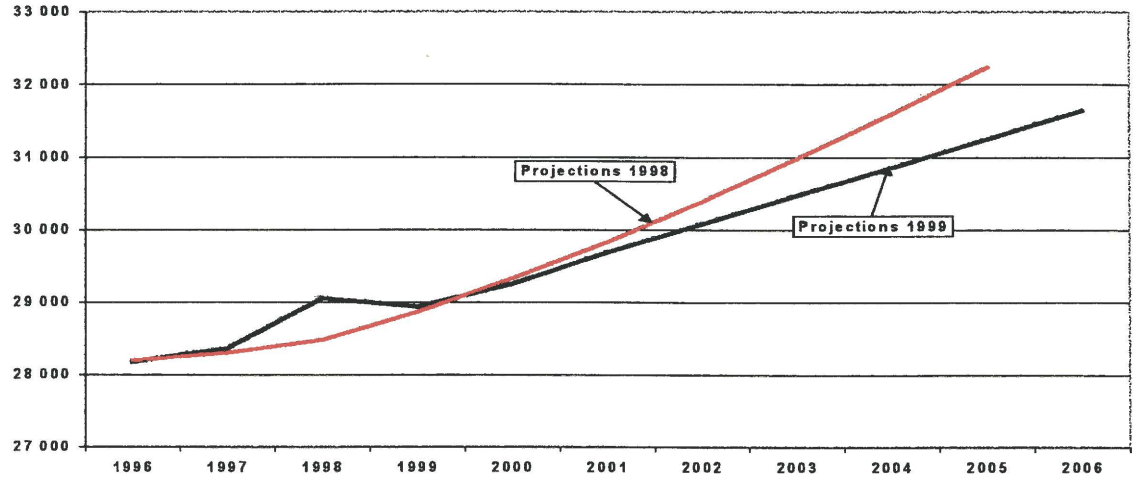
Table 2.3 Situation and perspectives of the milk market in the CEECs, 1996 - 2006

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Number of milk cows (mio)	8.3	8.2	8.1	7.9	7.8	7.8	7.8	7.7	7.7	7.7	7.6
Yield ('000 kg/cow)	3 389	3 461	3 562	3 633	3 692	3 753	3 815	3 877	3 940	4 005	4 072
Production (mio t)	28.2	28.4	29.1	28.9	29.2	29.7	30.1	30.5	30.9	31.2	31.6
Total internal use (mio t)	25.9	25.9	26.4	26.3	26.6	27.0	27.4	27.8	28.1	28.5	28.9
Fresh milk use (mio t)	17.4	17.0	17.1	16.9	17.0	17.2	17.4	17.6	17.8	18.0	18.2
Balance (mio t)	2.3	2.5	2.7	2.7	2.6	2.7	2.7	2.7	2.7	2.7	2.8
Per cap. consumption (kg)	165	162	163	161	162	164	166	167	169	170	172

It is assumed that the **internal use** should increase in the projection period, but less than production. It is expected that most of the increased milk demand in the CEECs will come mainly from an increase in use of fresh milk products and cheese. These products have in recent years showed significant increases, and with the current economic outlook this development should continue. Total internal use is projected to reach nearly 29 mio t in 2006 compared to 26.4 mio t in 1998, with annual increases of 1.5 to 1.7 % on average during the period. It should also be mentioned that the projected increase in the use of fresh milk products as well as cheese may need investments in either upgrading existing capacity or the construction of new facilities.

Based on these trends in production and consumption, the CEECs are expected to increase their net export balance from 2.3 mio t in 1998 to 2.8 mio t in 2006. This increase in quantities available for exports mainly arises in the Czech Republic and Hungary and to a lesser extent from other CEECs.

Graph 2.3 Comparison of the 1998 and 1999 projections for milk production in the CEECs ('000 t)



Compared to the projections presented in 1998 the projected increase in production is smaller. This can mainly be explained by a lower number of dairy cows. Since 1997 the number of dairy cows has decreased. In the projections in 1998 it was foreseen that the number of dairy cows would begin to increase in 1998 and 1999. The high milk production of 1997 and 1998 was brought about by a particularly high increase in milk yields. These growth rates in milk yields are not expected to continue, and therefore for the end of the period, the projection of milk production has been lowered.

Figures for 1998 and 1999 for internal consumption also show a lower increase rate than expected in 1998. This leads to a net balance where quantities available for export are now estimated at 2.8 mio t compared to 2.2 mio t in the 1998 projections.

6. Beef and veal

The production of beef and veal in the CEECs is mainly linked to the dairy herd, as only limited numbers of herds with suckler cows are present in the CEECs. This situation is expected to continue in most countries with the exception of the Slovak Republic, where production based on suckler cows is being supported. The same development may occur in the Czech Republic. Since beef and veal production is so closely linked to the milk production, any restrictions in this sector (for instance by introductions of milk quotas, such as currently under discussion in the Czech Republic) will have significant influence on the potential beef meat production in the CEECs.

The beef meat sector has been the sector that has experienced the largest reduction in production since the beginning of transition. From 1989 to 1998 production decreased by 40 % to less than 1.2 mio t. Two countries dominate beef production in the CEECs - Poland and Romania, with respectively 0.5 mio t and 0.2 mio t in 1998 out of a total production of 1.2 mio t.

During the projection period it is expected that the number of **animals slaughtered** will decrease slightly. It is assumed that, as the number of dairy cows continues to decrease, beef and veal production will follow the same pattern. The increase in suckler cow production will not be able to compensate this decrease totally. The **average slaughter weight** is seen to increase marginally to around 200 kg/head. Total beef and veal **production** is seen to reach 1.15 mio t down from 1.2 mio t in 1998.

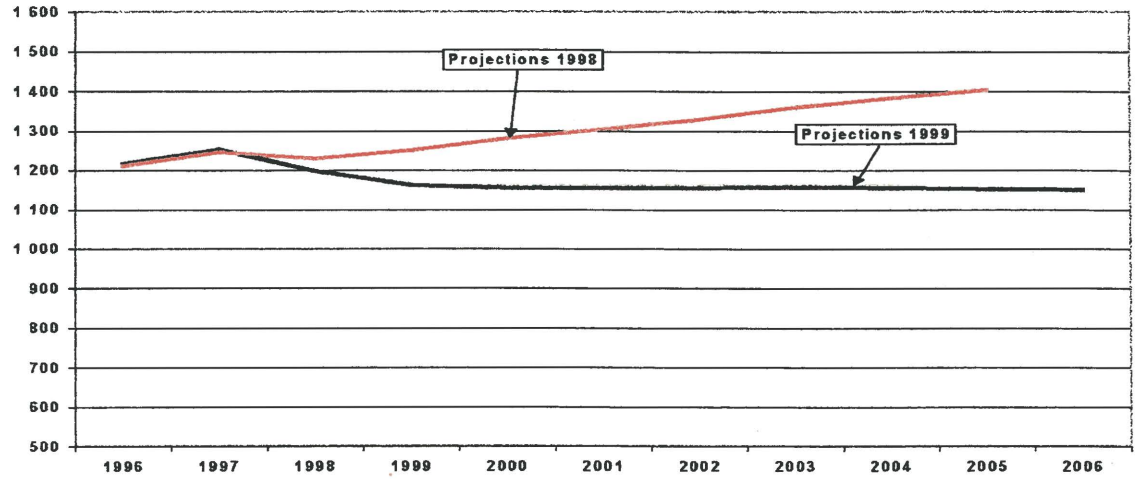
Table 2.4 Situation and perspectives of the beef and veal market in the CEECs, 1996 - 2006

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Slaughtered animals (mio)	6.4	6.3	6.1	5.90	5.81	5.81	5.80	5.81	5.79	5.78	5.76
Slaughter weight (kg/head)	191	199	197	197	199	199	199	199	199	200	200
Production (mio t)	1.22	1.25	1.20	1.16	1.16	1.16	1.16	1.16	1.16	1.15	1.15
Internal use (mio t)	1.22	1.21	1.15	1.16	1.17	1.18	1.19	1.20	1.21	1.22	1.23
Balance (mio t)	0.00	0.05	0.05	0.00	-0.01	-0.02	-0.03	-0.04	-0.05	-0.06	-0.08
Per cap. consumption (kg)	11.6	11.5	11.0	11.1	11.1	11.2	11.3	11.4	11.4	11.5	11.6

Internal consumption is expected to grow steadily but slowly, with per capita consumption to increase from 11.3 kg in 1998 to 12.1 kg in 2006. It is assumed that total internal use in the CEECs should rise from 1.16 mio t in 1998 and reach 1.23 mio t in 2006, which is the same level of beef and veal consumption in 1995/1996. This development together with the decreased production may lead to a significant number of CEECs becoming net-importers of beef as indicated in the annex.

These production and consumption trends will leave the CEECs with increasing net-imports reaching 70 000 t in 2006. However, Poland may be a net-exporter decreasing from 90 000 t in 1998 to 30 000 t in 2006 while Romania may become a net-importer of up to 40 000 t annually.

Graph 2.4 Comparison of the 1998 and 1999 projections for beef and veal production in the CEECs ('000 t)



The projections for beef and veal are very dependent on the dairy herd. As indicated above, the decrease in the numbers of dairy cows has continued, and only bottomed out in a few countries such as Poland. Since nearly the entire beef production is linked to milk a continued decrease in the dairy herd will reduce potential beef and veal production. The projections in 1998 foresaw an increase of beef and veal from 1.25 mio in 1997 to 1.4 mio t in 2005. Taking into account the new assumptions for the dairy and suckler cow herd, production is projected to stay mostly unchanged from the estimated 1.16 mio t in 1999. However, there may exist an unused potential in beef production as a number of calves are slaughtered shortly after birth in some countries.

7. Pig meat

Pig meat is the most important meat produced and consumed in the CEECs, and is expected to continue to be so. During the projection period the balance of pig meat should continue to leave a significant quantity available for export.

Total **pig meat production** is projected to increase from 4.5 to 5.1 mio t, and a significant part of this increased production is estimated to be consumed in the CEECs. The biggest increases both in real terms and relatively is expected in the two main producing countries of Poland and Hungary. In the case of Hungary production is estimated to increase in 2000, despite the low prices of 1998 and 1999. In 2006 Poland and Hungary together will produce around 3 mio t, of which 2.16 mio t in Poland.

Per capita consumption in the CEECs is projected to increase from 41.4 kg in 1999 to 44.2 kg in 2006, or on average 1 % per year. Increases are assumed in all CEECs.

Despite the problems following the Russian market crisis in August 1998, there has been no decline in total pig meat production in 1999 in the CEECs, as expected by many analysts. While production did decrease in The Czech and Slovak Republic and stagnate in Poland it is estimated to have increased by 11 % in Hungary, and a further increase is expected in 2000 due to an increased number of sows in the August 1999 census.

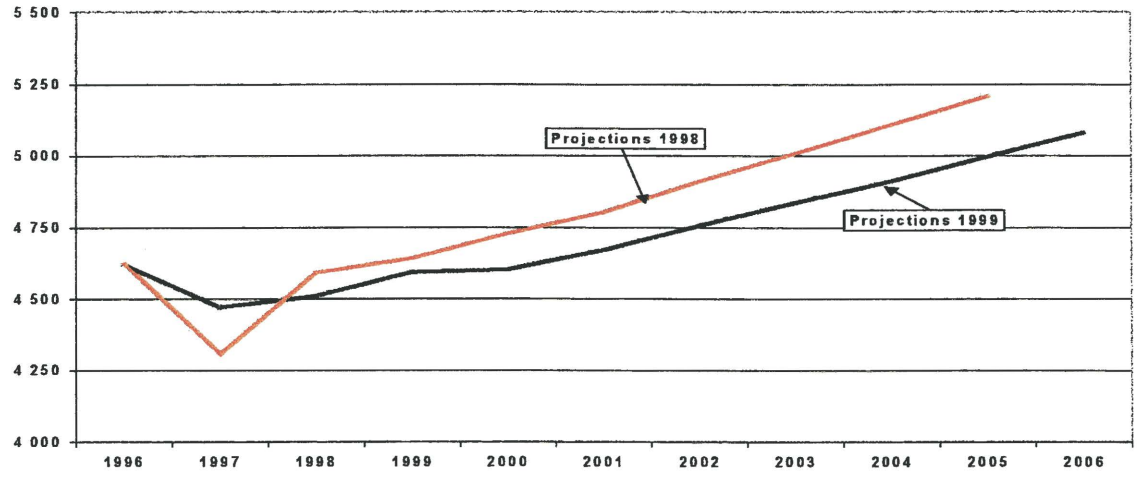
It is expected that the CEECs will continue to be net exporters of pig meat; net exports may even increase from around 140 000 t in 1998 to nearly 400 000 t in 2006. The net

balance in 1996 and 1997 were around 300 000 t. These net exports will mostly come from Poland and Hungary and to a lesser extent from Bulgaria and Romania.

Table 2.5 Situation and perspectives of the pig meat market in the CEECs, 1996 - 2006

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Slaughtered animals (mio)	53.7	51.6	52.2	52.8	53.0	53.8	54.7	55.7	56.6	57.6	58.6
Slaughter weight (kg/head)	86	87	86	87	87	87	87	87	87	87	87
Production (mio t)	4.62	4.47	4.51	4.59	4.60	4.67	4.76	4.84	4.91	4.99	5.08
Internal use (mio t)	4.34	4.16	4.37	4.35	4.37	4.43	4.48	4.54	4.59	4.64	4.68
Balance (mio t)	0.28	0.31	0.14	0.25	0.23	0.24	0.27	0.30	0.32	0.35	0.40
Per cap. consumption (kg)	41.2	39.6	41.6	41.4	41.7	42.2	42.6	43.1	43.5	43.9	44.2

Graph 2.5 Comparison of the 1998 and 1999 projections for pig meat production in the CEECs ('000 t)



Total pig meat production in 2005 is assumed to be 5.0 mio t, while the projections in 1998 reached a figure of 5.2 mio t. This is due to a slightly lower number of slaughtered animals. Nonetheless the annual increase in production is near to the projections from last year.

8. Poultry meat

The biggest part of poultry production is broiler, but turkey, duck and others are also important in some of the CEECs. Due to the fact that in some countries a relatively important part is domestically produced, it is therefore difficult to estimate exactly the slaughtering numbers and average weight. Three countries dominate poultry meat production i.e. Poland, Hungary and Romania with nearly 1 mio t in total in 1998, out of a total production of 1.6 mio t.

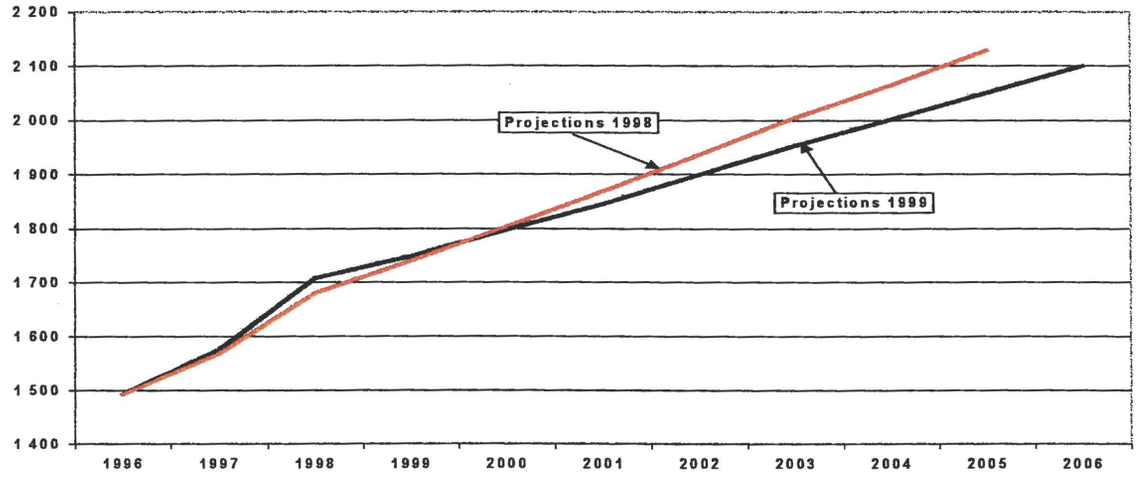
Table 2.6 Situation and perspectives of the poultry meat market in the CEECs, 1996 - 2006

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Production (mio t)	1.49	1.57	1.71	1.75	1.80	1.84	1.90	1.95	2.00	2.05	2.10
Internal use (mio t)	1.39	1.49	1.59	1.64	1.70	1.76	1.81	1.87	1.93	1.99	2.04
Balance (mio t)	0.11	0.08	0.12	0.11	0.09	0.09	0.09	0.08	0.07	0.06	0.06
Per cap. consumption (kg)	13.2	14.2	15.1	15.6	16.2	16.7	17.2	17.8	18.3	18.8	19.3

Total production of poultry meat is projected to go beyond 2 mio t in 2006 compared to 1.7 mio t in 1998. This increase is the result of a yearly increase of around 2.5 %, and the most significant increases are assumed to take place in Romania and Poland.

The increase in production is mostly demand driven by the internal market in the CEECs. **Per capita consumption,** which in 1996, 1997 and 1998 grew by 1 kg, is assumed to grow by 3.5 kg from 1999 to 2006 - or by nearly 3 % annually, and could go beyond 19 kg/capita in 2006. It is not expected that the CEECs will be able to increase their net-exports during the period. Net exports from the CEECs may in fact decline slightly from currently around 100 000 t to 60 000 t in 2006. However, Hungary is projected to continue to be a net exporter of around 130 000 t annually, and Poland should increase its net imports. Exports are declining while per capita consumption is increasing even faster than production. This large increase is very much linked to the expected GDP growth in the CEECs and the fact that the poultry meat has certainly gained in preference since the beginning of the transition period.

Graph 2.6 Comparison of the 1998 and 1999 projections for poultry meat production in the CEECs ('000 t)



The changes to the projection compared with the 1998 figures are very limited, in fact only 70 000 t less for the year 2005. In this sector development will certainly be dependent on investment in new production and processing facilities. However, it may also be the case that production becomes more visible, since today a non-negligible part takes place in households and is not fully covered by the National statistics.

Statistical annex

Table A.1 Situation and perspectives of cereal markets in the CEECs, 1996 - 2006

	Area ('000 ha)					Yield (t/ha)					Production (mio t)					Domestic use (mio t)					Balance (mio t)				
	1996	1997	1998	1999	2006	1996	1997	1998	1999	2006	1996	1997	1998	1999	2006	1996	1997	1998	1999	2006	1996	1997	1998	1999	2006
Bulgaria	1 787	2 017	2 171	2 014	2 250	1.89	3.03	2.43	2.71	3.12	3.37	6.12	5.26	5.46	7.02	4.53	4.71	4.66	4.88	5.94	-1.16	1.40	0.60	0.58	1.08
Czech Republic	1 581	1 686	1 678	1 650	1 695	4.20	4.14	3.97	4.09	4.39	6.64	6.98	6.67	6.75	7.43	6.84	6.54	6.66	6.73	6.85	-0.20	0.44	0.01	0.02	0.58
Estonia	288	327	354	358	380	2.17	1.99	1.63	1.90	2.12	0.63	0.65	0.58	0.68	0.81	0.76	0.75	0.72	0.71	0.77	-0.13	-0.10	-0.14	-0.02	0.03
Hungary	2 810	2 953	2 894	2 452	3 036	4.03	4.79	4.40	4.56	4.49	11.31	14.13	12.74	11.18	15.16	9.26	9.22	9.16	9.99	11.38	2.05	4.91	3.58	1.19	3.79
Latvia	446	483	466	480	520	2.15	2.15	2.06	2.06	2.08	0.96	1.04	0.96	0.99	1.18	0.95	0.93	0.91	0.91	0.99	0.01	0.11	0.05	0.08	0.19
Lithuania	1 079	1 162	1 108	1 108	1 108	2.42	2.54	2.45	2.53	2.99	2.62	2.95	2.72	2.80	3.31	2.55	2.90	2.81	2.89	3.24	0.07	0.04	-0.10	-0.09	0.07
Poland	8 679	8 857	8 797	8 755	9 220	2.91	2.86	3.08	3.04	3.33	25.25	25.33	27.09	26.62	30.70	26.16	27.12	28.06	27.14	30.24	-0.91	-1.79	-0.96	-0.52	0.46
Romania	5 833	6 325	5 919	5 850	6 056	2.43	3.49	2.61	2.68	3.17	14.18	20.06	15.45	15.68	19.20	16.18	17.40	16.33	16.26	17.26	-2.01	2.66	-0.88	-0.59	1.93
Slovak Republic	827	853	860	818	868	4.01	4.39	4.06	4.14	4.67	3.32	3.74	3.49	3.38	4.05	3.37	3.64	3.22	2.93	3.28	-0.04	0.10	0.27	0.45	0.78
Slovenia	99	96	96	86	100	4.92	5.66	5.83	5.80	6.39	0.49	0.54	0.56	0.50	0.64	0.96	1.06	1.02	0.92	1.02	-0.47	-0.51	-0.47	-0.42	-0.38
CEC-10 Total	23 429	24 757	24 342	23 570	25 232	2.93	3.29	3.10	3.14	3.55	68.8	81.5	75.5	74.0	89.5	71.5	74.3	73.6	73.4	81.0	-2.8	7.3	2.0	0.7	8.5

Table A.2 Situation and perspectives of oilseeds markets in the CEECs, 1996 - 2006

	Area ('000 ha)					Yield (t/ha)					Production ('000 t)					Domestic use ('000 t)					Balance ('000 t)				
	1996	1997	1998	1999	2006	1996	1997	1998	1999	2006	1996	1997	1998	1999	2006	1996	1997	1998	1999	2006	1996	1997	1998	1999	2006
Bulgaria	500	520	597	540	550	1.06	1.11	1.05	1.10	1.17	530	577	627	594	642	515	418	456	507	648	14	159	171	88	-6
Czech Republic	247	238	281	373	325	2.27	2.45	2.25	2.40	2.68	561	584	632	895	870	527	520	527	567	598	34	64	105	328	272
Estonia	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hungary	581	573	543	760	600	1.78	1.29	1.61	1.65	1.90	1 034	737	874	1 254	1 137	668	695	752	801	1 051	366	42	122	453	86
Latvia	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lithuania	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Poland	283	317	466	520	510	1.59	1.88	2.36	2.45	2.53	449	595	1 099	1 274	1 290	815	783	998	1 091	1 152	-366	-188	101	183	139
Romania	1 012	849	930	1 044	1 000	1.20	1.18	1.26	1.37	1.35	1 212	1 002	1 173	1 430	1 348	1 192	987	1 187	1 189	1 259	20	15	-14	242	89
Slovak Republic	134	139	140	207	160	1.89	1.93	1.69	1.84	2.33	253	269	236	381	374	160	200	209	228	230	93	69	27	153	143
Slovenia	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CEC-10 Total	2 756	2 636	2 957	3 444	3 145	1.47	1.43	1.57	1.69	1.80	4 039	3 764	4 642	5 828	5 661	3 877	3 603	4 130	4 382	4 938	161	161	512	1 446	723

Table A.3 Situation and perspectives of the milk market in the CEECs, 1996 - 2006

	Number of dairy cows ('000)					Yield (kg/cow)					Production ('000 t)					Domestic use ('000 t)					Balance ('000 t)				
	1996	1997	1998	1999	2006	1996	1997	1998	1999	2006	1996	1997	1998	1999	2006	1996	1997	1998	1999	2006	1996	1997	1998	1999	2006
Bulgaria	371	358	389	400	420	3 072	3 105	3 100	3 100	3 100	1 128	1 161	1 206	1 240	1 355	1 167	1 212	1 166	1 185	1 347	-39	-51	40	55	7
Czech Republic	707	619	562	552	479	4 385	4 454	4 934	5 080	5 232	3 100	2 757	2 773	2 804	2 994	2 462	2 208	2 188	2 151	2 189	638	549	585	653	805
Estonia	185	172	168	159	148	3 809	4 180	4 355	4 453	4 542	675	717	730	703	752	655	721	735	703	752	20	-4	-4	0	0
Hungary	396	414	403	407	450	5 073	4 696	5 108	5 183	5 258	2 009	1 944	2 059	2 110	2 566	1 982	1 919	2 073	2 116	2 475	27	25	-15	-6	91
Latvia	292	277	266	260	260	3 160	3 559	3 594	3 630	3 892	923	986	955	946	1 131	1 009	938	904	897	1 040	-86	47	51	49	90
Lithuania	590	583	541	510	430	3 093	3 205	3 384	3 400	3 900	1 832	1 869	1 831	1 734	1 677	792	770	692	692	730	1 040	1 099	1 139	1 042	947
Poland	3 461	3 490	3 542	3 417	3 417	3 387	3 474	3 555	3 650	4 091	11 722	12 124	12 592	12 472	13 979	11 176	11 500	11 922	11 852	13 388	547	624	670	620	591
Romania	1 772	1 769	1 753	1 735	1 650	2 851	2 875	2 937	2 981	3 308	5 052	5 086	5 148	5 173	5 460	5 085	5 126	5 167	5 187	5 434	-33	-40	-19	-14	26
Slovak Republic	339	310	289	265	210	3 415	3 712	4 069	4 386	5 296	1 159	1 150	1 176	1 162	1 112	1 050	1 016	1 023	995	1 037	109	134	153	167	75
Slovenia	200	185	182	182	182	2 885	3 085	3 199	3 271	3 631	575	570	582	595	660	493	501	484	485	486	82	69	98	110	175
CEC-10 Total	8 313	8 176	8 094	7 887	7 676	3 389	3 461	3 562	3 633	4 072	28 175	28 363	29 051	28 938	31 686	25 872	25 911	26 354	26 262	28 878	2 304	2 452	2 697	2 676	2 808

Table A.4 Situation and perspectives of the beef and veal market in the CEECs, 1996 - 2006

	Production ('000 t)					Domestic use ('000 t)					Balance ('000 t)					Per capita consumtion (kg)				
	1996	1997	1998	1999	2006	1996	1997	1998	1999	2006	1996	1997	1998	1999	2006	1996	1997	1998	1999	2006
Bulgaria	71	66	73	75	77	79	71	79	79	85	-8	-5	-6	-4	-8	9.5	8.6	9.5	9.6	10.2
Czech Republic	163	153	129	121	105	162	142	126	121	121	1	10	2	0	-16	15.7	13.8	12.3	11.8	11.8
Estonia	22	19	20	19	18	27	20	21	21	21	-5	0	-1	-2	-3	18.1	13.4	14.3	14.5	15.2
Hungary	63	66	63	63	69	72	51	56	61	75	-9	15	7	2	-6	7.1	5.0	5.5	6.0	7.4
Latvia	31	28	28	28	38	38	37	37	38	40	-8	-9	-9	-10	-2	15.4	14.9	15.0	15.5	17.5
Lithuania	83	80	73	69	58	82	83	74	70	58	1	-3	-1	-1	0	22.1	22.5	20.0	19.0	15.6
Poland	435	482	508	478	473	414	447	417	422	459	21	35	91	56	15	10.6	11.6	10.8	10.9	11.6
Romania	229	233	195	206	214	234	240	235	248	262	-5	-7	-40	-42	-48	10.0	10.2	10.0	10.6	11.3
Slovak Republic	67	70	63	55	53	56	63	60	55	56	11	7	3	0	-4	10.4	11.7	11.1	10.2	10.3
Slovenia	54	56	48	49	48	55	53	46	46	49	-1	3	2	3	-1	27.8	26.9	23.0	23.2	24.6
CEC-10 Total	1 217	1 253	1 199	1 161	1 153	1 219	1 207	1 150	1 160	1 225	-2	45	49	1	-72	11.6	11.5	11.0	11.1	11.6

Table A.5 Situation and perspectives of the pig meat market in the CEECs, 1996 - 2006

	Production ('000 t)					Domestic use ('000 t)					Balance ('000 t)					Per capita consumtion (kg)				
	1996	1997	1998	1999	2006	1996	1997	1998	1999	2006	1996	1997	1998	1999	2006	1996	1997	1998	1999	2006
Bulgaria	276	262	272	281	342	263	260	261	262	292	13	2	11	19	50	31.6	31.4	31.7	31.8	35.0
Czech Republic	491	483	476	452	477	496	471	471	448	480	-5	11	5	4	-3	48.1	45.7	45.8	43.6	46.7
Estonia	32	30	32	29	37	37	40	38	39	42	-6	-10	-6	-10	-5	25.2	25.8	26.3	26.7	30.2
Hungary	721	713	664	738	867	570	575	586	596	651	151	138	78	142	216	55.8	56.5	57.8	58.8	63.8
Latvia	44	45	43	43	56	71	66	67	67	71	-26	-22	-23	-24	-15	28.2	26.6	27.1	27.6	31.1
Lithuania	89	87	96	97	112	91	92	94	98	112	-2	-5	2	-1	0	23.8	24.2	24.7	25.2	29.0
Poland	2 020	1 895	2 053	2 065	2 162	1 887	1 725	1 958	1 911	2 005	133	170	95	154	157	48.6	44.6	50.6	49.3	50.6
Romania	679	693	629	646	733	649	656	610	631	705	30	37	19	14	28	27.5	28.0	26.0	27.0	30.5
Slovak Republic	209	204	181	178	225	208	200	200	213	230	1	4	-19	-35	-5	38.7	37.1	38.9	39.4	41.9
Slovenia	61	61	63	66	70	72	76	82	83	89	-11	-15	-19	-18	-18	36.3	38.3	41.2	42.0	44.5
CEC-10 Total	**4 621**	**4 471**	**4 509**	**4 593**	**5 080**	**4 343**	**4 161**	**4 367**	**4 348**	**4 676**	**278**	**310**	**142**	**245**	**404**	**41.2**	**39.6**	**41.6**	**41.4**	**44.2**

Table A.6 Situation and perspectives of the poultry meat market in the CEECs, 1996 - 2006

	Production ('000 t)					Domestic use ('000 t)					Balance ('000 t)					Per capita consumtion (kg)				
	1996	1997	1998	1999	2006	1996	1997	1998	1999	2006	1996	1997	1998	1999	2006	1996	1997	1998	1999	2006
Bulgaria	100	94	94	96	111	93	84	89	92	114	7	10	5	5	-4	11.1	10.1	10.8	11.1	13.7
Czech Republic	134	143	181	184	234	140	155	184	189	233	-7	-12	-3	-5	1	13.6	15.0	17.9	18.4	22.7
Estonia	17	18	18	19	22	17	18	18	19	22	0	0	0	0	0	11.4	12.2	12.6	13.0	16.0
Hungary	369	383	396	400	428	247	242	251	256	293	121	141	145	144	135	24.2	23.8	24.8	25.3	28.8
Latvia	9	8	6	7	12	18	19	19	20	22	-9	-11	-13	-13	-10	7.2	7.6	7.8	8.0	9.9
Lithuania	25	23	24	24	33	26	28	29	31	43	-1	-5	-5	-6	-9	7.1	7.5	7.8	8.2	11.6
Poland	410	474	530	542	656	429	501	532	542	720	-19	-27	-2	0	-64	11.0	13.0	13.7	14.0	18.2
Romania	293	294	314	323	422	295	316	326	348	435	-2	-22	-12	-25	-13	13.1	14.0	14.5	15.5	19.5
Slovak Republic	80	79	84	91	105	81	83	86	91	105	-2	-4	-2	0	0	15.1	15.4	15.9	16.8	19.1
Slovenia	58	60	61	63	76	41	47	52	52	56	18	13	9	11	20	23.5	26.0	26.3	26.5	28.5
CEC-10 Total	**1 494**	**1 575**	**1 708**	**1 748**	**2 100**	**1 388**	**1 491**	**1 587**	**1 639**	**2 044**	**105**	**83**	**121**	**109**	**56**	**13.2**	**14.2**	**15.1**	**15.6**	**19.3**

PROSPECTS FOR

WORLD AGRICULTURAL MARKETS

1. Introduction

This chapter is aimed at giving an overall picture of the long-term prospects of world markets for some key agricultural products. While the Commission has developed its own set of projections for the EU market prospects, the outlook of world markets is mainly assessed on the basis of reports and projections released by different international organisations, experts and foreign institutions, and in particular on the basis of three main sets of medium-term projections for international agricultural markets.

The first comes from the US Department of Agriculture through its interagency World Agricultural Outlook Board (USDA Baseline), the second from the Food and Agricultural Policy Research Institute (FAPRI), with units at the University of Missouri-Columbia and Iowa State University, which provides analysis and economic forecasts to the US Congress (FAPRI Outlook). The third set of projections consists of the medium-term outlook from the Organisation for Economic Co-operation and Development (OECD) which reflects information provided by its members as well as independent analysis by the OECD Secretariat.

These forecasts constitute the most recent and comprehensive set of long-term agricultural forecasts available to date. However, it should be stressed that these forecasts were finalised during the first half of 1999 on the basis of information available at the end of 1998. Therefore, they do not take into account the recent developments on agricultural markets, economic prospects and the implementation of policy reform in the European Union. In this perspective, some issues related to key underlying assumptions and forecast results will be briefly addressed in the light of the latest information available and our own assessment.

2. Overview of main trends

There is a broad consensus among analysts that the medium-term outlook for agricultural products should be characterised by a strong growth in demand that would generate a sustained expansion in trade. Prospects for an increased consumption of food products, mainly in the developing countries, combined with the limited possibilities to proportionally increase domestic production are expected to boost world trade and strengthen world prices above their long-term declining trend. If short-term developments are foreseen to be dominated by the aftermath of the Asian crisis and its spread to Latin America and Russia, gradual recovery over the medium term towards a strong and stable economic growth is expected to generate an expansion in demand from the non-OECD regions, in particular in Asia and Latin America, which would constitute the main driving force behind these favourable prospects.

If the situation of agricultural markets is expected to improve as compared to the late 1980s and early 1990s, this positive outlook would nevertheless constitute a significant downward revision from the very optimistic prospects that had been forecast by major organisations over the last few years. A combination of over-supply in many markets in response to high prices in recent years and depressed economic conditions in many developing countries (both in terms of income and currency depreciation) led to a general fall in commodity prices in 1998 and 1999.

On the assumption that supply will adjust to this low price environment and that the economic prospects do not worsen, world prices and trade of most agricultural commodities are expected to recover. However, prices would remain at low levels in the

short-term, whereas recovery would only take place over the medium term, but at a lower level than previously foreseen.

Furthermore, these projections are subject to some uncertainties. These include notably factors of policy (future agricultural and trade policy developments in the US, EU[36] and emerging markets) and macro-economic nature (future world economic perspectives and currency fluctuations). These uncertainties may be expected to moderate future recovery prospects for agricultural markets.

2.1 Overview per sector

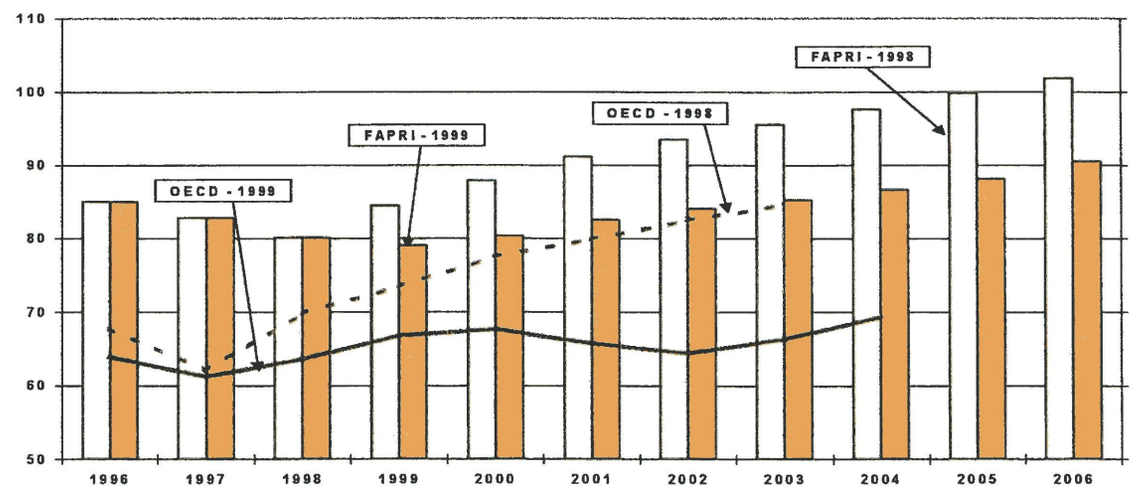
The main features of the medium-term prospects per main agricultural commodity can be summarised as follows:

Cereals

Large global supplies, combined with weaker import demand generated by the deterioration of the economic environment, are foreseen to keep cereal prices at depressed levels in the short-run. The expected recovery in the crisis-affected economies as well as supply adjustment in the cereal sector are forecast to provide the basis for a modest recovery in prices and trade over the medium term. Higher cereal consumption, fuelled by economic and population growth as well as dietary changes, combined with limited production potential is forecast to stimulate cereal imports in a large number of non-OECD countries, including China, North Africa and Latin America.

After 15 years of relative stagnation, the FAPRI and USDA forecast total cereal trade to increase between 18 % and 27 % respectively by the year 2006/07, with coarse grains exhibiting a stronger pattern driven by increasing meat consumption in many developing countries and the ensuing expansion of their livestock sector.

Graph 3.1 Outlook for wheat net trade – comparison with the 1998 outlook, 1996 – 2006 (mio t)

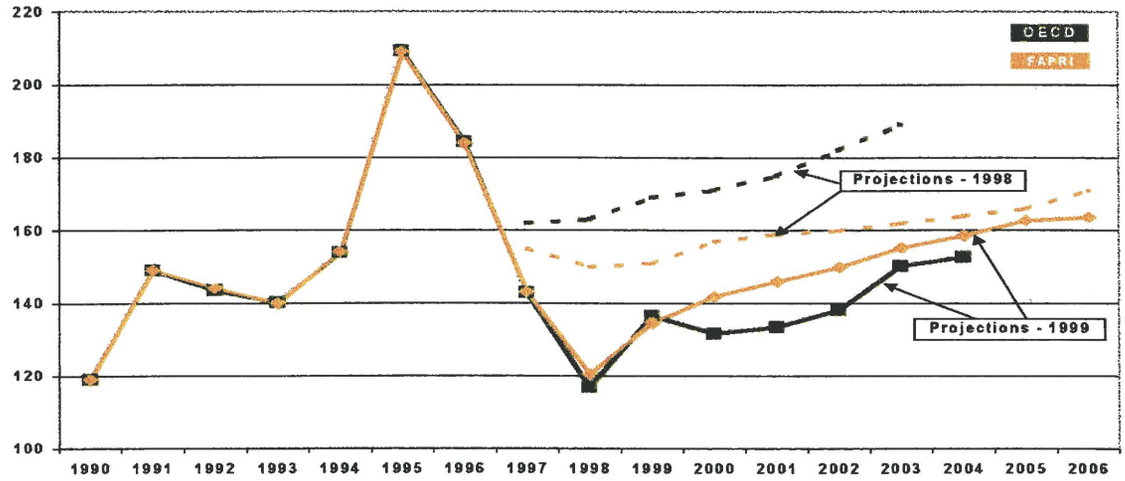


Source: FAPRI (world trade) and OECD (OECD zone).

[36] The implementation of the Agenda 2000 CAP reform in the EU has not been taken into account in the set of projections presented in this chapter. Moreover, the possibility of further enlargement of the EU within the next seven years is not considered in these projections.

Global trade in coarse grains would strengthen with annual growth averaging between 2.7 % and 3.6 %, whereas wheat trade is projected to grow by an annual average of between 1.5 % and 2.5 % over the 1998/99-2006/07 period.

Graph 3.2 Outlook for wheat world prices – comparison with the 1998 outlook, 1990 – 2006 ($/t)



Source: OECD and FAPRI (March 1999). Ref.: US FOB Gulf, HRW.

After bottoming out in 1998/99, world prices would follow an upward trend up to 2006/07. According to FAPRI and USDA projections, wheat prices are expected to range in 2006/07 between 164 $/t and 175 $/t respectively, whereas maize and barley prices should develop between 105 $/t and 124 $/t. The OECD foresees that wheat and maize prices would strengthen over the medium term and reach 153 $/t and 120 $/t respectively in 2004/05.

Oilseeds

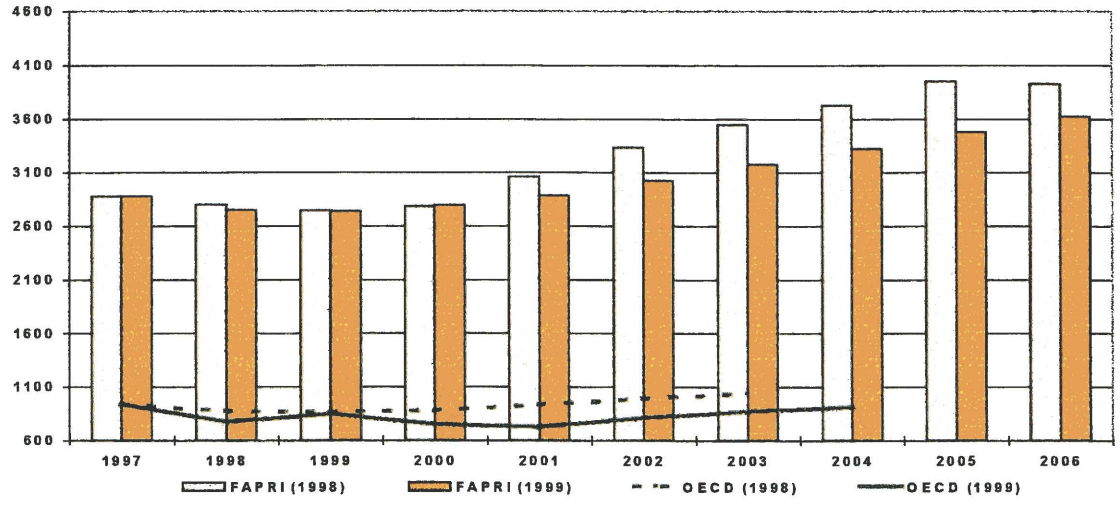
The oilseed sector is expected to exhibit a gradual recovery from a current situation characterised by plentiful supplies and weak demand. Over the medium term, most organisations foresee a stronger demand for vegetable oils due to increased human demand as well as for oilseed meals, which should benefit from the expansion of the feed-livestock sector. Higher demand would support prices over the outlook horizon, sustain production and generate further expansion of trade in oilseeds and oilseed products (though at a lower pace than in the early 1990s). The prices of oilseeds and oilseed products would remain at depressed levels in the short-term, before strengthening over the rest of the period. By 2006/07, soya bean prices would range between 237 $/t and 271 $/t according to the FAPRI and USDA projections respectively (the OECD foresees a stronger recovery with soya bean prices at 301 $/t by 2004/05). Soya bean meal prices would also trend upward over the medium term, reaching between 165 $/t and 185 $/t in 2006/07.

Palm oil is forecast to capture the greatest share of an expanding demand and trade for vegetable oil. Growth in oilseed oil trade would be stronger than that of oilseeds and oilseed meals, though lower than in the early 1990s. The strong dependence of trade in vegetable oil from developing countries makes the outlook very sensitive to the economic prospects in these countries.

Meat

The prospects for an increase in the consumption of meat in response to income growth, in particular in transition economies and rapidly industrialising economies, combined with limited possibilities to proportionally increase domestic production, are expected to stimulate world trade and strengthen world prices for meat over the medium and long term. Beef trade is forecast to increase by more than 0.8 mio t over the 1998-2006 period (i.e. +17 %), with most of the growth from Asia and Mexico. Pig meat trade is projected to climb to between 0.5 to 0.7 mio t over the same period (i.e. around 20-34 %). Global trade in poultry meat is also projected to trend upward, with increases in the range of 1.2 to 2.1 mio t (i.e. around 30-40 %) according to different analysts.

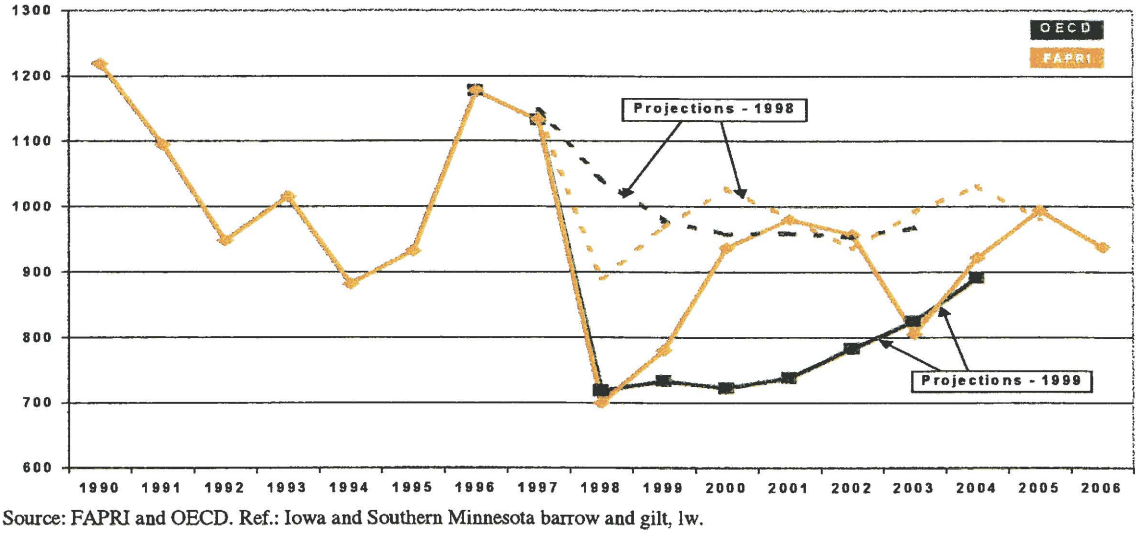
Graph 3.3 Outlook for beef net trade – comparison with the 1998 outlook, 1997 - 2006 ('000t cwe)



Source: FAPRI (world trade) and OECD (OECD zone trade).

Beef and poultry prices should strengthen over the medium term supported by strong demand. The magnitude of the recovery would remain dependent on higher feeding costs as well as the depth of the economic crisis and the speed of recovery in some key importing countries. Pig meat prices are projected to trend upward over the medium term, driven by higher demand and feed prices but largely tempered by continued efficiency gains and increased competition from other meat.

Graph 3.4 Outlook for pig meat prices – comparison with the 1998 outlook, 1990 – 2006 ($/t)



Source: FAPRI and OECD. Ref.: Iowa and Southern Minnesota barrow and gilt, lw.

Milk and dairy products

The medium-term outlook for the milk and dairy markets appears to be rather favourable as for the other agricultural products. Stimulated by increasing consumption and higher producer prices, milk production is set to expand in a number of countries, mainly outside the OECD area and in those OECD countries that do not use production quotas. According to the OECD, world cow milk production is likely to increase by more than 50 mio t from 1998 to 2004. The greatest increase in milk output is foreseen in India, some other Asian countries (China, Pakistan) and several countries of Latin America (mainly Brazil, Argentina and Mexico).

The OECD and the FAO anticipate that the gradual shift in world trade from bulk dairy products (i.e. SMP and butter) towards higher value added products (such as cheese) should continue over the medium term. After a short-term decline, world market prices of dairy products are predicted to gradually recover. They would remain below their 1995 level, but above the level experienced in the early 1990s. Price prospects for cheese would exhibit the most favourable development.

2.2 Underlying factors

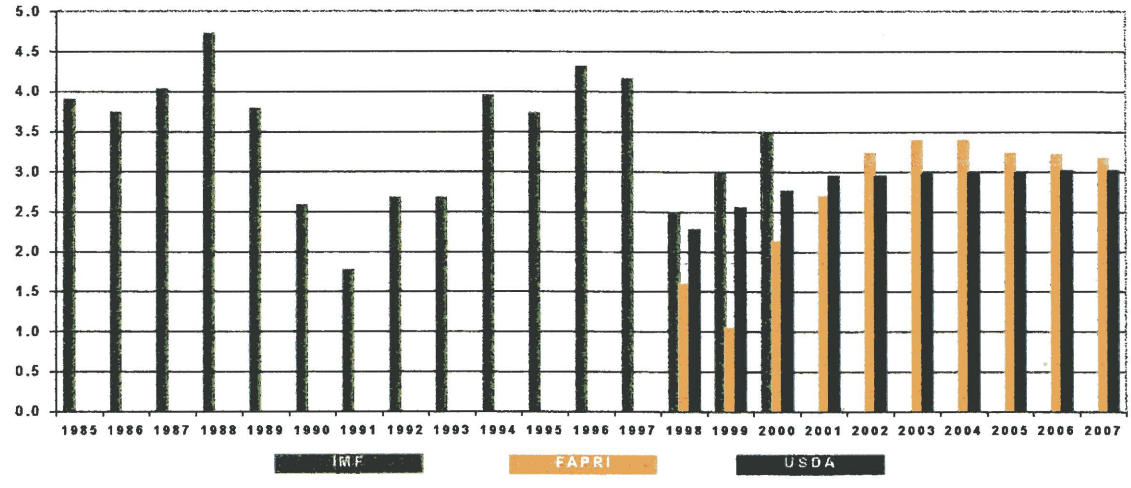
Five main factors can be identified to explain these developments:

(1) Strong economic growth in developing and transitional economies

The main contributing factor to the improvement in the medium-term outlook of agricultural markets lies in the prospects for a short-term recovery in economies affected by the Asian crisis and its aftermath, and the return to a stable medium-term economic outlook characterised by strong economic growth in many emerging economies.

The first part of the nineties has been characterised by a robust growth in the world economy, of slightly less than 3 % a year on average. Countries in East and South East Asia have enjoyed an economic boom, with a growth in real GDP averaging around 9 % a year. China topped the list of Asian countries with an annual growth of nearly 12 %. Growth was much less significant in Latin America, averaging around 3 %. Economic growth in the OECD countries was around 2 % a year over the same period.

Graph 3.5 Outlook for world real GDP annual growth, 1985 – 2007 (in %)



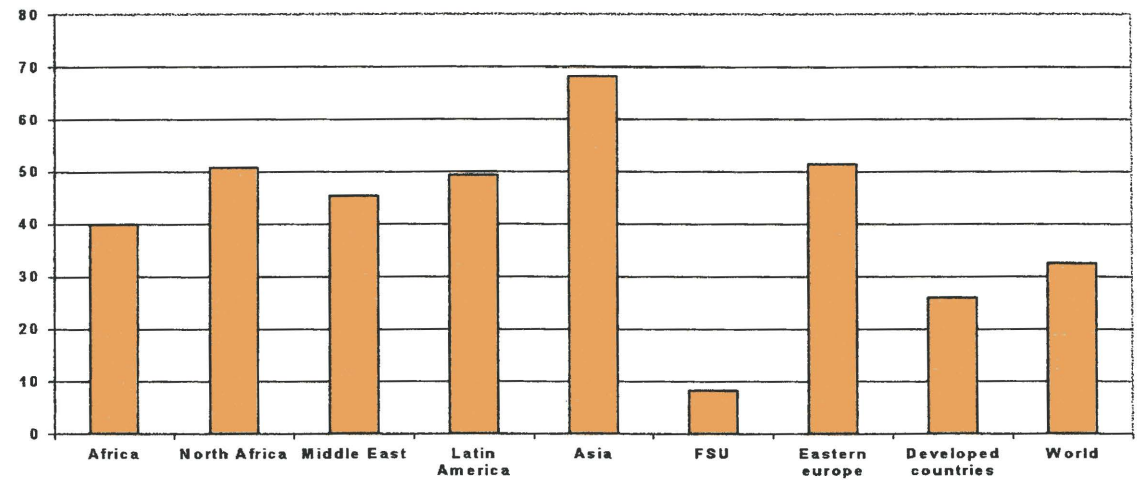
Source: IMF, USDA and FAPRI.

Short-term developments are expected to be dominated by the aftermath of the Asian crisis, which began in Summer 1997 and its spread to other regions of the world (notably Russia and Latin America). The depth and duration of the crisis have proved to be more severe than initially foreseen. In that perspective, the next two years of the forecast horizon are expected to display the slow restoration of a moderate growth. Over the medium term, structural reforms in the crisis-affected countries are assumed to lead to a strong and stable economic growth, though at lower levels than previously expected.

After a slow recovery up to the early years of the next millennium, global GDP growth is assumed to average around 3 % over the medium term. Much of the recovery is expected to be fuelled by emerging economies. The USDA expects that structural adjustment should help resolve current macro-economic problems confronting Asia emerging economies, notably in terms of capital flows and currency instability, and allow economic recovery to take place over the medium term. Asia developing countries would exhibit a GDP growth averaging more than 6 % (led by an annual growth rate of more than 7 % in China), i.e. substantially lower than in the early 1990s. After a marked slow down in the wake of the Asian crisis, Latin American economies are expected to rebound vigorously over the medium term led by the Mercosur core countries of Brazil and Argentina, with GDP growth strengthening and reaching over 4 % a year on average.

Strengthening oil prices are foreseen to boost economic growth in the Middle East at an average level of 3.8 % per year, i.e. above the performance of the 1980s and 1990s. Africa, especially North Africa, is forecast to demonstrate a robust economic pattern, with GDP growth estimated at around 3.5 % over the medium term.

Graph 3.6 Outlook for real GDP growth per region, 1997 - 2007 (cumulative growth in %)



Source: USDA.

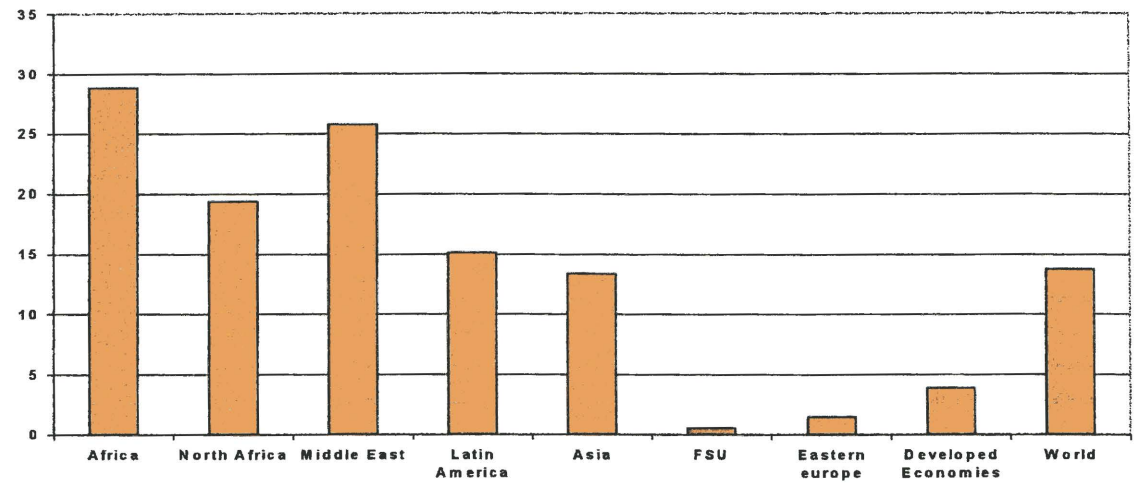
Despite further contraction in the near-term, the USDA and FAPRI anticipate that the decline in the Former Soviet Union (FSU) output of more than 8 % on average annually during the first part of the 1990s will come to an end and give rise at the turn of the century to positive but slow and modest growth over the next decade. Medium-term economic and financial prospects in that region constitute a major uncertainty for the future prospects of agricultural markets. Central and Eastern European countries are expected to display strong growth over the medium term, notably for countries where economic reforms towards greater market liberalisation and openness to trade and competition have been implemented. Average growth in these countries is forecast to reach more than 4 % per annum.

The economic situation in developed countries is foreseen to remain favourable over the outlook period, with GDP growth estimated higher than in the early 1990s. Growth in the US is assumed to exhibit a slow down to sustainable rates with little disruption over the next few years. If Japan is still expected to face significant structural problems in the short-term, modest growth is assumed to resume over the medium term. While stronger economic growth in the developed world should only have a minor influence on the global demand for agricultural products, it is expected to have a much stronger effect on food consumption in the non-OECD zone owing to high per capita-income elasticity.

(2) Population growth

Population growth constitutes another traditional determinant for food demand. Global annual population growth has been steadily declining since the second half of the 1960s, falling from 2.1 % in the 1960s to 1.4 % in 1998. It is estimated to fall further over the next seven years to reach 1.2 % in 2006. However, the next decade is expected to witness the highest absolute annual increments in world population history. It is estimated that the world population will increase every year by between 75 to 80 mio persons over the next decade.

Graph 3.7 Cumulated population growth, 1997 – 2007 (in %)



Source: USDA and FAPRI.

The pattern of population growth will differ widely between regions, with Africa and the Middle East demonstrating strongest increase (around 2.5 % and 2.2 % per year respectively). The next fastest growing regions are Latin America and Asia, averaging 1.3 % and 1.2 % per annum respectively. More than 90 % of this population increase will take place in developing countries, with more than half in Asia.

(3) Change in dietary pattern

Higher income is expected to have significant repercussions on the nature and the composition of global food demand, as there is a direct correlation between per capita growth in income and diet diversification. Demand for meat products, processed food and beverages is expected to rise in developing countries in line with wealth. A higher degree of urbanisation and openness to trade is also expected to lead to a shift in demand for wheat-based products and meat (with the ensuing increase in demand for coarse grains and other feedingstuffs as it takes more cereals and oilseeds to produce a unit of calories from meat than through the direct human consumption of these crops).

(4) Differentiated pattern of food production and consumption will lead to regional imbalance and increased trade

The prospects for trade over the medium term depend heavily on the differentiated pattern in domestic production and consumption at regional level. Although agricultural production is expected to increase faster in developing countries, the annual rate of increase of production in these countries is still projected to be lower than the increase in demand. This will result from the combined impact of the limited potential of available land (due to urbanisation and pressure on agricultural resources and environment) and under-investment in agriculture (as compared to the more profitable manufacturing sector), despite the scope for further productivity gains. This will lead to the emergence of some large countries and regions (like China, South Korea, Indonesia, Middle East and Latin America) as important and increasingly significant importers of agricultural products.

(5) Continuing trends towards market-oriented policy reform and trade liberalisation

The continued implementation of the Uruguay Round and further trade liberalisation in the framework of the WTO are expected to lower barriers and boost the demand for food imports. The pace of economic reform in many regions, such as the transition economies and the FSU, towards greater liberalisation of markets and integration into the global economy (in terms of trade, investment flows and currency convertibility) will have a significant impact on international trade.

3. Prospects per sector

This section is based on the projections[37] of some international organisations, including the OECD, the FAPRI, the USDA and the Commission's internal assessment of possible development in world agricultural markets over the medium term. Its main objective is not to compare these different estimates or to give the most realistic levels of global supply, demand and trade of the different commodities at a given time, but only to assess the possible development of world markets over the next seven years. As a consequence, the absolute levels of the different variables considered must be interpreted with caution, and should be seen as providing an order of magnitude instead of a precise estimate of the level of these variables[38].

---

[37] It is important to mention that these forecasts are not always directly comparable. In fact, they sometimes differ as regards their geographical coverage, the precise nature of the commodity concerned, the price variables used and the historical reference period. Despite these divergences, it is possible to point out some main trends that are presented hereafter.

[38] These projections, on which the assessment is based, are not intended to forecast what the future will be, but instead describe what may happen under a specific set of assumptions and circumstances. The projections represent one plausible long-run scenario that presumes a continuation of the current agriculture and trade policies, with no major weather or political shocks, and with specific assumptions regarding the global macro-economy, international developments, productivity growth and other factors affecting food production, consumption and trade. It is obviously impossible to give a comprehensive view of all macroeconomic and policy assumptions adopted by each analyst. These can be found in the documents mentioned in reference.

3.1 Cereals

Most projections tend to converge in their global assessment of the medium-term outlook for cereals. They depict a situation of world cereal markets that looks rather favourable over the next seven years. If the short-term prospects are forecast to be characterised by large global supplies and weak demand (due in part to the Asian, Latin American and Russian crises), improved economic perspectives, limited production potential in some countries and supply adjustments are expected to provide the basis for import demand to increase and prices to strengthen over the medium term. However, these factors should only allow for a moderate recovery, with more modest increases in prices and trade than previously foreseen by most analysts.

Short-term developments

The short-term estimates from the International Grains Council (IGC[39]) for the 1999/00 marketing year tend to indicate a large wheat crop forecast at 581.8 mio t. However, this level of supply would be some 3.5 mio t below last year's harvest and substantially below the 1997/98 record, with lower supply in the EU, US, Near East Asia and North Africa, but increases in the FSU, Canada, South America, China, India and Australia. Coarse grain production would reach 883.8 mio t, an 11.7 mio t decline as compared to 1998/99[40]. Larger crops in the FSU, South America and South Africa could not outweigh smaller harvests in the EU, US, China and North Africa.

World demand for wheat is anticipated to reach 589 mio t in 1999/00, i.e. a decline of around 4 mio t as compared to 1998/99, whereas coarse grain consumption would increase slightly to 877 mio t. As consumption is forecast to exceed production for the second year in a row, wheat stocks would fall further to 116 mio t in 1999/00 (i.e. a stock-to-use ratio of 19.7 %). However, stocks in major countries would still remain large, limiting any price increase. In contrast, coarse grain stocks would continue to refurbish strongly, reaching 159 mio t by the end of 1999/00 (i.e. a stock-to-use ratio of 18.1 %). In 1999/00, total wheat trade is set to rise to 99.4 mio t, i.e. a 4.6 mio t increase on 1998/99. IGC expects the bulk of this increase to take place in drought-affected Near East Asia. Total coarse grain trade is estimated to reach 98.1 mio t in 1999/00, i.e. an additional 2.7 mio t, split between 0.9 mio t for maize, 1.0 mio t for barley and 0.8 mio t for other coarse grains. Maize trade prospects appear fairly modest with the only significant increases in imports coming from Far East Asia (mostly Korea) and Africa. Barley trade should remain robust, supported by Near East Asia's higher feed needs and strong demand for malting barley from China.

Supply

Over the medium term, world wheat production is forecast to increase substantially faster than in the early 1990s but significantly lower than during the two decades before. Wheat availability should grow at a sustained pace that ranges from 1.3 % on annual average in

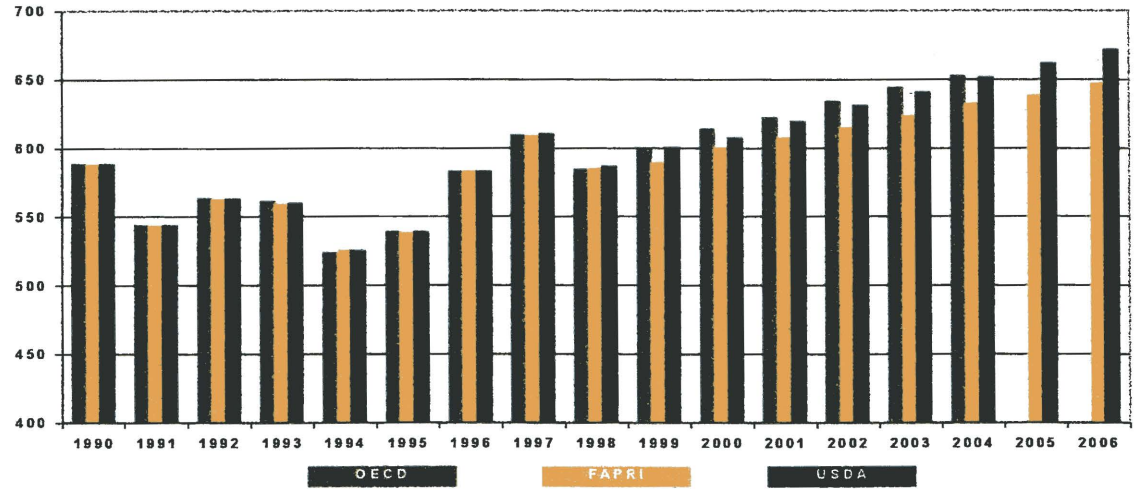
---

[39] The short-term estimates from the IGC allow to throw some light on the most recent developments in the world cereal markets. In that context, they may display some differences with the medium and long-term projections published at the beginning of 1999 by the OECD, FAPRI and USDA.

[40] The fall in coarse grain production would result from a reduction of 6 mio t in both barley and maize production. Barley supply would fall from 138.4 mio t in 1998/99 to 132.6 mio t in 1999/00 while maize production would fall from 603.1 mio t in 1998/99 at 597.4 mio t in 1999/00.

the FAPRI forecasts (i.e. 61 mio t over the 1998/99-2006/07 period) to 1.7-1.9 % in the USDA and OECD projections respectively (i.e. around 85 mio t in the USDA outlook). Total wheat production should reach around 650 mio t or more in 2006/07 as compared to 609 mio t in 1997/98 (a record high). Most of the growth in production will be generated from higher yields that are estimated to rise by an anticipated 1.3 % on annual average by FAPRI and the USDA and 0.7 % by the OECD (i.e. a marked slow down as compared to the previous decades but an improvement over the early 1990s). However, the USDA and OECD also foresee an expansion in area allocated to wheat (of 7.4 and 15.6 mio ha over their respective forecasting period), in spite of land and water constraints in many countries linked to urbanisation and climatic conditions, and to the changing market and policy environment in some countries that is expected to increase competition from other crops[41].

Graph 3.8 Outlook for world wheat production, 1990 – 2006 (mio t)



Source: OECD, FAPRI and USDA.

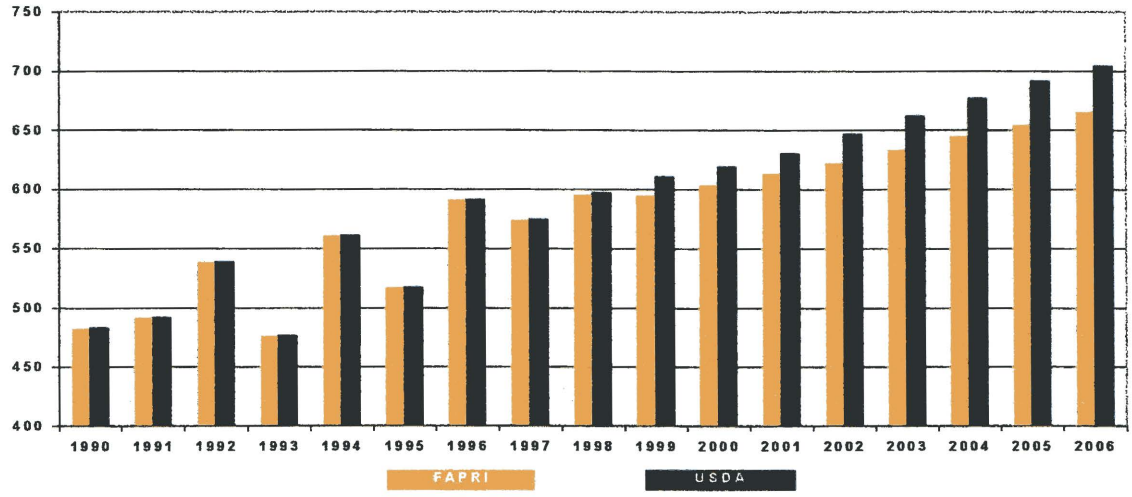
Information on total coarse grain is not available as the definition of this group differs across projections. Yet, the two major coarse grains, i.e. maize and barley, exhibit an outlook characterised by a development in production and consumption stronger than over the most recent decades. As for wheat, the USDA and OECD foresee that production growth would be supported by both some increase in total area (renewed increase for corn and stabilisation for barley) and yields. Conversely, FAPRI expects that the increase in coarse grain production will only be generated by yield growth, as total coarse grain area will slightly decline (the increase in maize area only partially outweighing the fall in barley area).

In OECD projections, coarse grain production would rise by 113 mio t from 1998/99 to 2004/05 (i.e. 2.0 % per year). Growth in coarse grain production would be mainly driven by the expansion of maize production that will range over the 1998/99-2006/07 period between 70 mio t (FAPRI) and 107 mio t (USDA) (i.e. 1.4 % to 2.1 % per annum respectively). In spite of lower profitability and productivity prospects relative to maize, barley production is still expected to rise by between 9 mio t (FAPRI) and 22 mio t (USDA) (i.e. around 1.1 % and 1.9 % per year respectively), supported by a strong demand for malting barley forecast in the USDA projections. These growth rates would

[41] It should be noted that land idling programmes in the EU and US have been set at or close to their maximum or reference base in most projections.

constitute a significant increase compared to the 1980s and 1990s, though lower than during the 1970s.

Graph 3.9 Outlook for world maize production, 1990 – 2006 (mio t)



Source: FAPRI and USDA.

Demand

After a marked slow down in the early part of the decade, growth in demand for wheat is forecast to gather pace over the 1998/99-2006/07 period and reach on average an annual rate ranging from 1.1 % (FAPRI) to 1.5 % (OECD and USDA), i.e. by between 53 and 74 mio t. Total coarse grain consumption should follow a stronger pattern with an annual growth estimated on average at 1.4 % (FAPRI) and 2.2 % (OECD and USDA) (i.e. increases of around 91 and 133 mio t respectively) over the forecast period. Demand for coarse grains would thus grow faster than during the 1980s and 1990s, but slower than during the 1970s. According to the FAPRI and USDA outlook, maize should constitute the main driving force behind this development in demand, due to the expansion of the poultry and pig meat sectors, with an annual increase forecast between 1.6 % and 2.3 % respectively (corresponding to 81 and 117 mio t from 1998/99 to 2006/07), whereas barley consumption would rise by 0.5 % and 1.4 % respectively on annual average (i.e. 6-17 mio t over the whole period).

This strong development in demand for cereals is mainly derived from non-OECD (importing) countries, in relation to rising real incomes, population growth and continued urbanisation (changes in diet with increased meat demand and further diversification towards more wheat-based food). Despite a marked slow down in demand at the turn of the century caused by the Asian crisis and its aftermath in other parts of the world, developing countries –notably China, Latin America and North Africa & Middle East- should display significant growth as income resumes its strong rise.

Trade

Since this growth in cereal demand cannot be fully matched by domestic availability, trade is expected to rise. Reversing a decline that began in the early 1980s, coarse grains are expected to exhibit the strongest increase in grain trade in response to higher meat consumption and the consequent increase in feed demand (maize benefits also from higher yields and lower prices than wheat). Both FAPRI and USDA foresee a steady expansion in cereal trade from 1998/99 to 2006/07 ranging between 13 % and 22 % for wheat (i.e. 10 mio t and 21 mio t respectively) and between 23 % and 32 % for coarse grains (i.e.

16 mio t and 29 mio t respectively). If trade is expected to be rather modest in the short-run because of the slow down in world economy, it is forecast to gather pace over the medium-run as economic growth rises.

Table 3.1 Outlook for total trade in cereals, 1998 – 2006 (mio t)

	1998		2006		Change in trade	
	USDA	FAPRI	USDA	FAPRI	USDA	FAPRI
heat	93.9	80.1	114.6	90.5	20.7	10.4
Coarse grains	89.9	68.5	118.9	84.5	29.0	16.0
Maize	63.4	55.1	85.8	69.1	22.4	14.0
arle	15.8	12.3	20.7	14.6	4.9	2.3
Total cereals	183.8	148.6	233.5	175.0	49.7	26.4

USDA figures include intra-FSU trade. FAPRI: net trade

When looking at the regional breakdown of cereal net imports, most analysts expect that developments in cereal imports will mainly be driven by income growth (and its associated impact on per capita meat consumption) and urbanisation (and its effect on dietary pattern) in some lower and middle-income regions, including China and South East Asia, Latin America, North Africa and Middle East.

Net cereal imports from China are forecast to increase significantly over the next seven years. Chinese wheat net imports will grow between 0.7 mio t (FAPRI) and 3.1 mio t (USDA) from 1998/99 to 2006/07. These gains represent a sharp downwards revision as compared to last year's forecasts in line with expectations of higher production potential and a relatively flat per capita consumption. China will turn from being a net exporter of coarse grains in 1998/99 for around 1.5 mio t to become a net importer of about 6-8 mio t by 2006/07. Growth in coarse grain imports (mainly maize) will be gradually driven by the rapid expansion of China's livestock sector in response to sustained meat demand and by a feed demand that would slowly outpace domestic production. However, like for wheat, these prospects for coarse grain import demand are much lower than what was projected last year.

Revisions in the cereal trade projections for China can generally be found in the three following factors: (i) policy changes that are expected to focus more narrowly on maintaining self-sufficiency in the grain sectors (ii) macro-economic factors, with an economic growth lower than previously expected and a projected depreciation of China's real exchange rate against the US $; (iii) feed-livestock sector data revision with lower meat production & consumption and lower feed demand. All these factors contribute to sharply lower medium-term prospects for cereal and coarse grain imports from China. Yet, although these import figures have been adjusted downwards, China remains a large potential importer of cereals.

Table 3.2 Outlook for wheat net imports for major importing countries, 1998 – 2006 (mio t)

	1998		2006		Change in trade	
	USDA	FAPRI	USDA	FAPRI	USDA	FAPRI
Total Asia	28.0	21.5	35.6	26.1	7.6	4.6
China	1.0	1.0	4.1	1.7	3.1	0.7
Indonesia	2.2	-	4.1	-	1.9	-
Japan	5.8	5.8	5.6	5.9	-0.2	0.1
FSU	1.7	3.7	0.5	-0.6	-1.2	-4.3
Africa & M.East	28.9	30.8	41.6	36.6	12.7	5.8
North Africa*	13.8	14.1	18.0	15.6	4.2	1.5

* excluding Lybia

Besides China, other Asian countries that are expected to exhibit some increases in wheat import include India, Pakistan and the South East Asian countries. Cereal imports in Africa and the Middle East are expected to rise in response to sustained GDP expansion, high population growth and limited production potential. Altogether coarse grain imports are projected to increase by about 4 to 8 mio t from 1998/99 to 2006/07, whereas wheat imports would grow between 6 and 13 mio t.

Table 3.3 Outlook for coarse grains net imports for major importers, 1998 – 2006 (mio t)

	1998		2006		Change in trade	
	USDA	FAPRI	USDA	FAPRI	USDA	FAPRI
Total Asia	33.8	32.4	48.3	43.2	14.5	10.8
China	-1.6	-1.5	4.6	6.1	6.2	7.6
Indonesia	-	-0.3	-	0.6	-	0.8
Japan	20.1	19.7	20.3	17.6	0.2	-2.1
Mexico	7.2	7.0	11.3	7.4	4.1	0.5
Other Lat. America*	9.0	8.8	11.8	10.0	2.8	1.2
FSU	1.2	1.2	-2.5	0.0	-3.7	-1.2
Africa & M.East	19.2	19.1	26.8	23.1	7.6	4.0
North Afr. & M.East	18.9	15.4	25.4	18.2	6.5	2.8

* excluding Argentina

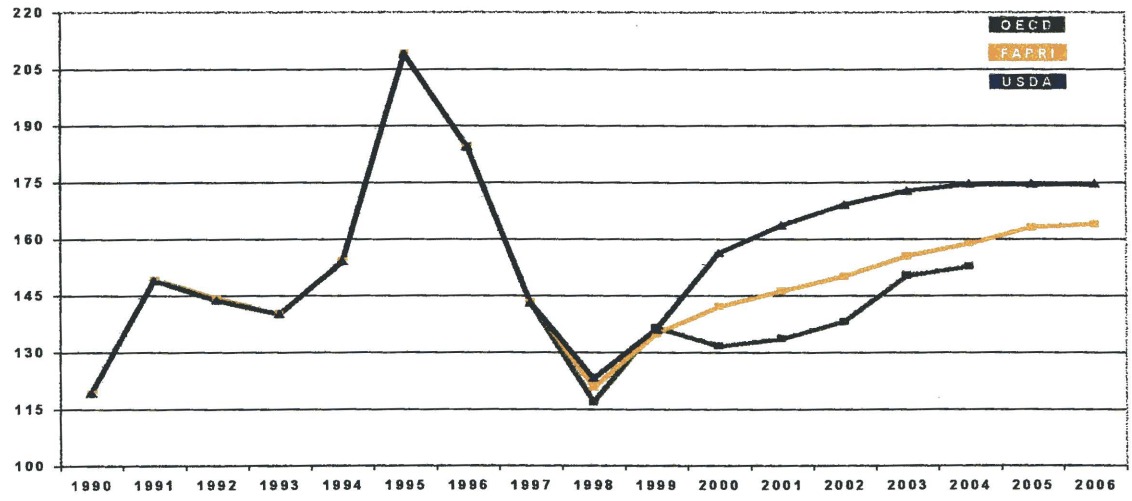
Coarse grain imports in Mexico and other Latin American countries are expected to increase further throughout the whole period as rising income boosts meat demand. Finally, wheat net imports from the Former Soviet Union are foreseen to fall over the forecast period. If a similar situation is forecast for coarse grains by the FAPRI, the USDA expects the FSU to become a small net exporter of coarse grains (mostly barley) in response to slow growth in consumer demand and livestock output.

Prices

After bottoming out in 1998/99 following two years of decline from their peaks in 1995/96, cereal prices are foreseen to remain at depressed level until at least the turn of the century before strengthening over the medium term as supply adjusts and economy growth recovers to normal levels. Prices of common wheat (HRW, fob US Gulf) are forecast in 2006/07 in a range between 164 $/t (FAPRI) and 175 $/t (USDA). Prices of coarse grains should follow a similar trend, with maize prices projected in a range between 113 $/t and 124 $/t at the end of the period. The OECD also expects that wheat and

coarse grain prices would strengthen over the medium term and reach in 2004/05 153 $/t and 120 $/t respectively.

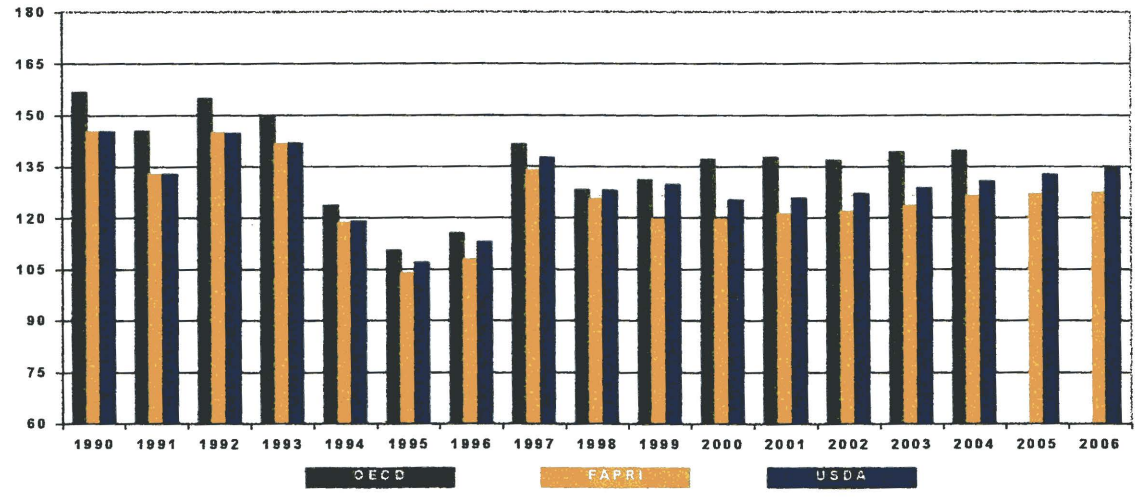
Graph 3.10 Outlook for world wheat prices, 1990 – 2006 ($/t)



Source: OECD, FAPRI and USDA. Ref.: US FOB Gulf, HRW.

After some strong rebuilding in 1997 and 1998, most organisations foresee a stabilisation in total wheat stocks at rather low levels. As a result, the stock-to-use ratio is expected to tighten and generate an increase in world wheat prices over the medium term.

Graph 3.11 Outlook for world wheat stocks, 1990 – 2006 (mio t)

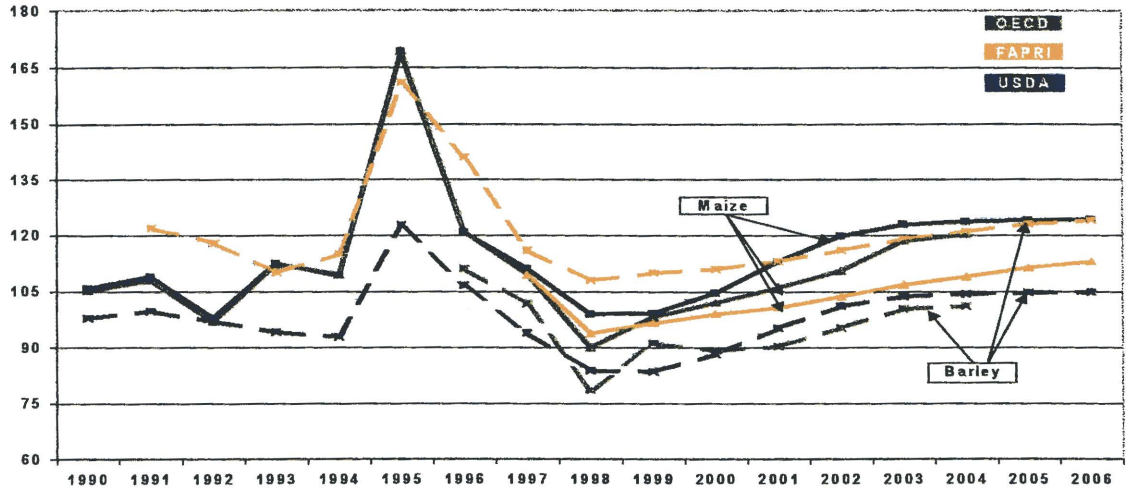


Source: OECD, FAPRI and USDA.

After falling up to 1998-1999, barley prices are forecast to strengthen over the rest of the period: from 108 $/t in 1998/99 (Portland reference) to 124 $/t in 2006/07 in FAPRI projections and from 84 $/t to 105 $/t (Duluth reference) in the USDA outlook.

The recovery in maize prices over the 1998/99-2006/07 period is stronger in the USDA and OECD projections than in the FAPRI outlook. After falling up to 1998/99, maize prices are forecast to increase by a range of 15-30 $/t over the next seven years, to reach in 2006/07 between 109 $/t (FAPRI) and 124 $/t (USDA).

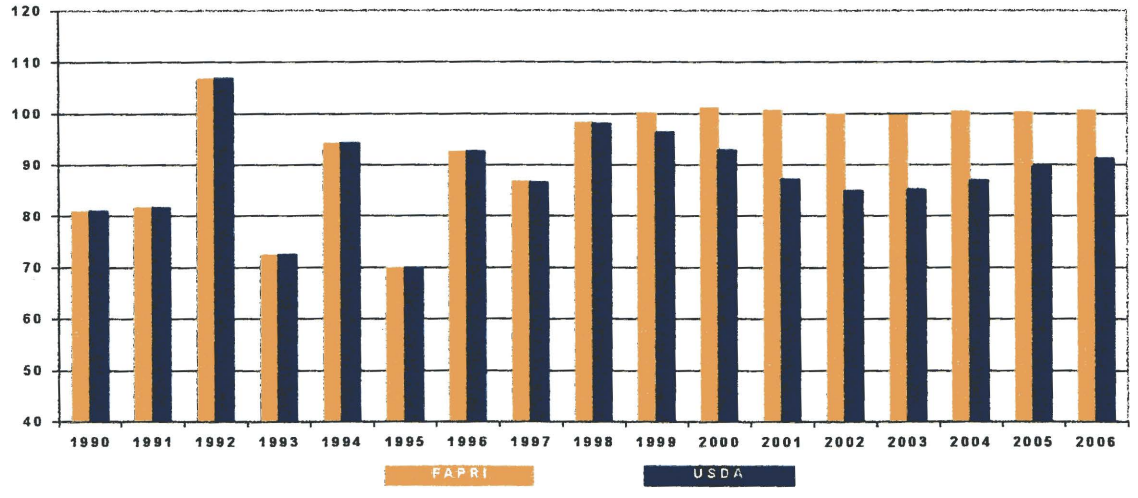
Graph 3.12 Outlook for world coarse grains prices, 1990 – 2006 ($/t)



Source: OECD, FAPRI and USDA. Ref.: Maize: US yellow corn FOB Gulf; Barley: OECD-No.1 CW barley St Lawrence since 1995, Thunder Bay before; FAPRI Portland; USDA: Duluth.

Main differences relate to the development in the level of maize stocks and stock-to-use ratio that are foreseen to decline to a much greater extent in the USDA projections.

Graph 3.13 Outlook for world maize stocks, 1990 – 2006 (mio t)



Source: FAPRI and USDA.

These projections show that the favourable prospects for cereal markets published by several forecasting organisations over the most recent years have been substantially overturned. Weaker economic prospects, a series of currency devaluations, stronger and swifter supply adjustments and growing uncertainties regarding China's prospects are among the factors that are expected to keep world cereal prices at rather depressed levels over the short-term –as confirmed by the latest estimates for 1999/00- and allow for moderate recovery over the medium-run.

Furthermore, a series of uncertainties may be expected to have a major influence on the medium-term developments of world cereal markets and reinforce a prudent and moderate outlook for cereal markets. These include the pace of supply adjustment to the expansion of demand in key importing countries, future policy (incl. the implementation of Agenda 2000) and trade environment (incl. the impact of the new round of WTO negotiations), and the medium-term perspectives for the world economy.

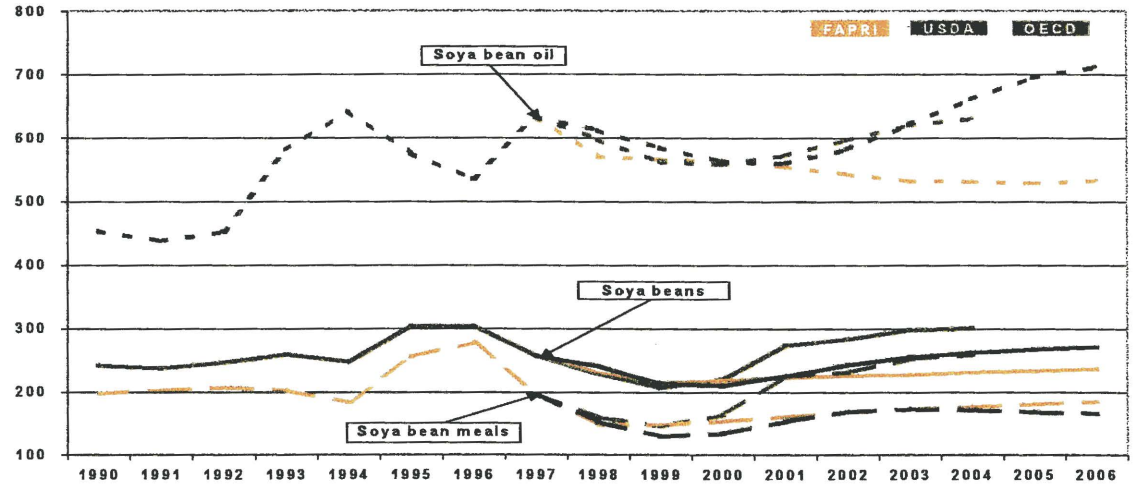
3.2 Oilseeds and oilseed products

Medium-term prospects for the oilseed sector are expected to exhibit a gradual recovery after a short-term situation marked by excess supplies and very low prices. Strong demand for vegetable oils for human consumption and for oilseed meals from the expanding livestock sector are forecast to generate further growth in the oilseed sector and support prices over the outlook horizon.

3.2.1 Oilseeds and oilseed meals

According to FAPRI and the OECD, total oilseed production is forecast to increase over the medium term at an annual rate ranging between 1.6 % and 2.5 % respectively. Similar growth rates are projected by the USDA and FAPRI for soya beans up to 2006/07. Most of the increase in oilseed production is foreseen to take place in the US, Brazil, Argentina, China and India and to result from both area expansion and yield improvement (except for the US where yield increases are foreseen to outweigh the decline in oilseed area). Nevertheless, yield growth is expected to remain rather modest over the medium term.

Graph 3.14 Outlook for world prices in the soya bean complex, 1990 – 2006 ($/t)

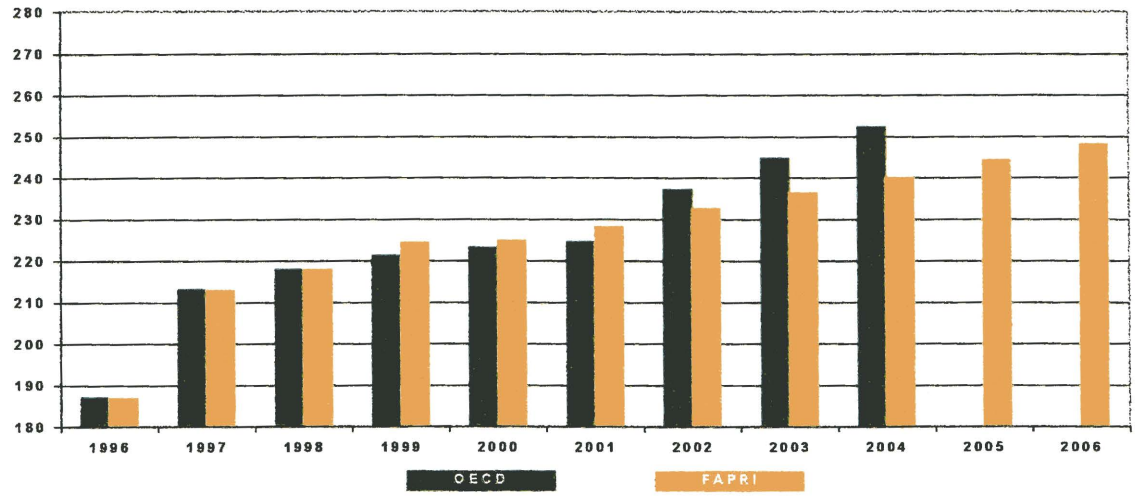


Source: OECD, FAPRI and USDA. Ref.: US Soya bean CIF Rotterdam; Soya bean meal CIF Rotterdam; Soya bean oil CIF Rotterdam.

Oilseed area expansion could amount to around 6.5 mio ha over the next seven years according to FAPRI (split around half in soya bean and half in rape/sunflower seed). Based on the higher international prices and relative profitability of oilseed production observed in most recent past years, the OECD expects a stronger increase in oilseed area, estimated at more than 9 mio ha from 1998/99 to 2004/05. Additional area would come either from new land brought into production (notably in Argentina and Brazil) or from land previously allocated to cereals (China and India).

The short-term decline in market prices generated by an excess supply and policy factors (such as the LDP support programme in the US) is forecast to stimulate demand and lead to a gradual run down in stocks. Low prices and tight financial conditions would in turn constrain area and yield growth in many developing countries in the short-term. Over the medium term, a strengthening demand outlook would favour some recovery in market prices and support production expansion.

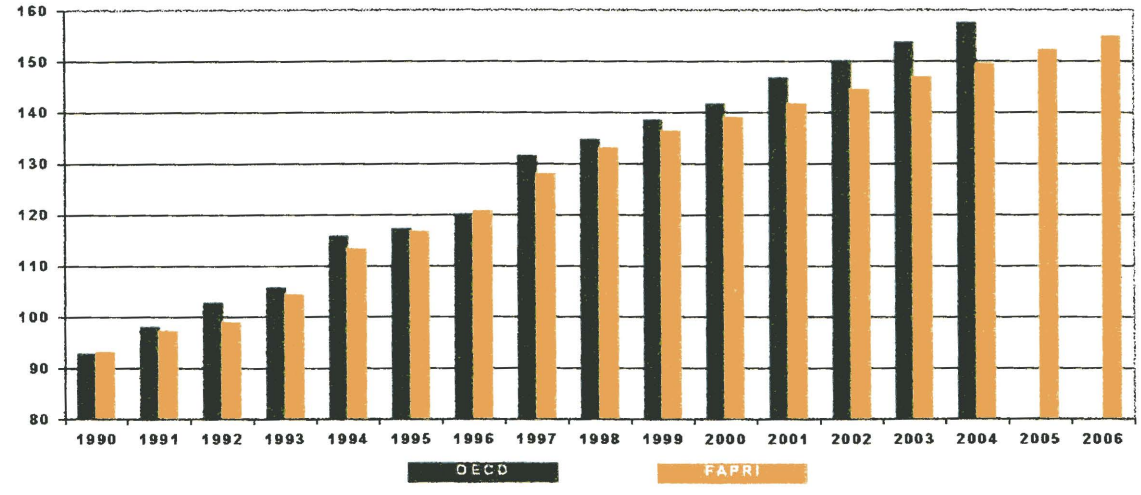
Graph 3.15 Outlook for world oilseed production, 1996 – 2006 (mio t)



Source: OECD and FAPRI.

In the event of no further deterioration of the medium-term perspectives for economic growth, import demand for oilseeds and oilseed meals may be expected to expand further, notably in developing countries where income growth is likely to stimulate demand for livestock products, notably for poultry and pig meat. However, OECD countries would still account for the largest share of oilseed and oilseed meals import demand, especially the EU and Japan.

Graph 3.16 Outlook for world oilseed meal consumption, 1990 – 2006 (mio t)



Source: OECD and FAPRI.

Total trade in oilseeds is anticipated to increase faster over the projection period than in the 1980s but more slowly than in the early 1990s. After a marked slow down in the short-run in the wake of the Asian crisis, trade is forecast to strengthen as economies recover.

Trade growth in oilseed meals is foreseen to be relatively steady but still slower than over the last fifteen years. According to the USDA and FAPRI, soya bean trade will rise at annual rates of 2.0 % and 2.2 % over the next seven years respectively, whereas soya bean meal imports will grow at a rate ranging between 1.7 % and 2.2 % per year.

Table 3.4 Outlook for total trade in soya bean and soya bean products, 1998 - 2006 (mio t)

	1998		2006		Change in trade	
	USDA	FAPRI	USDA	FAPRI	USDA	FAPRI
Soya bean	38.1	34.8	44.8	41.5	6.7	6.8
Soya bean meal	38.9	32.3	44.4	38.4	5.5	6.1
Soya bean oil	6.9	5.7	8.0	7.0	1.1	1.3

USDA figures include intra-FSU and intra-EU trade. FAPRI: net trade

The USDA foresees that the combined exports of soya beans and meals, on a soya bean-equivalent basis, would amount to 95.3 mio t by 2003/04 and 104.7 mio t by 2008/09.

Over the medium term, global import demand for oilseeds is projected to remain dominated by the EU, Japan, China, Mexico and South East Asia. No major developments are foreseen by most international organisations, except a renewed increase in demand from China and many countries of South East Asia for their domestic crushing industry and, ultimately, to supply their pig and poultry meat industry. On the export side, the US, Brazil and Argentina are forecast to increase their market share of world soya bean trade and Canada is expected to maintain its predominance in the rape seed market.

Table 3.5 Outlook for soya bean net imports for major importing countries, 1998-2006 (mio t)

	1998		2006		Change in trade	
	USDA	FAPRI	USDA	FAPRI	USDA	FAPRI
European Union	15.5	15.3	14.9	16.5	-0.5	1.2
Japan	4.6	4.7	4.8	4.8	0.2	0.1
China	3.4	3.4	5.3	4.3	1.9	0.9
Mexico	3.4	3.5	4.4	4.2	1.0	0.7
Taiwan	2.5	2.4	2.9	2.6	0.4	0.2

In the long run, global import demand in soya meal trade is forecast to be driven by the EU, China and South East Asia (notably South Korea). Whereas EU imports would stagnate or even decline slightly owing to falling feed cereal prices, China is forecast to display growing import demand in line with an expanding livestock sector. Argentina and Brazil would benefit most from a rising world trade with exports from these two countries growing by around 20 % from 1998/99 to 2006/07. India is also forecast to play an increasing role in world soya meal trade with exports rising by nearly 50 % over the next seven years.

Table 3.6 Outlook for soyabean meal net imports for major importing countries, 1998-2006 (mio t)

	1998		2006		Change in trade	
	USDA	FAPRI	USDA	FAPRI	USDA	FAPRI
European Union	12.6	12.8	11.5	12.8	-1.1	-0.1
Eastern Europe	2.3	2.1	2.7	2.3	0.4	0.3
China	4.4	4.4	6.8	8.1	2.4	3.7
South Korea	-	0.0	-	1.2	-	1.2

Oilseed and oilseed meal prices are expected to remain at depressed level in the short-term, before strengthening over the rest of the period supported by an expanding demand. The magnitude of the recovery differs across projections, with soya bean prices ranging by

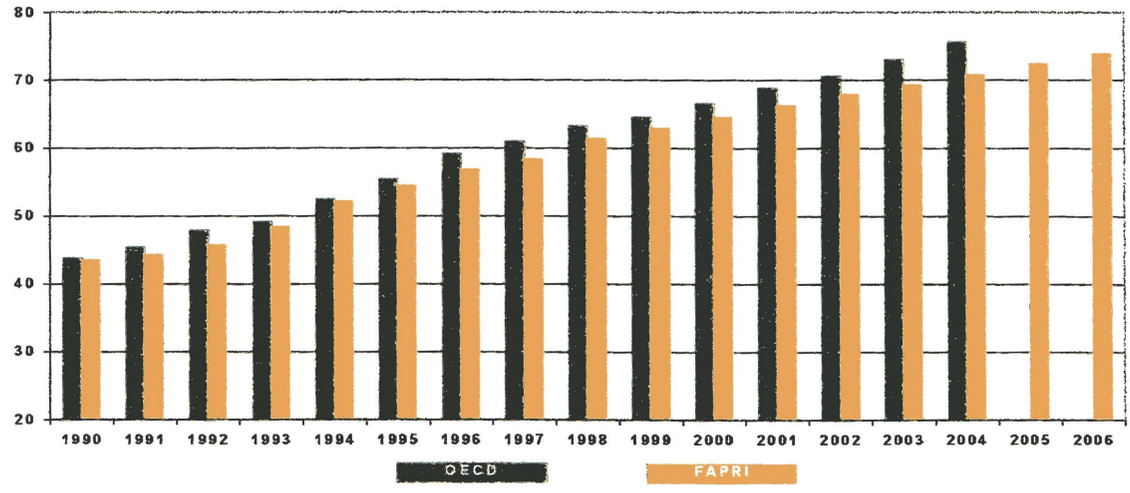
2006/07 between 237 $/t and 271 $/t according to FAPRI and USDA forecasts respectively (the OECD forecasts a very strong recovery in soya bean prices that would reach 301 $/t by 2004/05). Soya bean meal prices would also trend upward over the medium term, reaching between 165 $/t and 185 $/t in 2006/07 (there again, the OECD expects stronger developments with prices at 258 $/t in 2004/05).

According to the FAPRI and USDA projections, rape seed and sunflower seed prices are foreseen to display a similar pattern over the medium term with a steep fall at the turn of the century (down to 220-240 $/t and 240-250 $/t respectively) followed by a recovery up to 2006/07 (rather modest in FAPRI forecasts and strong in the USDA's)[42]. Prices of rape seed and sunflower seed meals would exhibit a more sustained recovery than seeds.

3.2.2 Vegetable oils

Vegetable oil has been the agricultural commodity with one of the most significant and continued growth rates over the last twenty years. There seems to be a strong relation between oil consumption and income growth. The OECD and FAPRI project that vegetable oil consumption will continue to expand over the medium term, at a rate averaging 3.1 % and 2.4 % respectively per year[43]. Most additional consumption is expected to be found in Asia and in Latin America, while less growth is anticipated in Western Europe, the US and Japan.

Graph 3.17 Outlook for world oilseed oil and palm oil consumption, 1990 – 2006 (mio t)



Source: OECD and FAPRI.

Income growth in China, India and Pakistan, which together account for more than a third of the total world population, is expected to drive trade growth in global vegetable oil from 1998/99 to 2006/07. The palm oil market should absorb the largest share of consumption and trade thanks to its higher oil content than soya bean. Whereas soya bean oil trade is projected to grow by more than 1 mio t -mainly driven by Chinese imports- palm oil trade is forecast to expand by 2.1 mio t (i.e. 2.4 % per year over the 1998/99-2006/07 period as compared to a growth of about 9 % a year in the early 1990s). China,

---

[42] By 2006/07, rapeseed prices would reach between 246 (FAPRI) and 285 $/t (USDA), whereas sunflower seed would attain 250 and 310 $/t in the respective projections.

[43] The USDA only provides for soya bean oil consumption. It expects an annual increase in soya bean oil consumption of 2.2 % on average.

the EU and India would be the main palm oil importing countries. World soya bean oil trade is projected by the USDA and FAPRI to grow by 1.9 % and 2.7 % per annum respectively on average over the 1998/99-2006/07 period, i.e. lower than the rates achieved in the 1980s and the early 1990s.

Malaysia and Indonesia constitute the two largest suppliers of palm oil (accounting for more than 75 % of world production and 95 % of world trade). They are forecast to increase domestic supply of palm oil by more than 3.4 mio t over the next eight years, in spite of the slow down in new tree plantings in the wake of the financial crisis.

The strong growth in oilseed oil trade relative to meals and beans is expected to create incentives for increased production in high-oil content oilseeds (such as rape and sunflower seeds in the EU as compared to soya beans)[44].

Medium-term prospects for vegetable oil prices are rather divergent across projections. A sustained demand and a relative supply shortage are forecast to support a sharp recovery in average oil prices in the OECD and USDA projections[45] (soya bean oil prices cif Rotterdam would range between 630 $/t and 660 $/t by 2004/05). In contrast, vegetable oil prices are projected to fall in the early projection years but are anticipated to strengthen later over the medium term in the FAPRI outlook (soya bean oil and palm oil prices would reach around 530 $/t and 505 $/t cif Rotterdam respectively by 2006/07).

However, the strong dependence of the vegetable oil market on imports from developing countries makes the outlook very sensitive to the macro-economic outlook in these countries.

3.3 Meat

This meat market outlook focuses on the three types of meat for which the EU is a net exporter (i.e. beef, pig meat and poultry meat). Most international organisations expect a rather favourable situation for the meat markets over the next seven years.

Table 3.7 Outlook for world meat trade, 1998 – 2006 ('000 t cwe)

	1998		2006		Change in trade	
	USDA	FAPRI	USDA	FAPRI	USDA	FAPRI
Beef	5049	2748	5885	3622	836	874
Pork	2575	2036	3085	2737	510	701
Poultry	5289	3473	7340	4634	2051	1161

FAPRI net trade.

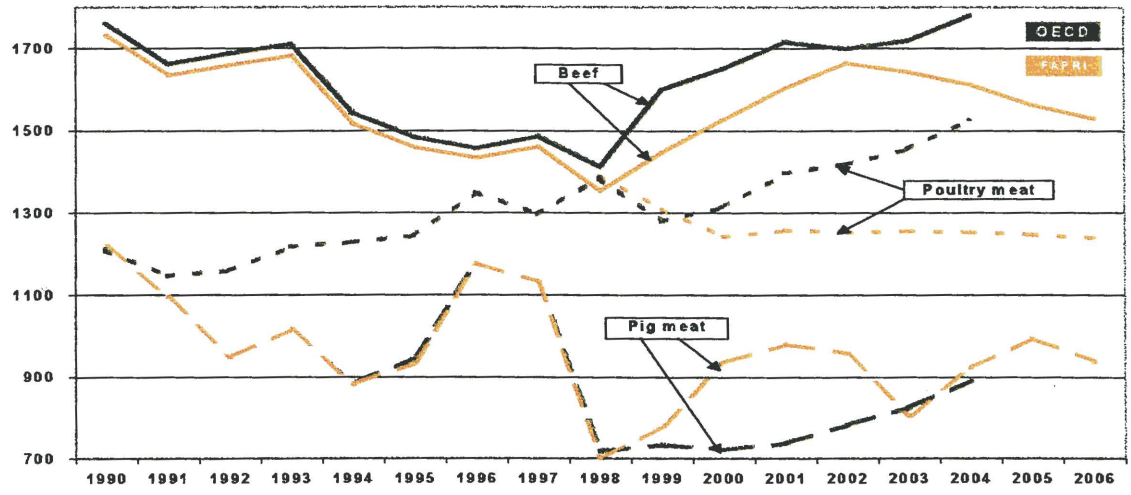
Prospects for growing consumption of meat in response to income growth, in particular in transition economies and rapidly industrialising economies, combined with limited possibilities to proportionally increase domestic production, are expected to stimulate world trade and to strengthen world prices for meat over the medium and long term.

---

[44] Demand for rape seed and sunflower seed oil is forecast to grow over the medium term in FAPRI projections, notably in China, India and other developing countries in line with higher expected income. However, trade is foreseen to display a moderate growth (7 % from 1998/99 to 2006/07 or 240 000 t in aggregate) as most consumption increase should be met by higher domestic production.

[45] The recovery in oilseed oil prices would be stronger than that of oilseed beans and meals which would face strong competition from abundant cereal supplies.

Graph 3.18 Outlook for world meat prices, 1990 – 2006 ($/t lw)



These projections are based on the assumption that the deterioration in the global economic situation, which took place in 1998 and 1999 in some parts of the world, will remain a short-term phenomenon, and that recovery will take place from 2000-2001 onwards.

3.3.1 Beef and veal

The beef market is traditionally split into two distinct segments, either free of foot-and-mouth disease (FMD) or not. The Pacific market is only available for exports that are free of FMD, with prices that are normally higher as compared to the Atlantic Market. However, the price gap between both regions has reduced in recent years. The continuation of this evolution in the framework of a more homogenous world market with increasing prices (subject to the successful implementation of eradication programmes in many regions such as Europe and South America) could have potentially large implications for the structure of world beef markets (both in terms of exporters' market shares and prices).

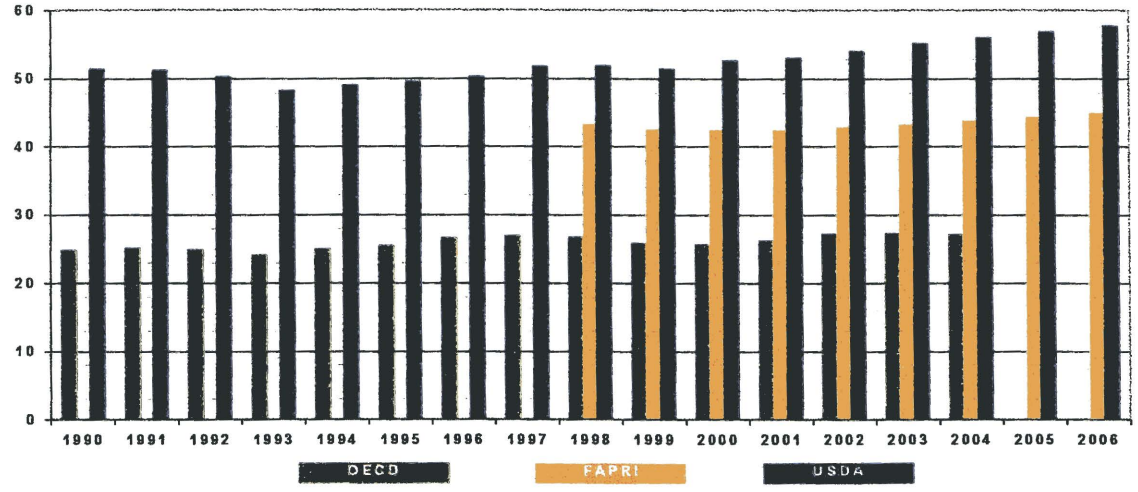
World beef production is forecast to increase over the medium term after recording a cyclical decline up to the turn of the century in many major producing countries. Over the 1998-2006 period, annual growth in world beef production would reach between 0.5 % and 1.3 % on average according to the FAPRI and the USDA respectively, with most of the increase concentrated in the non-OECD area.

Both projections differ mainly as regards their outlook for the FSU, China and the US. While the USDA foresees a marked increase in beef production in China and a modest recovery in the US and the FSU over the 2000-2006 period, FAPRI anticipates a stronger development for US beef output, a less robust increase in China and a marked decline in the FSU beef production. Brazil, Argentina, Canada and Mexico are the only other major beef producing countries, which are foreseen to experience strong growth over the medium term.

Global beef consumption is expected to rise gradually in relation to income growth, in particular in lower income countries. In most developed countries, per capita consumption of beef is expected to fall or to stagnate, since consumers continue to substitute pig meat and poultry meat for beef. This development is particularly marked in the US where beef

consumption per capita is foreseen to fall significantly: from more than 44 kg in 1998 to 39.5 kg (FAPRI) or 38.6 kg (USDA) in 2006.

Graph 3.19 Outlook for world beef production, 1990 – 2006 (mio t cwe)



Source: OECD, FAPRI and USDA. Ref.: OECD – data for OECD zone; FAPRI: data for selected countries; USDA: world

In contrast, increasing beef demand is likely to occur in Asian countries (mainly China, South Korea and Japan) and Latin America (led by Brazil and Mexico), on the condition that consumption will resume over the forecast horizon after a short-term decline linked to the economic crisis. In Asia, beef consumption should increase gradually, from low current levels, in response to economic development and higher disposable income that should lead to changes in food habits toward more western style[46].

Whereas growth in beef demand is likely to be satisfied by domestic supply in China, limitations on land and forage area availability in most other Asian markets are projected to constrain domestic production growth, thus creating additional market outlets for major exporters.

Table 3.8 Outlook for beef net imports for major importing countries 1998 – 2006 ('000 t)

	1998		2006		Change in trade	
	USDA	FAPRI	USDA	FAPRI	USDA	FAPRI
FSU	430	386	375	824	-55	438
Japan	964	964	1095	1149	131	185
South Korea	125	125	265	324	140	199
Mexico	171	171	257	320	86	149

The USDA and FAPRI predict that total trade in beef should increase by more than 800 000 t (a 17 % and 32 % increase respectively over the 1998-2006 period). Much of the growth in imports is expected to come from Asia and Mexico. In Japan and South Korea, beef is the preferred substitute for increasingly scarce seafood. After their recent fall in the wake of the economic downturn, beef imports in these two countries are forecast to stagnate at low levels before resuming their steady growth in the early years of the next millennium. Beef imports are forecast to grow in Mexico where competition from low-priced imports from the US would curtail the expansion of the domestic market.

---

[46] Even if some markets such as Japan exhibit limited potential for further increase since rapid growth has already occurred.

The prospects for the FSU constitute a major source of uncertainty over the medium term. FAPRI predicts that beef consumption should continue to fall in the short-term before stabilising at low level as the economy begins to pick up again. Since domestic production is not foreseen to recover before the end of the projection period due to more than a decade of declining cattle inventories, net imports are expected to pick up from 386 000 t in 1998 to 824 000 t in 2006. In contrast, the USDA expects that both beef consumption and production will rise significantly after bottoming up in 1999 as the economic situation improves. Yet, strong competition from relatively cheap white meat should limit the increase in beef demand. If intra-FSU trade is set to increase steadily in the USDA projections, FSU net beef imports are likely to grow up to 2006 after a dramatic fall at the turn of the century, though remaining below 400 000 t and their 1998 levels.

Strong import prospects combined with limited growth in beef production, especially in some OECD countries but also in most countries where the biggest increase in consumption is forecast, should result in rising beef prices over the medium and long term. Yet, since income growth is seen as the main driving force behind beef demand, a prudent and cautious assessment of medium-term prospects for global beef trade is deemed necessary. Much should depend on the depth and duration of the economic crisis and the speed of recovery in some major importing regions (South East Asia, Japan and the FSU).

3.3.2 Pig meat

The pig sector has been lately undergoing a drastic adjustment with prices at very low levels. This difficult market situation arises from the conjunction of several factors. The latter include a series of disease outbreaks (BSE in the beef sector and classical swine fever in the EU and foot-and-mouth disease in Taiwan) which pushed pig prices at very high levels and generated, combined with falling feed prices, a strong expansion in pig meat output. The impact of these increased supplies on the production cycle and the general price level has been exacerbated by the economic and financial crisis that took place in 1998 and 1999 which led to a dramatic fall in pig meat import demand from many Asian countries and Russia (in connection with currency devaluation and falling real consumer income).

Yet, the OECD, FAPRI and the USDA foresee a more favourable medium and long-term outlook for pig meat, characterised by a renewed increase in world production, consumption and trade. Pig meat prices are however only expected to display a rather modest recovery over the medium term, reflecting increased competition from poultry meat, sustained productivity growth and large supplies.

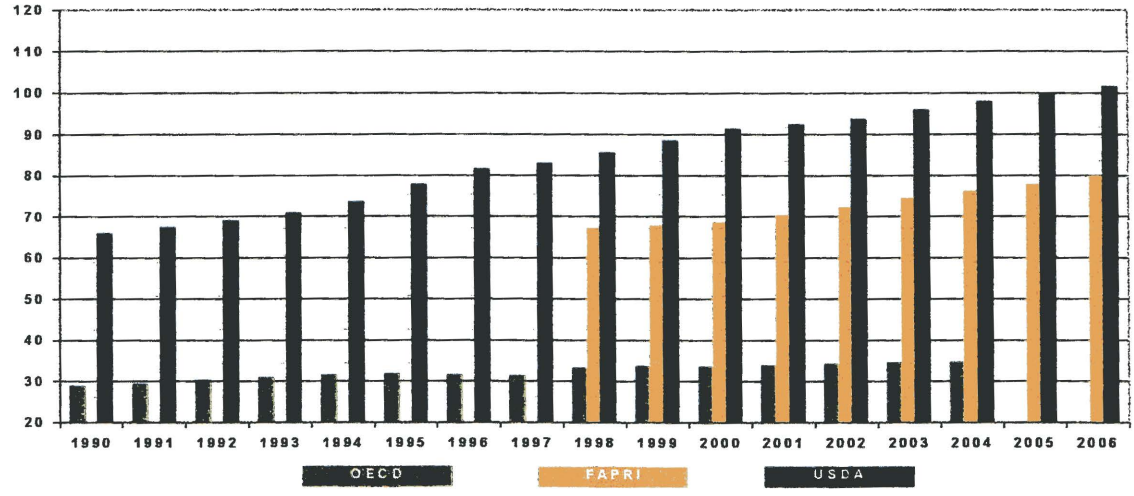
World pig meat production is projected to continue to increase over the medium term, but at a slower rate than in previous decades (2.2 % per annum on average between 1998 and 2006). Slower income growth, environmental constraints as well as greater competition from competitively priced poultry meat are expected to limit pig meat expansion in many regions. According to FAPRI and USDA projections, most of world production growth (i.e. between 13 and 16 mio t over the next seven years) is likely to occur in China (for around 75 %) whereas production in the US, EU, Canada and Brazil is forecast to show only modest growth. Production in Japan is projected to decline due to lower competitiveness vis-à-vis pig meat imports.

The consumption of pig meat in most developed countries (including the EU, US, Canada and Japan) is expected to record slower growth due to stronger competition from poultry meat and moderate economic prospects. Modest consumption growth in these countries

will be partially compensated by stronger increase in Asia and Latin America (in particular in China where total pig meat consumption is set to rise by around 27 % between 1998 and 2006). Expectations of low inflation and higher disposable incomes are also foreseen to boost pig meat demand in many developing countries such as Mexico, Brazil and the Philippines.

In the USDA outlook, the FSU and CEECs are predicted to exhibit a strong growth in pig meat consumption, with increases ranging between 0.9 and 1 mio t (i.e. 40 % and 23 % respectively) between 1998 and 2006. In contrast, the FAPRI projections are more moderate with consumption increases limited to around 150 000 t over the same period.

Graph 3.20 Outlook for world pig meat consumption, 1990 – 2006 (mio t cwe)



Source: OECD, FAPRI and USDA. Ref.: OECD – data for OECD zone; FAPRI: data for selected countries; USDA: world

After a short-term disruption in 1997 following the outbreak of FMD in Taiwan, global trade in pig meat is forecast to increase further over the medium term with growth rates ranging from 20 % in the USDA outlook to 34 % in FAPRI projections (i.e. around 500 000 t and 700 000 t of additional imports from 1998 to 2006 respectively). Over the forecast horizon, growth in pig meat trade would be mainly driven by strong demand in major importing countries of Asia (notably Japan and China) and Mexico.

The outbreak of FMD in Taiwan in 1997 forced Taiwan to withdraw from the lucrative Japanese market. In USDA and FAPRI projections, Taiwan exports to Japan are only expected to resume their growth in 2003 and 2004 although they would still remain at low levels by historical standards. Japanese pig meat imports fell in 1997 due to the interruption in supply from Taiwan, but are expected to recover strongly over the rest of the period in response to growing per capita income and declining production levels in Japan which should both boost import demand.

Like in other sectors, prospects in the FSU, a major importer, are difficult to assess both on the supply side (pace of production recovery linked to economic reforms) and on the demand side (with consumption growth linked to an uncertain economic outlook). After an initial fall following the economic turmoil, FAPRI forecasts that the moderate increase in domestic consumption should be mainly satisfied by domestic supply with net FSU imports limited to 349 000 t in 2006. In contrast the strong rise in consumption anticipated by the USDA is expected to generate a sustained increase in import demand as domestic production recovers more slowly.

Table 3.9 Outlook for pig meat net imports for major importing countries, 1998 – 2006 ('000 t cwe)

	1998		2006		Change in trade	
	USDA	FAPRI	USDA	FAPRI	USDA	FAPRI
Japan	735	735	937	910	202	175
FSU	343	312	559	349	216	37
South Korea	-40	-40	-21	-17	19	23
Mexico	40	40	143	52	103	12
China	126	126	181	229	55	103

The OECD, the USDA and FAPRI foresee that in the long-run the increasingly export-oriented pig meat sector of North America should benefit the most from the strong rise in world pig meat trade owing to (i) abundant feed grain supplies; (ii) continuing productivity gains with the re-structuring of the sector towards large production units and its transformation into a more vertically co-ordinated industry; (iii) less environmental constraints than in Europe and Asia.

Pig meat prices are generally expected to trend upwards over the medium term. However, the magnitude of this recovery, driven by higher feeding costs and strong demand, is foreseen to remain largely tempered by the continued efficiency gains in feeding practices and increased competition from other meat.

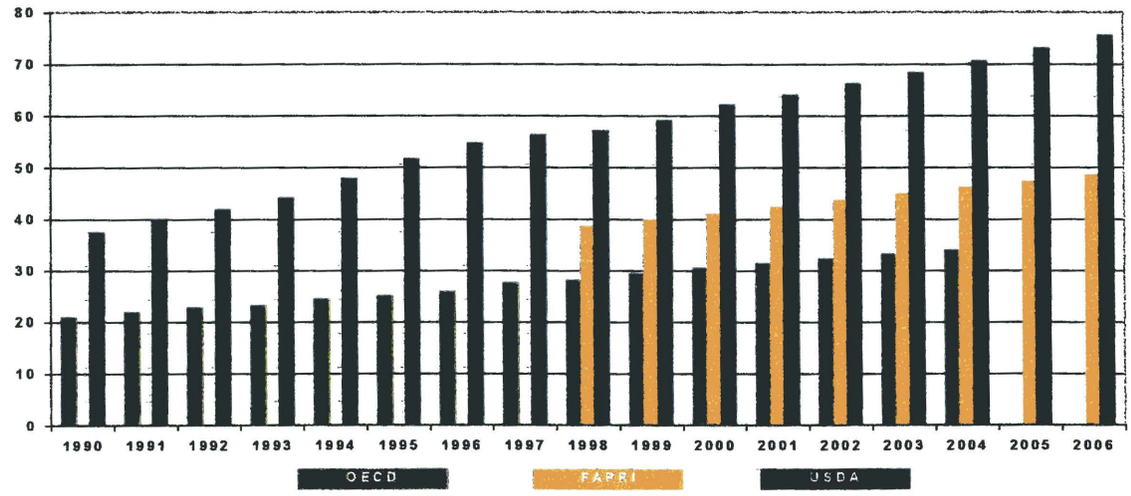
3.3.3 Poultry

The outlook for poultry meat appears to be the most favourable among the different types of meat, with all market fundamentals expected to demonstrate strong growth. World production, consumption and trade are foreseen by most international organisations to increase over the next decade at rates well above those for beef and pig meat, though somewhat lower than during the 1980s. Whereas poultry meat benefited from some shift in consumption away from beef and pig meat as a consequence of major disease outbreaks in the short-run, the main driving forces behind long-term expansion of the poultry sector are projected to lie in its low production cost and prices, and general health considerations.

Poultry meat production and consumption are predicted to increase sharply over the next seven years. The OECD, USDA and FAPRI foresee an annual growth averaging between 2.8 % and 3.6 %. Like in last year's outlook, China's prospects constitute the major source of divergence between the USDA and FAPRI outlooks. Production in the large producer countries (China, US, Brazil, EU and Mexico) should continue to expand as domestic and global demand increases.

Yet, most of the growth in production and consumption is expected in non-OECD countries. The lower price of poultry relative to other meats, combined with rising incomes and changing food demand pattern in most of these countries, is expected to strengthen demand. Therefore, in many countries with a relatively low per capita consumption (China, Mexico and Eastern Europe), the expected improvement of the economic situation should first favour the poultry sector. In addition, consumption should also increase, though more moderately, in countries with a relatively high per capita consumption due to a shift in consumer preferences.

Graph 3.21 Outlook for world poultry meat consumption, 1990 – 2006 (mio t cwe)



Source: OECD, FAPRI and USDA. Ref.: OECD – data for OECD zone; FAPRI: data for selected countries; USDA: world

Since production in most of the countries with expected rapid growth in consumption (China, Mexico, etc.) is only projected to expand at slower rates, increased demand is expected to generate a strong rise in trade (estimated at 33 % by FAPRI and 39 % by the USDA over the 1998-2006 period). Most of the growth in trade is likely to take place in lower-value poultry cuts.

Table 3.10 Outlook for poultry meat net imports for major importing countries, 1998 – 2006 ('000 t)

	1998		2006		Change in trade	
	USDA	FAPRI	USDA	FAPRI	USDA	FAPRI
FSU	974	757	1315	844	341	87
China	608	559	1030	1020	422	461
Mexico	217	128	263	349	46	221
Japan	504	492	685	758	181	266
Saudi Arabia	256	256	197	259	-59	3
South Korea	29	12	42	74	13	62

Imports of poultry meat from the FSU are expected to depend on the pace of modernisation of the domestic production sector. The latter is forecast to expand slowly in the longer term as it would suffer from high production costs, low productivity and financial weakness. Since consumption is foreseen to increase gradually as economic conditions improve, imports should grow. The USDA and FAPRI differ significantly on the future prospects of the sector in the FSU. If the main orientations are similar, the FAPRI foresees much lower trends in production and consumption growth and in import demand. The economic prospects over the medium term in this region constitute a source of major uncertainty since they should strongly influence not only the size and composition of poultry meat imports in the FSU but also global trade.

While the OECD, FAPRI and USDA forecast an increase in import demand from China above 400 000 t over the medium term, imports from Mexico differ substantially across projections. Whereas FAPRI expects that growth in Mexico's domestic production would be limited over the medium term by the liberalisation of the sector, the OECD and the USDA foresee a more favourable outlook and thus a reduction in the scope for a strong increase in Mexico's import demand.

All organisations foresee that the US would benefit most from this projected rise in poultry meat trade. Brazil is also expected to play an increasing role in global poultry trade. Both countries would benefit from large and cheap feed grain supplies and high productivity.

Poultry prices are forecast to follow the evolution of feed grain prices and to remain firm over the medium term, supported by a strong demand.

3.4 Milk and dairy products

This outlook for the world milk and dairy products market focuses on milk production in some selected countries and on some dairy products, notably butter, cheese and milk powder, since only limited quantities of fresh milk are traded. Compared to other agricultural products, projections for the dairy sector are more limited because only few international organisations establish long-term prospects for this sector[47].

According to the projections currently available, the outlook for the dairy sector appears to be rather favourable over the medium term, like for most other agricultural products. A gradually strengthening demand for dairy products, notably in the non-OECD area, is foreseen to lead to higher prices over the medium term in spite of some increase in production levels. Little change is anticipated in the demand for dairy products in most developed countries where they constitute a fundamental component of the diet and exhibit consumption levels close to saturation. Conversely, the consumption of dairy products is forecast to grow in some developing countries, in particular in Asia and Latin America, in line with rising disposable income, urbanisation and changing dietary pattern.

Increased demand from developing countries is foreseen to be primarily supplied by domestic production. Although some countries, notably in South America, are expected to become more active in the export market, developing countries as a whole should remain net importers of dairy products with most exports originating from developed countries. The OECD, FAPRI and the FAO expect a shift in the export market share in favour of Oceania (New Zealand and Australia) at the expense of the EU. The former countries are foreseen to benefit from lower production costs and geographical proximity to growing import markets. In addition, the EU is expected to continue to rely heavily on export subsidies, the use of which will be more and more limited with the implementation of the URA.

However, since demand for dairy products is strongly influenced by income levels, these medium-term projections remain highly dependent on the future economic and financial situation of the non-OECD area. In that perspective and in view of its share in world butter and cheese trade, a delay in the economic recovery in Russia could have major implications for future developments in world trade volume and prices.

3.4.1 Milk production

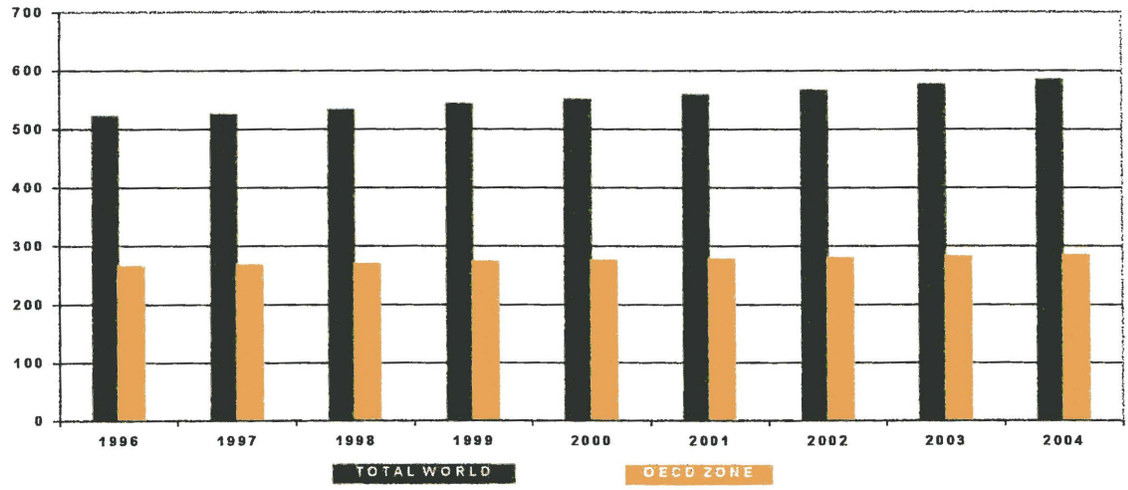
Stimulated by increasing consumption and higher producer prices, milk production is set to expand in a number of countries, mainly outside the OECD area and in those OECD countries not subject to production quotas (and prices far above world levels). According

---

[47] The USDA for example focuses only on the US dairy market in its most recent publication on long-term projections.

to the OECD, world milk production is likely to increase by more than 50 mio t (+9.6 %) from 1998 to 2004. The greatest increase in milk output is forecast in India, in some other Asian countries (notably China and Pakistan) and in several countries of Latin America (mainly Brazil, Argentina and Mexico). As a consequence, the share of developing countries in world milk production is expected to rise significantly[48].

Graph 3.22 Outlook for world milk production, 1996 – 2004 (mio t)



Source: OECD.

The dairy sector in Australia and New Zealand is anticipated to benefit from increased demand in Asia although the OECD expects the growth in dairy production in New Zealand to slow down in response to the rising cost of entering the sector in that country. An important increase in milk production is also forecast for the US, driven by strong domestic demand and firm prices. In the countries of Central and Eastern Europe, milk production is likely to increase over the medium term (in particular Poland), although growth rates should differ across countries.

3.4.2 Dairy products

Since fluid milk consumption is only foreseen to display a modest growth over the medium term, most of the milk production increase is expected to be processed into dairy products. For the period up to 2004, the OECD does not expect any major change in global dairy consumption in the OECD area, except in some countries like Poland, Turkey and Mexico. However, changes in the type and form of dairy products consumed are foreseen with, in particular, a continuous increase in cheese consumption and a decline in butter consumption.

In contrast, a significant increase in the overall consumption of dairy products is predicted for developing countries, in particular in Asia and Latin America. Solid growth in dairy products consumption should concern all products, except skimmed milk powder. Demand for SMP is forecast to stagnate over the next five years and to be increasingly replaced by whole milk powder and whey powder which are expected by the OECD to be preferred in respect to the reconstitution of milk and manufacturing of foodstuffs and animal feed products. Growing population, improved economic conditions, increasing

[48] One consequence is that the share of milk from animals other than cows is also forecast to expand (a significant share of milk produced in developing countries come from buffaloes, goats, sheep and camels).

urbanisation and a shift towards "western" diet constitute in Asia and Latin America the main factors underpinning the rise in dairy products consumption.

The OECD and the FAO anticipate that the change observed over the last few years in the structure of world trade will continue over the medium term. Since the mid 1980s, there has been a gradual shift in world trade of dairy products from bulk dairy products (SMP and butter) towards higher value added products (such as cheese). This restructuring in world trade –although trade in butter and SMP still remains substantial- was driven by changes in import demand, agricultural policy and the implementation of the URA.

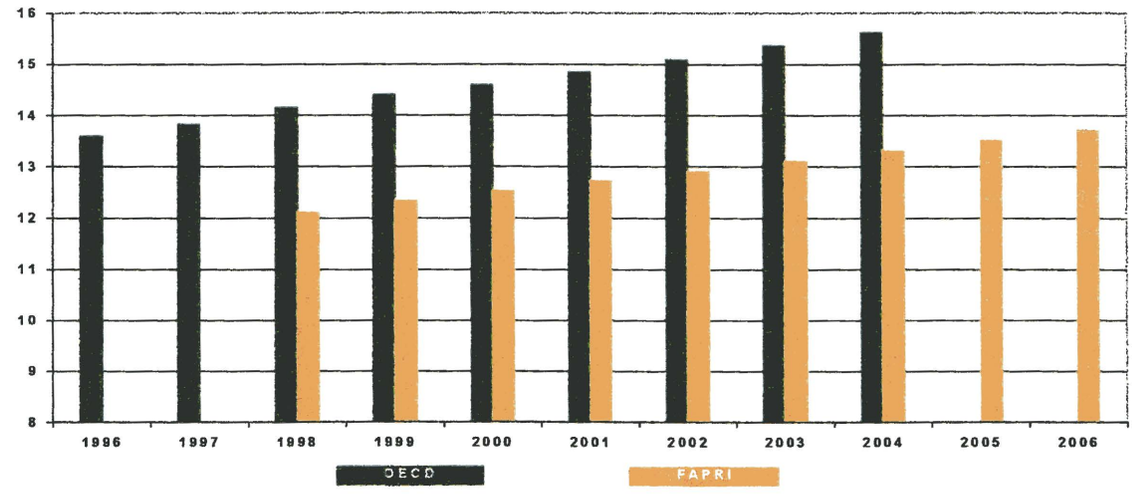
Table 3.11 Outlook for trade for major dairy products, 1998 – 2006 ('000 t)

	1998		2006		Change in trade	
	OECD	FAPRI	OECD	FAPRI	OECD	FAPRI
Butter	440	578	490	678	50	100
SMP	555	839	572	959	17	120
WMP	995	1064	1116	1084	121	20
Cheese	504	747	577	870	73	123

OECD: Imports from the non-OECD zone for 2004; FAPRI: net trade from major countries.

The strongest increase in consumption is predicted for cheese with a cumulative 10.3 % growth over the 1998-2004 period (i.e. around 1.3 % per year on average). Most of the increase in consumption should take place in OECD countries, which accounts for around 82 % of total world consumption, and be met by increased domestic supply. Both total imports and exports of the OECD countries are expected to rise by about 15 % over the next few years. A similar growth is forecast for net imports from the non-OECD area. In that context, the OECD and the FAO foresee that growing cheese consumption in the Asian region will be mainly satisfied by imports, largely from Australia and New Zealand (thanks to lower production costs and limits on EU subsidised exports). In Latin America, part of the increasing demand is likely to be supplied by expanding production in Argentina.

Graph 3.23 Outlook for world cheese consumption, 1996 – 2006 (mio t)



Source: OECD and FAPRI. Ref.: FAPRI: data for selected countries.

Butter production and consumption are forecast to increase by around 1.3-1.4 % on average annually over the next five years. Yet, most changes are predicted to occur in the non-OECD area, since butter production and consumption should remain relatively stable in the OECD countries. In the non-OECD area, total butter consumption is likely to

increase by 15 % from 1998 to 2004 (i.e. 2.4 % per year). In most countries, total increase in butter consumption will be driven by population growth since per capita consumption is foreseen to remain rather flat. Health concerns and competition from vegetable-based oils and solid fats are mentioned as explanatory elements. However, due to the fact that in these countries production is not able to keep pace with overall demand, some scope for additional exports from the main OECD producer countries can be expected.

The OECD and FAPRI differ substantially in their outlook for skimmed milk powder and whole milk powder. Whereas the OECD foresees a slight decline in SMP consumption of around –0.4 % per year and a strong pattern for WMP (+2.1 % on annual average), FAPRI anticipates a consumption growth for both products of around 0.8-0.9 % per year. Both organisations diverge also in their outlook for milk powder trade with most additional trade over the medium term being allocated to WMP in the OECD outlook and to SMP in FAPRI projections.

FAPRI expects that, after a short-term fall in Asian imports of SMP, rising demand in the long-run above production growth levels in Asia and Mexico should set the stage for a recovery in SMP imports, with Australia and New Zealand as main suppliers. In contrast, growth in WMP trade is foreseen as more modest. New Zealand, Australia and Argentina are forecast to capture the greatest share of these additional imports of milk powder to the detriment of the EU.

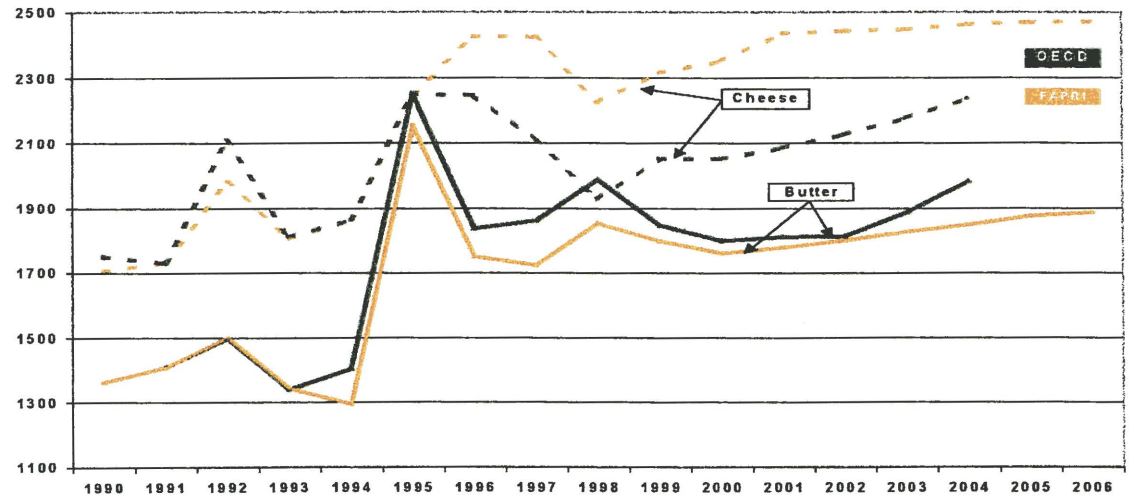
Conversely, the OECD anticipates a rather modest increase in SMP trade as compared to other dairy products, since the small additional demand in the non-OECD area by the end of the 1998-2004 period would outweigh the increase in domestic supply. Yet, the medium term prospects for WMP are expected to be more favourable. Increasing consumption to the expense of SMP -mainly in Latin America, North Africa and Asia- beyond domestic supply capacity is expected to generate a significant expansion in trade between the OECD area and the rest of the world (+12 % from 1998 to 2004).

3.4.3 Dairy prices

Both the OECD and FAPRI expect that over the medium term, world market prices of dairy products should remain above the level experienced in the early 1990s. After a short-term decline generated by the economic crisis which has affected countries of Asia, Latin America as well as Russia, prices are forecast to increase gradually over the medium term in line with the return of economic growth and a strengthening demand. In accordance with future prospects in global supply and demand, cheese prices are foreseen to recover quickly supported by the steady rise in global consumption[49]. In contrast, the pace of price increase after the year 2000 is forecast to be more modest for milk powder and butter.

[49] World market prices for cheddar are foreseen to remain far below EU domestic prices over the medium term, even if the gap is forecast to diminish somewhat.

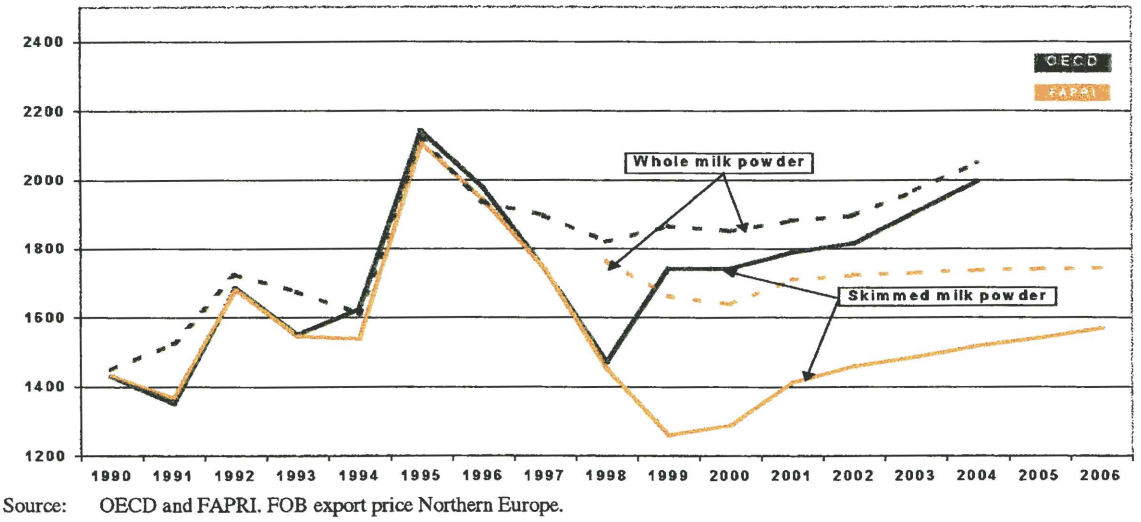
Table 3.24 Outlook for world market prices for butter and cheese, 1990 – 2006 ($/t)



Source: OECD and FAPRI. Cheese: FOB export price cheddar cheese 40lb blocks, Northern Europe; butter: FOB export price Northern Europe.

The recovery in dairy prices is also expected to be supported by the lower level of subsidised exports from the main players on the world dairy market. However, the cumulative impact of stronger import demand and lower subsidised exports on the future development in dairy prices may be expected to be somewhat tempered by rising world milk production.

Table 3.25 Outlook for world market prices for whole milk powder and skimmed milk powder, 1990 – 2006 ($/t)



Source: OECD and FAPRI. FOB export price Northern Europe.

4. Key issues

The outlook for agricultural markets over the next seven years appears fairly positive when compared to the situation in the 1980s and early 1990s. However, it must be stressed that these market projections are particularly sensitive to critical assumptions regarding the economic environment, future supply, demand and policy developments and they remain subject to some uncertainties.

In this regard, three main areas of uncertainties can be identified:

- *the economic perspectives*

- *the scope for production growth*
- *the policy and trade environment*

4.1 Economic prospects

The projections presented in this chapter anticipate that the strong and robust economic growth that is expected over the medium term in developing regions (in particular China, East Asia, Latin America, North Africa, and the Middle East) should constitute the most important source of import demand growth and the main driving force behind the recovery in most agricultural markets. They all assume that the economic crisis in a number of emerging economies will be of limited duration and that economic recovery will take place at the turn of the century with a return to a path of long-term growth.

Table 3.12 USDA assumptions in real GDP annual growth 1998 – 2007 (%) – comparison with 1998 outlook *(in italics)*

	1998		1999		2000		Average 1991-1996	Average 1997-2001		Average 2001-2007	
World	2.3	*(3.0)*	2.5	*(3.0)*	2.8	*(3.3)*	2.3	2.7	*(3.2)*	3.0	*(3.2)*
Developed economies	2.3	*(2.5)*	2.3	*(2.4)*	2.3	*(2.6)*	1.9	2.4	*(2.5)*	2.3	*(2.4)*
Transition economies	-1.0	*(1.2)*	-0.5	*(2.1)*	1.4	*(2.8)*	-6.8	0.8	*(1.9)*	2.7	*(3.5)*
Eastern Europe	4.1	*(5.1)*	4.4	*(4.0)*	4.4	*(4.2)*	-0.1	4.3	*(4.5)*	4.2	*(4.2)*
FSU	-3.1	*(-0.1)*	-2.6	*(1.4)*	0.0	*(2.3)*	-8.7	-0.7	*(1.0)*	2.0	*(3.2)*
Developing countries	2.4	*(5.0)*	3.7	*(5.2)*	4.5	*(5.5)*	5.4	4.1	*(5.3)*	5.0	*(5.5)*
East and Southeast Asia	0.7	*(6.7)*	3.6	*(6.6)*	5.4	*(6.9)*	9.0	4.5	*(6.8)*	6.3	*(6.8)*
China	6.6	*(8.9)*	7.0	*(8.8)*	7.5	*(8.7)*	11.9	7.5	*(8.8)*	7.7	*(8.2)*
Korea	-4.0	*(6.1)*	0.5	*(6.0)*	3.5	*(6.0)*	7.5	1.9	*(6.1)*	5.3	*(5.6)*
Indonesia	-15.0	*(5.2)*	-4.0	*(4.8)*	1.5	*(6.0)*	7.8	-2.2	*(5.6)*	4.2	*(6.2)*
Thailand	-4.1	*(2.0)*	-1.0	*(1.0)*	3.0	*(4.0)*	8.2	0.5	*(3.1)*	5.0	*(6.0)*
Latin America	2.8	*(4.4)*	3.9	*(5.1)*	4.3	*(5.0)*	3.1	4.0	*(4.8)*	4.3	*(4.7)*
Mexico	4.6	*(4.1)*	5.0	*(5.4)*	5.0	*(5.4)*	2.2	5.3	*(5.0)*	4.6	*(4.6)*
Brazil	1.0	*(4.4)*	3.0	*(5.2)*	4.0	*(5.0)*	2.6	3.0	*(4.7)*	4.2	*(4.8)*
Middle East	3.3	*(3.3)*	3.5	*(3.6)*	3.7	*(4.1)*	4.5	3.7	*(4.0)*	3.9	*(4.3)*
North Africa	4.5	*(4.2)*	4.4	*(4.2)*	4.2	*(4.2)*	2.5	4.9	*(4.2)*	4.1	*(4.1)*

Source: USDA.

However, concerns remain about the medium-term prospects for many emerging economies. If the situation in many of these countries has significantly improved and the economic downturns in Russia and Brazil shallower than expected earlier, some emerging economies remain fragile and vulnerable and the path towards full recovery may turn out to be longer than initially thought. Future economic prospects in the US and the pace of recovery in Japan could also significantly impact the world economic outlook over the medium term.

The currency re-alignment that took place during the Asia crisis and the subsequent financial turbulence in Russia and Brazil had a major (both direct and indirect) impact on trade flows and price developments for most agricultural commodities. If a significant recovery in economic activity is now taking place in many emerging countries, the extent to which the underlying structural problems have been addressed is still difficult to assess. The pace of financial reform and the return of investor confidence should be key to future exchange rate movements.

Slower growth and further currency devaluation in emerging countries could lead in the short-term to weaker demand, lower food exports from OECD countries and consequently lower world price prospects. The larger adverse impact is likely to be on

higher value added agricultural products, such as meat, dairy products and processed food that are directly and indirectly sensitive to changes in income. Lower demand for these products could in turn put downward pressure on feed grain prices.

4.2 Growth potential in agricultural supply

The slow supply adjustment of agricultural products to the expansion in demand constitutes a major outcome of these medium-term projections. It strongly conditions the expected increase in trade and prices. Yet, scope for further increase in production still remains a key uncertainty for the outlook, notably for crop products.

Most of production growth is forecast to be generated by productivity improvement as the potential for additional land is expected to be modest and limited in most regions due to the expanding urbanisation, climatic limitations and pressure on agricultural resources and environment (erosion, salinisation and contamination). Over the next seven years, total cereal yields are expected to increase faster than in the early 1990s, although significantly lower than in the past decades. The extent to which future prospects for yield trends will be influenced by the development and diffusion of genetically modified organisms is still an open question.

However, increased reliance on food imports in some regions and prospects of higher price levels could significantly impact the global level of production of crop products. Despite limitations linked to environmental pressures and water constraints, some areas of potential further gains in yield growth may still exist, such as the wider adoption of improved varieties and farming methods.

Furthermore, policy developments in some major importing countries -notably China- and the historical tendency in some regions to promote "self-sufficiency" policies could affect the outlook of agricultural markets, in particular production and trade levels and price developments. Crop production in the OECD zone is also expected to be strongly influenced by two major land idling programmes: the set-aside provision for farmers in the European Union and the Conservation Reserve Programme (CRP) in the US. Even if assumptions on both programmes differ across projections, a significant amount of land is kept out of production. Any change in the level of land set-aside could strongly influence world prices.

4.3 Policy and trade environment

Future course of agricultural policy reforms -in the EU and other major producing countries/regions- as well as the new round of WTO multilateral trade negotiations may have important implications for the medium-term outlook of agricultural products.

The implementation of Agenda 2000 can be expected, among others, to boost EU competitiveness on internal and world agricultural markets, resulting in downward pressure on world market prices. The outcome of the new WTO trade round may be expected to shape future developments in agricultural policy towards greater market orientation and the pace of trade liberalisation, which in turn would impact future production and trade patterns.

References

European Commission, 1997. *Long Term Prospects, Grain, Milk and Meat markets.* Brussels.

FAPRI, 1999. *World Agricultural Outlook.* Iowa State University – University of Missouri-Columbia.

FAPRI, 1998. *World Agricultural Outlook.* Iowa State University – University of Missouri-Columbia.

International Monetary Fund, 1999. World Economic Outlook. *World Economic and Financial Surveys.* Washington.

OECD, 1999. *The OECD Agricultural Outlook, 1999-2004.* Paris.

OECD, 1998. *The OECD Agricultural Outlook, 1998-2003.* Paris.

USDA, 1999. *Agricultural Baseline Projections to 2008.* Washington D.C.

USDA, 1998. *Agricultural Baseline Projections to 2007.* Washington D.C.

Statistical annex

1. Medium-term outlook for cereals

1.1 Wheat

Table A.1 Outlook for world wheat production, 1998 – 2006 (mio t)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD	583.9	597.7	613.1	621.7	633.4	643.5	652.0		
FAPRI	584.9	589.1	599.7	607.6	614.4	622.8	632.0	637.6	646.4
USDA	586.2	599.8	606.9	618.5	630.5	640.0	650.6	661.1	671.1

Table A.2 Outlook for world wheat consumption, 1998 – 2006 (mio t)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD	597.1	594.8	607.0	621.2	634.3	641.0	651.6		
FAPRI	593.4	594.9	599.8	606.2	613.6	621.0	629.2	637.1	646.0
USDA	595.3	598.2	611.3	617.9	629.2	638.3	648.7	659.3	669.3

Table A.3 Outlook for world wheat stocks, 1998 – 2006 (mio t)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD	128.0	130.9	136.9	137.4	136.6	139.0	139.3		
FAPRI	125.3	119.5	119.4	120.8	121.5	123.3	126.2	126.7	127.1
USDA	127.9	129.4	125.0	125.6	126.9	128.6	130.5	132.3	134.2

Table A.4 Outlook for world wheat market prices, 1998 – 2006 ($/t US FOB Gulf, HRW)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD	117	136	132	133	138	150	153		
USDA	123	136	156	164	169	173	175	175	175
FAPRI	121	135	142	146	150	155	159	163	164

1.2 Maize

Table A.5 Outlook for world maize production, 1998 – 2006 (mio t)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
FAPRI	595.1	594.6	603.3	613.5	621.9	632.9	644.5	653.8	665.1
USDA	596.8	610.3	618.7	630.0	646.6	661.6	676.4	690.8	703.9

Table A.6 Outlook for world maize consumption, 1998 – 2006 (mio t)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
FAPRI	583.6	592.7	602.3	613.9	622.7	633.0	643.8	653.9	664.8
USDA	585.3	612.1	622.3	635.6	648.8	661.4	674.6	688.2	702.3

Table A.7 Outlook for world maize stocks, 1998 – 2006 (mio t)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
FAPRI	98.2	100.1	101.1	100.6	99.8	99.6	100.3	100.3	100.6
USDA	98.0	96.3	92.7	87.1	84.9	85.1	86.9	89.5	91.1

Table A.8 Outlook for world maize market prices, (US yellow corn, fob Gulf), 1998 – 2006 ($/t)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD	90	98	102	106	110	118	120		
USDA	99	99	105	113	120	123	124	124	124
FAPRI	94	97	99	101	104	107	109	111	113

2. Medium-term outlook for oilseeds

2.1 Oilseed beans

Table A.9 Outlook for world oilseed production, 1998 – 2006 (mio t)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD	217.8	221.2	223.1	224.5	237.0	244.6	252.3		
FAPRI	218.1	224.4	224.9	228.3	232.7	236.5	240.0	244.3	248.1

Oilseeds = rape seed, soya bean and sunflower seed.

Table A.10 Outlook for world oilseed consumption, 1998 – 2006 (mio t)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD	214.0	219.6	225.7	232.0	237.1	244.6	252.4		
FAPRI	213.0	219.9	223.3	227.0	231.2	234.9	238.7	243.0	247.0

Oilseeds = rape seed, soya bean and sunflower seed.

Table A.11 Outlook for world oilseed stocks, 1998 – 2006 (mio t)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD	34.0	35.6	33.0	25.5	25.4	25.4	25.3		
FAPRI	14.1	15.7	15.6	15.8	15.5	15.3	15.0	14.8	14.6

Oilseeds = rape seed, soya bean and sunflower seed.

Table A.12 Outlook for world soya bean market prices, 1998 – 2006 ($/t)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD	228	207	219	273	283	298	301		
USDA	241	213	210	225	242	255	262	267	271
FAPRI	230	215	218	223	226	227	231	233	237

US soyabeans, cif Rotterdam

2.2 *Oilseed meals*

Table A.13 Outlook for world oilseed meal production, 1998 – 2006 (mio t)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD	134.2	137.6	141.5	146.7	149.5	153.3	157.5		
FAPRI	132.3	137.4	139.9	142.4	145.2	147.7	150.2	153.0	155.6

Oilseeds = soya beans; sunflower and rapeseed

Table A.14 Outlook for world oilseed meal consumption, 1998 – 2006 (mio t)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD	134.5	138.3	141.6	146.6	149.9	153.5	157.4		
FAPRI	133.0	136.3	139.0	141.6	144.4	146.9	149.4	152.2	154.9

Oilseeds = soya beans; sunflower and rapeseed

Table A.15 Outlook for world soya bean meal market prices, 1998 – 2006 ($/t)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD	159	146	163	225	231	252	258		
USDA	152	130	133	153	169	173	170	168	165
FAPRI	148	148	154	161	168	172	177	181	185

CIF Rotterdam

2.3 *Oilseed oil*

Table A.16 Outlook for world oilseed oil production, 1998 – 2006 (mio t)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD	62.9	64.6	66.7	68.9	70.8	73.1	75.7		
FAPRI	64.5	66.7	68.3	69.8	71.5	72.7	74.0	75.5	76.9

Oilseed oil = soya beans oil, sunflower oil, rapeseed oil and palm oil

Table A.17 Outlook for world oilseed oil consumption, 1998 – 2006 (mio t)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD	63.1	64.4	66.4	68.7	70.5	73.0	75.6		
FAPRI	63.6	65.2	66.9	68.7	70.5	71.9	73.5	75.2	76.8

Oilseed oil = soya beans oil, sunflower oil, rapeseed oil and palm oil

Table A.18 Outlook for world soya bean oil market prices, 1998 – 2006 ($/t)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD	597	562	558	572	597	620	630		
USDA	611	585	563	560	582	621	661	695	711
FAPRI	571	566	564	555	543	533	532	529	533

Fob Rotterdam

3. Medium-term outlook for meat

3.1 Beef

Table A.19 Outlook for world beef production, 1998 – 2006 (mio t, cwe)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD (OECD zone)	26.6	25.8	25.6	26.2	27.1	27.2	27.0		
SDA	51.8	51.3	52.6	52.9	54.0	55.0	55.9	56.8	57.6
FAPRI (selected countries)	43.2	42.4	42.3	42.3	42.8	43.1	43.6	44.2	44.8

Table A.20 Outlook for world beef consumption, 1998 – 2006 (mio t, cwe)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD (OECD zone)	25.9	25.2	25.0	25.2	25.8	26.0	26.1		
SDA	51.8	51.4	52.5	52.9	54.0	55.0	55.9	56.8	57.6
FAPRI (selected countries)	42.6	41.9	41.8	41.7	41.9	42.2	42.8	43.4	43.9

Table A.21 Outlook for world beef prices, 1998 – 2006 ($/t lw)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD	1413	1600	1652	1714	1698	1718	1779		
SDA	1364	1587	1586	1626	1622	1642	1682	1728	1767
FAPRI	1355	1449	1528	1605	1665	1644	1613	1563	1530

Nebraska Direct Fed Steer price.

3.2 Pig meat

Table A.22 Outlook for world pig meat production, 1998 – 2006 (mio t, cwe)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD (OECD zone)	34.1	34.5	34.2	34.4	34.7	35.1	35.4		
SDA	85.5	88.5	90.9	92.3	93.5	95.7	97.7	99.6	101.3
FAPRI (selected countries)	67.7	68.5	69.6	71.3	73.3	75.1	77.0	78.7	80.7

Table A.23 Outlook for world pig meat consumption, 1998 – 2006 (mio t, cwe)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD (OECD zone)	33.0	33.6	33.4	33.6	33.9	34.3	34.5		
SDA	85.4	88.4	91.1	92.3	93.5	95.7	97.7	99.6	101.3
FAPRI (selected countries)	67.0	67.8	68.6	70.2	72.1	74.3	76.0	77.7	79.7

Table A.24 Outlook for world pig meat prices, 1998 – 2006 ($/t lw)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD	718	733	722	737	782	825	891		
FAPRI	700	781	937	980	958	805	922	994	938
SDA	728	781	832	824	823	846	864	861	845

US price Iowa-Souther Minnesota, barrow and gilt price.

3.3 Poultry meat

Table A.25 Outlook for world poultry meat production, 1998 – 2006 (mio t, cwe)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD (OECD zone)	30.5	31.6	32.8	33.8	34.7	35.7	36.6		
USDA	57.3	59.1	62.1	64.1	66.1	68.2	70.5	72.9	75.4
FAPRI (selected countries)	40.2	41.3	42.5	43.9	45.2	46.4	47.7	48.9	50.1

Table A.26 Outlook for world poultry meat consumption, 1998 – 2006 (mio t, cwe)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD (OECD zone)	28.0	29.1	30.3	31.2	32.1	33.0	33.7		
USDA	57.0	59.0	62.1	64.0	66.1	68.2	70.5	72.9	75.4
FAPRI (selected countries)	38.6	39.8	41.0	42.4	43.7	44.8	46.1	47.3	48.5

Table A.27 Outlook for world poultry meat prices, 1998 – 2006 ($/t)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
OECD	1384	1279	1314	1396	1418	1455	1527		
USDA	1385	1285	1320	1395	1420	1462	1529	1588	1630
FAPRI	1391	1310	1242	1258	1252	1256	1253	1248	1240

Wholesale weighted average broiler price US 12 cities

4. Medium-term outlook for milk and dairy products

Table A.28 Outlook for world production of dairy products, 1998 – 2006 (mio t)

		1998	1999	2000	2001	2002	2003	2004	2005	2006
Milk	OECD	532.3	541.7	549.2	557.9	565.5	574.7	583.3		
	FAPRI	374.6	377.9	380.3	383.8	387.9	392.3	396.6	400.8	405.5
Butter	OECD	6.6	6.6	6.7	6.8	6.9	7.0	7.1		
	FAPRI	5.3	5.4	5.5	5.5	5.6	5.7	5.7	5.8	5.9
SMP	OECD	3.4	3.2	3.2	3.3	3.2	3.3	3.2		
	FAPRI	3.0	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.2
WMP	OECD	2.7	2.8	2.8	2.9	2.9	3.0	3.1		
	FAPRI	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Cheese	OECD	14.1	14.4	14.6	14.8	15.1	15.3	15.6		
	FAPRI	15.5	16.0	16.3	16.5	16.8	17.1	17.4	17.7	18.0

FAPRI: data for selected countries

Table A.29 Outlook for world consumption of dairy products, 1998 – 2006 (mio t)

		1998	1999	2000	2001	2002	2003	2004	2005	2006
Butter	**OECD**	6.6	6.6	6.7	6.8	6.9	7.0	7.1		
	FAPRI	4.9	5.1	5.1	5.2	5.2	5.3	5.4	5.5	5.5
SMP	**OECD**	3.3	3.2	3.2	3.2	3.2	3.3	3.3		
	FAPRI	2.3	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5
WMP	**OECD**	2.7	2.8	2.8	2.9	2.9	3.0	3.1		
	FAPRI	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2
Cheese	**OECD**	14.1	14.4	14.6	14.8	15.1	15.4	15.6		
	FAPRI	12.1	12.3	12.5	12.7	12.9	13.1	13.3	13.5	13.7

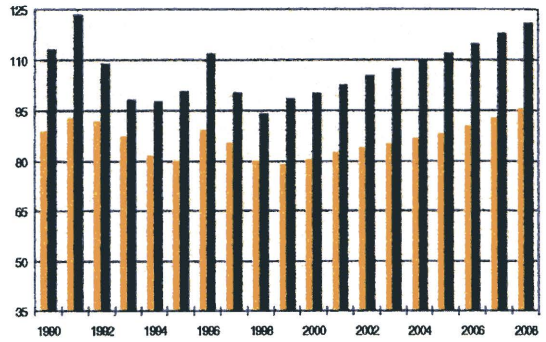
FAPRI: data for selected countries

Table A.30 Outlook for world dairy products prices, 1998 – 2006 ($/t)

		1998	1999	2000	2001	2002	2003	2004	2005	2006
Butter	**OECD**	1988	1847	1799	1811	1812	1884	1982		
	FAPRI	1853	1798	1761	1778	1801	1826	1848	1875	1886
Cheese	**OECD**	1928	2052	2050	2085	2126	2177	2235		
	FAPRI	2225	2316	2351	2436	2443	2448	2463	2469	2471
SMP	**OECD**	1471	1741	1741	1789	1815	1905	1995		
	FAPRI	1453	1260	1289	1413	1460	1486	1518	1540	1568
WMP	**OECD**	1819	1866	1850	1881	1896	1969	2049		
	FAPRI	1764	1662	1638	1710	1723	1729	1737	1740	1743

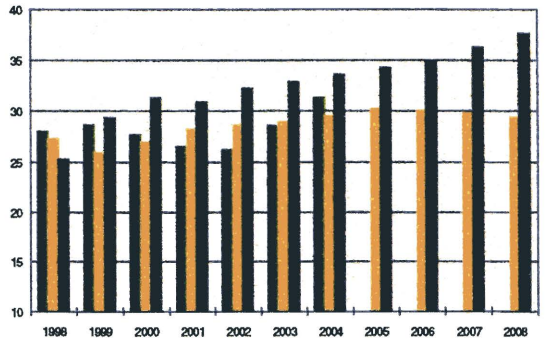
Ref: Cheese: FOB export price cheddar cheese 40lb blocks, Northern Europe; others: FOB export price Northern Europe

World wheat trade, 1990 – 2008
(mio t)

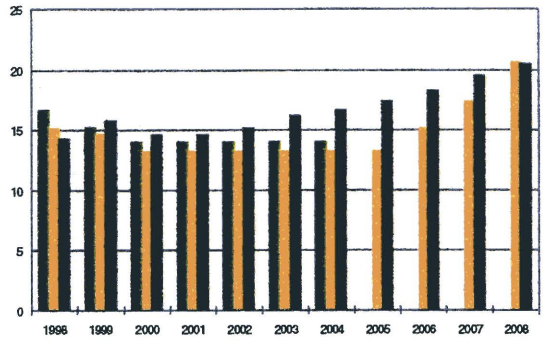


FAPRI: net trade

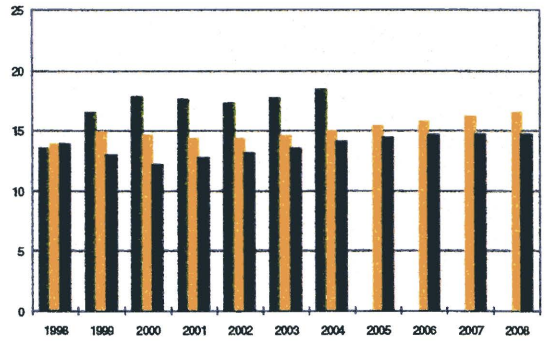
Outlook for wheat net exports – USA
(mio t)



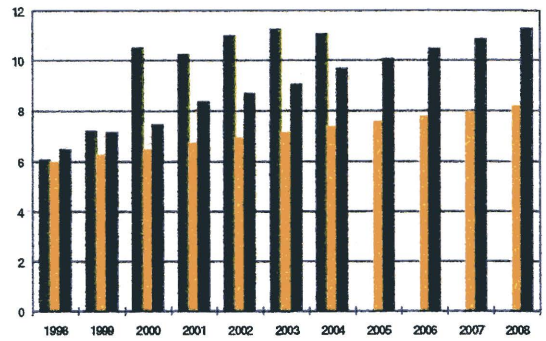
Outlook for wheat net exports – European Union
(mio t)



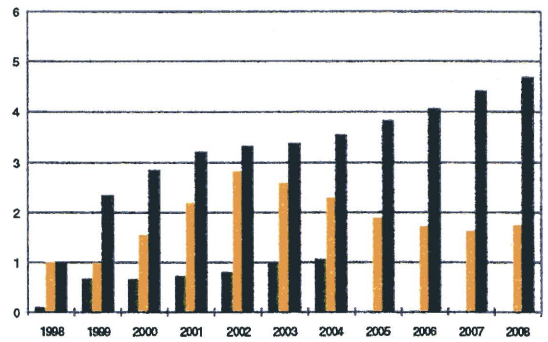
Outlook for wheat net exports – Australia
(mio t)



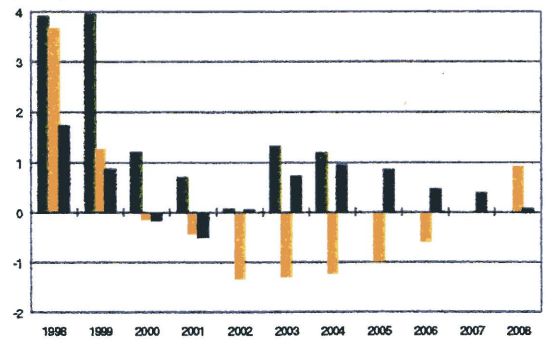
Outlook for wheat net exports – Argentina
(mio t)



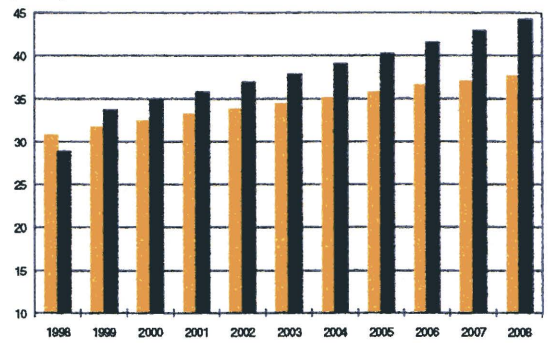
Outlook for wheat net imports – China
(mio t)



Outlook for wheat net imports – FSU
(mio t)

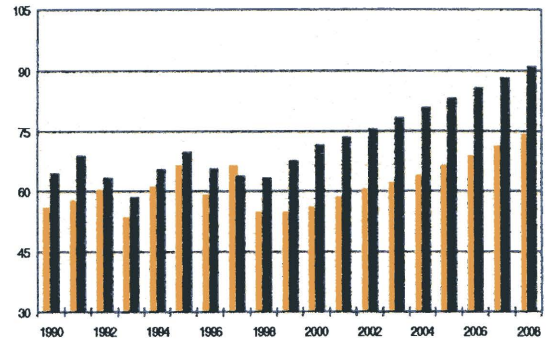


Outlook for wheat net imports – Africa and Middle East
(mio t)



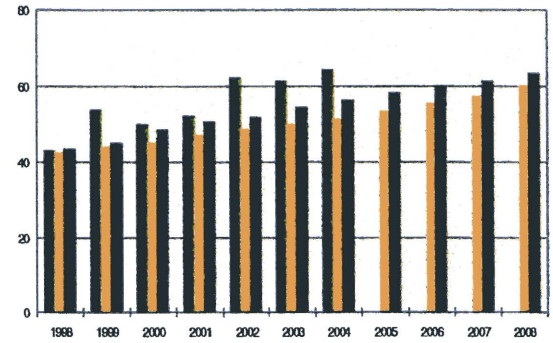
OECD FAPRI USDA

World maize trade, 1990 – 2008
(mio t)



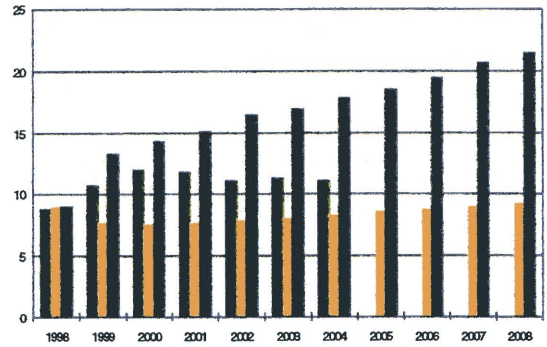
FAPRI: net trade

Outlook for maize net exports – USA
(mio t)



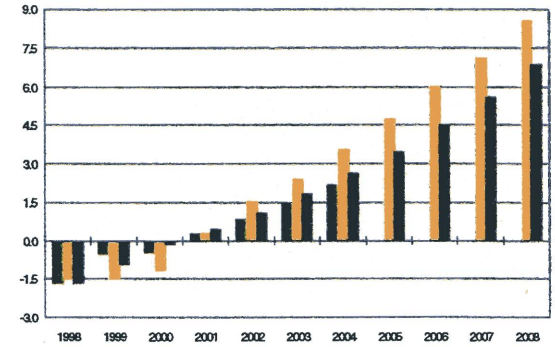
OECD: coarse grains

Outlook for maize net exports – Argentina
(mio t)

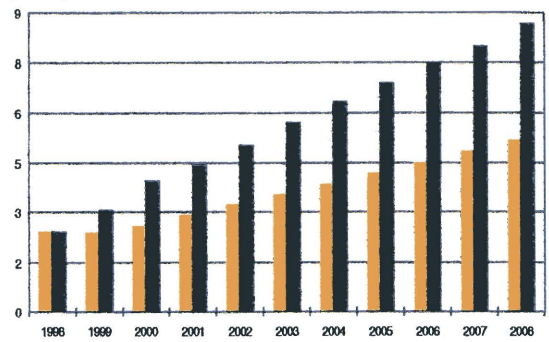


OECD: coarse grains

Outlook for coarse grains net imports – China
(mio t)

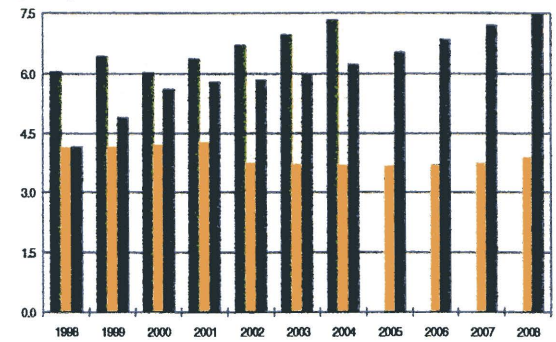


Outlook for maize net imports – South East Asia
(mio t)



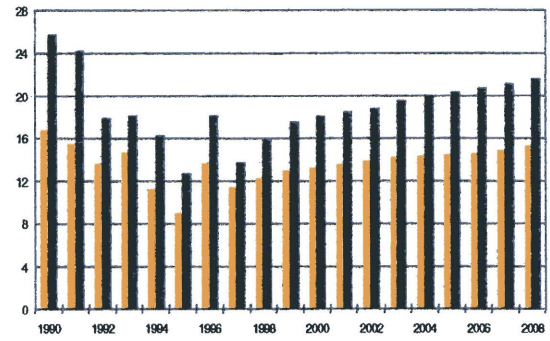
South East Asia: Malaysia, Indonesia, Thailand & Philippines

Outlook for maize net imports – Mexico
(mio t)



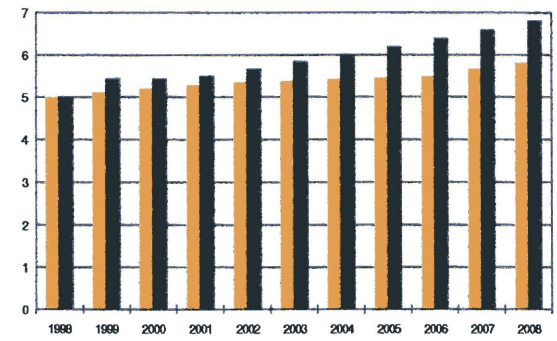
OECD: coarse grains

World barley trade, 1990 – 2008
(mio t)



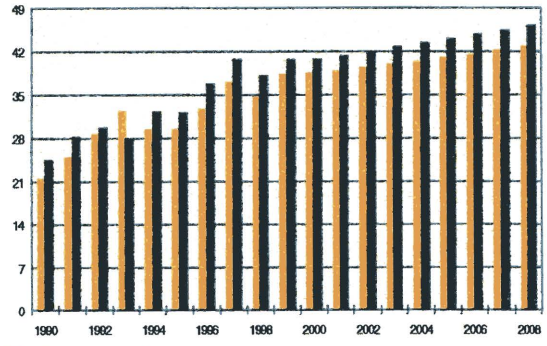
FAPRI: net trade

Outlook for barley net imports – Saudi Arabia
(mio t)



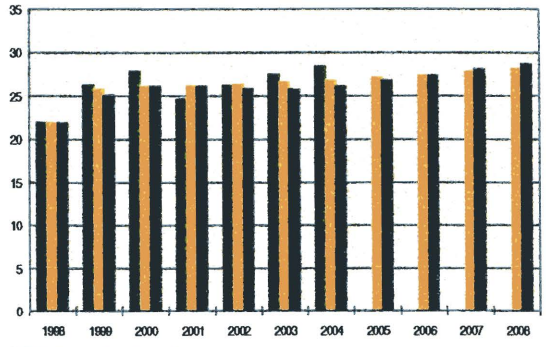
OECD FAPRI USDA

World soya bean trade, 1990 – 2008
(mio t)



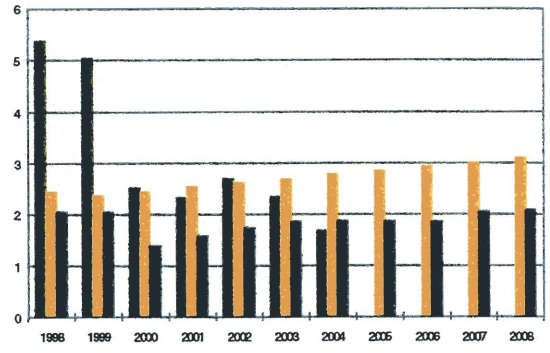
FAPRI: net trade

Outlook for soya bean net exports – USA
(mio t)



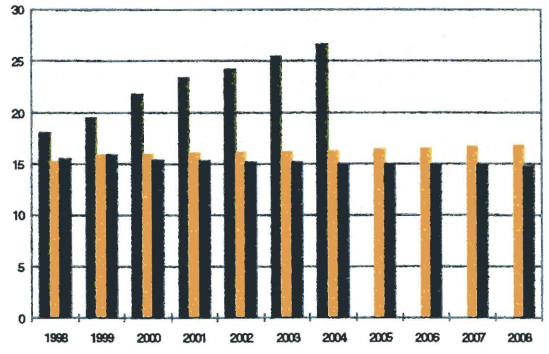
OECD: total oilseeds

Outlook for soya bean net exports – Argentina
(mio t)



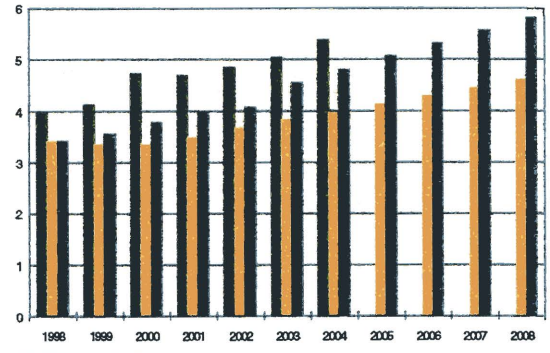
OECD: total oilseeds

Outlook for soya bean net imports – European Union
(mio t)



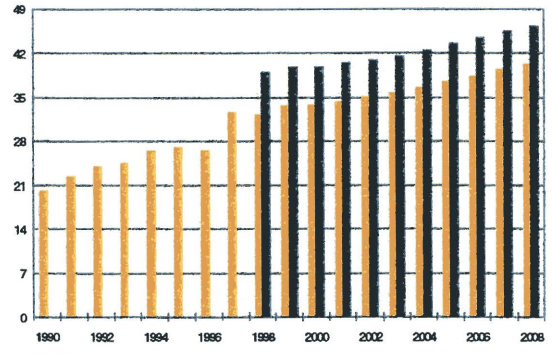
OECD: total oilseeds

Outlook for soya bean net imports – China
(mio t)



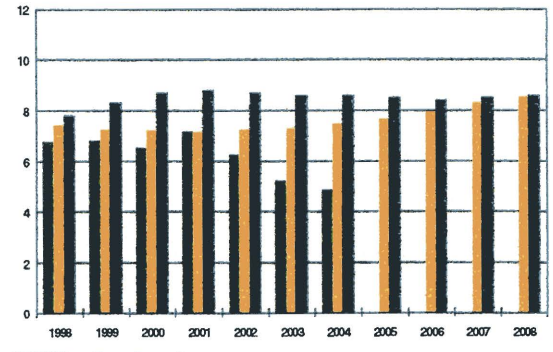
OECD: total oilseeds

World soya meal trade, 1990 – 2008
(mio t)



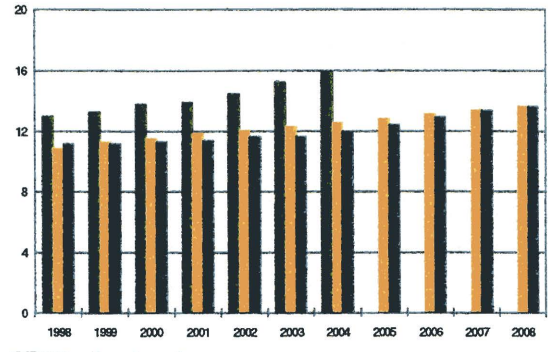
FAPRI: net trade

Outlook for soya meal net exports – USA
(mio t)



OECD: oilseed meals

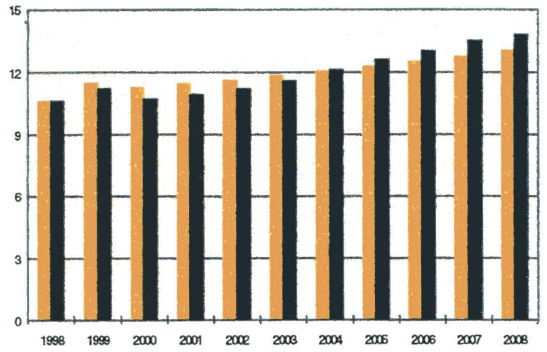
Outlook for soya meal net exports – Argentina
(mio t)



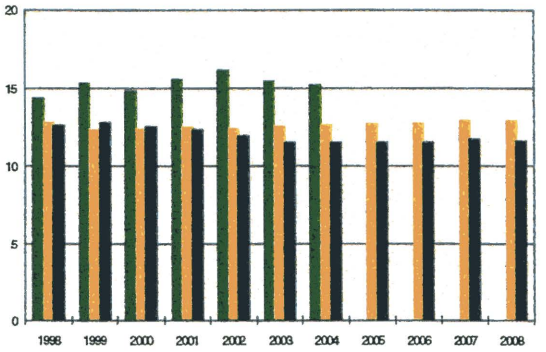
OECD: oilseed meals

OECD FAPRI USDA

Outlook for soya meal net exports – Brazil
(mio t)

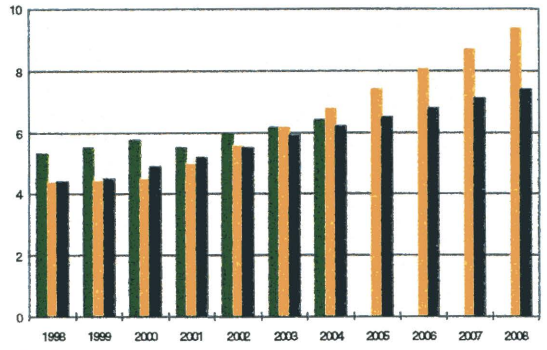


Outlook for soya meal net imports – European Union
(mio t)



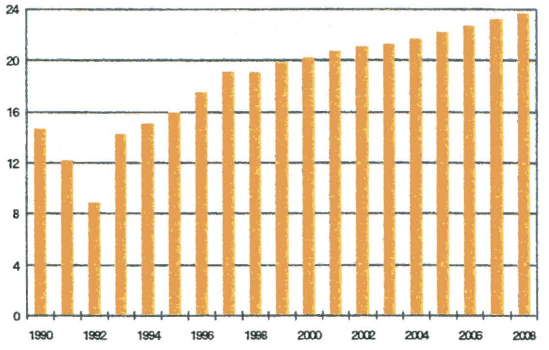
OECD: oilseed meals

Outlook for soya meal net imports – China
(mio t)



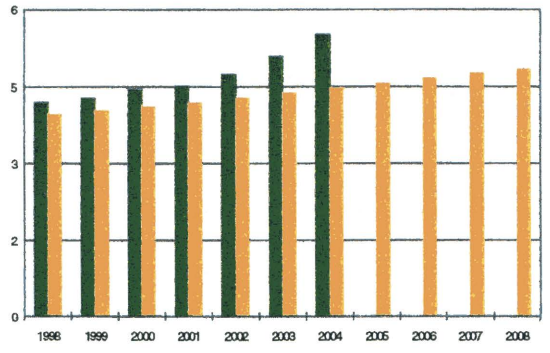
OECD: oilseed meals

World oilseed oil trade, 1990 – 2008
(mio t)

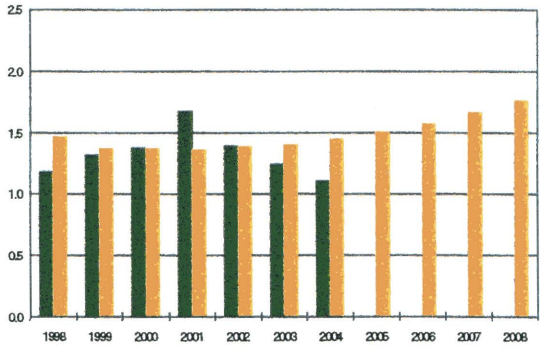


Net trade

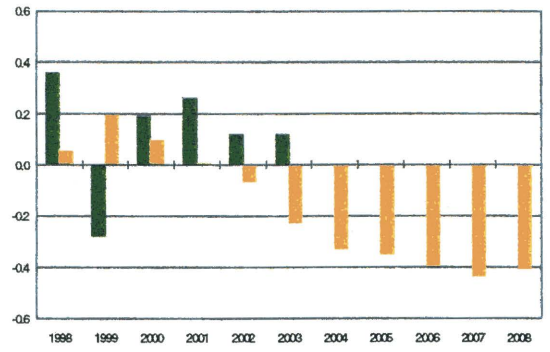
Outlook for oilseed oil net exports – Argentina
(mio t)



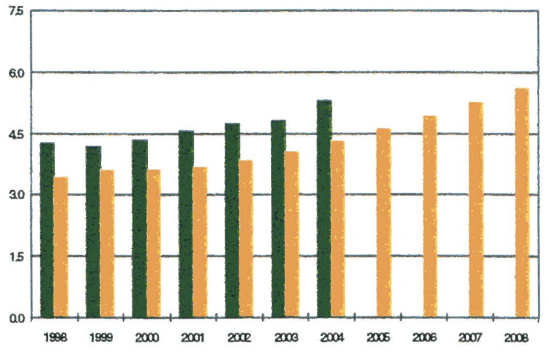
Outlook for oilseed oil net exports – USA
(mio t)



Outlook for oilseed oil net exports – European Union
(mio t)

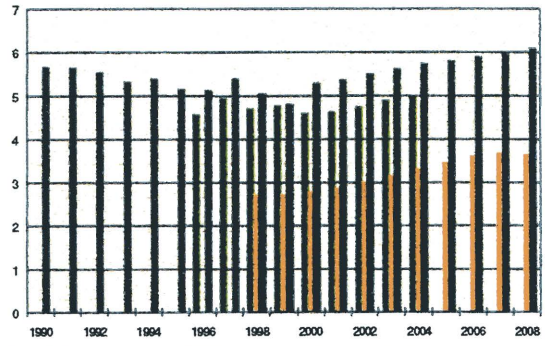


Outlook for oilseed oil net imports – China
(mio t)



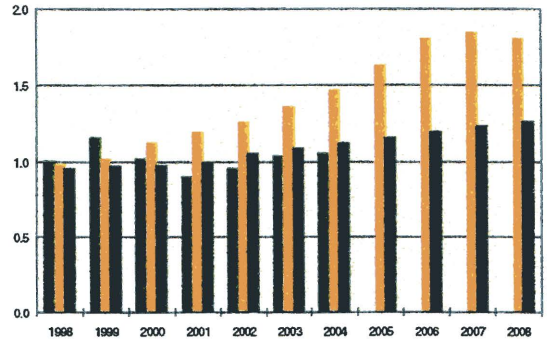
OECD FAPRI USDA

World beef trade, 1990 – 2008
(mio t)

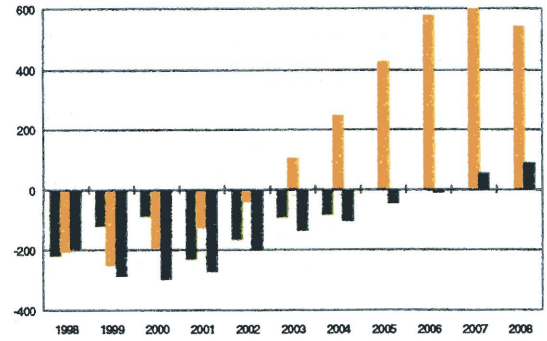


FAPRI: net exports; OECD: exports from OECD zone

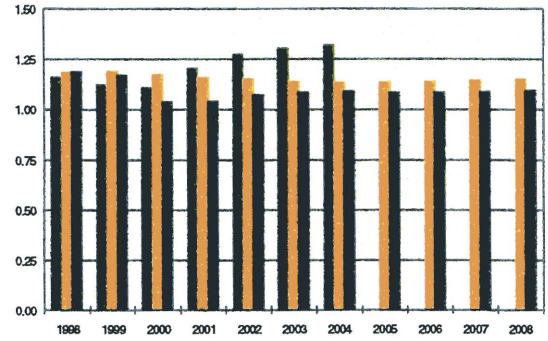
Outlook for beef exports – USA
(mio t)



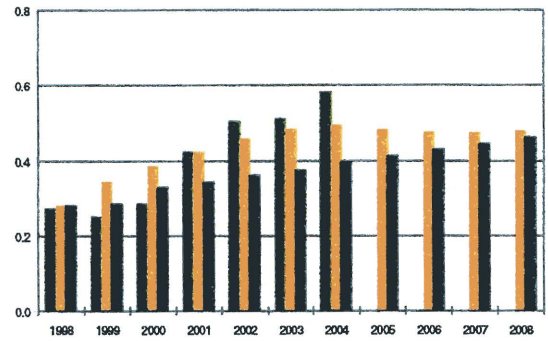
Outlook for beef net trade – USA
('000 t)



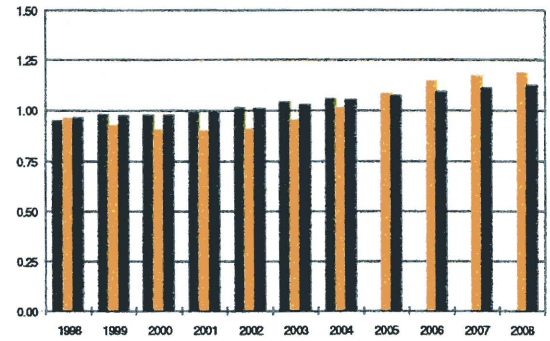
Outlook for beef exports – Australia
(mio t)



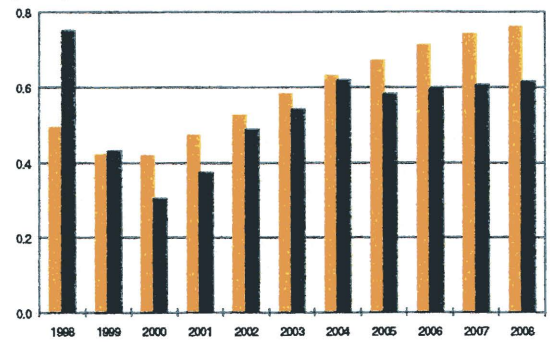
Outlook for beef exports – Argentina
(mio t)



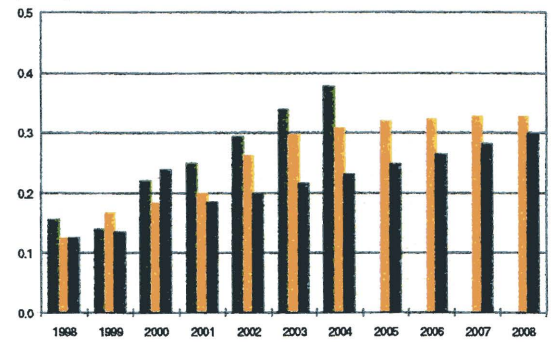
Outlook for beef imports – Japan
(mio t)



Outlook for beef imports – Russia
(mio t)

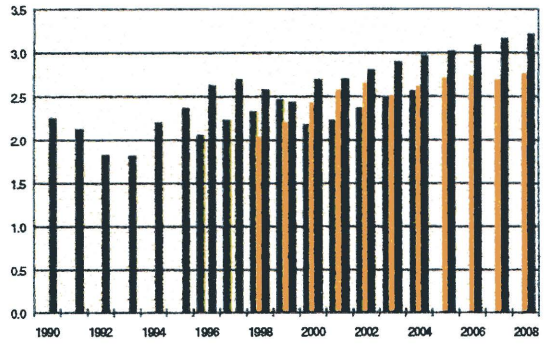


Outlook for beef imports – South Korea
(mio t)



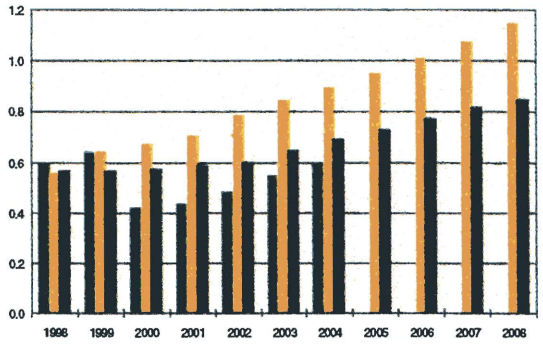
OECD FAPRI USDA

World pork trade, 1990 – 2008
(mio t)

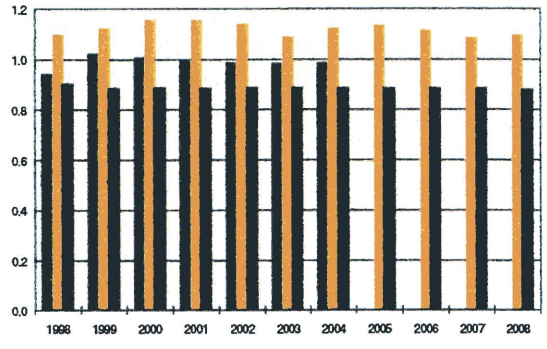


FAPRI: net exports; OECD: exports from OECD zone

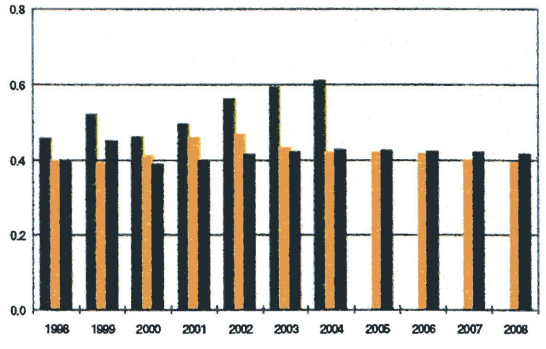
Outlook for pork exports – USA
(mio t)



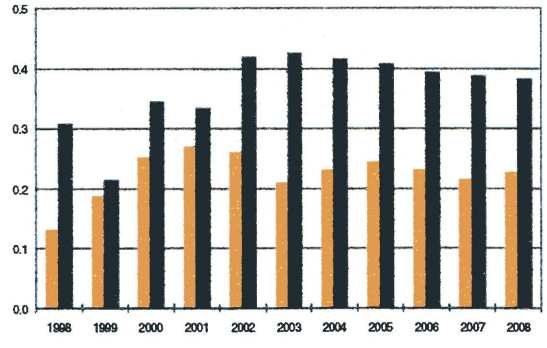
Outlook for pork exports – European Union
(mio t)



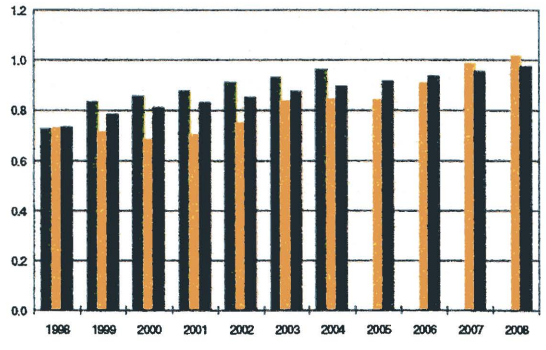
Outlook for pork exports – Canada
(mio t)



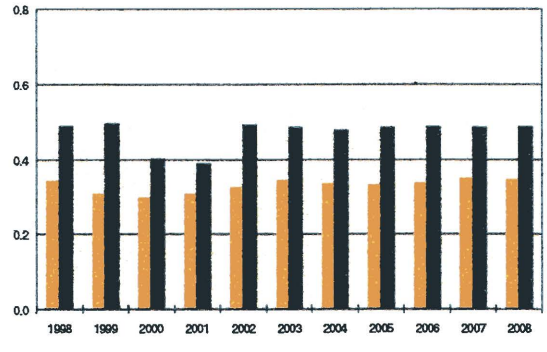
Outlook for pork net exports – Eastern Europe
(mio t)



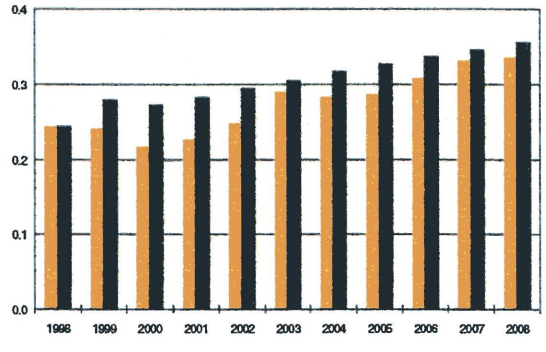
Outlook for pork imports – Japan
(mio t)



Outlook for pork imports – Russia
(mio t)

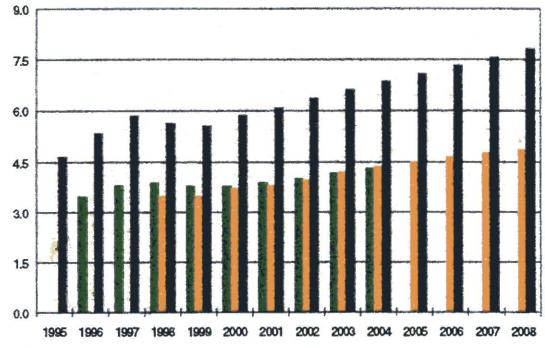


Outlook for pork imports – Hong Kong
(mio t)



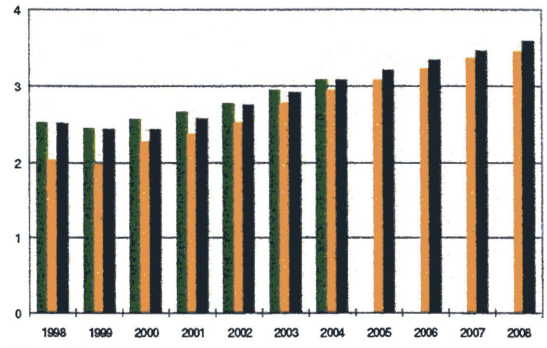
OECD FAPRI USDA

World poultry trade, 1995 – 2008
(mio t)



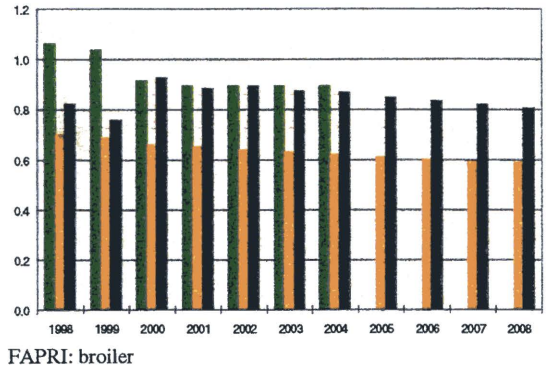
FAPRI: broiler, net exports; OECD: exports from OECD zone

Outlook for poultry exports – USA
(mio t)



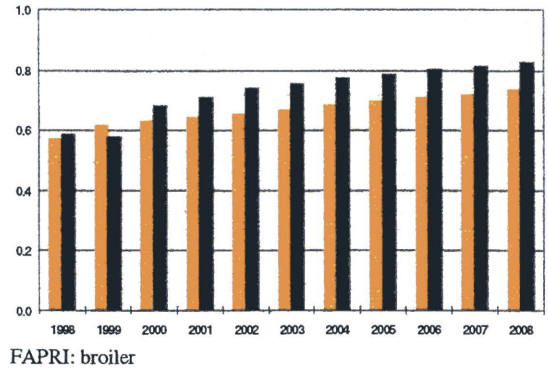
FAPRI: broiler

Outlook for poultry exports – European Union
(mio t)



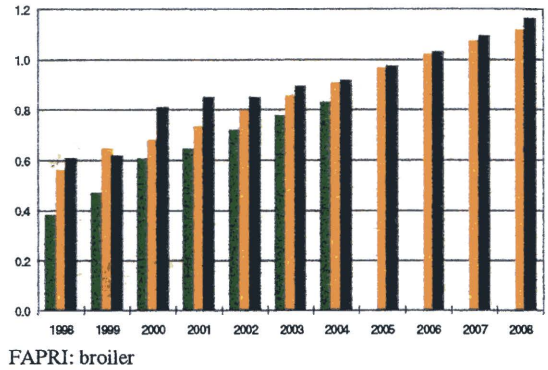
FAPRI: broiler

Outlook for poultry exports – Brazil
(mio t)



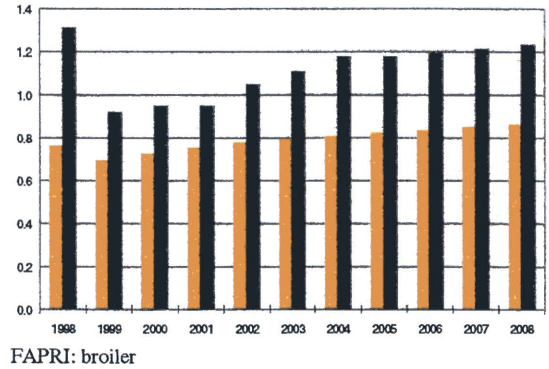
FAPRI: broiler

Outlook for poultry net imports – China & Hong Kong
(mio t)



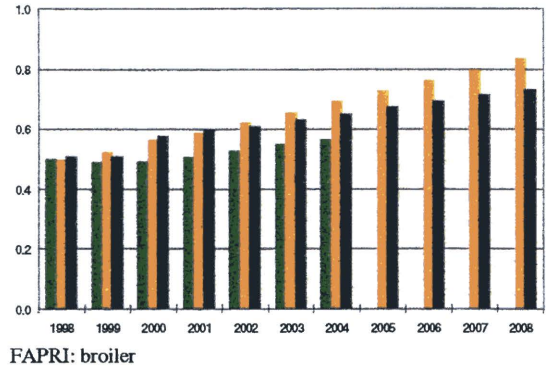
FAPRI: broiler

Outlook for poultry imports – Russia
(mio t)



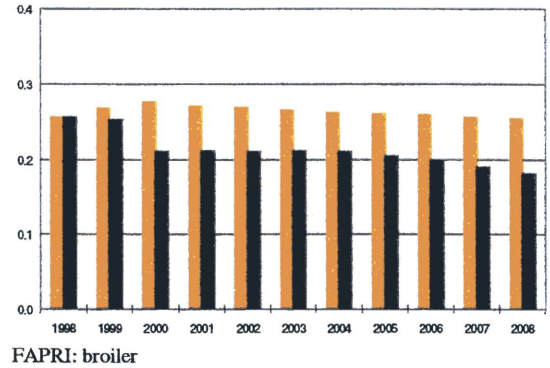
FAPRI: broiler

Outlook for poultry imports – Japan
(mio t)



FAPRI: broiler

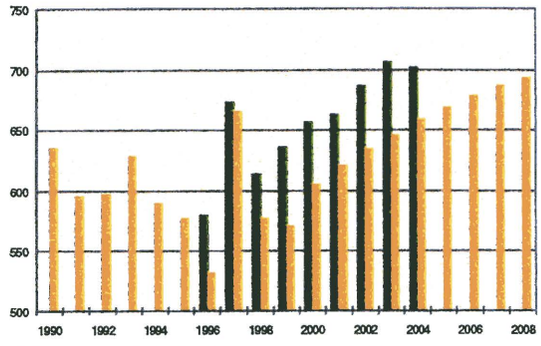
Outlook for poultry net imports – Saudi Arabia
(mio t)



FAPRI: broiler

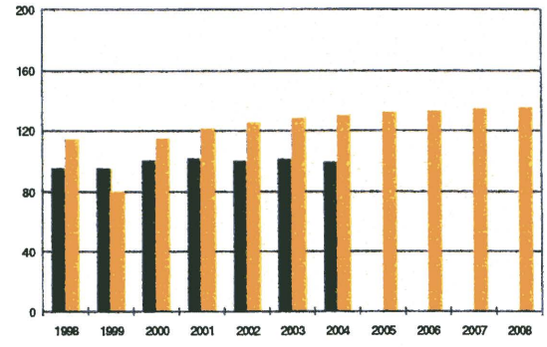
OECD FAPRI USDA

World butter trade, 1990 – 2008
('000 t)

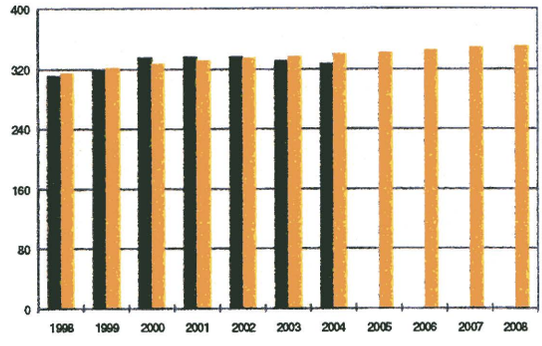


FAPRI: net trade; OECD: exports from OECD zone

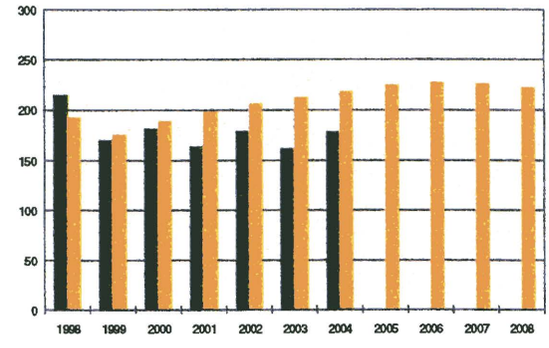
Outlook for butter net exports – European Union
('000 t)



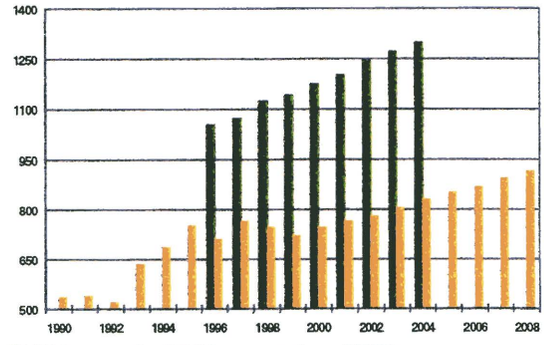
Outlook for butter net exports – New Zealand
('000 t)



Outlook for butter net imports – Russia
('000 t)

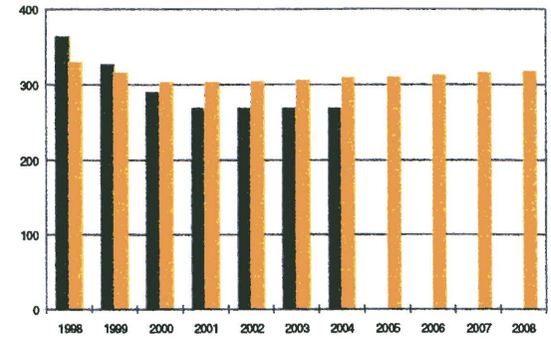


World cheese trade, 1990 – 2008
('000 t)

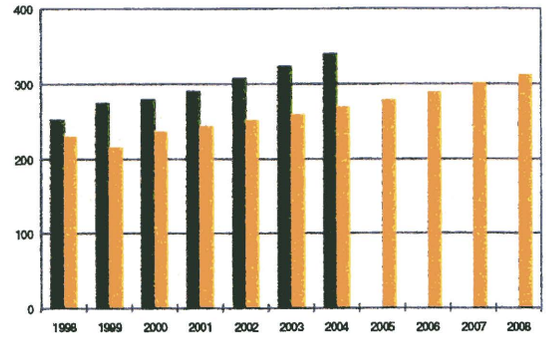


FAPRI: net trade; OECD: exports from OECD zone

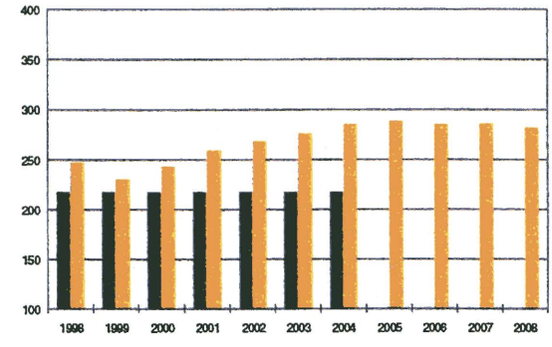
Outlook for cheese net exports – European Union
('000 t)



Outlook for cheese net exports – New Zealand
('000 t)

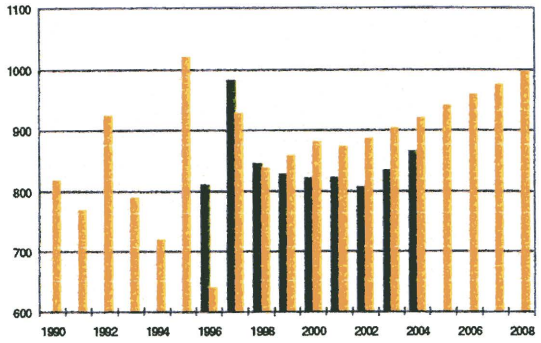


Outlook for cheese net imports – Russia
('000 t)



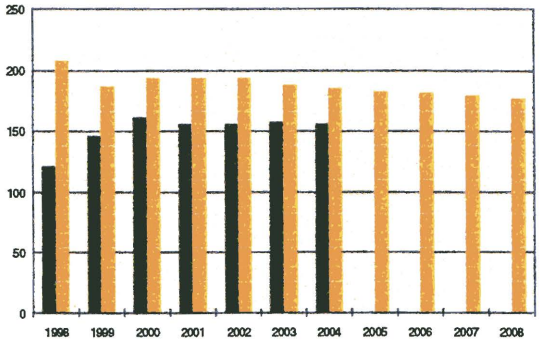
OECD FAPRI

World SMP trade, 1990 – 2008
('000 t)

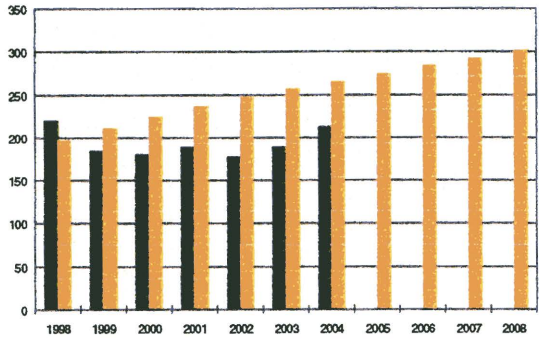


FAPRI: total net trade; OECD: exports from OECD zone

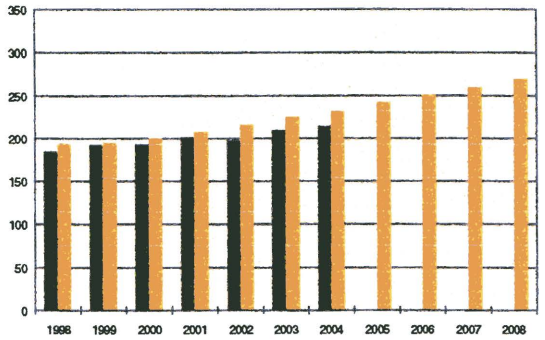
Outlook for SMP net exports – European Union
('000 t)



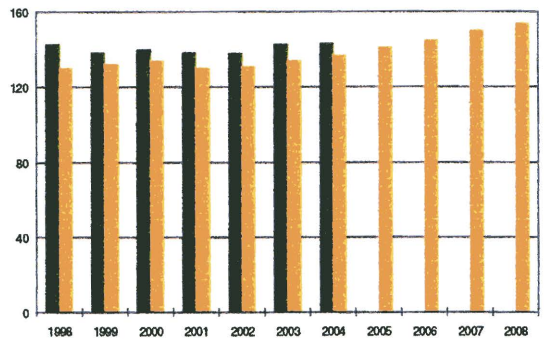
Outlook for SMP net exports – New Zealand
('000 t)



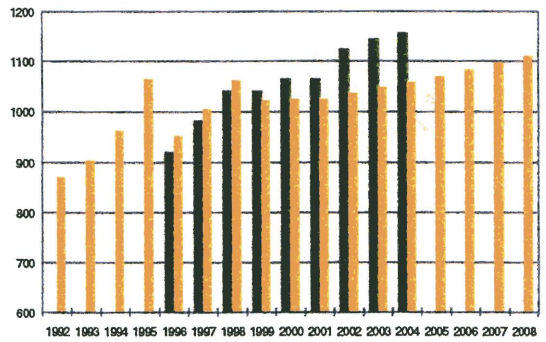
Outlook for SMP net exports – Australia
('000 t)



Outlook for SMP net imports – Mexico
('000 t)

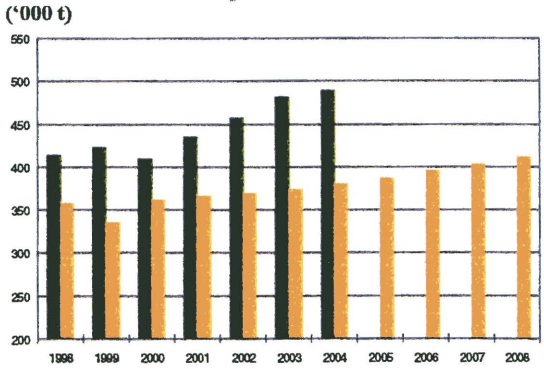


World WMP trade, 1992 – 2008
('000 t)

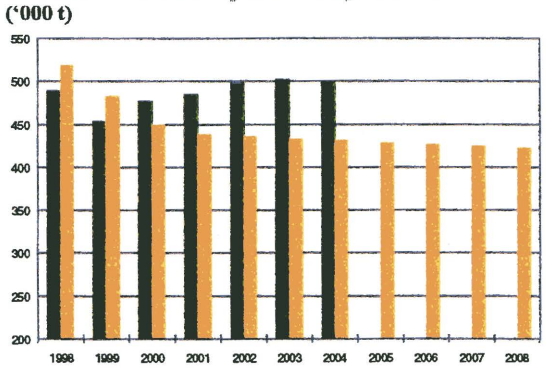


FAPRI: total net trade; OECD: exports from OECD zone

Outlook for WMP net exports – New Zealand
('000 t)



Outlook for WMP net exports – European Union
('000 t)



OECD FAPRI

European Commission
Directorate-General for Agriculture

This report gives an overview of market prospects by the year 2006 for cereals, oilseeds, meat and dairy products in the European Union, the Central and Eastern European Countries as well as at world level.