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Prospects for agricultural markets 2001-2008

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Directorate-General for Agriculture

PROSPECTS FOR

AGRICULTURAL MARKETS

2001 – 2008

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NOTE TO THE USERS

The medium-term perspectives presented in this publication consist of a set of market projections elaborated on the basis of specific assumptions regarding macro-economic conditions, the agricultural and trade policy environment, weather conditions and international market developments. They 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, which at the time of projections were judged plausible. As such, they should be seen as an analytical tool for medium-term market and policy issues, not as a short-term forecasting tool for monitoring market developments and addressing short-term market issues.

This report is based on the statistical information available in May 2001.

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Foreword

The Directorate-General for Agriculture of the European Commission has published in recent years an overview of market trends and medium-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 2008, based on a certain number of assumptions and on the statistical information available in May 2001.

This report contains three chapters. The first chapter centres on the market prospects by the year 2008 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
DG AGRI	Directorate-General for Agriculture
EU	European Union
EUROSTAT	Statistical Office of the European Communities
FAIR	Federal Agriculture Improvement and Reform (US)
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
LFA	Less Favoured Areas
lw	Live weight
mio	Million
OECD	Organisation for Economic Co-operation and Development
OTMS	Over Thirty Months Scheme
SAPARD	Special Accession Programme for Agricultural and Rural development
SMP	Skimmed Milk Powder
SRM	Specific Risk Material
t	Metric tonne
URAA	Uruguay Round Agreement on Agriculture
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

Introduction

This chapter summarises the main results and underlying assumptions of medium-term projections for some key agricultural products in the European Union for the period 2001 - 2008. The results presented are **based on the statistical information available in May 2001**.

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, which, at the time of projections were judged plausible. The most important assumptions concern the domestic agricultural policy and trade environment:

(1) All policy instruments and measures are expected to operate under the current rules or within the changes already decided by the end of May 2001 for the 2001-2008 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) **It is assumed that all commitments taken within the Uruguay Round Agreement on Agriculture (URAA), regarding market access and subsidised exports will be fully respected.** Thus, subsidised exports are expected not to exceed the annual URAA limits, whereas imports under current and minimum access are fully incorporated. **In addition, the URAA commitments are assumed to remain unchanged over the 2001-2008 period**.

(3) The trade agreements that have been concluded by the EU with the 10 CEECs candidate countries in the course of 2000 have been taken into account in these market projections.

Arable crops

Cereals

The medium-term projections depict an outlook for the EU cereal markets that would appear rather favourable. In spite of a further expansion in cereal production, total cereal stocks would remain constrained at reasonable levels for most of the projection period as the implementation of the Agenda 2000 CAP reform would strongly improve cereal competitiveness on both the internal and external markets. The expected recovery in world cereal markets and a favourable currency environment would also contribute significantly to the overall balance of EU cereal markets, with the notable exception of rye.

Yet, the ability of the domestic and international markets to absorb the expansion of EU cereal production and, thus, the stability of EU cereal markets would become increasingly

and critically dependent on the situation on the world cereal markets and on the developments of the €/$ exchange rate.

After an estimated fall of 1 mio ha in 2001 linked to the recovery in oilseed prices (in € terms), the second cut in cereal support prices and the climatically-induced short-term expansion in voluntary set-aside, **total cereal area** would benefit in 2002 from some shift in area from non-textile linseed and oilseed crops and reach to 37.4 mio ha. Cereal area would also be supported by market prices above support levels for common wheat, maize and durum wheat and by the return of voluntary set-aside to more normal levels. From 2003/04 onwards, slightly better price prospects for oilseeds would generate a decline in total cereal area of around 0.5 mio ha over the next six years as direct payments are fully harmonised across COP crops (i.e. cereals-oilseeds-protein). Total cereal area would gradually decrease to 36.8 mio ha by 2008/09.

Yield trends observed since the mid-1980s are assumed to continue over the projection period, although at a lower rate (around 1.3 % per annum). Average cereal yields would reach 6.15 t/ha in 2008/09, with the highest increases for maize, soft wheat and rye. After a record cereal crop estimated at 212.6 mio t in 2000, **total harvested cereal production** is projected to fall to 206.8 mio t in 2001. It would then bounce back in 2002 and, driven by increasing yields that would largely more than compensate the gradual fall in total cereal area, expand significantly over the medium term to reach 226.5 mio t in 2008. Owing to higher area and yield projections (5 % and 12 % respectively as compared to 1999), **common wheat production** would rapidly expand over 100 mio t and reach a historical high of 106 mio t in 2008. In contrast, **coarse grain production** would fall in the short term from the high levels recorded in 2000, before rising slowly to around 111 mio t over the medium term as yield growth would somewhat outpace the slow decline in area.

After a relative stagnation in 1999, the implementation of the Agenda 2000 CAP reform, the moderate recovery in the prices of the oilseed complex and a relatively weak €/$ exchange rate are all expected to boost cereal competitiveness and to generate a significant increase in domestic demand for cereals. **Total cereal demand** is projected to increase strongly over the medium term, from 181.1 mio t in 1999/00 to 199 mio t in 2008/09. Most of this 18 mio t growth in cereal demand would be driven by **total cereal feed usage**, which would increase to 125.8 mio t in 2008/09 (i.e. an additional 12 mio t), thanks to a larger demand for feed products from the livestock sector (notably from poultry production) and an improved market share. **Total cereal non-feed uses** are also projected to increase by some 6 mio t, from 67.3 mio t in 1999/00 to 73.2 mio t in 2008/09 driven mainly by industrial demand (especially soft wheat).

The implementation of the Agenda 2000 CAP reform, the recovery in world cereal prices and a projected sustained import demand (notably from North Africa and the Middle East) are all foreseen to improve EU cereal competitiveness and set the stage for a sustained development in EU cereal exports over the next seven years. These favourable perspectives would be reinforced by a relatively favourable €/$ exchange rate that is anticipated to further enhance the ability of the EU to export beyond its URAA limits on subsidised exports. After a short-term fall in 2000/01, **total cereal exports** are estimated to increase gradually and reach 32.5 mio t by 2008/09, i.e. well above the URAA limits on subsidised exports (all durum wheat and some significant quantities of soft wheat and barley/malt would be exported without subsidies). **Total cereal imports** are assumed to increase to 7 mio t in the short run and to remain relatively stable over the medium term.

Total cereal stocks would remain below or at around 35 mio t until 2004/05, as the expansion in cereal production would be somewhat limited by the increase in voluntary set-aside and mainly absorbed by a growing domestic feed demand. From 2004/05 onwards, the steady rise in the yields of many cereals would not be able to keep pace with the continuous growth in domestic and international demand and cereal prices would start rising (in particular for soft wheat and barley). In contrast, **rye stocks would continue to build up**, though at a slower rate than in the initial part of the projection period as some land would shift to more profitable cereals. Overall cereal stocks would grow steadily to reach around 40 mio t by 2008/09, of which about 13 mio t of rye in public stores.

The markets for **soft wheat**, **durum wheat** and **maize** are expected to remain rather tight throughout the whole period. Despite an increase in production levels, these cereals would benefit from a steady growth in domestic and/or external demand, which is foreseen to keep their market prices above support levels. Whereas the **barley** market would rapidly improve and become broadly balanced around 2003/04, **the market for rye is projected to become increasingly and structurally unbalanced over the whole projection period as the potential for adjustment in the supply and demand of this cereal would remain largely constrained by its relatively high prices**. The limited scope for increasing rye exports, a stagnating human demand and strong competition from other cereals on the domestic feed market (combined with nutritional limitations) are all foreseen to make public stores an increasingly attractive market outlet for this cereal. Total rye stocks would increase from 3.8 mio t in 1999/00 to 13.8 mio t in 2008/09, of which 13 mio t in intervention stocks.

Oilseeds

After a marked fall estimated at 0.4 mio ha in 2000/01 (due mainly to rape seed), the **total "food" oilseed area** is forecast to rebound strongly in 2001/02 thanks to an expansion in sunflower area. It would then decline further in 2002/03, when it would bottom out at 4.4 mio ha with the full implementation of the Agenda 2000 CAP reform. Total oilseed area would gradually and slowly recover to 4.6 mio ha as it would be supported by improved price prospects and productivity increases.

Soya bean and **rape seed area** would fall by 21 % and 17 % respectively in 2002/03 relative to 1999/00, before stabilising at around 300 000 ha and 2.3 mio ha respectively over the medium term. In contrast, after a small short-term decrease in 2000/01 and 2002/03, the area allocated to **sunflower seed** is foreseen to increase slightly by the end of the period relatively to 1999/00. Its area would stabilise between 1.9 mio ha and 2.0 mio 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 2000/01–2008/09 period.

Oilseed yields are expected to increase in the medium term and reach 2.8 t/ha on average in 2008/09 (i.e. a 1.5 % annual average increase between 2001/02 and 2008/09). Oilseeds (food) **production** is projected to fall from 13.3 mio t in 1999/00 to 11.0 mio t in 2002/03 as total oilseed area drops. It would then increase slightly over the medium term to reach 12.8 mio t in 2008/09 as yields resume rising and oilseed area recovers. Non-food oilseed production would evolve together with the level of set-aside and stabilise at around 2.3-2.4 mio t over the medium term.

Uncertainties

These projections 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 that could have implications for the EU arable crop markets, notably the future developments on the world cereal and oilseed markets and the medium-term outlook for the **€/$ exchange rate**. Any change in any of these assumptions could significantly alter the medium-term perspectives. A sensitivity analysis shows that if a weaker € environment would not drastically change the overall market perspectives for the arable crop sector, a stronger € (i.e. a €/$ exchange rate gradually falling to 0.90 from 2004 onwards) would in contrast generate some more significant outcome, with a further increase in total stocks of around 17 mio t (equally shared between barley and rye).

Meat and livestock

Beef and veal

By the middle of 2000 the EU beef market was experiencing a situation of relative equilibrium with consumption back to pre-BSE level, good exports, no stocks and prices above support level. The situation changed rapidly in October, when a series of events resulted in a new food scare across Europe, with beef consumption falling rapidly, reaching –27 % in December 2000, compared to the same month of 1999. After a good development in the first 10 months, the drop in November and December 2000 was enormous and sufficient to bring total EU consumption for the year 2000 down to 7.26 mio t, -5 % compared to 1999.

Beef and veal production for the year 2001 is subject to a number of short-term disturbances, and in particular, the large number of animals that have been retained in the farms at the end of 2000 and are expected to be slaughtered in 2001, the "Purchase for Destruction" scheme and the Foot and Mouth (FMD) containment culling that are assumed to withdraw respectively around 230 000 t and 150 000 t in 2001, the estimated impact of the "Special Purchase" scheme, which, at the end of May 2001 is still not fully applied across the EU. In addition to this, we assume that the OTMS scheme in the UK will be maintained until the end of 2002.

After taking into account all these factors, and under the assumption that changes in the production level are only possible after a certain time lag, we estimated beef and veal meat production destined for human consumption at around 7.76 mio t in 2001. Production is then estimated to decrease in the year 2002, as the beef cycle enters the downward path, and reach a minimum by the years 2004/2005 at around 7.67 mio t. Beef production should then slightly increase to reach 7.85 mio t by 2008. Compared to last year's projections, which did not consider the BSE and FMD crises and therefore can be considered as a reference scenario (what would happen without BSE/FMD crises), production is projected to drop, over the long term (2003-2008), on average by –1 6 %.

Based on the information available for the first months of the year 2001, we assume the reduction of beef consumption for the year 2001 to reach on average –10 % compared to 1999, but we expect beef consumption to recover gradually and return to the decreasing long-term trend after three/four years.

EU **beef imports** are projected to decrease slightly in the short term after the high level recorded in 1999 and 2000, but are likely to increase up to 400 000 t in 2002, and then

stabilise in the medium term. **Beef exports** have been strongly influenced by the recent BSE crisis and the outbreaks of FMD in the UK and in other Member States. With the re-opening of some key markets, notably the Russian market, total beef exports (including live trade) are expected to reach around 500 000 t in 2001 (which represent around 60 % of the GATT limit on subsidised exports). Exports are then projected to recover further and to reach 820 000 t by the year 2003 and then stabilise at this level.

Overall, the assumptions and projections outlined above suggest that the current unbalance in the EU beef market is likely to continue and even deteriorate over the short term, with the creation of large internal surplus (up to 740 000 t by 2003). The situation is expected to improve over the medium term with a projected net de-stocking of around 500 000 t between 2004 and 2007. However, this is not expected to clear stocks that are projected to stabilise at around 240 000 t by the end of the forecast period.

Pig meat

After the big increase in production recorded in 1998 and 1999 **pig meat production** decreased by around -2.4 % in 2000, with a positive impact on producer prices and margins. Production is expected to grow in 2001, and a more substantial increase is projected for the year 2002. Over the medium and longer term, growth rates are anticipated to be lower than in the past. **Pig meat consumption** is expected to increase by around 2 % in the year 2001, partly due to the large drop in beef consumption caused by the BSE scare. The medium and long-term outlook for pig meat **consumption**, is in general positive since pig meat is likely to continue to be favoured by consumers, although clearly less than poultry.

Imports are projected to slightly increase over the medium term, following the increased market access commitments allowed under the double zero agreements. Compared to the record level of 1999, **exports** decreased by around 100 000 t in 2000 and are likely to be lower in the short term. Exports are then expected to slightly increase over the medium term in line with higher EU production and growing international trade.

Poultry

After the slowdown recorded in 1999 due to the French cutback in production, the dioxin crisis in Belgium and the outbreak of avian influenza in Italy, **poultry production** decreased by -1.2 % in 2000, dropping to 8.6 mio t. The BSE crisis in the beef sector benefited mostly the poultry sector, which is quicker to respond to sudden increase in demand. Production for the year 2001 is expected to increase by around 3.4 %. 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. Per capita **consumption** is forecast to increase from 21.4 kg in 2000 to around 24.8 kg by the year 2008. This evolution is comparable with the long-term growth of consumption that has been observed in the past.

After the strong increase recorded over the last few years, **imports** are projected to increase slightly over the medium term, 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. **Exports** are likely to continue to grow slightly in the medium term in line with higher EU production and growing international trade.

Sheep and goat

Production of sheep/goat meat in the EU was strongly affected by the Foot and Mouth epidemic and is expected to drop by around 8 % in 2001. In the medium and long term, after an expected gradual recovery, a slight downward trend both for **production** and per capita **consumption** is expected.

Imports could increase slightly in response to shortcomings of domestic sheep meat due to FMD and to a somewhat better use of market access commitments granted to some third countries as well as the possible impact of increased quotas under the double zero agreement with the 10 CEECs.

Milk and dairy products

Milk

Milk deliveries decreased slightly during the year 2000 and are expected to stabilise at around 114.4 mio t in the following years. For the first time in many years, milk production and deliveries did not reach the available reference quantities for various reasons. Partly this could be attributed to the fact that milk reference quantities for certain member states have been increased in the year 2000 and 2001 as part of the Agenda 2000. The low deliveries are also due to the situation in the UK, which reduced strongly its production as a consequence of a fall in milk prices over the last three years.

In the following years, it is expected that milk deliveries will decline slightly each year, reflecting the continuing slight 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 projected to increase again by the end of the forecast period in line with the quota increase in the years 2005-2008 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 that tend to decrease. In addition, direct sales are not concerned because only the quotas for deliveries will be increased.

The higher milk production, linked to the quota increases decided with Agenda 2000, is likely to slow down somewhat the long-term decline of the **dairy herd**. Assuming a further increase of milk yields by around 1.6 % per year on average over the forecast period, the number of dairy cows in the EU is projected to decline from 20.6 mio animals recorded in 2000 (December survey) to around 18.1 mio animals by the year 2008.

Cheese

The medium and long-term outlook for **consumption** is in general positive, but with a slowdown in the growth rate after the big increase recorded in 2000. Per capita consumption is cautiously forecast to rise from 18.3 kg in 2000 to about 19.5 kg by the year 2008. This represents an annual growth rate of around +0.8 %. Total consumption will increase somewhat faster, i.e. by about +1 %, due to the expected small growth of population.

Exports are likely to slowdown somewhat after the increase recorded in 2000. Over the medium term, it is expected that exports could reach about 430/440 000 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 that, together with expected higher world prices, should contribute to increase the competitiveness of European cheese on the world market. **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 decrease slightly in spite of the higher supply of milk fat due to increased milk deliveries. It appears that the increase in milk deliveries recorded in 1999, which anticipated the 2000/2002 quota increase, was only partly used in the manufacturing of butter and SMP. The production of other dairy products, and in particular cheese, is likely to absorb an important part of the additional deliveries, following the evolution of the demand side. Butter **consumption** tends still to decline despite some signs of stabilisation observed over several years. Forecasts for per capita consumption are set at 4.4 kg by the year 2008, compared to around 4.7 kg currently. This forecast implies an annual rate of change of around -0.8 %. The expected decrease in total consumption is somewhat lower (-0.6 %) due to the anticipated small population increase.

Imports of butter are projected 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, mainly due to normalisation of trade with Russia after the crisis in 1998.

The balance sheet for butter shows that, unless exports are higher than assumed, 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. Over the medium term, the forecast suggests a reduction of SMP **production** from an estimated 1.02 mio t in 2000 to around 891 000 t by the year 2008. 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 230 000 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, after the strong reduction that took place last year, tend to slightly increase in the long term.

Chapter II Prospects for agricultural markets in the candidate countries from Central and Eastern Europe

This chapter provides an overview of the current and expected medium-term developments in 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 implies that the projections are based on current policy, constant exchange rates and that **no assumptions** have been made concerning the date and conditions of entry to the EU by the candidate countries[2].

Cereals

Following weather related difficulties in 1999, the **cereal area** was reduced to 22.5 mio ha. A partial recovery to 23.1 mio ha took place in 2000. A further increase to 24.1 mio ha is estimated for 2001. For the rest of the projection period, it is expected that the total area under cereals in the CEECs will show a minor annual increase of around 130 000 ha and reach 25.1 mio ha in 2008, 6 % above the average cereal area of the 1996-2000 period. Most of this increase is projected to be common wheat. It is foreseen that the area under cereals will remain rather stable or show small increases in most countries from 2001 to 2008, and only Poland and Bulgaria will see significant increases of 400 000 ha and 230 000 ha respectively. It is expected that the **average cereal yield** for the CEECs will continue to increase, at around 1.2 % per annum, and reach on average 3.51 t/ha in year 2008. Based on the above-mentioned assumptions on area and yield an increase in **total cereal production** is expected, up to about 88 mio t in 2008.

Due to a slight increase in per capita consumption, total **human consumption** of cereals is projected to increase by around 0.3 mio t to 19.6 mio t in the period from 2000 to 2008. Following the decrease in animal production and the drought conditions during the summer of 2000, a 6 mio t reduction of cereal **feed use** is expected in 2000/01, most of that in Romania. A 3.5 mio t recovery is projected for 2001 and total feed use of cereals is projected to increase by 5.5 mio t from 43.6 mio t in 2001 to 49 mio t in 2008. This development is mainly due to increasing feed demand in Poland, Hungary and Bulgaria. These feed and food use patterns, combined with relatively stable use for other cereals, will lead to an increase in **total cereal use** from 70 mio t in 2001/02 to 75.5 mio t in 2008/09.

These projections on production and use will leave an increasing amount of cereals available for export. The net **balance of exportable cereals** is foreseen to grow to 12 mio t in 2008, of which 10 mio t of common wheat and just 2 mio t of coarse grains.

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

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

Oilseeds

The **area** grown under oilseeds decreased significantly in 2000 to 3.0 mio ha from 3.7 mio ha in 1999, due to low prices, especially for rapeseed and soya in 1999. A slight recovery in 2001 to 3.1 mio ha is foreseen. It is projected that the total oilseed area will only show very limited increases to 3.3 mio ha by 2008. **Yield** is foreseen to grow at around 0.7 % annually, a lower rate than that of cereals. Increase is foreseen for rapeseed while sunflower seed should stay mainly unchanged.

Due to the drought in 2000, **oilseed production** decreased to 3.9 mio t. In 2001, a recovery to above 5 mio t is estimated. Based on the projections on area and yields mentioned above, total production should reach 5.6 mio t in 2008. This is below the record crop of 6 mio t in 1999.

Internal use/crushing is expected to increase from 4.4 mio t in 1999/00 to 4.8 mio t in 2008/09. The quantities available for exports should remain stable at around 0.8-0.9 mio t with most of this being rapeseed.

Milk

It is projected that the **number of dairy cows** will continue to decrease until 2008. The total number of dairy cows decreased from 7.7 mio in 1999 to 7.3 mio in 2000. A further reduction to just 7.1 mio cows is expected in 2001. It is projected that the dairy cow numbers should continue to decline by around 120 000 heads per year until 2008, due to the continued restructuring pressure in the dairy farming sector, which is not expected to disappear in the immediate future. However, this annual reduction is lower than that observed in the 1990s. It is projected that the **average yield per cow** should go up on average by 1.3 % annually in the projection period (at the same percentage rate as in the EU).

The increase in yield per cow coupled with the decrease in cow numbers lead to a slight decrease in **milk production** by no less than 1 mio t from 28.3 mio t in 1999 to 27.3 mio t in 2000, followed by a minor decrease to 27.2 mio t in 2001. From 2002 onwards, production is projected to show an annual decrease of little more than 100 000 t and should reach 26.3 mio t in 2008. Of this projected 1 mio t decrease from 2001 to 2008, 0.7 mio t would take place in Poland and 0.2 mio t in Romania.

It is assumed that the internal use of milk and milk products should remain stable at 25.6 to 25.3 mio t. Whereas milk used for feed should decrease, the human consumption should stay mostly unchanged at around 23.5 mio t. An increased demand for fresh milk products and cheese will be offset by a decrease in drinking milk use, mostly resulting from declining direct sales and on farm consumption.

Based on these projections on production and consumption, the CEECs are projected to have a net exportable balance of 1.5 mio t in 2001, down from 2.7 mio t in 1998, and projected to decrease gradually to 0.85 mio t in 2008.

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 in line with the decrease in the dairy herd. The increase in suckler cow production will not

compensate for this decrease in beef production from the dairy herd. Total beef and veal production is projected at 0.9 mio t in 2008 down from 1.11 mio t in 1998.

Internal consumption decreased in the CEECs during the second half of the 1990s as production declined. It is projected that total internal use should decrease to 0.96 mio t during the forecast period. This development together with the reduced production would lead to most of the CEECs becoming net importers of small amounts of beef and veal.

Pig meat

Pig meat is the most important meat produced and consumed in the CEECs, and is expected to continue to be so. After a reduction in production following the Russian crisis, total pig meat production is projected to increase from 4.1 mio t in 2001 to 4.6 mio t in 2008. A significant part of this supplementary production is estimated to be consumed in the CEECs. Per capita consumption in the CEECs is projected to go up from 39.1 kg in 2000 to 42.1 kg in 2008. Higher consumption is expected in all CEECs.

It is expected that the CEECs will be able to continue to be net exporters of pig meat, with the net exportable surplus decreasing from 200 000 t in 1999 to 80 000 t in 2000. A further reduction is estimated for 2001. It should then return back to around 200 000 t in 2008. These net exports should mostly come from Poland and Hungary. These projections are based on the assumption that the producers and processors in the CEECs can overcome most cost pressures and ensure market share domestically and on export markets.

Poultry meat

Since transition, consumption and production have constantly set new highs nearly every year. It is projected to continue so, and production should go beyond 2 mio t in 2006 compared to 1.7 mio t in 2000. This increase is the result of a yearly growth of more than 2.0 %, and the most significant increases are projected to take place in Romania, Hungary 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 annually, is assumed to grow by 3.1 kg from 2000 to 2008 - or by more than 2 % annually, and reach 19 kg/capita in 2008. During the projection period it is foreseen that the CEECs should have a net exportable balance increasing to 120 000 t in 2008. Hungary is projected to continue to be the main net exporter.

Chapter III Prospects for world agricultural markets

The prospects for world agricultural markets are mainly based on reports and projections released by the most prominent institutions in this field, namely the FAPRI, the OECD, the USDA and the FAO. These organisations foresee that, in the initial years of the outlook period, agricultural markets would gradually recover from the marked and prolonged downturn that resulted in weak agricultural commodity prices. Longer-term developments in the agricultural markets would reflect an improved macro-economic environment with more broadly based, robust and sustainable growth. Combined with higher population and changes in dietary pattern, notably in many emerging economies, these prospects for stronger economic growth would support a steady increase in food demand.

World trade in agricultural commodities would exhibit a sustained expansion as demand for food products would outpace production, especially in many developing countries. The tightening of the stock-to-use ratio would in turn strengthen world prices over the medium term. Most of the growth would come from the non-OECD regions, which would constitute the main driving force behind these favourable perspectives.

However, if the main trends in market fundamentals may all reasonably be expected to be positive, it is important to stress that these projections remain subject to many uncertainties that should moderate the strong pattern forecasted for future trade and price growth. The most important include the future course of agricultural policy reforms, the new round of multilateral trade negotiations, the future macro-economic perspectives (especially in view of the short-term concerns about a steeper-than-expected downturn in world growth led by a marked slowdown in the US and a stalling recovery in Japan) and the scope for further productivity growth in some regions. Some recent market developments, such as the crises in the animal sector of the EU, could also have a significant impact on the outlook of agricultural markets. In view of these uncertainties, a cautious assessment of these relatively favourable prospects is deemed necessary.

Cereals

World cereal markets would gradually emerge from a short-term situation marked by large supply, ample stocks and relatively weak demand. Over the medium term, higher cereal demand, fuelled by an improved economic environment, population growth as well as changes in the dietary pattern in some major importing countries, would generate a tightening of stock-to-use ratios. As domestic supply is not projected to meet the pace of a rapidly expanding demand in many developing countries, including China, North Africa and Latin America, the growth in cereal consumption would set the stage for a solid increase in global cereal trade. After 15 years of relative stagnation, total cereal trade is foreseen to increase by 17 % by 2008/09, with coarse grains exhibiting a stronger pattern driven by increasing meat consumption in many developing countries and the ensuing expansion of their livestock sector.

Global trade in coarse grains would strengthen with annual growth averaging about 2.2 %-2.6 %, whereas wheat trade would demonstrate a more modest pattern with an annual average ranging between 1.3 % and 1.8 % over the 2000/01-2008/09 period.

After bottoming out in 1999/00, world prices would exhibit a modest and gradual recovery over the medium term as supply adjusts and global demand strengthens. HRW wheat prices would reach 152 $/t by 2008/09 in the FAPRI projections (the SRW wheat, which broadly corresponds to EU wheat quality, generally quotes around 10 % below the HRW wheat reference), whereas maize and barley prices would exhibit a similar trend at 112 $/t and 102 $/t[3] respectively by the end of the projection period. A similar price outlook is projected by the OECD, with wheat and maize prices strengthening over the medium term to 148 $/t and 108 $/t respectively in 2006/07. Durum wheat prices would follow a similar trend, rising from around 150 $/t in 2000/01 (for EU durum wheat quality) to 180 $/t by 2008/09.

[3] OECD projections: St Lawrence reference.

Oilseeds

The oilseed sector is still foreseen to demonstrate a slow and modest recovery from a current situation characterised by very weak prices, stemming from excess supplies, relatively weak demand and a combination of policy and macro-economic factors (notably the support system in the US). In the longer run, the robust expansion in the demand for oilseed and oilseed products that is anticipated by most agencies would contribute to gradually restore market balance as supply exhibits only moderate increases. Global demand would benefit from the consolidation of the recovery in world economic growth that would stimulate increased human consumption of vegetable oils as well as the use of oilseed meals for the livestock sector. Trade in oilseeds is anticipated to increase faster over the projection period than in the 1980s, but more slowly 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 thanks to an improved demand. By 2008/09, soybean prices would reach 236 $/t in the FAPRI projections (the OECD anticipates a similar, though more positive, pattern with soybean prices at 256 $/t by 2006/07). Soybean meal prices would broadly stagnate over the medium term, ranging between 199 $/t and 208 $/t in 2008/09.

Prospects of rising incomes drive the solid expansion in vegetable oil consumption. Palm oil and soybean oil would capture the greatest share of an expanding demand for and trade of vegetable oil. Growth in oilseed oil trade would be stronger than that of oilseeds and oilseed meals, though lower than in the 1990s. The strong dependence of trade in vegetable oil from developing countries, notably China, India and Pakistan, makes the outlook very sensitive to the economic prospects in these countries.

Meat

The general perspectives for the global meat markets would be rather favourable over the medium term with growing production, consumption and trade. The increase in meat consumption would be supported by a favourable macro-economic environment of sustained income growth, in particular in the emerging economies of Asia and Latin America. As higher meat demand would take place in net importing countries, world trade would rise and world prices strengthen over the medium and long term. The FAPRI and USDA projections exhibit an expansion in beef trade ranging between 0.8 mio t and 0.95 mio t over the 2000-2008 period (i.e. by 18 % and 30 % respectively), with most of the growth from Russian, Asian and Mexican imports. Pig meat trade is projected to rise by around 0.6 mio t over the same period (i.e. 25-30 %), driven by strong import demand from China, Japan, Russia and Mexico.

Poultry meat would capture the largest proportion of the increased global meat demand thanks to low production costs and consumer and social preferences. Trade in poultry meat is also projected to trend upwards, with increases in the range of 0.6 to 1.1 mio t (i.e. between 15 % and 22 %). Much would depend on the prospects for import demand from China and Russia, with Russian import demand closely linked to the pace of recovery of the production sector and to the economic and political outlook.

Beef prices would strengthen over the medium term supported by a strong demand and limited growth in production. The magnitude of the recovery would nevertheless remain dependent on the strength of the economic rebound in some key importing countries of the non-OECD area. Furthermore, the changing structure of the world beef market, the

emergence of new exporting countries and the increasing competition from other meats should restrain upward beef price tendencies. Poultry and pig meat prices are generally expected to rise over the projection horizon. However, structural changes and technological improvement in the meat sector should support production growth and thus moderate future price trends. The increasing number of export suppliers and greater competition between meats should also contribute to maintain world prices under pressure.

Milk and dairy products

The OECD and FAPRI projections suggest a rather favourable medium-term outlook for the milk and dairy markets. Stimulated by higher demand and stronger producer prices, milk production is set to expand in a number of countries, mainly outside the OECD area. According to the OECD, world cow milk production is projected to increase by 67 mio t from 2000 to 2006 (i.e. 12 %), with strong gains in China, India, Brazil, Argentina and Mexico.

Higher demand for dairy products would mainly originate from developing countries where growing population, rising disposable income, urbanisation and changing dietary pattern would set the stage for a strong and sustained rise in the consumption of dairy products, in particular of cheese and butter. In contrast, global demand for dairy products in the OECD area is not projected to show major changes over the medium term (even if cheese and whole milk powder are expected to experience some significant gains). As domestic production would not keep pace with the overall demand for dairy products in some regions of the non-OECD area (mainly China, South East Asia, Middle East and the FSU), scope for additional, though increasingly regionalised, trade is foreseen. The OECD anticipates that the gradual shift in world trade from supply-led bulk dairy products (i.e. SMP and butter) towards higher value added products (such as cheese) that has been observed since the mid-1980s, would continue over the medium term. Yet, this trend towards more differentiated products and markets should make trade projections for dairy products more complex as they would become more dependent on dairy firms' cost structure, production and marketing strategy.

After the sharp decline recorded in 1999 for cheese and milk powder and in 2000 for butter, world market prices of dairy products are predicted to increase over the medium term, supported by the return of economic growth and a strengthening demand. The prices of most dairy products would stand at levels above those experienced in the early and late 1990s. Cheese prices would demonstrate the strongest rise, thanks to very favourable developments on the demand side. Butter prices would experience a more modest pattern, as they would remain strongly linked to the uncertain Russian market. After peaking in 2000, milk powder prices should fall a little in 2001 and resume increasing from 2003 onwards. These perspectives would remain dependent on the future developments in some key emerging markets and on the potential impact of the changes in national dairy policies that have been adopted or scheduled in a certain number of countries.

Key issues

If the outlook for agricultural markets over the next seven years appears rather positive as agricultural markets would emerge from a prolonged downturn marked by very weak agricultural commodity prices, it clearly remains subject to some uncertainties. In this respect, three main areas of uncertainty can be identified:

- *The economic prospects:* Strong and sustainable economic expansion in many emerging economies would constitute the main driving force behind the recovery in most agricultural markets as it would lift global food demand and stimulate solid growth in world trade. However, since the publication of these favourable macro-economic projections, short-term prospects for global growth have weakened significantly and concerns remain about a steeper-than-expected downturn in world growth, led by a marked slowdown in the US, a stalling recovery in Japan and moderate growth in the EU and in a number of emerging economies (notably those with a close link with the US economy). If a number of factors, including falling interest rates in the US, receding inflationary risks and reduced external and financial vulnerability of many emerging economies, may suggest a relatively moderate and short-lived slowdown, risks of a less favourable outcome are still significant.

- *The scope for production growth:* the projected increase in trade and prices over the medium term, one of the major outcomes of the projections, is strongly conditioned by the slow adjustment of agricultural supply to the expansion of food demand in some regions of the world. Yet, the extent to which production would become increasingly outpaced by a rising domestic consumption remains unclear as the scope for further production increase in some major importing regions constitutes a key uncertainty for the medium-term outlook, notably for crop products. Policy management and development in some major importing countries –such as China- and exporting countries -such as the EU and the US with the land set-aside instrument- could also have far reaching implications for the future level of world agricultural supply.

- *The policy and trade environment:* Future changes in agricultural policies as well as the new round of multilateral trade negotiations may have important implications for the medium-term outlook of agricultural products. The possible emergence of new issues related to food safety, food quality and the environment may also be foreseen to impact future developments in agricultural production, consumption and trade as well as the functioning of agricultural markets.

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 medium-term projections for some key agricultural products (i.e. cereals, oilseeds, meat and milk products) in the European Union for the period 2001 - 2008. 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. They are **based on the statistical information available in May 2001**.

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, which, at the time of projections were judged plausible. 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 by the end of May 2001 for the 2001-2008 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 on Agriculture. **It is assumed that all URAA commitments regarding market access and subsidised exports will be fully respected.** Thus, subsidised exports are expected not to exceed the annual URAA limits, whereas imports under current and minimum access are fully incorporated. **In addition, the URAA commitments are assumed to remain unchanged over the 2001-2008 period**.

(3) The trade agreements that have been concluded by the EU with the 10 CEECs candidate countries in the course of 2000 have been taken into account in these market projections.

1.2 The macro-economic environment

The economic situation in the EU in 2000 was one of the best in the last decade as GDP growth reached 3.4 %, 2.8 mio jobs were created and inflation remained relatively subdued thanks to wage moderation (in spite of the upsurge in oil prices and the weakness of the euro). However, the hike in oil prices eroded the purchasing power of households and private consumption decelerated towards the end of 2000.

According to the short-term economic forecasts from the Commission[4] released in Spring 2001, the sharper than expected deceleration of the US economy at the end of last year is now foreseen to cloud the EU economic outlook. However, the consequences of the abrupt economic slowdown in the US are expected to remain limited thanks to resilient domestic demand and because the weakness of US economic activity is foreseen to be short-lived. As a result, growth in the EU has been revised down to 2.8 % on average in 2001. In the second half of this year, growth would rise again underpinned by sustained

[4] European Commission, Directorate-General for Economic and Financial Affairs (March/April 2001). Spring 2001 Forecasts for 2001-2002. *Supplement A Economic Trends No.3/4.*

job creation. Inflation will still stand above 2 % in 2001, but on a declining path. Public finance consolidation is expected to continue in 2001 in most Member States, although budgetary policy would be mildly expansionary due to large tax cuts in a few countries.

Growth in 2002 is foreseen to accelerate to 2.9 % thanks to an improved international environment. Growth would mainly rely on a steady domestic demand that would benefit from an increase in real wages, robust job creation and tax cuts. The external contribution to GDP growth would be neutral as the pick-up in world demand would be broadly offset by the assumed strengthening of the euro and rising imports fuelled by the strong domestic demand. In spite of continuing wage moderation, some lagged pass-through effects of imported inflation and a rebounding economy would prevent inflation from falling much below 2 % in 2002. Total employment is foreseen to grow further, though at a slower pace than in 1999 and 2000.

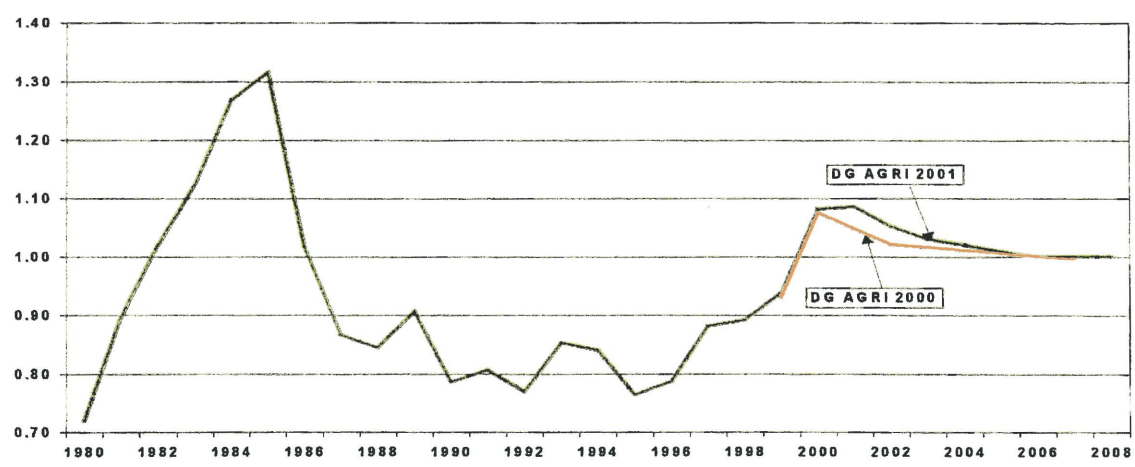
Table 1.1 Assumptions on macro-economic variables in the European Union, 1999 – 2008

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Population (in mio)	375.9	377.0	377.9	378.9	379.9	380.8	381.8	382.5	383.2	383.9
GDP growth (in %)	2.5	3.4	2.8	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Inflation (in %)	1.2	2.1	2.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8
€/$ exchange rate	0.94	1.08	1.09	1.05	1.03	1.02	1.01	1.00	1.00	1.00

If short-term downside risks have increased, economic fundamentals remain positive. The medium-term prospects for economic growth in the EU should continue to rely on a relatively strong domestic demand. As EU economic growth becomes more balanced, they should also benefit from the sharp rebound towards a strong and sustainable growth that is projected for many emerging economies, from the adjustment of the economic and financial imbalances that persist in the global economy –notably the differentiated growth pattern and currency misalignment between the US and the EU- and moderate oil prices. In this framework, economic growth as well as inflation figures in the EU would remain broadly stable over the medium term at 2.9 % and 1.8 % respectively.

The euro has depreciated by over 25 % against the US dollar since its launch in January 1999. Many factors have been put forward to explain this pronounced weakness of the euro against the US dollar. They include the growth differentials between the two zones, the interest rate differentials, the relative economic and financial prospects, developments in current transactions and bilateral portfolio equity flows.

Graph 1.1 Medium-term development in the €/$ exchange rate, 1980 – 2008



If the short-term developments in the €/$ exchange rate may be expected to display a continued weakness with a trading range well below estimates of the value consistent with medium-term economic fundamentals, it can reasonably be assumed that the euro should strengthen *vis-à-vis* the US dollar over the medium term as the impact of the short-term factors contributing to the current strong depreciation of the euro weakens. The €/$ exchange rate is assumed to drop from 1.09 in 2001 (1.09 € = 1 $, estimated on the basis of the four months) to 1.06 in 2002, before slowly decreasing towards parity by 2006.

2. Arable crops

2.1 Cereals

2.1.1 Supply

Area allocation

The implementation of the **Agenda 2000 CAP reform** is expected to shape the distribution of arable land over the medium term in the EU. Three measures are foreseen in particular to have a significant impact on the supply of land for the main arable crops (cereals, oilseeds and protein crops) and for the set-aside programmes: the cut in cereal support prices, the alignment of direct payments for all the various uses of the base area on the cereal payments from 2002/03 onwards and the base rate for compulsory set-aside at 10 %. As compared to the pre-CAP reform 1999 production year (with a similar rate of mandatory set-aside), the Agenda 2000 reform is projected to generate some shift among arable crops over the medium term, with notably a relative **increase in cereal area** at the expense of oilseeds (including linseed), and an **expansion in voluntary set-aside** in regions where farming profitability is low. The implementation of this new regulatory framework would also tend to make the distribution of arable land increasingly dependent on the development in world market prices and particularly sensitive to the €/$ exchange rate.

Table 1.2 Distribution of the total area under arable crops and set-aside, 1999/00 – 2008/09 (mio ha)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Cereals	36.3	37.6	36.6	37.4	37.2	37.1	37.1	37.0	37.0	36.8
Oilseeds	5.0	4.5	4.8	4.4	4.4	4.4	4.5	4.5	4.6	4.6
Protein crops	1.2	1.1	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Linseed + silage (*)	4.9	4.6	4.6	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Total arable crops (a)	47.5	47.7	47.2	47.5	47.4	47.3	47.3	47.3	47.3	47.2
Compulsory set-aside	4.1	3.9	3.9	3.9	3.9	3.9	4.0	4.0	4.0	4.0
Other set-aside	1.7	1.7	2.3	2.0	2.1	2.2	2.1	2.1	2.1	2.2
Total set-aside (b)	5.7	5.6	6.1	5.9	6.0	6.1	6.1	6.1	6.1	6.2
TOTAL (a+b)	53.2	53.3	53.3	53.4	53.4	53.4	53.4	53.4	53.4	53.4

(*) : including flax & hemp from 2001/02.

The area allocated to COP production (cereals, oilseeds and protein crops) and land set-aside is expected to increase in the short term from 48.3 mio ha in 1999/00 to 48.9 mio ha in 2003/04 owing to a sharp drop in total linseed area. It would then display a rather stable pattern over the medium term at around 48.9 mio ha as the area devoted to silage and linseed would relatively stagnate over the rest of the projection period.

In spite of a base rate for mandatory set-aside maintained constant at 10 % throughout the whole period, **total land set-aside** is projected to rise from 5.7 mio ha in 1999 to an estimated 6.2 mio ha in 2008. Total land under compulsory set-aside fell in 2000 to 3.9 mio ha as the new arrangements governing the general and simplified schemes in the

Agenda 2000 CAP reform (notably in terms of level of direct payments granted for arable crops and eligibility for voluntary set-aside) generated a drop in the total area under the general scheme for the first time since 1993 to 38.5 mio ha. Land under **mandatory set-aside** would resume rising from 2001 onwards to reach 4.0 mio ha by 2008 as area grown under the general scheme expands (mainly due to structural adjustments).

In contrast, land under **voluntary set-aside** would have increased from 1.7 mio ha in 1999 to 2.3 mio ha in 2001 owing to unfavourable climatic conditions (with a significant share from producers under the simplified scheme). Under the assumption of normal climatic conditions from 2002 onwards, voluntary set-aside would fall but remain at relatively high level in response to the decline in cereal prices and the cut in the direct payments for oilseed and non-textile linseed production. After a rapid development over the near term, voluntary set-aside is projected to stabilise between 2.1 and 2.2 mio ha over the medium term depending on market price developments (which may shift land into or out of production). Any change in the rate of compulsory set-aside could significantly alter these projected developments.

The slow rise in total set-aside land would generate a gradual decline in the **total COP area in production**. The latter would gradually fall from around 43 mio t in 2002 to 42.7 mio ha in 2008 owing to the stagnation in total cereal prices, notably in relation to oilseed prices. The distribution of the total COP area between cereals, oilseeds and protein crops over the medium term is expected to be directly influenced by changes in the relative profitability of these crops once direct payments are equalised across arable crops[5]. Owing to a lower fall in average receipts, the share of cereals in the total COP area would rise steadily over the short term from 85.4 % in 1999/00 to 87 % in 2002/03[6]. Higher direct payments, increasing yields and prices above support levels for some cereals (such as wheat and maize[7]) would on average partially outweigh the cut in cereal support prices[8]. Over the medium term, the recovery in world oilseed prices would generate some gradual, though moderate, decline in total cereal share that would slowly decrease to 86.2 %.

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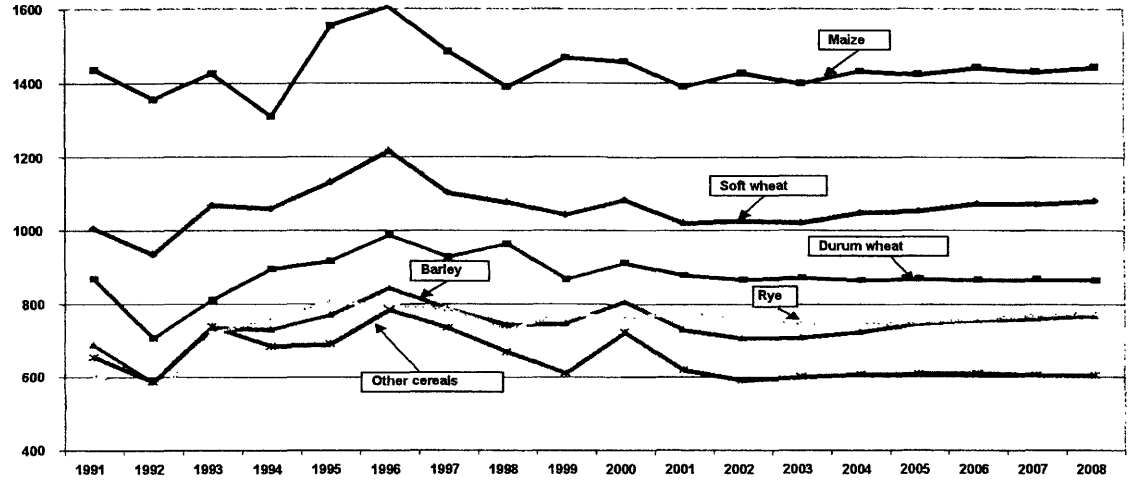
5 Direct payment per crop is calculated on a per Member State basis, taking into account the national reference yields. This allows to identify specific changes in direct payments for crops which are not produced evenly across the EU (such as sunflower, soya bean and durum wheat) and to take full account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

6 After an estimated fall to 1.1 mio ha in 2000/01, protein crops area would rapidly recover in 2001/02 to slightly less than 1.3 mio ha. It would then stabilise at around 1.3 mio ha over the medium-term thanks to more favourable price developments. Protein crops would maintain their share in the total COP area to around 3 %.

7 EU domestic prices for cereals are foreseen to benefit from improved medium-term perspectives for world markets and a relatively weak €/$ exchange rate which should allow to keep domestic prices above support levels by 2001/02 for some cereals (notably common wheat, but also barley in the second half of the projection period). After bottoming out by the turn of the century, world prices are expected to exhibit a slow recovery over the medium term as supply adjusts and global demand strengthens. By 2008/09, world cereal prices would reach around 152 €/t for common wheat (HRW, US fob Gulf), 112 €/t for maize (US fob Gulf) and 102 €/t for barley (fob, St Lawrence).

8 The projected development in internal prices and productivity growth would sustain the general level of total cereal receipts (i.e. market receipts and direct payments) as the latter would range by 2008/09 between –5 % for "other cereals" (i.e. oats and triticale) and +3 % for soft wheat, barley and rye as compared to the 1998/99-1999/00 average (i.e. before the Agenda 2000 reform).

Graph 1.2 Medium-term development in cereal receipts, 1991/92 – 2008/09 (€/ha)



The weakness of the euro against the US dollar during the 2000/01 marketing year contributed to the recovery of oilseed prices which, combined with the second reduction in cereal support prices in 2001/02 and the climatically-induced short-term expansion in voluntary set-aside, are foreseen to generate an estimated 1.0 mio ha fall in **total cereal area** to 36.6 mio ha. In 2002/03, the reform of the arable crop sector would be fully implemented with the third cut in direct payments and the end of the transitional period in the oilseed sector. This is foreseen to lead to some shift in area from non-textile linseed and oilseed crops towards cereal area that would rebound to 37.4 mio ha. Cereal area would also be supported by market prices above support levels for common wheat, maize and durum wheat and by the return of voluntary set-aside to more normal levels. From 2003/04 onwards, slightly better price prospects for oilseeds would generate a decline in total cereal area of around 0.5 mio ha over the next six years as direct payments are fully harmonised across COP arable crops. Total cereal area would gradually decrease to 36.8 mio ha by 2008/09.

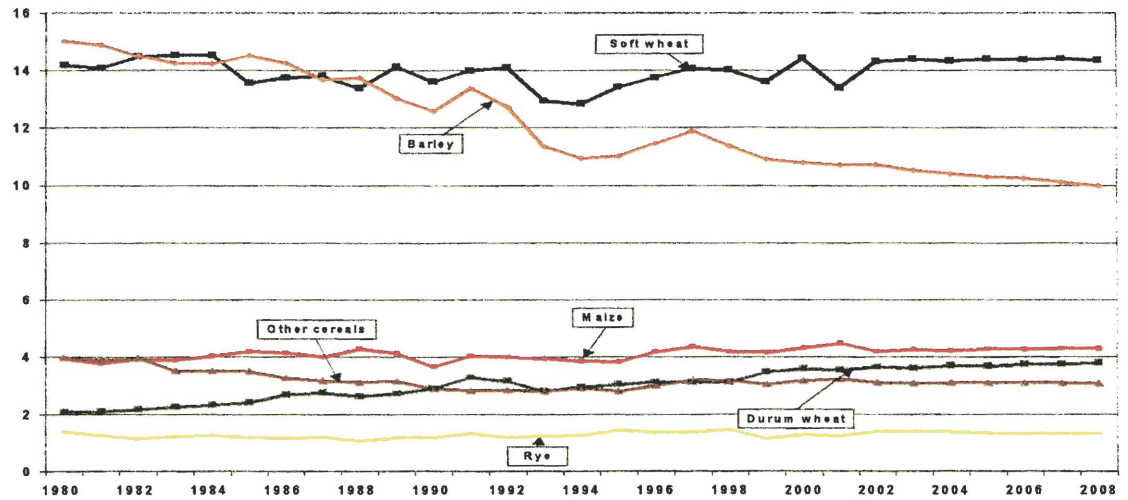
These developments would not be uniform across cereals as **wheat area** would mainly gain with an increase estimated in 2008/09 at around 6% relative to 1999/00. **Soft wheat** area would stabilise between 14.3 and 14.4 mio ha over the medium term, a 5 % increase relative to 1999/00, thanks to a sustained increase in domestic use and export demand that would maintain its prices above support levels. The implementation of the new common market organisation and relatively high prices throughout the period would in turn boost **durum wheat** area that would reach 3.8 mio ha by 2008/09, a 9 % increase relative to 1999/00.

Table 1.3 Cereal area allocation in the European Union, 1999 – 2008 (mio ha)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total wheat	17.1	18.0	16.9	18.0	18.0	18.0	18.1	18.1	18.2	18.1
Soft wheat	13.6	14.4	13.4	14.3	14.4	14.3	14.4	14.4	14.4	14.3
Durum wheat	3.5	3.6	3.5	3.6	3.6	3.7	3.7	3.7	3.7	3.8
Total coarse grains	19.3	19.5	19.6	19.4	19.2	19.1	19.0	18.9	18.8	18.7
Barley	10.9	10.8	10.7	10.7	10.5	10.4	10.3	10.2	10.1	10.0
Maize	4.2	4.3	4.5	4.2	4.3	4.2	4.3	4.3	4.3	4.3
Rye	1.2	1.3	1.2	1.4	1.4	1.4	1.3	1.3	1.3	1.3
Other cereals	3.0	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Total cereals	36.3	37.6	36.6	37.4	37.2	37.1	37.1	37.0	37.0	36.8
Set-aside rate	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%

In contrast, **total coarse grain area** would continuously fall over the medium term to reach 18.7 mio ha by 2008/09, a decrease of around 3 % as compared to 1999/00. Lower growth prospects on the demand side (both internal and external) are expected to generate stock increases and keep coarse grain market prices below support levels (with the exception of maize and barley in the second half of the projection period) which should in turn constrain their development on the supply side.

Graph 1.3 Cereal area allocation in the European Union, 1980/81 – 2008/09 (mio ha)



The development in coarse grain area would be mainly affected by the fall in **barley** area of 8 % between 1999/00 and 2008/09 due mostly to projected lower receipts. The maize area would increase by 3 % relatively to its 1999/00 level. Yet, most of the gains would take place in the short term as **maize** area would stabilise between 4.2 and 4.3 mio ha from 2003/04 onwards thanks to high productivity growth that would outweigh slowly declining prices. The latter would remain under pressure from prices of other feed grains, notably feed wheat.

Rye would benefit from the domestic support price and would maintain its share within the total COP area at slightly above 3 %, i.e. an area ranging between 1.3 and 1.4 mio ha. In spite of the significant projected fall in the average prices of the "**other cereals**", mainly oats and triticale, as they are not –for most of them- supported by any intervention price system, the total area allocated to these cereals would stagnate at around 3.1 mio ha over the whole projection period.

Yields

Yield trends observed since the mid-1980s are assumed to continue over the projection period, although at a lower rate. In comparison to the yield projections published over the most recent years, these medium-term trends have been revised upwards for most types of cereals, in particular for barley.

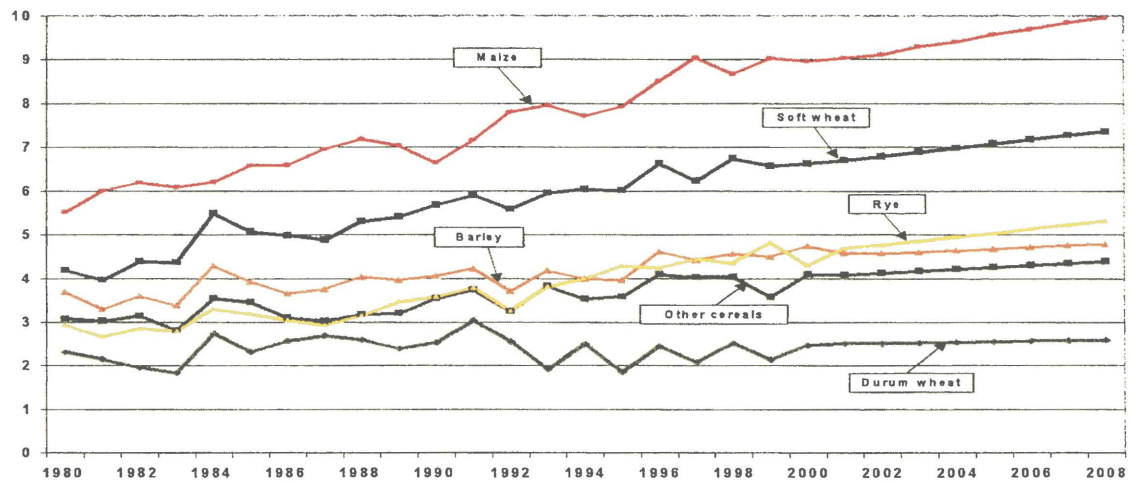
However, the general decline in market prices that is expected to take place in the wake of the cut in support prices is foreseen to curb somewhat the increasing trend in cereal yields, notably in the near term. However, its negative impact on productivity growth could be partially offset by the projected increase in the level of (voluntary) land set-aside (that should remove the least productive land from production).

Table 1.4 Cereal yield projections in the European Union, 1999 – 2008 (t/ha)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total wheat	5.7	5.8	5.8	5.9	6.0	6.1	6.2	6.2	6.3	6.4
Soft wheat	6.6	6.6	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4
Durum wheat	2.1	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6
Total coarse grains	5.3	5.5	5.5	5.5	5.6	5.6	5.7	5.8	5.9	5.9
Barley	4.5	4.7	4.6	4.6	4.6	4.6	4.7	4.7	4.8	4.8
Maize	9.0	9.0	9.0	9.1	9.3	9.4	9.6	9.7	9.8	10.0
Rye	4.8	4.3	4.7	4.8	4.8	4.9	5.0	5.1	5.2	5.3
Other cereals	3.6	4.1	4.1	4.1	4.2	4.2	4.3	4.3	4.3	4.4
Total cereals	5.5	5.7	5.7	5.7	5.8	5.8	5.9	6.0	6.1	6.1

Over the medium term, cereal yields are foreseen to continue to expand to reach 6.15 t/ha in 2008, i.e. an annual average productivity growth of 1.3 %. This would constitute a marked slowdown as compared to the annual growth rates observed between 1993 and 1999 (+2.2 % on average). Maize, soft wheat and rye would exhibit the strongest gains, with an average annual increase estimated at around 0.12 t/ha, 0.08 t/ha and 0.08 t/ha respectively (i.e. more than 1.4% per annum). Conversely, durum wheat and barley would record the lowest yield increases.

Graph 1.4 Cereal yields in the European Union, 1980 – 2008 (t/ha)



Production

After a record cereal crop estimated at 212.6 mio t in 2000 (associated with a yield and area increase), total harvested cereal production is projected to fall to 206.8 mio t in 2001 owing to the foreseen short-term fall in cereal area and to the stagnation in cereal yields to their long-term trends. It should then bounce back in 2002 and, driven by increasing yields that would largely more than compensate the gradual fall in total cereal area, expand significantly over the medium term to reach 226.5 mio t in 2008. As compared to 1999, the cumulated increase in yields of 12 % up to 2008 would outweigh the very slight increase in total cereal area (+1 %) in the total production growth (13 %).

In line with higher area and yield projections (5 % and 12 % respectively as compared to 1999), soft wheat production would rapidly expand over 100 mio t and reach a historical high of 106 mio t in 2008. In contrast, coarse grain production would fall in the short term from the high levels recorded in 2000, before rising slowly to around 111 mio t over the medium term as yield growth would somewhat outpace the slow decline in area. Barley production is projected to stagnate at around 48 mio t over the next seven years owing to lower profitability prospects and less favourable perspectives for productivity growth.

Table 1.5 Cereal harvested production projections in the EU, 1999 – 2008 (mio t)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total wheat	96.8	104.5	98.6	106.4	108.3	109.4	111.4	112.7	114.5	115.4
Soft wheat	89.4	95.6	89.7	97.2	99.2	100.0	102.0	103.1	104.8	105.5
Durum wheat	7.5	8.9	8.9	9.2	9.1	9.4	9.4	9.6	9.7	9.9
Total coarse grains	102.9	108.1	108.2	106.4	107.4	107.6	108.9	109.7	110.7	111.1
Barley	49.0	51.1	49.0	49.0	48.3	48.2	48.1	48.3	48.1	47.8
Maize	37.4	38.5	40.3	38.0	39.5	39.5	40.8	41.3	42.3	42.6
Rye	5.6	5.5	5.8	6.7	6.8	6.8	6.8	6.8	6.9	7.1
Other cereals	10.9	13.0	13.1	12.7	12.8	13.0	13.2	13.3	13.4	13.5
Total cereals	199.7	212.6	206.8	212.8	215.7	217.0	220.4	222.4	225.1	226.5

2.1.2 Internal demand

After a relative stagnation in 1999, the implementation of the Agenda 2000 CAP reform, the moderate recovery in the prices of the oilseed complex and a relatively weak €/$ exchange rate are all expected to boost cereal competitiveness and to generate a significant increase in domestic demand for cereals.

Total cereal demand is projected to increase steadily over the medium term, from 181.1 mio t in 1999/00 to 199 mio t in 2008/09. Most of this 18 mio t growth in cereal demand would be driven by feed usage, which would increase by some 12 mio t by 2008/09.

Table 1.6 Cereal demand projections in the EU, 1999/00 – 2008/09 (mio t)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Feed demand	113.8	118.2	119.6	119.9	120.9	121.4	122.7	123.7	124.9	125.8
Food demand	43.3	43.7	44.2	44.4	44.7	44.8	45.0	45.1	45.4	45.5
Seed demand	6.1	5.9	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Other demand	18.0	18.2	19.2	19.6	20.1	20.3	20.7	21.0	21.4	21.7
Total cereals demand	**181.1**	**185.9**	**189.0**	**190.0**	**191.7**	**192.5**	**194.4**	**195.7**	**197.7**	**199.0**

Feed demand

Cereal use in animal feed exhibited a sustained increase since 1992/93, rising from 84 mio t to 113.8 mio t in 1999/00. This expansion, predominantly driven by soft wheat, has mainly resulted from the rapid development in white meat production and from the sharp improvement in EU cereals competitiveness following the implementation of the 1992 CAP reform. As a result, the cereal market share in the total demand for marketable feed products rose from around 48 % in 1992/93 to 54.0 % in 1999/00.

The implementation of the Agenda 2000 CAP reform is projected to generate a further increase in cereal feed use over the 1999/00–2008/09 period, though at a more moderate pace than after the 1992 CAP reform due to slower growth in meat production and lower gains in the price competitiveness of cereals[9].

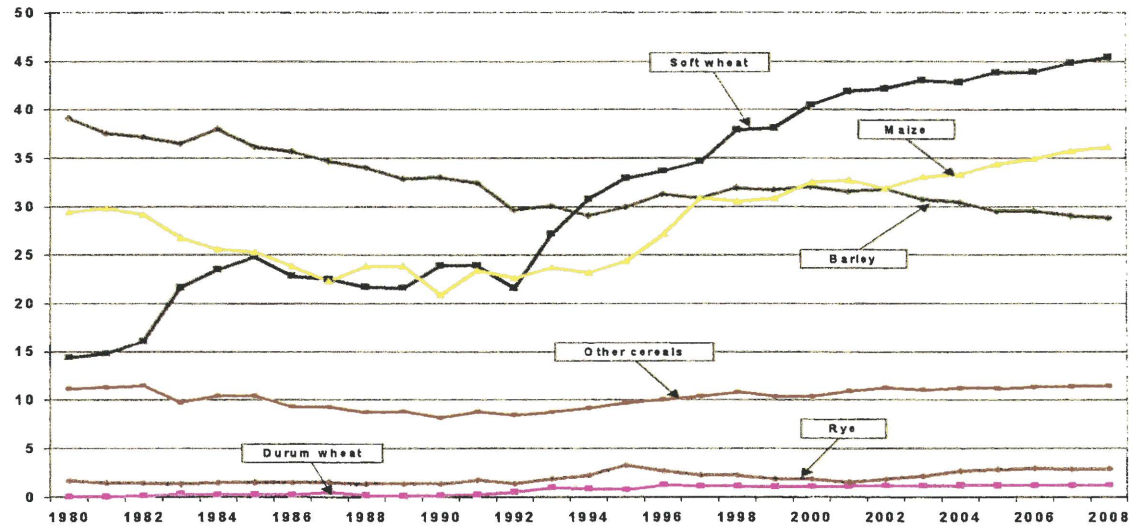
The medium-term prospects of a marked slowdown in the growth of white meat production and the declining trend in the size of the total EU cattle herd, reinforced by the series of measures adopted in the wake of the BSE and FMD crises in the EU animal

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

sector[10], are expected to limit the average annual growth in the total demand for marketable feed products to around 0.5 %, i.e. only a third of the growth observed between 1993/94 and 1999/00. Short-term developments in total feed demand would be dominated by the crisis in the animal sector, the beef cycle (which enters its downward path in 2002) and the upwards adjustment in the white meat sector (which should benefit from high prices). After some strong increase in 2001 and a relative stagnation in 2002 and 2003, global growth in feed demand would later stabilise at around 0.5 % per year, the slowdown in the expansion of the poultry and pig sectors being offset by the relative stabilisation of the cattle sector.

The general fall in **EU cereal prices** in the wake of the implementation of the Agenda 2000 CAP reform should boost their price competitiveness vis-à-vis their main substitutes. After falling sharply in 1997/98 and 1998/99 from a high level of 278 $/t in 1996/97, soybean meal prices recovered over the last two years to reach an estimated 200 $/t in 2000/01. They are foreseen to fall again over the next marketing years before strengthening from 2003/04 onwards to reach 208 $/t in 2008/09. Conversely, the prices of corn gluten feed would stagnate over the medium term at around 83 $/t, whereas manioc prices would decline broadly in line with EU domestic cereal prices in order to remain competitive in the EU (after a short-term fall, they would stabilise around 75 $/t).

Graph 1.5 Development in cereal feed demand, 1980/81 – 2008/09 (mio t)



The cut in cereal support prices in 2000/01 and 2001/02 is projected to lower the general price level of feed cereals over the medium term. In spite of the recovery on world markets, both in terms of prices and trade opportunities, and its impact on EU domestic prices, most feed cereal prices in the EU would trade at or below support price levels throughout the whole period. The existence of excess supply for some coarse grains (notably rye), the absence of price support for some cereals (feed wheat, oats and triticale) and the delicately balanced EU cereal markets are expected to exert pressure on the EU feed grain market and restrain significant price increases[11].

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[10] It should be mentioned that the measures adopted on June, 19 2001 for the beef market are not taken into account in these projections.

[11] Furthermore, most additional cereal exports generated by the recovery in world import demand should concern grains of higher quality.

A relatively weak €/$ exchange rate would reinforce the improved price competitiveness of EU cereals, notably in the short term. Even if the euro is assumed to appreciate substantially over the medium term -as compared to the situation as of May 2001- this relatively favourable currency environment should put some further strain on the competitiveness of the major imported feed substitute products.

Therefore, more competitive EU cereals are projected to capture a growing share of the total demand for marketable feed products. The total share of EU cereals would increase strongly and reach 57.3 % in 2008/09, from 54.2 % over the 1997/98-1999/00 period. Most of these gains would be achieved over the first years of implementation of the Agenda 2000, when the cut in support prices translates into a fall in average cereal market prices. This growth in cereal use would take place at the expense of the "protein-rich" and "energy-rich" products whose market share would drop by 0.7 and 2.4 percentage points respectively[12].

An improved market share for cereals and a larger total demand for marketable feed products would lead to a sustained rise in total feed use of cereals that would reach 125.8 mio t by 2008/09, a 12 mio t increase as compared to 1999/00. The corresponding annual average growth rate in cereal feed demand of 1 % from 1999/00 to 2008/09 would however constitute a marked slowdown relatively to the 1992/93-1999/00 period (4 %).

The distribution of this increased global feed demand for cereals would mainly depend 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 less price responsive, much should depend from the price relationship between soft wheat and maize.

Table 1.7 Total wheat demand projections in the EU, 1999/00 – 2008/09 (mio t)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Feed demand	39.1	41.5	43.0	43.3	44.1	43.9	45.0	45.0	46.0	46.6
Food demand	37.9	38.3	38.8	39.0	39.3	39.4	39.6	39.6	39.9	40.1
Seed demand	3.2	3.1	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Other demand	5.9	6.1	6.9	7.2	7.6	7.7	8.0	8.2	8.6	8.9
Wheat demand	**86.2**	**88.9**	**91.9**	**92.8**	**94.3**	**94.3**	**95.9**	**96.2**	**97.8**	**98.8**

Soft wheat is projected to confirm its predominance as the main feed cereal in the EU over the medium term. Despite relatively firm prices, its share in the total cereal feed use would rise from 33.1 % in 1999/00 to 36.1 % in 2008/09. Soft wheat feed usage would grow from 38.1 mio t in 1999/00 to 45.4 mio t in 2008/09, i.e. an increase of 7.3 mio t over the whole period. High productivity growth would enable feed wheat to restrain price increases and to maintain its price competitiveness with other feed grains over the medium term. Most of soft wheat gains would take place at the expense of barley, the use of which would fall by 2.9 mio t over the whole period. Barley feed use would reach 28.8 mio t in 2008/09, i.e. less than a quarter of the total feed cereals consumed by animals. The projected decline in production levels and new export opportunities are foreseen to exert pressure on barley prices and affect its overall competitiveness. High

[12] It should be mentioned that, in these projections, it has been assumed that the ban on the use of processed animal proteins in farmed livestock feed would expire at the end of 2001. An extension of the ban over the medium-term would generate an increase in soybean meal consumption and some further gains in cereal uptake, the magnitude of which would depend on the price relationship between cereals and soybean meal.

productivity growth is foreseen to maintain maize competitiveness on the feed market. Maize feed use would rise by 5.3 mio t to reach 36.1 mio t in 2008/09, a 1 % point gain in market share in the total cereal feed usage.

Table 1.8 Total coarse grains demand projections in the EU, 1999/00 – 2008/09 (mio t)

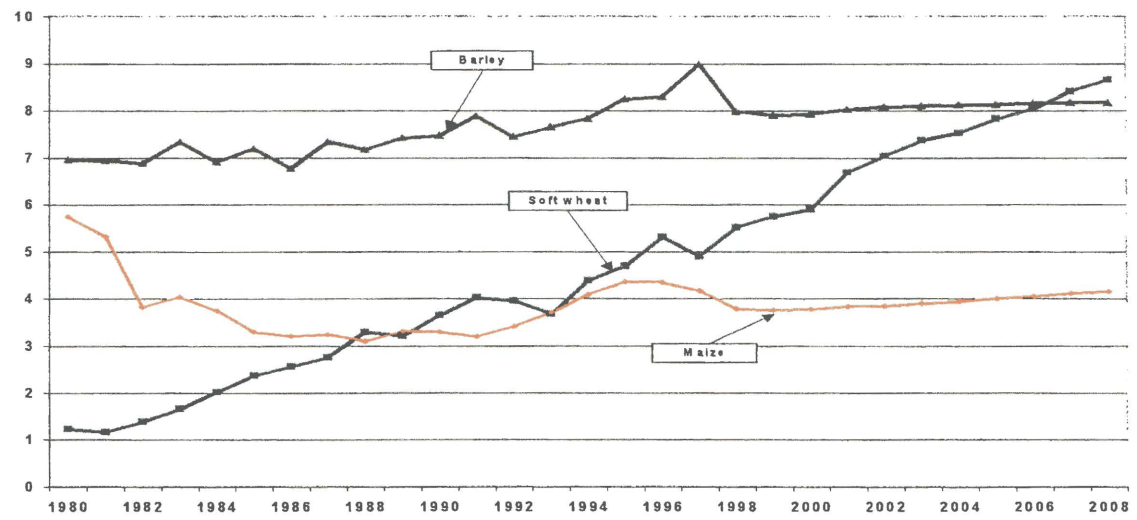
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Feed demand	74.6	76.7	76.6	76.6	76.8	77.4	77.7	78.6	78.9	79.2
Food demand	5.4	5.4	5.4	5.4	5.4	5.5	5.5	5.5	5.5	5.5
Seed demand	2.9	2.8	2.8	2.7	2.7	2.7	2.7	2.7	2.7	2.6
Other demand	12.1	12.1	12.3	12.4	12.5	12.6	12.6	12.7	12.8	12.8
Coarse grains demand	**95.0**	**97.0**	**97.1**	**97.2**	**97.5**	**98.2**	**98.5**	**99.5**	**99.9**	**100.2**

These projections of cereal feed use tend to show that the general fall in cereal prices generated by 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, in particular barley.

Non-feed demand

The total non-feed uses of cereals are projected to increase by 5.8 mio t over the medium term, from 67.3 mio t in 1999/00 to 73.2 mio t in 2008/09. Food demand would increase broadly in line with population growth due to the low price responsiveness of this type of demand. However, the anticipated annual average growth of 0.4 % for total cereal food demand would contrast sharply with the rates recorded since the implementation of the 1992 CAP reform. This is particularly the case for the growth in durum wheat consumption: its growth rate in food consumption would be more than halved over the next seven years. Seed demand would stagnate around 6 mio t over the medium term in line with a total cereal area at around 37 mio ha.

Graph 1.6 Development in "other demand" for soft wheat, maize and barley, 1980/81 – 2008/09 (mio t)



The other types of demand, mainly industrial demand, would in turn be stimulated by the fall in cereal prices. They are foreseen to grow by 3.7 mio t from 1999/00 to 2008/09 (i.e. a 21 % increase relatively to 1999/00). Most of the growth on "other demand" would be generated by soft wheat (predominantly for starch production) as barley and maize would only exhibit modest growth (0.3 mio t and 0.4 mio t respectively) owing to their lower price competitiveness. Therefore, the fall in cereal prices generated by the implementation of Agenda 2000 is also anticipated to favour again soft wheat usage at the expense of

coarse grains. Yet, overall projected growth rates in non-feed usage of cereals would also display a marked reduction as compared to the post 1992 CAP reform period.

2.1.3 External trade

The implementation of Agenda 2000 CAP reform, the recovery in world cereal prices and a sustained import demand (notably from North Africa and the Middle East area) are all foreseen to **improve EU cereal competitiveness** and set the stage for a sustained development in EU cereal exports over the next seven years. These favourable perspectives for EU cereal exports would be reinforced by a relatively favourable €/$ exchange rate that is anticipated to further enhance the ability of the EU to export beyond its URAA limits on subsidised exports.

If the cereal sector is foreseen in the short term to continue to recover from a market situation in the late 1990s marked by large supply, ample stocks and weak demand, most projections from prominent forecasting organisations tend to depict an outlook for world cereal markets that appears rather favourable over the medium term. Improved economic perspectives over the medium term and the gradual adjustment of supply to prices at historical lows should set the stage for a strengthening of world demand and a tightening of stock-to-use ratios. Limited production potential in some countries (including China, North Africa, Middle East and Latin America) and supply adjustments should generate a broad based expansion of cereal trade, driven by rising income, diet diversification and higher demand for livestock products and feeds in some developing countries.

These factors would generate a **significant, though moderate price recovery** over the medium term. By 2008/09, cereal prices would reach around 152 $/t for common wheat (US Fob Gulf, HRW[13]), 112 $/t for maize (US Fob Gulf) and 102 $/t for barley (Saint Lawrence). Durum wheat would also trend upwards, rising to about 180 $/t by the end of the projection period. After 15 years of relative stagnation, global cereal trade would increase by 17 % by 2008/09, with total wheat trade exhibiting a 13 mio t increase (from Asia and Africa/Middle East) and an overall growth in total coarse grains of around 20 mio t. Among coarse grains, barley trade would also demonstrate significant growth with an increase of about 2 to 3 mio t, mainly from Middle East and China.

The impact of this expected recovery in world market prices and of the cut in cereal support prices on the competitiveness of EU cereals would be strengthened by a relatively favourable €/$ exchange rate. World market prices of common wheat, durum wheat and barley would develop at sustained levels in € terms. However, they would only display a moderate growth as the expected slow appreciation of the € against the US $ in the short term would partially outweigh the recovery in world market prices in $ terms.

As a result, world market prices for common wheat would develop above the EU intervention price level[14] as early as 2000/01 (though more significantly from 2001/02 onwards). **This market situation should allow the EU to export large quantities of**

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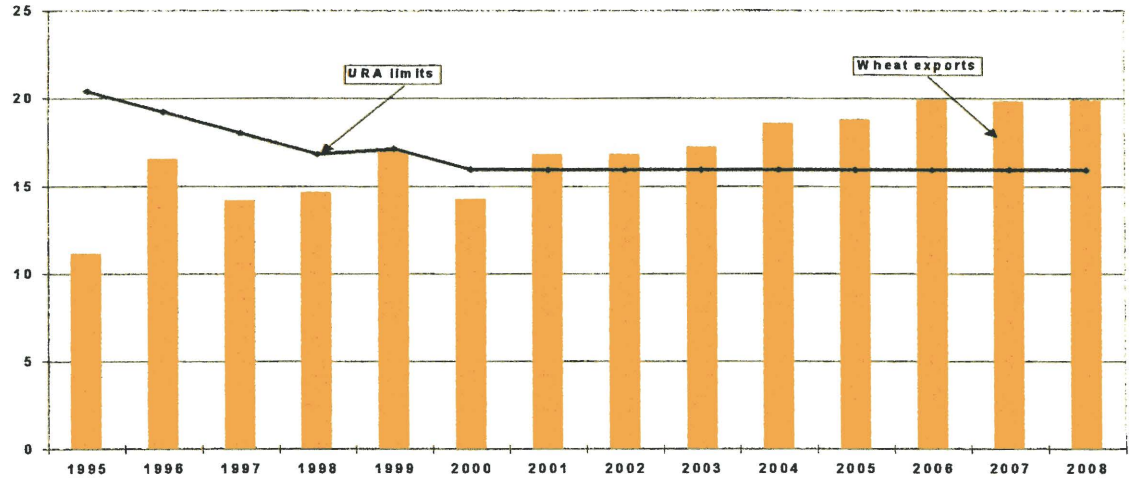
[13] The SRW wheat, which broadly corresponds to EU wheat quality, generally quotes around 10 % below the HRW wheat reference.

[14] 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.

soft wheat without subsidies, thus removing any WTO constraints on the level of its soft wheat exports.

Graph 1.7 Development in total wheat exports, 1995/96 – 2008/09 (mio t)



A similar situation would occur for durum wheat, the exports of which would take place without any export refunds as durum wheat prices would remain substantially above EU domestic support price over the whole projection period.

Medium-term developments in barley prices are also foreseen to show world market prices at a level similar or above EU domestic prices and allow some unsubsidised barley exports over the whole projection period (mostly in the form of malt). In contrast, other coarse grain exports would remain limited to the URAA limits since their prices would remain above world market prices.

After a short-term fall in 2000/01 to 26 mio t from 35.6 mio t in 1999/00 (an exceptional barley export campaign), total cereal exports would stand substantially above the annual limit for subsidised exports set by the URAA limits (i.e. 25.4 mio t for total cereals[15]) as durum wheat, some common wheat and barley/malt would be exported without subsidies.

From 2001/02, total cereal exports would expand steadily driven by rising soft wheat exports[16] and reach 32.5 mio t in 2008/09. Whereas exports of maize, rye and other coarse grains would remain broadly stagnant[17] with an overall volume of 3.7 mio t, barley exports would slowly increase over the medium term as world import demand for barley strengthens and prices rise (from around 8 mio t in the short term to 9 mio t over the medium term). Durum wheat exports would remain sustained at rather high levels (slightly below 1 mio t).

Total cereal imports are assumed to increase to 7 mio t in the short term and to remain relatively stable over the medium term. Most of the increase would concern high quality wheat that would enter the EU market with low or even nil import duties.

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15 This export volume includes an additional 0.5 mio t for food aid (including free delivery of agricultural products), but excludes 0.4 mio t of exported potato starch.

16 Conditional on the respect of the quality requirements.

17 The possibility of taking advantage of unsubsidised barley exports to increase subsidised exports of other coarse grains has been cautiously kept at a minimum.

2.1.4 Balance sheet

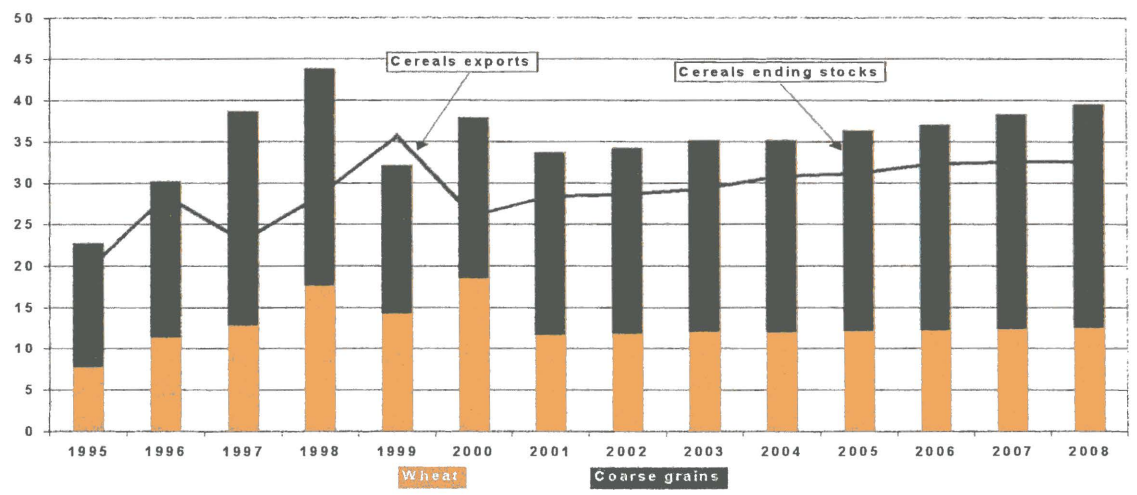
These medium-term projections depict an outlook for the EU cereal markets that would appear **rather favourable** over the medium term. In spite of a further expansion in cereal production, total cereal stocks would remain constrained at reasonable levels for most of the projection period as the implementation of the Agenda 2000 CAP reform would strongly improve cereal competitiveness on both the internal and external markets. The expected recovery in world cereal markets and a favourable currency environment would also contribute significantly to the overall balance of EU cereal markets, with the notable exception of rye. Yet, the ability of the domestic and international markets to absorb the expansion of EU cereal production and thus the stability of EU cereal markets would become increasingly and critically dependent on the situation on the world cereal markets and on the developments of the €/$ exchange rate.

Table 1.9 Total cereals balance sheet in the EU, 1999/00 – 2008/09 (mio t)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Usable production	199.3	211.6	206.1	212.1	215.0	216.3	219.7	221.7	224.4	225.8
Consumption	181.1	185.9	189.0	190.0	191.7	192.5	194.4	195.7	197.7	199.0
Imports	5.7	6.2	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Exports	35.6	26.0	28.4	28.6	29.3	30.8	31.1	32.3	32.5	32.5
Beginning stocks	43.8	32.1	37.9	33.7	34.2	35.2	35.2	36.3	37.1	38.3
Ending stocks	32.1	37.9	33.7	34.2	35.2	35.2	36.3	37.1	38.3	39.6
of which intervention	8.9	9.0	7.6	8.4	8.4	9.4	10.3	11.0	12.0	13.1

Total cereal stocks would remain below or at around 35 mio t until 2004/05 as the expansion in cereal production would be somewhat limited by the increase in voluntary set-aside (favoured by the general fall in the profitability of arable crops) and mainly absorbed by a growing domestic feed demand (supported by an improved price competitiveness). However, these general trends would mask widely diverging prospects across cereals. If the stock levels for most cereals would gradually fall, their impact on the total cereal stock would be broadly offset by the sustained accumulation of rye production surplus.

Graph 1.8 Allocation of the total cereal production surplus in the EU, 1995/96 – 2008/09 (mio t)



From 2004/05 onwards, the steady rise in the yields of many cereals would not be able to keep pace with the continuous growth in domestic and international demand (even in the cautious assumption of limited unsubsidised coarse grain exports) and cereal prices would start rising (in particular for soft wheat and barley, but with the notable exception of maize). In contrast, rye stocks would continue to build up, though at a slower rate than in

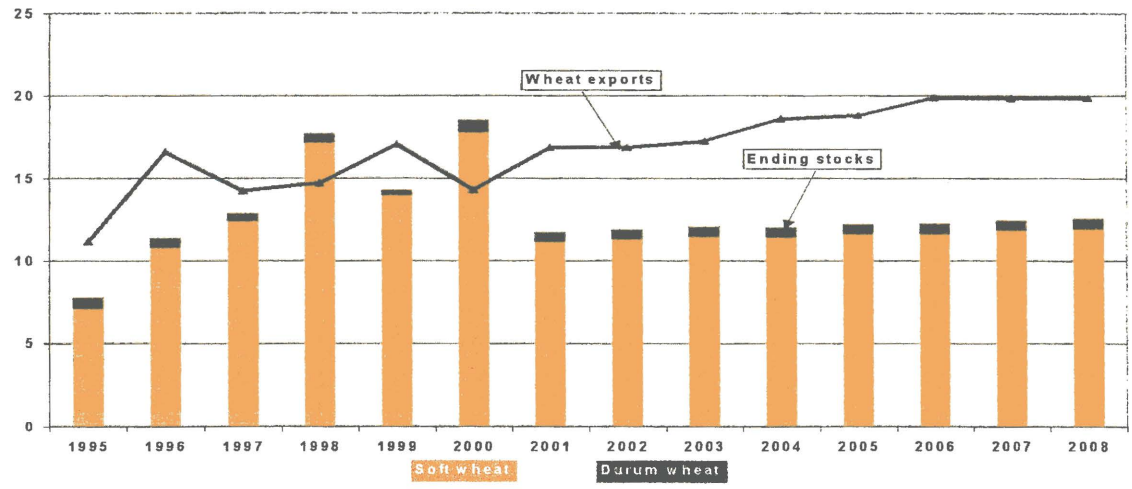
the initial part of the projection period as some land would shift to more profitable cereals. Overall cereal stocks would start growing steadily to reach around 40 mio t by 2008/09, of which about 13 mio t of rye in public stores.

Table 1.10 Wheat balance sheet in the European Union, 1999/00 – 2008/09 (mio t)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Usable production	96.4	104.2	98.3	106.1	108.0	109.1	111.1	112.4	114.2	115.1
Consumption	86.2	88.9	91.9	92.8	94.3	94.3	95.9	96.2	97.8	98.8
Imports	3.4	3.3	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Exports	17.0	14.3	16.8	16.8	17.2	18.6	18.8	19.9	19.8	19.9
Beginning stocks	17.7	14.3	18.5	11.7	11.9	12.1	12.0	12.2	12.2	12.4
Ending stocks	14.3	18.5	11.7	11.9	12.1	12.0	12.2	12.2	12.4	12.5
of which intervention	3.1	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

The markets for soft wheat, durum wheat and maize are expected to remain rather tight throughout the whole period. Despite an increase in production levels, these cereals would benefit from a steady increase in domestic and/or external demand, which is foreseen to keep their market prices substantially above support levels.

Graph 1.9 Allocation of the wheat production surplus in the EU, 1995/96 – 2008/09 (mio t)



Whereas total wheat stocks would stabilise over the medium term at around 12.5 mio t (of which 0.6 mio t in durum wheat), maize stocks would remain at low levels and fluctuate slightly above 5 mio t over the next seven years.

The barley market would improve rapidly and become broadly balanced around 2003/04, when the stagnation in production levels and the prospects for sustained exports outweigh the erosion of the barley share in the feed market (to the benefit of soft wheat). Total stocks of barley would decline over the medium term from 8 mio t in 1999/00 to 6 mio t in 2008/09. From 2004/05 onwards, average barley prices would start rising above support levels.

The large fall in the prices of "other cereals" [18] (oats and triticale) would stimulate a regular increase in the domestic consumption of these cereals, but would in turn constrain their development on the supply side. As a result their market would stabilise for most of the projection period, with total "other cereals" stocks standing at slightly below 2 mio t.

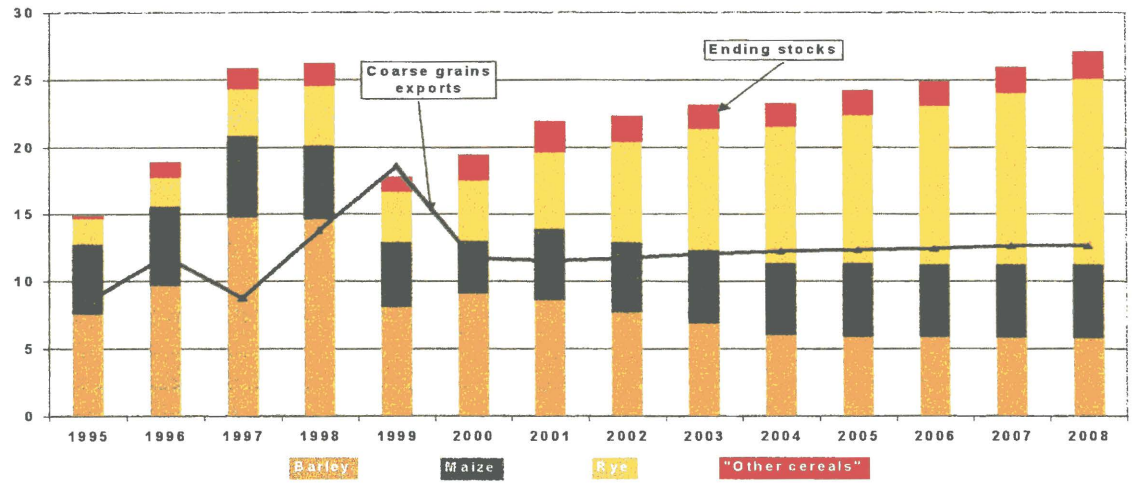
[18] Market prices for oats and triticale would fall below support price levels as these cereals are not eligible to the intervention price support mechanisms.

Table 1.11 Coarse grains balance sheet in the EU, 1999/00 – 2008/09 (mio t)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Usable production	102.9	107.5	107.8	106.0	107.0	107.2	108.5	109.3	110.3	110.7
Consumption	95.0	97.0	97.1	97.2	97.5	98.2	98.5	99.5	99.9	100.2
Imports	2.3	2.9	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Exports	18.6	11.7	11.5	11.7	12.0	12.2	12.3	12.4	12.6	12.6
Beginning stocks	26.2	17.8	19.4	21.9	22.3	23.1	23.2	24.1	24.8	25.9
Ending stocks	17.8	19.4	21.9	22.3	23.1	23.2	24.1	24.8	25.9	27.0
of which intervention	5.8	7.6	7.6	8.4	8.4	9.4	10.3	11.0	12.0	13.1

In contrast, **the rye market would become increasingly and structurally unbalanced** as the potential for adjustment in the supply and demand of this cereal would remain largely constrained by its relatively high prices[19] as compared to other cereals (notably soft wheat, oats and triticale). The limited scope for increasing rye exports (both in terms of import demand and price competitiveness[20]), the strong competition from other cereals and its nutritional limitations on the domestic feed market and a stagnating domestic human demand are all foreseen to make public stores an increasingly attractive market outlet for this cereal. Total stocks of rye are projected to rise rapidly from 3.8 mio t in 1999/00 to 13.8 mio t in 2008/09, of which 13 mio t in intervention stocks.

Graph 1.10 Allocation of the coarse grain production surplus in the EU, 1995/96 – 2008/09 (mio t)



2.2 Oilseeds

The world oilseed sector is projected to exhibit a slow and modest recovery from a current situation characterised by very weak prices, stemming from excess supplies, relatively weak demand and a combination of policy and macro-economic factors (notably the support system in the US). In the longer run, the robust expansion in the demand for oilseed and oilseed products that is anticipated by most agencies would contribute to gradually restore market balance as supply exhibits only moderate increases. Global demand would benefit over the medium term from the consolidation of the recovery in

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19 Rye production is concentrated in some specific regions where it provides agronomic advantages. In contrast to feed wheat, oats and triticale, rye prices are supported by the intervention price support mechanism that makes it attractive.

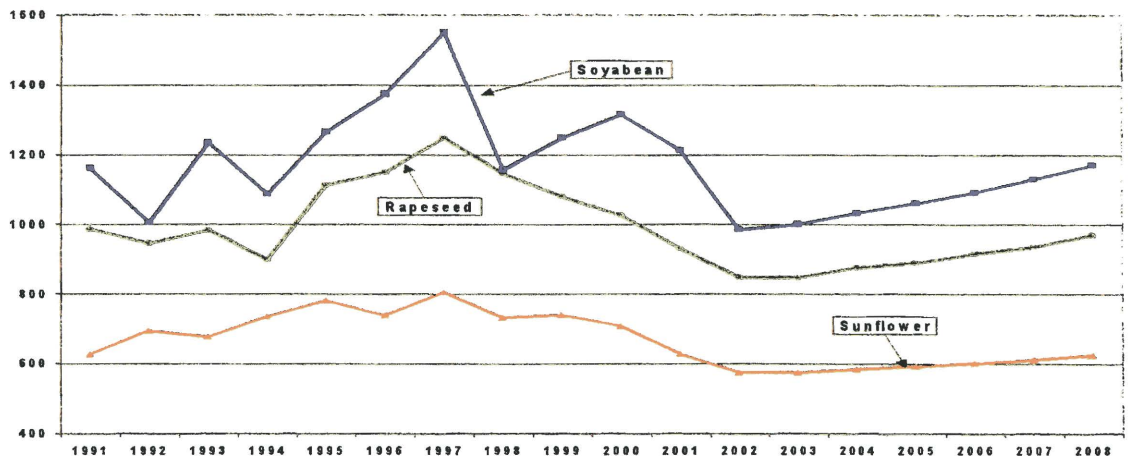
20 The import demand for rye is rather limited and unstable: its comes from, on the one hand, the CEECs and the FSU for bread-making purposes when these traditional rye-producing countries face supply shortage, and, on the other hand, from Asia (China, Japan and South Korea) where it is used as feed grain, but where it faces a strong competition from other (cheap) feed grains.

world economic growth that would stimulate increased human consumption of vegetable oils as well as the use of oilseed meals for the livestock sector.

If the world prices of oilseeds and oilseed products would remain at depressed levels in the short term, they are foreseen to strengthen over the rest of the period thanks to an improved demand. Soybean prices would increase from 211 $/t estimated for 2000/01 to 243 $/t by 2008/09, whereas rape seed and sunflower seed would follow a similar pattern with prices rising from 198 $/t and 201 $/t in 2000/01 to 224 $/t and 226 $/t respectively in 2008/09. These projections would constitute a downward revision from last year's assumptions on oilseed market prices. The medium-term perspectives of a relatively weak €/$ exchange rate would translate this moderate recovery into a stronger pattern for oilseed prices in € terms and should contribute to sustain oilseed production in the European Union over the next seven years. Soybean prices would increase from 236 €/t in 2000/01 to 243 €/t in 2008/09, rape seed prices from 221 €/t to 224 €/t and sunflower seed prices from 225 €/t to 226 €/t over the same period.

After a marked fall estimated at 0.4 mio ha in 2000/01 (due mainly to rape seed), the "food" oilseed area[21] is forecast to rebound strongly in 2001/02 thanks to an expansion in sunflower area. It would then decline further in 2002/03, when it would bottom out at 4.4 mio ha with the full implementation of the Agenda 2000 CAP reform. Total oilseed area would gradually and slowly recover to 4.6 mio ha[22] as it would be supported by improved price prospects and productivity increases.

Graph 1.11 Medium-term development in oilseed receipts, 1991/92 – 2008/09 (€/ha)



The cut in oilseed direct payments and their gradual alignment to the cereal payment from 2000/01 to 2002/03, the stagnation in world market prices in $ terms (i.e. their fall in €/t owing to the assumed short-term appreciation of the €) would more than offset over the short-term modest yield increases, resulting in a drop in oilseed receipts more pronounced than that for cereals[23] [24]. Oilseed receipts would recover over the medium term, supported

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[21] 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 soybean meal equivalent).

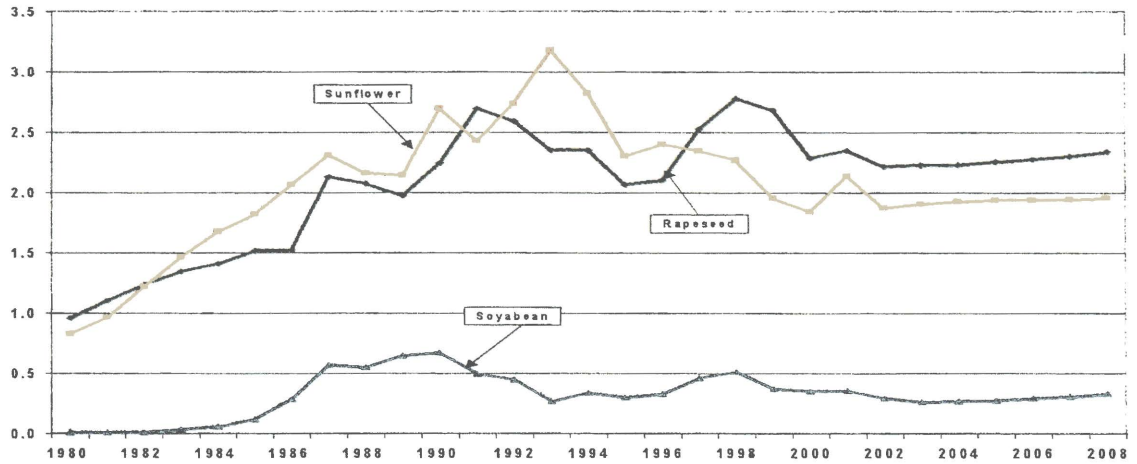
[22] This projected level of "food" oilseed area would stand below the Blair House limits (at 4.9 mio ha, cf. methodological annex).

[23] Relatively to the 1998/99-1999/00 average, falls in oilseed receipts would range between 22 % and 24 % in 2002/03 for sunflower seed and rape seed respectively. In spite of a marked decrease in direct

by the recovery in oilseed prices and strong productivity prospects, thus limiting their overall fall in 2008/09 to around 3 % for soybean, 13 % for rape seed and 15 % for sunflower seed relatively to the pre-Agenda 2000 period (cf. graph 1.11).

Lower oilseed receipts would generate a fall in their relative share in the total COP area from 11.8 % in 1999/00 to 10.8 % in 2008/09. Soya bean and rape seed would display the less favourable pattern, their share declining from 1.1 % and 6.3 % over the most recent years to 0.7 % and 5.4 % respectively by the end of the projection period. Soya bean and rape seed area would fall by 21 % and 17 % respectively in 2002/03 relative to 1999/00, before stabilising around 300 000 ha and 2.3 mio ha respectively over the medium term. In contrast, after a small short-term decrease in 2000/01 and 2002/03, the area allocated to sunflower seed is foreseen to increase slightly by the end of the period relatively to 1999/00. Its area would stabilise between 1.9 and 2.0 mio ha over the medium term.

Graph 1.12 Oilseed (food) area allocation in the EU, 1980/81 – 2008/09 (mio ha)



Non-food oilseed area is estimated to adapt to the level of the set-aside rate. After a sharp increase in 1999/00 to 1.0 mio ha, it is expected to decline slightly at around 0.8 mio ha over the 2000/01–2008/09 period (with rape seed area covering about 0.7 mio ha).

Table 1.12 Oilseed area allocation in the EU, 1999/00 – 2008/09 (mio ha)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Rape seed	3.6	3.0	3.1	2.9	2.9	2.9	3.0	3.0	3.0	3.0
of which food	*2.7*	*2.3*	*2.4*	*2.2*	*2.2*	*2.2*	*2.3*	*2.3*	*2.3*	*2.3*
Sunflower seed	2.0	1.9	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.1
of which food	*2.0*	*1.8*	*2.1*	*1.9*	*1.9*	*1.9*	*1.9*	*1.9*	*1.9*	*2.0*
Soya beans	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Total oilseeds	6.0	5.3	5.6	5.2	5.2	5.2	5.3	5.3	5.4	5.4
Food	5.0	4.5	4.8	4.4	4.4	4.4	4.5	4.5	4.6	4.6
Non food	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Set-aside rate	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%

payment, soybean receipts would limit their fall to 18 % by 2002/03 owing to high productivity growth and improved price prospects.

[24] The fall in soybean direct payments 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 cereals 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).

Despite a certain decline in the early nineties, oilseed yields are expected to increase in the medium term and reach 2.8 t/ha on average in 2008/09. This corresponds to an average annual growth of 1.5 % between 2001/02 and 2008/09, with soybean exhibiting the stronger pattern with an annual growth rate projected at 1.7 % on average.

Table 1.13 Oilseed (food) yields in the EU, 1999/00 – 2008/09 (t/ha)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Rape seed	3.4	3.0	3.1	3.1	3.1	3.1	3.2	3.3	3.3	3.4
Sunflower seed	1.5	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8
Soya beans	3.3	3.3	3.4	3.4	3.5	3.5	3.6	3.7	3.7	3.8
Total oilseeds	2.7	2.5	2.5	2.5	2.5	2.5	2.6	2.7	2.7	2.8

Oilseeds (food) production is forecast to drop from 13.3 mio t in 1999/00 to 11.3 mio t in 2000/01 and 11.0 mio t in 2002/03 as total oilseed area declines. It would then increase slightly over the medium term to reach 12.8 mio t in 2008/09 as yields resume rising and oilseed area recovers.

Table 1.14 Oilseed harvested production in the EU, 1999/00 – 2008/09 (mio t)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Rape seed	11.9	9.0	9.3	8.8	9.0	9.1	9.4	9.6	9.9	10.2
of which food	*9.1*	*6.9*	*7.3*	*6.8*	*6.9*	*7.0*	*7.3*	*7.4*	*7.7*	*7.9*
Sunflower seed	3.1	3.3	3.8	3.4	3.5	3.5	3.6	3.6	3.7	3.8
of which food	*3.0*	*3.2*	*3.6*	*3.2*	*3.3*	*3.3*	*3.4*	*3.4*	*3.5*	*3.6*
Soya beans	1.2	1.2	1.2	1.0	0.9	1.0	1.0	1.1	1.1	1.3
Total oilseeds	16.2	13.5	14.3	13.2	13.4	13.6	14.0	14.3	14.7	15.2
Food	13.3	11.3	12.1	11.0	11.1	11.3	11.7	12.0	12.3	12.8
Non food	2.9	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.4
Set-aside rate	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%

After a short-term fall, non-food oilseed production would evolve together with the level of set-aside and stabilise around 2.3-2.4 mio t over the medium term.

2.3 Uncertainties

These projections 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 that could have some implications for the EU arable crop markets. The most important uncertainties can be summarised as follows:

(1) These projections remain conditional on the medium-term developments on the world cereal markets, both in volume and relative prices, that directly influence 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 appear rather moderate and a more favourable outlook for these markets could have a significant (and positive) impact on EU markets. A more favourable outlook could allow higher levels of cereal exports, both for wheat (if EU producers could deliver the adequate quality of wheat) and for coarse grains as higher unsubsidised coarse grain exports would in turn allow to increase subsidised exports of other coarse grains. It could also shift some domestic feed demand from soft wheat to coarse grains;

(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 area allocation and domestic consumption. Were future prospects for world market prices of oilseeds and oilseed products more favourable, some EU cereal production surplus could be reduced by shifting more area into oilseeds and increasing domestic demand for cereals. In contrast, any significant downward revision in the medium-term perspectives of the oilseed complex would add pressure on internal cereal market in shifting additional area into other arable crops (the largest part into cereal production);

(3) Changes in the €/$ exchange rate could have pronounced effects on the future prospects for the EU cereal markets. A weaker €, as currently observed on the currency markets, would provide further boost to EU cereal competitiveness on the demand side (both domestically and externally). It could also alleviate supply-side pressure on the cereal market by favouring the development of EU oilseed production. A stronger €, as observed over the 1990s, would in turn reduce the competitiveness of EU cereals on its internal markets *vis-à-vis* imported feed substitute products and on the world markets. Furthermore, it could reduce the EU ability to export some cereals without export refunds and render the WTO limits on subsidised exports increasingly binding in certain cereal sectors (notably in the barley sector and, to a lesser extent, the soft wheat sector). A stronger € would also undermine the attractiveness of oilseed production by reducing the profitability of these crops;

A sensitivity analysis has been carried out to illustrate the impact of alternative €/$ exchange rates on the arable crop sector. In a weaker € scenario (a €/$ exchange rate rising from 1.08 in 2001 to 1.10 from 2002 onwards), oilseed area would rise by some 0.1 mio ha on average (at the expense notably of voluntary set-aside and, to a lower extent, cereals). If feed demand would increase slightly, the projected increase in internal prices (as domestic markets would become increasingly tight) would affect other types of cereal demand. The largest impact would be found in cereal exports where EU cereals would more competitive[25]. As a result, total cereal stocks would drop by some 5 to 6 mio t by 2008/09.

If a weaker € scenario would not drastically change the overall picture, a stronger € (the €/$ exchange rate falling from 1.08 in 2001 to 1 in 2002 and 0.90 from 2004 onwards) would in contrast generate some more significant outcome. Whereas cereal area and voluntary set-aside would rise by slightly less than 0.2 mio ha, total cereal feed demand would decline by more than 0.5 mio t in the short term relatively to the reference scenario (baseline). However, the general decrease in cereal prices in response to rising stocks would partially outweigh the loss of competitiveness of feed cereals *vis-à-vis* imported feed substitutes so that the long-term impact on the feed market of a stronger € would be significantly reduced. Conversely, the largest impact would be found on the export side where soft wheat and barley exports would be significantly reduced (by 3 to 4 mio t in aggregate) as they lose competitiveness and WTO limits become more binding. As a result, total ending stocks of cereals would rise by a further 17 mio t (equally shared between barley and rye) in a stronger € scenario, to reach 56 mio t by 2008/09.

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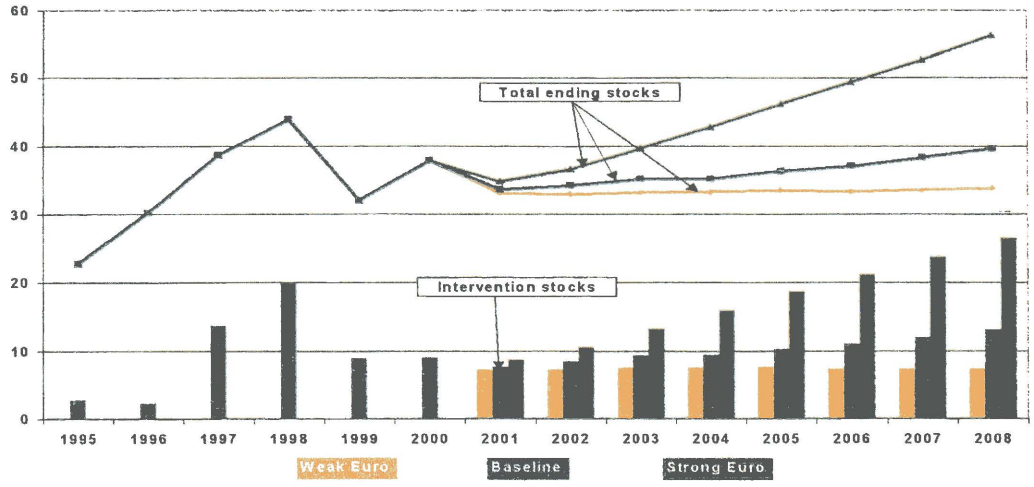
[25] Furthermore, the resulting decline in the use of export subsidies for cereal exports (mainly for barley) could in turn allow to increase subsidised exports of other coarse grains up to the URAA limits (in the limits of import demand).

Graph 1.13 Total cereal ending stocks under alternative €/$ exchange rate scenarios, 1995/96 – 2008/09 (mio t)



3. Meat and livestock

3.1 Beef and veal

Over the last five years the EU beef and veal market has been strongly influenced by the measures that were taken in 1996 after the first BSE scare. In the period between 1996 and 2000 around 5 mio animals have been withdrawn in the framework of the slaughter schemes and around 6 mio calves were concerned by the emergency supply-side schemes[26] (of which 3.5 mio in the framework of the early marketing scheme).

By the middle of 2000 the EU beef market was experiencing a situation of relative equilibrium with consumption back to pre-BSE level, good exports, no stocks and prices above support level. The situation has changed rapidly in October, when a series of events resulted in a new food scare across Europe. The French decision to anticipate the testing of over thirty months animals unveiled an increasing number of BSE cases. At the same time, the discovery of irregularities in the slaughter scheme and the large media coverage given to the first French cases of nv-CJD (new variant of Creutzfeld-Jacob disease) amplified consumers reaction, with beef consumption falling rapidly in France, reaching – 38 % in December 2000[27], compared to the same month of 1999. The crisis extended rapidly to other Member States as soon as the more systematic testing revealed cases of BSE. Germany, Spain, Italy and other Member States experienced a similar drop in consumption. After a good development in the first 10 months, the drop in November and December 2000 was enormous and sufficient to bring total EU consumption for the year 2000 down to 7.26 mio t, -5 % compared to 1999. The sharp fall in prices that followed has drastically reduced the number of slaughtered animals, bringing net production for 2000 at 7.39 mio t, -3.8 % compared to 1999. However, this immediate reduction in production was just a temporary response, obtained by retaining animals in the farms for a certain period. Production decisions for those animals were made years before and,

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[26] For a detailed description of the 1996 crisis, the measures introduced and the impact on production and consumption, please refer to "*Prospects for the Agricultural Markets 2000-2007*" – November 2000, European Commission, Brussels.

[27] According to Beef Management Committee estimates.

therefore, any adaptation to this sudden change in the demand level will only be possible after a certain time lag, possibly years.

In order to reassure consumer concerning the increased safety standard of EU beef meat, and to reduce the growing gap between supply and demand, a number of measures were rapidly put in place. The aim was, on one side, to restore consumer confidence on beef and, at the same time, to reduce beef production by withdrawing animals destined to the food chain. The objective of the "Purchase for Destruction" scheme, which came into force on the 1st of January 2001, was to withdraw and destroy all meat coming from over-thirty-months animals which were not tested for BSE[28]. In this way there was the reassurance that all the meat put on the food chain was tested against BSE, and at the same time, withdrew a large amount of beef from the market[29]. Furthermore, it allowed for a transitory period of 6 months to give the possibility to all the Member States to equip for the testing of all over-thirty-months animals. Up to the end of May 2001, the scheme has withdrawn around 200 000 t of beef meat, mainly in Ireland and France[30] and is expected to reach 230 000 t by the end of the scheme (30/6/2001), when all over thirty months animals will be tested. This scheme will be fully replaced by a "Special Purchase Scheme" that is already in force since the beginning of April 2001 and will run until the end of the year 2001. This new scheme allows Member States to buy up and stock beef from over-thirty-months animals and to decide later whether to destroy it or to put it back on the market, once the crisis is over.

However, even with those measures in place, prices have fallen below intervention level and even below the safety net (for a short period and limited to Germany and the Netherlands). Intervention stocks have rapidly grown, also due to more flexible criteria that have been decided for buying into intervention. At the end of May 2001, intervention stocks were at around 190 000 t[31], mainly in Spain, France, Italy and Germany.

The situation has showed signs of recovery since March 2001, with growing consumption, a slowdown in the sales into intervention and a lower use of the destruction scheme. This market improvement coincided with the insurgence of a new crisis that hit the EU livestock market. Foot and Mouth disease (FMD) appeared in the UK in the middle of February 2001 and quickly affected a large number of animals. Since then some outbreaks have been recorded in Ireland and in Continental Europe (France and the Netherlands), but the measures put in place have been able to block the spread outside the UK. At the

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[28] The decision to limit the compulsory testing to over-thirty-months animals is based on scientific advice and on evidence from the statistical age distribution of BSE infected animals in UK. The extension of compulsory testing to younger animals is possible but has not been advised by the Scientific Steering Committee because, as the reliability of the current quick testing kits is limited to 6 months before the appearance of clinical signs, and following the low incidence of BSE on less than thirty months animals due to the long incubation period, this testing will probably provide a false certitude.

[29] The purchase is compensated by a given amount per animal, with a 70 % co-financing from the EU budget. The scheme proved to be the cheapest possible as it withdrew mainly cow meat, which is the cheapest on the market.

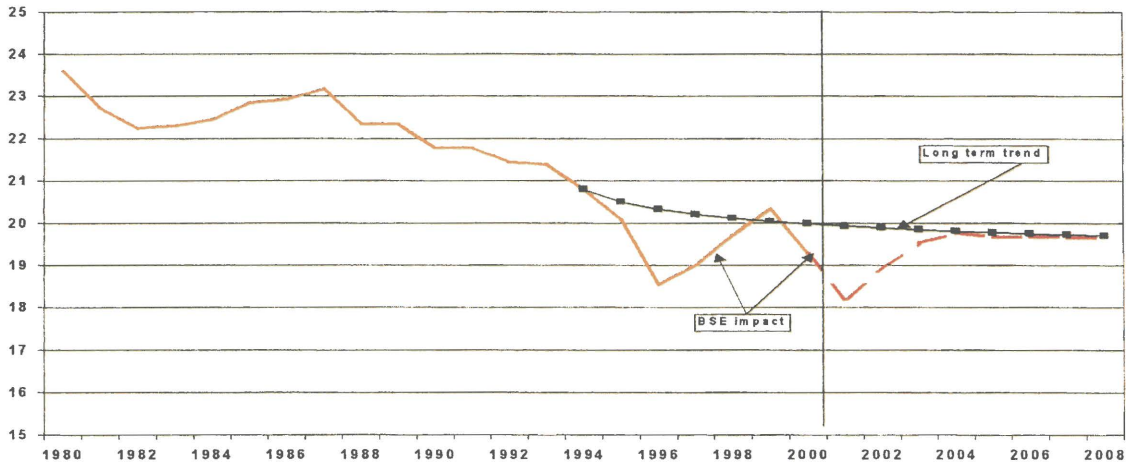
[30] Sweden, Austria and Finland have been exempted from this scheme on the basis of their BSE free status. Denmark and the Netherlands did not apply the scheme and are testing all the over thirty months animals.

[31] Taking into account that some of the accepted quantities have not been bought by the Spanish Authorities due to limits in cooling and storage capacity.

end of May 2001, UK remains the sole country in Europe where the epidemic is not over, even if it is now in its final stage. For the purpose of our projections, we have assumed the epidemic to be totally controlled by the end of July 2001 (i.e. no new cases after that date).

The impact of FMD on beef and veal market is relatively less severe when compared to other livestock. Until the end of May 2001 around 600 000 cattle have been slaughtered and destroyed as a measure to contain the spread of the disease (compared to around 2.5 mio sheep). Furthermore, it must be specified that, of these animals, around 500 000 cattle concern the UK. In the absence of any information on the age/category distribution of those animals, and based on the herd structure recorded at the last census[32], we assume that around 40 % of those animals were over 30 months old and would have been destroyed anyway within the OTMS scheme. In this respect we assumed FMD to withdraw around 150 000 t of beef meat from the market in 2001.

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



The evolution of consumption estimates for the first months of the year 2001[33], together with information from household surveys carried out in most Member States, revealed a large drop in consumption compared to the previous year, but a rapid recovery. In this respect, and following the drop of consumption of 5 % in 2000, we assumed the reduction for the year 2001 to reach on average –10 % compared to 1999. Following the evolution recorded in the 1996 BSE crisis, which represents the only information available and it is used as a reference in our projections, we expect beef consumption to recover gradually and return to the decreasing long-term trend.

Beef and veal production for the year 2001 is subject to a number of short-term disturbances. First of all the carry over of a large number of animals that have been retained in the farms at the end of 2000, following the fall in prices and the strong reduction in demand. In this respect, we made the assumption that this backlog of animals correspond to around 350 000 t (reduction in slaughterings recorded in the last two

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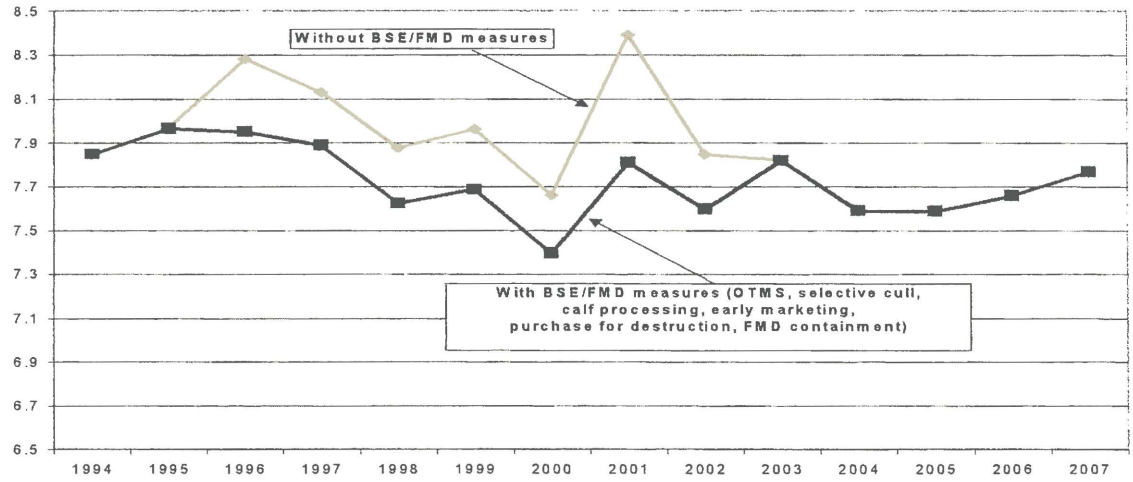
[32] The last census was carried out in all Member States in November/December 2000.

[33] The experts of the beef Management Committee have provided estimates of the drop in beef consumption compared to a "normal" situation. For the EU as a whole they estimated a drop by –27.5 % in December 2000, and for 2001a drop of -28.23 % in January, -28.23 % in February, -23.58 % in March, -18.3 % in April, -10.2 % in May.

months of 2001). These animals cannot be kept indefinitely, and must, at a certain point, be slaughtered. We assume that a large part of these animals (that in the meantime have increased weight) would be slaughtered in 2001[34], also thanks to the incentives provided with the destruction schemes. However, it is also reasonable to imagine that a small part would however be postponed to the next year, due to the low prices. Beef production will also be strongly affected by the "Purchase for Destruction" scheme and the FMD containment culling, which are assumed to withdraw respectively around 230 000 t and 150 000 t in 2001. At the end of May 2001, the "Special Purchase" scheme is still not fully applied across the EU and, for the moment, has only attracted small quantities. It is therefore too early to have a projection on the basis of the first tenders. We assumed therefore that this scheme might be able to withdraw more meat than the "Purchase for Destruction scheme", as in autumn we expect an increase in slaughterings (cf. footnote 34). In addition to this, we assume that the OTMS scheme in the UK will be maintained until the end of 2002[35]. This means that from 2003 onwards we include around 200 000 t of beef meat per year that were previously destroyed and that from 2003 on will be put on the market every year[36]. It should be mentioned that the measures adopted on the 19th of June 2001 are not taken into account.

Graph 1.15 Impact of the BSE and FMD measures on beef/veal production (mio t)



After taking into account all the factors mentioned above, and under the assumption that changes in the production level are only possible after a certain time lag, we estimated beef and veal meat production destined for human consumption at around 7.76 mio t in 2001. Production is then estimated to decrease in the year 2002, as the beef cycle enters

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34 The retention in the farms is less expensive during spring and summer, as a large number of these animals are left grazing. For this reason it is expected an increase in the slaughtering in the coming autumn and winter.

35 In the November 2000 report (cf. footnote 26), we had assumed the end of the OTMS scheme in the UK by the end of 2001. However, on the basis of the information available at the beginning of June 2001, it seems that the UK Government will not call for the end of the scheme within 2001 and therefore we assumed a continuation of the scheme throughout the year 2002.

36 The OTMS scheme in the UK withdrew slightly less than 1 mio animals per year between 1998 and 2000, which corresponds roughly to 250 000 t of beef meat per year. It is expected that, in the absence of such a scheme and following even lower prices for over thirty months cattle, some of these animals would be kept and therefore we assumed that the removal of the scheme would increase production by around 200 000 t per year.

the downward path, and reach a minimum by the year 2004/2005 at around 7.67 mio t[37]. Beef production should then slightly increase to reach 7.85 mio t by 2008. Compared to the last year's projections, which did not consider the BSE and FMD crises and therefore can be considered as a reference scenario (what would happen without BSE/FMD crises), production is projected to drop, over the long term (2003-2008), on average by –1.6 %.

EU **beef imports** are forecast to decrease in the short term after the high level recorded in 1999 and 2000, but are likely to increase up to 400 000 t in 2002, and than stabilise in the medium term. The possible further increase in imports due to the recent "double-zero" agreements with the 10 CEECs could be outweighed by the lower internal prices foreseen over the long term that will reduce somewhat the attractiveness of the EU market[38]. In addition, since the BSE scare and the ongoing discussions on hormone-treated beef, EU consumers seem to tend more towards local, regional and national products and this trend will be probably reinforced with the new beef labelling requirements[39].

Table 1.15 Beef/veal projections in the EU, 1999 - 2008 ('000 t cwe)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Production (gross)	7747	7452	8150	7650	7874	7722	7731	7777	7873	7920
Import of live animals	38	36	40	45	45	45	45	45	45	45
Export of live animals	99	94	50	90	100	100	110	120	120	120
Production (net)	7686	7394	8140	7605	7819	7667	7666	7702	7798	7845
- Meat from destroyed animals			380							
Purchase for Destruction			230							
FMD containment			150							
Available net production	7686	7394	7760	7605	7819	7667	7666	7702	7798	7845
Consumption	7648	7264	6877	7163	7420	7535	7510	7520	7535	7540
Imports	385	378	350	400	400	400	400	400	400	400
Exports	872	571	450	620	720	720	710	700	700	700
Beginning stocks	513	65	2	435	657	736	548	394	276	239
Ending stocks	65	2	435	657	736	548	394	276	239	244
Stock changes	-448	-63	433	222	79	-188	-154	-118	-37	5
Special Purchase Scheme (stock change)			350							
p.c. cons. (kg)	20.34	19.27	18.19	18.90	19.52	19.77	19.67	19.66	19.66	19.64

Contrary to the situation of 1996, beef exports have been strongly influenced by the recent BSE crisis, with a large number of countries lifting unilateral embargoes on EU beef meat. Furthermore, the outbreaks of FMD in the UK and in other Member States has virtually halted, for a certain period, our exports of meat and dairy products. With the re-opening of some key markets, notably the Russian market, total beef exports (including live trade) are quickly recovering and are expected to reach around 500 000 t in 2001 (which represent around 60 % of the GATT limit on subsidised exports). Exports are then projected to recover further and to reach 820 000 t by the year 2003 and then stabilise at this level.

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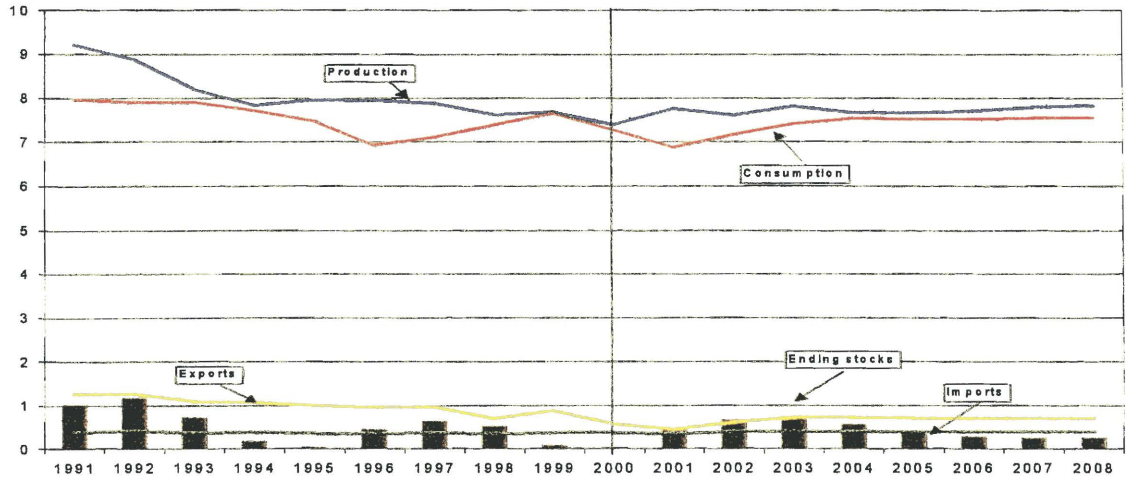
[37] Availability of beef meat is expected to increase from the year 2003, following the end of the OTMS scheme in the UK.

[38] The recent outbreaks of FMD in South America might drastically reduce our imports that traditionally rely on those countries for high quality beef.

[39] Regulation 1760/2000 establishes a system for the identification and registration of bovine animals and covers the labelling of beef and beef products. It applies to beef from animal slaughtered after September 1st, 2000. In a fist period, until the end of 2001, beef at retail level should carry a label indicating the country of slaughtering. From 1/1/2002 it should also include the country of birth of the animal and, if applies, all the countries were the animal has been raised.

The assumptions and projections outlined above suggest that the current unbalance in the EU beef market is likely to continue and even deteriorate over the short term, with the creation of large surplus (up to 740 000 t by 2003). The situation is expected to improve over the medium term with a projected net de-stocking of around 500 000 t between 2004 and 2007. However, this is not expected to clear stocks that are projected to stabilise at around 240 000 t by the end of the forecast period.

Graph 1.16 Beef/veal projections in the EU, 1991 – 2008 (mio t)



The very exceptional situation on the beef market hindered our analysis and our projections and called for the inclusion of a number of critical assumptions, on almost each post of the balance sheet. First of all, on the basis of past experience and of recent estimates, we assumed a given reduction in consumption (down to –10 % in 2001) and the recovery over 3/4 years, like after 1996. This assumption is in line with our latest estimates from Member States but assumes a continued and gradual improvement in consumption and therefore does not take into account the possibility of any other food scare over the medium term. On the supply side, other than the big impact of destruction schemes and FMD containment measures, we assumed the end of the OTMS in UK by the end of 2002, with around 200 000 t of beef meat per year to be put on the food chain from 2003 onwards. On the export side, we assume exports up to the GATT limits on subsidised exports between 2003 and 2008. However, our recent experience has shown that unilateral, and often unjustified, bans are sufficient to reduce drastically our exports. Finally, on the "Special Purchase" scheme, which assumes that Member States will withdraw up to 350 000 t of beef meat by the end of 2001, we made the assumption that those quantities will not be put back on the food chain before the end of the forecast period.

3.2 Pig meat

In most recent months the pig meat market, like the entire EU livestock sector, has been affected by some extraordinary circumstances that are having major consequences for the short term and are expected to influence the medium-term evolution of the sector.

The new BSE scare in the beef sector, which has started to produce a switch in demand towards other kinds of meat, has partly benefited the pig meat sector and has contributed to further increase prices. After the decrease in production recorded in 2000 (-2.4 % compared to 1999), which followed the period of oversupply and very low prices of 1998 and 1999, the pig meat sector was benefiting of a period of good prices and reasonable margins and, at least in some Member States, there were first signs of investments and

increase of the breeding herd. The recent BSE crisis, like in 1996, is expected to increase pig meat consumption and therefore further sustain the high level of prices. However, among the measures that were immediately put in place against the BSE, the temporary interdiction in the use of animal proteins in pig and poultry feed will probably affect prices of feedstuff and producers' margins.

Overall, the last pig census that was carried out across the EU between November and December 2000 showed, with few exceptions, a further reduction of the total pig herd. The number of mated sows, however, was increasing almost everywhere, even before the incentives created by the new BSE scare. The relative high price level is expected to lead to a major upward adjustment by pork producers and almost all Member States foresee increasing production by the last quarter of 2001[40].

However, at the beginning of 2001, the outbreak of FMD in UK and then in Ireland, France and the Netherlands has partially perturbed the pig meat sector. On one side, the animals killed and destroyed for sanitary reasons in the areas touched by the outbreaks will affect current and future production level. Up to the end of May 2001, around 270 000 pigs have been killed and destroyed in the FMD containment. On the other side, following the FMD outbreak, limitation to the movement of livestock together with a large number of export bans imposed by third countries has created strong disruption in the slaughtering and in the sales. The important role of exports for the European pig sector makes it extremely sensible to this kind of epidemics. However, the limited spread of the disease outside the UK has prevented major problems and a large part of the export ban on EU pig meat have been removed after few months.

Pig meat production is expected to increase by around 0.5 % in 2001, following the positive developments of producer prices and margins over the last year. However, the big part of the anticipated increase in production will take place in 2002, which is foreseen to reach 18 mio t (+2 % compared to the previous year). The production increase is then foreseen to slow down in 2003 (+0.9 % compared to 2002), and production should even reduce slightly by 2004. Over the long term, there is a certain scope for further growth, but the growth rates are anticipated to be lower than in the past. Pig meat production, which is assumed to be driven mostly by demand (internal and external) is, thus, projected to resume its growth and reach around 18.8 mio t by the end of the forecast period.

The drop in beef per capita consumption, which has been recorded since November 2000, is expected to have a positive impact on pig and poultry meat consumption. For the year 2001 pig meat consumption is expected to increase by around 2 %. The medium and long-term outlook for pig meat **consumption** is in general positive since pig meat is likely to continue to be favoured by consumers, although clearly less than poultry. After the sharp increase in 2001 in connection with the BSE crisis, the growth rates for per capita consumption are anticipated to slowdown somewhat in coming years, given the expected recovery of beef meat consumption and against the moderate prices that are expected following the strong increase in production. Pork per capita consumption is projected to increase from 43.4 kg in 2000 to around 46 kg by the year 2008.

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[40] Danish pig producers have, in general, anticipated the investments and have already increased production (+3.5 % in the first quarter) and, according to market experts, gross indigenous production might reach up to 25 mio pigs in 2001 (+11 % compared to 2000).

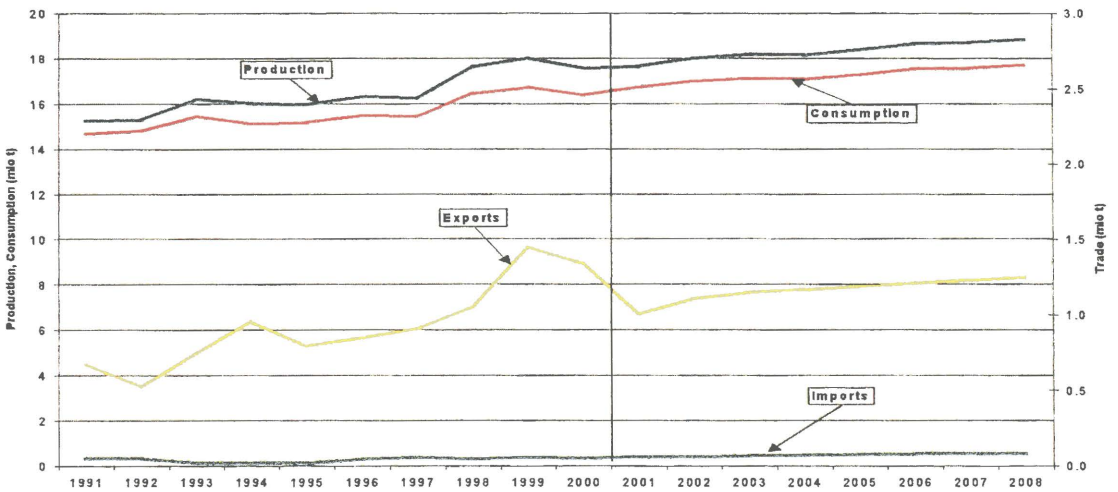
Table 1.16 Pig meat projections in the EU, 1999 – 2008 ('000 t cwe)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Production (gross)	17993	17563	17652	18006	18175	18152	18368	18646	18706	18850
Import of live animals	0	1	0	0	0	0	0	0	0	0
Export of live animals	2	1	1	1	1	1	1	1	1	1
Production (net)	17991	17563	17652	18005	18175	18151	18367	18645	18706	18850
Imports	55	48	60	58	64	69	73	76	80	84
Exports	1444	1335	1000	1100	1143	1163	1183	1203	1223	1243
Stock changes	-100	-100	0	0	0	0	0	0	0	0
Consumption	16702	16376	16712	16963	17096	17058	17257	17519	17563	17691
p.c. cons. (kg)	44.42	43.44	44.21	44.75	44.97	44.75	45.20	45.80	45.82	46.07

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

Imports are forecast to increase slightly over the medium term, following the increased market access commitments allowed under the double zero agreements with 10 accession countries. Compared to the record level of 1999 and the remarkable level of 2000, **exports** are likely to be lower in 2001, due to the export restrictions that followed the outbreak of FMD in Europe. Exports are projected however to slightly increase over the medium term in line with higher EU production and growing international trade.

Graph 1.17 Pig meat projections in the EU, 1991 – 2008 (mio t)



3.3 Poultry

The poultry sector developed much more continuously if compared to beef and pork, with an average growth rate of around 3.2 % between 1995 and 1998. However, the year 1999 showed, for the first time in many years, a reduction in poultry production (-1.2 % compared to 1998), mainly due to the French cutback in production, the Dioxin crisis in Belgium and the outbreak of avian influenza in Italy. The consequences of these crisis were felt also in 2000 with a similar contraction in production (-1.2 % compared to 1999).

The new BSE scare in the beef sector, which, like in the 1996 crisis, has translated in a switch in demand towards other kinds of meat, should mostly benefit the poultry sector. At the moment of the crisis, pork and poultry production were at a low level and the increase in demand faced low supplies and therefore translated into high prices for both pig and poultry meat. However, poultry production is much quicker to respond and all the indicators suggest a rapid increase, estimated at around +3.4 % in 2001 compared to the previous year.

In the medium and long term, the outlook for poultry is 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. However, the temporary interdiction to feed animal proteins to poultry may partly compensate the lower feeding costs.

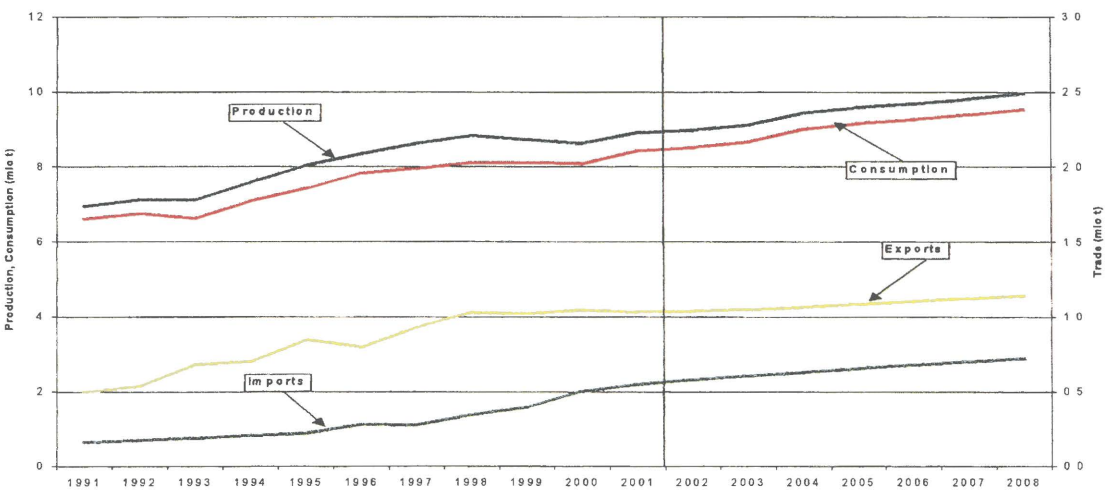
Mainly driven by demand (internal consumption and exports), **poultry production** is forecast to rise from 8.6 mio t in 2000 to around 10 mio t by the end of the forecast period. Per capita **consumption** is forecast to increase from 21.4 kg in 2000 to around 24.8 kg by the year 2008. This evolution is in line with the long-term growth of consumption that has been observed in the past.

Table 1.17 Poultry projections in the EU, 1998 - 2008 ('000 t cwe)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Production (gross)	8731	8626	8920	8980	9113	9439	9585	9687	9814	9955
Import of live animals	0	0	0	0	0	0	0	0	0	0
Export of live animals	3	4	4	2	2	2	2	2	2	2
Production (net)	8727	8623	8916	8978	9111	9438	9583	9685	9812	9954
Imports	397	503	550	580	605	630	655	680	700	725
Exports	1022	1046	1034	1040	1050	1065	1085	1105	1125	1145
Stock changes	-7	0	0	0	0	0	0	0	0	0
Consumption	8109	8080	8432	8518	8666	9003	9153	9260	9387	9534
p.c. cons. (kg)	21.57	21.43	22.31	22.47	22.80	23.62	23.97	24.21	24.49	24.83

After the strong increase recorded over the last few years[41], **imports** are forecast to continue to increase, but at a lower pace, 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. **Exports**, after the expected decrease in 2001[42], are likely to continue to grow slightly in the medium term in line with higher EU production and growing international trade.

Graph 1.18 Poultry projections in the EU, 1991 – 2008 (mio t)



41 Imports of "salted meat from other animals", mainly poultry, have rapidly increased since 1997. These imports mainly from Thailand and Brazil are subject to a lower duty compared to imports of frozen unprocessed poultry meat and have therefore increased rapidly, from 5 000 t in 1997 to 108 000 t in 2000.

42 Exports of poultry meat have also been affected by FMD, even if the disease cannot contaminate birds. This is the result of unilateral embargoes on European meat and dairy products decided by a number of trade partners in the wake of the FMD crisis.

3.4 Sheep and goat

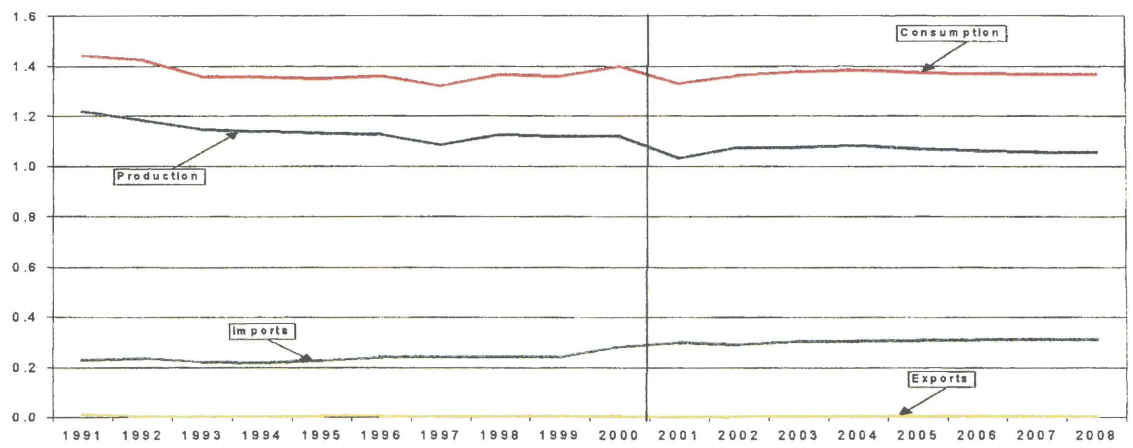
Sheep and goat meat production was stable in 2000, after the slight decrease of 1999. The outbreak of FMD in the UK and in some other European countries has severely disrupted the sheep sector with large losses and limits to trade. Up to the end of May 2001, around 2.7 mio sheep have been killed and destroyed in the framework of FMD containment, almost entirely in the UK, and, as the crisis is not over at the beginning of June 2001, the number can increase further[43]. For the purpose of our analysis we assumed that the epidemic would stop by end of July 2001 (i.e. no more cases after that date), and therefore we assumed that a total of 4 mio sheep would be killed and destroyed in 2001. In this respect we estimate EU production for the year 2001 at around 1.02 mio t, -7.9 % compared to 2000. This drop is also due to the movement restrictions that have been decided to stop the spread of the disease and that have created enormous difficulties in the throughput[44]. Production is expected to recover in the year 2002 thanks to the carry over of lambs from 2001. This should compensate for the lower breeding herd that has been severely reduced by the FMD crisis (market experts estimate that 3/4 of the destruction concerned breeding sheep) and that will limit the increase in production, which is foreseen to continue its slight increase until 2004.

Table 1.18 Sheep/goat projections in the EU, 1999 – 2008 ('000 t)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Production (gross)	1107	1106	1018	1060	1062	1068	1055	1047	1040	1038
Import of live animals	13	15	15	15	16	16	17	17	18	18
Export of live animals	1	1	1	1	1	1	1	1	1	1
Production (net)	1119	1120	1032	1074	1076	1082	1071	1063	1057	1054
Imports	243	283	300	292	305	307	308	311	312	315
Exports	3	4	2	3	3	3	3	3	3	3
Stock changes	-1	0	0	0	0	0	0	0	0	0
Consumption	1359	1398	1330	1363	1378	1386	1376	1371	1366	1366
p.c. cons. (kg)	3.62	3.71	3.52	3.60	3.63	3.64	3.60	3.58	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.

Graph 1.19 Sheep/goat projections in the EU, 1991 – 2008 (mio t)



[43] Until the end of May 2001, additional 1 mio sheep have been registered into the "livestock welfare disposal scheme" in the UK.

[44] The interdiction of livestock markets and the impossibility for slaughterhouses to collect sheep from neighbouring farms with the same vehicle, has created a slowdown in slaughter operation and an increase in transport costs.

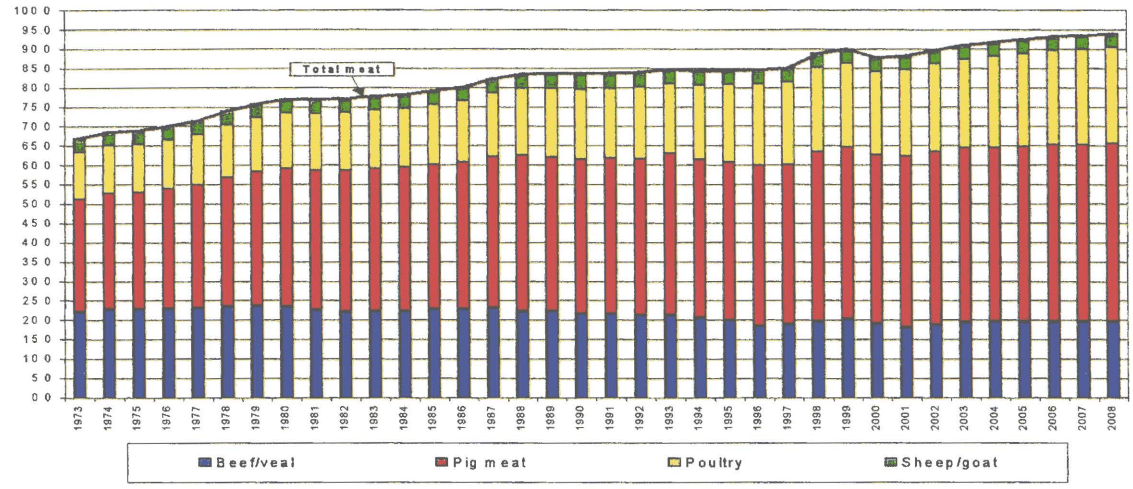
After the big increase of 2000, **imports** could increase slightly in response to somewhat better use of market access commitments granted to some third countries as well as the possible impact of increased quotas under the double zero agreement with 10 CEECs.

3.5 Overall meat consumption

The following graph shows the evolution of per capita meat consumption in the EU over the period 1973-2000[45] and presents the medium-term projections for the years up to 2008.

As it can be seen from this graph, there is a long-term trend towards higher per capita consumption of meat that has slowed down at the beginning of the 1990s.

Graph 1.20 Meat per capita consumption in the EU, 1973 – 2008 (kg/head)



The big increase of meat consumption, which is confirmed by the statistical figures for 1998 and 1999, is difficult to bring in line with the view that meat consumption, in general, is saturated. The forecasts for overall EU meat consumption that are presented in this document 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 87.9 kg/head in 2000 to around 94.1 kg by the year 2008. The sharp drop in beef/veal consumption in the year 1996 was compensated by higher consumption of other meats. Overall, per capita consumption of meat increased slightly by +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, with historically low prices reflecting the huge increase of production. However, consumption in the other sectors was rising, also. The year 1999 showed more or less the same picture, but with a smaller growth. The higher prices on all meat sectors recorded in the year 2000 (beef meat as well benefited of high prices until the BSE crisis) contributed to reduce meat consumption. Furthermore, the BSE crisis had a strong impact on beef consumption and the graph shows the possible impact of this crisis on the overall meat

[45] 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.

consumption. Compared to the 1996 crisis, which translated into a short-term stability in total meat consumption, we are faced with a marked reduction in overall consumption for the year 2000. This is due to the fact that both pig and poultry were in a phase of low production and were not ready to benefit of the drop in beef consumption. Furthermore, the crisis happened in the last months of the year, leaving no time for any adjustment in meat consumption.

Table 1.19 Overall meat per capita consumption in the EU, 1998 – 2008 (kg/head)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Beef/veal	19.71	20.34	19.27	18.19	18.90	19.52	19.77	19.67	19.66	19.66	19.64
Pork	43.82	44.42	43.44	44.21	44.75	44.97	44.75	45.20	45.80	45.82	46.07
Poultry	21.61	21.57	21.43	22.31	22.47	22.80	23.62	23.97	24.21	24.49	24.83
Sheep/goat	3.64	3.62	3.71	3.52	3.60	3.63	3.64	3.60	3.58	3.56	3.56
Total	88.78	89.94	87.86	88.23	89.71	90.92	91.77	92.44	93.25	93.54	94.09

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 24 %, which has overtaken beef/veal since 1996. The projections up to the year 2008 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 1999, **cow milk production** in the EU was 121.9 mio t and estimates for 2000 suggest a lower volume of around 121.4 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 114.9 mio t in 1999. The monthly figures available for 2000 suggest that milk deliveries in 2000 could be somewhat lower and the last estimate stands at about 114.4 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 2000/March 2001, there is a net under-use of the reference quantities for deliveries of around 480 000 t[46]. For the first time in many years, milk production and deliveries for the EU as a whole did not reach the available reference quantities for various reasons. Partly this could be attributed to the fact that milk reference quantities for certain Member States were increased in the years 2000 and 2001 as part of the Agenda 2000 decisions. The low deliveries are also due to the situation in the United Kingdom that reduced strongly its production as a consequence of a fall in milk prices over the last three years. Producer prices in the UK have slightly recovered since the fourth quarter of 2000 and may lead to higher deliveries and production. However, this might be offset by the disruption caused by the epidemic of Foot and Mouth disease (FMD). Not only deliveries were affected by the movement restrictions of collecting vehicles, but the cull of a large number of cattle as FMD containment measures (as well as part of the "Welfare disposal scheme") are expected to reduce further the UK milk production in 2001.

[46] Estimated after taking into account the fat adjustment. The figure is the net result of an overshooting of around 520 000 t by 7 Member States and an under-use observed in 8 Member States of around 1 mio t.

Table 1.20 Milk production, deliveries and dairy herd in the EU, 1999 – 2008

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Production (mio t)	121.9	121.4	121.2	121.2	121.0	120.7	120.8	121.1	121.3	120.6
Deliveries (mio t)	114.9	114.4	114.3	114.4	114.2	114.1	114.3	114.6	114.9	114.8
Delivery ratio (in %)	94.29	94.23	94.30	94.36	94.41	94.50	94.59	94.68	94.71	95.14
Fat content (in %)	4.07	4.08	4.08	4.09	4.10	4.11	4.11	4.12	4.13	4.13
Milk yield (kg/dairy cow)	5724	5814	5916	6009	6095	6195	6312	6418	6514	6587
Number of dairy cows (000)	21119	20649	20330	20012	19677	19303	18988	18744	18501	18126

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

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, around 29 mio dairy cows produced around 136.2 mio t of milk. The corresponding figures for 2000 are 20.6 mio dairy cows and a milk production of around 121.4 mio t[47]. Obviously, there was a big increase in milk yield over the same period, i.e. from 4387 kg/dairy cow in 1984 to 5814 kg estimated for 2000. On a yearly base, this represents an average growth rate of around +1.8 % that slowed down somewhat in most recent years.

Milk deliveries are projected to decrease slightly until 2004 and then resume somewhat following the quota increase starting in 2005/2006. Assuming that Member States will fully adjust to the available reference quantities for deliveries and direct sales, it is expected that milk deliveries will stabilise at around 114.4 mio t by the year 2002. This is around 670 000 t more than in 1998 but some 580 000 t less than in 1999. **Milk production** is expected to follow the developments projected for deliveries. On farm milk use, which is not governed by quotas is assumed to continue its decreasing trend. Direct sales are not concerned by the increase of milk quota.

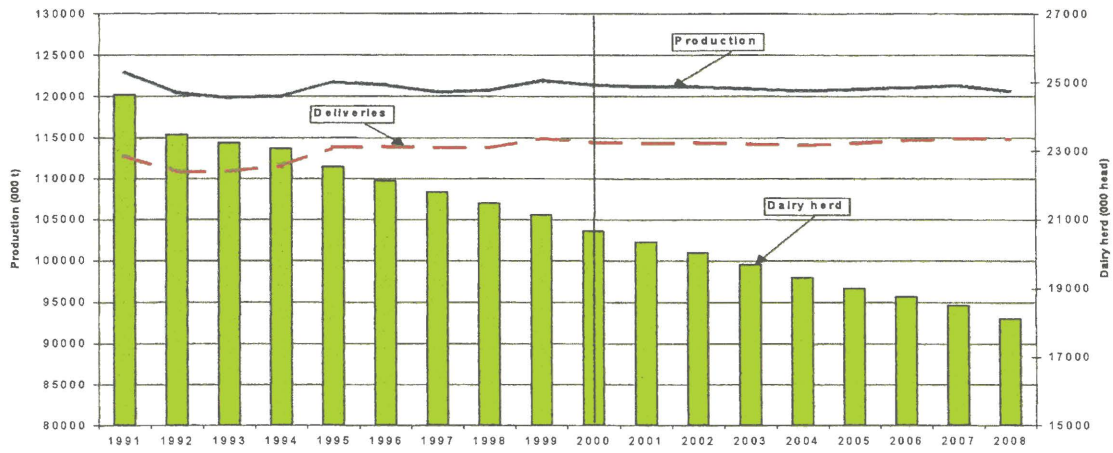
In the following years, it is expected that milk deliveries will decline slightly each year, reflecting the continuing increase in the milk **fat content** that reduces the margin for milk deliveries to dairies if the historical reference fat content is exceeded. Milk deliveries are forecast to increase again by the end of the forecast period in line with the quota increase in the years 2005-2007 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 decrease slightly from 121.4 mio t estimated for 2000 to 121.2 mio t by the year 2002 and then decline somewhat until 2004. At the end of the forecast period, i.e. in the years 2005, 2006 and 2007, production is forecast to be somewhat higher due to the increase in milk quotas in these years.

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 trend for further rising milk yields is not expected to change over the next few years.

[47] 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.

Graph 1.21 Milk production, deliveries and dairy herd in the EU, 1991 - 2008



The two steps of increase in milk quotas will slow down somewhat the long-term decline of the dairy herd. Assuming a further increase of milk yields by around 1.6 % per year on average over the forecast period, the number of dairy cows in the EU is forecast to decline from 20.6 mio animals recorded in 2000 (December survey) to around 18.1 mio cows by the year 2008.

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. The difficulties of 1998 and 1999 for exports on some third country markets, in particular Russia, changed considerably the short-term perspectives of the sector. Exports in 1998 were about 65 000 t lower than in 1997, and a further decline took place in 1999. However, the most recent figures on dairy production for the year 2000 indicate an increase of about 180 000 t, due both to higher domestic consumption and exports.

Within the context of medium-term forecasts up to year 2008, it has been assumed that cheese production will be mainly driven by (internal and external) demand. While the medium-term perspective for consumption still looks relatively good, **exports**, after the low levels experienced in 1998 and 1999 and the strong increase of the year 2000, are expected to decrease slightly in the short term. Over the medium term, it is expected that exports could reach about 430/440 000 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 that, together with expected higher world prices, should contribute to increase the competitiveness of European cheese on the world market.

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 like the double zero agreements with 10 CEEC countries.

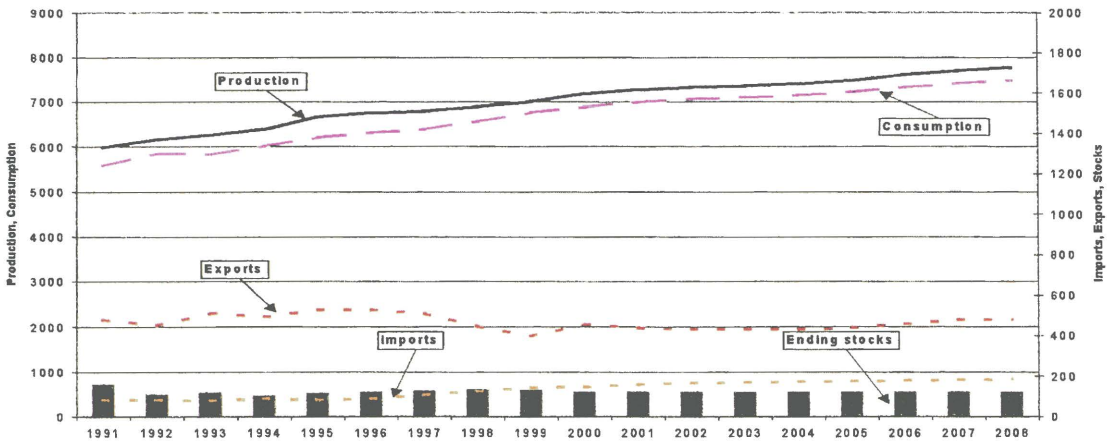
Table 1.21 Cheese projections in the EU, 1999 - 2008 ('000 t)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Production	6785	6962	7048	7100	7128	7172	7246	7373	7463	7533
Processed cheese impact	226	227	229	231	233	235	237	239	244	243
Imports	146	148	160	168	171	174	177	180	183	186
Exports	398	458	440	430	430	430	440	460	480	480
Consumption	6758	6888	6997	7068	7101	7150	7220	7331	7409	7481
Stock changes	0	-10	0	0	0	0	0	0	0	0
p.c. consumption (kg)	17.97	18.27	18.51	18.65	18.68	18.76	18.91	19.16	19.33	19.52
Public stocks (private aided stocks)										
Beginning stocks	133	130	120	120	120	120	120	120	120	120
Ending stocks	130	120	120	120	120	120	120	120	120	120
Stock changes	-3	-10	0	0	0	0	0	0	0	0

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

As already mentioned before, the medium and long-term outlook for **consumption** is in general positive, but it could well be that the growth will slow down. Per capita consumption is cautiously projected to rise from 18.3 kg in 2000 to about 19.5 kg by the year 2008. This represents an annual growth rate of around +0.8 %. Total consumption will increase somewhat faster, i.e. by about +1 % per year, due to the expected small growth of population.

Graph 1.22 Cheese projections in the EU, 1991 – 2008 ('000 t)



Consequently, cheese **production** is projected to continue its steady increase, but at a relatively lower rate in comparison to the recent past. Due to the constraining nature of the GATT commitments for exports, the expected average yearly growth rate for production is similar to those of total cheese consumption, i.e. at around +1 % per year. 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, higher milk deliveries led 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 1995-2000, total consumption fluctuated at around 1.76 mio t, with a trend to decline. Current exports are running at relatively low levels. After the sharp drop in 1998 and the small decrease in 1999, EU butter exports recovered slightly in 2000 (reaching 185 000 t).

Butter **production** is forecast to decrease slightly in spite of the higher supply of milk fat due to increased milk deliveries. It appears that the increase in milk deliveries recorded in 1999, which anticipated the 2000/2002 quota increase, was only partly used in the manufacturing of butter and SMP. The production of other dairy products is likely to absorb an important part of the additional deliveries, following the evolution of the demand side.

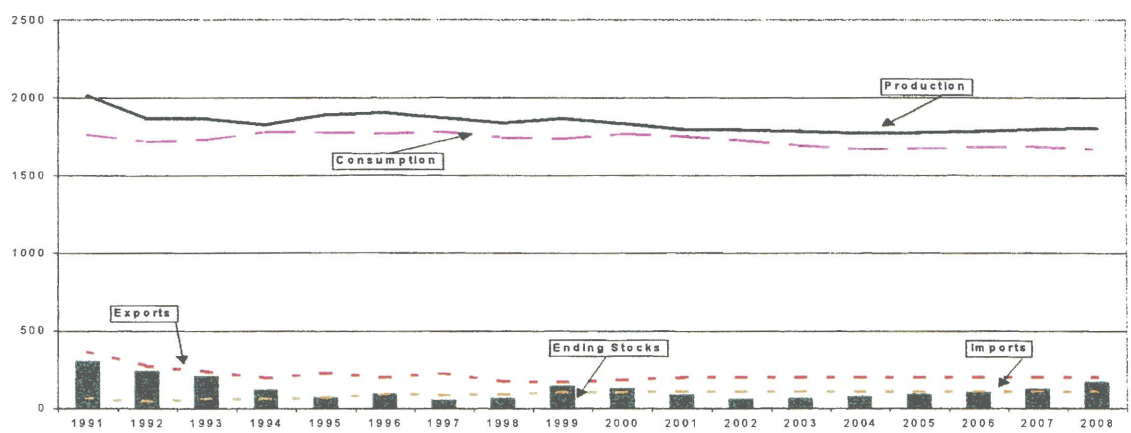
Table 1.22 Butter projections in the EU, 1999 – 2008 ('000 t)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Production	1867	1832	1798	1791	1783	1773	1776	1783	1796	1806
Imports	106	105	110	110	110	110	110	110	110	110
Exports	170	185	200	200	200	200	200	200	200	200
Consumption	1733	1768	1750	1725	1692	1669	1673	1680	1683	1668
Stock changes	70	-15	-42	-24	1	14	13	12	22	47
p.c. consumption (kg)	4.61	4.69	4.62	4.54	4.45	4.40	4.38	4.38	4.39	4.39
Public stocks (intervention and private aided stocks)										
Beginning stocks	64	144	129	87	63	63	77	89	101	124
Ending stocks	144	129	87	63	63	77	89	101	124	171
Stock changes	80	-15	-42	-24	1	14	13	12	22	47

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

Imports of butter are projected 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, mainly due to normalisation of trade with Russia after the crisis in 1998. 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.

Graph 1.23 Butter projections in the EU, 1991 – 2008 ('000 t)



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. Taking into account the evolution in most recent years, butter consumption is projected to continue to decrease. Forecasts for per capita consumption are set at 4.39 kg by the year 2008,

compared to around 4.69 kg currently. This forecast implies an annual rate of change of around –0.8 % for per capita consumption and –0.7 % for total consumption.

The balance sheet for butter shows that unless exports are higher than assumed above, some pressure on intervention stocks can be expected, despite continuous and sustained support of domestic use.

4.2.3 Skimmed milk powder (SMP)

Production and consumption of SMP decreased slightly over the last decade, after a strong decline during the period 1984-1992. SMP production decreased on average by –3.6% per year over the period 1996-2000[48]. The main reason for the fall of SMP production is, on one side, lower demand in the animal feed sector due to lower veal production, and, on the other side, the increasing use of skimmed milk in the manufacture of other dairy products (fresh products, cheese). Overall consumption, after the slight reduction between 1995 and 1998, increased considerably in 1999 but returned on a declining trend in 2000. Subsidised use of SMP decreased over the last 20 years both in absolute and relative terms: it represented more than 50 % of calves feed in the beginning of the 80s, and it has decreased since to around 27 % in 1998. The year 1999 represented a back-up line for subsidised use of SMP in calves feed, with a slight increase of 5 % on 1998. This was the first time after more than 20 years of gradual reduction[49]. Per capita human consumption was more or less stable over the last few years at a level around 0.9 kg.

In the medium and long term, the downward trend both for production and consumption of SMP should continue after the short interruption in 1999. Even the high internal and world market prices recorded over the last year[50] did not create an incentive to produce more skimmed milk powder. SMP production is likely to follow the downward developments projected for butter. The forecasts suggest a reduction of SMP production from 1.02 mio t in 2000 to around 890 000 t by the year 2008.

Imports are forecast to keep increasing slightly each year over the medium term. SMP **exports** are set at 230 000 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. 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 230 000 t on average that has been retained in the projections, the margin for additional exports is quite limited due to the GATT agreement. It is not expected that, up to the year 2008, SMP exports can be achieved without refunds, despite the prospects for higher world market prices.

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[48] Substantial statistical revisions have been carried out by some Member States, notably France. This resulted in a downward shift in the level of SMP production of around 60 000 t.

[49] With the only exception of the years when a "special aid" was granted for the use of SMP in pork and poultry feed.

[50] Domestic prices for SMP increased rapidly in the second half of 2000, up to more than 130 % of intervention price, on average across the EU. Prices, at the end of May 2001 are still high above intervention level (at more than 120 % of intervention price).

While human **consumption** of SMP is projected to remain more or less stable, the use of SMP in the animal feed sector, after the resurgence observed in 1999, is forecast to continue to decline over time. An important part of SMP consumption is subsidised (animal feed), but the share fell from around 70 % in 1991 to about 50 % in 2000. The cut in cereals and oilseeds prices, decided with Agenda 2000, implies cheaper vegetable feedstuff and, therefore, a further reduction of SMP use in animal feed. Furthermore, the reduction of the minimum incorporation ratio (of SMP in calves feed) and the reduction in the level of aid that have been decided recently should accentuate this downward trend.

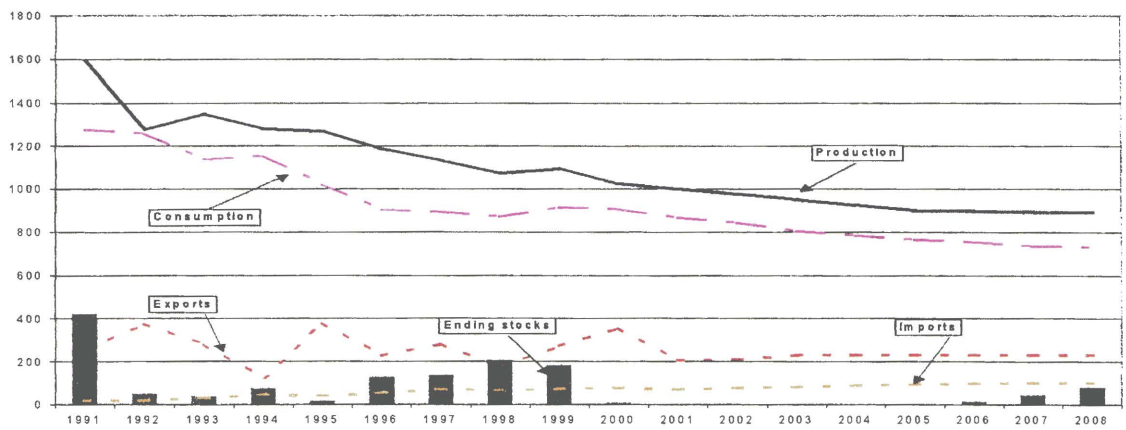
Table 1.23 SMP projections in the EU, 1999 – 2008 ('000 t)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Production *)	1095	1024	1001	977	951	926	901	898	895	891
Imports	73	78	70	77	83	89	94	98	101	103
Exports	273	357	205	210	230	230	230	230	230	230
Consumption	915	906	866	844	804	784	765	753	736	728
--- human	338	338	340	332	329	330	344	345	338	338
--- anim. feed, etc.	577	568	526	512	474	454	421	408	398	390
Stock changes	-20	-160	0	0	0	0	0	13	29	36
p.c. consumption (kg)	2.43	2.40	2.29	2.23	2.11	2.06	2.00	1.97	1.92	1.90
Public stocks (intervention and private aided stocks)										
Beginning stocks	205	180	7	0	0	0	0	0	13	43
Ending stocks	180	7	0	0	0	0	0	13	43	79
Stock changes	-24	-173	-7	0	0	0	0	13	29	36

*) 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.

Overall, the assumptions and projections presented above show a market situation where SMP intervention stocks, after the strong reduction that took place in the current year, tend to slightly increase in the long term.

Graph 1.24 SMP projections in the EU, 1991 – 2008 ('000 t)



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

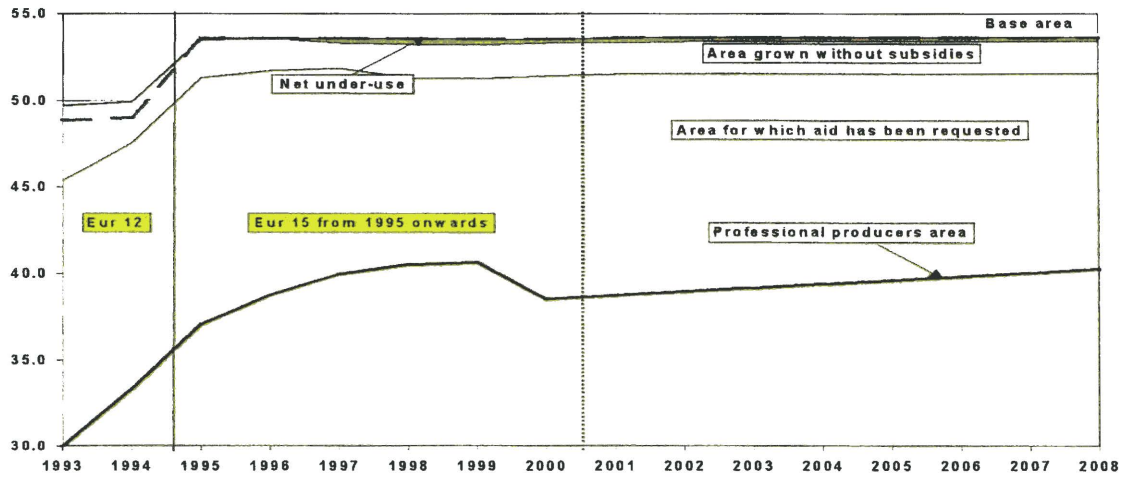
1.1 Area

Area projections are based on the allocation of the base areas as defined in the Council Regulation 1765/92 (et al.) for EUR 15. This "total base area", upon which compensatory payments are granted, amounts to 53.6 mio ha. It is distributed, as explained hereafter, among the arable crops covered by the 1992 reform and Agenda 2000 (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). From 2001/02 onwards, flax and hemp area is included in the base area.

Overall use of the base area

The allocation of the base area takes into account two phenomena that have been observed over the 1993-2000 period: firstly, some **systematic under-utilisation** of the base area (notably in Italy, Spain, Greece, Finland, Portugal and Sweden[51]) 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 to 2000, the net impact of these two phenomena displayed a **net under-use of the total base area** of some 100 to 300 000 ha and an overall decline in total land farmed in arable crops or set-aside within 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 – 2008/09 (mio ha)



[51] In order to ensure consistency with pre-Agenda 2000 statistics, the estimates for under-utilisation in Finland and Sweden from 2000/01 onwards do not take into account grass silage area.

The net under-use of the total base area is estimated to have reached slightly more than 200 000 ha in 2000 in the European Union as a whole (cf. graph A.1). Early estimates for the 2001 production year would show a small increase in the net under-use to nearly 250 000 ha.

It has been assumed that these phenomena would remain stable from 2002 onwards at a level close to the observed level of under-utilisation in 2000, so that the net under-use would remain at 200 000 ha over the forecast period.

Set-aside of land

Compulsory set-aside is set at 10 % from 2002 onwards, its base rate in the context of the Agenda 2000 CAP reform. Total land under compulsory set-aside is calculated on the basis of the total area under the general scheme. This area has been steadily increasing over the 1993-1999 period: from 30 mio ha in 1993 (EU-12) to 40 mio ha in 1997 and then 40.6 mio ha in 1999. This evolution reflected 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. However, the 2000 production year showed a drop in the total area under the general scheme of around 2 mio ha. This shift in the level of the area subject to the compulsory set-aside would be associated with the changes in the arrangements governing the application of the set-aside instruments implemented in the Agenda 2000 CAP reform framework (notably the harmonisation of direct payments between the simplified and general scheme as well the possibility for "small producers" to set aside land on a voluntary basis).

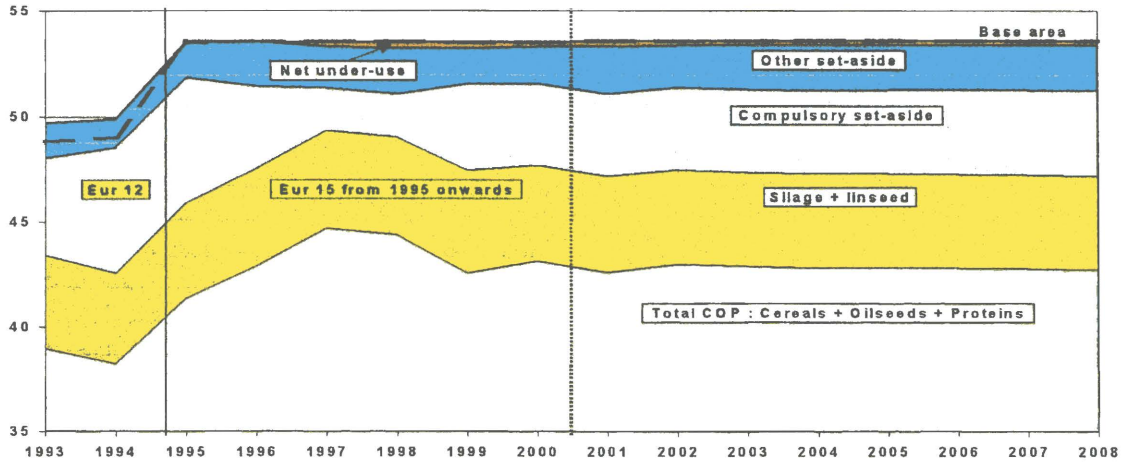
Over the projection period, it is assumed that the structural adjustment will continue, though at a slower pace than in the past. Total area under the general scheme will expand from 38.8 mio ha in 2001 to reach 40.3 mio ha in 2008. Therefore, land under compulsory set-aside is estimated to increase from 3.9 mio ha in 2001 to 4.0 mio ha in 2008.

Voluntary set-aside is assumed to adapt to changes in the rate of compulsory set-aside and in market prices. It is expected to increase from 1.7 mio ha in 2000 to 2.3 mio ha in 2001 due, to a large extent, to difficult sowing conditions. The voluntary set-aside area has been modelled, desaggregating Spain from the rest of the EU, taking into account the evolution of the rate of compulsory set-aside and the relative profitability of arable crop farming. Voluntary set-aside area is estimated to increase from 2.0 mio ha in 2002 to 2.2 mio ha in 2008. The rise in voluntary set-aside would mainly result from the expected decline in the relative profitability of arable crops, especially in the first part of the projection period.

Linseed, flax & hemp 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 4.3 mio ha, whereas area under non-fibre flax seed should drop to about 0.1 mio ha by 2002 in line with the cut in direct payment (as compared to 0.2 mio ha in 2001), and then should remain stable at 75 000 ha from 2003 to 2008. Flax and hemp area is foreseen to stabilise at around 100 000 ha from 2001 to 2008.

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 – 2008/09 (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 mainly 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, rye and "other cereals" -mainly oats and triticale-, rapeseed, 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 (MGQ) 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 %)[52].

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[52] 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.

In order to provide a more realistic outlook for the oilseed sector, it has been assumed that oilseed area in 2001/02 may exceed the Blair House limits. 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.

1.2 Yields

Yields are projected on the basis of non-linear functions with respect to trends[53] and market prices. Yield functions have been estimated for each type of cereals on the basis of the most representative period, generally over the 1985-2000 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 projected 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 between 13 % and 15 % of domestic consumption depending on the cereal, which corresponds to around five to seven weeks of consumption (except for durum wheat for which private stocks are assumed to remain stable at around 600 000 t).

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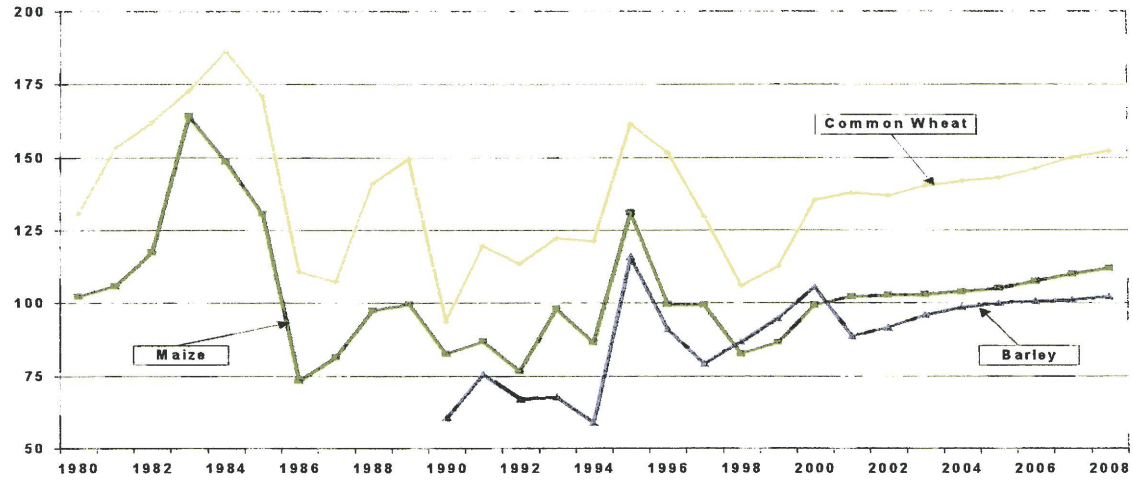
[53] Under these functional forms, estimated trends exhibit a decline over the long term in the annual growth rate in yields.

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.

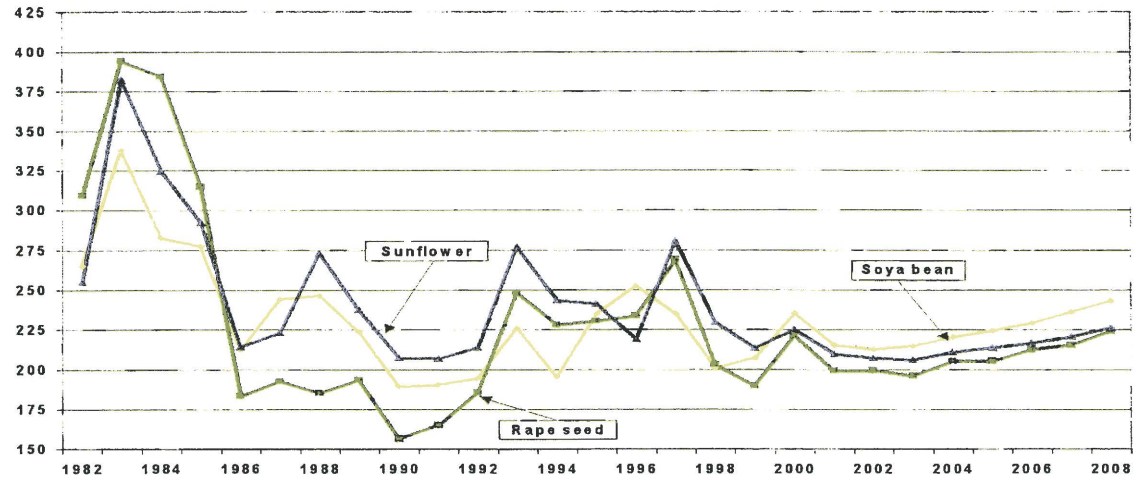
Graph A.3 Assumptions for world market prices for cereals, 1980/81 – 2008/09 (€/t)



Note: Wheat: US No.2, HRW, FOB Gulf (FAPRI); Maize: No.2, yellow corn, US Gulf ports, FOB (FAPRI); Barley: CW barley St Lawrence since 1995, Thunder Bay before (OECD).

Assumptions for world cereal and oilseeds prices are based on the most recent FAPRI and OECD outlook projections published early Spring 2001 (cf. graphs A.3 and A.4).

Graph A.4 Assumptions for world market price for oilseeds, 1982/83 – 2008/09 (€/t)



Note: Soya bean: CIF Rotterdam; Sunflower seed: CIF Lower Rhine; Rapeseed: 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 and veal 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 projections. However, since the BSE crises 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 BSE) and the impact of the measures (slaughtering for sanitary reason, supply side measures, destruction schemes) on production adopted in 1996 and 2000-2001.

Beef supply

Projections 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 trend. 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 "first projections", which are then used as a reference for adjustments in order to incorporate the potential impact of the BSE crises and the different support measures that have been adopted. These adjustments cover in particular:

- The effect of the different slaughter programs in different member states, in particular the "Over-Thirty-Months-Scheme" (OTMS) in the UK, which is assumed to be applied until the year 2002. In addition, the selective cull programs in several member states are taken into account. The estimates of 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. Processed or diverted calves (from beef to veal production, in order to compensate for the reduced slaughter weight 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 of administrative data on the number of animals concerned by both schemes and assumptions on average slaughter weight.

- The estimated impact of the destruction schemes introduced after the recent BSE crisis. The meat withdrawn from the food chain in the framework of the "Purchase for Destruction" scheme is estimated on the basis of administrative data on the number of thirty–months animals entering the scheme and average slaughter weight. For the "Special Purchase" scheme, like for intervention stocks, information will be provided in tons carcass weight equivalent.

- The estimated impact of the FMD containment measures. In the absence of detailed information on the age/categories distribution of animals concerned by the culling, assumptions have been made on the basis of herd structure at the December 2000 survey. Furthermore, as FMD hit mostly the UK, we assumed that around 40 % of those animals were over 30 months old and would have to be destroyed anyway within the OTMS scheme and, therefore, are not included in the FMD estimates.

The net impact of these types of measures has been deducted from the potential beef production obtained from the "first projections".

Beef demand

The projections for beef and 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 trend for beef meat per capita consumption, are then adjusted to take into account the observed and further expected impact of both BSE crises. Beef consumption is assumed to drop in the short term and recover in few years following the same pattern shown after the 1996 crisis.

2. Pig meat, poultry and sheep/goat meat

Projections 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. The estimated impact of FMD, mainly on sheep, has been taken into account.

The forecasts for internal demand are coming from the same econometric model that has been used for the beef consumption projections. However, as for beef, results from this model have been adjusted in order to take account of the impact of the BSE crises.

IV. Milk and dairy products

1. Milk supply and dairy herd

The projections for milk productions and deliveries are to a large extent determined by the milk quota system, which fixes the 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 projections 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 "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 projections on dairy cow numbers are derived from the forecast results for milk production, assuming a further increase in milk yields that has been fixed at about 1.6 % per year on average. This assumption is based on the past evolution of milk yields.

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, i.e. the "double zero" agreements recently concluded with the 10 accession countries. It is assumed that production of dairy products 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 projections 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 CANDIDATE COUNTRIES FROM CENTRAL AND EASTERN EUROPE

1. Introduction

This chapter provides an overview of the current and expected medium-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[54].

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 2008 - marketing year 2008/09 in the case of cereals and oilseeds. The projections are based on a combination of different approaches (statistical analysis, expert judgement, etc.) and on different statistical sources (national statistics, international organisations, private information, etc.). This includes a short-term appreciation of the most likely development in 2001 based on current knowledge of weather conditions, prices, market situation, etc. The medium-term projections are **based on implicit status-quo assumptions on policies and agricultural as well as general economic conditions.** This implies that they are based on the continuation of **current policies** and **no assumptions** have been made concerning the date and conditions of entry to the EU by the candidate countries[55].

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 data set on agricultural statistics for all CEECs. Historical data have in some cases changed since last year[56] leading to modifications in this year's projections compared to those projections published last year. Given this still moving statistical basis for the projections, the figures presented in this chapter should be interpreted with care and only taken as orders of magnitude. This is in particular the case for projections of production and consumption up to 2008, as these countries are still in a post transition period with many uncertainties on the likely developments over the next years.

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. We have therefore added in annex a set of tables showing simplified balance sheets per country and per product for the period 1997 - 2000 and projections for the year 2008 (marketing year 2008/09 in the case of cereals and oilseeds). The figures for the year 2000 and still provisional and the projections up to 2008 are based on information available at the end of May 2001.

The year 2000 was a year of extremes in the CEECs. The adjustments following the fall out of the Russian export market became fully evident in the production figure in the animal sector. In addition many countries were affected by the worst drought since the transition. The consequences of the drought will be felt also in the production outcome in 2001 at least. It remains to be seen whether these short-term effects will affect medium-term trends. The general assumption for the medium-term projections has been that production and consumption will return to the underlying trend.

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

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

[56] "*Prospects for agricultural markets 2000-2007*" - November 2000, European Commission, Brussels.

2. Economic outlook

Central and Eastern European Countries have shown 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 2001 and 2002, the European Commission (April 2001) expects annual average increase in GDP of 4 % or more. This will contribute to rising consumer incomes in the CEECs, a trend, which has been assumed to continue over the forecasting period, and which should affect positively the demand for agricultural food products.

The population is assumed to stabilise at around 105.2 mio people following a slight decline in the 1990s. Therefore food consumption is not expected to be significant influenced by this factor.

The projections for agricultural products are based on the assumption of constant exchange rates and costs of production factors. Any significant movements in exchange rates as well as of cost components could have a great influence on the production level as well as on the consumption pattern in the CEECs, and consequently on trade.

The Russian crisis in 1998 led to a decline of an important export market for the CEECs. The adjustment of livestock production as a response to tighter markets became fully visible in 2000. The future possibilities for the development of the CEECs processing industry and food exports will partly depend on the recovery of the Russian market, with most still experiencing difficulties in finding alternative outlets. The agri-food sectors, in particular the milk and livestock sectors as well as the related processing industries, are still undergoing restructuring, in order to withstand increasing competition on domestic markets as well as on their traditional export markets.

Both primary and processing stages need to improve standards and quality of products in preparation for enlargement. The SAPARD[57] programme, which has been adopted for all the CEECs, will help to address this problem. However solving the problems need considerable additional efforts in the CEECs. In continuation of the European agreements from the beginning of the 1990s, the so-called "double zero-agreements" between the EU and the CEECs, concluded in 2000, deepen the process of bilateral trade liberalisation between the candidate countries and the EU[58].

3. Cereals and Oilseeds

During the second half of the 1990s the **area** of cereals grown in the CEECs was relatively stable at above 24 mio ha. The high world market prices for cereals in 1996 and 1997 led to an increased cereal area in the CEECs to almost 25 mio ha. Lower world market prices, difficult export perspectives plus unfavourable weather conditions reduced the area sown as well as harvested in the following years. At the same time favourable

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[57] SAPARD: Special Accession Programme for Agricultural and Rural Development.

[58] The agreements between the EU and the CEECs to further liberalise the trade in agriculture products comprise - in most cases - a total liberalisation (0 % import tariff for unlimited quantities) of some 700 tariff lines. Another important part of the agreements is the so-called "double-zero-solution", whereby the parties have agreed to eliminate - for certain sectors - import tariffs and export subsidies within the framework of tariff quotas. It should be pointed out that every agreement has been concluded bilaterally between the EU and each candidate country and that, consequently, the contents of the agreements vary from one case to another.

prices for oilseeds contributed to increasing area use. In 1999 the harvested area reached a low of 22.5 mio ha, and total sown area for oilseeds and cereals fell by 1 mio ha to 26.1 mio ha.

Given relatively improved world market prices for both cereals and oilseeds in 2000 compared to 1999 and assuming no repetition of the wet conditions observed in 1999 or drought in 2000, an increase in total area of about 1 mio ha is projected for 2001. During the projection period, a continued increase of cereal area is expected, and a total area (for cereals and oilseeds) of more than 28 mio ha is projected for 2008.

For the projection period the total area under cereals in the CEECs is expected to show a minor annual increase of around 130 000 ha and reach about 25.1 mio ha in 2008, 4 % above the average cereal area of 1996-2000. It is assumed that the area under cereals will stay rather stable or show small increases in most countries. Only Poland and Bulgaria should see a significant increase of respectively 400 000 ha and 250 000 ha from 2001 to 2008.

Table 2.1 Total cereal and oilseed area in the CEECs, 1999 – 2008

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Cereals (mio ha)	22.5	23.1	24.1	24.3	24.4	24.6	24.7	24.8	25.0	25.1
Oilseeds (mio ha)	3.7	3.0	3.1	3.2	3.2	3.2	3.2	3.2	3.3	3.3
Total cereals and oilseeds (mio ha)	26.1	26.1	27.2	27.5	27.6	27.8	27.9	28.1	28.2	28.4

As is the case for the EU, much will depend on the relative prices between cereals and oilseeds. In general, the development of the relative world market price between cereals and oilseeds should not encourage an increase of oilseed production during the projection period. Hence, the foreseen area increase in arable crops will predominantly go into cereals. The exact amount will depend on how much area is transferred from production of other crops, grassland production or from arable land which is currently unused.

3.1 Cereals

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 3.2 t/ha in 1999. The estimated yield for the year 2000 is influenced by the severe drought, which has reduced yields in all countries and for nearly all crops. The CEECs seem to be more exposed to droughts than the EU-15 (since the transition, droughts have affected the CEECs every 4-5 year). The average cereal yield in 2000 is now estimated at only 2.65 t/ha. Yields are foreseen to return to normal levels of around 3.2 t/ha in 2001.

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 1.2 % per annum and reach on average 3.5 t/ha in year 2008. For the drier regions of the CEECs, the expected annual increase in yields is slower than the average, 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.

Total cereal production in the CEECs increased from 63 mio t in 1992 to around 76 mio t in 1998. Due to weather related problems, the cereal harvest was reduced in 1999 to 73 mio t and the drought in 2000 resulted in a crop of only 61 mio t, the lowest harvest since the beginning of transition. For 2001 a recovery to more than 77 mio t is foreseen. Based on the above mentioned assumptions on area and yield, a further increase

in total cereal production is expected, to more than 88 mio t in 2008. Of this production, 64 mio t (72 %) is expected to come from just 3 countries: Poland (31 mio t), Romania (17.8 mio t) and Hungary (15 mio t).

Table 2.2 Situation and perspectives of cereal markets in the CEECs, 1999 - 2008

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Area (mio ha)	22.5	23.1	24.1	24.3	24.4	24.6	24.7	24.8	25.0	25.1
Yield (t/ha)	3.25	2.65	3.23	3.27	3.31	3.35	3.39	3.43	3.47	3.51
Production (mio t)	72.9	61.1	77.8	79.4	80.8	82.3	83.7	85.2	86.7	88.2
Total internal use (mio t)	73.0	66.0	70.1	70.9	71.8	72.5	73.3	74.0	74.8	75.5
Food (mio t)	19.6	19.1	19.3	19.3	19.3	19.4	19.4	19.5	19.5	19.6
Feed (mio t)	46.5	40.0	43.6	44.5	45.4	46.1	46.7	47.5	48.2	49.0
Balance incl. stock changes (mio t)	-0.1	-4.9	7.7	8.5	9.0	9.7	10.5	11.2	11.9	12.7

A minor increase in **per capita consumption** is assumed during the projection period to 186 kg/head on average in 2008. Together with the minor increase in population, total human consumption of cereals is projected to increase by around 300 000 t, reaching 19.6 mio t in 2008.

A big drop in cereals used for feed is expected in 2000 due to reduced animal production, but also due to reduced availability (which is the case for Romania where a recovery is expected in 2001). An increase in animal production is projected, and following this, an increased use of cereals for animal feed in the period up to 2008 is foreseen. Total cereal feed use is projected to go up by more than 5 mio t from 44 mio t in 2001 to 49 mio t in 2008. These feed demand projections include a slight decrease of feed potatoes.

The largest growth of feed demand occurs in Poland, Hungary, Romania, and Bulgaria as a result of growing pork and poultry production. The economic conditions of pork production in the CEECs favoured by relatively high producer prices and strong demand, however, crucially depend on the adjustment of farmers *vis-à-vis* increasing feed cereal prices, as well as on the development of consumer income in the CEECs.

The feed and food use patterns described above, combined with relatively stable other cereal use, should lead to an increase in **total use of cereals** in the CEECs from 73 mio t in 1999/00 to 75.5 mio t in 2008/09. Three countries will consume 73 % of total cereals: Poland 29 mio t, Romania 16 mio t and Hungary 10 mio t.

The above assumptions on production and use during the projection period should leave an increasing annual amount of **cereals available for export.** During recent years, total exports and imports have fluctuated significantly due to weather related changes in production. Although some of their needs in 2000/01 have been covered by reducing cereal stocks, the CEECs are expected to be globally net importers during 2000/01 of up to nearly 2.5 mio t. However, as in the long term, production is projected to increase at a higher rate than usage, the net balance of exportable cereals is expected to grow to around 12 mio t in 2008/09. While Hungary, the Czech Republic, Romania, Bulgaria, Poland, and the Slovak Republic should have a net export balance, Slovenia should remain a net importer. It is expected that total imports of cereals into the CEECs will decrease to around 1.5 mio t in 2008 from currently more than 2 mio t, in years without drought condition.

Table 2.3 Situation and perspectives of wheat markets in the CEECs, 1999 - 2008

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Area (mio ha)	7.7	8.6	9.2	9.4	9.5	9.7	9.8	10.0	10.1	10.2
Yield (t/ha)	3.34	3.06	3.40	3.44	3.49	3.53	3.58	3.62	3.67	3.71
Production (mio t)	25.7	26.2	31.3	32.4	33.3	34.2	35.1	36.0	37.0	37.9
Total internal use (mio t)	26.0	25.7	26.3	26.5	26.7	27.0	27.2	27.5	27.7	28.0
Food (mio t)	13.6	13.2	13.1	13.1	13.1	13.1	13.1	13.2	13.2	13.2
Feed (mio t)	9.6	9.5	10.0	10.2	10.4	10.7	10.9	11.2	11.4	11.7
Balance (mio t)	-0.2	0.5	5.0	5.9	6.6	7.2	7.9	8.5	9.2	9.9

Of the total cereal area, 38 % was grown with common wheat in 2000. Based on world market prices assumptions described in chapters I and III it is expected that the entire increase of the cereal area will be **wheat**, which is foreseen to increase from less than 9 mio ha in 2000 to more than 10 mio ha in 2008. **Coarse grain area** is expected to remain stable at around 14.9 mio ha. The production of wheat has been projected to increase from around 31 mio t in 2001 to above 38 mio t in 2008, whereas use in the CEECs should go up from 26 to 28 mio t in the same period. This leaves a balance of exportable quantities of nearly 10 mio t in 2008/09.

Table 2.4 Situation and perspectives of coarse grains markets in the CEECs, 1999 - 2008

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Area (mio ha)	14.8	14.5	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9
Yield (t/ha)	3.20	2.41	3.13	3.16	3.20	3.23	3.27	3.30	3.34	3.37
Production (mio t)	47.2	34.9	46.5	47.0	47.6	48.1	48.6	49.2	49.7	50.3
Total internal use (mio t)	47.0	40.3	43.8	44.4	45.1	45.6	46.0	46.5	47.1	47.5
Food (mio t)	6.0	5.9	6.1	6.2	6.2	6.2	6.3	6.3	6.4	6.4
Feed (mio t)	36.8	30.4	33.6	34.3	34.9	35.3	35.8	36.3	36.8	37.3
Balance (mio t)	0.2	-5.4	2.7	2.6	2.5	2.5	2.6	2.7	2.6	2.8

The production of **coarse grains** is projected to increase by nearly 4 mio t to 50 mio t in 2008, of which 12 mio t of barley, 22 mio t of maize, 6.5 mio t of rye, 2 mio t of oats and 7 mio t of triticale mixed grain and others. Internal use is expected to increase by about the same amount to 47.5 mio t leaving a balance of 2.8 mio t available for export, of which 0.7 mio t of rye (almost entirely from Poland).

3.2 Oilseeds

The area grown under oilseeds in the CEECs reached a peak in 1999. This was the result of the attractive relative oilseed prices in 1998, as well as weather related problems during cereal sowing (for instance in Hungary and the Slovak Republic). The changes in harvested area during 1999 show that farmers in the CEECs are responding quickly to price signals from the market.

The **area grown under oilseeds** decreased significantly to 3.0 mio ha in 2000 from 3.7 mio ha in 1999. This was due to the relatively low world market prices last year for rapeseed, sunflowerseed and soyabean. After a slight recovery in 2001 in the area sown with oilseeds, it is projected that the total oilseed area will remain relatively stable at 3.3 mio ha during the projection period. This development is based on the assumption that the world market prices for oilseeds after 2000 will stagnate relative to cereals over the forecast period. Should the relative prices change in favour of oilseeds, then more area could be grown with that crop. The share of oilseeds in the total cereal plus oilseed area is

estimated to marginally decrease from around 11.5 % in the years 1997-1999 to 11.3 % in 2007/08. In 1999 this percentage reached 14.0 % and was 11.5 % in 2000.

Yield is expected to grow at a rate slightly lower than that of cereals at below 0.7% annually. As in the EU, the annual increase should be higher for rapeseed (1.4 %) than for sunflowerseed (very limited increase of 0.1 %).

Table 2.5 Situation and perspectives of oilseed markets in the CEECs, 1999 - 2008

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Area (mio ha)	3.7	3.0	3.1	3.2	3.2	3.2	3.2	3.2	3.3	3.3
Yield (t/ha)	1.65	1.29	1.62	1.64	1.65	1.66	1.67	1.68	1.70	1.71
Production (mio t)	6.0	3.9	5.1	5.2	5.3	5.3	5.4	5.5	5.5	5.6
Total internal use (mio t)	4.4	4.0	4.3	4.3	4.4	4.5	4.6	4.6	4.7	4.8
Balance (mio t)	1.6	-0.1	0.8	0.9	0.9	0.9	0.8	0.8	0.8	0.8

Total oilseed **production** decreased in 2000 due to reduced area and reduced yield caused by drought. However, as yields are expected to improve, production should reach 5.6 mio t in year 2008, which is still below the record crop in 1999.

Internal use/crushing is decreasing in 2000 as a consequence of the reduced crop. A recovery in 2001 is expected and during the projection period a further increase to 4.8 mio t is foreseen. This increase comes from a growing demand for oil meals for feed, and also from an increased use of oils for food. This higher demand for crushing will necessitate investments in either improvement of existing plants or creation of new crushing capacity. According to these projections for production and internal use, the balance available for export would reach 0.8 mio t in 2008.

Table 2.6 Situation and perspectives of rape seed markets in the CEECs, 1999 - 2008

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Area (mio ha)	1.2	1.0	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Yield (t/ha)	2.31	1.93	2.24	2.27	2.31	2.34	2.37	2.41	2.44	2.47
Production (mio t)	2.9	2.0	2.5	2.6	2.7	2.7	2.7	2.8	2.8	2.9
Total internal use (mio t)	1.7	1.8	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.3
Balance (mio t)	1.1	0.2	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6

The **rapeseed** crop has traditionally only been of importance in Poland. However during recent years production has been expanding significantly in the Czech Republic, Slovak Republic and Hungary. It is projected that rapeseed area will remain stable at around 1.2 mio ha from 2002 and onwards. Production should reach 2.9 mio t and total use is expected to increase by 200 000 t to 2.3 mio t in 2008. This leaves 0.6 mio t available for export annually.

Table 2.7 Situation and perspectives of sunflowerseed markets in the CEECs, 1999 - 2008

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Area (mio ha)	2.3	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Yield (t/ha)	1.27	0.96	1.24	1.24	1.24	1.24	1.25	1.25	1.25	1.25
Production (mio t)	2.9	1.7	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4
Total internal use (mio t)	2.4	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Balance (mio t)	0.5	-0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3

Sunflower accounts for more than 60 % of the oilseed area in the CEECs, but for only 40 % of the total oilseed production, due to the significant lower yield of sunflower. In 2000 a significant decrease in the sunflower area was observed in Hungary (-200 000 ha). It is not expected that a significant part of this area will return to sunflower. A reduction in the area sown was also seen in other CEECs and it is projected that the sunflower area will remain stable at 1.9 mio ha towards 2008. No big changes in yields are expected, and production is foreseen to be stable at around 2.3-2.4 mio t, leaving just 300 000 t available for export.

The area with **soya beans** is stable at around 200 000 ha (mostly in Romania), producing 300 000 t, and no big change is foreseen during the projection period.

4. Milk and dairy products

The milk sector is of major importance for most of the CEECs. Together with the beef sector milk is an area where the CEECs have seen the most significant reductions in the 1990s. The CEECs as a group have been net-exporters of milk and are expected to continue to remain so in the projection period even though at a reduced level. Currently, Poland (with 11.5 mio t) and Romania (with 5 mio t) are the most important producing countries whereas the Czech Republic, Lithuania and Poland are the most important exporters, each with around 400 000 t milk equivalent in 2000.

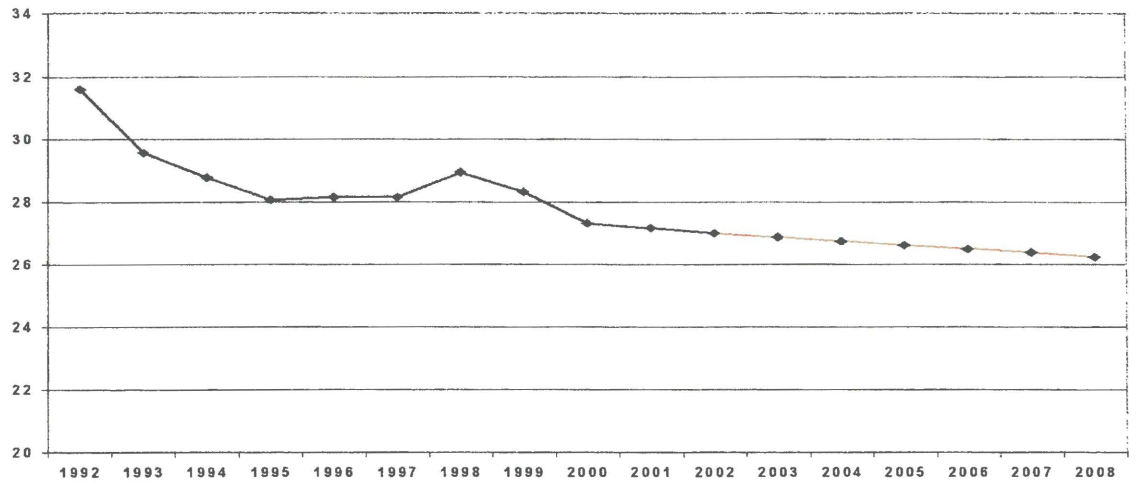
The number of **dairy cows** has decreased from above 10 mio in 1992 to 7.8 mio in 1999 and a further important decrease to 7.3 mio heads occurred in 2000. In Bulgaria, after having improved between 1997 and 1999, the number of dairy cows showed a decrease in 2000. In 2001 a further decrease of nearly 0.2 mio cows is expected taking into account the cow herd by the end of 2000. In the period until 2008 it is projected that the number of dairy cows will continue to decrease by around 120 000 cows annually, which is at a significant lower rate than the annual reduction observed in the past. The total number of dairy cows is projected to reach 6.3 mio in 2008.

The development in total herd size in the CEECs may mask some significant structural changes in the different countries, for example, by switching from household farming (subsistence farming) to commercial farming or vice versa (as has been the case in Bulgaria). This has important economic implications. The short-term developments confirm the extraordinary adjustment pressure, which the dairy sector still faces. After a thorough analysis of the situation, a less optimistic view on medium-term developments has been taken.

The **average milk yield** has increased by 1 to 5 % in the years 1994 to 1999. In 2000 showed a growth of 3 % and reached 3.7 t/cow. Decreases in Lithuania and Bulgaria were outweighted by increases especially in Poland, Czech Republic and Slovak Republic. It is projected that the **average yield per cow** should increase by up to 1.5 % annually by the end of projection period (which is at the same percentage rate as in the EU). In recent years countries such as the Czech Republic, the Slovak Republic and Slovenia have had some very significant yield increases (more than 5 % annually).

The combination of positive yield trends and negative herd trends should lead to a minor decrease of **milk production** from 27.3 mio t in 2000 to 26.3 mio t in 2008. Production is reduced by 0.7 mio t in Poland, 0.2 mio t in Romania and 0.1 mio t in Lithuania. The rest of countries show only minor annual changes in total milk production.

Graph 2.1 Milk production in the CEECs, 1992 - 2008 (mio t)



The pressure for restructuring the dairy sector both on farm level and in dairies is far from over and an important investment will be needed in the future to avoid even more important reductions in production. This investment is needed both for improving techniques on farm levels but also to improve the standards and the quality of products in the dairy sector. The competition for dairy products on both domestic markets and traditional exports markets makes these investments indispensable for CEEC industries for maintaining their market share.

Table 2.8 Situation and perspectives of the milk market in the CEECs, 1999 - 2008

		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Number of milk cows	mio	7.76	7.26	7.11	6.98	6.85	6.73	6.61	6.50	6.39	6.28
Yield	1000kg/cow	3 648	3 764	3 822	3 870	3 921	3 973	4 024	4 076	4 127	4 179
Production	mio t	28.3	27.3	27.2	27.0	26.9	26.8	26.6	26.5	26.4	26.3
Total internal use	mio t	26.1	25.7	25.6	25.6	25.6	25.5	25.5	25.4	25.4	25.3
- of which human (in milk equivalent)	mio t	23.8	23.5	23.5	23.5	23.6	23.5	23.5	23.5	23.5	23.4
Balance	mio t	2.2	1.6	1.5	1.4	1.3	1.2	1.1	1.1	1.0	0.9
Per cap. consumption	kg/pc	227	225	224	225	225	224	224	223	223	223

It is expected that the total food demand for milk in the CEECs will remain relatively stable up to 2008, as the increase in use of fresh milk products (including yoghurts, etc) and cheese should be offset by a decrease in drinking milk, which indicates declining subsistence production in the CEECs. In recent years, fresh milk products and cheese have shown significant increases and with the current economic outlook, this development should continue. Total **human use** is projected to be around 23.4 mio t in 2008 compared to 23.5 mio t in 2000 and 23.9 mio t in 1998. **Total per capita** consumption of milk and dairy products (in milk equivalent) is projected to decrease only marginally from 225 kg/capita in 2000 to 223 kg/capita in 2008.

Feed use has decreased from 3 mio t in 1992 to 2.2 mio t in 2000, and as cow numbers is projected to continue to decrease, the feed use should drop further to 1.9 mio t in 2008.

It is assumed that **total internal use** within the CEECs should decrease very slightly in the projection period, but by less than production.

For countries where statistics are available, **quantities delivered to dairies** were on average 65 % of total production in 2000. However big differences exist between

countries. Deliveries are around 92 % in the Czech Republic, 85 % in the Slovak Republic, 80 % in Hungary, 70 % in Slovenia, 60 % in Estonia, 65 % in Lithuania, 58 % in Poland, 48 % in Latvia and 37 % in Bulgaria. However the rate of delivery is expected to increase during the projection period, mostly in the countries with a low delivery rate. A significant increase has been observed in Poland following the introduction of a strict quality policy. Under optimistic conditions, the delivery rate could increase to 77 % in 2008, which however implies a successful restructuring of small and medium sized farms.

Given the figures mentioned above on milk production and consumption, the CEECs' net export balance decreased from 2.7 mio t in 1998 to 1.6 mio t milk equivalent in 2000. A further reduction to 1.5 mio t in 2001 is projected. For the rest of the period, a gradually reduction of the exportable surplus is foreseen arriving at just 0.9 mio t in 2008. The decrease in quantities available for exports mainly arises in Poland and to a lesser degree in the Czech Republic. This projection for the net exportable balance for milk includes an increase in total import of dairy products.

Butter

The production of **butter** decreased from above 425 000 t in 1992 to 320 000 t in 2000. Production would show only marginally changes towards 2008. Butter consumption has been relatively stable during the last years at around 2.70 kg/capita (compared to 4.6 kg in the EU) and should be only slightly lower during the projection period. The exportable surplus should as a consequence decrease from around 40 000 t in 2000 to 30 000 t in 2008. Poland is producing more than half of the butter in the CEECs followed by Lithuania and Estonia.

Table 2.9 Situation and perspectives of the butter market in the CEECs, 1999 - 2008

		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Production	000 t	328	320	323	322	320	319	318	317	316	315
Total internal use	000 t	288	280	284	288	280	283	283	283	283	283
Balance	000 t	40	40	39	34	40	35	35	34	33	32
Per cap. consumption	kg/pc	2.75	2.68	2.70	2.70	2.70	2.69	2.69	2.69	2.68	2.68

Cheese

Whereas butter production has been on the decline, **cheese** has been on an upward trend since 1992 both in production and consumption. Total cheese production has gone up from 650 000 t in 1992 to 860 000 t in 1999. Production of cheese decreased slightly in 2000 to 820 000 t, but is expected to increase to 875 000 t in 2001.The biggest producer is Poland followed by Hungary and the Czech Republic. In several of the CEECs a significant part of cheese is produced and consumed by or sold from the household and this plays an important role in subsistence farming, for instance in Bulgaria, where the delivery to dairies has decreased in recent years while household/on farm sales have increased.

During the projection period a further increase in consumption and production is foreseen. It is projected that per capita consumption could reach 9.1 kg/capita in 2008 (19 kg in EU-15) and total production could be above 1 mio t in 2008.

Table 2.10 Situation and perspectives of the cheese market in the CEECs, 1999 - 2008

		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Production	000 t	867	819	851	877	904	930	956	982	1 009	1 035
Total internal use	000 t	786	797	820	840	860	880	901	921	942	962
Balance	000 t	81	22	31	37	43	49	55	61	67	73
Per cap. consumption	kg/pc	7.5	7.6	7.8	8.0	8.2	8.4	8.6	8.8	9.0	9.1

The CEECs are expected to have a net-exportable balance of cheese during the whole projection period. After a decrease during 2000, it is expected that the exportable surplus will increase during the projection period. The contributing factors are: a better quality of milk and the restructuring of the dairy industry.

Skimmed milk powder (SMP)

The production of **skimmed milk powder** is important for the dairy industries in the CEECs, with total production at around 250 000 t, of which 170 000 t in total were exported in 2000. As butter production stays relatively stable so should the production of SMP. This together with a foreseen increase in internal consumption will lead a decrease in the exportable balance to 130 000 t in 2008.

5. Beef and veal

The production of **beef and veal** in the CEECs is mainly linked to the dairy herd because only limited suckler cows herds are present in the CEECs. Due to the long production cycle, the build up of suckler cow and specialised beef production is slow. Specialised beef production therefore does not affect total beef production to a great extent over the projection period. On the other hand, beef production is much more linked to the development of the dairy herd.

The beef meat sector has been the sector that has experienced the largest reduction in production since the beginning of transition. From 1989 to 1999 production decreased by more 40 % to less than 1.05 mio t. Two countries dominate beef production in the CEECs, Poland and Romania, with respectively 0.4 mio t and 0.2 mio t.

During the projection period it is expected that the number of **animals slaughtered** will decrease in line with the reduction in the number of dairy cows. The minor increase in suckler cow production will not be able to compensate for this decrease. Total beef and veal **production** is predicted to reach just 1.03 mio t in 2000, compared to 1.05 mio t in 1999. Production is estimated to be below 1.0 mio t in 2001 for the first time since transition, and should reach 0.9 mio t in 2008.

Table 2.11 Situation and perspectives of the beef and veal market in the CEECs, 1999 - 2008

		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Slaughtered animals	mio	5.64	5.54	5.41	5.31	5.22	5.14	5.05	4.97	4.89	4.81
Slaughter weight	kg/head	185	185	183	184	184	184	184	184	184	184
Production	mio t	1.05	1.03	0.99	0.97	0.96	0.94	0.93	0.91	0.90	0.88
Total internal use	mio t	1.00	0.99	0.99	0.98	0.98	0.98	0.97	0.97	0.97	0.96
Balance	mio t	0.04	0.03	0.00	-0.01	-0.02	-0.03	-0.05	-0.06	-0.07	-0.08
Per cap. consumption	kg/pc	9.6	9.5	9.4	9.4	9.3	9.3	9.3	9.2	9.2	9.2

Internal consumption is expected to be reduced in 2000 to just 9.5 kg per capita, mainly as a consequence of reduced availability but also as a consequence of changing consumption habits, where beef has lost share in preference to other meats such as

poultry. During the projection period per capita consumption should show a minor decrease to 9.2 kg. It is assumed that total internal use in the CEECs should decrease to 0.96 mio t during this period. This development, together with decreased production, may lead to a significant number of CEECs becoming net importers of beef (higher quality) and only Poland continuing to be a net exporter. Polish net exports are projected to decrease from 54 000 t in 2000 to 17 000 t in 2008.

6. 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. Despite the Russian crisis in August 1998, production increased during 1999, and the adjustment to the new market conditions were only working through the sector during the second half of 1999 with the full effect only seen in the figures for 2000.

Compared to 1999 total **pig meat production** is estimated to have decreased by 0.4 mio t (9 %) in 2000. A further reduction of 1.5 % is expected in 2001. The production is expected to return to a growth path as from 2002 and should continue at a yearly average rate of more than 1.5 % until 2008. Total production is projected at 4.6 mio t in 2008. A significant part of this higher production will be consumed within the CEECs. The biggest increases both in absolute figures and in percentage are expected in the two main pig meat producing countries, i.e. Poland and Hungary. In 2008, Poland and Hungary together should produce around 3 mio t, of which 2.25 mio t in Poland. These projections are based on the assumption that the producers and processors in the CEECs can overcome the cost pressures from relatively high cereal and oilseed prices, and the competition on the internal and external markets. Moreover, the projections crucially depend on the development of disposable income, and hence meat demand.

Per capita consumption in the CEECs is expected to decrease in 2000 to 39.1 kg/capita, and return to the level of consumption observed in 1997. This reduction is most pronounced in Poland (from 48.9 to 47.2 kg), Czech Republic (43.6 to 41 kg) and Slovak Republic (from 35.9 to 32 kg). This lower consumption is mainly due to a reduced production within the CEECs, which is not compensated for by increased import. Per capita consumption is projected to increase to 42.1 kg in 2008 or on average by 1 % per year. Increases are assumed for all CEECs due to the continued increase in GDP, which should lead to higher demand for meat.

It is expected that the CEECs as a whole will be able to continue to be net exporters of pig meat. The net-exports were above 300 000 t prior to the Russian crisis. In 2000, the net balance is estimated at just 75 000 t, but after a further reduction in 2001, it is projected to reach 200 000 t in 2008. These net exports will mostly come from Poland and Hungary.

Table 2.12 Situation and perspectives of the pig meat market in the CEECs, 1999 - 2008

		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Slaughtered animals	mio	54.1	49.6	47.8	48.7	49.7	50.5	51.4	52.2	53.0	53.9
Slaughter weight	kg/head	84	84	86	86	86	86	86	86	86	86
Production	mio t	4.54	4.17	4.11	4.20	4.28	4.34	4.42	4.49	4.56	4.63
Total internal use	mio t	4.35	4.10	4.09	4.19	4.25	4.29	4.33	4.37	4.41	4.44
Balance	mio t	0.20	0.08	0.02	0.01	0.04	0.06	0.09	0.12	0.15	0.20
Per cap. consumption	kg/pc	41.4	39.1	39.1	40.0	40.5	40.8	41.2	41.6	41.9	42.1

7. Poultry meat

The biggest part of poultry production is broiler, but turkey, duck and geese are also important in some of the CEECs. Due to the fact that in some countries an important proportion is produced at household level, it is difficult to estimate exactly the slaughter numbers and average slaughter weight. Three countries dominate poultry meat production i.e. Poland, Hungary and Romania with more than 1.2 mio t in total in 1999 out of a total production of around 1.8 mio t.

Table 2.13 Situation and perspectives of the poultry meat market in the CEECs, 1999 - 2008

		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Production (mio t)	mio t	1.71	1.74	1.81	1.85	1.89	1.94	1.98	2.03	2.07	2.12
Internal use (mio t)	mio t	1.61	1.67	1.73	1.77	1.81	1.85	1.88	1.92	1.96	2.00
Balance (mio t)	mio t	0.09	0.07	0.08	0.08	0.09	0.09	0.10	0.11	0.11	0.12
Per cap. consumption	kg/pc	15.4	15.9	16.5	16.9	17.2	17.6	17.9	18.3	18.6	19.0

Poultry meat production, like pig meat, is mostly demand driven from the internal market. Since the transition demand has increased significantly, and as the only meat has shown increases in per capita consumption every year since 1992. **Total production** of poultry meat is projected to go beyond 2 mio t in 2006 compared to 1.7 mio t in 1999 and could reach 2.1 mio t in 2008. This increase is the result of a yearly increase of around 2.0 %, and the most significant increases are assumed to take place in Hungary, Romania and Poland. In some CEECs the increased production may include a shift from household production to commercial production, and household production is not fully covered by the national statistics.

Per capita consumption grew by 1 kg per year in 1996, 1997 and 1998. During 2000, consumption is foreseen to stagnate. However it is assumed to grow by a further 2 kg per capita from 2000 to 2008 - or by 2 % annually, and should reach 19 kg/capita in 2008. This large increase is very much linked to the expected GDP growth in the CEECs and to the fact, that poultry meat has gained in popularity since the beginning of the transition period. It is expected that the CEECs will be able to marginally increase their net exports compared to 1999. In 2008, total net exports should reach 120 000 t. Hungary is projected to be the most important net exporter with an exportable surplus of 185 000 t in 2008.

8. Sheep and goat meat

The production of **sheep and goat meat** has nearly halved since 1992 from 227 000 t to 128 000 t in 1999. The **flocks** are expected to continue the downward trend even though a few countries, such as Hungary, are beginning to show signs that the flock is beginning to stabilise. However, in the two main producing countries, Romania and Bulgaria, no such signs are seen - on the contrary.

Table 2.14 Situation and perspectives of the sheep and goat meat market in the CEECs, 1999 - 2008

		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Production	mio t	0.13	0.13	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10
Total internal use	mio t	0.11	0.12	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09
Balance	mio t	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Per cap. consumption	kg/pc	1.1	1.1	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.8

Production in the CEECs is estimated to show a significant decrease in 2001 to just 100 000 t. Production is projected to decrease slightly towards 2008 reaching 88 000 t. The two biggest producers Romania and Bulgaria each produce more than 40 % of the total sheep and goat meat production. Beyond the two main producers, the production and consumption of sheep and goat meat are very limited in the CEECs. In total the CEECs have a minor exportable surplus.

9. Total meat consumption

During the projection period total meat consumption is projected to increase from 65.7 kg/capita in 2000 to 71.1 kg in 2008. The entire increase comes from pig meat and poultry, which should increase by respectively 3.0 and 3.1 kg/capita.

Table 2.15 Total meat consumption per capita in the CEECs, 1999 – 2008 (kg/cap.)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Beef and veal	9.6	9.5	9.4	9.4	9.3	9.3	9.3	9.2	9.2	9.2
Pigmeat	41.4	39.1	39.1	40.0	40.5	40.8	41.2	41.6	41.9	42.1
Poultry meat	15.4	15.9	16.5	16.9	17.2	17.6	17.9	18.3	18.6	19.0
Sheep and goat	1.1	1.1	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.8
Total per cap. consumption	67.5	65.7	66.0	67.1	68.0	68.6	69.3	69.9	70.6	71.1

10. Conclusion

General economic conditions have improved and strong economic growth is expected to continue in most of the Central and Eastern European candidate countries. Rising consumer incomes might provide opportunities for CEEC agriculture and food processing as well as challenges. The opportunities are related to increasing demand for processed agricultural commodities as well as some expansion of consumed quantities of certain highly preferred agricultural commodities such as fresh milk products, cheese, pig and poultry products. Moreover new export possibilities might arise from a recovery of Russian markets and positive developments on the world markets. Challenges will in particular be the ongoing and continued restructuring of the primary and processing sectors of agriculture and the result of the increasing integration of the CEEC and EU food markets. Confronted with a stagnating demand for bulk products, increasing competition on domestic and international markets, CEEC agriculture and food processing will need to restructure in order to achieve a competitive use of a significant agricultural potential.

Statistical annex

Table A.1 Situation and perspectives of cereal markets in the CEECs, 1997 - 2008

	AREA (1000 ha)					YIELD (t/ha)					PRODUCTION (mio t)					DOMESTIC USE (mio t)					BALANCE (mio t)				
	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008
BULGARIA	2 098	2 044	1 810	1 780	2 164	2.95	2.63	2.87	2.39	3.07	6.19	5.38	5.20	4.26	6.64	5.27	4.59	4.13	3.46	4.69	0.92	0.79	1.07	0.80	1.95
CZECH REPUBLIC	1 686	1 678	1 592	1 640	1 687	4.14	3.97	4.35	3.91	4 57	6.98	6.67	6.93	6.41	7.70	6.54	6.45	6.50	6.53	6.59	0.44	0.22	0.43	-0.12	1.11
ESTONIA	335	361	324	351	363	1.99	1.62	1.25	1.89	2.09	0.67	0.58	0.41	0.66	0 76	0.76	0.81	0.80	0.81	0.87	-0.10	-0.23	-0.40	-0.15	-0.11
HUNGARY	2 937	2 835	2 402	2 818	2 984	4.81	4.59	4.74	3.59	5.10	14.12	13.01	11.38	10.10	15.23	9.52	9.41	9.55	9.06	10.15	4.60	3.59	1.83	1.04	5.08
LATVIA	483	465	423	421	541	2.14	2.05	1.85	2.20	2.35	1.04	0.96	0.78	0.93	1.27	1.11	1.04	0.95	1.00	1.17	-0.08	-0.08	-0.16	-0.08	0.10
LITHUANIA	1 158	1 099	1 013	980	1 020	2.54	2.47	2.02	2.71	2.81	2.94	2.71	2.05	2.66	2.86	2.89	2.70	2.07	2.46	2.64	0.05	0.00	-0.02	0.20	0.22
POLAND	8 899	8 843	8 697	8 735	9 335	2.85	3.07	2.96	2.66	3.31	25.40	27.16	25.75	23.26	30.91	27.00	28.24	27.73	26.71	29.14	-1.60	-1.08	-1.99	-3.45	1.77
ROMANIA	6 312	5 916	5 373	5 459	6 000	3.50	2.61	3.17	1.86	2.96	22.09	15.44	17.04	10 18	17.79	17.05	16.38	17.42	12.35	16.03	5.04	-0.94	-0.38	-2.17	1.76
SLOVAK REPUBLIC	853	860	733	812	913	4.39	4.06	3.86	2.71	4.78	3.74	3.49	2.83	2.20	4.37	3.32	3.10	2.83	2.72	3.23	0.42	0.39	0.00	-0.51	1.14
SLOVENIA	96	96	94	96	107	5.66	5.83	5.63	4.79	6.01	0.54	0.56	0.53	0.46	0.64	0.99	0.94	0.98	0.95	1.00	-0.44	-0.38	-0.45	-0.49	-0.36
CEEC-10 TOTAL	24 857	24 196	22 462	23 092	25 115	3.37	3.14	3.25	2.65	3.51	83.7	76.0	72.9	61.12	88.2	74.5	73.7	73.0	66.0	75.5	9.3	2.3	-0.1	-4.9	12.7

Table A.2 Situation and perspectives of oilseed markets in the CEECs, 1997 - 2008

	AREA (1000 ha)					YIELD (t/ha)					PRODUCTION (1000 t)					DOMESTIC USE (1000 t)					BALANCE (1000 t)				
	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008
BULGARIA	459	549	597	515	604	0.97	0.96	1.02	0.81	1.00	444	530	611	420	603	482	530	320	215	348	-38	0	291	205	255
CZECH REPUBLIC	238	281	377	356	340	2.45	2.55	2.63	2.02	2.73	583	717	994	718	927	547	524	534	546	704	36	193	460	172	224
ESTONIA	8	17	24	21	21	1.23	1.02	1.23	1.20	1.28	10	18	30	25	27	0	0	0	0	0	10	18	30	25	27
HUNGARY	543	503	733	475	508	1.32	1.67	1.63	1.39	1.77	716	841	1 198	659	898	778	817	822	661	878	-62	24	376	-2	20
LATVIA	0	1	1	1	1	1.35	1.30	1.30	1.30	1.30	1	2	2	2	2	1	2	2	2	2	0	0	0	0	0
LITHUANIA	22	22	84	56	51	1.68	2.54	1.37	1.46	1.62	37	56	115	81	82	27	28	29	30	38	10	28	86	51	44
POLAND	317	466	545	430	500	1.87	2.36	2.08	1.98	2.41	595	1 099	1 132	850	1 205	923	985	908	933	1 042	-328	114	224	-83	163
ROMANIA	851	1 134	1 199	1 062	1 111	1.16	1.15	1.32	0.81	1.28	991	1 303	1 586	865	1 428	1 032	1 358	1 590	1 402	1 458	-42	-55	-4	-537	-30
SLOVAK REPUBLIC	134	129	213	167	207	1.98	1.76	1.73	1.54	1.99	266	226	368	256	413	187	217	209	193	299	79	10	159	63	114
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
CEEC-10 TOTAL	2 543	3 062	3 664	3 005	3 270	1.43	1.56	1.65	1.29	1.71	3 643	4 792	6 036	3 875	5 584	3 977	4 460	4 414	3 981	4 766	-334	332	1 622	-106	817

Table A.3 Situation and perspectives of the milk market in the CEECs, 1997 - 2008

	DAIRY COWS (1000)					YIELD (kg/cow)					PRODUCTION (1000 t)					DOMESTIC USE (1000 t)					NET BALANCE (1000 t)				
	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008
BULGARIA *	358	389	424	434	401	3 330	3 400	3 257	3 198	3 358	1 299	1 437	1 484	1 488	1 428	1 298	1 437	1 484	1 489	1 431	0	-1	0	-2	-3
CZECH REPUBLIC	619	562	545	519	442	4 367	4 934	5 163	5 345	6 065	2 703	2 716	2 736	2 670	2 611	2 165	2 167	2 196	2 210	2 305	538	549	540	460	306
ESTONIA	172	168	159	154	142	3 085	3 199	3 271	3 311	4 370	717	729	626	622	619	494	555	492	470	463	223	174	134	152	156
HUNGARY	414	403	407	399	351	4 664	5 108	5 100	5 200	5 880	1 931	2 045	2 076	2 075	2 062	1 906	1 980	2 051	2 062	2 117	25	65	25	13	-55
LATVIA	277	264	242	206	201	3 559	3 594	3 400	3 800	4 323	986	949	823	781	867	941	904	800	800	779	45	45	23	-19	87
LITHUANIA	583	538	494	438	378	3 325	3 444	3 322	3 184	3 584	1 950	1 930	1 714	1 485	1 356	958	979	1 100	1 064	1 066	992	951	614	421	290
POLAND	3 490	3 470	3 296	3 047	2 620	3 372	3 524	3 615	3 772	4 120	11 770	12 229	11 915	11 494	10 794	11 146	11 600	11 329	11 150	10 801	624	629	586	344	-8
ROMANIA	1 769	1 753	1 753	1 633	1 393	2 875	2 937	2 981	3 063	3 463	5 086	5 148	5 225	5 002	4 824	5 125	5 167	5 188	5 035	4 889	-39	-19	37	-33	-65
SLOVAK REPUBLIC	310	288	262	246	195	3 712	4 089	4 224	4 467	5 700	1 150	1 178	1 107	1 099	1 112	1 010	1 011	965	958	959	140	167	142	141	153
SLOVENIA	185	183	181	186	160	3 085	3 199	3 271	3 311	3 631	570	582	615	615	580	501	484	489	492	498	69	98	126	123	82
CEEC-10 TOTAL	8 176	8 017	7 763	7 261	6 282	3 444	3 610	3 648	3 764	4 179	28 161	28 942	28 321	27 330	26 251	25 545	26 284	26 094	25 730	25 308	2 616	2 658	2 227	1 600	942

*) Production and domestic use includes sheep and goat milk, around 100 000 t annually

Table A.4 Situation and perspectives of the beef and veal market in the CEECs, 1997 - 2008

	PRODUCTION (1000 t)					DOMESTIC USE (1000 t)					BALANCE (1000 t)					PER CAPITA CONSUMPTION (kg)				
	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008
BULGARIA	57	56	65	68	59	78	81	82	79	78	-21	-25	-17	-11	-19	9.4	9.8	10.0	9.9	9.9
CZECH REPUBLIC	154	129	121	116	99	144	126	121	119	116	10	2	0	-3	-16	13.9	12.3	11.8	11.6	11.3
ESTONIA	19	20	19	18	17	20	21	21	19	18	0	-1	-2	-1	-1	13.4	14.3	14.5	13.2	12.2
HUNGARY	66	57	63	62	53	51	56	61	63	79	15	1	2	-1	-26	5.0	5.5	6.0	6.2	7.8
LATVIA	28	28	25	23	22	37	37	38	39	40	-9	-9	-13	-16	-18	36.9	37.0	37.8	38.6	40.2
LITHUANIA	90	81	77	75	52	71	79	66	66	50	19	3	11	9	2	19.0	21.2	17.8	17.5	13.4
POLAND	446	473	423	404	348	390	345	358	350	331	56	128	65	54	17	10.1	8.9	9.2	9.0	8.3
ROMANIA	189	152	153	162	142	192	171	158	167	165	-3	-19	-5	-5	-24	8.5	7.6	7.0	7.4	7.0
SLOVAK REPUBLIC	70	63	54	48	45	63	61	55	47	42	7	1	-1	1	-2	11.7	11.4	10.2	8.6	7.7
SLOVENIA	56	48	46	50	48	53	46	46	46	46	3	2	0	4	2	26.9	23.0	23.2	23.2	23.2
CEEC-10 TOTAL	1 175	1 106	1 046	1 025	884	1 098	1 022	1 005	994	964	77	84	41	32	-80	10.6	9.7	9.6	9.5	9.2

Table A.5 Situation and perspectives of the pig meat market in the CEECs, 1997 – 2008

	PRODUCTION (1000 t)					DOMESTIC USE (1000 t)					BALANCE (1000 t)					PER CAPITA CONSUMPTION (kg)				
	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008
BULGARIA	227	248	267	239	213	223	254	271	240	212	4	-6	-4	-1	1	26.9	30.9	33.0	30.2	26.8
CZECH REPUBLIC	483	476	452	421	443	471	471	448	424	448	11	5	4	-4	-5	45.7	45.8	43.6	41.2	43.6
ESTONIA	30	32	24	25	26	40	38	39	39	43	-10	-6	-15	-14	-16	25.8	26.3	26.7	27.3	29.7
HUNGARY	713	664	738	701	725	575	586	596	606	647	138	78	142	95	78	56.5	57.8	58.8	59.8	63.8
LATVIA	45	43	42	42	40	66	67	67	68	74	-22	-23	-26	-26	-34	26.6	27.1	27.6	28.1	32.2
LITHUANIA	87	96	91	80	80	92	94	98	88	98	-5	1	-7	-8	-18	24.2	24.7	25.2	23.2	26.1
POLAND	1 895	2 029	2 087	1 935	2 254	1 682	1 900	1 931	1 835	2 055	213	129	156	100	198	43.5	49.1	49.8	47.2	51.6
ROMANIA	668	617	595	502	616	626	648	620	537	582	42	-31	-25	-35	33	22.4	23.8	22.8	22.8	25.1
SLOVAK REPUBLIC	197	181	176	164	168	200	199	194	176	178	-3	-18	-18	-12	67	37.2	36.9	35.9	32.5	32.8
SLOVENIA	61	61	72	66	70	75	79	83	85	101	-14	-18	-10	-19	-30	37.5	39.8	41.6	42.6	50.6
CEEC-10 TOTAL	4 404	4 447	4 543	4 174	4 634	4 049	4 337	4 346	4 099	4 437	355	110	197	75	197	38.5	41.3	41.4	39.1	42.1

Table A.6 Situation and perspectives of the poultry meat market in the CEECs, 1997 - 2008

	PRODUCTION (1000 t)					DOMESTIC USE (1000 t)					BALANCE (1000 t)					PER CAPITA CONSUMPTION (kg)				
	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008
BULGARIA	101	105	106	107	130	103	120	115	120	134	-2	-15	-9	-13	-4	12.4	14.5	14.0	15.1	17.0
CZECH REPUBLIC	143	181	205	209	231	155	184	209	212	228	-12	-3	-4	-3	3	15.0	17.9	20.3	20.6	22.2
ESTONIA	5	5	6	6	8	18	18	19	19	23	-13	-13	-13	-13	-15	12.2	12.6	13.0	13.3	15.7
HUNGARY	383	434	380	410	485	242	250	255	260	301	141	184	125	150	184	23.8	24.7	25.2	25.7	29.7
LATVIA	8	6	7	7	13	19	19	20	20	24	-11	-13	-13	-13	-11	7.6	7.8	8.0	8.3	10.5
LITHUANIA	23	24	23	25	23	31	33	30	34	46	-8	-10	-7	-9	-22	8.3	9.0	8.2	9.2	12.4
POLAND	474	520	573	580	735	501	522	536	555	696	-27	-2	37	25	38	13.0	13.5	13.8	14.3	17.5
ROMANIA	255	260	262	253	329	268	310	289	305	380	-13	-50	-27	-52	-50	12.1	13.8	12.7	14.7	17.1
SLOVAK REPUBLIC	79	84	90	85	115	83	86	94	92	111	-4	-3	-4	-8	59	15.4	16.0	17.4	17.1	20.5
SLOVENIA	59	58	54	54	54	52	52	47	48	57	8	6	7	6	-2	26.1	26.1	23.9	24.4	28.4
CEEC-10 TOTAL	1 528	1 676	1 705	1 736	2 123	1 471	1 595	1 613	1 666	1 998	57	81	92	70	124	14.0	15.2	15.4	15.9	19.0

Table A.7 Situation and perspectives of the sheep and goat meat market in the CEECs, 1997 – 2008

	PRODUCTION (1000 t)					DOMESTIC USE (1000 t)					BALANCE (1000 t)					PER CAPITA CONSUMPTION (kg)				
	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008	1997	1998	1999	2000	2008
BULGARIA	50	53	58	60	42	47	49	52	56	38	4	4	6	4	4	5.7	5.9	6.4	7.1	4.8
CZECH REPUBLIC	2	1	1	1	2	2	1	1	1	2	0	0	0	0	0	0.2	0.2	0.2	0.1	0.2
ESTONIA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.3	0.2	0.2	0.2
HUNGARY	10	9	9	8	11	6	6	6	5	8	4	3	3	3	3	0.6	0.6	0.5	0.5	0.8
LATVIA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0.0	0.0	0.0
LITHUANIA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
POLAND	3	3	3	3	4	1	0	0	0	2	2	2	2	2	2	0.0	0.0	0.0	0.0	0.1
ROMANIA	65	57	54	54	37	47	55	53	54	37	18	2	1	0	1	2.1	2.4	2.4	2.4	1.7
SLOVAK REPUBLIC	4	4	3	3	3	1	1	1	1	1	3	2	2	2	2	0.2	0.2	0.2	0.2	0.2
SLOVENIA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0
CEEC-10 TOTAL	135	127	128	129	100	104	113	114	118	88	31	14	14	11	12	1.0	1.1	1.1	1.1	0.8

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 market projections for the EU and the CEECs countries, 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. This information is supplemented by the medium-term projections from the FAO.

These forecasts constitute the most recent and comprehensive set of long-term agricultural projections available to date. However, it should be stressed that these forecasts were finalised during the first half of 2001 on the basis of information available at the end of 2000. Therefore, they do not take full account of the most recent developments in the general economic situation and on agricultural markets, notably the impact on EU and world markets of the recent BSE and FMD crises in the EU animal sector. 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

In the initial years of the outlook period, agricultural markets would gradually recover from the marked and prolonged downturn that resulted in weak agricultural commodity prices. Longer-term developments in the agricultural markets would reflect an improved macro-economic environment with more broadly based, robust and sustainable growth. Combined with higher population and changes in dietary pattern, notably in many emerging economies, these prospects for stronger economic growth would support a steady increase in food demand.

World trade in agricultural commodities would exhibit a sustained expansion, as demand for food products would outpace production, especially in many developing countries. The tightening of the stock-to-use ratio would in turn strengthen world prices over the medium term. Most of the growth would come from the non-OECD regions, which would constitute the main driving force behind these favourable perspectives.

However, if the main trends in market fundamentals may all reasonably be expected to be positive, it is important to stress that these projections remain subject to many uncertainties that should moderate the strong pattern forecasted for future trade and price growth. The most important include the future course of agricultural policy reforms, the new round of multilateral trade negotiations, the future macro-economic perspectives (especially in view of the short-term concerns about a steeper-than-expected downturn in world growth led by a marked slowdown in the US and a stalling recovery in Japan) and

the scope for further productivity growth in some regions. Some recent market developments, such as the crises in the animal sector of the EU, could also have a significant impact on the outlook of agricultural markets. In view of these uncertainties, a cautious assessment of these relatively favourable prospects is deemed necessary.

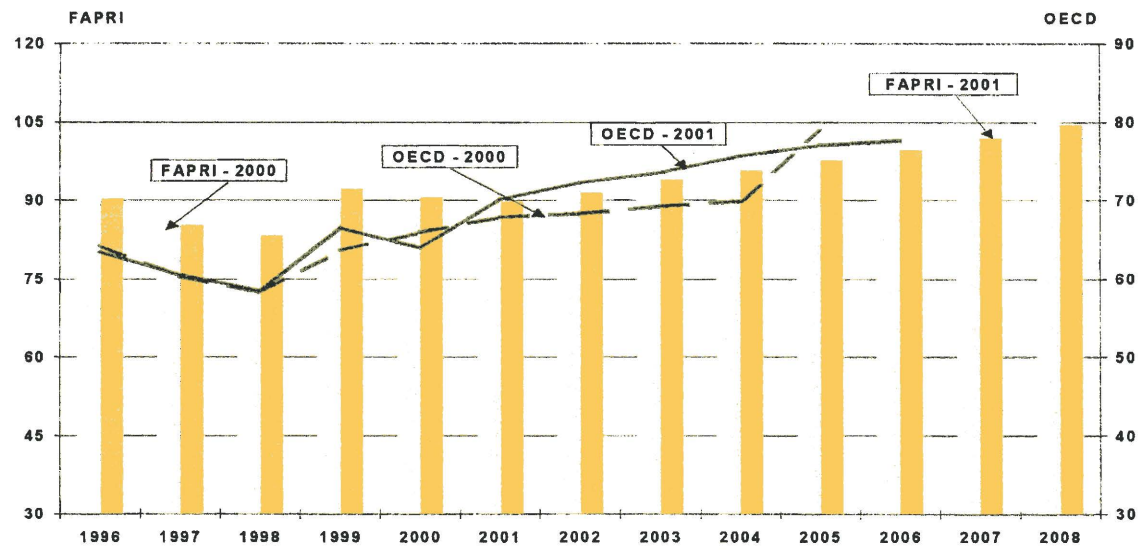
2.1 Overview per sector

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

Cereals

World cereal markets would gradually emerge from a short-term situation marked by large supply, ample stocks and relatively weak demand. Over the medium term, higher cereal demand, fuelled by an improved economic environment, population growth as well as changes in the dietary pattern in some major importing countries, would generate a tightening of stock-to-use ratios. As domestic supply is not projected to meet the pace of a rapidly expanding demand in many developing countries, including China, North Africa and Latin America, the growth in cereal consumption would set the stage for a solid increase in global cereal trade. After 15 years of relative stagnation, total cereal trade is foreseen to increase by 17 % by 2008/09, 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 2000 outlook, 1996 – 2008 (mio t)



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

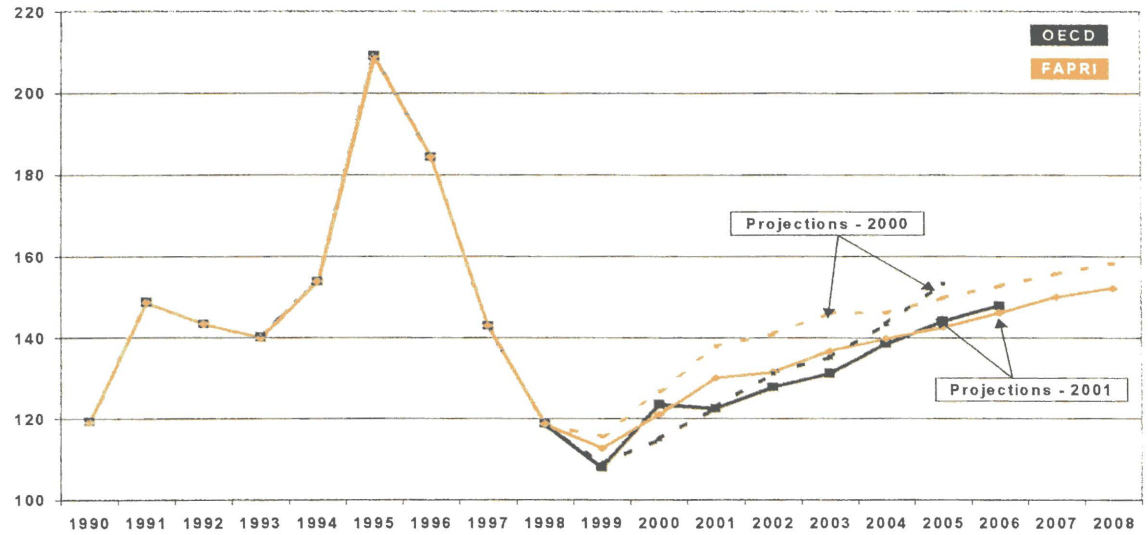
Global trade in coarse grains would strengthen with annual growth averaging about 2.2 %-2.6 %, whereas wheat trade would demonstrate a more modest pattern with an annual average ranging between 1.3 % and 1.8 % over the 2000/01-2008/09 period.

After bottoming out in 1999/00, world prices would exhibit a modest and gradual recovery over the medium term as supply adjusts and global demand strengthens. HRW wheat prices would reach 152 $/t by 2008/09 in the FAPRI projections[59], whereas maize

[59] The SRW wheat, which broadly corresponds to EU wheat quality, generally quotes around 10 % below the HRW wheat reference.

prices would exhibit a similar trend at 112 $/t by the end of the projection period. A similar price outlook is projected by the OECD, with HRW wheat, maize and barley prices strengthening over the medium term to 148 $/t, 108 $/t and 101 $/t respectively by 2006/07. Durum wheat prices would follow a similar trend, rising from around 150 $/t in 2000/01 (for EU durum wheat quality) to 180 $/t by 2008/09.

Graph 3.2 Outlook for wheat world prices – comparison with the 2000 outlook, 1990 – 2008 ($/t)



Ref.: US FOB Gulf, HRW.

Oilseeds

The oilseed sector is still foreseen to demonstrate a slow and modest recovery from a current situation characterised by very weak prices, stemming from excess supplies, relatively weak demand and a combination of policy and macro-economic factors (notably the support system in the US). In the longer run, the robust expansion in the demand for oilseed and oilseed products that is anticipated by most agencies would contribute to gradually restore market balance as supply exhibits only moderate increases. Global demand would benefit from the consolidation of the recovery in world economic growth that would stimulate increased human consumption of vegetable oils as well as the use of oilseed meals for the livestock sector. Trade in oilseeds is anticipated to increase faster over the projection period than in the 1980s, but more slowly 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 thanks to an improved demand. By 2008/09, soybean prices would reach 236 $/t in the FAPRI projections (the OECD anticipates a similar, though more positive, pattern with soybean prices at 256 $/t by 2006/07). Soybean meal prices would broadly stagnate over the medium term, ranging between 199 $/t and 208 $/t in 2008/09.

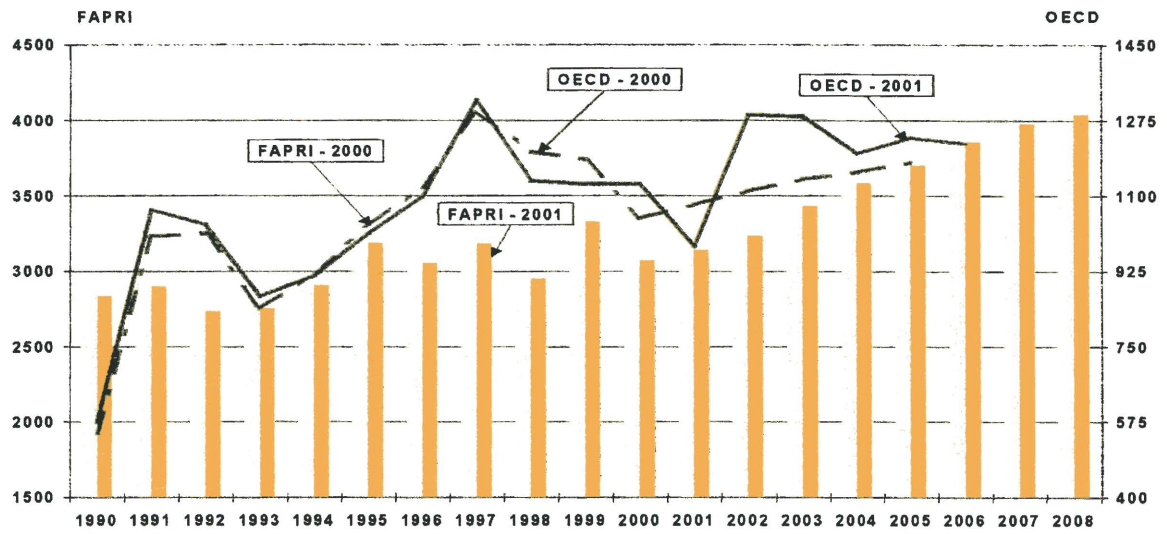
Prospects of rising incomes drive the solid expansion in vegetable oil consumption. Palm oil and soybean oil would capture the greatest share of an expanding demand for and trade of vegetable oil. Growth in oilseed oil trade would be stronger than that of oilseeds and oilseed meals, though lower than in the 1990s. The strong dependence of trade in vegetable oil from developing countries, notably China, India and Pakistan, makes the outlook very sensitive to the economic prospects in these countries.

Meat

The general perspectives for the global meat markets would be rather favourable over the medium term with growing production, consumption and trade. The increase in meat consumption would be supported by a favourable macro-economic environment of sustained income growth, in particular in the emerging economies of Asia and Latin America. As higher meat demand would take place in net importing countries, world trade would rise and world prices strengthen over the medium and long term. The FAPRI and USDA projections exhibit an expansion in beef trade ranging between 0.8 mio t and 0.95 mio t over the 2000-2008 period (i.e. by 18 % and 30 % respectively), with most of the growth from Russian, Asian and Mexican imports. Pig meat trade is projected to rise by around 0.6 mio t over the same period (i.e. 25-30 %), driven by strong import demand from China, Japan, Russia and Mexico.

Poultry meat would capture the largest proportion of the increased global meat demand thanks to low production costs and consumer preferences. Trade in poultry meat is also projected to trend upwards, with increases in the range of 0.6 to 1.1 mio t (i.e. between 15 % and 22 %). Much would depend on the prospects for import demand from China and Russia, with Russian import demand closely linked to the pace of recovery of the production sector and to the economic and political outlook.

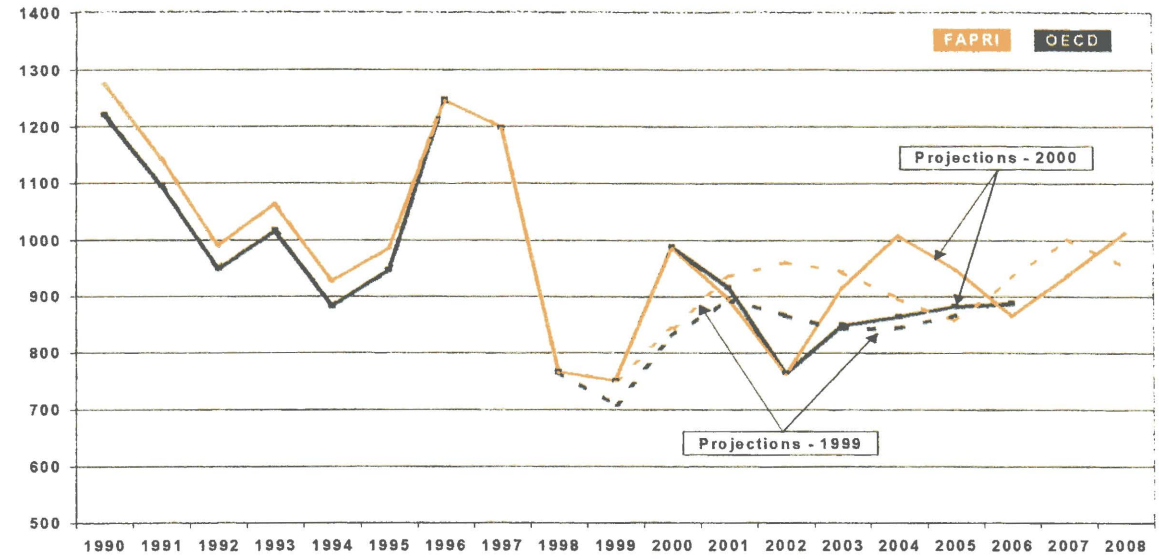
Graph 3.3 Outlook for beef net trade – comparison with the 2000 outlook, 1990 - 2008 ('000 t cwe)



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

Beef prices would strengthen over the medium term supported by a strong demand and limited growth in production. The magnitude of the recovery would nevertheless remain dependent on the strength of the economic rebound in some key importing countries of the non-OECD area. Furthermore, the changing structure of the world beef market, the emergence of new exporting countries and the increasing competition from other meats should restrain upward beef price tendencies. Poultry and pig meat prices are generally expected to rise over the projection horizon. However, structural changes and technological improvement in the meat sector should support production growth and thus moderate future price trends. The increasing number of export suppliers and greater competition between meats should also contribute to maintain world prices under pressure.

Graph 3.4 Outlook for pig meat prices – comparison with the 2000 outlook, 1990 – 2008 ($/t)



Ref.: Iowa and Southern Minnesota barrow and gilt, lw.

Milk and dairy products

The OECD and FAPRI projections suggest a rather favourable medium-term outlook for the milk and dairy markets. Stimulated by higher demand and stronger producer prices, milk production is set to expand in a number of countries, mainly outside the OECD area. According to the OECD, world cow milk production is projected to increase by 67 mio t from 2000 to 2006 (i.e. 12 %), with strong gains in China, India, Brazil, Argentina and Mexico.

Higher demand for dairy products would mainly originate from developing countries where growing population, rising disposable income, urbanisation and changing dietary pattern would set the stage for a strong and sustained rise in the consumption of dairy products, in particular of cheese and butter. In contrast, global demand for dairy products in the OECD area is not projected to show major changes over the medium term (even if cheese and whole milk powder are expected to experience some significant gains). As domestic production would not keep pace with the overall demand for dairy products in some regions of the non-OECD area (mainly China, South East Asia, Middle East and the FSU), scope for additional, though increasingly regionalised, trade is foreseen. The OECD anticipates that the gradual shift in world trade from supply-led bulk dairy products (i.e. SMP and butter) towards higher value added products (such as cheese) that has been observed since the mid-1980s, would continue over the medium term.

After the sharp decline recorded in 1999 for cheese and milk powder and in 2000 for butter, world market prices of dairy products are predicted to increase over the medium term, supported by the return of economic growth and a strengthening demand. The prices of most dairy products would stand at levels above those experienced in the early and late 1990s. Cheese prices would demonstrate the strongest rise, thanks to very favourable developments on the demand side. Butter prices would experience a more modest pattern, as they would remain strongly linked to the uncertain Russian market. After peaking in 2000, milk powder prices should fall a little in 2001 and resume increasing from 2003 onwards. These perspectives would remain dependent on the future developments in some key emerging markets and on the potential impact of the changes in national dairy policies that have been adopted or scheduled in a certain number of countries.

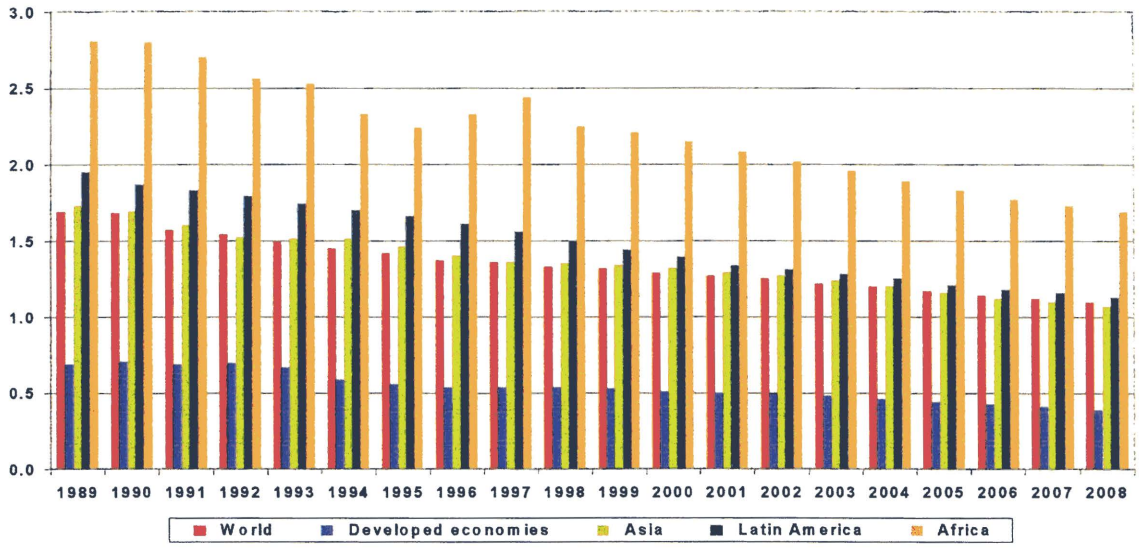
2.2 Underlying factors

Five main factors can be identified to explain these developments:

(1) Population growth

Population growth constitutes a 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 1.3 % in 2000. This pattern is estimated to continue over the next seven years and overall world population is expected to increase by between 1.1 % and 1.2 % per year in 2008.

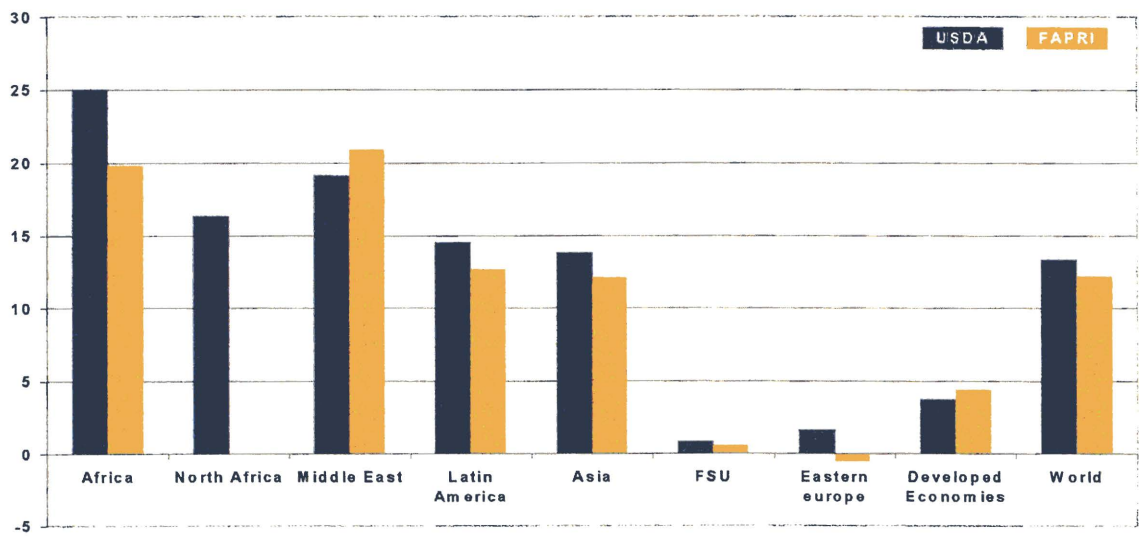
Graph 3.5 Growth rate in population growth, 1989 – 2008 (in %)



Source: FAPRI

However, the decade is expected to witness some of the highest absolute annual increments in world population history. It is estimated that the world population will increase every year by between 75 and 80 mio persons over the decade. The pattern of population growth will differ widely between regions, with Africa and the Middle East demonstrating the strongest increase of around 20 % or more over the next seven years.

Graph 3.6 Cumulated population growth, 2001 – 2010 (in %)

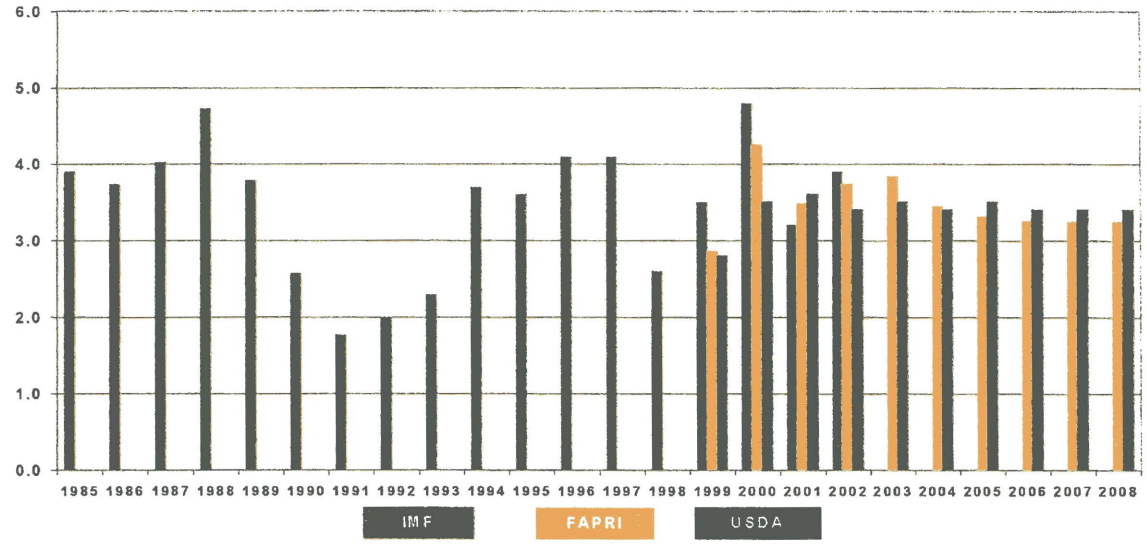


In 2008, Africa's population growth would stand at 2.2% in USDA projections whereas FAPRI foresees a more modest growth pattern at 1.7 %. Conversely, FAPRI projections assume stronger growth in the Middle East where population would expand by 2.0 % per annum in 2008 versus 1.7 % according to the USDA. The next fastest growing regions are Latin America and Asia, averaging between 1.1 % and 1.3 % per annum by 2008. More than 90 % of the increase in world population would take place in developing countries, with more than half in Asia.

(2) Strong economic growth in developing and transition economies

The main contributing factor to the improvement in the medium-term outlook of agricultural markets lies in the prospects for a favourable macro-economic environment based on more solid and balanced growth. If the short-term economic outlook has somewhat deteriorated, it is expected to remain mainly dominated by the continuing recovery from the global slowdown observed in 1997 and 1998. Over the medium term, most leading agencies anticipate that long-term structural reforms in the crisis-affected countries should provide the basis for a robust and sustainable economic growth in many emerging economies, though at a lower rate than previously observed. If Asia is foreseen to remain the major force in the expansion of the world economy, strong and sustained growth is expected in the transition economies, Africa and Latin America, leading to a significant narrowing of the growth differential between these regions. Moreover, the proportion of households with middle and high-income levels is foreseen to rise in these countries, with significant importance on food consumption pattern.

Graph 3.7 Outlook for world real GDP annual growth, 1985 – 2008 (in %)



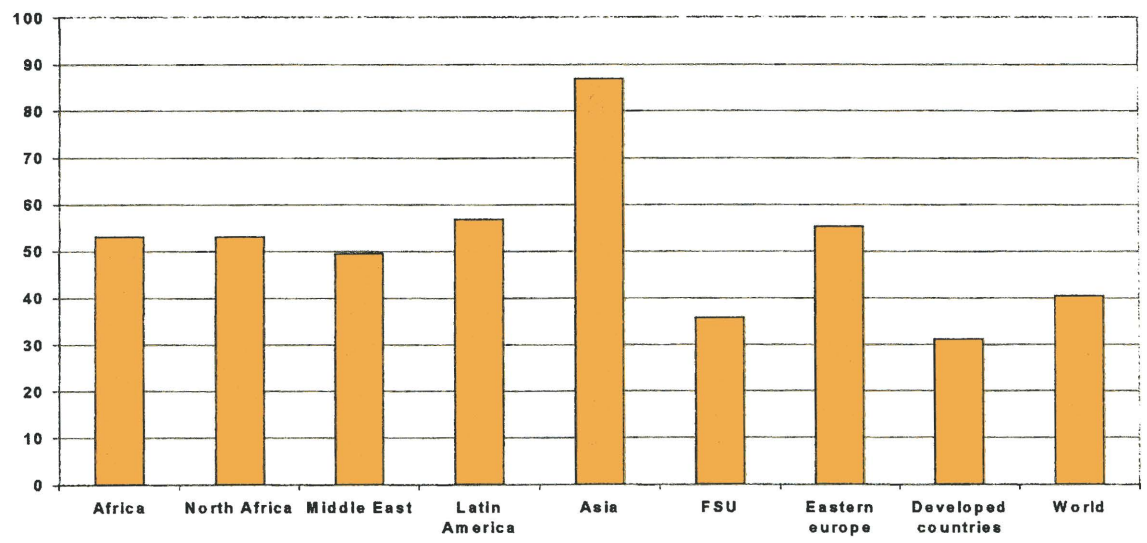
After a more rapid than anticipated recovery from the Asian financial crisis in 1999 and 2000, thanks to the continued strength of the US economy, the robust expansion in Europe and the nascent recovery in Japan, global GDP growth is forecast to average around 3.5 % per year according to the USDA and FAPRI projections over the 2001-2005 period (as compared to an average of 2.6 % from 1991 to 2000). From 2006 onwards, economic growth would stabilise around 3.3 % per year. Much of this growth is expected to be fuelled by emerging economies. In these countries, it is anticipated that sound macro-economic policies –notably tighter monetary and fiscal policies- and further structural and institutional reforms –especially in the financial and corporate sectors- should provide the fundamentals for long-term sustained economic development, but at a lower rate than before the Asian crisis.

Asian developing countries would exhibit a GDP growth averaging more than 6 % (led by an annual growth rate of around 8 % in China), i.e. substantially lower than in the early 1990s. In the wake of a milder-than-expected downturn in 1999, Latin American economies are foreseen to display a strengthening of economic growth, which would reach more than 4.5 % a year on average over the medium term. Nevertheless, these favourable perspectives would rely heavily on the implementation of further policy reforms, reduced debts, growing intra-regional trade and high foreign direct investment.

Despite the relatively moderate increase in real oil prices assumed in the projections of most international agencies, average economic growth for Middle East countries would reach slightly more than 4 % per year, i.e. above the performance of the 1980s and 1990s. Africa, with the exception of some politically troubled countries, is forecast to display a generally healthy economic pattern, with GDP growth estimated at above 4 % over the medium term. However, GDP growth in Africa and the Middle East, when expressed per capita, would be outperformed by those of Asia and Latin America by a larger margin than given by their GDP growth rate differentials owing to their higher population prospects (cf. section (1) above).

After some significant growth in 2000, Russia and the other countries from the FSU would experience economic expansion over the medium term of around 3 % and more than 4 % in the USDA and FAPRI baselines respectively. This performance would constitute a substantial increase from the negative growth recorded in the 1990s (around – 5 % per year). These prospects depend on further progress towards the establishment of a market-based economy and the continuation of the integration of the FSU into the global economy in terms of trade, foreign investment and currency convertibility. 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 would display vigorous growth over the medium term, in particular countries where market reforms and increased openness to trade and competition have been implemented. Average growth in these countries is forecast to reach between 4 % and 5 % per annum.

Graph 3.8 Outlook for real GDP growth per region, 2001 - 2010 (cumulative growth in %)



Source: USDA.

In spite of a short-term slowdown in the early years of the projection period, the economic situation in developed countries is foreseen to remain favourable over the medium term. GDP growth is estimated to reach between 2.5 % and 3.0 %, i.e. higher

than in the 1990s, as structural adjustments undertaken throughout the second half of the 1980s and into the past decade created a foundation for growth. After several years of very strong gains, the US economy is foreseen to slow in 2001 and 2002 in the USDA projections, before returning to a long-term sustainable rate of 3.2 % over the rest of the outlook period. The FAPRI and the OECD anticipate a stronger and more robust pattern for the US economy, with growth rates averaging between 3.5 % and 3.7 % over the medium term. Significant structural problems, especially in the financial and corporate sectors, are expected to constrain the Japanese economy on a modest growth path over the medium term at between 1.5 % and 2.0 % per year. Economic growth in the EU is expected to gain momentum in the short run at more than 3.0 %. It would then stabilise at between 2.5 % and 3.0 % on average over the medium term.

While stronger economic growth in the developed world should only have a minor direct influence on the global demand for agricultural products[60], it is expected to have a much stronger effect on food consumption in the non-OECD zone owing to higher per capita-income elasticity.

This environment of steady medium-term growth is foreseen to take place without significant inflationary pressures. In spite of the recent increase in oil prices that more than doubled in 1999 and 2000, there is no expectation of a significant impact on GDP growth and inflation over the medium term as oil has become a less important factor in the world economy since the 1970s. Oil prices would exhibit some moderate gains in real terms over the medium term.

If large exchange rate fluctuations triggered significant changes in agricultural trade flows and prices over the recent past (cf. notably the depreciation of the Euro and the Brazilian Real), currency prospects over the next seven years are expected to exhibit a more stable pattern. The euro, the Canadian $ and the Japanese yen are projected by the FAPRI and the OECD to appreciate slightly versus the US $ over the next seven years, whereas currencies from China and Mexico would depreciate. The FAPRI outlook also suggests some currency depreciation in Brazil and most countries of South East Asia. Diverging prospects are anticipated for the Russian Ruble, with a medium-term depreciation in the FAPRI projections versus an appreciation in the USDA outlook.

(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).

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[60] However, economic growth in developed countries is crucial for spurring growth at world level, which would then translate into higher food demand and global trade.

(4) A differentiated pattern of food production and consumption should lead to some regional imbalance and increase 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 in developing countries, the annual rate of increase of production in these countries is still projected to be lower than the increase in domestic consumption. This would result from the combined impact of the limited potential of available land and water (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 would lead to the emergence of some large countries and regions (such as China, South Korea, Indonesia and Middle East) 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 Agreement on Agriculture and further trade liberalisation in the framework of the WTO are expected over the medium term to lower barriers and boost the demand for food imports. The pace of economic reform in many regions, such as the transition economies, the FSU and China, towards greater liberalisation of markets and integration into the global economy (in terms of trade, investment flows and currency convertibility) should also have a significant impact on international trade.

3. Prospects per sector

This section is based on the projections[61] of some prominent forecasting organisations (OECD, FAPRI, USDA, FAO) 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[62].

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[61] It is important to mention that these projections are not always directly comparable. 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.

[62] These projections 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

If the cereal sector is foreseen in the short term to continue to recover from a market situation in the late 1990s marked by large supply, ample stocks and weak demand, most projections tend to depict an outlook for world cereal markets that appears rather favourable over the medium term. Improved economic perspectives over the medium term and the gradual adjustment of supply to prices at historical lows should set the stage for a strengthening of world demand and a tightening of stock-to-use ratios. Limited production potential in some countries and supply adjustments should generate a broad based expansion of cereal trade, driven by rising income, diet diversification and higher demand for livestock products and feeds in some developing countries. These factors would generate a significant, though moderate price recovery over the medium term.

Short-term developments

The short-term estimates from the International Grains Council (IGC[63]) for the 2001/02 marketing year indicate a wheat crop forecast at 579 mio t. The 2001 harvest would thus constitute the fourth consecutive fall in world wheat production from the 1997 record of 610 mio t. Significantly lower supply is anticipated in the EU, India, Pakistan and, to a lesser extent, in the US. In contrast, wheat production is forecast to increase in the CEECs, the FSU (mainly Russia and Ukraine), Australia, North Africa and Iran. Coarse grain production would in turn increase sharply to 883 mio t, 16 mio t higher than the 2000 harvest[64]. Large crops are foreseen in China, Europe, Canada and South Africa. There should be smaller harvests in the US and Brazil.

World demand for wheat is anticipated to resume increasing after three years of relative stagnation. Driven by food use in developing countries and feed usage in industrialised economies, total wheat consumption would reach 600 mio t in 2001/02, i.e. an increase of around 7 mio t as compared to 2000/01. As consumption is forecast to exceed production for the fourth year running, wheat stocks would fall further to 94 mio t in 2001/02 (i.e. a stock-to-use ratio of 15.6 %). Moreover, wheat stocks in the five major exporting countries would drop by 10 mio t to 37 mio t, their lowest level since 1996/97. Total wheat trade is set to rise in 2001/02 to 104 mio t, with the bulk of this increase taking place in China and other Asian markets, notably Indonesia[65].

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 would grow at a sustained pace that ranges from 1.4 % on annual average in the FAPRI forecasts (i.e. 70 mio t over the 2000-2008 period) to 1.8-2.0 % in the USDA and OECD projections respectively (i.e. around 90 mio t in the USDA outlook). Developing countries and transition economies are foreseen by all major organisations to

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[63] 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 2001 by the OECD, FAPRI and USDA.

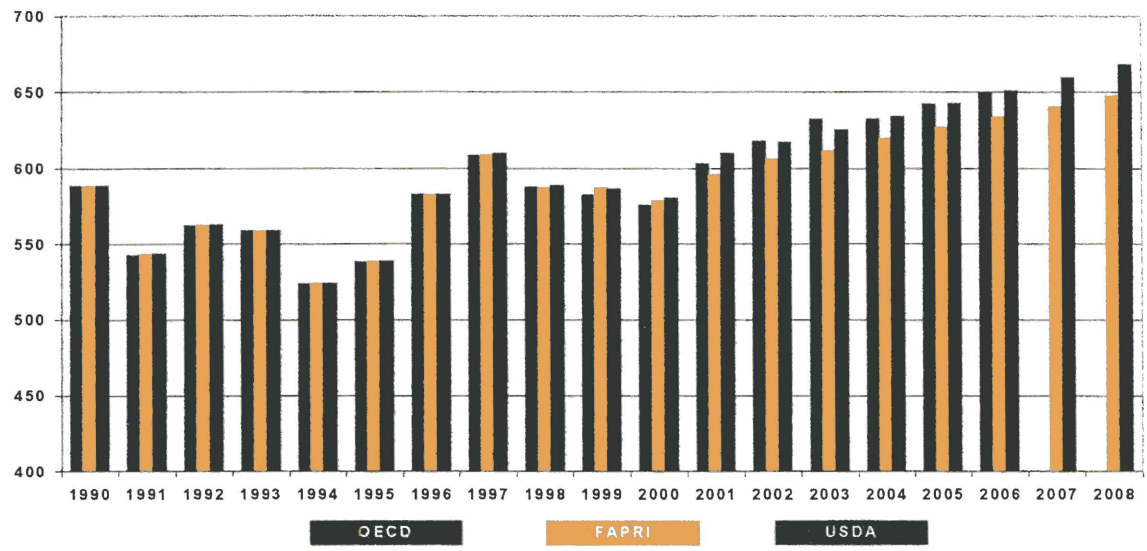
[64] Higher coarse grain production would mainly result from a sharp recovery in maize production that would reach around 600 mio t, while barley production would remain broadly stable at 134 mio t.

[65] Short-term forecasts from the IGC for consumption, trade and stocks of coarse grains were not available when this report was finalised.

account for most of the increase in production. Total wheat production would reach between 650 and 670 mio t in 2008 as compared to 609 mio t in 1997 (a record high).

As in recent decades, most of the growth in production would be generated from higher yields as wheat area would only expand moderately. Wheat yields are estimated to rise by an anticipated 1.1-1.2 % on annual average by the FAPRI and the USDA and 0.9 % by the OECD. These wheat productivity growth rates represent a marked slowdown as compared to the previous decades but an improvement over the early 1990s[66].

Graph 3.9 Outlook for world wheat production, 1990 – 2008 (mio t)



World wheat area, which has been declining since its record level in 1996 in line with the market and policy environment in some countries, is foreseen to bounce back in 2001 and to expand by 9 and 14 mio ha in the USDA and OECD outlook respectively over the rest of the forecasting period supported by strengthening prices. However, land and water constraints in many countries (linked to urbanisation and climatic conditions) as well as sustained competition from other crops are expected to limit wheat area development over the medium term[67]. In that context, the FAPRI only foresees a very modest recovery in wheat area after 2001, with wheat area reaching 220 mio ha by 2008/09.

Information on total coarse grain is not fully comparable 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 stronger than over the most recent decade in the USDA and OECD projections. As for wheat, these organisations foresee that production growth would be supported by both yield growth and, though to a lower extent, some increase in total area (notably for maize). Conversely, FAPRI expects that the rise in coarse grain production would be mainly generated by increased

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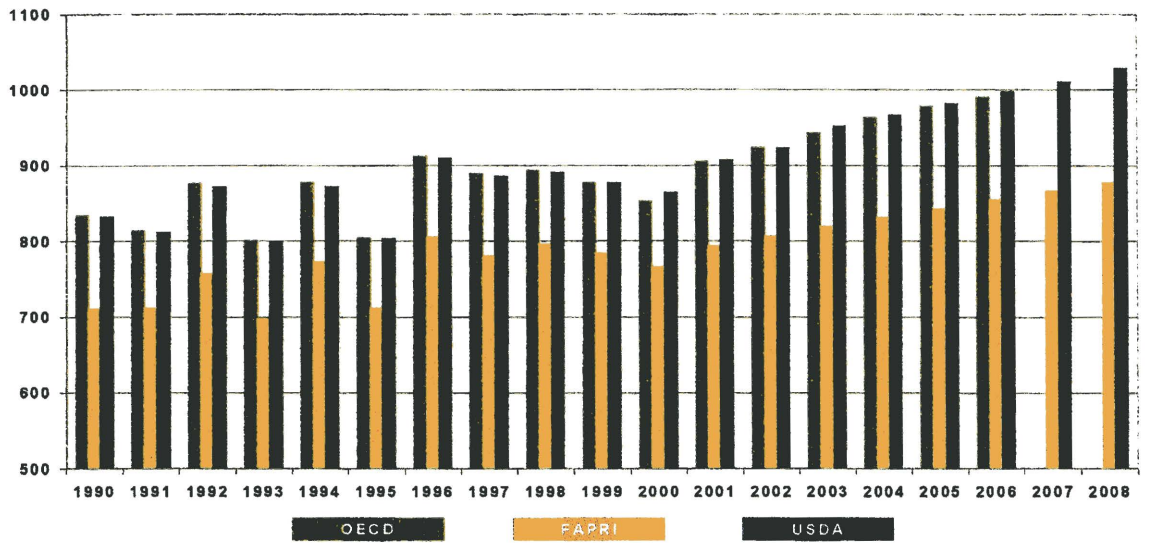
66 The slowdown in yield growth is attributed by some analysts to the lower quality of soils being brought in production and reduced budgets for research and development. The OECD argues that the combination of stricter environmental restrictions on the use of inputs, higher costs of fertilisers and agro-chemical inputs and increasingly tighter water supply for irrigation may significantly contribute to this anticipated reduction in yield growth.

67 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.

productivity[68], as total coarse grain area would only grow by slightly more than 3 mio ha, the decline in sorghum area partially offsetting the projected increase in maize and barley area.

In the OECD projections, coarse grain production would rise by 138 mio t from 2000 to 2006 (i.e. 2.5 % per year). Growth in coarse grain production would be mainly driven by the expansion in maize production that would range over the 2000-2008 period between 92 mio t (FAPRI) and 127 mio t (USDA) (i.e. 1.8 % to 2.5 % per annum respectively). A growing demand for malting barley and attractive prices would support gains in barley production. Growth in barley production would reach between 14 mio t (FAPRI) and 16 mio t (USDA) from 2000 to 2008 (i.e. around 1.2 % and 1.4 % per year respectively). These growth rates would constitute a significant increase when compared to the 1980s and 1990s, though lower than during the 1970s.

Graph 3.10 Outlook for world coarse grain production, 1990 – 2008 (mio t)



Demand

After a marked slowdown in the early 1990s, growth in wheat demand is forecast to gather pace over the 2000/01-2008/09 period and reach on average an annual rate ranging from 1.1 % (FAPRI) to 1.5 % (OECD and USDA), i.e. by between 52 and around 75 mio t over the whole period. As most developed countries have already relatively high levels of per capita wheat consumption and only limited scope to increase it, developing countries would account for most of projected increase (although transition economies are also foreseen to show important gains). The USDA expects world per capita wheat consumption to increase slowly from 99 kg per year in 2000 to about 100 kg over the medium term driven by higher feed wheat demand in the FSU, other transition economies, China and the EU[69]. Nevertheless, if projected growth rates in global wheat use are significantly higher than those observed in the 1990s, they would still fall short of the

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[68] Over the next seven years, productivity growth in maize production is expected to slow down to 1.6 % per annum in the USDA and FAPRI projections, whereas barley yields would rise between 0.8 % and 1.0 % respectively, i.e. a significant increase compared to the 1980s and 1990s. A similar pattern is foreseen by the OECD.

[69] World per capita consumption of wheat fell sharply from a peak of 107 kg in 1990 to 97 kg in 1995 owing to the drastic fall in demand in the FSU and the CEECs.

levels recorded in the 1970s and 1980s.

Total coarse grain consumption would follow a stronger pattern with a robust growth estimated on annual average between 1.4 % (FAPRI) and 2.2 % (OECD, with the USDA at 1.8 %), i.e. an increase of between 90 and 164 mio t respectively over the forecast period. Demand for coarse grains would thus grow faster than during the 1980s and 1990s[70], but much slower than during the 1970s. Maize would constitute the main driving force behind this rise in demand, due to the expansion of the poultry and pig meat sectors[71], with an annual increase forecast between 1.4 % and 2.0 % respectively (corresponding to 73 and 108 mio t from 2000/01 to 2008/09), whereas barley consumption would rise by 1.1 % and 1.2 % respectively on annual average (i.e. 12-14 mio t over the whole period).

This strong development in demand for cereals would be mainly derived from non-OECD (importing) countries, in relation to rising real incomes (and the associated gain in per capita meat consumption), population growth and continued urbanisation (changes in diet with increased meat demand and further diversification towards more wheat-based food). Developing countries –notably China, Latin America, North Africa and Middle East- and transition economies would exhibit significant growth in total cereal demand (for feed, food and industrial purposes) over the medium term as the consequences of the recent economic slowdown fade and their economies recover towards a more stable and sustainable path.

Trade

As domestic supply is not projected to meet the pace of a rapidly expanding demand in many regions of the world, this growth in world cereal consumption is foreseen to boost global trade. World cereal trade is projected to grow sharply higher than in the 1980s and 1990s. Reversing a decline that began in the early 1980s, coarse grains are expected to exhibit the strongest increases in grain trade in response to higher meat consumption and the consequent increase in feed demand (maize would also benefit from higher yields and lower prices than wheat).

Table 3.1 Outlook for total trade in cereals, 2000 – 2008 (mio t)

	2000		2008		Change in trade	
	USDA	FAPRI	USDA	FAPRI	USDA	FAPRI
Wheat	105.6	90.6	117.3	104.4	11.7	13.9
Coarse grains	101.3	91.5	124.3	109.3	23.0	17.8
Maize	72.5	67.3	89.3	82.4	16.8	15.1
Barley	18.6	17.8	21.8	19.3	3.2	1.5
Total cereals	206.9	182.0	241.6	213.7	34.7	31.7

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

Both FAPRI and USDA foresee a steady expansion in cereal trade from 2000/01 to 2008/09 ranging between 11 and 15 % for wheat (i.e. 12-14 mio t) and 20-23 % for coarse grains (i.e. 18-23 mio t). The OECD outlook expects net exports from the OECD

[70] Demand for coarse grains in the 1990s had been restrained by the restructuring in the livestock and feeding industry of the transition economies and the economic slowdown in the Far East Asia.

[71] About two thirds of global coarse grain production are used as animal feed.

area to rise by 25 % for wheat and 40 % for coarse grains by 2006, as compared to the 1995-99 average.

When looking at the regional breakdown of cereal net imports, most analysts expect that developments in cereal imports would be mainly 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. In contrast, the role of the FSU, one of the world's largest importers during the 1980s, is expected to remain limited over the medium term, with import demand at low levels over the projection period. However, if all organisations agree on the level and the driving forces underlying global trade growth, some significant differences exist on the distribution of medium-term import demand and export supply.

Table 3.2 Outlook for wheat net imports for major importing countries, 2000 – 2008 (mio t)

	2000		2008		Change in trade	
	USDA	FAPRI	USDA	FAPRI	USDA	FAPRI
Total Asia	7.8	26.7	17.2	33.6	9.4	6.9
China	1.5	1.0	3.1	5.4	1.6	4.4
Indonesia	3.7	-	5.1	-	1.4	-
Japan	5.5	5.5	5.5	5.4	0.0	-0.1
FSU	0.7	0.6	-1.3	0.9	-2.0	0.3
Africa & M. East	39.8	40.4	45.7	41.4	5.9	1.0
North Africa*	15.5	15.4	17.4	17.3	1.9	1.9

* excluding Lybia

Net cereal imports from China are forecast to increase over the next seven years: Chinese wheat net imports would grow between around 0.4-1.6 mio t (OECD and USDA) and 4.4 mio t (FAPRI) from 2000/01 to 2008/09. These modest gains in relation to earlier expectations may be seen as the net result of agricultural and trade policy changes combined with somewhat slower growth in demand and rising yields. China would also turn from being a net exporter of coarse grains in 2000/01 for around 1.5 mio t to become a net importer over the medium term. The FAPRI expects net coarse grain imports to reach more than 8 mio t by 2008/09. In their outlook, growth in coarse grain imports (mainly maize) would 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 outpace domestic production by the end of the projection period. The USDA foresees a similar, though slightly more modest pattern for Chinese cereal imports, with net wheat and coarse grain imports standing at 3 mio t and 7 mio t respectively by 2008/09[72]. Rising imports to meet an expanding livestock and higher feed demand are also projected by the OECD, so that China would become a net coarse grain importer of 4.6 mio t by 2006/07.

Besides China, other Asian countries that are expected to exhibit some increases in wheat import include the South East Asian countries, Pakistan and India. The latter, that has

[72] The new grain policy in 1999 towards strict quality standards on government grain purchases and the gradual elimination of purchases of low-quality grains is foreseen to reduce grain supply. Yet, abundant grain stocks are expected to limit the rapid development of cereal imports in the short-term. Over the medium-term, lower grain production should generate higher prices, greater incentives towards high-quality grains and larger imports.

been a wild card player over the last few years alternating as an importer or an exporter of wheat depending on domestic availability, is foreseen to become a growing net wheat importer.

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 3 to 5 mio t from 2000/01 to 2008/09, whereas wheat imports would grow between 1 and 6 mio t. Mexico and other Latin American countries are also expected to be a source of import growth throughout the whole period as rising income boosts meat demand. Finally, growth in world barley trade of around 2 to 3 mio t is foreseen to take place mainly in China for malting barley and Saudi Arabia for feed barley. However, malting barley markets are anticipated to exhibit higher growth potential, as feed barley would face strong competition from other feed grains.

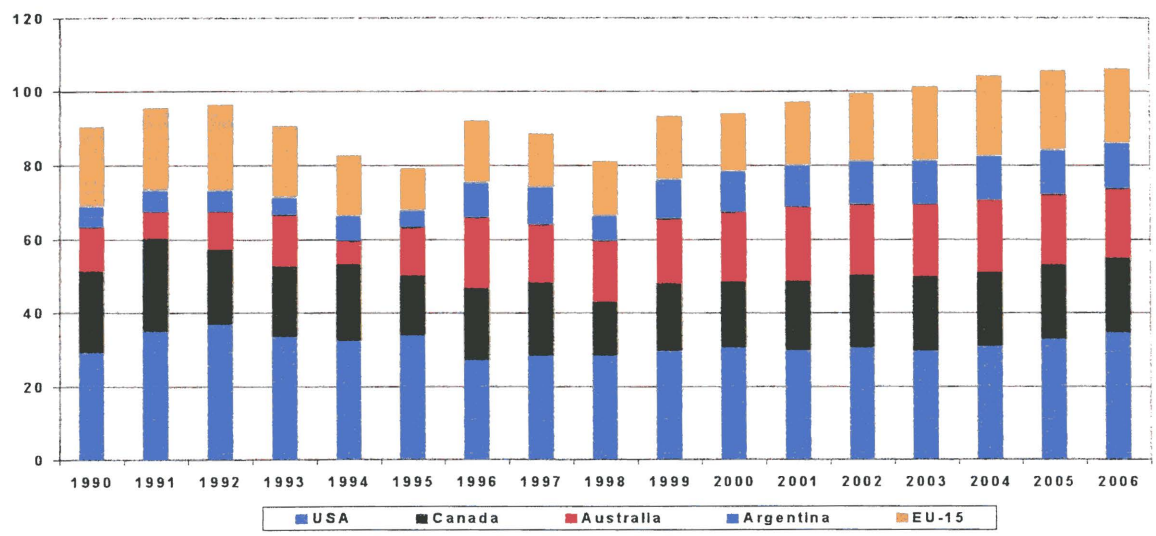
Table 3.3 Outlook for coarse grains net imports for major importers, 2000 – 2008 (mio t)

	2000		2008		Change in trade	
	USDA	FAPRI	USDA	FAPRI	USDA	FAPRI
Total Asia	33.2	36.4	44.8	50.5	11.6	14.2
China	-1.4	-1.7	6.9	8.1	8.3	9.7
Indonesia	1.1	1.2	1.9	1.6	0.8	0.5
Japan	20.0	19.7	19.8	19.2	-0.2	-0.6
Mexico	9.5	10.0	12.3	11.7	2.8	1.8
Other Lat. America*	9.9	9.6	13.4	10.8	3.5	1.2
Africa & M.East	25.5	24.5	30.3	27.0	4.8	2.5
North Afr. & M.East**	24.8	21.1	29.7	22.9	4.9	1.8

* excluding Argentina; ** only Algeria and Egypt in FAPRI

Prospects for higher world wheat trade would mainly benefit the traditional exporters such as the US, Canada, the EU, Australia and Argentina. Whereas Canada's market share in the global wheat trade would broadly stagnate, Australia's would exhibit a decline.

Graph 3.11 Outlook for wheat exports for the major wheat exporters, 1990 – 2006 (mio t)



Source: OECD

The US is foreseen by all organisations to reap the lion's share of the additional import demand, although its global market share would somewhat diminish. If Argentina is

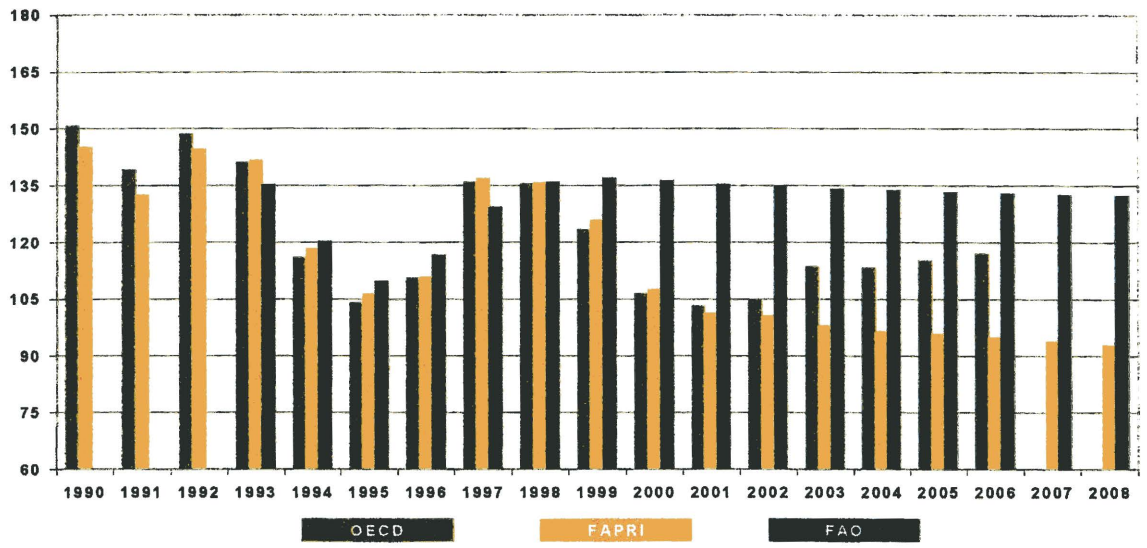
foreseen to benefit from a larger import demand, the EU is clearly expected to be the main winner as it would benefit from an improved competitiveness and abundant supply that should enable the EU to export beyond its WTO limits on subsidised exports. These prospects would result from the implementation of Agenda 2000 (notably the cut in cereal support price), favourable currency developments (in particular the €/$ exchange rate) and the recovery in world market prices.

Additional maize import demand is expected to be met by the US, Argentina and Eastern European countries, as China would reduce its exports over the projection period. Finally, the EU is foreseen to capture most of the growth in barley trade at the expense of Canada and Australia. According to the USDA, FAPRI and the OECD, a favourable exchange rate[73] and rising projected world prices should enable the EU to export most of its barley without subsidies over the medium term.

Stocks and prices

After some strong rebuilding in 1997 and 1998, cereal stocks declined sharply over the last two years. Most organisations foresee that low cereal stock levels should be a feature of cereal markets over the medium term. Combined with a projected global increase in cereal demand, the stock-to-use ratio is expected to tighten and generate an increase in world cereal prices over the medium term.

Graph 3.12 Outlook for world wheat stocks, 1990 – 2008 (mio t)

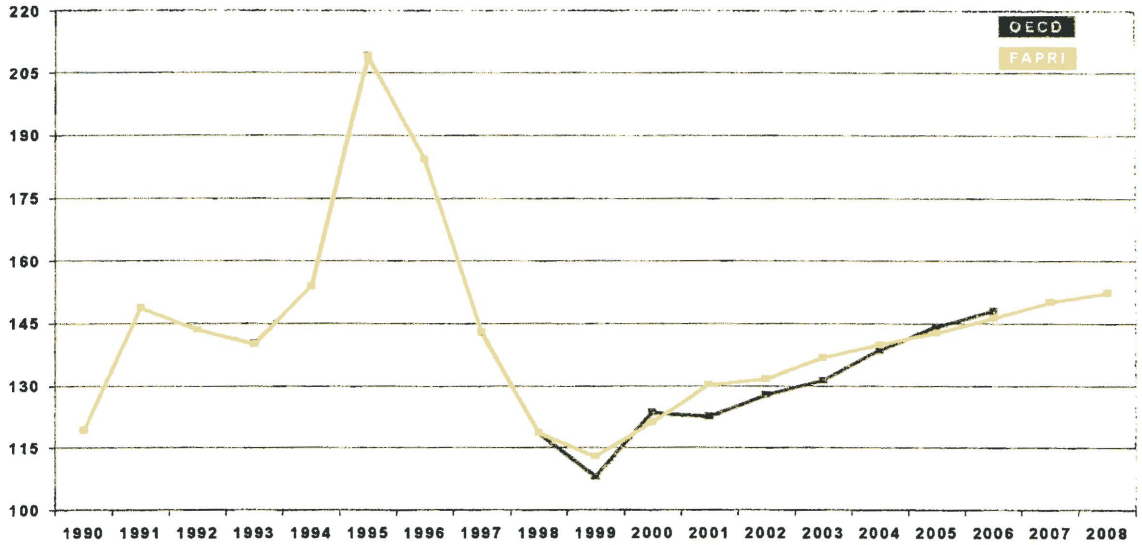


After bottoming out by the turn of the century, cereal prices are foreseen to recover slowly over the medium term from the current low levels as supply adjusts and global demand strengthens. According to the FAPRI projections, prices of common wheat (HRW, fob US Gulf) are projected to range around 152 $/t by 2008/09 (SRW wheat, that

[73] In their analysis, the OECD and FAPRI assume that the € would strengthen in nominal terms versus the US $ from 2001 onwards. Whereas the €/$ exchange rate would quickly fall from 1.08 in 2000 to around parity from 2002 onwards in the OECD projections, the FAPRI foresees a much stronger pattern as the € would appreciate substantially throughout the period reaching 0.9 in 2008. Conversely the USDA anticipates that the EU economic development would continue to lag behind US growth so that the € would remain weak and depreciate up to 2004 (when it quotes slightly less than 1.25). From 2005 onwards, the USDA indicates some appreciation in nominal terms at around 1.20 (a mere stabilisation in real terms).

broadly corresponds to EU common wheat quality, would quote around 10 % below these HRW wheat price projections).

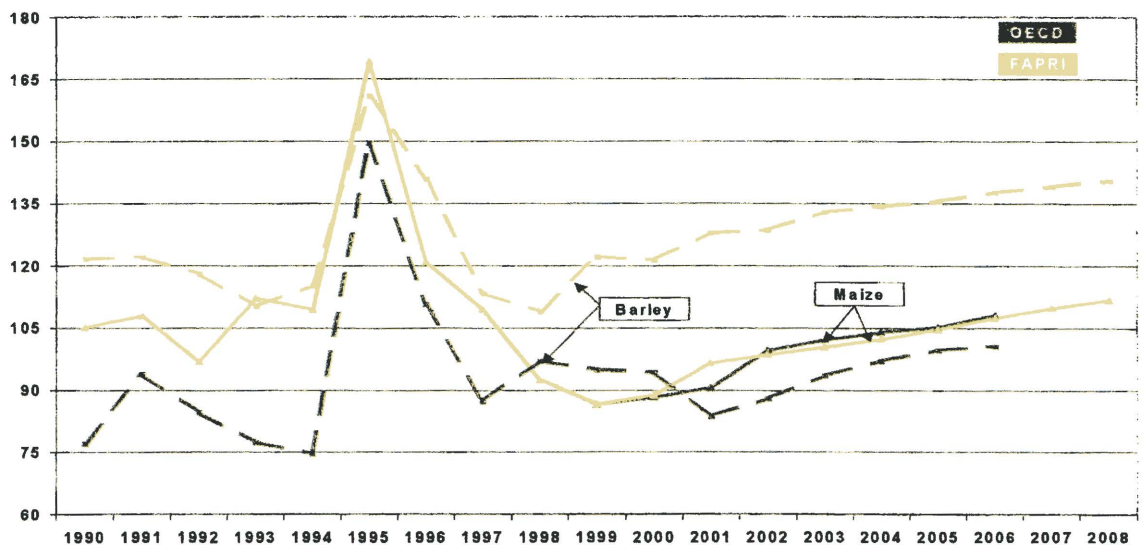
Graph 3.13 Outlook for world wheat prices, 1990 – 2008 ($/t)



Ref.: US FOB Gulf, HRW.

Prices of coarse grains should follow a similar trend, with maize (fob US Gulf) prices projected at about 112 $/t by the end of the period. The OECD foresees similar developments with wheat and coarse grain prices strengthening over the medium term and reaching 148 $/t and 108 $/t respectively by 2006/07. Durum wheat prices would also trend upwards, rising from around 150 $/t in 2000/01 (for EU durum wheat quality) to about 180 $/t by 2008/09.

Graph 3.14 Outlook for world coarse grains prices, 1990 – 2008 ($/t)

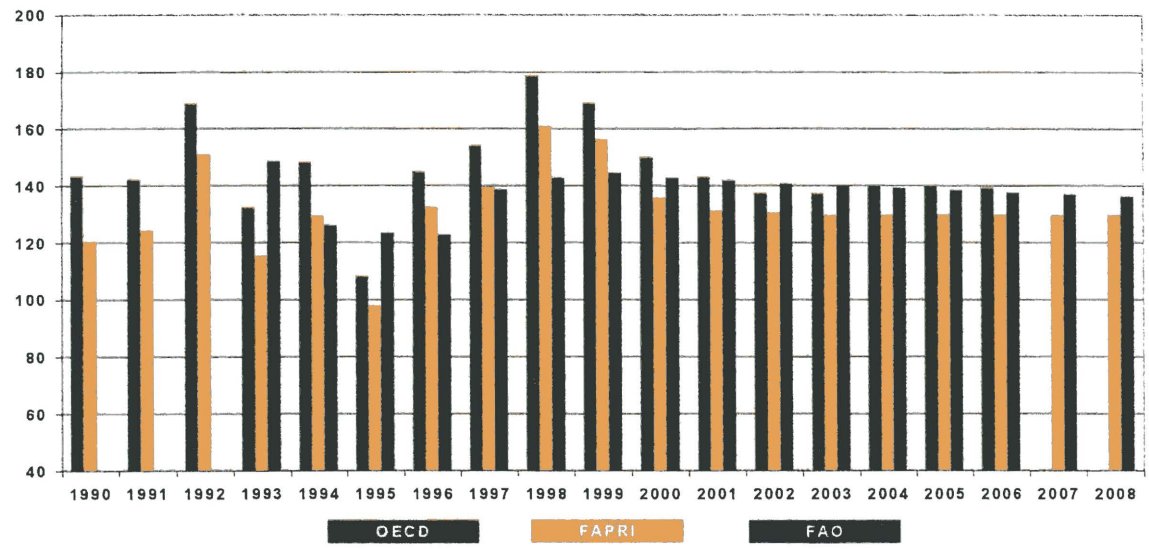


Ref.: Maize: US yellow corn FOB Gulf; Barley: OECD-No.1 CW barley St Lawrence since 1995, Thunder Bay before; FAPRI Portland.

After falling sharply from their peak in 1995/96, barley prices are projected to recover gradually over the rest of the period: from 109 $/t in 1998/99 (Portland reference) to

141 $/t in 2008/09 in the FAPRI projections and from 84 $/t in 2001/02 to 101 $/t (St Lawrence reference[74]) in the OECD outlook.

Graph 3.15 Outlook for world coarse grain stocks, 1990 – 2008 (mio t)



3.2 Oilseeds and oilseed products

The medium-term prospects for the oilseed sector are still expected to display a relatively modest recovery after a short-term situation characterised by excess supplies and very low prices. However, the vigorous growth in demand anticipated over the medium term – notably from developing countries- for oilseed and oilseed products (in the form of vegetable oil for human consumption and oilseed meal from an expanding livestock sector) is forecast to sustain further growth in the oilseed sector, gradually restore market balance and support prices by the end of the outlook horizon.

3.2.1 Oilseeds and oilseed meals

According to the OECD and the FAPRI, total oilseed production is forecast to increase between 2000/01 and 2006/07 at an annual rate ranging between 1.6 % and 1.9 % respectively (i.e. around 25 mio t). Similar growth rates are projected by the USDA and FAPRI for soybean up to 2008/09. 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 in the US where oilseed area in 2008/09 is foreseen to remain close to its 2000/01 level).

FAPRI expects that the continuous expansion in oilseed output would be supported by both an increase in oilseed area, that would strongly increase by 7.1 mio ha to stand at 113.6 mio ha by 2008/09 (split between around 2/3 in soybean and 1/3 in rape/sunflower seed), and further yield growth that would reach 9 % over the 2000/01-2008/09 period (i.e. 1.1 % per annum on average).

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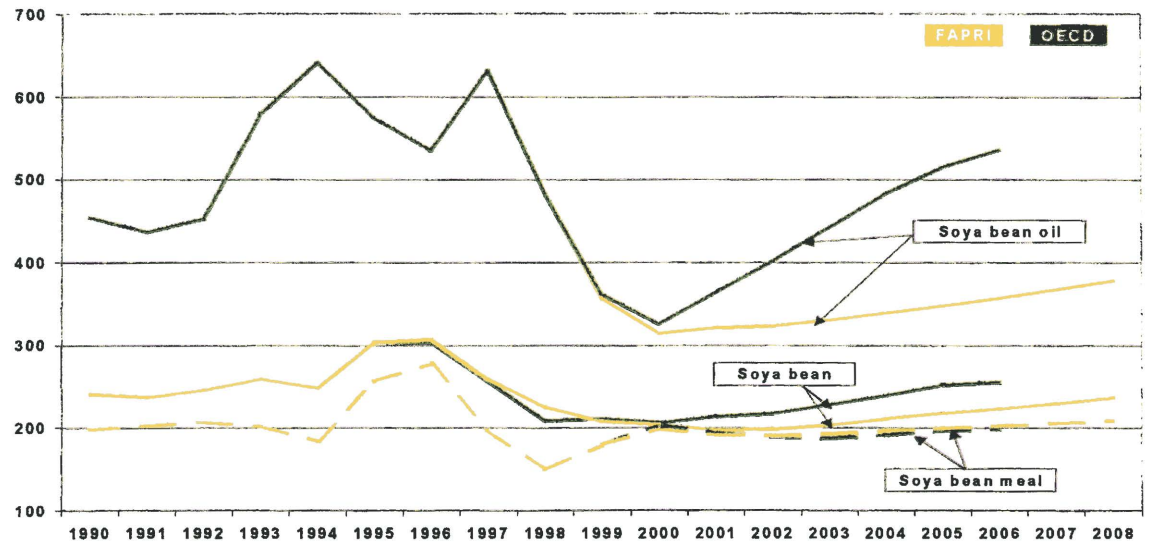
[74] The St Lawrence quotation for barley prices constitutes the appropriate reference for EU barley qualities and trade destinations.

If the OECD foresees similar trends in yields, it anticipates a more moderate pattern in area expansion, with an additional oilseed area of only 3 mio ha over the next five years. Yet, all projections appear to indicate a relative stabilisation in the oilseed area in the OECD zone (notably the US). In contrast and despite low world prices in the early part of the projection period, most of additional area allocated to oilseed production would be found in the low-cost exporting countries of South America (Argentina and Brazil).

Current low oilseed prices still result from a relative excess supply, slower demand growth and a combination of policy and macro-economic[75] factors. In the short term, supply is anticipated to adjust slowly to this low price level owing to policy factors, notably in the US[76] where soybean production is only partly responsive to market signals as producers are largely sheltered from current low prices thanks to the loan deficiency payment (LDP) system.

The importance of this instrument is foreseen to decline over the medium term as global demand strengthens, stocks fall and market prices recover. The OECD, USDA and FAPRI projections expect that the role of these payments will cease by around 2004/05 when average prices start rising above the loan rate.

Graph 3.16 Outlook for world prices in the soya bean complex, 1990 – 2008 ($/t)



Ref.: US Soya bean CIF Rotterdam; Soya bean meal CIF Rotterdam; Soya bean oil CIF Rotterdam.

However, low market 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, an expanding demand would favour some moderate recovery in market prices and support production developments thanks to productivity gains and availability of land resources.

The consolidation of the economic recovery over the medium term is expected to stimulate import demand for oilseeds and oilseed meals, notably in developing countries where income growth is likely to generate higher demand for livestock products, notably for poultry and pig meat. The shift in consumer preferences in these countries towards

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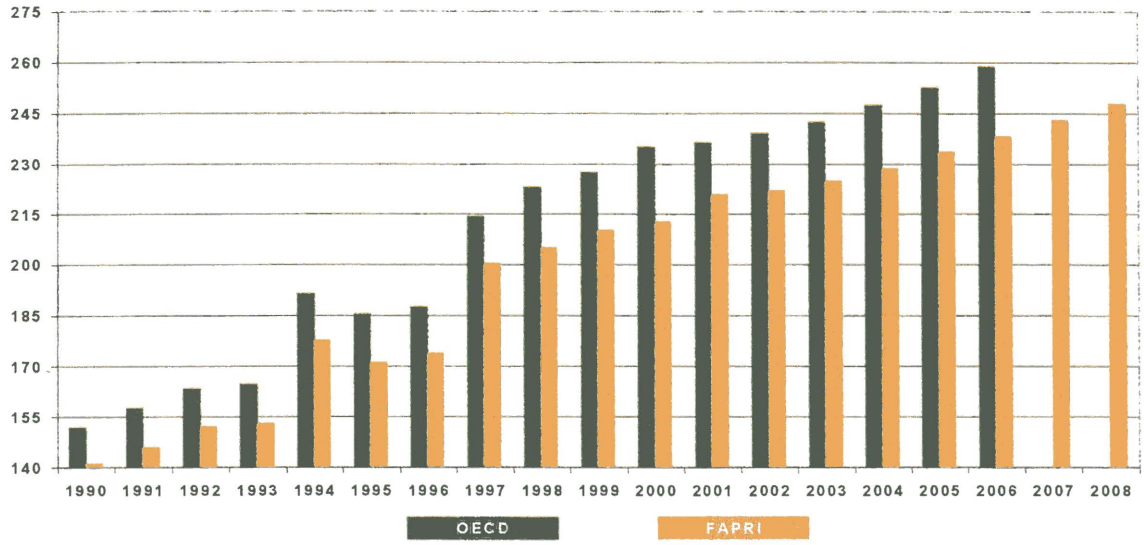
[75] Notably the recent currency depreciation that was observed in some major oilseed producing countries (in particular Brazil).

[76] Beyond the policy incentives, developments in the US soybean area also reflect higher input costs for maize that limit plantings of that crop.

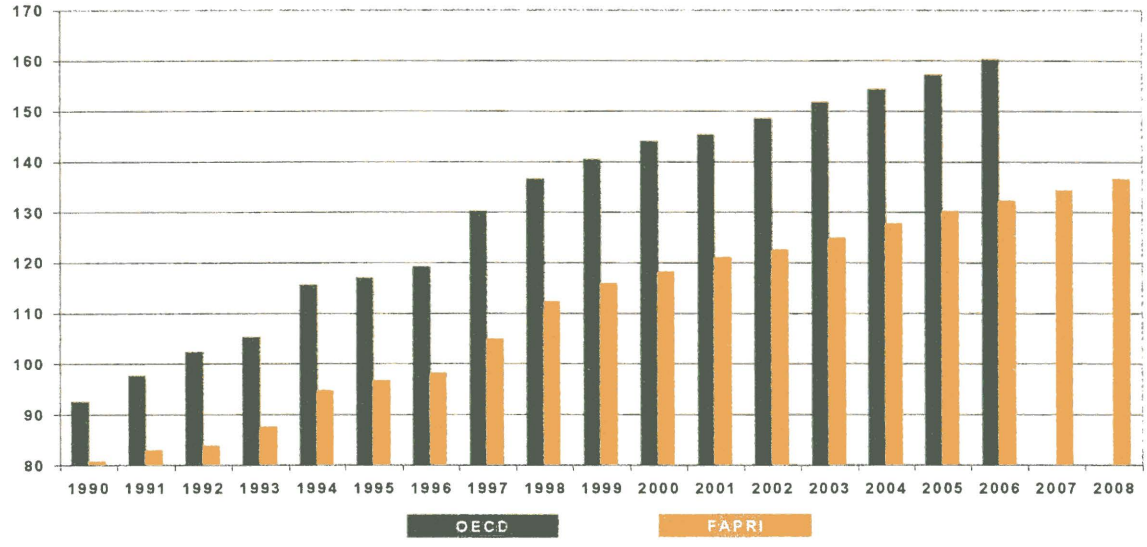
white meat and away from red meat, and the consequent large feed requirements would become the main driving force underlying the strong growth in global oilseed meal consumption.

Graph 3.17 Outlook for world oilseed production, 1990 – 2008 (mio t)



Additional oilseed meal consumption is estimated between 14 and 16 mio t by 2006/07. Although the pace of growth is now slower in developed countries[77] than in emerging economies, the former still make up for 60 % of world oilseed meal use. Moreover, OECD countries would still account for the largest share of oilseed and oilseed meal import demand, especially the EU and Japan.

Graph 3.18 Outlook for world oilseed meal consumption, 1990 – 2008 (mio t)



Total trade in oilseeds is anticipated to increase faster over the projection period than in the 1980s, but much more slowly than in the early 1990s. After a marked short-run slowdown in the wake of the Asian crisis at the end of last decade, global trade is forecast to strengthen as economies recover towards a more sustainable economic path. Trade

[77] However the OECD markets are starting to mature in contrast to developing countries that represent now just over half the world consumption of oilseeds and over 60 % of vegetable oils.

growth in oilseed meals is foreseen to be relatively steady but still slower than over the last fifteen years. Soybean is forecast to account for most of the growth in oilseed and oilseed meal trade over the medium term.

According to the USDA and FAPRI projections, soybean trade would rise at annual rates ranging between 1.2 % and 3.6 % respectively over the next seven years, whereas soybean meal imports would grow by between 0.7 % and 2.1 % per year respectively. The combined exports of soybeans and soymeals, on a soybean-equivalent basis, would thus grow according to the USDA from 95.3 mio t in 2000/01 to an estimated 116.5 mio t in 2010/11.

If the FAPRI and USDA projections do not fundamentally diverge on the overall medium-term prospects for sustained growth in oilseed and oilseed meals, they differ mainly over the composition of future trade flows, notably for the two major importers the EU and China. Whether oilseeds or oilseed products are imported depends on each importer's domestic policies and crushing capacity.

Table 3.4 Outlook for total trade in soybean and soybean products, 2000 - 2008 (mio t)

	2000		2008		Change in trade	
	USDA	FAPRI	USDA	FAPRI	USDA	FAPRI
Soya bean	45.2	41.9	51.1	58.0	5.9	16.2
Soya bean meal	39.9	33.1	47.9	35.7	8.0	2.6
Soya bean oil	7.8	5.9	9.4	6.7	1.6	0.7

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

The USDA foresees a significant decline in EU soybean and soybean meal imports as lower prices of domestic feed grain due to the implementation of Agenda 2000 and abundant supplies would combine to reduce the level of import demand for oilseeds and oilseed products. In contrast, the FAPRI expects EU imports to continue to grow over the next seven years[78][79].

Table 3.5 Outlook for soybean net imports for major importing countries, 2000-2008 (mio t)

	2000		2008		Change in trade	
	USDA	FAPRI	USDA	FAPRI	USDA	FAPRI
European Union	15.4	16.0	14.1	17.3	-1.3	1.3
Japan	4.8	4.8	4.8	4.8	0.0	0.0
China	7.1	7.7	9.7	15.3	2.6	7.7
South Korea	1.7	1.7	1.5	2.0	-0.2	0.3
Mexico	4.2	-	5.0	-	0.8	-
Taiwan	2.3	2.4	2.9	2.4	0.6	0.0

[78] Whereas the ban on animal protein meals adopted in December 2000 is not taken into account in the USDA projections, it is anticipated to generate an additional 1 mio t of soybean meal consumption in the EU in 2000/01 and 2001/02 according to the FAPRI outlook.

[79] The OECD outlook, prepared before the adoption of the ban on the use of animal bone and meat in animal feed, suggests a moderate growth in total EU imports. Oilseed imports would slightly rise to offset the small decrease in domestic oilseed production while oilseed meal imports would decline from current levels as the competitiveness of domestic grains improves thanks to the Agenda 2000 reform.

China's domestic grain policy and recent shift towards maximising its large domestic crushing industry would translate into greater imports of oilseeds (rather than oilseed meals and oil). Driven by strong oil consumption and increased demand for oilseed meals from the livestock industry (mainly for pig and poultry), China is foreseen to account for around half the world's growth in soybean imports. Whereas the FAPRI expects China to double its current level of soybean imports by 2008/09 (from 7.7 mio t in 2000/01 to 15.3 mio t in 2008/09), the USDA projections indicate a more moderate pattern with an additional 2.6 mio t of soybeans imported by 2008/09 and a further 2.7 mio t increase in soybean meal imports[80]. The OECD provides for a "middle ground" picture with total oilseed and oilseed meal imports rising by 3 mio t and 1 mio t respectively by 2006/07[81].

Besides the EU and China, the medium-term outlook for global oilseed import demand is projected to remain dominated by Japan, Mexico and South East Asia.

On the export side, the US, Brazil and Argentina are forecast to increase their market share of the world soybean market, while Canada would maintain its predominance in the rape seed market. If the US are expected to capture a large share of the additional import demand in the short term as a favourable oilseed policy maintains US domestic production at high levels relative to other major exporters, firmer prices in ensuing years should help Brazil and, to a lesser extent, Argentina to increase supply and restore their export competitiveness. By the end of the decade, Brazil is forecast to account for the largest share of the projected oilseed trade expansion.

In the long run, if global import demand in soybean meal trade is forecast to be mainly driven by the EU, China and South East Asia (notably South Korea), a growing share of this demand would emerge widespread across many developing countries (from Africa and Latin America) and transition countries. According to the FAPRI and USDA outlook, Argentina and Brazil would capture around 80 % of the expansion in world soybean meal trade between 2000/01 to 2008/09.

Table 3.6 Outlook for soybean meal net imports for major importing countries, 2000-2008 (mio t)

	2000		2008		Change in trade	
	USDA	FAPRI	USDA	FAPRI	USDA	FAPRI
European Union	14.7	15.0	14.4	16.5	-0.3	1.5
Eastern Europe*	2.4	2.4	3.1	2.6	0.7	0.2
China*	1.0	0.8	3.7	0.3	2.7	-0.5
South Korea*	-	1.0	-	1.4	-	0.4

* Gross export for USDA

Oilseed and oilseed meal prices are expected to remain at depressed levels in the short term, before increasing slowly over the rest of the period supported by an expanding demand. The pace and magnitude of the recovery differ across projections. The FAPRI foresees that prices of soybean and soybean products would bottom out around 2001/02 and recover slowly over the rest of the outlook period, with soybean and soybean meal prices reaching 236 $/t and 208 $/t respectively by 2008/09. The OECD outlook displays

[80] Strong import growth in oilseeds and oilseed meals is foreseen by the USDA as it anticipates that the inefficiencies in the Chinese crushing sector should limit its long-term competitiveness.

[81] It should be acknowledged that the accession of China to the WTO over the 2000-2008 projection period could significantly impact these global perspectives.

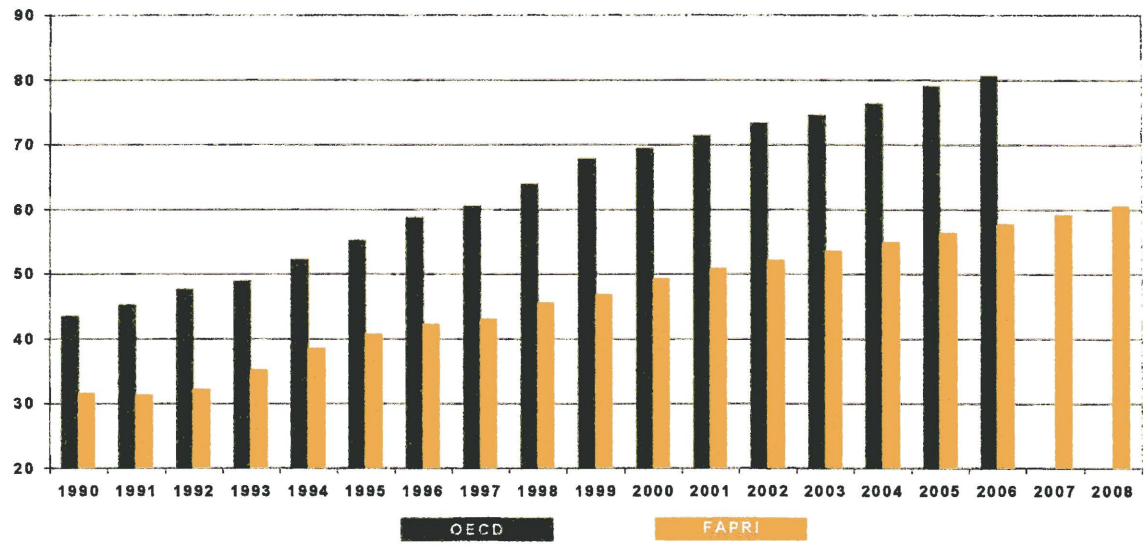
similar price trends, although more bullish for soybeans, with soybean and soybean meal prices at 256 $/t and 199 $/t respectively by 2006/07. These differences in the outlook for soybean prices mainly reflect differing underlying assumptions concerning the soybean loan rates in the US: the FAPRI assumes a continuation of the 2000/01 loan rate at 193 $/t throughout the whole projection period whereas the latter is set at 181 $/t in the OECD and the USDA baselines from 2001/02 and 2002/03 onwards respectively.

According to the FAPRI and OECD projections, rape seed and sunflower seed prices are foreseen to further decline at the turn of the century (down to 180 $/t and 190-219 $/t respectively) before recovering rather modestly over the medium term[82]. Prices of rape seed and sunflower seed meals would exhibit an even more modest 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. Increasing income prospects are expected to maintain vegetable oil on its expansionary path. The OECD and FAPRI project that growth in vegetable oil consumption would average 2.4 % per year over the medium term[83]. Most of this additional consumption (of more than 11 mio t) is expected to be found in Asia and in Latin America, whereas slower growth is anticipated in Western Europe, the US and Japan.

Graph 3.19 Outlook for world oilseed oil and palm oil consumption, 1990 – 2008 (mio t)



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 2000/01 to 2008/09. Palm oil –the main lower-cost oil[84]- and soybean oil should absorb the largest share of additional consumption and trade. Palm oil trade is forecast to expand by 4.6 mio t (i.e. 3.9 % per year over the 2000/01-2008/09 period as compared to a growth of about 9 % a year in the early 1990s). China, the EU and India would remain

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82 By 2006/07, rape seed prices would reach between 204 $/t (FAPRI) and 236 $/t (OECD), whereas sunflower seed prices would stand at 208 $/t and 264 $/t in the respective projections.

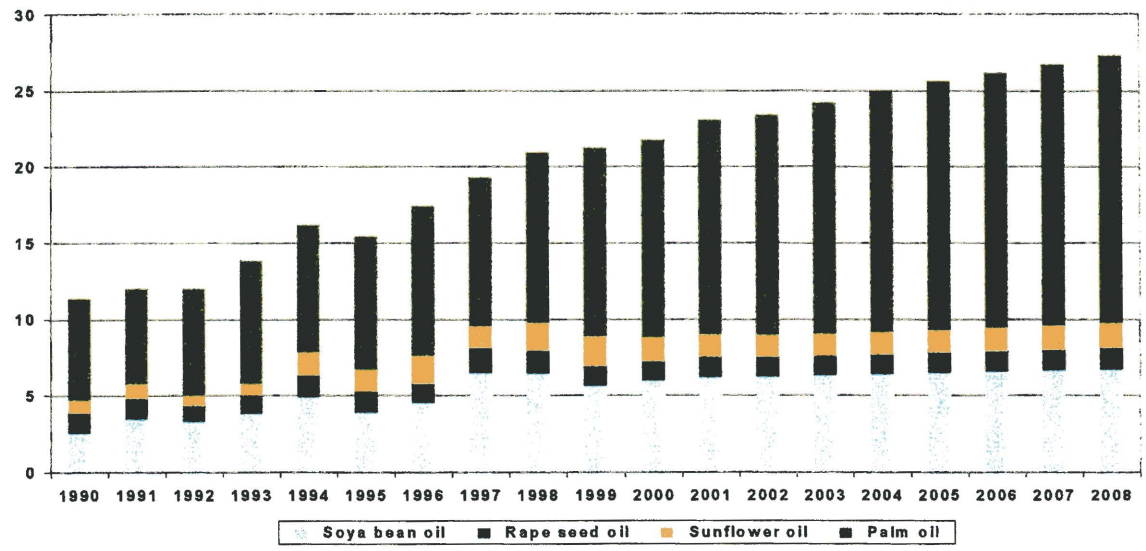
83 The USDA outlook only provides for soybean oil consumption, for which it expects an annual increase of about 2 % on average.

84 Thanks to low production costs in US $ terms and high productivity relative to other oilseeds.

the major palm oil importing countries. Malaysia and Indonesia constitute the two largest suppliers of palm oil (accounting for more than 75 % of world production and 95 % of world trade). These two countries are forecast to increase domestic supply of palm oil by 6.3 mio t over the next eight years (or 34 %), in spite of the anticipated slowdown that may be expected from the reduction in the rate of increase in new tree plantings that took place in the wake of the financial crisis, particularly in Indonesia.

World soya bean oil trade is projected by the FAPRI and USDA to grow on annual average by between 1.5 % and 2.5 % respectively over the next seven years, i.e. at a much lower rate than those achieved in the 1980s and the early 1990s, as additional demand stimulates domestic production in importing countries. Chinese imports, totalling around 1 mio t by 2008/09, and, to a lesser extent, Indian imports would constitute the main driving force behind the growth in soybean oil trade.

Graph 3.20 Outlook for world oilseed oil and palm oil trade, 1990 – 2008 (mio t)



Source: FAPRI.

The strong growth in oilseed oil consumption and trade relative to meals and beans combined to an expected recovery in oil prices is forecast to create incentives for increased production in high-oil content oilseeds (such as rape and sunflower seeds in the EU as compared to soybeans)[85].

The medium-term prospects for vegetable oil prices appear more favourable than for other oilseed products thanks to a strongly growing demand[86]. In spite of the current large availability of vegetable oils and palm oil, this sustained demand is forecast to support a steady recovery in oil prices, notably in the second half of the decade when growth in palm oil production starts slowing down. The FAPRI and OECD projections provide for medium-term prospects of soybean oil prices rising at an average annual rate ranging between 2.3 % and 8.7 % and reaching between 357 $/t and 536 $/t respectively by

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[85] In the FAPRI projections, demand for rape seed and sunflower oil is forecast to grow over the medium term in line with rising incomes and population, notably in China, India and other developing countries. However, trade in rape seed oil and sunflower oil is only foreseen to display modest growth as most consumption increase would be met by higher domestic production.

[86] Furthermore, prices of oilseeds and oilseed meals would face a strong competition from abundant cereal supplies in the short term.

2006/07 (cif Rotterdam). Palm oil prices would display a similar pattern with prices falling to a low in 2001/02 at around 291 $/t cif Rotterdam, before recovering slowly to 413 $/t by the end of the projection period[87]. OECD and FAPRI price projections for palm oil differ about the timing and the pace of the price recovery, with the OECD forecasting an earlier and stronger rebound in palm oil prices.

Finally, it should be acknowledged that the strong dependence of the global vegetable oil market on imports from developing countries makes the projections very sensitive to the macro-economic outlook in these countries.

3.3 Meat

The meat prospects focus 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 foresee rather favourable perspectives for the meat markets over the next seven years as they provide an outlook characterised by growing production, consumption and trade as well as world meat prices showing moderate strength. Prospects for rising meat demand would mainly emerge from a favourable macro-economic environment of sustained income growth, notably in Asia and Latin America.

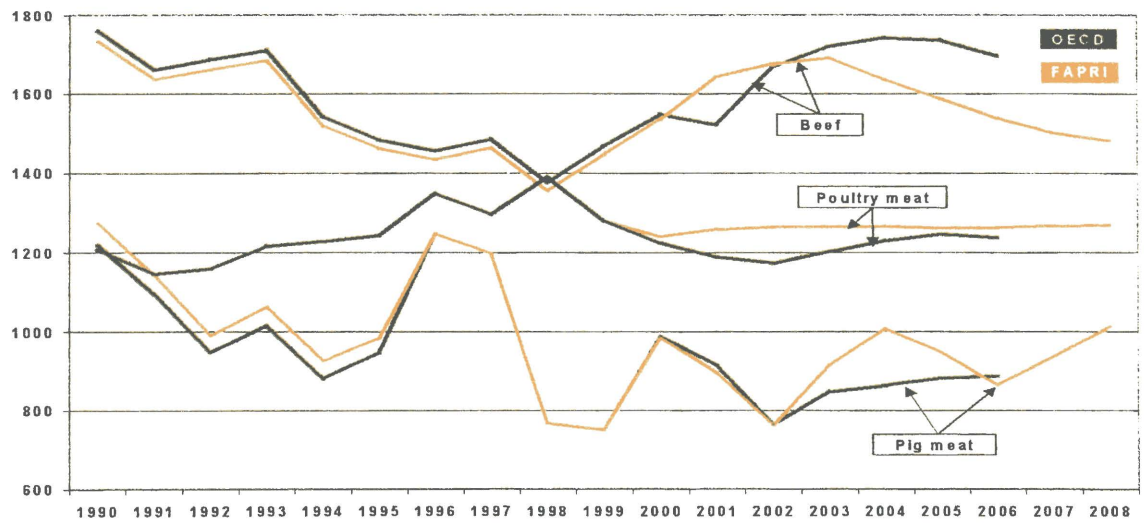
Table 3.7 Outlook for world meat trade, 2000 – 2008 ('000 t cwe)

	2000		2008		Change in trade	
	USDA	FAPRI	USDA	FAPRI	USDA	FAPRI
Beef	4258	3071	5041	4037	783	966
Pork	2237	2252	2886	2831	649	579
Poultry	5029	4076	6121	4688	1092	612

FAPRI net trade.

As growing consumption is mostly expected to take place in countries that are net importers with limited possibilities to proportionally and competitively increase domestic supply (in quantity and quality), world trade would increase and world prices for meat strengthen over the medium and long term.

Graph 3.21 Outlook for world meat prices, 1990 – 2008 ($/t lw)



87 Owing to their lower cost structure, major producing countries of palm oil would be relatively less affected by the low price level foreseen in the short term.

These projections rely heavily on the assumption that the recovery from the economic and financial crisis that has been observed over the late 1990s in the Asian emerging economies, the transition countries and Latin America, would turn into sustained economic growth over the medium term.

Furthermore, the beginning of the decade has been marked by disruptions in world meat markets caused by sanitary issues (Japan, South Korea, Brazil, Argentina, EU). Sanitary and food safety issues could strongly alter future trends in international meat markets by increasing market segmentation and limiting market access for some potential meat exporters[88].

3.3.1 Beef and veal

The traditional split between the Pacific market and the Atlantic market will become less and less relevant if more Latin American countries succeed in securing foot-and-mouth disease free status (FMD-free). Such an evolution in the framework of a more homogenous world market with increasing prices could have potentially large implications for the structure of world beef markets, in terms both of exporters' market shares and prices. The OECD also asserts that the market is developing a new segmentation along lines of consumer and processor preferences between grass-fed and grain-fed beef. The strong demand for grain-fed beef, notably in South Korea and Japan, that currently favours the US and Canada may generate some changes in production practices in exporting countries such as Argentina and Australia (that traditionally produce grass-fed beef).

World beef production is foreseen to increase over the 2000-2008 period at a pace ranging between 1 % and 2 % on annual average according to the FAPRI, FAO and USDA projections, with most of the increase concentrated in the non-OECD area. The OECD predicts a mere stagnation of beef production in the OECD area (0.2 %), the small increases in Canada, Australia and Mexico being broadly offset by the fall in US production. As regards prospects for the US beef sector, the USDA and the FAPRI projections seem to display similar trends in production growth but with different magnitude. Over the medium term, the USDA foresees a moderate expansion in the next US cattle cycle (after a marked decline through 2003, an emphasis on grain-fed beef production and a smaller cattle inventory). In contrast, FAPRI anticipates a stronger development for US beef output with an 8 % growth and the US cattle inventory bottoming out earlier in 2002 but expanding at slower pace. All projections exhibit a robust increase in beef production in China (around 30 % over the next seven years), Brazil and Argentina (at around 15 %) and, to a lesser extent, in the FSU (5 %).

Global beef consumption is expected to rise gradually between 1% and 2 % per year on average in the FAPRI, FAO and USDA projections, in relation to income growth in particular in lower income countries. In many developed countries, per capita consumption of beef is expected to stagnate or to fall, 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 around 45 kg in 2000 to 43.9 kg (FAPRI), 41.9 kg (USDA) and 41 kg (OECD) in 2008.

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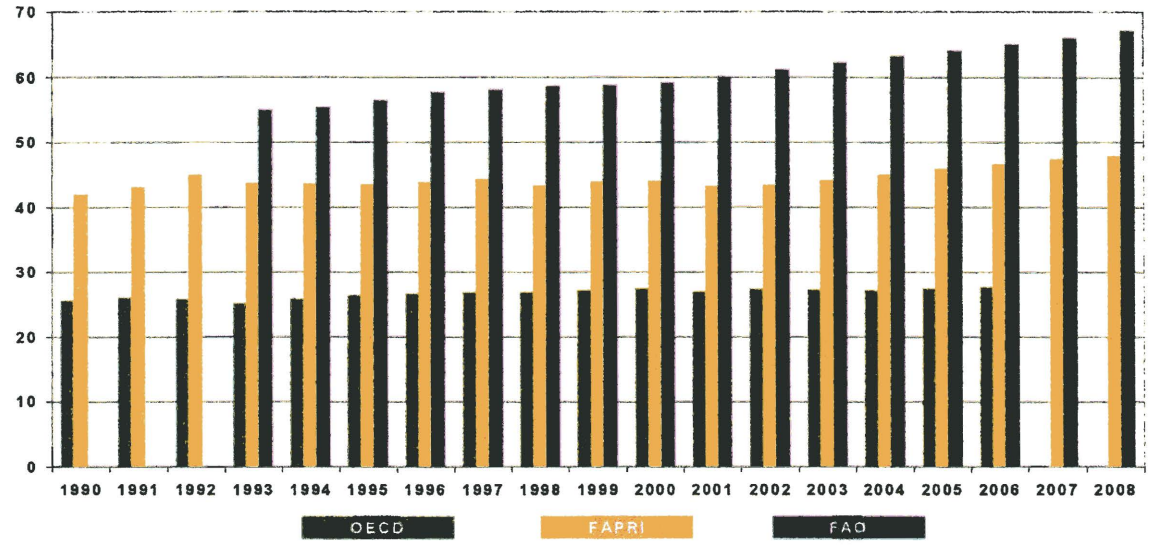
[88] It should be mentioned that the potential impacts of the BSE crisis in the EU are only incorporated in the FAPRI projections.

In contrast, increasing beef demand is likely to occur in Asian countries (mainly China and Japan) and Latin America (led by Brazil, Argentina and Mexico) over the projection horizon, after a short-term decline at the end of the nineties linked to the deterioration of the economic situation. In Asia, beef consumption should increase gradually, from relatively low current levels, in response to population growth, economic development and higher disposable income that should lead to changes in food habits toward more western style[89].

Graph 3.22 Outlook for world beef production, 1990 – 2008 (mio t cwe)



Ref.: OECD – data for OECD zone; FAPRI: data for selected countries; FAO: world.

Whereas growth in beef demand is likely to generate little import growth in China as Chinese trade policies are expected to favour domestic supply, limitations on feed production capacity (in terms of land and forage area) in many Asian countries 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 2000 – 2008 ('000 t)

	2000		2008		Change in trade	
	USDA	FAPRI	USDA	FAPRI	USDA	FAPRI
Russia *	450	445	697	688	247	243
Japan	1000	1000	1113	1095	113	95
South Korea	268	268	518	424	250	156
Mexico *	400	400	622	525	222	125

USDA: * Gross trade

The USDA and FAPRI predict that total trade in beef should increase by between 800 000 t and 950 000 t (i.e. 18 % and 30 %) respectively over the 2000-2008 period. Much of the growth in imports is expected to come from Asia, the FSU and Mexico. After their recent fall in the wake of the economic downturn, beef imports in Japan and South Korea are expected to continue to resume growing over the next decade. Owing to the fall in domestic production levels (gradual in Japan and in line with the rebuilding of

[89] Even if some markets such as Japan may no longer exhibit the rapid growth recorded in the late 1980s and early 1990s.

the cattle herd in South Korea), imports would account for around 70 % and 60-70 % of domestic consumption respectively. If import growth may turn out to be rather modest in the mature Japanese market, South Korean beef imports may be boosted by the liberalisation of the beef import market in 2001 and possible changes in its beef retail distribution system, which the WTO found discriminated in favour of domestic beef.

Beef imports are forecast to grow substantially in Mexico between 2000 and 2008. A strong increase in domestic demand would outpace the slow recovery in domestic production, which had been affected by low profitability, credit problems in the second half of the 1990s, and drought conditions in 1999. The FAPRI baseline shows that after a sharp increase in beef import levels in the short term, the recovery of the beef production sector from 2003-2004 onwards allows beef imports to decline somewhat.

The prospects for the FSU remain a major source of uncertainty over the medium term. The USDA and FAPRI predict that, due to moderate-income growth and competition from pig meat and poultry meat, beef consumption would only display a slow recovery over the medium term. Domestic production would continue to fall slowly up to 2006 and stagnate afterwards at low levels. As a result, after a sharp drop in total imports associated with the elimination of food aid in 2000, beef net imports would rise gradually over the projection period -though reverting to their mid-1990s level- and level off at the end of the period at about 690 000 t.

The increasing import demand is expected to mainly benefit the US according to the USDA, FAO and FAPRI projections[90]. Other low-cost producers such as Argentina, Brazil and Canada would also exhibit export gains, whereas Australia and New Zealand would lose some market share. In contrast, the OECD outlook displays a different picture with Canada, Argentina, Australia and Brazil projected to become the main beneficiaries of the expansion in the world beef market. The OECD is also far less optimistic about US export prospects and foresees that US beef imports would remain at high levels over the next seven years[91].

Strong import demand combined with limited growth in beef production should improve future prospects for beef prices over the short and medium term. Yet, a series of factors, including the changing structure of the world beef market, the emergence of new major exporters and the increasing competition from other meats, are expected to exert downward pressure on beef prices. Finally, a cautious assessment of these medium-term prospects for global beef trade and prices is deemed necessary as they strongly rely on the strength of the economic perspectives in some major importing regions (South East Asia, Japan and the FSU).

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[90] With a 20 % rise in US exports by 2005, FAPRI expects the US to become the world's largest exporter and net exporter by 2006. The USDA foresees more modest gains for US exports, though the US would also become net exporter by 2008.

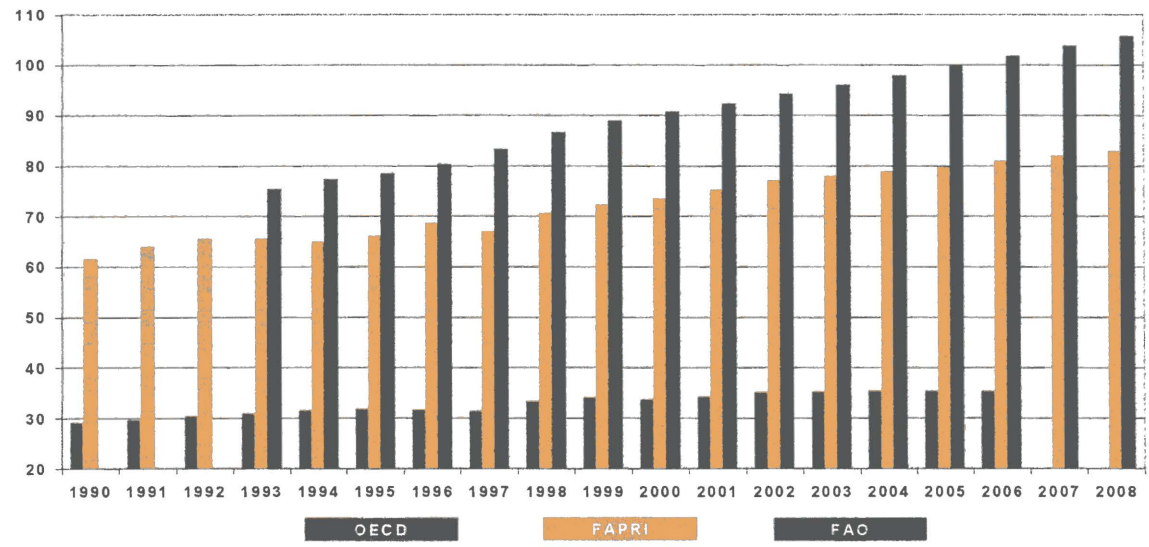
[91] The USDA and the OECD, that do not incorporate the impact of the BSE crisis and FMD on the beef sector in their projections foresee that EU beef exports would broadly remain at or below WTO limits on subsidised exports. In contrast, the FAPRI baseline suggests that, after an initial drop in 2000 and 2001 in the wake of the BSE crisis, EU beef exports would recover slightly beginning in 2003, but would remain below the WTO limits over the medium term.

3.3.2 Pig meat

The OECD, FAO, FAPRI and the USDA foresee a medium-term outlook for pig meat characterised by a renewed increase in world production and consumption, and a marked expansion in world trade. The strong competition between exporters, sustained productivity growth and large supplies should however prevent pig meat prices to rise substantially.

World pig meat production is projected to continue to increase moderately over the medium term by between 13 and 17 %, i.e. a slower rate than in previous decades. The pig meat sector recently displayed an expansion of productive capacity and increased productivity. Higher concentration of production in some exporting countries is projected to raise productivity further and reduce production costs. However, pig meat expansion would remain constrained in some regions by greater competition from competitively priced poultry meat as well as by environmental and animal welfare standards. According to FAPRI and USDA projections, most of world production growth (i.e. between 10 and 13 mio t over the next seven years) is likely to occur in China (for around 50 % of total world growth in FAPRI), Canada, Brazil and Mexico. In contrast, production in the US and the EU are forecast to show more modest growth. Pig meat production in Japan is projected to decline, but at a much slower rate than in the previous decade.

Graph 3.23 Outlook for world pig meat consumption, 1990 – 2008 (mio t cwe)



Ref.: OECD – data for OECD zone; FAPRI: data for selected countries; FAO: world.

The mature pig meat markets in the EU, US, Canada and Japan are expected to record moderate demand growth in line with income prospects and population. Slow consumption growth in these countries would be partially compensated by a stronger increase in Asia and Latin America (notably in Mexico, Brazil and China where total pig meat consumption is set to rise by around 18 % between 2000 and 2008), driven by expectations of low prices and the improvement in the general economic conditions.

Prospects for the pig meat sector in Russia are difficult to assess both on the supply side, where the pace of production recovery should be closely linked to economic reforms, and on the demand side, with consumption growth associated with an uncertain economic outlook and income distribution issues. The FAPRI, FAO, OECD and USDA foresee an expansion in Russia's import demand for pig meat due to the slow recovery in pig meat production (if not a further decline) that would remain restricted by structural problems

(small size units), limited availability of feed grains, and infrastructure and institutional constraints. In contrast domestic demand would continue growing as economic prospects improve modestly. Pig meat net imports would rise over the whole projection period and reach 400 000 t by 2008, i.e. a 100 000 t increase.

Global trade in pig meat is forecast to increase further over the medium term with growth rates ranging from 17 % in the FAO projections to 26 % in the FAPRI outlook and 29 % in the USDA projections (i.e. by around 600 000 t of additional imports from 2000 to 2008). Over the forecasting horizon, growth in pig meat trade would be mainly driven by strong demand in major importing countries of Asia (notably Japan and China), Russia and Mexico.

Japan would remain the largest pig meat importer over the outlook horizon, with net imports amounting to about 1 mio t. However, the pace of import growth would significantly decline as compared to the previous decade thanks to the slowdown in the contraction of domestic output. Growing population and improved income levels should boost Mexico's import demand according to the FAPRI outlook as domestic production would be constrained by infrastructure and distribution problems. Conversely, the USDA and OECD projections suggest that the pig meat sector in Mexico should benefit from on-going restructuring driven by the NAFTA agreement. Improved technology and better integration and co-ordination of operators would enable Mexico to raise pig meat output and exports, only restrained by relatively high feed costs.

Table 3.9 Outlook for pig meat net imports for major importing countries, 2000–2008 ('000 t cwe)

	2000		2008		Change in trade	
	USDA	FAPRI	USDA	FAPRI	USDA	FAPRI
Japan	880	880	1034	950	154	70
Russia *	500	299	601	408	101	109
South Korea *	140	110	129	42	-11	-68
Mexico	95	95	144	209	49	114
China - Hong Kong *	154	220	210	266	56	46

USDA: * Gross trade

Taiwan imports are forecast to rise over the medium term as the increase in consumption is expected to outpace the growth in domestic production that would remain largely below the pre- FMD levels. Owing to the FMD outbreak in 2000, South Korean exports fell, notably to the remunerative Japanese market, prompting a decline in import levels as domestic production remained on the South Korean market. Over the medium term, South Korean exports resume growing, generating a fall in total net imports.

The OECD, FAO, USDA and FAPRI foresee that the increasingly export-oriented and low-cost producing pig meat industry of North America should capture most of the sustained rise in world pig meat trade. Significant restructuring, through concentration and vertical integration, and improved productivity in the production, marketing and processing sectors of the pork industry is expected to boost North American, notably Canada's, competitiveness. However, new exporting countries are emerging on the world pig meat market, in particular Brazil, Mexico and South Korea. These countries would gain market shares at the expense of the EU, the world's largest pig meat exporter, whose pig meat exports would stagnate over the medium term.

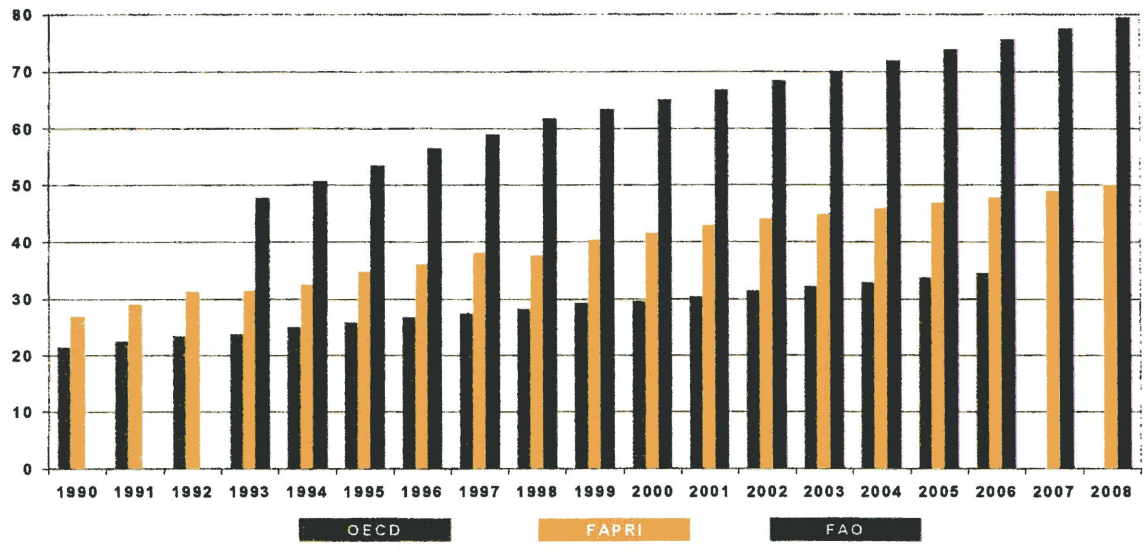
If pig meat prices are generally expected to rise over the medium term, the magnitude of this recovery should remain largely constrained by the continued efficiency and productivity gains in feeding practices, increased competition from other meats and the emergence of new exporting countries.

3.3.3 Poultry

The medium-term outlook for poultry meat is foreseen to be favourable, as all market fundamentals would demonstrate solid growth. World production and consumption are forecast to continue to expand over the next seven years at rates well above those for beef and pig meat, though somewhat lower than during the 1980s. This expansion of the poultry meat sector would be mainly driven by its low production cost (relative to beef and pig meat) and consumer and social preferences in many parts of the world (in line with changing diets towards western lifestyle and health considerations).

Poultry meat production and consumption are predicted by the OECD, FAO and FAPRI to increase sharply over the next seven years by more than 20 %, i.e. an average annual growth of 2.5 %. Production in the large producer countries (such as China, US, Brazil, EU and Mexico) should continue to expand as domestic and global demand increases. Overall, most of the growth in production and consumption is to be found in the developing countries, notably in the expanding economies of Asia.

Graph 3.24 Outlook for world poultry meat consumption, 1990 – 2008 (mio t cwe)



Ref.: OECD – data for OECD zone; FAPRI: data for selected countries; FAO: world.

In most countries, poultry meat is foreseen to capture the largest proportion of the increased meat demand over the medium term. FAPRI estimates that half of the growth in per capita meat consumption in the next decade would be accounted for by the increase in poultry consumption. These developments would be mainly driven by the price advantage of poultry relative to other meats, rising incomes and changing food demand pattern in most of these countries. Therefore, in many countries with a relatively low per capita consumption (China, Mexico and Eastern Europe), the expected improvement of the economic situation is anticipated to favour first the poultry sector. In addition,

consumption should also increase, though more moderately, in countries with a relatively high per capita consumption due to a continuing shift in consumer preferences[92].

Since production in most of the countries with expected rapid growth in consumption (China etc.) is only projected to expand at slower rates, increased demand is expected to generate a strong rise in trade (estimated at 15 %, 22 % and 26 % by the FAPRI, the USDA and the FAO respectively over the 2000-2008 period). Most of the growth in trade is likely to take place in poultry cuts as opposed to whole birds.

The FAPRI and USDA projections exhibit a sustained growth in China mainland consumption, which would outstrip production, generating an increase in import volumes[93]. Net imports are foreseen at around 970 000 t in the USDA outlook by the end of the projection period, whereas the FAPRI and the OECD foresee a more cautious development for China over the medium term (at 840 000 t and 740 000 t respectively). Chinese imports would benefit from consumer preferences for the various poultry products (notably for dark meat, feet and wings) which would be complementary to the demand for poultry meat products in many countries. Net imports from Mexico are projected to decline in the OECD and FAPRI outlook as growth in domestic production would outpace an increasing internal consumption thanks to falling production costs due to declining feed prices and comprehensive vertical integration in the poultry sector.

Table 3.10 Outlook for poultry meat net imports for major importing countries, 2000–2008 ('000 t)

	2000		2008		Change in trade	
	USDA	FAPRI	USDA	FAPRI	USDA	FAPRI
Russia *	1000	895	1248	790	248	-105
China mainland	815	770	968	842	153	72
Hong Kong	320	286	389	326	69	40
Mexico *	270	159	368	148	98	-11
Japan	565	546	610	623	45	77
Saudi Arabia	373	352	398	411	25	59
South Korea	64	51	100	61	36	10

USDA: * Gross trade

The other large export destination is Russia. Prospects for poultry meat imports are divergent across the FAPRI and USDA projections, as much should depend on the pace of modernisation of the domestic production sector. If the USDA and the FAO foresee a gradual recovery in domestic output, the latter is forecast to be insufficient to prevent imports rising in line with the increase in domestic consumption. Conversely, the FAPRI projections suggest a stronger pattern for poultry meat production owing to improved production structure, resulting in net imports falling by more than 100 000 t by 2008. The economic and political prospects over the medium term in this region constitute a source

[92] A strong rise in US per capita consumption of poultry meat is projected by the FAPRI and the OECD (more than 5 kg per head over the next seven years). Chicken consumption would approach and sometimes exceed consumption of the traditional meat product, such as beef in the American continent.

[93] Even if poultry meat exports from China mainland are also expected to grow according to the USDA, notably for further processed and de-boned poultry products.

of major uncertainty since they should impact not only the size of poultry meat imports in Russia but also global poultry trade.

All organisations foresee that the US and Brazil would reap most of the projected rise in poultry meat trade. The US would continue to benefit from a competitive production structure through vertical integration, high technology levels, access to low-cost feed products and efficient transport and storage infrastructure. Brazil would also gain from large and cheap feed grain supplies, high productivity (boosted by foreign investment) and currency depreciation which are all anticipated to enhance Brazil's share of the world market. Competition from these two countries is anticipated to reduce export growth prospects for the two other major exporters, the EU and Thailand.

Poultry prices would trend upwards over the medium term, supported by a strong demand notably from Asia. However, the rapid growth in poultry meat production supported by the structural changes of the poultry sector and continuing technological improvement is foreseen to alleviate pressure on world prices and moderate future price trends over the medium term.

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 as only few international organisations establish long-term prospects for this sector[94].

The FAPRI and OECD projections depict a medium-term outlook for the dairy sector that would be mainly driven by a gradually strengthening demand for dairy products stimulated by the economic recovery, notably in Asia, Latin America and the Middle East. Stronger demand would generate higher prices for dairy products over the medium term. In many developed countries dairy products constitute a fundamental component of the diet with consumption levels close to saturation. Therefore, little change in the demand for dairy products (with the noticeable exception of cheese) is foreseen in these regions. In contrast, rising disposable income, urbanisation and changing dietary pattern are forecast to boost dairy products consumption in some developing countries, in particular in Asia and Latin America.

In developing countries a significant share of this increased demand would be primarily supplied by domestic production. However, production growth would not be sufficient to meet this additional demand. Therefore, except in a few countries of South America that are expected to become more active in the export market, many developing countries should remain net importers of dairy products with most imports originating from developed countries. In the short term, the OECD and FAPRI projections exhibit some gains in the export market shares of New Zealand and Australia at the expense, to some extent, of the EU. These two countries would benefit from lower production costs and geographical proximity to growing import markets, whereas the EU is expected to remain constrained by the URAA limits on export subsidies. From 2005 onwards, the cut in the EU support prices would improve somewhat EU export competitiveness.

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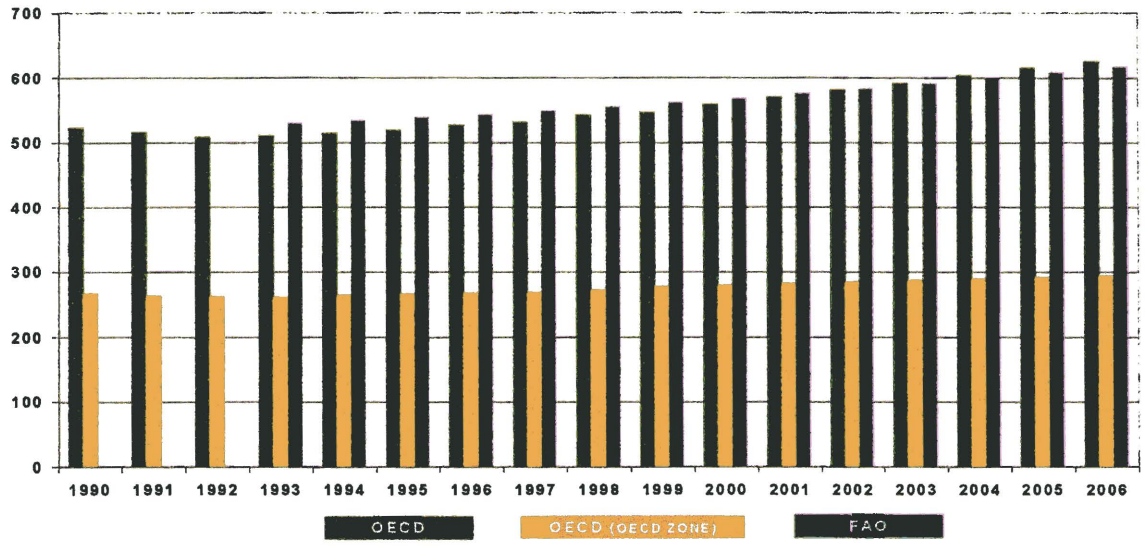
[94] The USDA for example focuses only on the US dairy market in its most recent publication on long-term projections.

As increased demand for dairy products would be mainly driven by improved income levels, these medium-term projections appear highly dependent on the future economic and financial situation of many developing countries. In particular, any economic, financial or policy developments that would alter the pace of recovery in Russia could have major implications for future developments in world trade volume and prices given Russian share in the world dairy market.

3.4.1 Milk production

After stagnating in the first half of the 1990s, world milk production resumed growing towards the end of the last decade. As consumption and producer prices start to recover, milk production would expand in a number of countries, mainly outside the OECD area and in those OECD countries not subject to production quotas.

Graph 3.25 Outlook for world milk production, 1990 – 2006 (mio t)



The OECD shows an increase in world milk production of 67 mio t (+12 %) from 2000 to 2006. Milk production in the non-OECD area would grow by 2.9 % on annual average over the medium term. The greatest increase in milk output is forecast in China, India, Brazil, Argentina and Mexico. As a consequence, the share of developing countries in world milk production is expected to rise significantly[95].

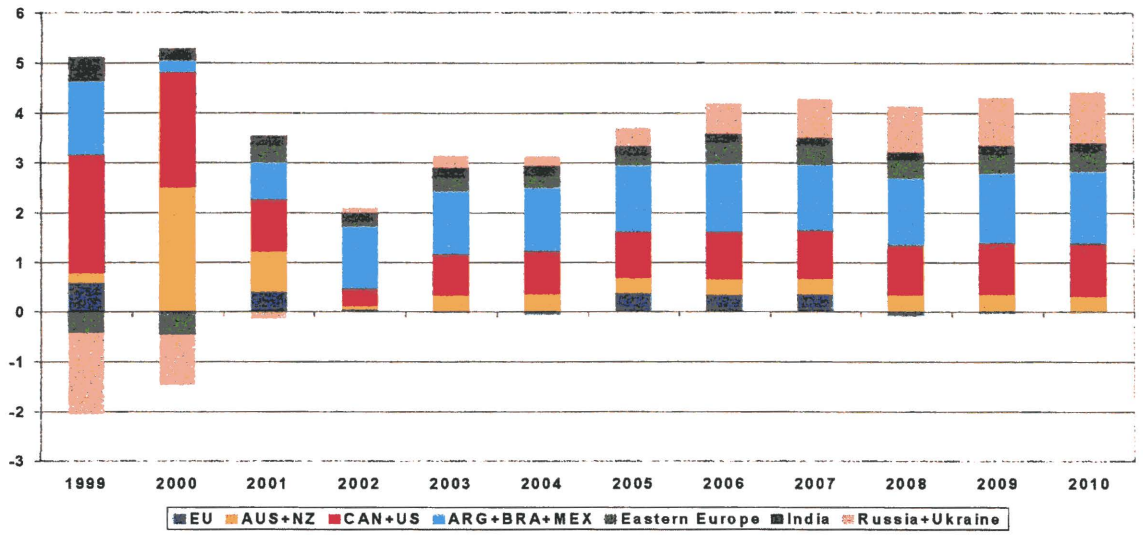
The OECD and the FAPRI display diverging prospects for Russia's dairy sector: whereas the OECD projections suggest that the fall in dairy output would slow significantly, the FAPRI outlook provides a more bullish picture with productivity gains and an increased herd (in the second half of the decade, after a short-term reduction).

The OECD foresees that milk production growth in the OECD area should continue at the same pace as in the second half of the 1990s. Yet, the share in world output from developed countries operating under constraining dairy policies, in particular production quotas, would shrink. If Australia and New Zealand, two major exporters of dairy

[95] The OECD predicts that the non-OECD share of world milk production would reach around 53 %. 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).

products, are anticipated to benefit from increased demand in Asia, they are nevertheless expected to display slower output growth in dairy production as compared to the early 1990s. An important increase in milk production is forecast for the US driven by strong domestic demand, notably for cheese. In the CEECs milk production is likely to increase over the medium term (in particular Poland), although growth rates should differ across countries.

Graph 3.26 Outlook for world milk production, annual changes, 1990 – 2010 (mio t)



Source: FAPRI (selected countries)

3.4.2 Dairy products

As fluid milk consumption should only exhibit a modest growth over the medium term, most of the milk production increase would be processed into dairy products. The OECD projections suggest that if global dairy consumption in the OECD area is not forecast to show major changes over the 2000-2006 period, differing patterns could be identified across the various types and forms of dairy products with, in particular, a strong increase in cheese (+11.1 %, i.e. +7.2 % per capita) and whole milk powder consumption (+18.0 %, i.e. +13.9 % per capita) and a mere stagnation in the consumption of skimmed milk powder (+1.5 %, i.e. –2.0 % per capita) and butter (0 %, i.e. –3.4 % per capita).

Conversely, the OECD outlook for the overall consumption of dairy products in developing countries (notably in Asia, Latin America and the Middle East) is marked by strong increases. Solid growth in dairy products consumption should concern all products, though to a lesser extent for milk powder. Whereas SMP and WMP demand would rise by around 14 % (+5 % per capita) up to 2006, consumption of butter and cheese would show growth of more than 30 % (i.e. more than 20 % per capita) from 2000 to 2006. Growing population, improved economic conditions, increasing urbanisation and a shift towards "western" diet would constitute in these countries the main factors underpinning the rise in dairy products consumption.

The gradual shift in world trade of dairy products from bulk dairy products (SMP and butter) towards higher value added products (such as cheese and whey powder) that has been observed since the mid 1980s would appear to continue over the medium term according to the OECD outlook (although trade in butter and SMP would still remain substantial).

Table 3.11 Outlook for trade for major dairy products, 2000 – 2008 ('000 t)

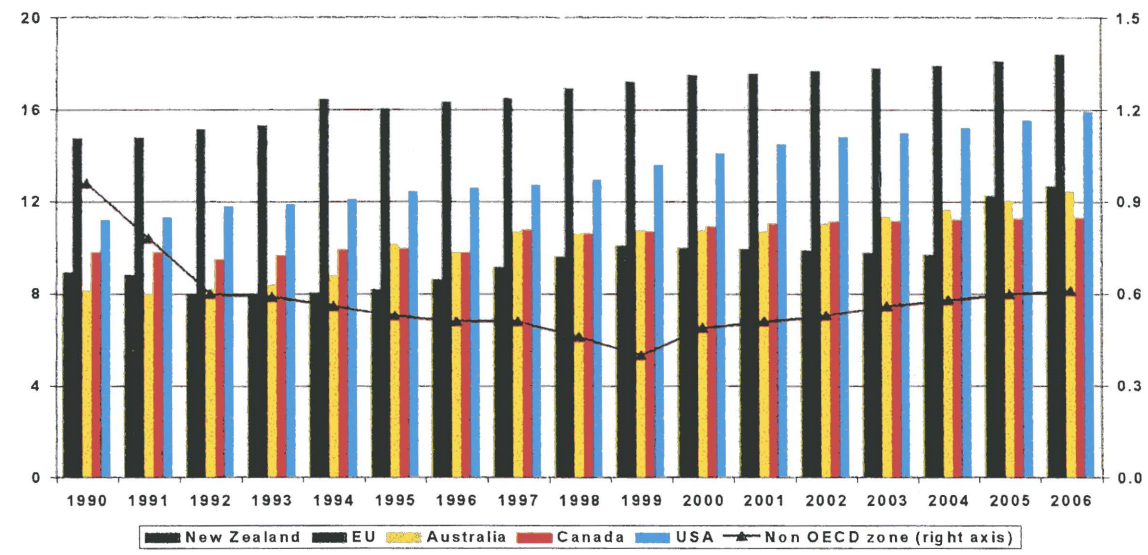
	2000		2008		Change in trade	
	OECD	FAPRI	OECD	FAPRI	OECD	FAPRI
Butter	476	567	565	598	89	31
SMP	802	1014	630	890	-172	-124
WMP	1082	1217	1135	1383	53	166
Cheese	362	743	457	873	95	130

OECD: Net imports from the non-OECD zone for 2006; FAPRI: net trade from major countries.

The strongest increase in global world consumption of dairy products is predicted for cheese in the OECD projections with a cumulative 15 % growth over the 2000-2006 period (i.e. 2.4 % per year on average). Most of the increase in consumption (around 60 %) would take place in OECD countries, which accounted for 84 % of total world consumption in 2000, and be met by increased domestic supply. The US and the EU would account for more than half of this additional cheese demand. Total cheese imports and exports of the OECD countries are expected to rise by 8 % and 14 % respectively over the 2000-2006 period.

Net imports of cheese from the non-OECD area would grow by 26 % or around 4 % annually until 2006. Increasing cheese consumption in the Asian region would be mainly satisfied by imports (particularly in Japan where domestic production is not foreseen to keep pace with rising consumption), largely from Australia and New Zealand. In Latin America, the increasing demand would be supplied either by domestic production or by the expanding production in Argentina. After their sharp drop in 1998 and 1999 in the wake of the economic turmoil, Russian imports are anticipated to grow at a rather moderate pace over the medium term. These additional imports would be supplied by the EU and the CEECs. However, a recovery in Russia's imports to their pre-rouble crisis levels could result in more favourable developments in world trade volume and prices.

Graph 3.27 Outlook for world cheese per capita consumption, 1990 – 2006 (kg/capita)



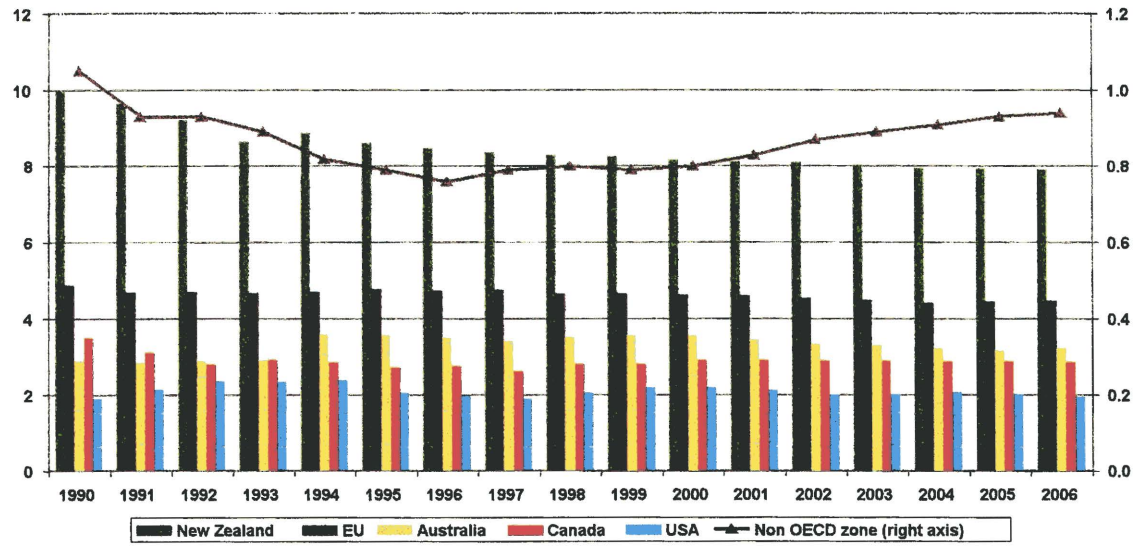
Source: OECD

World butter production and consumption are forecast to increase by between 2.0 % (FAPRI) and 2.5 % (OECD) on annual average over the next five years. Nevertheless, the OECD foresees that most –if not all- of the growth in butter production and consumption would take place in the non-OECD area, since they would remain fairly stable in the

OECD zone. In the non-OECD area, total butter consumption is likely to increase by 29 % from 2000 to 2006 (i.e. 4.3 % per year). In contrast to previous expectations, per capita consumption is foreseen to rise at a sustained pace (2.8 % per year on average) from 0.8 kg in 2000 to 0.94 kg per person.

However, as domestic production would not be able to keep pace with the overall demand in some of these countries, scope for additional exports from the main OECD producer countries can be expected. The bulk of the growth in butter trade is projected to be captured by New Zealand and the EU. It should be noticed that the medium-term perspectives for the world butter market strongly depend on the Russian market: the FAPRI and OECD projections anticipate a rather modest import growth from this country. Yet, given Russian's share of the world market in the most recent years, any change in import levels from Russia could have a significant impact on the future development in the size and price of the world butter market.

Graph 3.28 Outlook for world butter per capita consumption, 1990 – 2006 (kg/capita)



Source: OECD

The FAPRI and OECD baselines provide for similar perspectives for milk powder. Whereas they foresee sustained growth in world WMP consumption ranging between 1.4 % and 2.4 % per annum respectively, SMP would exhibit a more modest growth pattern of between 0.8 % and 1.1 % per year, owing to the overall stagnation of SMP demand in the OECD area[96]. If the future growth perspectives for milk powder trade are broadly consistent in showing a decline in SMP imports and a steady rise in WMP trade, their magnitude and pace differ significantly across the FAPRI and OECD projections.

FAPRI expects that, after a short-term steep increase in 1999, SMP imports from Russia would drop back to low levels as production is foreseen to recover. Developing countries of Asia, Latin America and Africa would reduce their overall import demand by around 130 000 t by 2008/09. SMP imports from Japan and Mexico would also fall slightly. In contrast, Brazilian imports would rise strongly as domestic demand outstrips production. US and EU SMP exports would drop from their 2000 levels owing to WTO limits on

[96] Additional WMP demand would be used for milk reconstitution, displacing SMP and condensed milk. In turn, SMP would also face competition from whey powder in animal feed and food processing.

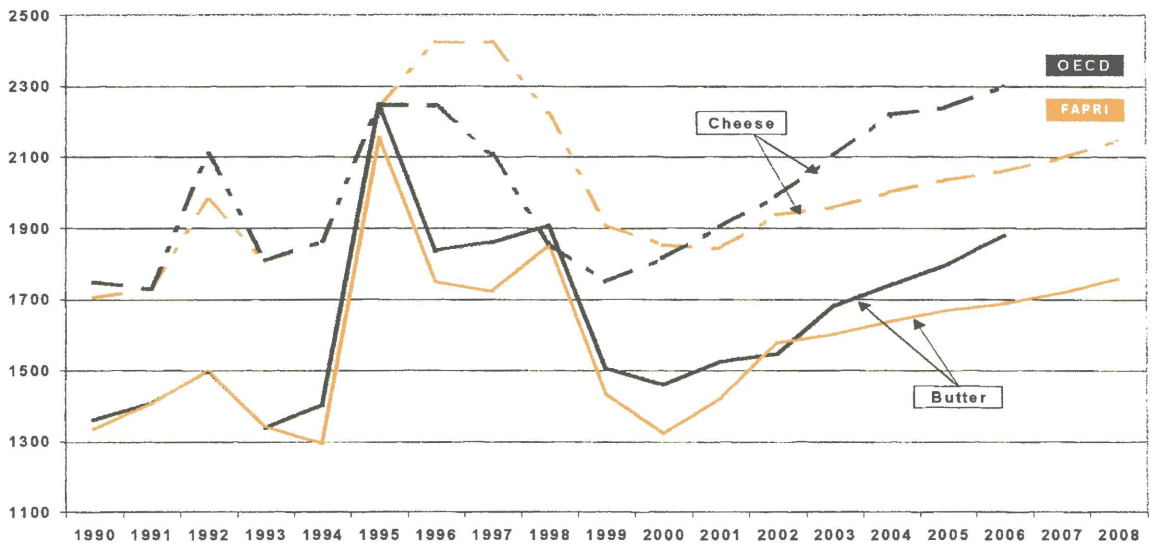
subsidised exports. Greater profitability in other dairy markets (cheese and WMP) prompt declines in export supply from other traditional exporters (such as New Zealand and Australia), whereas Poland would show some growth in SMP export and recover from the impact of the recent Russian economic crisis. FAPRI foresees overall growth in WMP trade to reach 14 % over the 2000-2008 period (as compared to a -12 % fall for SMP). Additional WMP import demand would be broadly spread over the non-OECD area and mainly draw on additional exports from the New Zealand (two-thirds of the total growth), Argentina and Australia. EU exports would barely stagnate at 530 000 t over the medium term.

The OECD anticipates a stronger decline in SMP trade from the OECD area at around 21 %. New Zealand, Poland and Argentina would increase their share of the international market of SMP to the detriment of the EU and Australia. The medium-term prospects for WMP are in turn expected to be more favourable. Increasing consumption -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 of 5 % from 2000 to 2006. Like in the FAPRI projections, New Zealand and Australia would capture the bulk of the additional trade to the detriment of the EU.

3.4.3 Dairy prices

These projections for supply and demand are foreseen by the OECD and FAPRI to generate a recovery in world market prices of dairy products over the medium term above the level experienced in the early 1990s. After the sharp decline in 1999 generated by the economic crisis, prices are forecast to increase gradually over the medium term in line with the return of economic growth and a strengthening demand.

Graph 3.29 Outlook for world market prices for butter and cheese, 1990 – 2008 ($/t)



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

Cheese prices are foreseen to recover quickly supported by the steady rise in global consumption[97]. In contrast, the pace of price increase after the year 2000 is forecast to be more modest for milk powder, notably for SMP, which should face greater competition

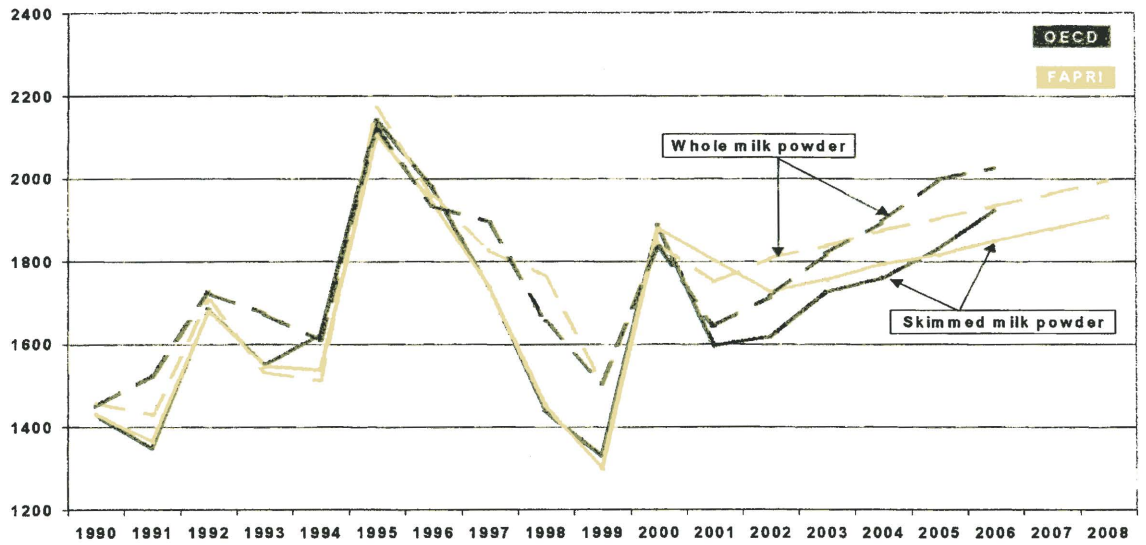
[97] World market prices for cheddar are foreseen to remain far below EU domestic prices over the medium term, even if the gap is forecast to diminish somewhat. However, cheddar cheese is not fully representative of EU cheese production.

from WMP and whey powder. Having reached high levels in 2000, milk powder prices should fall in 2001 before picking up again from 2003 onwards.

Butter prices would also recover gradually, though remaining strongly linked to developments in the Russian market (the major import market) where commercial imports have always been fairly uneven since the early 1990s. They should also benefit from the expected rise in vegetable oil prices.

These medium-term perspectives remain strongly dependent on the future development in some key (existing or emerging) markets such as Russia and China. Furthermore, changes in national dairy policies that have recently been adopted or that are scheduled in a number of countries (Australia, Japan, US, EU, Switzerland) could also have a significant impact on the world dairy markets over the medium term.

Graph 3.30 Outlook for world market prices for whole milk powder and skimmed milk powder, 1990 – 2008 ($/t)



Ref.: FOB export price Northern Europe.

4. Key issues

If the outlook for agricultural markets over the next seven years appears rather positive, as agricultural markets would emerge from a prolonged downturn marked by very weak agricultural commodity prices, it clearly remains subject to some uncertainties. In this respect, three main areas of uncertainty can be identified:

- the economic prospects
- the scope for production growth
- the policy and trade environment

4.1 Economic prospects

The medium-term projections from the OECD, USDA and FAPRI presented in this chapter depend heavily on the robust and sustainable economic growth, which is expected over the medium term in developing regions (in particular China, South East Asia, Latin America, North Africa and the Middle East). Buoyant economic expansion, population growth and dietary changes in these regions would constitute the main driving force behind the recovery in most agricultural markets as they are all foreseen to lift global food

demand and stimulate solid growth in world trade. An outlook of strong and broadly based growth in developed countries would combine with a rapid recovery in many emerging economies towards sustained expansion to set the stage for a prolonged high-growth period in almost all regions of the world without significant inflationary pressures (cf. table 3.12).

However, since the publication of these very favourable macro-economic projections, short-term prospects for global growth have weakened significantly and concerns remain about a steeper-than-expected downturn in world growth, led by a marked slowdown in the US, a stalling recovery in Japan and moderate growth in the EU and in a number of emerging economies (notably those with a close link with the US economy). If a number of factors, including falling interest rates in the US, receding inflationary risks and reduced external and financial vulnerability of many emerging economies, may suggest a relatively moderate and short-lived slowdown, risks of a less favourable outcome are still significant.

Table 3.12 USDA assumptions in real GDP annual growth, 1999 – 2010 (%)

	1999	2000	2001	2002	2003	2004	Average		
							1991-2000	2001-2005	2006-2010
World	2.8	3.5	3.6	3.4	3.5	3.4	2.6	3.5	3.4
Developed economies	2.6	3.1	3.0	2.8	2.8	2.7	2.3	2.8	2.7
Transition economies	2.2	3.3	3.7	3.8	3.7	3.7	-3.3	3.7	3.4
Eastern Europe	2.6	4.0	4.6	5.2	5.1	4.9	1.3	4.9	4.1
FSU	2.1	3.0	3.3	3.2	3.1	3.1	-4.7	3.2	3.0
Developing countries	3.2	5.2	5.4	5.6	5.6	5.5	4.8	5.5	5.2
East and Southeast Asia	6.1	6.9	7.0	7.1	6.9	6.8	7.3	6.9	6.4
China	7.1	8.0	8.2	8.5	8.3	8.2	10.1	8.3	7.7
Korea	9.1	8.0	7.2	6.6	6.2	6.0	6.1	6.4	5.6
Indonesia	0.2	4.5	5.1	6.0	6.2	5.9	4.3	5.8	5.0
Thailand	4.0	4.2	4.5	5.0	5.2	5.2	4.6	5.0	5.0
Latin America	0.8	3.5	4.4	4.8	5.0	4.8	3.2	4.7	4.5
Mexico	3.7	5.8	5.2	5.1	5.1	5.1	3.5	5.1	5.1
Brazil	0.8	3.2	4.2	5.0	5.4	5.1	2.6	4.9	4.6
Middle East	0.7	4.5	4.1	4.2	4.1	4.1	3.8	4.1	4.1
North Africa	3.6	5.4	5.3	4.8	4.5	4.3	3.2	4.6	4.1

Source: USDA

This is particularly the case of the global imbalances that have developed over the past few years with the uneven pattern of economic growth in the US, Japan and the EU, the resulting increase in the external account imbalances and the seemingly misalignment of their currencies in view of the medium-term fundamentals. A deeper slowdown in US economic growth could have high spill-over effects and impact negatively on the rest of the world –with lower economic activity and abrupt currency alignment- if only partially offset by a moderate economic expansion in the EU and a modest recovery in Japan.

Moreover, if the situation in many emerging countries of Asia and Latin America has recently dramatically improved, some still remain fragile and vulnerable. The strengthening of economic fundamentals and the consolidation and continuation in the reform process would appear necessary to ensure investor confidence and the maintenance of a steady and sustainable growth over the coming years.

The deterioration of the economic situation of emerging countries could lead in the short term to weaker demand, lower food exports from developed countries and consequently lower world price prospects. The larger adverse impact would likely concern 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 projected increase in trade and prices over the medium term, one of the major outcomes of the projections, is strongly conditioned by the slow adjustment of agricultural supply to the expansion of food demand in some regions of the world. Yet, the extent to which production would become increasingly outpaced by a rising domestic consumption remains unclear as the scope for further production increase in some major importing regions constitutes a key uncertainty for the medium-term outlook, notably for crop products.

Like in the recent decades, much of the growth in grain production is projected to be derived from productivity increase as the potential for additional land is foreseen to be limited in most regions due to the expansion of urban areas, pressure on agricultural resources and environment, and climatic limitations. The projected price increases would not appear sufficient to reverse this trend.

If total cereal productivity growth is forecast to be higher over the next seven years than in the early 1990s, it would remain significantly lower than in the past decades[98]. However, prospects for more favourable price levels and increased reliance on food imports in some regions could stimulate the research for further gains in productivity (in terms of wider adoption of improved varieties and farming methods, increased investment in agricultural structure, storage, transport and marketing systems).

Policy management and development in some major importing countries –such as China- and exporting countries -such as the EU and the US with the land set-aside instrument- could also have far reaching implications for the future level of world agricultural supply.

4.3 Policy and trade environment

Future changes in agricultural policies as well as the new round of multilateral trade negotiations may have important implications for the medium-term outlook of agricultural products. They include the new farm legislation in the US after 2002 when the 1996 Federal Agriculture Improvement and Reform (FAIR) Act expires and the EU's 'mid-term review' of Agenda 2000 planned for 2002 and 2003.

As regards trade policy, the outcome of the new trade round at the World Trade Organisation (WTO) and accession of new Members (such as China) may also be expected to shape the pace towards trade liberalisation and future developments in agricultural policy reform towards greater market orientation. The possible emergence of new regional trade agreements and of new issues related to food safety, food quality and the environment may also be foreseen to impact future developments in agricultural production, consumption and trade as well as the functioning of agricultural markets.

[98] 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.

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Statistical annex

1. Medium-term outlook for cereals

1.1 Wheat

Table A.1 Outlook for world wheat production, 2000 – 2008 (mio t)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD	575.4	602.8	618.0	632.2	632.4	642.3	649.0		
FAPRI	578.2	595.3	606.0	611.4	619.3	626.8	633.7	640.5	647.9
USDA	579.9	609.7	616.9	625.1	634.1	642.7	650.9	659.9	668.4

Table A.2 Outlook for world wheat consumption, 2000 – 2008 (mio t)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD	592.4	606.1	616.2	623.4	632.8	640.4	647.2		
FAPRI	596.4	601.8	606.7	613.9	620.7	627.6	634.6	641.6	648.9

Table A.3 Outlook for world wheat stocks, 2000 - 2008 (mio t)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD	106.3	103.0	104.8	113.6	113.2	115.1	116.9		
FAPRI	107.6	101.1	100.4	97.9	96.4	95.7	94.9	93.8	92.8

Table A.4 Outlook for world wheat market prices, 2000 - 2008 ($/t)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD	123.5	122.6	127.8	131.2	138.5	144.1	147.9		
FAPRI	121.2	130.2	131.6	136.8	139.9	142.7	146.3	150.1	152.3

US FOB Gulf, HRW

1.2 Coarse grains

Table A.5 Outlook for world coarse grain production, 2000 - 2008 (mio t)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD	852.1	904.2	922.2	942.3	962.8	978.2	990.3		
FAPRI	766.2	793.7	806.4	819.0	830.6	842.0	853.8	865.9	877.5
USDA	863.0	906.2	922.1	951.4	966.4	981.6	996.9	1011.0	1028.4

Table A.6 Outlook for world coarse grain consumption, 2000 - 2008 (mio t)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD	871.0	911.1	927.9	942.7	960.2	977.7	991.2		
FAPRI	786.9	798.4	807.1	819.8	830.7	841.7	853.9	865.9	877.5

Table A.7 Outlook for world coarse grain stocks, 2000 - 2008 (mio t)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD	150.0	143.2	137.4	137.0	139.6	140.1	139.2		
FAPRI	135.5	130.9	130.2	129.4	129.3	129.6	129.5	129.5	129.5

Table A.8 Outlook for world coarse grain market prices, 2000 - 2008 ($/t)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD	88.3	90.5	99.6	102.2	103.9	105.1	108.1		
FAPRI	88.8	96.5	98.6	100.4	102.3	104.6	107.4	109.8	111.8

US yellow maize, fob Gulf

2. Medium-term outlook for oilseeds

2.1 Oilseed beans

Table A.9 Outlook for world oilseed production, 2000 - 2008 (mio t)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD	234.8	236.3	239.0	242.3	247.2	252.3	258.6		
FAPRI (selected countries)	212.4	220.7	221.7	224.7	228.4	233.3	238.1	242.8	247.6

Oilseeds = rape seed, soya bean and sunflower seed.

Table A.10 Outlook for world oilseed consumption, 2000 - 2008 (mio t)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD	233.6	235.6	239.4	244.4	249.2	253.3	258.8		
FAPRI (selected countries)	204.0	209.0	210.9	214.2	217.4	221.2	225.0	228.7	232.4

Oilseeds = rape seed, soya bean and sunflower seed.

Table A.11 Outlook for world oilseed stocks, 2000 - 2008 (mio t)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD	21.0	21.7	21.4	19.3	17.3	16.3	16.1		
FAPRI (selected countries)	15.9	18.0	18.5	18.3	17.9	17.5	17.3	17.0	16.6

Oilseeds = rape seed, soya bean and sunflower seed.

Table A.12 Outlook for world soybean market prices, 2000 - 2008 ($/t)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD	206.4	213.7	217.4	228.5	239.7	251.6	255.7		
FAPRI	204.5	197.4	198.4	203.4	211.0	217.4	223.0	229.6	236.3

US soyabeans, cif Rotterdam

2.2 *Oilseed meals*

Table A.13 Outlook for world oilseed meal production, 2000 - 2008 (mio t)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD	144.0	145.2	148.4	151.4	154.2	157.1	160.4		
FAPRI (selected countries)	132.0	134.5	136.1	138.4	140.7	143.2	145.8	148.4	150.9

Oilseeds = soya bean, sunflower and rapeseed

Table A.14 Outlook for world oilseed meal consumption, 2000 - 2008 (mio t)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD	144.0	145.2	148.4	151.6	154.2	157.1	160.1		
FAPRI (selected countries)	118.1	120.9	122.4	124.7	127.6	130.0	132.1	134.1	136.5

Oilseeds = soya bean, sunflower and rapeseed

Table A.15 Outlook for world soybean meal market prices, 2000 - 2008 ($/t)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD	204.5	194.6	189.8	187.7	192.1	197.4	198.8		
FAPRI	198.5	191.1	190.4	192.5	196.8	199.8	202.4	205.3	208.2

CIF Rotterdam

2.3 *Oilseed oil*

Table A.16 Outlook for world oilseed oil production, 2000 - 2008 (mio t)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD	69.8	71.5	73.0	74.5	76.2	79.2	80.8		
FAPRI (selected countries)	62.7	65.1	66.5	68.3	70.0	71.5	73.0	74.4	75.9

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

Table A.17 Outlook for world oilseed oil consumption, 2000 - 2008 (mio t)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD	69.4	71.4	73.3	74.5	76.3	79.1	80.7		
FAPRI	49.2	50.8	52.1	53.5	54.9	56.3	57.7	59.1	60.5

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

Table A.18 Outlook for world soybean oil market prices, 2000 - 2008 ($/t)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD	325.7	363.8	401.4	442.0	482.7	515.2	536.4		
FAPRI	314.5	320.6	323.4	330.2	338.4	347.6	356.7	366.9	377.9

Fob Rotterdam

3. Medium-term outlook for meat

3.1 Beef

Table A.19 Outlook for world beef production, 2000 - 2008 (mio t, cwe)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD (OECD zone)	27.4	26.9	27.3	27.2	27.1	27.4	27.7		
FAPRI (selected countries)	43.9	43.1	43.4	44.0	44.9	45.7	46.5	47.2	47.8

Table A.20 Outlook for world beef consumption, 2000 - 2008 (mio t, cwe)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD (OECD zone)	26.9	26.4	26.4	26.4	26.4	26.6	26.9		
FAPRI (selected countries)	43.3	42.7	42.9	43.5	44.4	45.2	45.9	46.7	47.2

Table A.21 Outlook for world beef prices, 2000 - 2008 ($/t lw)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD	1547.2	1522.2	1668.9	1719.4	1742.2	1736.8	1697.5		
FAPRI	1535.5	1642.3	1675.5	1689.6	1635.0	1585.9	1538.3	1500.9	1481.5

Nebraska Direct Fed Steer price.

3.2 Pig meat

Table A.22 Outlook for world pig meat production, 2000 - 2008 (mio t, cwe)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD (OECD zone)	34.6	35.0	36.1	36.2	36.3	36.3	36.3		
FAPRI (selected countries)	73.2	75.0	76.8	77.8	78.7	79.6	80.7	81.7	82.7

Table A.23 Outlook for world pig meat consumption, 2000 - 2008 (mio t, cwe)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD (OECD zone)	33.6	34.1	35.1	35.2	35.3	35.3	35.3		
FAPRI (selected countries)	72.8	74.7	76.5	77.5	78.3	79.3	80.3	81.3	82.3

Table A.24 Outlook for world pig meat prices, 2000 - 2008 ($/t lw)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD	987.3	915.8	763.1	848.1	863.3	881.6	887.3		
FAPRI	985.5	895.0	761.6	914.1	1006.1	946.8	864.3	936.0	1011.5

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

3.3 Poultry meat

Table A.25 Outlook for world poultry meat production, 2000 - 2008 (mio t, cwe)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD (OECD zone)	32.2	33.0	34.0	35.0	35.8	36.6	37.4		
FAPRI (selected countries)	42.6	43.9	45.2	46.2	47.2	48.2	49.3	50.4	51.6

Table A.26 Outlook for world poultry meat consumption, 2000 - 2008 (mio t, cwe)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD (OECD zone)	29.5	30.3	31.3	32.2	32.9	33.7	34.3		
FAPRI (selected countries)	41.5	42.9	44.0	44.9	45.9	46.8	47.8	48.9	50.0

Table A.27 Outlook for world poultry meat prices, 2000 - 2008 ($/t)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
OECD	1223.5	1188.9	1173.4	1202.5	1230.5	1246.3	1237.7		
FAPRI	1239.0	1258.1	1263.7	1264.2	1264.3	1260.4	1261.9	1266.2	1268.7

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, 2000 - 2008 (mio t)

		2000	2001	2002	2003	2004	2005	2006	2007	2008
Milk	OECD	558.8	569.9	580.7	590.8	602.7	615.2	625.7		
	FAPRI	386.1	389.5	391.7	394.8	397.9	401.7	405.9	410.2	414.3
Butter	OECD	7.1	7.2	7.4	7.6	7.8	8.0	8.2		
	FAPRI	5.8	6.2	6.3	6.3	6.4	6.5	6.6	6.7	6.7
SMP	OECD	3.4	3.5	3.5	3.4	3.5	3.5	3.5		
	FAPRI	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2
WMP	OECD	2.7	2.8	2.8	2.8	2.9	3.0	3.1		
	FAPRI	2.1	2.2	2.2	2.3	2.3	2.4	2.4	2.4	2.4
Cheese	OECD	15.0	15.3	15.7	16.0	16.4	16.8	17.3		
	FAPRI	12.7	13.0	13.2	13.4	13.6	13.9	14.1	14.3	14.5

FAPRI: data for selected countries

Table A.29 Outlook for world consumption of dairy products, 2000 - 2008 (mio t)

		2000	2001	2002	2003	2004	2005	2006	2007	2008
Butter	**OECD**	7.0	7.3	7.4	7.6	7.8	8.0	8.2		
	FAPRI	5.3	5.7	5.7	5.8	5.9	6.0	6.1	6.2	6.2
SMP	**OECD**	3.3	3.4	3.5	3.5	3.5	3.5	3.5		
	FAPRI	2.4	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6
WMP	**OECD**	2.7	2.8	2.8	2.8	2.9	3.0	3.1		
	FAPRI	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2
Cheese	**OECD**	15.0	15.3	15.7	16.1	16.4	16.8	17.2		
	FAPRI	12.5	12.7	12.9	13.1	13.3	13.5	13.7	13.9	14.1

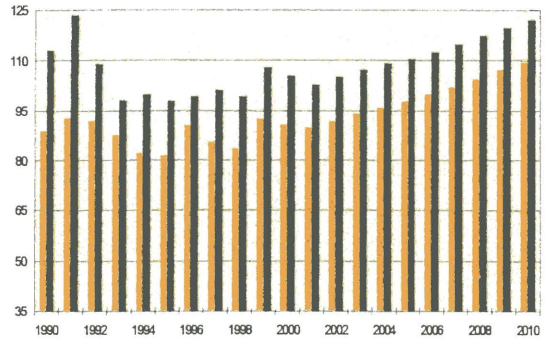
FAPRI: data for major countries

Table A.30 Outlook for world dairy products prices, 2000 - 2008 ($/t)

		2000	2001	2002	2003	2004	2005	2006	2007	2008
Butter	**OECD**	1462	1525	1548	1683	1741	1799	1880		
	FAPRI	1325	1422	1579	1603	1639	1670	1689	1719	1758
Cheese	**OECD**	1816	1904	1990	2103	2221	2242	2301		
	FAPRI	1854	1844	1938	1959	2002	2037	2061	2097	2148
SMP	**OECD**	1888	1597	1618	1726	1760	1830	1923		
	FAPRI	1880	1804	1728	1757	1794	1816	1851	1878	1908
WMP	**OECD**	1835	1644	1716	1820	1896	1999	2028		
	FAPRI	1846	1749	1808	1838	1875	1904	1934	1963	1996

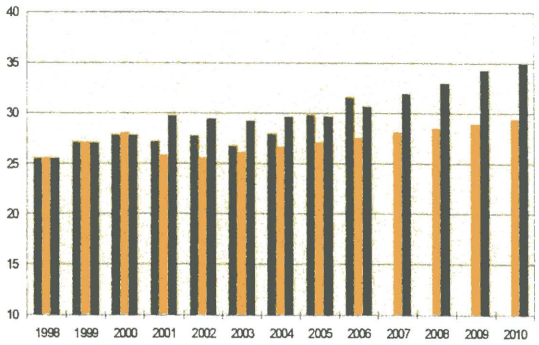
Ref: Cheese: FOB export price cheddar cheese 40lb blocks, Northern Europe; others: FOB export price Northern Europe

Outlook for world wheat trade, 1990 – 2010
(mio t)

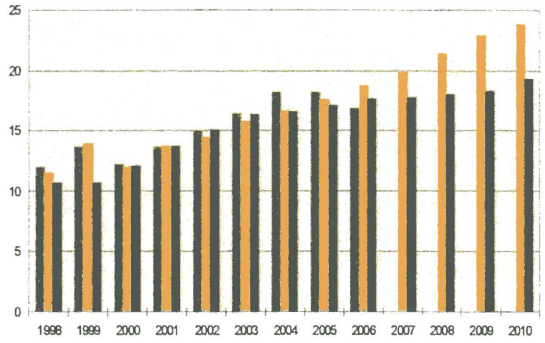


FAPRI: net trade

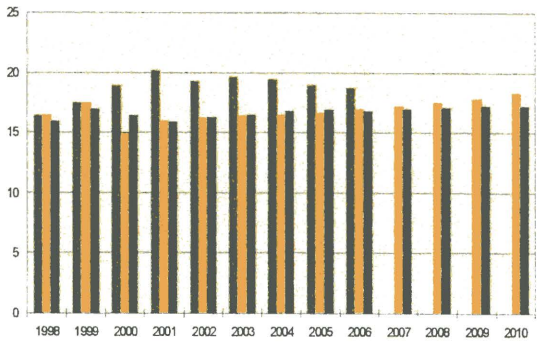
Outlook for wheat net exports – US
(mio t)



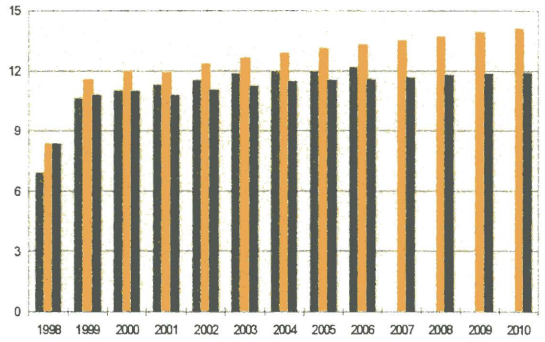
Outlook for wheat net exports – European Union
(mio t)



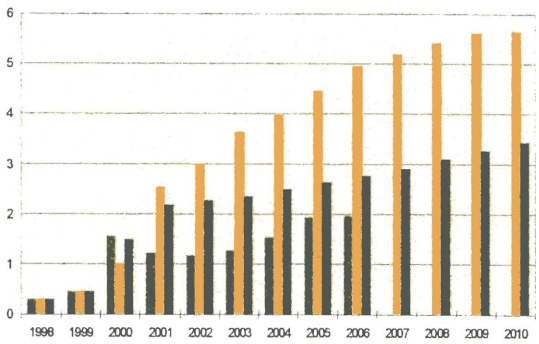
Outlook for wheat net exports – Australia
(mio t)



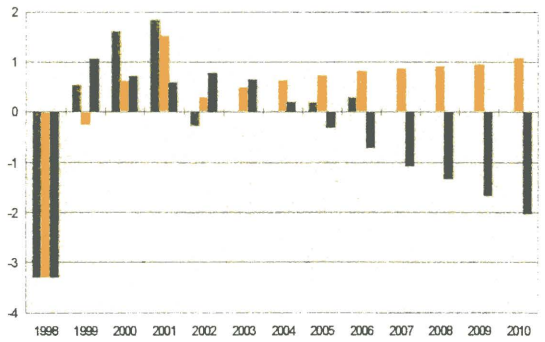
Outlook for wheat net exports – Argentina
(mio t)



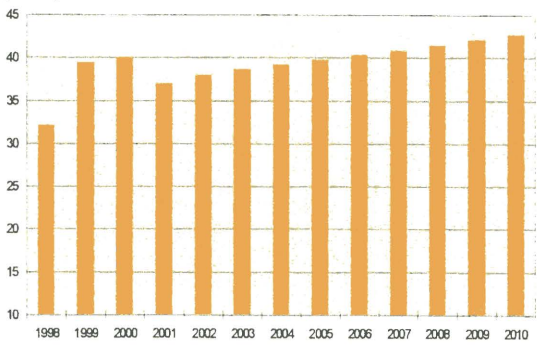
Outlook for wheat net imports – China
(mio t)



Outlook for wheat net imports – FSU
(mio t)

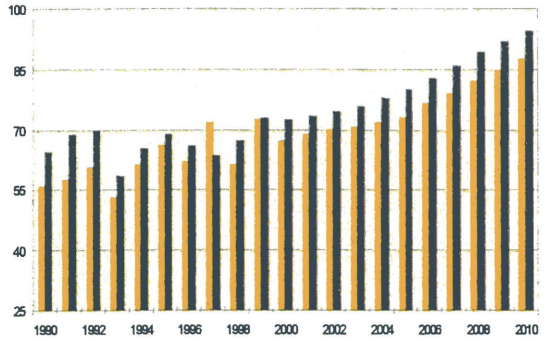


Outlook for wheat net imports – Africa and Middle East
(mio t)



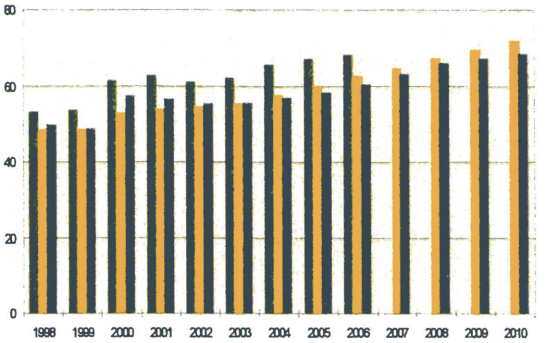
OECD FAPRI USDA

Outlook for world maize trade, 1990 – 2010
(mio t)



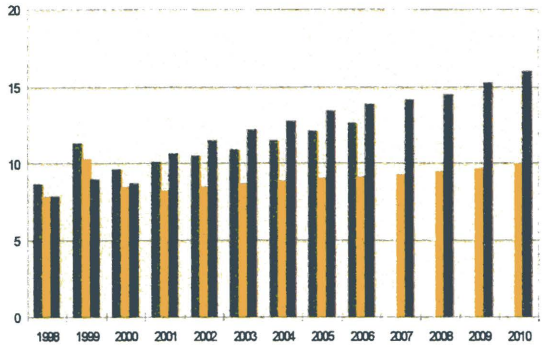
FAPRI: net trade

Outlook for maize net exports – US
(mio t)



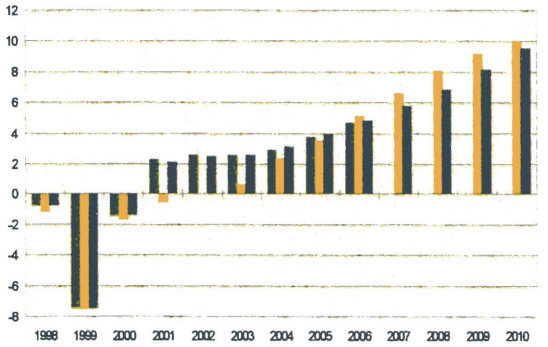
OECD: coarse grains

Outlook for maize net exports – Argentina
(mio t)

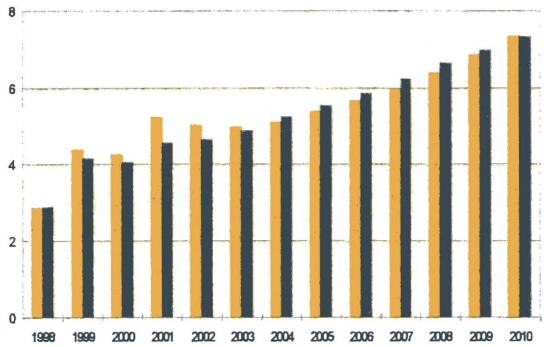


OECD: coarse grains

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

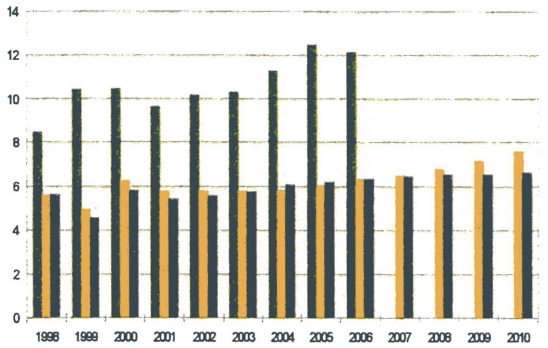


Outlook for maize net imports – South East Asia
(mio t)



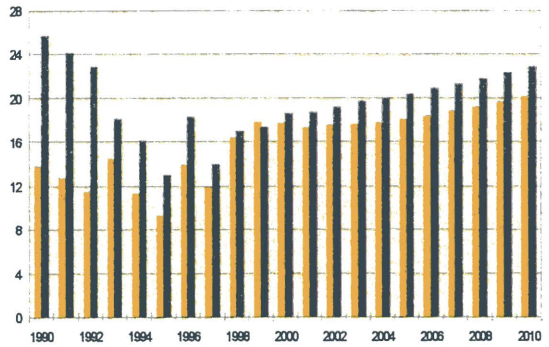
South East Asia: Malaysia, Indonesia, Thailand & Philippines

Outlook for maize net imports – Mexico
(mio t)



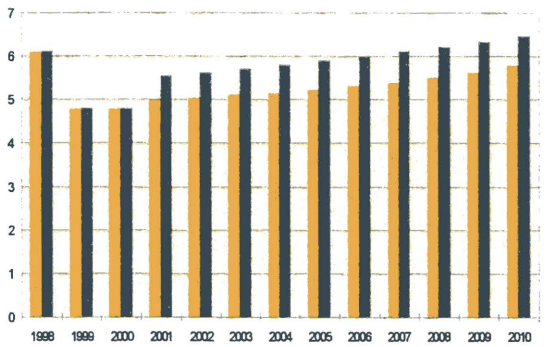
OECD: coarse grains

Outlook for world barley trade, 1990 – 2010
(mio t)



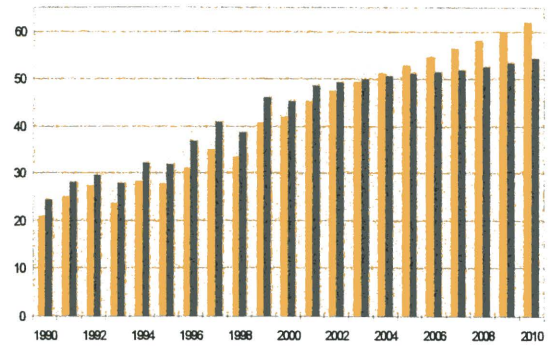
FAPRI: net trade

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



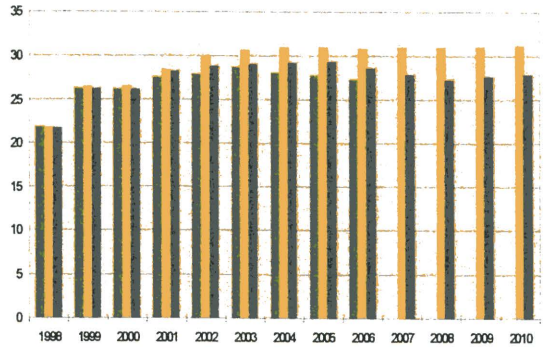
OECD FAPRI USDA

Outlook for world soybean trade, 1990 – 2010
(mio t)



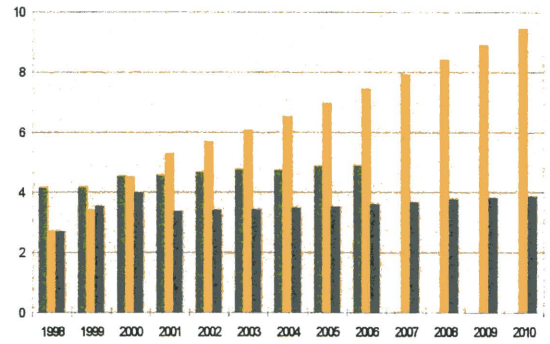
FAPRI: net trade

Outlook for soybean bean net exports – US
(mio t)



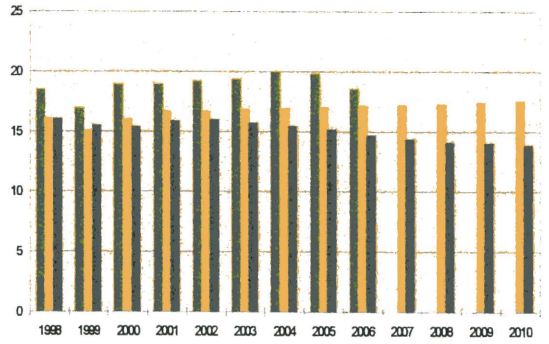
OECD: total oilseeds

Outlook for soybean net exports – Argentina
(mio t)



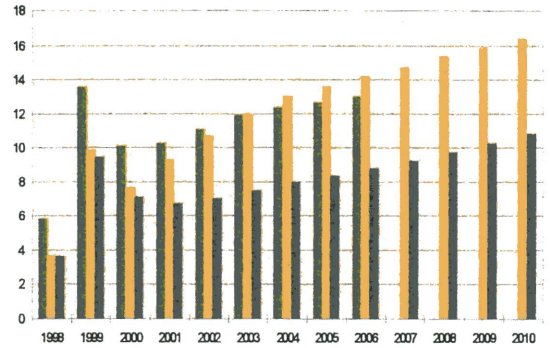
OECD: total oilseeds

Outlook for soybean net imports – European Union
(mio t)



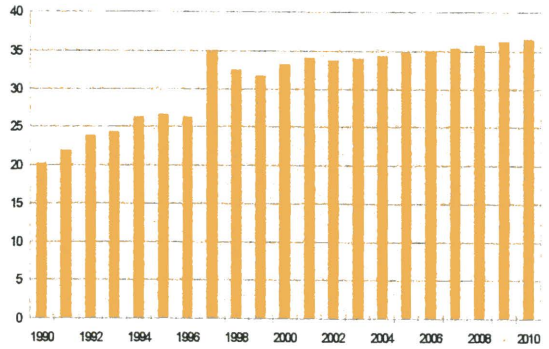
OECD: total oilseeds

Outlook for soybean net imports – China
(mio t)



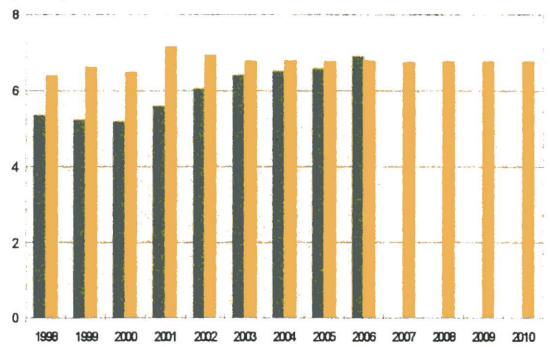
OECD: total oilseeds

Outlook for world soybean meal trade, 1990 – 2010
(mio t)



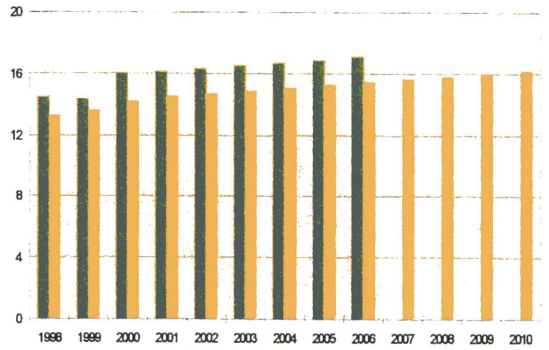
Net trade

Outlook for soybean meal net exports – US
(mio t)



OECD: oilseed meals

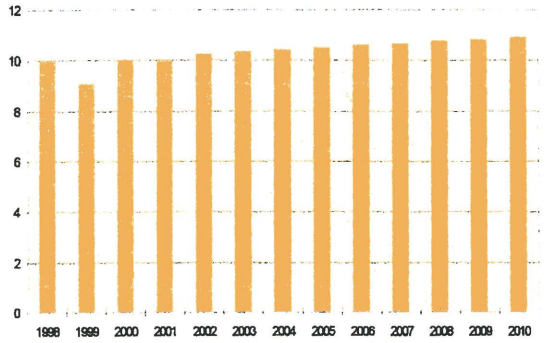
Outlook for soybean meal net exports – Argentina
(mio t)



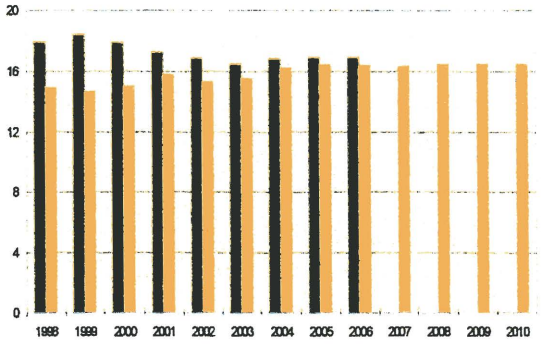
OECD: oilseed meals

OECD FAPRI USDA

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

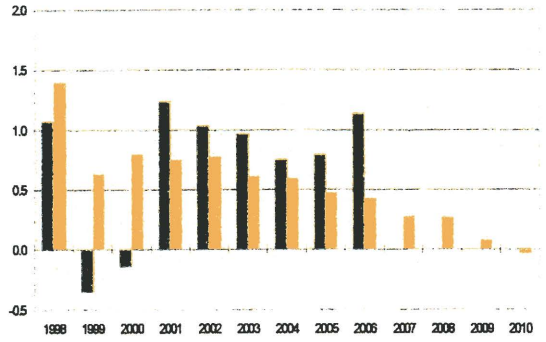


Outlook for soybean meal net imports – European Union
(mio t)



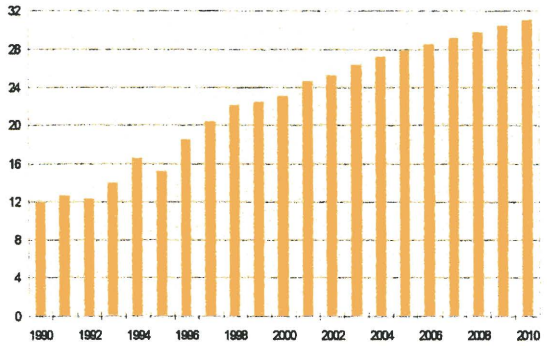
OECD: oilseed meals

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



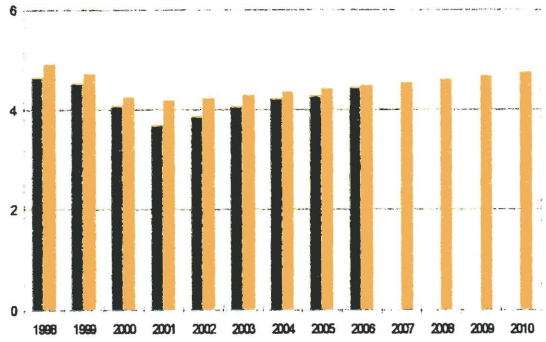
OECD: oilseed meals

Outlook for world oilseed oil trade, 1990 – 2010
(mio t)

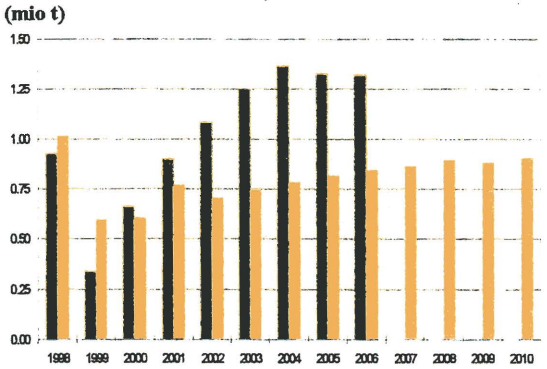


Net trade

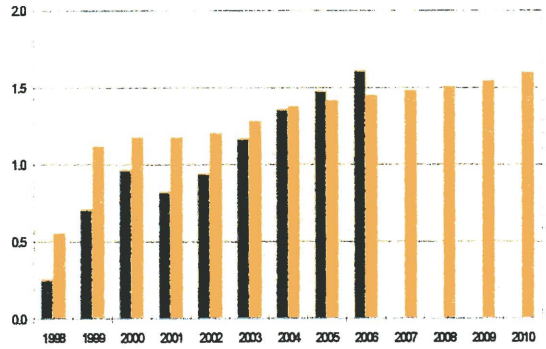
Outlook for oilseed oil net exports – Argentina
(mio t)



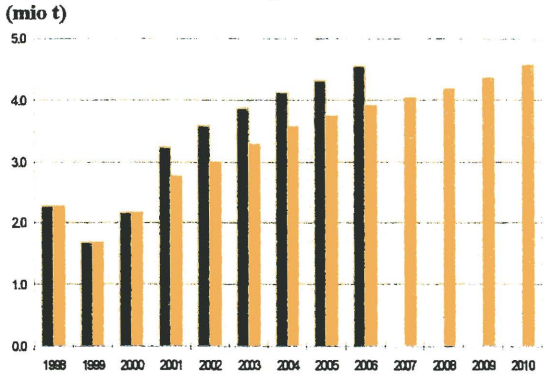
Outlook for oilseed oil net exports – US
(mio t)



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

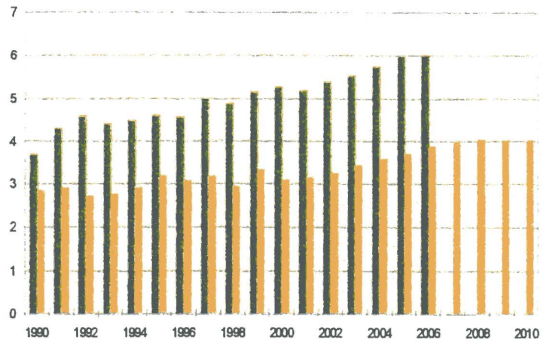


Outlook for oilseed oil net imports – China
(mio t)



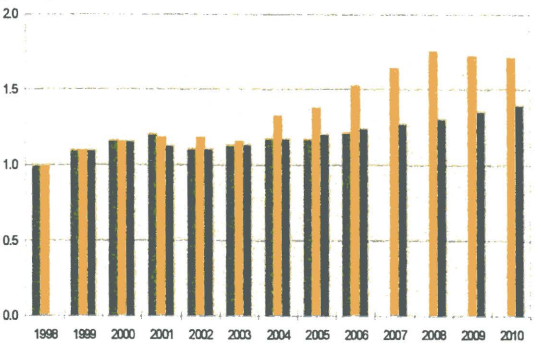
OECD FAPRI USDA

Outlook for world beef trade, 1990 – 2010
(mio t)

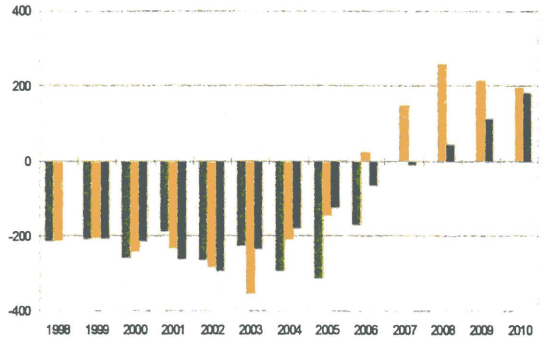


OECD: exports from OECD zone; FAPRI: net exports

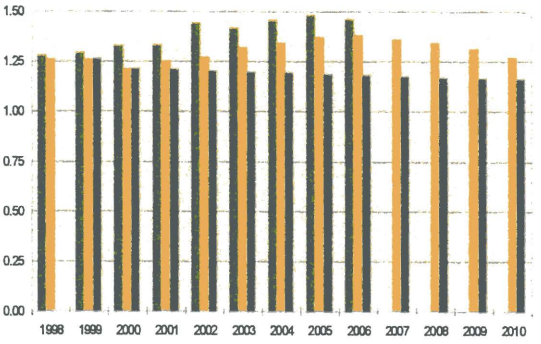
Outlook for beef exports – US
(mio t)



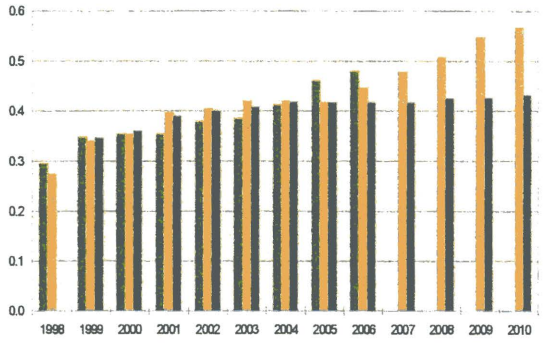
Outlook for beef net trade – US
('000 t)



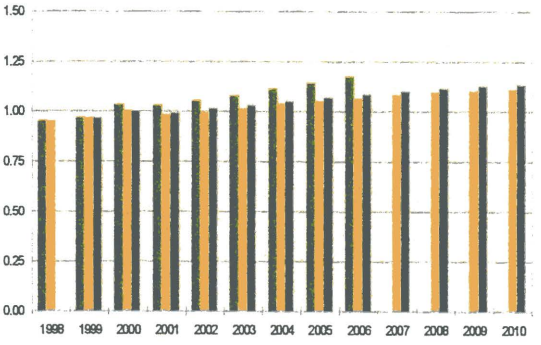
Outlook for beef exports – Australia
(mio t)



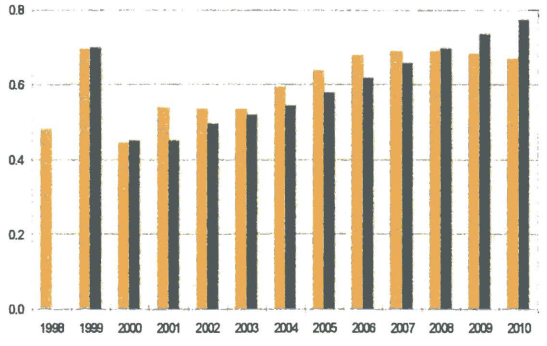
Outlook for beef exports – Argentina
(mio t)



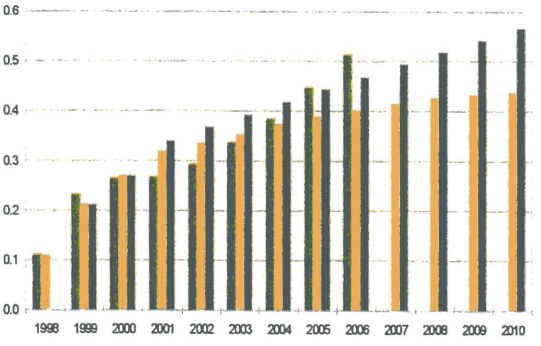
Outlook for beef imports – Japan
(mio t)



Outlook for beef imports – Russia
(mio t)

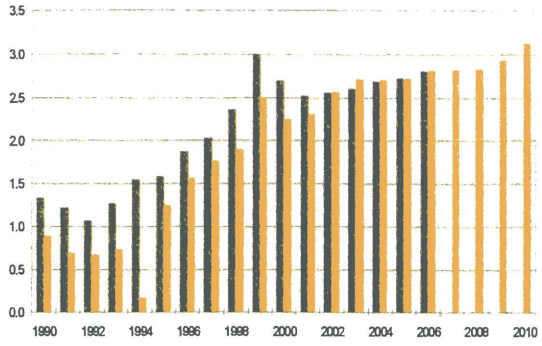


Outlook for beef imports – South Korea
(mio t)



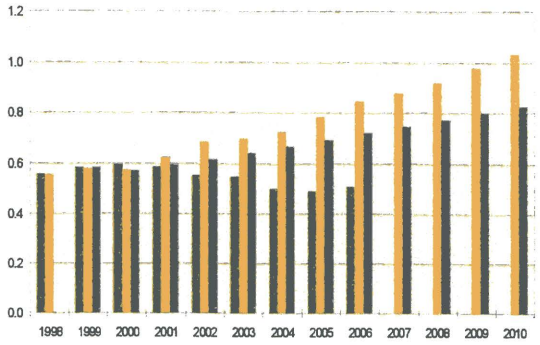
OECD FAPRI USDA

Outlook for world pork trade, 1990 – 2010
(mio t)

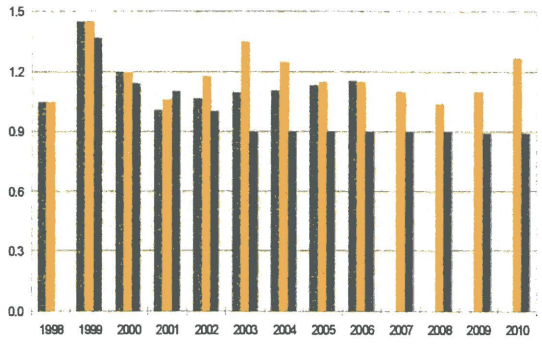


OECD: exports from OECD zone; FAPRI: net exports

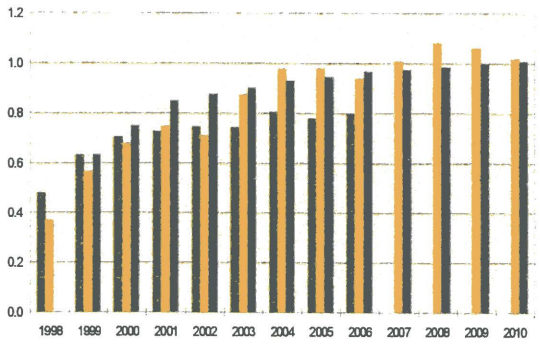
Outlook for pork exports – US
(mio t)



Outlook for pork exports – European Union
(mio t)

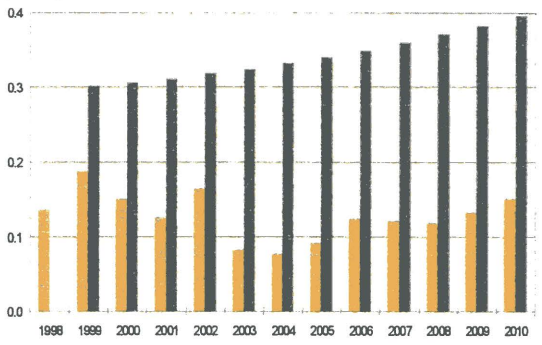


Outlook for pork exports – Canada
(mio t)



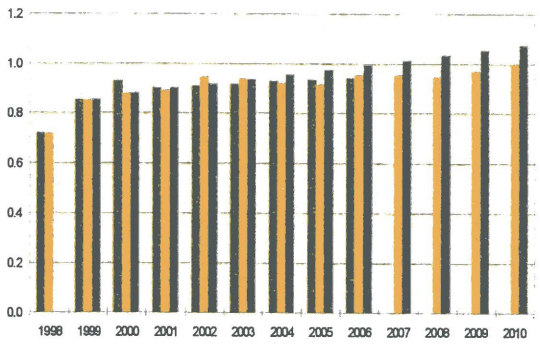
FAPRI: net exports

Outlook for pork exports – Eastern Europe
(mio t)

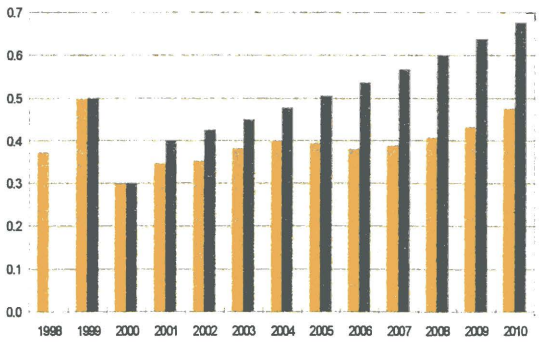


FAPRI: net exports

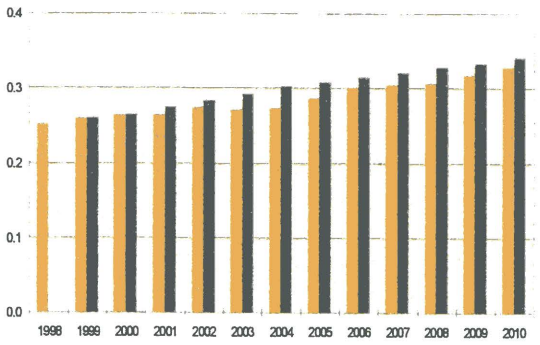
Outlook for pork imports – Japan
(mio t)



Outlook for pork imports – Russia
(mio t)

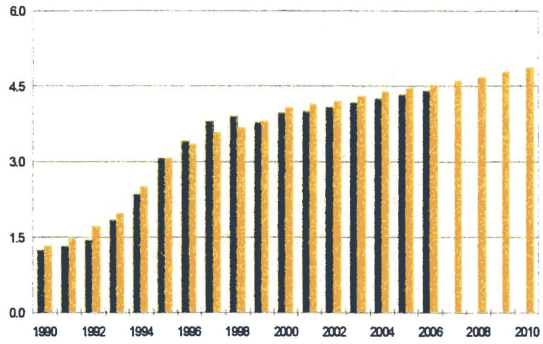


Outlook for pork imports – Hong Kong
(mio t)



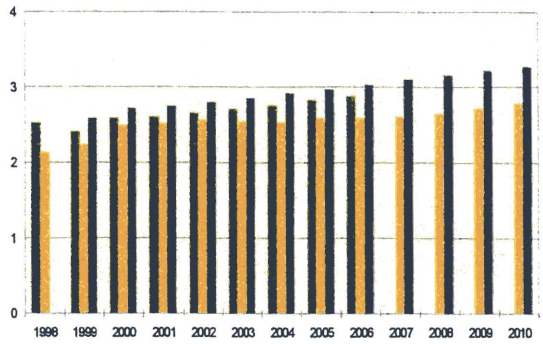
OECD FAPRI USDA

Outlook for world poultry trade, 1990 – 2010
(mio t)



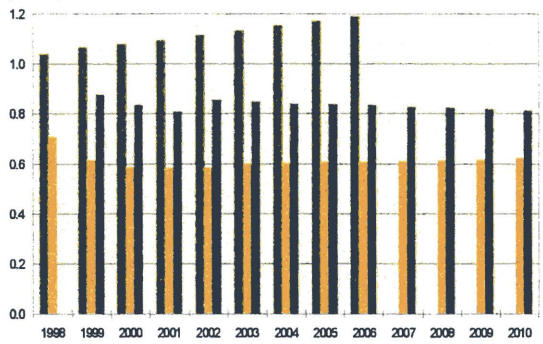
OECD: exports from OECD zone; FAPRI: broiler, net exports

Outlook for poultry exports – US
(mio t)



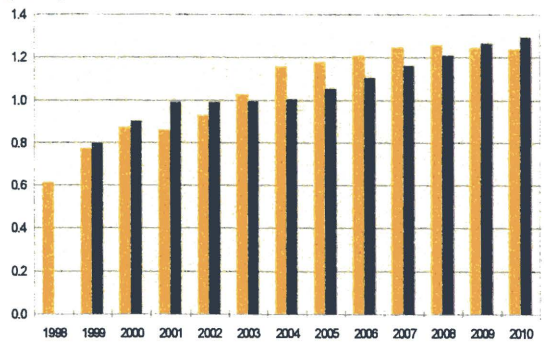
FAPRI: broiler

Outlook for poultry exports – European Union
(mio t)



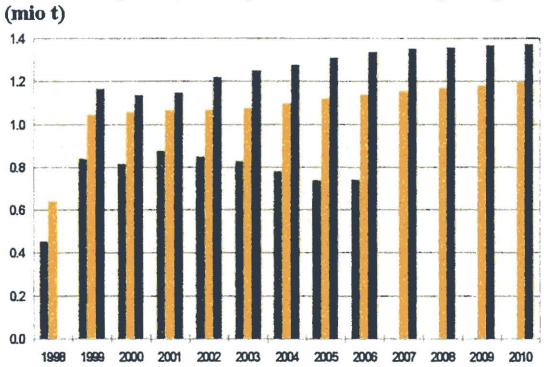
FAPRI: broiler

Outlook for poultry exports – Brazil
(mio t)



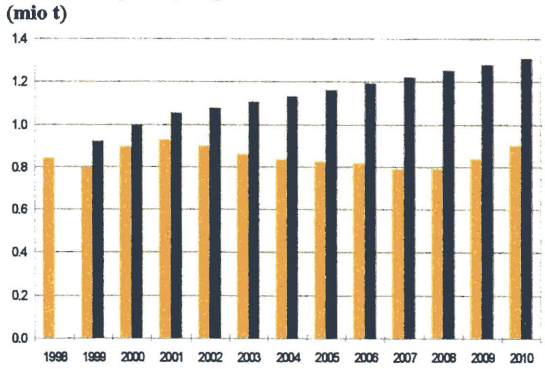
FAPRI: broiler

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



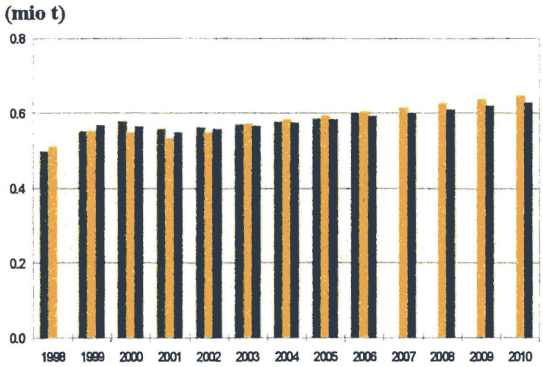
FAPRI: broiler

Outlook for poultry imports – Russia
(mio t)



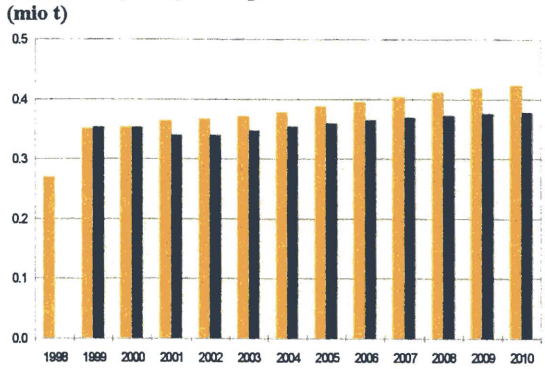
FAPRI: broiler

Outlook for poultry imports – Japan
(mio t)



FAPRI: broiler

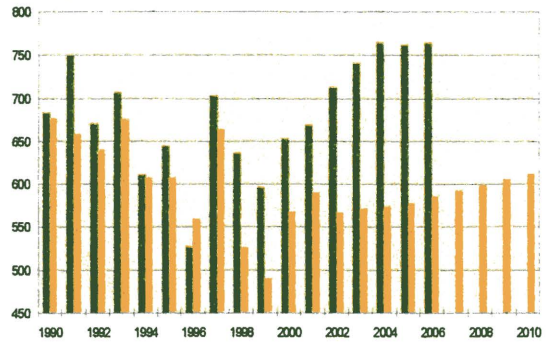
Outlook for poultry net imports – Saudi Arabia
(mio t)



FAPRI: broiler

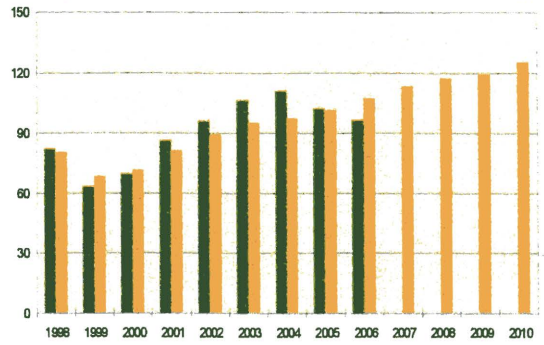
OECD FAPRI USDA

Outlook for world butter trade, 1990 – 2010
('000 t)

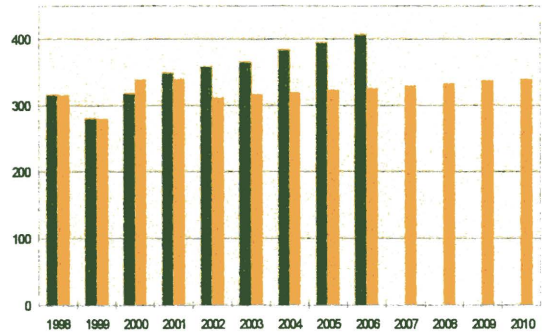


OECD: exports from OECD zone; FAPRI: net trade

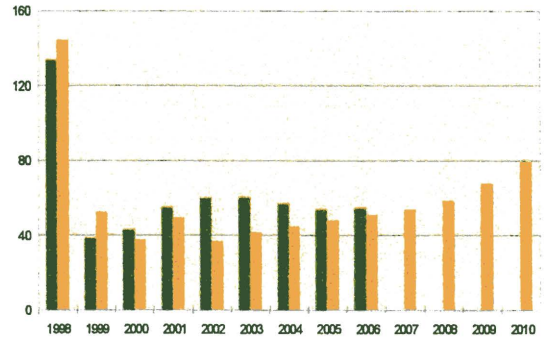
Outlook for butter net exports – European Union
('000 t)



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

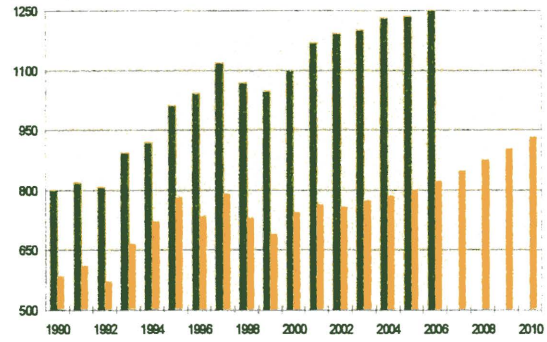


Outlook for butter net imports – Russia
('000 t)



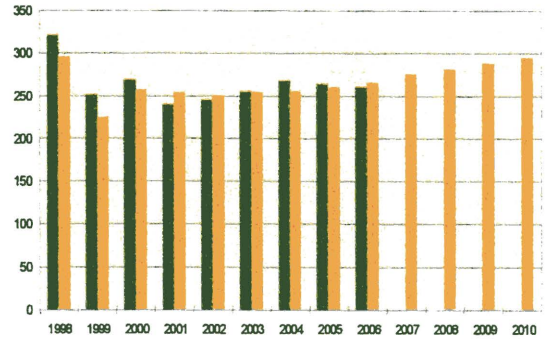
OECD: FSU

Outlook for world cheese trade, 1990 – 2010
('000 t)

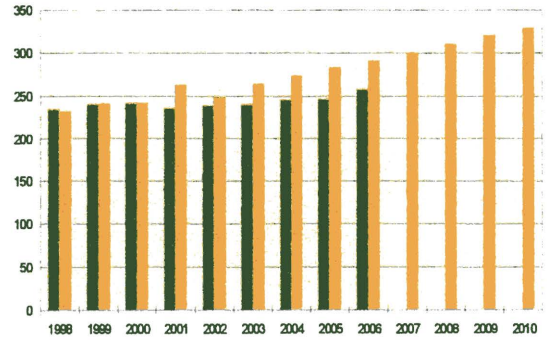


OECD: exports from OECD zone; FAPRI: net trade

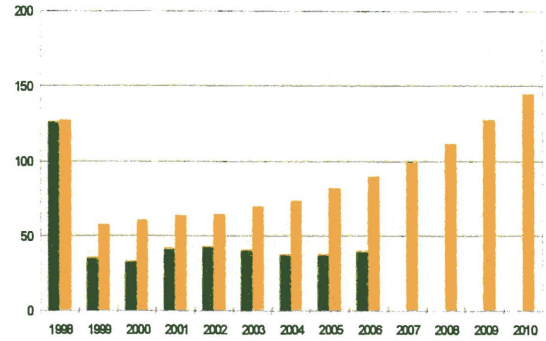
Outlook for cheese net exports – European Union
('000 t)



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



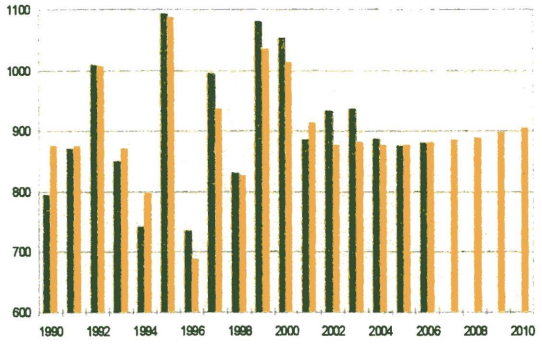
Outlook for cheese net imports – Russia
('000 t)



OECD: FSU

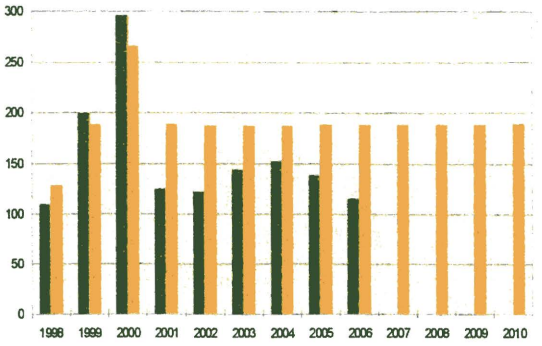
OECD FAPRI

Outlook for world SMP trade, 1990 – 2010
('000 t)

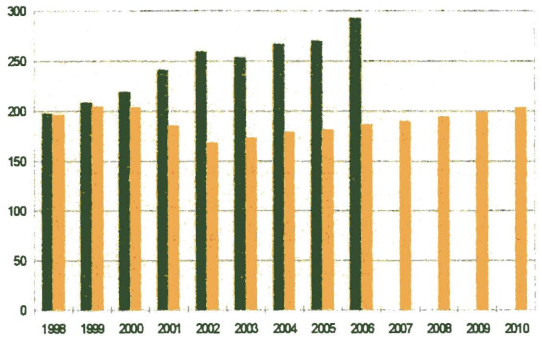


OECD: exports from OECD zone; FAPRI: total net trade

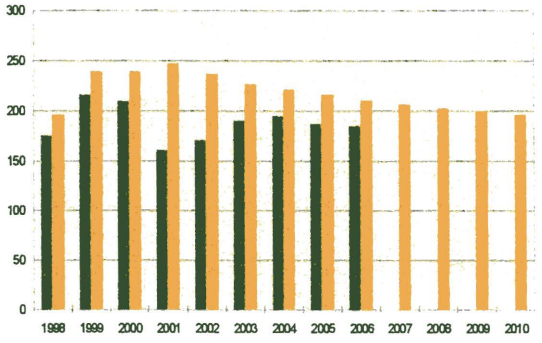
Outlook for SMP net exports – European Union
('000 t)



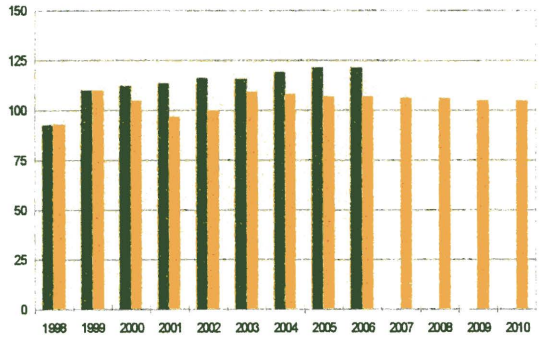
Outlook for SMP net exports – New Zealand
('000 t)



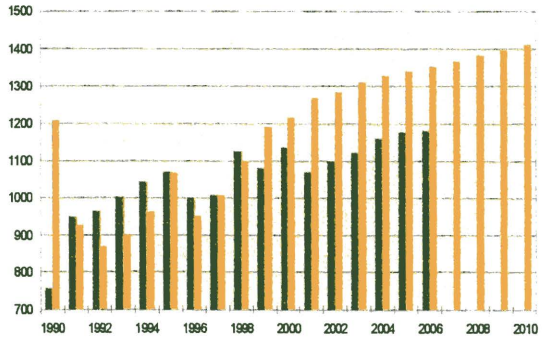
Outlook for SMP net exports – Australia
('000 t)



Outlook for SMP net imports – Mexico
('000 t)

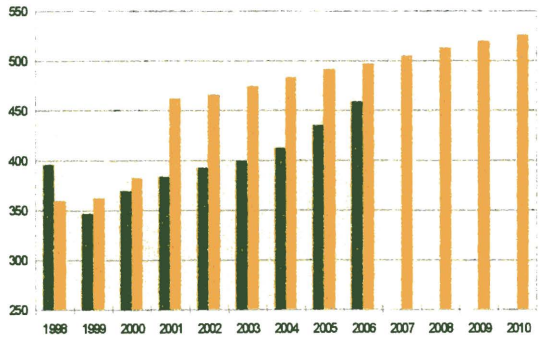


Outlook for world WMP trade, 1990 – 2010
('000 t)

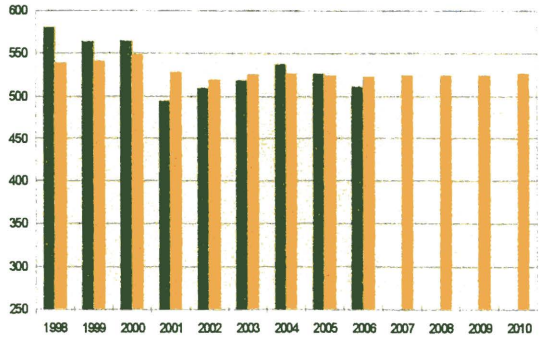


OECD: exports from OECD zone; FAPRI: total net trade

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 2008 for cereals, oilseeds, meat and dairy products in the European Union, the Central and Eastern European Countries as well as at world level.

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