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OILSEEDS*

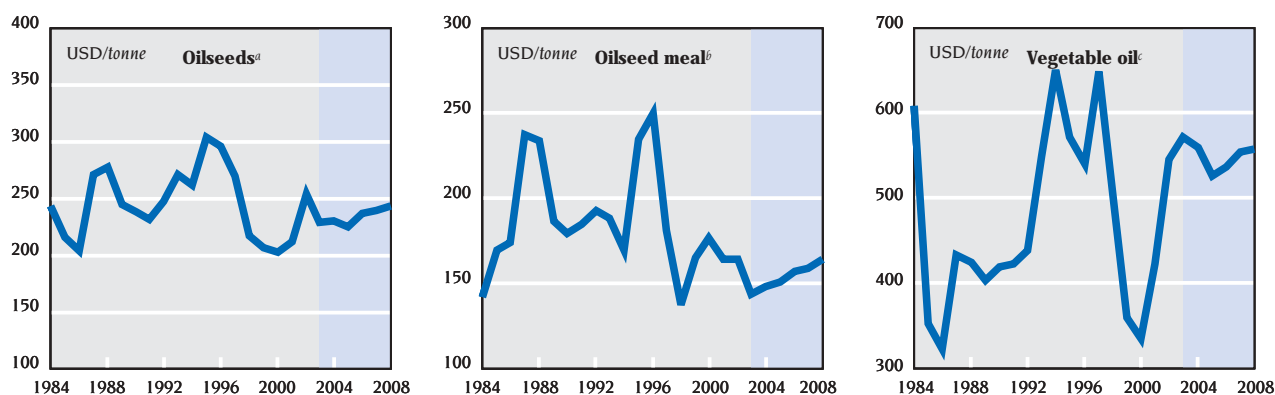
Main projections – outlook in brief

- The oilseed baseline is best characterised as follows: after a rebound in supply in 2003 crop year, strengthening demand for oilseed products caused by a recovery in the macroeconomic environment is met by continued expansion of soybean area in Brazil and sustained production in OECD member countries. Supplies largely satiate the oilseed meal market at low prices and, with growth in palm oil production, suffice to meet the growing demand for vegetable oil at flat prices.
- World oilseed production is set to rise by just over 18% over the period and consumption rises by less than 18%. World oilseed prices drop at first, but then stabilise. At the end of the forecast period, they are 4% lower than in 2002. In real terms, this represents a more substantial decrease of 11%.
- The expansion in area in Brazil, though not limitless, looks set to continue rising quickly over the projection period. Expanding area and somewhat higher yields raise Brazilian oilseed production by 40%, on top of the 18% increase in 2002 alone. At the same time, OECD oilseed production grows 19% over the period, but half this increase takes place in 2003 as production in some countries recovers from current poor growing conditions.
- World oilseed meal use rises by 17% over the projection period. But slowly rising feed demand is barely sufficient to offset rising supplies, and oilseed meal prices are relatively flat, falling initially but then rising slowly over the period to end near 2002 nominal price levels. In real terms, oilseed meal prices fall by 8%.
- Global vegetable oil output and use rise by 21% and 19%, respectively. Continued strong demand may be sufficient to sustain the recent price rise, despite a return to normal weather and some supply response. Prices are expected to rise by a further 2% by 2008, which corresponds to a decrease of 5% in real terms.

Capital investments in palm oil production that come on-line in 2005 lead to an atypically large increase in vegetable oil availability in that year. This pushes down prices of vegetable oil and oilseeds in that year. Supply response in the form of a drop in the oilseed area will lead to the opposite price effects the next year. This effect is exacerbated as a sharp change in Brazil's exchange rate impacts on relative prices such that oilseed area expansion there briefly pauses in 2006.

* All data provided in this chapter are on a crop year basis unless otherwise specified. All statements of per cent growth over the Outlook period are calculated as the 2002 value, unless otherwise specified.

Figure 26. **Flat nominal world prices for oilseeds and oilseed products**



- a) Weighted average oilseed price, Europe.
- b) Weighted average oilseed meal price, Europe.
- c) Weighted average price of oilseed oils and palm oil.

Source: OECD Secretariat.

World market trends and prospects

Current prices increase sharply as weather problems persist, but prices should fall if weather improves

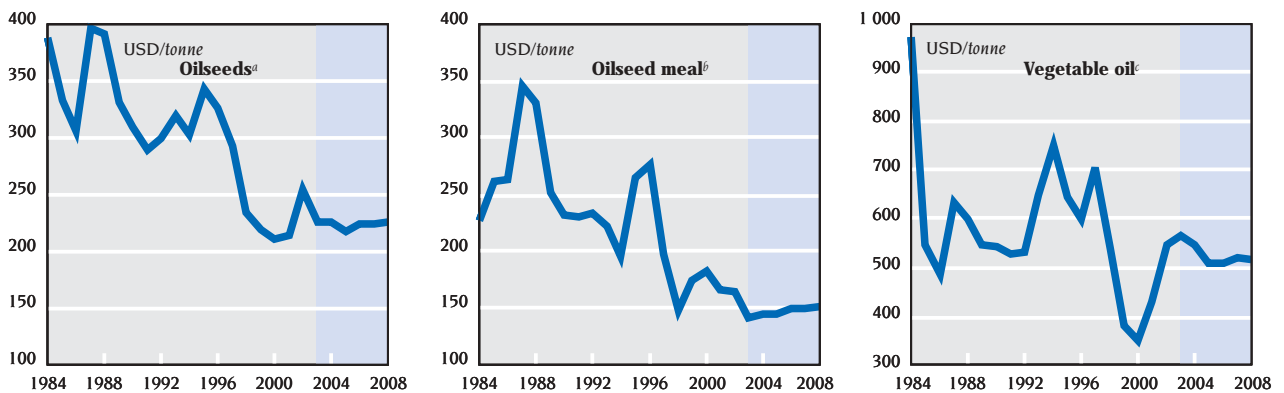
Persistent weather difficulties have reduced supplies, creating pressure for higher prices for oilseeds and oilseed products in world markets. Moreover, after world oilseed stocks fell from over 9% of use in 2000 to only about 7% in 2001, much more significant rises in prices in 2002 were required to reduce stocks further towards 6% of use and to restrict consumption. However, the medium-term outlook is not dominated by current weather; weather is assumed to return to average. As such, with yields back at trend levels and area planted growing in response to recent high prices, world oilseed production should rise by 18% over the period. These averages mask a significant increase in 2003 due to yield recovery and to supply response, amounting to almost 10% in OECD member countries or half their total production increase over the baseline.

While global production expands, the stable macroeconomic environment assumed during the projection period favours steady demand growth for oilseeds and oilseed products. After an initial decrease of 10% in 2003, nominal oilseed prices rise somewhat to end the projection period down 4% relative to 2002, or off 11% in real terms.

Demand helps vegetable oil prices keep much of their recent strength even as supplies expand

World consumption of vegetable oil is projected to remain strong during the Outlook period, rising by 19%. Alongside continued growth in OECD member countries, amounting to a 13% increase, a good macroeconomic environment in non-member Economies with rising incomes and stable, even strengthening, exchange rates, helps consumption of vegetable oil to rise by 23% in these countries. As such, the vegetable oil price in world markets is expected to remain at the current, weather-induced peak, and ends the period 2% higher in nominal terms. This implies a real price decrease of 5%. This demand strength maintains prices over time despite the production increase

Figure 27. **Weak real world oilseed and oilseed product prices**



- a) Weighted average oilseed price, Europe, deflated by USA GDP deflator 2001= 1.
 b) Weighted average oilseed meal price, Europe, deflated by USA GDP deflator 2001= 1.
 c) Weighted average price of oilseed oils and palm oil, deflated by USA GDP deflator 2001= 1.
 Source: OECD Secretariat.

in 2003, following recent price increases, and a second rapid supply expansion in 2005, due to an anticipated increase in palm oil production capacity.

Oilseed meal demand may keep up with growing supplies

A similar – though less pronounced – demand increase is likely for oilseed meal. World prices for oilseed meal are projected to be similar to oilseed prices, with an initial decrease of 13% followed by a gradual increase in nominal terms. By the end of the period, prices are to be about the same as in 2002, representing a decrease in real terms of 8%. Relatively flat nominal prices and rising meat production encourages global consumption of oilseed meal, which rises 17%.

World trade expands, but less so for OECD members

OECD exports of oilseeds and oilseed products grow over the projection period. As is the case with oilseed production, a large portion of the total change occurs in 2003 alone. Of the total increase in both OECD oilseed production and exports over the forecast period, about 40% occurs in 2003. Similarly, a significant share of the growth in exports of oilseed meal and oil from OECD members also takes place early on. In later years, growth is more modest. Nevertheless, trade by some OECD member countries grows throughout the period. Examples are the rapid expansion of oilseed and oilseed meal imports by Mexico, the fast-growing vegetable oil exports from the European Union and changes in sometimes relatively small levels of trade on the part of central European countries. Nevertheless, the majority of growth in oilseed and oilseed product trade appears to be taking place among non-member Economies. In particular, Brazilian and Argentinean exports of these commodities rise rapidly, while imports of oilseeds and oilseed products to China and some other non-member Economies continue to grow at a fast pace.

Recent deviations from the norm create short-term uncertainty

The Outlook projections are set against an environment which is unlikely to produce many sudden shocks. In particular, the projections assume average weather, no further exchange rate shocks in key producing or consuming regions and no change in policies other than those announced. Of

these conditioning factors, sensitivity analysis conducted this year allows yields to vary based on historic distributions in order to give some sense of how deviations from average weather could affect crop markets. The results of this analysis are reported elsewhere in this report.

Even in this stable environment, there is uncertainty about the nature of recovery in several key producing areas that are currently suffering weather-related difficulties. Both Australian and Canadian exports of oilseeds and oilseed products are likely to rebound, given a return to normal yields and harvested areas. Similarly, as US yields recover in 2003 so should production. But the increase is less than that in yields, given that area is not expected to return to the levels induced by the higher loan rates preceding the implementation of the FSRI Act (see Box 3). It is this recovery that largely explains the sharp increase in OECD oilseed production in 2003 and, along with supply response in the form of more area allocated to oilseeds, the price decrease in that year as well.

Spill-over effects from BSE in Japan may continue to be significant

Possibly as a side effect of the recent BSE crisis in Japan, recent data hint at a break in the downward trend of poultry production and, in addition, better prospects for domestic pork production. These events help to create a mild increase in oilseed meal demand for feed, which corresponds to a relatively large increase in oilseed meal imports into Japan. However, this increase in feed demand may prove transitory and a reduction in oilseed meal consumption back towards previous levels and fewer imports should not be excluded.

The South American soybean boom must have an end, even if it is not in sight

Observing the surging oilseed output of South America, common sense dictates that this must, at some point, slow down or even stop. At the same time, few observers see much likelihood of a stopping point in the medium-term. While the cultivatable area of Brazil may indeed be finite, the potential for more land to be pulled into oilseed production remains substantial. The Outlook for world prices may not be particularly strong, but even the relatively lower levels of the recent past were sufficient to encourage area expansion, once combined with a general decreasing trend for the Real. Thus, by 2008, the Outlook projections show another 5 million hectares oilseed area on top of over 2.5 million hectares added in 2002 alone. Notwithstanding this reduced pace of expansion relative to the recent past, oilseed production of Brazil ends the period 40% larger than in 2002.

On the other hand, no strong additional growth in total area in agriculture is foreseen in Argentina and, moreover, little possibility for further reductions in pasture area in the face of significant increases in beef and milk production. In the Outlook period, oilseed area expands at a much slower pace than in the past and production increases by 11% – which is modest after having more than doubled from 1996 to 2002. Although the fact that total area is indeed restricted at some point, it may prove that there remains potential for further significant expansion, including in the area allocated to oilseeds. This would pressure prices lower.

A “sneeze” in a major producing area can have effects in world markets

Weak exchange rates following devaluations, in Brazil in the late 1990s and in Argentina in 2002, can encourage an export-led increase in oilseed production. The oilseeds and oilseed products can be exported directly or, in the case of oilseed meal, indirectly through livestock products. A further crisis in exchange rates may lead to short-term disruption, due to disarray in

financing markets or infrastructure, but could give a medium-term boost to the exports of either of these two countries. On the other hand, if currencies were to strengthen against those of other countries, then the world market prices would be less attractive and exports less profitable. The Outlook projections highlight this sensitivity: the sharp change in Brazil's exchange rate in 2004 along with the slight weakness in world prices in 2005 induce a serious slow-down in the area expansion of Brazil towards the end of the period. This slower rate of growth in Brazilian oilseed production, falling to under 2% in 2006 as compared to the average rate of 6% for the projection period, exacerbates the global supply response to the 2005 prices, leading to a significant and opposite price shock in 2006 as well.

Palm oil represents a growing share of vegetable oil

Palm oil production has risen steadily to become a third of the total vegetable oil production as defined in the Outlook. By the end of the projection period, global palm oil production is seen to rise by more than 30%. Indeed, it is the 2005 realisation of earlier palm production investment decisions that generates a sufficiently large increase in total supply so as to bring world prices lower. More generally, as palm oil is not produced in OECD member countries, production is determined in part by local agricultural policies, whether subsidising or taxing agriculture, and by macroeconomic stability – as well as by the evolution of world prices.

The stage is set for strong, but almost separate, growth in supplies of meal and oil

The net effect of strong production capacity of soybeans in non-member Economies, particularly Brazil and Argentina, is significant competitive pressure in international markets. This is not only so for oilseeds, but also for oilseed meal given soybeans' high meal content. As long as capital investment in palm oil producing countries continues in the context of a reasonably stable macroeconomic environment, there is a likelihood of steady long-term growth in capacity. At the same time, and also with the same caveat regarding the context in terms of exchange rate and financing and suchlike, Brazil's expansion also rests in part on continued investment, in particular in infrastructure that reduces the costs of transporting soybeans to ports.¹ In all, there clearly exists a probability of greater supply of soybeans, with their high yield in meal, and of palm oil that can be exported at low prices in the future.

Support policies play a significant role in the face of competition

Policies of some OECD member countries can insulate their producers from at least some part of this pressure, largely by adding direct payments atop market returns so that OECD producers are more likely to continue selling oilseeds than they would be if they faced price signals alone. These sorts of payments raise oilseed producer revenues in the European Union and the United States, for example. In the latter case, the price signals are almost completely lost throughout the 2003-2008 period, as US policies provide producers with a per unit level of return that exceeds the market price. Indeed, this explains why oilseed production in the United States and Japan, for example, remain at recent levels with little regard to the variations in world prices during the projection period. This is in particular an important issue regarding the United States, which produces one-third of total world oilseed output. Thus, at the expense of tax-payers, OECD supply potential may be encouraged even in those cases where crop products could be supplied more efficiently by another producer.

Consumers of oilseed products at world market prices are to be counted among the beneficiaries of the supply potential in non-member Economies and, to a certain extent, of the tax-payer funded support to producers. Despite the fact that global stocks are projected to remain low relative to total consumption, the world market prices for oilseeds, oilseed meal and vegetable oil are projected to decline in real terms. This is clearly to the benefit of consumers of these goods directly and others goods, such as livestock products, which are made in part from oilseed products.

Key issues and uncertainties

Policies to be decided in the future will affect producer incentives

It is certain that some countries will adjust their agricultural policies, in detail of application or more fundamentally, during the course of the Outlook. Those amendments that are known in advance are mostly incorporated in the projections, as in the case of the US FSRI Act, but these reflect only a small part of what might reasonably be expected in the next six years. The European Commission's CAP reform proposal is under discussion and, in any case, accession of many central European countries is looming. Japan's slowly evolving agricultural policies will likely have implications for local oilseed production, particularly if even more incentives are provided to rice-growers who reallocate land to soybean production. More generally, world-wide agricultural policies of producer support and border measures may be challenged by a successful conclusion to the Doha Round of WTO negotiations.

What will be the role of transgenic organisms?

The future role of transgenic oilseeds and their products in world markets remains a matter of some uncertainty. The Outlook assumes that the market for oilseeds does not change substantially relative to the current setting. At the same time, trend rates of yield growth are typically used, implying that technological progress continues in some form. Clearly, deviations from our neutral assumption about the use of transgenic crops are possible and could impact on oilseed and oilseed product markets in the medium-term future.

The surrounding context is key

Of course, the Outlook projections for oilseed markets depend on external factors, including the results of the other sectors. As mentioned before, the macroeconomic and weather assumptions are critical factors. In addition, the projections call for declining real cereal prices, save rice, so competing land uses are unlikely to be more attractive than oilseed area. There is also a growing demand for oilseed meal to be used as an input to rising livestock production, as will be discussed later.

Note

1. A USDA report reported that total-farm costs of production were 20-25% lower in Brazil and Argentina as compared to those of the USA in calculations based on late 1990s data. This same report highlighted the greater transportation costs of moving soybeans from the interior of South America to port facilities. (See Agriculture in Brazil and Argentina, WRS-01-3.)

METHODOLOGY

The projections presented and analysed in this document are the result of a process that brings together information from member countries and a number of other sources. Consistency in this process is ensured by the use of the OECD's *Aglink* model. A large amount of expert judgement, however, is applied at various stages of the Outlook process. The OECD *Agricultural Outlook* presents a single assessment, judged by the Secretariat to be plausible given the underlying assumptions, the procedure of information exchange outlined below and the information to which it had access as of 25 April 2003.

The starting point of the outlook process is the reply by member countries (and some non-member Economies) to an annual questionnaire circulated by the Secretariat at mid-year. Through these questionnaires, the Secretariat obtains information from member countries on future market developments and on the evolution of agricultural policies in OECD countries. This information is supplemented by that obtained from other sources, such as the FAO, the World Bank or the IMF, to establish a view of the main forces determining market developments in the non-member Economies. This part of the process is aimed at creating a first insight into possible market developments and at establishing the key assumptions which condition the Outlook. The main economic and policy assumptions are indicated in the chapter on Economic and Policy Assumptions, and in specific tables of the present report. In a change to the previous procedure, the assumed medium term developments in main macroeconomic variables are based on December 2002 projections of the OECD's Economic Department. While sometimes different from macroeconomic assumptions provided through the questionnaire replies, it was judged preferable to use one consistent source for these variables.

As a next step, the OECD's *Aglink* model is used to facilitate a consistent integration of this information and to derive an initial set of global market projections (baseline). *Aglink* is a dynamic economic and policy specific model of major temperate-zone agricultural commodity markets. It currently consists of modules for ten main agricultural producing and trading countries, or groups of countries, within the OECD, a complete agricultural sector module for Argentina, Russia, China and Brazil (added this year) and a beef sector module for other MERCOSUR countries. A standalone sugar model has also been developed (and separate from the *Aglink* model at this stage), to produce a set of medium baseline projections for world and OECD sugar markets, covering raw and white or refine sugar. The modules are all developed by the Secretariat in conjunction with experts in member

countries and non-member Economies and, in some cases, with assistance from other national administrations. The initial baseline results are compared with those obtained from the questionnaire replies and any emerging issues are discussed in bilateral exchanges with country experts. On the basis of these discussions and of updated information, a second baseline is produced.

In addition to quantities produced, consumed and traded, the baseline also includes projections for nominal prices for the commodities concerned. Unless otherwise stated, prices referred to in the text are also in nominal terms.

The information generated is used to prepare reports presenting outlook assessments for cereals, oilseeds, meats, dairy products and sugar. These reports are discussed at the annual meetings of the Working Group on Meat and Dairy Products and the Working Group on Cereals, Animal Feeds and Sugar of the OECD Committee for Agriculture. The outlook discussions in the Working Groups focus on key issues emerging from the replies to the questionnaires and any adjustments which have to be made to member country projections in order to derive a coherent global baseline. Subsequent to the meetings of the commodity Working Groups and final data revisions, a revised baseline is produced and its sensitivity to major uncertainties evaluated. The revised projections form the basis of a draft of the present OECD *Agricultural Outlook* publication, which is normally discussed by the Working Party on Agricultural Policies and Markets of the Committee for Agriculture, prior to publication.

The above procedure implies that the baseline projections presented in this report are heavily conditioned by those developed by member countries and participating non-member Economies. It also reconciles inconsistencies between individual country projections through the use of a formal modelling framework and highlights the sensitivity of the outcomes to key assumptions. The review process ensures that the judgement of country experts is applied to the projections and related analyses. However, the final responsibility for the projections and their interpretation rests with the OECD Secretariat.

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SMP production, export	
WMP production, import export	
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Egg balance	
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Australia

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Oilseed production, crush, trade, price	
Oilseed meal price	
Vegetable oils price	
Beef production, trade, price	
Pig meat production, trade, prices	
Poultry meat production, trade, prices	
Sheep meat production, trade, prices	
Milk production, liquid sales, industrial use, prices	
Butter production, trade, price	
Cheese production, trade, price	
SMP production, trade, price	
WMP production, trade	
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Vegetable oils production, imports	
Rice, production, exports	
Casein, net trade	
Consumption of all products	Calculated as production + imports – exports – change in stocks.

Brazil

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Pig meat utilisation, supply, prices	
Poultry meat utilisation, supply, prices	
Sheep meat utilisation, supply, prices	
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Butter utilisation, supply, price	
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SMP utilisation, supply, price	
WMP utilisation, supply, price	
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Canada

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Oilseed production, crush, exports, feed use, price	
Oilseed meal production, imports, exports, price	
Vegetable oils production, imports, exports, price	
Beef production, imports, exports, price	
Pig meat production, exports, price	
Poultry meat production, imports, price	
Sheep meat production, imports, price	
Milk production, liquid sales, industrial use, prices, target return	
Dairy subsidy	
Butter production, exports, price, support price	
Cheese production, imports	
SMP production, exports, price	
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Consumption of all products	Calculated as production + imports – exports – change in stocks.

China

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Coarse grains price	
Rice balance, price	
Oilseed balance, price	
Beef balance, price	
Pig meat balance, price	
Poultry balance, price	
Milk price	
Coarse grains production, imports, exports, stocks	
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Rapeseed meal balance	
Rapeseed oil balance	
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Butter production, imports, exports	
Cheese production, imports, exports	
SMP imports	
WMP imports, exports	
Consumption of all products	Calculated as production + imports – exports – change in stocks.

European Union

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Rice price	
Poultry meat price	
Sheep meat price	
Milk price	
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Vegetable oil price	
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Rice production, imports, stocks	
Oilseeds production	
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Pig meat production, exports, imports, stocks	
Poultry meat production, exports, imports, stocks	
Sheep meat production, imports	
Butter production, imports, exports, stocks	
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SMP production, imports, exports, stocks	
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Vegetable oils production, imports, exports, stocks	
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Cheese price	
SMP price	
Consumption of all products	Calculated as production + imports – exports – change in stocks.

Hungary

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Oilseed production, crush, exports, price		
Oilseed meals production, imports, price		
Vegetable oils production, imports		
Beef and veal production and price		
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Poultry meat production, imports, price		
Butter production, exports, price		
Cheese production, exports, price		
SMP production		
Milk production, liquid sales, industrial use, price		FAO, <i>FAOSTAT PC database</i> , Rome (2002).
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Consumption of all products	Calculated as production + imports – exports – change in stocks.	

Japan

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Vegetable oil production, imports, stocks	
Beef production, imports, price	
Pig meat production, imports, price	
Sheepmeat imports	
Poultry meat production, imports, price	
Milk production, fluid sales, industrial use, price, support price, transaction price, deficiency payment	
Butter production, imports, price, stabilisation price	
Cheese production, imports, price	
SMP production, imports, price, stabilisation price	
WMP production	
Consumption of all products	Calculated as production + imports – exports – change in stocks.

Korea

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Beef production, price	
Pig meat production, price	
Poultry meat production, price	
Sheep meat production, price	
Rice production, export, stocks and price	
Butter production	
SMP production	
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Maize support price	
Cereal income payment	
Oilseed support price	SAGAR, <i>Medium Term Questionnaire Reply</i> (August 2002), Mexico City.
Soyabean income payment	
Milk production, price	
Milk liquid sales, industrial use	
Butter price	
Cheese price	
SMP price	
WMP price	
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New Zealand

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Pig meat production, imports, price	
Poultry meat production, price	
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Cheese production, exports, price	
SMP production, exports, price	
WMP production, consumption, exports, price	
Casein price	
Wheat feed use	
Coarse grain imports, feed use	
Butter consumption	
SMP consumption	
Whey powder net trade	FAO, FAOSTAT PC <i>database</i> , Rome (2002).
Casein, exports	USDA (January 2003), PS&D FAO.
Consumption of all products	Calculated as production + imports – exports – change in stocks.

Poland

Wheat production, imports	IERIGZ(86-96).
Coarse grains production, imports	USDA (September/October 2002), PS&D <i>Database</i> ,
Oilseed production, crush, imports	Washington DC.
Oilseed meals production, imports	Reply to OECD medium term questionnaire Warsaw,
Vegetable oils production, imports	(September 2002).
Pig meat production, exports, price	
Poultry meat production, imports, price	
Cheese exports	
Milk production, on farm use liquid sales, industrial use, price	WTO (81-84), GUS (88-90), IERIGZ (91-96), Reply to OECD medium term questionnaire Warsaw, (September 2002).
Butter production, exports, imports, price	
Cheese price	
SMP production, exports price	
Casein exports	USDA (September/October 2002), PS&D <i>Database</i> ,
	Washington DC.
Cheese production	GUS (89-95), IERIGZ (96), FAO FAOSTAT PC <i>Database</i> ,
Whey powder net trade	Rome (2002).
Wheat price	GUS (86-96).
Coarse grains price	Reply to OECD medium term questionnaire Warsaw,
Oilseed price	(September 2002).
Oilseed meals price	
Vegetable oils price	
Beef production, price	
Consumption of all products	Calculated as production + imports – exports – change in stocks.

Russia

Wheat production, imports, exports, ending stocks	USDA (January 2003), <i>PS&D Database</i> , Washington DC.
Coarse grains production, imports, exports, ending stocks	
Oilseed production, crush, imports, exports	
Oilseed meals production, imports, exports	
Vegetable oils production, imports, exports	
Rice production, imports, exports	
Beef production, imports	FAO, <i>FAOSTAT PC database</i> (2002), Rome.
Pig meat production, imports	
Poultry meat production, imports	USDA (January 2003), <i>PS&D Database</i> , Washington DC.
Milk production	FAO, <i>FAOSTAT PC database</i> (2002), Rome.
Butter production, imports	USDA (January 2003), <i>PS&D Database</i> , Washington DC.
Cheese production, imports	
SMP production, imports, exports	
WMP production, imports	
Consumption of wheat, coarse grain, rice, oilseeds, oilseed meals, vegetable oils, beef, pig meat, poultry meat, sheep meat, butter, cheese, SMP and WMP	Calculated as production – imports + exports – change in stocks.
Prices	OECD <i>PSE database</i> (2003).

United States

Wheat production, imports, exports, stocks, price, EEP payment	USDA, <i>Wheat Outlook</i> (January 2003), Washington DC.
Coarse grains production, exports and price	USDA, <i>Feed Outlook</i> (January 2003), Washington DC.
Rice production, imports, exports, stocks and price	USDA, <i>Rice Outlook</i> (January 2003), Washington DC.
Beef production, imports, exports, price	USDA, <i>Livestock, Dairy and Poultry</i> (January 2003), Washington DC.
Pig meat production, imports, exports, price	
Poultry meat production, exports, price	
Sheep meat production, imports, price	
Milk production, liquid sales, industrial use, support price, prices	USDA, <i>Livestock, Dairy and Poultry</i> (January 2003), Washington DC.
Butter production, exports, stocks, price	
Cheese production, imports, exports, price	
SMP production, exports, stocks, price	
WMP production, exports, stocks	USDA <i>Dairy Yearbook</i> (2002), Washington DC.
Whey powder production, exports, price	
Casein imports	USDA (January 2003), <i>PS&D Database</i> , Washington DC.
Oilseed production, crush, exports, and price	USDA, <i>Oil Crops Outlook</i> (January 2003), Washington DC.
Oilseed meals production, imports, exports and price	
Vegetable oils production, imports, exports, stocks and price	
Wheat target price, loan rate, ARP area, CRP area, other land idled	USDA, <i>Agricultural Outlook</i> (2003), Washington DC.
Coarse grains ARP area, CRP area, other land idled	
Maize target price, loan rate	
Soyabean loan rate, CRP area	
Consumption of all products	Calculated as production + imports – exports – change in stocks.

Other OECD

Wheat production, consumption	Replies to OECD Questionnaires (September 2002). USDA (January 2003), PS&D <i>Database</i> , Washington DC.
Coarse grains production, consumption	
Oilseed production, crush, consumption	
Oilseed meals production, consumption	
Vegetable oils production, consumption	
Rice production, consumption	
Beef production, consumption	Replies to OECD Questionnaires (September 2002). USDA (January 2003), PS&D <i>Database</i> , Washington DC.
Pig meat production, consumption	
Poultry meat production, consumption	
Sheep meat production, consumption	
Milk production, on farm use, liquid sales, industrial use	Replies to OECD Questionnaires (September 2002).
Butter production, consumption	
Cheese production, consumption	
SMP production, consumption	
WMP production, consumption	
Net trade in wheat, coarse grain, rice, oilseeds, oilseed meals, vegetable oils, beef, pig meat, poultry meat, sheep meat, butter, cheese, SMP and WMP	Calculated as production – consumption – change in stocks.

OECD

Production of wheat, coarse grains, rice, oilseeds, oilseed meals, vegetable oils, butter, cheese, SMP, WMP	Calculated as Australia + Canada + EU + Japan + New Zealand + United States + Mexico + Korea + Poland + Hungary + other OECD.
Consumption of wheat, coarse grains, rice, oilseeds, oilseed meals, vegetable oils, butter, cheese, SMP, whole milk powder	
Imports of butter, cheese, SMP, WMP	
Exports of butter, cheese, SMP, WMP	
Stocks of wheat, coarse grains, rice, oilseeds, oilseed meals, vegetable oils, butter, cheese, SMP	
Feed use of wheat, coarse grains	
Oilseed crush	

Rest of World

Wheat production, stocks	USDA (December 2002), PS&D <i>Database</i> , Washington DC.
Coarse grains production, stocks	
Rice production, stocks	
Oilseed production, crush, stocks	
Oilseed meals production, stocks	
Vegetable oils production, stocks	
Net trade of wheat, coarse grains, rice, oilseeds, oilseed meals, vegetable oils, butter, cheese, SMP, WMP, whey powder	Calculated as – net trade of (OECD + RUS + Other Independent States + Brazil + China + Argentina)
Milk production, industrial use, other uses	Calculated as World – (OECD + RUS + Other Independent States + Argentina + Brazil + China).
Butter production	
Cheese production	
SMP production	
WMP production	
Consumption of all products	Calculated as production – net trade – change in stocks.

Chinese Taipei, India

Rice production, stocks

USDA (December 2002) *PS&D Database*, Washington DC.**Indonesia**

Rice production, imports, stocks

Thailand

Rice production, exports, stocks

Chinese Taipei, India, Indonesia, Thailand

Rice price

University of Arkansas rice database (2002), Fayetteville, USA.
USDA *FAS reports* (various issues), Washington DC.
IRRI *World Rice Statistics* (various issues), Makati, Philippines.

Consumption of all products

Calculated as production – net trade – change in stocks.

OIS (Other Independent States)Wheat production, net trade, ending stocks
Coarse grains production, net trade, ending stocks
Rice production, net trade
Oilseed production, crush, net trade, ending stocks
Oilseed meals production, net trade
Vegetable oils production, net tradeUSDA (January 2003), *PS&D Database*, Washington DC for FSU.
Calculated as FSU-RUS.Butter production, net trade
Cheese production, net trade
SMP production, net trade
WMP production, net tradeUSDA (January 2003), *PS&D Database*, Washington DC for FSU.
Calculated as FSU-RUS.Consumption of wheat, coarse grain, rice, oilseeds,
oilseed meals, vegetable oils, beef, pig meat,
poultry meat, sheep meat, butter, cheese, SMP
and WMP

Calculated as production – net trade – change in stocks.

WorldWheat production, feed use, stocks
Coarse grains production, feed use, stocks
Rice production, stocks
Oilseed production, crush, stocks
Oilseed meals production, stocks
Vegetable oils production, stocks
Butter, cheese, skim milk powder, stocksCalculated as Rest of world + OECD + Argentina + Brazil + China
+ OIS + Russia.Production of butter, cheese, skim milk powder, whole
milk powderFAO, *FAOSTAT PC database*, Rome (2002).

Wheat price

USDA, *Wheat Outlook*, January 2003.

Coarse grains price

USDA, *Feed Outlook*, January 2003.

Rice price

USDA, *Rice Outlook*, January 2003.

Oilseed price

ISTA Mielke GmbH, *Oil World Annual 2002*, Hamburg.

Oilseed meals price

Oilseed oils price

Palm oil price

Butter price

SMP price

USDA, *Dairy World Markets and Trade* (December 2002),
Washington DC.

Cheese price	USDA, <i>Dairy World Markets and Trade</i> (December 2002), Washington DC.
WMP price	USDA, <i>Dairy World Markets and Trade</i> (December 2002), Washington DC.
Whey powder price	USDA, <i>Livestock, Dairy and Poultry</i> (January 2002), Washington DC.
Casein price	New Zealand Dairy Board, <i>International Market Update</i> , Wellington.
Tariffs, tariff-quotas and subsidised export limits for OECD countries unless otherwise specified	GATT (1996), <i>Uruguay Round GATT Schedules</i> , Geneva.
Consumption of all products	Calculated as production – net trade – change in stocks.
Sugar	
Sugar production, raw and white exports, raw and white imports, consumption, stocks	FO Licht World Sugar Balances, 2002.

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ACRONYMS AND ABBREVIATIONS

Acronyms

ABARE	Australian Bureau of Agricultural and Resource Economics
ALIC	Agriculture and Livestock Industry Corporation
AMAD	Agricultural Market Access Database
AMS	Agricultural Marketing Service
ASEAN	Association of Southeast Asian Nations
BSE	Bovine spongiform encephalopathy
CEEC	Central and Eastern European Countries
CAP	Common Agricultural Policy (EU)
CCP	Counter-Cyclical Payments (US)
CIS	Commonwealth of Independent States
CoOI	Country-of-Origin Labelling
CPI	Consumer price index
CMO	Common Market Organisation for sugar (EU)
CRP	Conservation Reserve Program (US)
DEIP	Dairy Export Incentive Program (US)
DMLP	Dairy Market Loss Payment (US)
DPC	Direct Payments for Crops (US)
EBA	Everything-But-Arms Initiative (EU)
ECB	European Central Bank
ECU	European Currency Unit
EEP	Export Enhancement Program (US)
ERS	Economic Research Service of the US Department for Agriculture
EUROSTAT	Statistical Office of the European Communities
FAIR ACT	Federal Agriculture Improvement and Reform Act (US) of 1996
FAO	Food and Agriculture Organisation of the United Nations
FMD	Foot and mouth disease
FAS	Foreign Agricultural Service of the US Department for Agriculture
FSRI ACT	Farm Security and Rural Investment Act (US) of 2002
FTAA	Free Trade Area of the Americas
GATT	General Agreement on Tariffs and Trade
GDP	Gross domestic product
GM	Genetically modified
GMO	Genetically engineered or modified plant, animal, micro-organism or virus
HFCS	High Fructose Corn Syrup
HS	Harmonised Commodity Description and Coding System
IMF	International Monetary Fund
MAF	Ministry of Agriculture and Forestry (New Zealand)
MAFF	Ministry of Agriculture, Forestry and Fisheries (Japan)
MERCOSUR	Common Market of the South
MLAP	Marketing Loan Assistance Program (US)
MLC	Meat and Livestock Commission (United Kingdom)
MFN	Most Favoured Nation
MPC	Milk protein concentrates
MTR	Mid-Term Review of the CAP (EU)
NAFTA	North American Free Trade Agreement
NIS	Newly Independent States
NME	Non-member Economies
NTBs	Non-Tariff Barriers
NZDB	New Zealand Dairy Board
OECD	Organisation for Economic Co-operation and Development
OIE	Office International des Epizooties
OMB	Office of Management and Budget (United States)
OTMS	Over Thirty Month Scheme
PFCP	Production Flexibility Contract Payments (US)
PSE	Producer Support Estimate
R&D	Research and Development
RR	Roundup Ready seed varieties
RRAC	Relative Risk Aversion Coefficient
RTAs	Regional Trading Arrangements
SARS	Severe Acute Respiratory Syndrome
SMP	Skim milk powder
SPS measures	Sanitary and phyto-sanitary measures
STE	State Trading Enterprises
TRQ	Tariff rate quota
UK	United Kingdom
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational Scientific and Cultural Organisation
URAA	Uruguay Round Agreement on Agriculture
US	United States
USDA	United States Department of Agriculture
VAT	Value added tax
WMP	Whole milk powder
WPC	Whey protein concentrates
WTO	World Trade Organisation

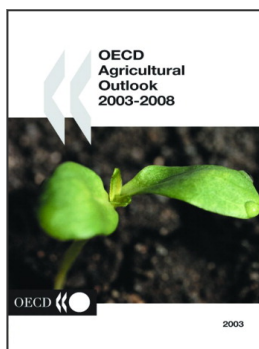
For an explanation of technical terms, see the *Glossary*

Abbreviations and symbols

ARS	Peso (Argentina)	Euro	European currency unit	mn	Million
AUD	Dollars (Australian)	f.o.b.	Freight on board	mt	Million tonnes
Bn	Billion	Ha	Hectare	NZD	Dollars (New Zealand)
CAD	Dollars (Canadian)	JFY	Japanese fiscal year (beg. 1 April)	pw	Product weight
c.i.f.	Cost insurance freight	JPY	Japanese yen	rse	Raw sugar equivalent
CNY	Yuan (China)	Kg	Kilogram	rtc	Ready-to-cook
cts/lb	US cents per pound	kt	Thousand tonnes	rw	Retail weight
Cwe	carcass weight equivalent	L	Litre	t	Tonnes
Dw	Dressed weight	lw	Live weight	t/ha	Tonnes per hectare
ECU	European currency unit	mha	Million hectares	USD	dollars (United States)

THE OUTLOOK IN BRIEF

- World production of agricultural products is projected to continue to expand over the period to 2008 with the mix of outputs shifting towards a larger share of livestock products and feedstuffs and a lower share of food grains. Continued productivity increases will account for the largest share of production growth. Most of the additional production of agricultural products over the Outlook will take place in non-member Economies (NMEs). However, their food consumption will grow even faster and will provide opportunities for increased production and trade with OECD countries, particularly for higher value processed products and feedstuffs.
- An expected rebound in OECD economic growth and revival of the world economy from 2004 onwards, supported by continuing, albeit slowing, population growth in NMEs leads to an increase in global demand for agricultural products. Much of the growth in world demand is expected to be reflected in increased consumption of coarse grains and oilseeds, with a shift away from wheat and rice based staple foods towards more processed food and higher protein products such as meats. The shift in consumption patterns is due mainly to higher per capita incomes and dietary changes in NMEs with only slow growth in food demand expected in mature OECD markets.
- Drought induced production adjustments and low demand lead to some divergence between cereal and livestock product prices at the beginning of the Outlook. As production rebounds, cereal and oilseed prices fall, improving the profitability of livestock sectors. Higher demand growth with the revival of the world economy leads to rising agricultural product prices over the medium term. Increasing crop and livestock product supplies over the Outlook period, and some rebuilding of global stocks, moderate the extent and pace of future price increases for most commodities.
- Trade in bulk and processed food products will continue to expand. The highest growth in net trade of OECD countries will be for cereals, followed by dairy products, when compared to the average volumes for 1997-2001. Some slowdown in OECD meat exports is expected due to faster internal consumption and intra-OECD trade, as well as increased competition in international markets.
- High farm support and protection in the OECD area and trade restrictions in a number of NMEs, continue to have a major impact on international agricultural markets. The pace of agricultural reform for particular commodities continues to be mixed, proceeding for some products and in some countries, but having slowed or halted for others. Further improvement in market orientation and lower market protection would improve the functioning of world commodity markets and the prospects for most participants. The WTO negotiations underway on agricultural trade offer an opportunity to pursue these goals. However, success in reaching an agreement acceptable to all participants and one which promotes a more liberal trading environment will require continued international cooperation and leadership by OECD countries.



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