



Food Outlook

Global Market Analysis

FOCUS

International prices of most agricultural commodities have increased in recent months, some sharply. The FAO Food Price index has gained 34 points since the previous Food Outlook report in June, averaging 197 points in October, only 16 points short from its peak in June 2008. The upward movements of prices were connected with several factors, the most important of which were a worsening of the outlook for crops in key producing countries, which is likely to require large draw downs of stocks and result in tighter global supply and demand balances in 2010/11. Another leading factor has been the weakening of the United States Dollar (US Dollar) from mid-September, which continues to sustain the prices of nearly all agricultural and non-agricultural traded commodities. The increase in international prices of food commodities, all of which accruing in the second half of 2010, is boosting the overall food import bill in 2010 closer to the peak reached in 2008.

The pressure on prices to rise was first felt in the cereal market, most notably for wheat and barley, in August. This prompted FAO to call for an extraordinary meeting on 24 September 2010 to discuss the underlying causes and possible remedies. The meeting clearly identified the importance of reliable and up-to-date information on crop supply and demand to cope with unexpected developments in world markets. More transparency and a better understanding of the role of commodity futures markets and government responses were also viewed as necessary to address price volatility. The full report of the meeting is included in the Special Feature section of this issue of Food Outlook.

Amid fears of a repeat of the price surge experienced in 2008, FAO expects supplies of major food crops in 2010/11 to be more adequate than two years ago, mainly because of much larger reserves. The fact that supplies of rice, wheat and white maize, the most important staple food crops in many vulnerable countries, are also more ample lessens the risk of a repeat of the 2007/08 crisis in the current season. Nonetheless, following a series of unexpected downward revisions to crop forecasts in several major producing countries, world prices have risen alarmingly and at a much faster pace than in 2007/08.

Attention is now turning to plantings for the next (2011/12) marketing season. Given the expectation of falling global inventories, the size of next year's crops will be critical in setting the tone for stability in international markets. For major cereals, production must expand substantially to meet utilization and to reconstitute world reserves and farmers are likely to respond to the prevailing strong prices by expanding plantings. Cereals, however, may not be the only crops farmers will be trying to produce more of, as rising prices have also made other commodities attractive to grow, from soybeans to sugar and cotton. This could limit individual crop production responses to levels that would be insufficient to alleviate market tightness. Against this backdrop, consumers may have little choice but to pay higher prices for their food. With the pressure on world prices of most commodities not abating, the international community must remain vigilant against further supply shocks in 2011 and be prepared.

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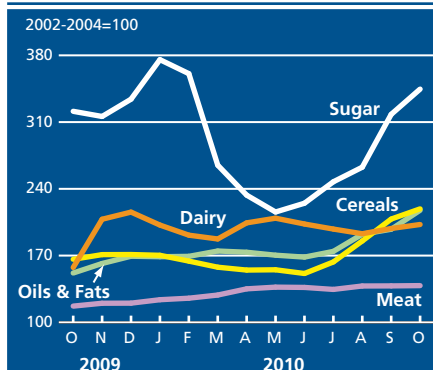
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FAO Food Price Indices (October 2009 - October 2010)



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Cereal market summary

Unexpected production shortfalls driven by weather events negatively influenced the outlook for global cereal supply in the early months of the 2010/11 marketing season from July to October. Rarely have markets exhibited this level of uncertainty and sudden turns in such a brief period of time. World cereal production this year, which is currently put at 2 216 million tonnes, is 2 percent below the previous year's level and, although it represents the third largest crop on record, it is 63 million tonnes less than the forecast reported in the June 2010 Food Outlook. Most of the downward revision involves wheat and coarse grains, following cuts in production in major grain producing countries in the Commonwealth of Independent States (CIS) and disappointing yields in the EU, Canada and the United States.

As production numbers were trimmed, policy responses in the form of export restrictions by some countries also contributed to anxiety in world markets. International prices surged rapidly, renewing worries over the tightening cereal supply and demand balance. In recent weeks, developments in other food markets and the slide in the US Dollar have further underpinned cereal prices and volatility.

Against this background, the size of next year's harvest becomes increasingly critical. For stocks to be replenished and prices to return to more normal levels, large production expansions are needed in 2011, especially for wheat and major coarse grains.

World cereal market at a glance ¹

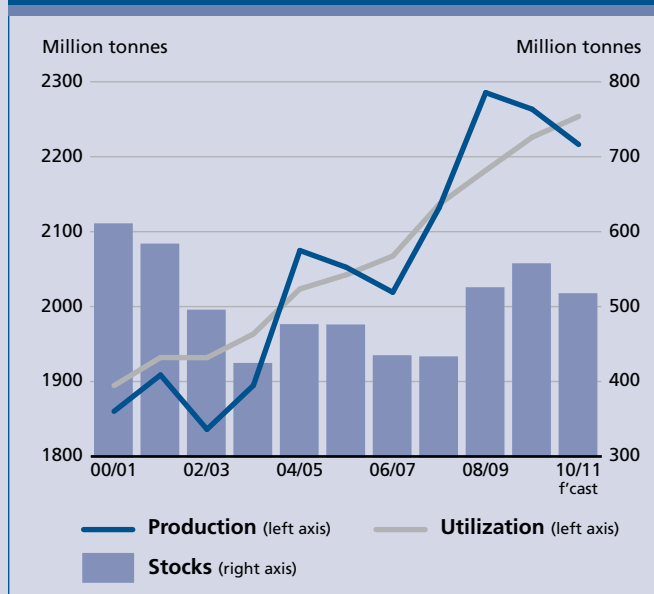
| | 2008/09 | 2009/10 estim. | 2010/11 f'cast | Change 2010/11 over 2009/10 |
|---|---------|-------------------|-------------------|--|
| million tonnes | | | | % |
| WORLD BALANCE | | | | |
| Production | 2 285.5 | 2 263.4 | 2 216.4 | -2.1 |
| Trade ² | 281.3 | 273.6 | 267.3 | -2.3 |
| Total utilization | 2 181.8 | 2 226.0 | 2 253.8 | 1.3 |
| Food | 1 027.6 | 1 040.5 | 1 056.6 | 1.5 |
| Feed | 758.0 | 761.1 | 764.0 | 0.4 |
| Other uses | 396.2 | 424.3 | 433.2 | 2.1 |
| Ending stocks | 520.4 | 552.4 | 512.5 | -7.2 |
| SUPPLY AND DEMAND INDICATORS | | | | |
| Per caput food consumption: | | | | |
| World (kg/year) | 152.1 | 152.2 | 152.7 | 0.3 |
| LIFDC (Kg/year) ³ | 155.9 | 155.9 | 156.5 | 0.4 |
| World stock-to-use ratio (%) | 23.4 | 24.5 | 22.5 | |
| Major exporters' stock-to-disappearance ratio (%) | 17.8 | 17.7 | 14.9 | |
| | | | | |
| FAO cereal price index (2002-2004=100) | 2008 | 2009 | 2010 Jan-Oct | Change: Jan-Oct 2010 over Jan-Oct 2009 % |
| | 238 | 174 | 173 | -1 |

¹ Rice in milled equivalent

² Trade data refer to exports based on a July/June marketing season for wheat and coarse grains and on a January/December marketing season for rice

³ Low-Income Food-Deficit Countries

Cereal production, utilization and stocks



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Wheat market summary

World wheat markets have undergone major turbulence in 2010/11, stemming largely from unexpected production shortfalls due to unfavourable weather conditions in a number of major producing countries, particularly in the CIS. FAO's latest forecast for 2010 wheat production stands at 648 million tonnes, which is 29 million tonnes less than predicted in the June 2010 Food Outlook. The bulk of this downward revision reflects a sharp fall in production in the Russian Federation which more than offset a better than expected crop in the United States and improved prospects in Argentina and Australia.

Although global production in 2010 is set to decline by at least 5 percent from 2009, wheat stocks have proven sufficient to cover this year's decline in world output, especially in major exporting countries. World wheat closing inventories are forecast to fall to 181 million tonnes, 10 percent below the 2010 level but still 25 percent above the critically low level of 2008. The tightening of the wheat supply and demand balance gave rise to sharp price increases from the onset of the current season in July, with prices surging most during August, when the Russian Federation decided to ban exports. Since September, prices have remained firm, although below the peaks reached in August, supported by the tighter supplies but also by the increase in maize prices and the slide in the US Dollar.

Attention is now increasingly on production prospects for 2011 but, with winter plantings in major producing countries of CIS lagging behind last year and unfavourable weather hampering early crop development in the United States, prices are expected to remain high and volatile for the remainder of the season.

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World wheat market at a glance

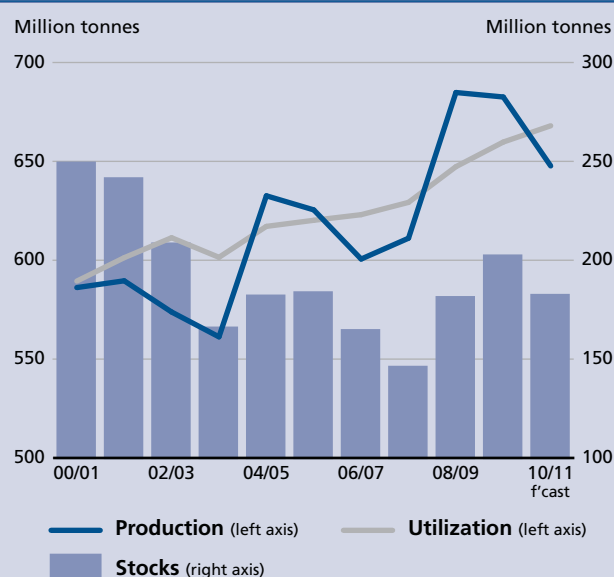
| | 2008/09 | 2009/10 estim. | 2010/11 f'cast | Change 2010/11 over 2009/10 |
|--|---------|-------------------|-------------------|--|
| million tonnes | | | | % |
| WORLD BALANCE | | | | |
| Production | 684.8 | 682.6 | 647.7 | -5.1 |
| Trade ¹ | 139.1 | 128.1 | 121.0 | -5.6 |
| Total utilization | 647.3 | 659.8 | 668.0 | 1.2 |
| Food | 453.3 | 461.0 | 467.1 | 1.3 |
| Feed | 120.7 | 122.3 | 125.0 | 2.2 |
| Other uses | 73.3 | 76.4 | 75.9 | -0.7 |
| Ending stocks | 179.8 | 200.9 | 180.9 | -9.9 |
| SUPPLY AND DEMAND INDICATORS | | | | |
| Per caput food consumption: | | | | |
| World (kg/year) | 67.1 | 67.4 | 67.5 | 0.1 |
| LIFDC (Kg/year) | 57.5 | 58.0 | 58.2 | 0.3 |
| World stock-to-use ratio (%) | 27.3 | 30.1 | 27.3 | |
| Major exporters' stock-to-disappearance ratio (%) ² | 17.5 | 21.7 | 18.4 | |
| | | | | |
| Wheat price index * (2002-2004=100) | 2008 | 2009 | 2010 Jan-Oct | Change: Jan-Oct 2010 over Jan-Oct 2009 % |
| | 235 | 154 | 159 | 2 |

* Derived from International Grains Council (IGC) Wheat Index

¹ Trade data refer to exports based on a common July/June marketing season

² Major exporters include Argentina, Australia, Canada, EU and the United States

Wheat production, utilization and stocks



Coarse grain market summary

Contrary to early-season forecasts that pointed to an increase in global output of coarse grains, the latest FAO forecast puts this year's production at 1 102 million tonnes, down 2 percent from 2009 and well below the 2008 record. As the season for the 2010 crops progressed, unfavourable weather conditions took their toll in several major producing countries. In particular, barley in the Russian Federation and Ukraine was severely affected by drought, while maize in the United States yielded considerably less than the bumper levels initially expected. While world production would still be the third largest ever, it will nevertheless fall short of the anticipated utilization of 1 126 million tonnes. This implies a considerable drawdown of world inventories this season.

World coarse grain stocks are forecast to reach 198 million tonnes by the close of seasons in 2011, down as much as 12 percent from their opening levels. As a result, the world stocks-to-use ratio for coarse grains could fall to 17.1 percent, down from 20 percent in 2010 but still above its low of 15.2 percent in 2006/07. World trade is expected to reach 116 million tonnes, up 1.2 percent from the previous season, with major exporters meeting most of the anticipated increase in world exports and countries in Asia and Europe accounting for most of the expansion in world imports.

This season's tightening of the global supply and demand balance of coarse grains is reflected in the sharp increases in international prices, with feed barley and maize prices in October up 70 and 40 percent, respectively, from October 2009. Considering that prices of coarse grains at this time of the year, corresponding with the main harvest period in northern hemisphere, should normally be at their seasonal lows, there is a strong likelihood that prices may rise even further from these already high levels.

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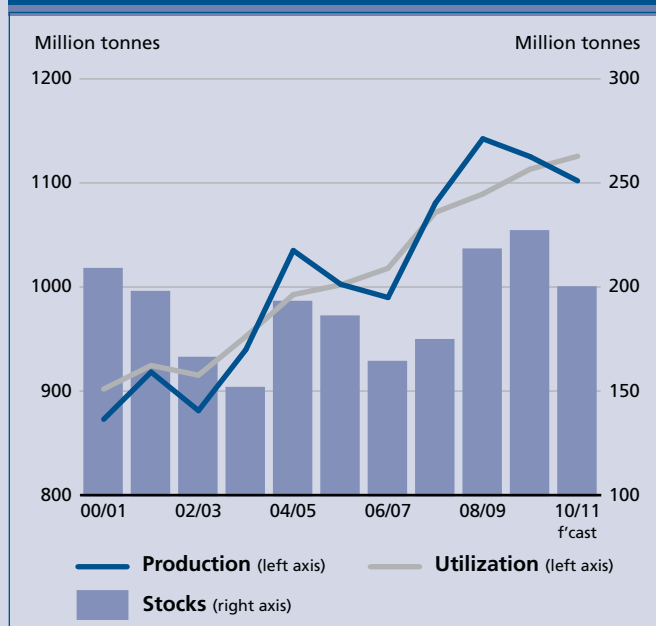
World coarse grain market at a glance

| | 2008/09 | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | Change 2010/11 over 2009/10 |
|---|----------------|--------------------------|--------------------------|---|
| <i>million tonnes</i> | | | <i>%</i> | |
| WORLD BALANCE | | | | |
| Production | 1 142.4 | 1 125.2 | 1 102.0 | -2.1 |
| Trade ¹ | 113.0 | 114.7 | 116.0 | 1.2 |
| Total utilization | 1 089.4 | 1 113.3 | 1 125.7 | 1.1 |
| Food | 192.2 | 191.5 | 195.6 | 2.1 |
| Feed | 625.0 | 626.6 | 626.8 | 0.0 |
| Other uses | 272.1 | 295.1 | 303.2 | 2.7 |
| Ending stocks | 216.5 | 225.3 | 198.4 | -12.0 |
| SUPPLY AND DEMAND INDICATORS | | | | |
| Per caput food consumption: | | | | |
| World (kg/year) | 28.5 | 28.0 | 28.3 | 0.9 |
| LIFDC (Kg/year) | 29.4 | 28.7 | 29.1 | 1.3 |
| World stock-to-use ratio (%) | 19.5 | 20.0 | 17.1 | |
| Major exporters' stock-to-disappearance ratio (%) ² | 14.6 | 14.7 | 8.8 | |
| | | | | |
| FAO coarse grain price index (2002-2004=100) | 2008 | 2009 | 2010 Jan-Oct | Change: Jan-Oct 2010 over Jan-Oct 2009 % |
| | 211 | 157 | 164 | 5 |

¹ Trade data refer to exports based on a common July/June marketing season

² Major exporters include Argentina, Australia, Canada, EU and the United States

Coarse grain production, utilization and stocks



Rice market summary

Prospects for rice production in 2010/11 have deteriorated since the start of the season, following weather-related setbacks, including severe flood damage to crops in Asia, especially in Pakistan. Despite the setbacks, global rice output this season is forecast to reach a record level, sufficient to cover world consumption without the need to draw down reserves. On the contrary, the anticipated large world output could translate into a sizeable increase in 2011 global rice carryover stocks – to what would be their highest level since 2002.

After several months of relative calm, import demand gained vigour in the second part of 2010, with Bangladesh and Indonesia becoming particularly active buyers. As a result, the forecast for trade in 2010 has been raised to a level that is 5 percent above 2009, with much of the yearly increase expected to be met through larger exports from the United States and Viet Nam. On the other hand, amid expectations of reduced import needs and tightening supplies in key exporting countries, rice trade may contract somewhat in 2011.

Reflecting relatively good crops in major importing countries and the release of large reserves by key exporters, prices in the first ten months of 2010 were lower year-on-year for all types of rice except the lower quality Indica, for which demand has recently soared. Reflecting temporary tightness of export supplies until the secondary paddy crops are harvested in March/April 2011, international rice quotations could rise in the coming months, especially against the backdrop of firm grain prices and a weak US Dollar.

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World rice market at a glance

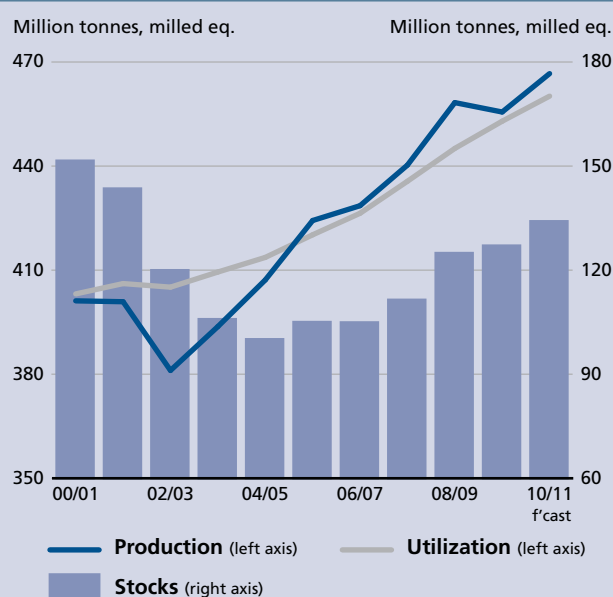
| | 2008/09 | 2009/10 estim. | 2010/11 f'cast | Change 2010/11 over 2009/10 |
|--|---------|-------------------|-------------------|--|
| million tonnes | | | | % |
| WORLD BALANCE (milled basis) | | | | |
| Production | 458.3 | 455.6 | 466.7 | 2.4 |
| Trade ¹ | 29.3 | 30.8 | 30.3 | -1.7 |
| Total utilization | 445.1 | 452.9 | 460.2 | 1.6 |
| Food | 382.1 | 388.0 | 393.9 | 1.5 |
| Ending stocks | 124.1 | 126.2 | 133.2 | 5.6 |
| SUPPLY AND DEMAND INDICATORS | | | | |
| Per caput food consumption: | | | | |
| World (kg/year) | 56.5 | 56.7 | 56.9 | 0.4 |
| LIFDC (Kg/year) | 68.8 | 68.9 | 69.0 | 0.1 |
| World stock-to-use ratio (%) | 27.4 | 27.4 | 28.5 | 3.8 |
| Major exporters' stock-to-disappearance ratio (%) ² | 21.3 | 16.6 | 17.6 | 6.0 |
| FAO rice price index (2002-2004=100) | 2008 | 2009 | 2010 Jan-Oct | Change: Jan-Oct 2010 over Jan-Oct 2009 % |
| | 295 | 253 | 223 | -12.5 |

¹ Calendar year exports (second year shown)

² Major exporters include India, Pakistan, Thailand, the United States and Viet Nam

More detailed information on the rice market is available in the FAO Rice Market Monitor which can be accessed at: <http://www.fao.org/economic/est/publications/rice-publications/rice-market-monitor-rmm/en/>

Rice production, utilization and stocks



Cassava market summary

After 15 years of uninterrupted growth, global cassava production is forecast to fall to 249 million tonnes in 2010, a decline of over 2 million tonnes from the record of the previous year, reflecting poor harvests in Asia, particularly in Thailand.

In spite of the drop in production, world trade in cassava products is set to undergo a further expansion in 2010, underpinned by an expected sharp rise in the import demand for cassava chips as feedstock for the ethanol industry. International cassava flows will once again be confined mostly to Southeast Asia and some cross-border transactions where cassava is grown. Thailand is expected to be the leading source of trade supplies, with its dominance reaffirmed by the slump in sales by Viet Nam. On the import side, Mainland China is likely to remain the major destination of trade in cassava products.

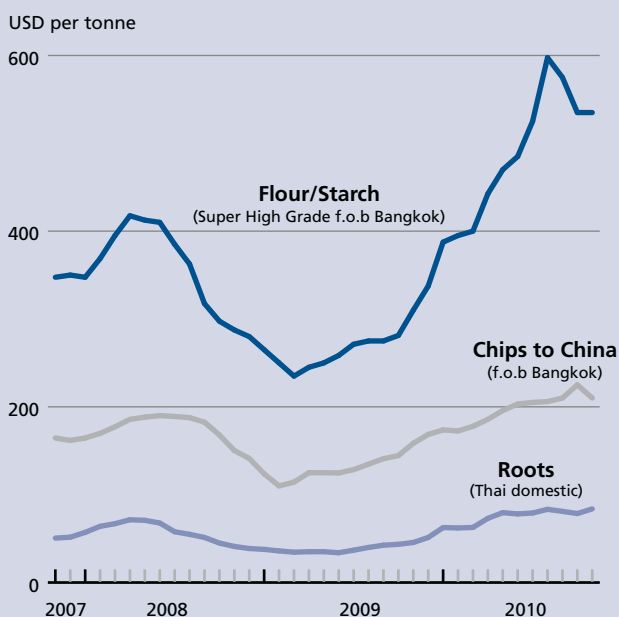
Prices of internationally traded cassava products rose to record levels in 2010. A sharp cut in Thai exportable supplies, owing to a collapse in production, was the main reason behind the firmer prices but a weak US Dollar also provided support. Cassava product prices are expected to remain firm in 2011, although much will depend on the demand for cassava products for feed and industrial use, especially ethanol. These prospects will in turn be influenced by developments in the competing global maize sector.

World cassava market at a glance

| | 2008 | 2009 estim. | 2010 f'cast | Change 2010 over 2009 |
|-----------------------------------|-----------|----------------|-----------------|---|
| (million tonnes fresh root equiv) | | | | % |
| WORLD BALANCE | | | | |
| Production | 239.9 | 251.0 | 248.7 | -0.9 |
| Trade | 18.9 | 28.2 | 29.2 | 3.8 |
| SUPPLY AND DEMAND INDICATORS | | | | |
| Per caput food consumption | | | | |
| World (kg/year) | 16.9 | 17.7 | 17.6 | -0.9 |
| Developing (kg/year) | 21.3 | 22.2 | 22.0 | -0.9 |
| LDC (kg/year) | 62.6 | 65.8 | 68.9 | -4.7 |
| Sub Saharan Africa (kg/year) | 106.4 | 111.2 | 114.8 | 3.2 |
| FAO cassava prices | | | | |
| | 2008 | 2009 | 2010 Jan-Oct | Change: Jan-Oct 2010 over Jan-Oct 2009 |
| | USD/tonne | | | % |
| Chips to China (f.o.b. Bangkok) | 171.1 | 137.4 | 199.1 | 52.4 |
| Starch (f.o.b. Bangkok) | 383.6 | 281.3 | 496.0 | 87.1 |
| Thai domestic root prices | 57.2 | 41.4 | 76.1 | 98.8 |

Source: Thai Tapioca Trade Association

International cassava and Thai domestic prices



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Oilseeds market summary

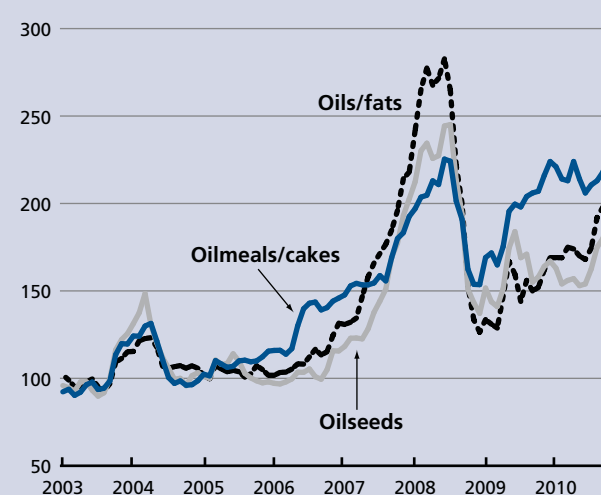
At the onset of the 2010/11 season, reports of lower than expected crops of both oilseeds and coarse grains lent new support to prices in the oilseed complex, driving the FAO indices for oilseeds, oils and meals to 24-month highs in October. Current forecasts for 2010/11 suggest that total oilcrop output will remain close to the 2009/10 record level as anticipated declines for soybeans, rapeseed and copra would be compensated by the rising cottonseed, groundnut and palmkernel output. However, with meal and oil utilization anticipated to expand further, the market situation is expected to remain tight, in particular in the case of oils and fats. While global production of both, oils and meals is anticipated to be near record, the respective stock-to-use ratios are forecast to fall. Such outlook, together with the possibility of strong competition for land between soy, maize and wheat in 2011, suggests that world prices of oilseeds, meals and oils could remain firm throughout the current season.

World oilseed and product markets at a glance

| | 2008/09 | 2009/11 <i>estim.</i> | 2010/11 <i>f'cast</i> | Change 2010/11 over 2009/10 |
|--|---------|--------------------------|--------------------------|--|
| million tonnes | | | | % |
| TOTAL OILSEEDS | | | | |
| Production | 409.5 | 454.8 | 453.7 | -0.3 |
| OILS AND FATS | | | | |
| Production | 161.5 | 172.0 | 174.6 | 1.5 |
| Supply | 184.8 | 194.2 | 198.8 | 2.4 |
| Utilization | 163.6 | 169.9 | 178.0 | 4.7 |
| Trade | 86.2 | 88.9 | 90.8 | 2.2 |
| Stock-to-utilization ratio (%) | 13.6 | 14.2 | 13.2 | |
| MEALS AND CAKES | | | | |
| Production | 100.0 | 116.0 | 115.4 | -0.5 |
| Supply | 117.9 | 130.6 | 134.6 | 3.1 |
| Utilization | 104.6 | 109.5 | 114.9 | 4.9 |
| Trade | 62.3 | 66.8 | 69.9 | 4.6 |
| Stock-to-utilization ratio (%) | 14.0 | 17.4 | 16.4 | |
| | | | | |
| FAO price indices (Jan-Dec) (2002-2004=100) | 2008 | 2009 | 2010 Jan-Oct | Change: Jan-Oct 2010 over Jan-Oct 2009 % |
| Oilseeds | 205 | 161 | 165 | 3.0 |
| Oilmeals/cakes | 195 | 194 | 216 | 14.2 |
| Oils/fats | 225 | 150 | 181 | 23.2 |

Note: Refer to Table 13 for further explanations regarding definitions and coverage

FAO monthly international price indices for oilseeds, oils/fats and meals/cakes (2002-2004=100)



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Sugar market summary

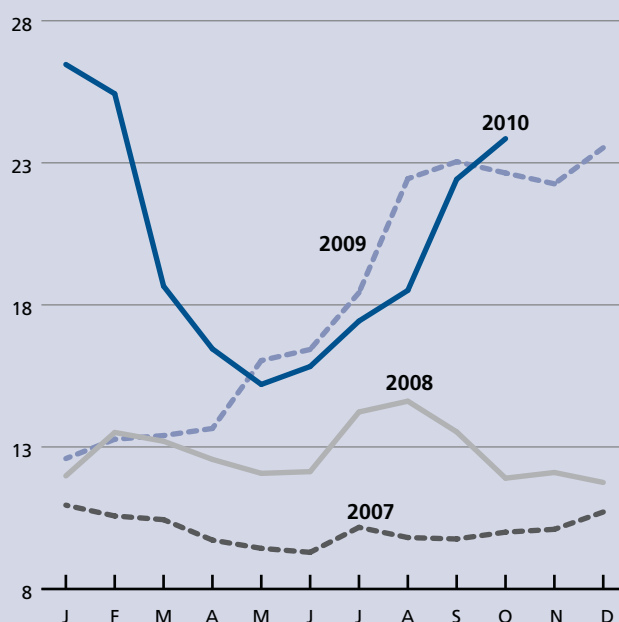
World sugar production is expected to reach 168.8 million tonnes in 2010/11, which represents an increase of 7.7 percent over the 2009/10 season. For the first time since 2007/08, global production is to surpass consumption, but the surplus may be subject to downward revisions as the season progresses. The increase in production is largely attributed to significant expansion in area, prompted by strong international sugar prices over the past 12 months. Growth in world sugar consumption is set to recover from a slowdown in 2009/10, as buoyant economic activity in 2010/11 stimulates sugar intake in several emerging and developing countries. World trade is expected to decline by 5 percent, constrained by reduced export availabilities in several producing countries. As a result, and given a strong global demand, international sugar prices may well remain relatively high and volatile in the coming months.

World sugar market at a glance

| | 2008/09 | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | Change: 2010/11 over 2009/10 |
|--|---------|--------------------------|--------------------------|--|
| <i>million tonnes</i> | | | | % |
| WORLD BALANCE | | | | |
| Production | 151.05 | 156.66 | 168.80 | 7.75 |
| Trade | 47.50 | 53.30 | 50.62 | -5.03 |
| Utilization | 160.79 | 162.59 | 166.09 | 2.15 |
| Ending stocks | 60.89 | 54.80 | 56.37 | 2.87 |
| SUPPLY AND DEMAND INDICATORS | | | | |
| Per caput food consumption: | | | | |
| World (kg/year) | 22.96 | 22.94 | 23.16 | 0.96 |
| LIFDC (Kg/year) | 13.50 | 13.59 | 13.58 | -0.08 |
| World stock-to-use ratio (%) | 37.87 | 33.70 | 33.94 | |
| | | | | |
| ISA Daily Price Average (US cents/lb) | 2008 | 2009 | 2010 Jan-Oct | Change: Jan-Oct 2010 over Jan-Oct 2009 % |
| | 12.80 | 18.14 | 20.07 | 16.8 |

International Sugar Agreement (ISA)

US cent per lb.



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Meat and meat products market summary

World meat trade is forecast to grow by 2.8 percent in 2010, to 26.1 million tonnes, sustained by a brisk growth in pig meat, but also by gains in bovine and poultry meat. However, in the case of poultry, the most widely traded meat, the expansion of world exports is likely to be constrained by the imposition of sanitary restrictions by major importers. Increased purchases from Asian countries are expected to fuel much of the expected increase of meat trade, more than compensating for a 15 percent reduction of imports by the Russian Federation, which had emerged as the second largest meat importer in 2009, after China.

According to the FAO Meat Price Index, world meat prices between January and October 2010 averaged 14 percent higher than in the same period in 2009, and similar to the levels witnessed in 2008.

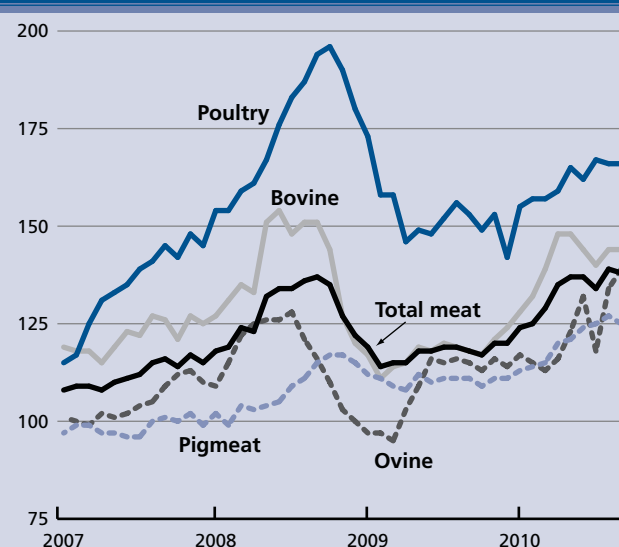
World meat production in 2010 is anticipated to grow by a mere 1 percent, to 286 million tonnes, restrained by reduced animal inventories, high feed costs and a relatively weak consumer demand, which will make it difficult for producers to transfer the full increases of costs to prices.

World meat markets at a glance

| | 2008 | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | Change: 2010 over 2009 |
|---|-------|-----------------------|-----------------------|--|
| <i>million tonnes</i> | | | | % |
| WORLD BALANCE | | | | |
| Production | 279.4 | 283.9 | 286.2 | 0.8 |
| Bovine meat | 65.2 | 65.7 | 65.0 | -1.1 |
| Poultry meat | 91.9 | 93.7 | 95.7 | 2.2 |
| Pigmeat | 104.0 | 106.1 | 107.0 | 0.9 |
| Ovine meat | 12.9 | 12.9 | 13.0 | 0.1 |
| Trade | 25.9 | 25.4 | 26.1 | 2.8 |
| Bovine meat | 7.4 | 7.4 | 7.6 | 3.0 |
| Poultry | 11.1 | 11.1 | 11.3 | 1.5 |
| Pigmeat | 6.3 | 5.8 | 6.1 | 5.3 |
| Ovine meat | 0.9 | 0.8 | 0.8 | 1.9 |
| SUPPLY AND DEMAND INDICATORS | | | | |
| Per caput food consumption: | | | | |
| World (<i>kg/year</i>) | 41.7 | 41.9 | 41.8 | -0.3 |
| Developed (<i>Kg/year</i>) | 81.5 | 81.1 | 80.7 | -0.4 |
| Developing (<i>kg/year</i>) | 31.0 | 31.5 | 31.5 | 0.1 |
| FAO meat price index (2002-2004=100) | 2008 | 2009 | 2010 Jan-Oct* | Change: Jan-Oct 2010 over Jan-Oct 2009 % |
| | 128 | 118 | 134 | 14.0 |

* September and October estimates

FAO international meat price indices (2002-2004 = 100)



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Dairy market summary

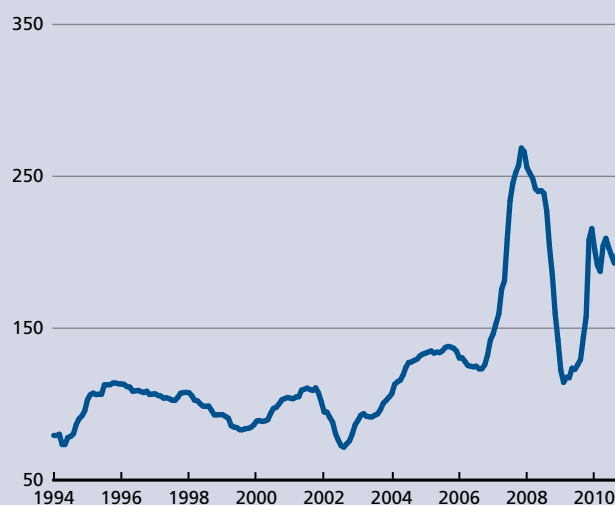
Strong import demand from Asian countries and the Russian Federation has driven dairy product trade to historically high levels in 2010, with the demand largely met by higher exports from New Zealand and the United States. Dairy product prices in international trade have remained firm, in particular butter, which in October reached an all-time high.

FAO's latest forecast of world dairy production for 2010 stands at 710.7 million tonnes, 1.7 percent more than last year. Production in developed countries is forecast to grow by around 1 percent, while that of developing countries may increase by 2.4 percent. On a per capita basis, consumption of milk and milk products in developing countries may increase by 1 kg per capita in 2010, from 66.4 to 67.5 kg, fuelled by strong economic growth in Asia.

World dairy market at a glance

| | 2008 | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | Change: 2010 over 2009 |
|--|-------|-----------------------|-----------------------|--|
| <i>million tonnes milk equiv.</i> | | | | % |
| WORLD BALANCE | | | | |
| Total milk production | 694.2 | 698.8 | 710.7 | 1.7 |
| Total trade | 42.0 | 43.5 | 46.0 | 5.7 |
| SUPPLY AND DEMAND INDICATORS | | | | |
| Per caput food consumption: | | | | |
| World (<i>kg/year</i>) | 104.0 | 103.5 | 104.1 | 0.6 |
| Developed countries (<i>Kg/year</i>) | 246.3 | 243.8 | 244.3 | 0.2 |
| Developing countries (<i>Kg/year</i>) | 66.0 | 66.4 | 67.5 | 1.5 |
| Trade - share of prod. (%) | 6.0 | 6.2 | 6.5 | |
| FAO dairy price index (2002-2004=100) | 2008 | 2009 | 2010 Jan-Oct | Change: Jan-Oct 2010 over Jan-Oct 2009 % |
| | 220 | 142 | 199 | 57 |

FAO international dairy price index (2002-2004=100)



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The index is derived from a trade-weighted average of a selection of representative internationally traded dairy products.

Fish and fishery products market summary

On average, the latest trade information indicates that two years after the drastic fall at the end of 2008, prices in September 2010 were only 1 percent below the peak of September 2008, with aquaculture prices 11.6 percent higher whereas prices of wild species were 10 percent lower. According to the FAO Fish Price Index, prices over January to September were, on average, 8.5 percent higher year-on-year.

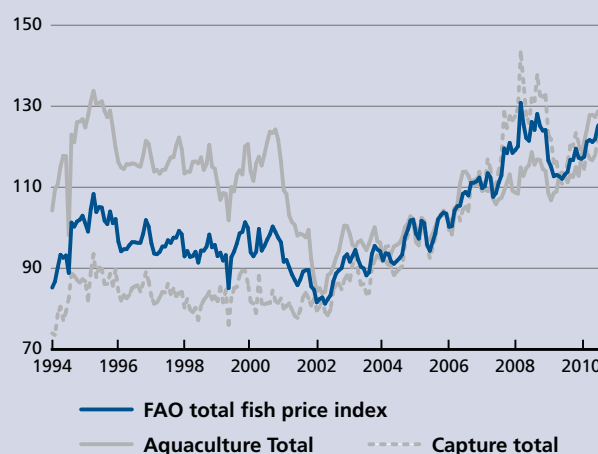
Aquaculture producers of many of the exported commodities responded to the economic crisis in late 2008 and throughout 2009 by reducing stocking levels, thus affecting future production. Since then, demand in many developing countries has rebounded, especially in Asia and South America. Developed country demand for farmed products is picking up, and prices for products such as shrimp, catfish, tilapia and salmon have risen significantly in 2010. For capture fisheries, the picture is more mixed with some prices negatively affected by large harvests, whereas others have strengthened as lower fishing quotas resulted in reduced supply.

The price outlook for the rest of 2010 and early 2011 is positive, with demand firming in most markets and supply expected to remain stable.

World fish market at a glance

| | 2008 | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | Change 2010 over 2009 |
|-----------------------------------|---------------|-----------------------|-----------------------|---|
| | | | <i>million tonnes</i> | % |
| WORLD BALANCE | | | | |
| Production | 142.3 | 145.1 | 147.0 | 1.3 |
| Capture fisheries | 89.7 | 90.0 | 89.8 | -0.2 |
| Aquaculture | 52.5 | 55.1 | 57.2 | 3.8 |
| Trade value (exports USD billion) | 102.0 | 95.4 | 101.9 | 6.8 |
| Trade volume (live weight) | 55.2 | 54.9 | 55.3 | 0.7 |
| Total utilization | | | | |
| Food | 115.1 | 117.8 | 119.5 | 1.5 |
| Feed | 20.2 | 20.1 | 20.1 | -0.1 |
| Other uses | 7.0 | 7.2 | 7.4 | 2.8 |
| SUPPLY AND DEMAND INDICATORS | | | | |
| Per caput food consumption: | | | | |
| Food fish (kg/year) | 17.1 | 17.2 | 17.3 | 0.3 |
| From capture fisheries (kg/year) | 9.3 | 9.2 | 9.0 | -1.7 |
| From aquaculture (kg/year) | 7.8 | 8.1 | 8.3 | 2.6 |
| FAO Fish price index | 2008 Sept. | 2009 Sept. | 2010 Sept. | Change Sept. 2010 over Sept. 2009 % |
| | 128 | 117 | 127 | 8.5 |

The FAO fish price index (2005=100)



Data source: Norwegian Seafood Export Council

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MARKET ASSESSMENTS

CEREALS

Unexpected decline in production leads to smaller inventories

FAO's forecast for world cereal **production** in 2010 now stands at 2 216 million tonnes, including milled rice. This is 2 percent below last year's level and the second consecutive decline, but still the third largest crop on record. All of the reduction is in wheat and coarse grains (primarily barley) in several major producing and exporting countries where sowings were cut back due to reduced price prospects at planting time and/or drought during the growing season, which severely impacted yields. Contrary to most other cereals, the global output of rice will grow in 2010 to a new record level, reflecting more favourable monsoon rains over the season, especially in India.

Regarding the first of the 2011 cereal crops, many of which have already been planted, early prospects are generally favourable. The bulk of winter grain planting is almost complete in the northern hemisphere where the overall area is expected to expand in response to favourable price prospects. In the southern hemisphere, most of the main maize crop has been planted in South America. Plantings have increased in Argentina but may have declined somewhat in Brazil. In Southern Africa, early indications suggest a smaller maize area in South Africa, the main producing country, although the recent strengthening of maize prices may encourage some late planting.

World cereal trade in 2010/11 is forecast to contract by 2 percent to 267 million tonnes, with declines in barley, wheat and rice more than offsetting an increase in maize trade. The fall in wheat imports reflects smaller purchases by several countries in Asia while small increases in imports are anticipated for Africa and Europe. The slight 2011 contraction in rice trade mainly reflects expectations of reduced imports by Asian countries. By contrast, trade in coarse grains is forecast to increase, driven by higher maize demand because of tightening barley and feed wheat supplies.

World cereal **utilization** is forecast at 2 254 million tonnes in 2010/11, pointing to a growth of around 1.3 percent from 2009/10. This compares with over 2 percent growth rates registered during the past three seasons. However, food, feed and industrial utilization of major cereals all seem to be keeping pace with recent trends – the anticipated slower growth in total utilization mostly stems from this year's decline in world cereal production which inherently lowers the level of post-harvest losses, another component of the total cereal utilization. Total food consumption of cereals is forecast to reach 1 057 million tonnes, up 1.5 percent from the previous season. World feed use of cereals is expected to increase marginally as in the previous season, by less than 1 percent, to 764 million tonnes. For coarse grains, total feed use is forecast to remain stagnant for the third season in a row because of continuing difficult economic conditions dampening livestock demand and, hence, production in the developed countries.

World cereal **stocks** for crop seasons ending in 2011 are forecast to fall to 512 million tonnes, down 7 percent from

Figure 1. Year-to-year change in cereal production

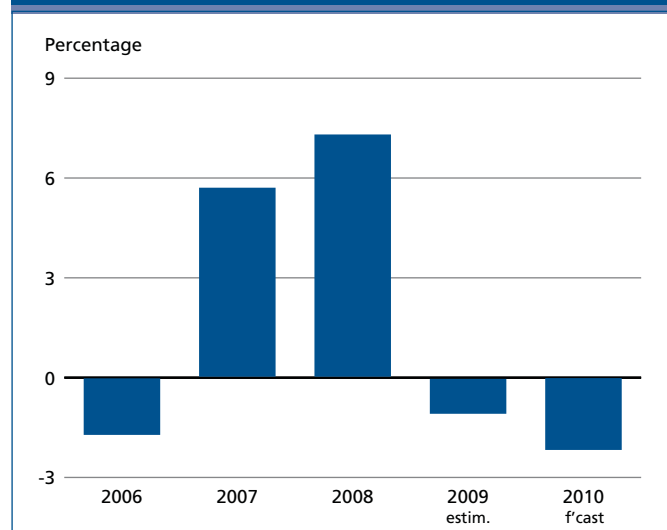
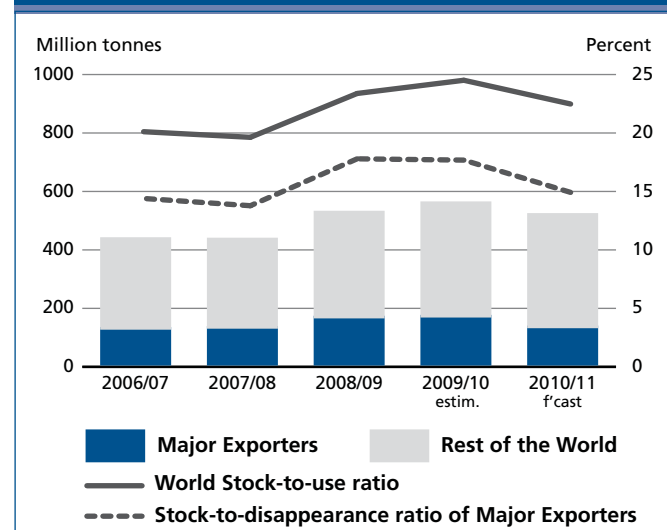


Figure 2. Cereal stocks and ratios



EARLY PROSPECTS FOR 2011 WHEAT AND MAIZE CROPS

Significant increases in production are needed to avert a major tightening of supplies in 2011/12

Amid the tightening of global balances for some grains in the current season and the related sharp rise in international prices, attention is already turning to the prospects for the 2011 crops which, along with the 2010/11 closing stocks, will determine supplies in 2011/12. For **wheat**, assuming utilization in 2011/12 remains close to the ten-year trend, an estimated increase of at least 3.5 percent in world production in 2011 would be required in order to prevent a further drawdown of global wheat reserves in 2012. However, in view of the fact that wheat utilization has exceeded the ten-year trend for two consecutive seasons, should this be the case again next season, the increase in global production would have to be higher than 3.5 percent to prevent wheat stocks from plunging to critically low levels. The supply of maize, another major cereal, also has become a concern this season. For the **maize** supply and demand balance to improve in 2011/12, world production needs to increase by at least 6 percent compared with 2010.

Planting of the winter grain crops is almost complete in the *northern hemisphere* and sowing of maize is well underway in the southern hemisphere. In the EU, conditions for the winter grain planting have been generally favourable, with wheat area forecast to rise by about 3 percent compared with the previous season. Although some of the increase may come at the expense of oilseed rape because of adverse weather in August/September, it is also expected that a significant amount of land under voluntary set-aside may be brought back into wheat production for the 2011 harvest in response to attractive wheat prices. In the eastern part of Europe, autumn sowing in the Russian Federation has been significantly impeded because of this year's severe drought. Although the Russian Federation's winter wheat area is tentatively estimated to be well down from the previous year's level, spring wheat planting could increase significantly to bring the overall wheat area close to the average of the past few years. However, having a higher proportion of spring crops, which yield much less than winter crops, would imply lower than normal yield potential for the 2011 crop. In Ukraine, planting conditions have improved after a dry start and the winter wheat area should be near last year's average. In North America, the United States' winter wheat planting, virtually complete by the end of October, increased in area by a significant 2 to 3 million hectares over last year's 40-year low. However, crop conditions as of early November remained far from ideal, especially in Kansas, a major producing state. In Asia, conditions reportedly have been satisfactory in China and India for winter wheat planting and the areas sown in both countries are thought to have changed little from the previous year's about-average levels. Based on the current planting information and assuming normal weather conditions and average yields, global wheat production could increase sufficiently to avoid further supply deterioration in 2011/12.

In the *southern hemisphere*, sowing of the main maize crops for harvest in 2011 is already well underway in the major producing countries. In South America, the bulk of the planting in Argentina has been completed under favourable conditions and beneficial rains have increased soil moisture reserves, vitally important for the development of crops later in the season. Helped by the good planting conditions, and in response to increased price prospects, early indications suggest that the maize area has increased significantly from last year's already above-average area, providing potential for a bumper crop next year. However, in Brazil, the main maize crop area, mostly in southern parts of the country, is thought to have declined slightly due to earlier dry weather that delayed the start of the planting season. Although about 40 percent of Brazil's annual maize production is now produced from the secondary season crop, which follows soybeans, there are already concerns that the area to be planted next year may be limited because of the late start to the soy season. In Southern Africa, the main maize crops for harvest in 2011 are also being planted. As of mid-October, South African farmers' planting intentions pointed to a 10 percent decrease in the area planted to maize for the 2011 harvest.

While high prices encourage farmers to dedicate more area to maize for next year, planting areas in major producing countries, such as in the United States, the world's largest producer, were already at their peaks in 2010. Therefore, any further expansion would require a switch of area from competing crops. This situation calls for a close monitoring of plantings for 2011 in order to determine if next year's production could increase sufficiently to prevent a further drawdown of already low stocks.

Table 1. World cereal market at a glance ¹

| | 2008/09 | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | Change 2010/11 over 2009/10 |
|---|---------|--------------------------|--------------------------|--|
| million tonnes | | | | % |
| WORLD BALANCE | | | | |
| Production | 2 285.5 | 2 263.4 | 2 216.4 | -2.1 |
| Trade ² | 281.3 | 273.6 | 267.3 | -2.3 |
| Total utilization | 2 181.8 | 2 226.0 | 2 253.8 | 1.3 |
| Food | 1 027.6 | 1 040.5 | 1 056.6 | 1.5 |
| Feed | 758.0 | 761.1 | 764.0 | 0.4 |
| Other uses | 396.2 | 424.3 | 433.2 | 2.1 |
| Ending stocks | 520.4 | 552.4 | 512.5 | -7.2 |
| SUPPLY AND DEMAND INDICATORS | | | | |
| Per caput food consumption: | | | | |
| World (kg/year) | 152.1 | 152.2 | 152.7 | 0.3 |
| LIFDC (Kg/year) ³ | 155.9 | 155.9 | 156.5 | 0.4 |
| World stock-to-use ratio (%) | 23.4 | 24.5 | 22.5 | |
| Major exporters' stock-to-disappearance ratio (%) | 17.8 | 17.7 | 14.9 | |
| FAO cereal price index (2002-2004=100) | | | | |
| | 2008 | 2009 | 2010 Jan-Oct | Change: Jan-Oct 2010 over Jan-Oct 2009 % |
| | 238 | 174 | 173 | -1 |

¹ Rice in milled equivalent² Trade data refer to exports based on a July/June marketing season for wheat and coarse grains and on a January/December marketing season for rice³ Low-Income Food-Deficit Countries

their relatively high opening levels. The decline marks the first dip in world cereal inventory in three years. World stocks of coarse grains are forecast to decline most, by 12 percent. Maize stocks are forecast to fall by 6 percent while inventories of barley could plunge by as much as 35 percent. Wheat stocks are also foreseen to contract sharply, by 10 percent. Nearly all the reductions in grain stocks are anticipated to occur in the major exporters and the CIS. By contrast, given the expected rise in world rice production, rice stocks are expected to increase by 6 percent. Based on the current expectations for production and utilization this season world cereal stocks-to-use ratio in 2010/11 is likely to decline by 2 percentage points to 22.5 percent, which would be lower than was anticipated at the start of the season but still well above the 30-year low of 19.6 percent registered in 2007/08.

Given this season's tighter market situation, **prices** of most cereals have risen sharply. The FAO Cereal Price Index averaged 219 points in October 2010, 5 percent above the September average, but up as much as 32 percent, or

53 points, from October 2009. Among the major cereals, international prices of barley, maize and wheat increased the most. Between July and October, wheat and coarse grains increased by 35 and 47 percent respectively while rice prices gained 14 percent.

WHEAT

PRICES

International wheat prices have increased sharply

International wheat prices started to increase rather unexpectedly at the beginning of the current season in July. Prices hit their highest 2010 level in August, as production prospects in a number of major producing countries began to look far less promising than originally anticipated. The main problem areas were the drought-stricken Russian Federation and Kazakhstan, but unfavourable weather also lowered production in Canada, the EU and Ukraine as well as in several importing countries, including many countries of northern Africa. An export restriction imposed by the Russian Federation, starting from mid-August and eventually extended to 30 June 2011, was also an important factor in driving up world prices. However, because of generally good supply prospects, international prices fell towards the end of September and early October, before rebounding strongly following a sudden surge in maize prices in October and the slide in the US Dollar. In October, the benchmark **US No. 2 Hard Red Winter, f.o.b.**, averaged USD 291 per tonne, down slightly from September but 37 percent higher than in

Figure 3. Wheat export price (US no. 2 H.W. Gulf)

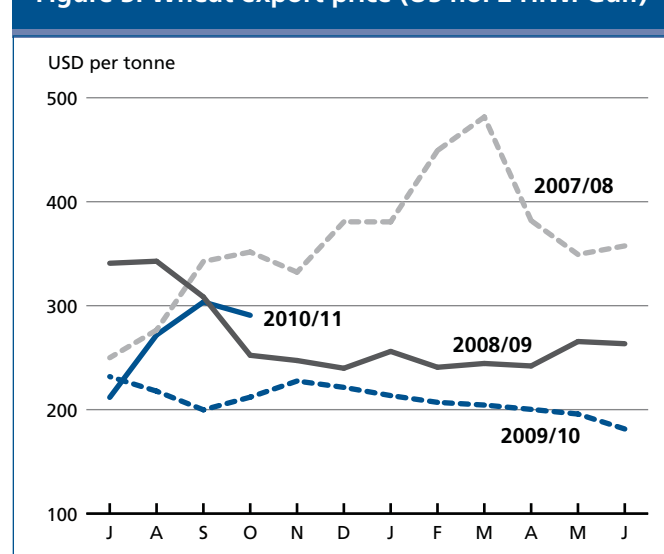
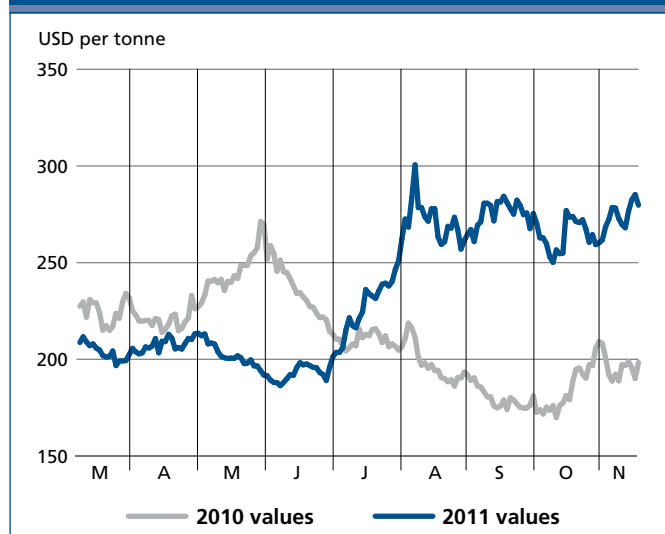


Figure 4. CBOT wheat futures for March



July, although still 40 percent below the record reached in March 2008.

In recent weeks, wheat prices also have been influenced by concerns about lower plantings in the Russian Federation and Ukraine, unfavourable crop conditions in the United States and, more generally, by expectation of an insufficient increase in overall plantings, as farmers in many major producing countries are likely to increase plantings of other crops as well. This prospect, combined with tightening maize supplies and a weak US Dollar, continue to underpin wheat futures. As of early November, **wheat futures in Chicago** for March delivery were quoted at around USD 280 per tonne, up 41 percent from the corresponding period a year ago and 39 percent higher than at the start of the season in July.

PRODUCTION

Global wheat output falls significantly in 2010

FAO's latest forecast for global wheat output in 2010 now stands at 648 million tonnes, much less than had been expected earlier in the season and 5 percent down from 2009. The wheat crop was forecast to be smaller than last year from the outset of the season because of planting reductions and expected return to normal yields in some major producing and exporting countries. However, as the season progressed, adverse weather in some parts curtailed yields far more than anticipated bringing this year's production levels further down.

Most of the major 2010 wheat crops have already been harvested. Latest estimates in Asia indicate a small decline in the aggregate output of wheat in 2010. In the Near

Table 2. World wheat market at a glance

| | 2008/09 | 2009/10 estim. | 2010/11 f'cast | Change 2010/11 over 2009/10 |
|--|---------|-------------------|-------------------|--|
| million tonnes | | | % | |
| WORLD BALANCE | | | | |
| Production | 684.8 | 682.6 | 647.7 | -5.1 |
| Trade ¹ | 139.1 | 128.1 | 121.0 | -5.6 |
| Total utilization | 647.3 | 659.8 | 668.0 | 1.2 |
| Food | 453.3 | 461.0 | 467.1 | 1.3 |
| Feed | 120.7 | 122.3 | 125.0 | 2.2 |
| Other uses | 73.3 | 76.4 | 75.9 | -0.7 |
| Ending stocks | 179.8 | 200.9 | 180.9 | -9.9 |
| SUPPLY AND DEMAND INDICATORS | | | | |
| Per caput food consumption: | | | | |
| World (kg/year) | 67.1 | 67.4 | 67.5 | 0.1 |
| LIFDC (Kg/year) | 57.5 | 58.0 | 58.2 | 0.3 |
| World stock-to-use ratio (%) | 27.3 | 30.1 | 27.3 | |
| Major exporters' stock-to-disappearance ratio (%) ² | 17.5 | 21.7 | 18.4 | |
| Wheat price index * (2002-2004=100) | | | | |
| | 2008 | 2009 | 2010 Jan-Oct | Change: Jan-Oct 2010 over Jan-Oct 2009 % |
| | 235 | 154 | 159 | 2 |

* Derived from International Grains Council (IGC) Wheat Index

¹ Trade data refer to exports based on a common July/June marketing season

² Major exporters include Argentina, Australia, Canada, EU and the United States

Table 3. Wheat production: leading producers (2009 and 2010)

| Country * | 2009 estim. | 2010 f'cast | Change: 2010 over 2009 |
|----------------------|----------------|----------------|---------------------------|
| | million tonnes | | % |
| EU | 138.5 | 136.0 | -1.8 |
| China (Mainland) | 115.1 | 115.1 | - |
| India | 80.7 | 80.7 | - |
| United States | 60.4 | 60.1 | -0.4 |
| Russian Federation | 61.7 | 42.0 | -32.0 |
| Canada | 26.8 | 22.2 | -17.3 |
| Pakistan | 24.0 | 23.9 | -0.7 |
| Australia | 21.7 | 23.0 | 6.2 |
| Ukraine | 20.9 | 17.6 | -15.8 |
| Turkey | 20.6 | 19.5 | -5.3 |
| Kazakhstan | 17.0 | 13.0 | -23.5 |
| Iran Islamic Rep. of | 13.0 | 14.5 | 11.5 |
| Argentina | 7.5 | 11.5 | 53.5 |
| Egypt | 8.5 | 8.6 | 0.9 |
| Uzbekistan | 6.6 | 6.8 | 1.7 |
| Other countries | 59.5 | 53.3 | -10.5 |
| World | 682.6 | 647.7 | -5.1 |

* Countries listed according to their position in global production (average 2008-2010)

East subregion, increased output in the **Islamic Republic of Iran** offset weather-reduced crops in **Afghanistan**, the **Syrian Arab Republic** and **Turkey**. In North Africa, output was severely reduced by a drought in **Tunisia** and **Morocco** that was already underway at planting time. In Europe, the final harvest outcomes were below early season expectations in parts of the **EU**, due to insufficient precipitation during the season in some areas and heavy rains in others. However, it was severe drought in the two main producing CIS countries in Europe – the **Russian Federation** and **Ukraine** – that was behind the bulk of the downward revisions to the global output forecast as the season progressed. The two countries are also responsible for much of the reduction in the world production compared with last year. Output in the Russian Federation alone is estimated to have fallen by about 19 million tonnes. In North America, the 2010 wheat crop estimate in the **United States** rose as the season progressed and, despite a significant reduction in plantings, above-average yields have resulted in an output that is virtually unchanged from the previous year. By contrast, production in **Canada** fell further than expected, as adverse spring weather was followed by unfavourable weather for crop maturation, which is expected to depress further the final harvested area and yields.

In South America, production is expected to recover sharply from last year's reduced level, reflecting a return to normal weather conditions in **Argentina** (the main producing country) after last year's drought. In Oceania, prospects for the wheat crop in **Australia** remain mixed, with the outlook very good in the eastern producing areas, but poor in western Australia where drought persists. Overall, Australia's 2010 output forecast is up slightly from 2009, at 23 million tonnes.

TRADE

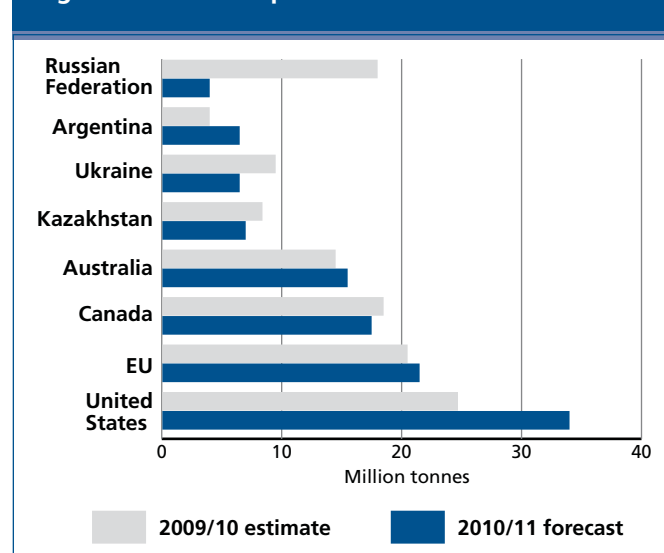
Wheat trade to decrease in 2010/11

World wheat trade in 2010/11 (July/June) is forecast to reach 121 million tonnes, 1 million tonnes higher than was forecast in September,¹ but down almost 5 million tonnes, or 4 percent, from 2009/10 and as much as 16 million tonnes, or 12 percent, below the 2008/09 all time high of 137 million tonnes. The decline in this season's imports mostly reflects substantially lower wheat purchases by several countries in Asia, which would more than offset small increases in imports in Africa and in Europe.

Total **wheat imports** by countries in **Asia** are forecast to fall to 53 million tonnes, down 8 million tonnes from the previous season. Most of this decline would be due to reduced purchases by the **Islamic Republic of Iran**, reflecting a bumper crop and the country's decision to ban imports of wheat. In addition, imports of feed wheat by the **Republic of Korea** are likely to be smaller, because of reduced supplies from the Black Sea region. Lower imports are also forecast for **Mainland China**, the **Syrian Arab Republic** and **Thailand**, mostly because of large carryovers from the previous season. Smaller imports are anticipated in **Bangladesh** because of large domestic supplies and in **Afghanistan**, because of this year's above-average domestic output coupled with reduced availabilities from the nearby exporting countries.

In **Africa**, aggregate imports are forecast to exceed 35 million tonnes, 1 million tonnes higher than in the previous season. The increase reflects a significant jump in deliveries to several countries in North Africa, up almost 2 million tonnes from the previous season to nearly 22 million tonnes. Larger imports by **Morocco**, which suffered from a severe drought, and by **Tunisia**, because of a smaller harvest, account for the bulk of the expected increase in imports in North Africa. In order to stabilize supplies, Morocco suspended its 135 percent import duty on soft wheat from mid-September until the end of this year. By contrast, with domestic production at a record high and large carryovers from the previous season, this season's wheat imports by **Egypt**, the world's largest wheat importer, are likely to decline by 1.2 million tonnes, to 9 million tonnes. Total wheat imports by countries in

Figure 5. Wheat exporters



¹ GIEWS Crop Prospects and Food Situation, No.3 September 2010

sub-Saharan Africa are forecast to decline by 1.2 million tonnes to 13.6 million tonnes, the lowest level since 2007/08, mainly driven by reductions in **Kenya** and **Nigeria**.

In **Latin America and the Caribbean**, total wheat imports in 2010/11 are forecast to approach 20 million tonnes, up marginally from the previous season. Imports by **Brazil**, the region's largest wheat importer, are forecast to remain unchanged at 6.5 million tonnes, mainly because this year's production rose to above-average levels, sufficient to meet the anticipated increase in food consumption. By contrast, **Mexico** will need higher imports this season to compensate for the decline in domestic wheat production. Wheat imports in Mexico are forecast to increase by 300 000 tonnes, to 3.3 million tonnes.

Total imports in **Europe** are put at 9.6 million tonnes, up nearly 2 million tonnes from the previous season's reduced level. The increase is almost entirely due to large purchases by the **Russian Federation** following this year's severely reduced harvests.

Total **wheat exports** by the five traditional exporters are forecast to approach 92 million in 2010/11, up 14 percent from the previous season's level. Shipments from the **United States** are forecast to reach 33.5 million tonnes, the highest since 1995/96 and 9 million tonnes more than in 2009/10. Following a recovery in domestic production, exports from **Argentina** are forecast to increase sharply. Larger sales are also anticipated for **Australia** and the **EU** while **Canada** is expected to ship less wheat than last season because of a decline in its domestic production. This strong rebound in exports from the five major exporters should more than offset a sharp decline in sales from the CIS countries.

Wheat exports from the **Russian Federation** in 2010/11 are estimated at only 3.5 million tonnes, down 14 million tonnes from the previous season. Following this year's drought-reduced crop, the Russian Federation imposed a ban on all grain exports from mid-August to the end of 2010. This ban has recently been extended to 30 June 2010, while a ban on wheat flour exports will be lifted in January 2011. Exports from **Ukraine** also have been curtailed following this year's production. Wheat shipments from Ukraine are currently forecast at 6 million tonnes, down 3 million tonnes from 2009/10 and less than half the level in 2007/08 when Ukraine shipped a record 12.6 million tonnes. In October, the Government imposed a 2.7 million tonne quota on grain exports until the end of 2010 which includes 500 000 tonnes of wheat. Smaller exports are also anticipated in **Kazakhstan** and **Turkey**, following a reduction in domestic production.

UTILIZATION

Wheat utilization in 2010/11 to exceed trend

As a result of the decline in world wheat production and the increase in prices of wheat since the beginning of the season, the world wheat utilization in 2010/11 is forecast at 668 million tonnes, down from the earlier estimate of 675 million tonnes published in the June 2010 Food Outlook. However, even at the current forecast level, world wheat utilization would be 1.2 percent above the previous season's level and still slightly above the ten-year trend.

World **food consumption** of wheat in 2010/11 is anticipated to rise by 1.3 percent, to 467 million tonnes. Developing countries account for most of the increase, consuming 334 million tonnes on aggregate, 1.5 percent more than in 2009/10. In general, the growth in food use is likely to keep pace with the population growth, with global wheat consumption remaining steady at around 68 kg per person per annum and at around 60 kg per person in the developing countries.

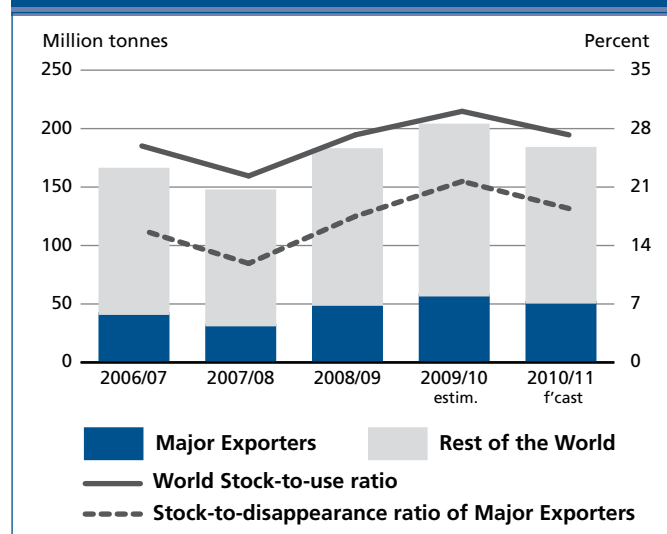
Total **wheat feed utilization** is forecast to increase by 2 percent, to 125 million tonnes in 2010/11. This compares with 1.3 percent growth in 2009/10. In spite of the increase in prices, demand for wheat in developed countries remains strong because of its price advantage over high protein ingredients. Nearly 100 million tonnes of wheat are expected to be destined for feed in 2010/11 in the developed countries, up slightly from the previous season. In the EU, the largest market for feed wheat, this season's feed usage of wheat could approach 53 million tonnes, slightly below the previous season's level due to tighter supplies. However, larger wheat feed usage is expected in the CIS countries, in particular in the Russian Federation where it could reach 20 million tonnes, the highest volume since 1993 and 3.5 million tonnes more than in the previous season. The large increase in wheat usage is expected to offset sharp declines in the use of barley and maize for feed because of their even tighter domestic supplies. Among the other usages of wheat, the **industrial use** also is expected to increase in 2010/11, with most of the anticipated expansion likely to occur in the EU, mainly because of growing demand for ethanol.

STOCKS

Wheat inventories to fall sharply

World wheat stocks are currently forecast to reach 181 million tonnes by the close of the crop seasons in 2011. This is 13 million tonnes below FAO's first forecast, which was reported in the June 2010 Food Outlook. The downward

Figure 6. Wheat stocks and ratios



revision puts world wheat stocks at some 20 million tonnes, or 10 percent, below the previous season's high level, but still around 36 million tonnes, or 25 percent, above the 2008 critically low of 145 million tonnes. The revision reflects a notable downward adjustment to 2010 production levels in several important wheat producing countries, in particular in the CIS, as well as significant upward adjustments to forecasts for exports from the **United States** and the **EU**. Among the CIS countries, inventories in the **Russian Federation** alone are likely to decline by over 4 million tonnes because of the drought-devastated production in 2010. Based on the latest forecasts for world stocks and utilization, the **global stock-to-use ratio** for wheat in 2010/11 is expected to drop to 27.3 percent in 2010/11 from 30.1 percent in 2009/10. However, the ratio remains well above the 30-year low of 22.3 percent registered in 2007/08.

Total wheat stocks held by the major exporters are forecast to reach 49 million tonnes, down 6 million tonnes from their opening level but still the second highest in five years and 19 million tonnes more than in 2008. Among the major exporters, the largest decrease is expected in the **United States** where, despite a steady production level, season-end wheat inventories are projected to decline by 3.5 million tonnes to 23.1 million tonnes because of much larger exports and domestic utilization than in the previous season. Nonetheless, inventories in the United States would be the second largest since 2001, and nearly three times higher than its low in 2008. Similarly, stocks in the **EU** are set to decline by 2.5 million tonnes, to 15.5 million tonnes, driven by an increase in exports as well as a decline in this year's production. On aggregate, however, the

ratio of stocks held by the major exporters to their disappearance (i.e. domestic utilization plus exports) is forecast to reach 18.4 percent, down 3.3 percentage points from the previous season but well above the critically low ratio of 11.8 percent in the high-price 2007/08 season.

COARSE GRAINS

PRICES

Tight markets leading to higher prices

Unexpected weather events have driven up prices of most coarse grains since the start of the 2010/11 season in July. In recent weeks, the slide in the US Dollar and other outside market factors also contributed to price increases. Barley prices were among the first to rise sharply, especially after the Russian Federation's August decision to ban all grain exports in response to a severe drought that cut this year's production. Feed barley prices surged in August and remained high in September. Prices rose further in October when French **feed barley price (f.o.b. Rouen)** averaged USD 264 per

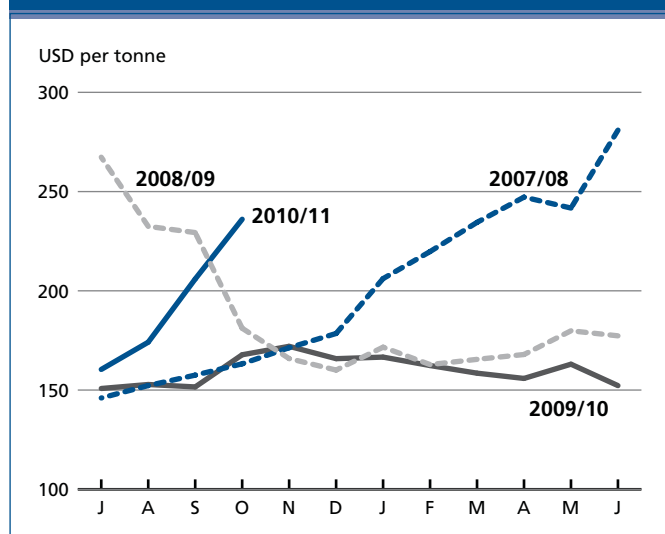
Table 4. World coarse grain market at a glance

| | 2008/09 | 2009/10 estim. | 2010/11 f'cast | Change 2010/11 over 2009/10 |
|--|---------|-------------------|-------------------|--|
| million tonnes | | | % | |
| WORLD BALANCE | | | | |
| Production | 1 142.4 | 1 125.2 | 1 102.0 | -2.1 |
| Trade ¹ | 113.0 | 114.7 | 116.0 | 1.2 |
| Total utilization | 1 089.4 | 1 113.3 | 1 125.7 | 1.1 |
| Food | 192.2 | 191.5 | 195.6 | 2.1 |
| Feed | 625.0 | 626.6 | 626.8 | 0.0 |
| Other uses | 272.1 | 295.1 | 303.2 | 2.7 |
| Ending stocks | 216.5 | 225.3 | 198.4 | -12.0 |
| SUPPLY AND DEMAND INDICATORS | | | | |
| Per caput food consumption: | | | | |
| World (kg/year) | 28.5 | 28.0 | 28.3 | 0.9 |
| LIFDC (Kg/year) | 29.4 | 28.7 | 29.1 | 1.3 |
| World stock-to-use ratio (%) | 19.5 | 20.0 | 17.1 | |
| Major exporters' stock-to-disappearance ratio (%) ² | 14.6 | 14.7 | 8.8 | |
| | | | | |
| FAO coarse grains price index (2002-2004=100) | 2008 | 2009 | 2010 Jan-Oct | Change: Jan-Oct 2010 over Jan-Oct 2009 % |
| | 211 | 157 | 164 | 5 |

¹ Trade data refer to exports based on a common July/June marketing season

² Major exporters include Argentina, Australia, Canada, EU and the United States

Figure 7. Maize export price (US no. 2 yellow, Gulf)



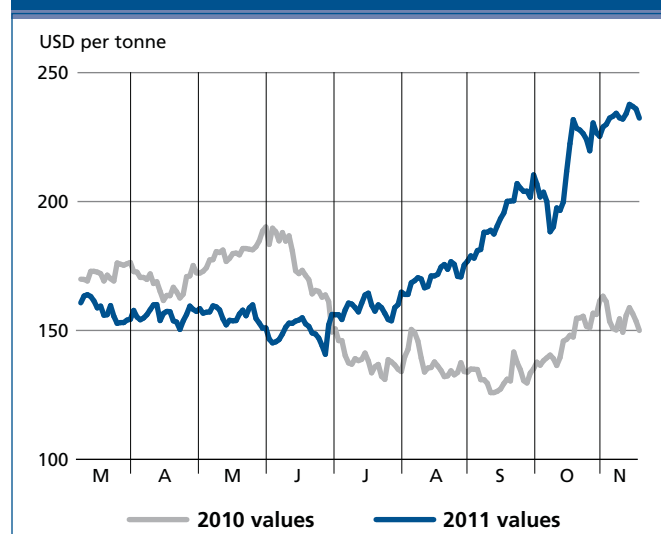
tonne, up 52 percent from July and as much as 72 percent from October 2009. International maize prices also increased sharply but unlike barley, the increase in maize prices occurred mostly after September, with a sudden surge in early October on news of lower yields in the United States than earlier anticipated. The price of the benchmark **US maize prices (Yellow, No. 2, f.o.b.)** averaged USD 236 per tonne in October, up nearly 47 percent since the beginning of the season and 40 percent higher than in October 2009. Maize prices are supported by continuing supply tightness of barley and feed wheat. **Sorghum (Yellow Gulf)** prices also have risen sharply this season, although not by as much as barley, averaging USD 231 per tonne in October, up 33 percent from the same month in 2009. In recent weeks, prices have been underpinned further by the slide in the US Dollar. As of early November, **Chicago maize futures** for March delivery stood at USD 232 per tonne, up as much as 47 percent from the corresponding period last year. At current levels, maize prices are only 16 percent below the peak reached in June 2008.

PRODUCTION

Coarse grains output in 2010 to fall

FAO's latest forecast for world production of **coarse grains** in 2010 has been revised down further in recent weeks and now stands at 1 102 million tonnes. Contrary to early-season forecasts pointing to an increase in global output, the current forecast is now 2 percent down from last year, although still the third largest crop ever. As the 2010 crop seasons progressed, unfavourable weather conditions took their tolls in several major producing countries. In particular, barley was severely affected by drought in the

Figure 8. CBOT maize futures for March



Russian Federation and Ukraine while maize yields in the United States turned out considerably lower than the bumper levels initially expected.

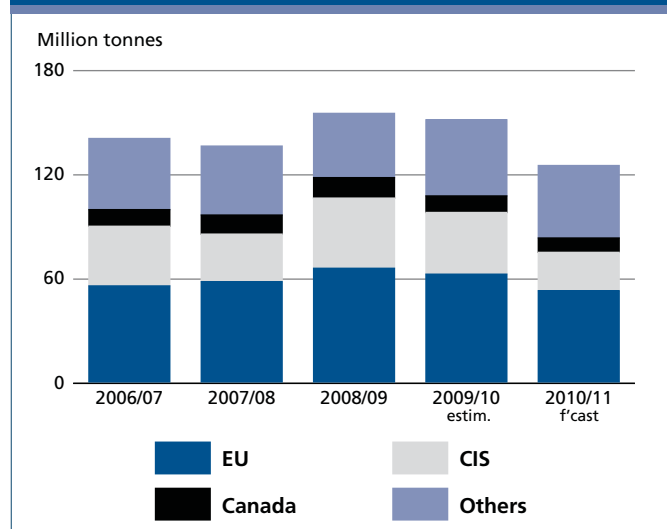
Regarding **maize**, the major coarse grain grown worldwide, world production in 2010 is now forecast at 831 million tonnes, only 1 percent up from 2009. The outlook for the United States, which alone accounts for about 40 percent of global maize output, has changed considerably since October. Although plantings increased in the United States, it became evident as harvesting progressed that yields had not matched the bumper levels achieved in the previous year and output was forecast some 3 percent down from the record 2009 level. Elsewhere, a larger crop had been gathered earlier in the year in South America. Production in Argentina recovered from drought in 2009 and Brazil increased its output to a bumper level. In Southern Africa, where the harvest was completed several months ago, good-to-bumper crops were gathered in most countries. In Asia, China, the world's second largest maize producer, again reaped a bumper crop, maintaining the high level achieved in the preceding two years.

FAO's latest forecast for world production of **barley** in 2010 now stands at 125 million tonnes, 7 percent down from the previous year's level. Although a smaller barley crop was already forecast earlier in the season when plantings declined throughout the major producing countries, the reduction has been amplified by adverse weather during the growing season. Throughout the EU countries, which together account for the bulk of the global barley production, dry weather impaired yields resulting together with reduced plantings, in a 15 percent reduction in this year's aggregate harvest. The most notable reductions were in the Russian

Table 5. Coarse grain production: leading producers (2009 and 2010)

| Country * | 2009 estim. | 2010 f ^{cast} | Change: 2010 over 2009 |
|--------------------|----------------|---------------------------|---------------------------|
| | million tonnes | | % |
| United States | 349.5 | 332.7 | -4.8 |
| China (Mainland) | 173.1 | 175.4 | 1.3 |
| EU | 155.5 | 139.0 | -10.6 |
| Brazil | 53.7 | 57.9 | 8.0 |
| India | 34.2 | 37.6 | 10.1 |
| Russian Federation | 33.4 | 19.6 | -41.5 |
| Mexico | 30.1 | 30.8 | 2.4 |
| Argentina | 16.5 | 28.6 | 73.0 |
| Canada | 22.6 | 22.1 | -2.3 |
| Ukraine | 24.0 | 22.1 | -8.0 |
| Nigeria | 21.0 | 20.9 | -0.7 |
| Indonesia | 17.6 | 18.0 | 2.2 |
| South Africa | 13.1 | 14.2 | 8.2 |
| Australia | 13.0 | 12.7 | -2.3 |
| Ethiopia | 13.1 | 12.8 | -2.3 |
| Other countries | 154.8 | 157.6 | 1.8 |
| World | 1 125.2 | 1 102.0 | -2.1 |

* Countries listed according to their position in global production (average 2008-2010)

Figure 9. Barley production

Federation and Ukraine where, due to the severe drought, the barley crops are estimated to have fallen by about 50 and 20 percent respectively compared with 2009.

The forecast of world **sorghum** output in 2010 is put at 59 million tonnes, 2.6 percent up from the previous year's crop but well below the 2008 bumper level of 66 million tonnes. Among the major producing countries, output decreased somewhat in the United States but recovered in Argentina after last year's drought-reduced crop.

TRADE

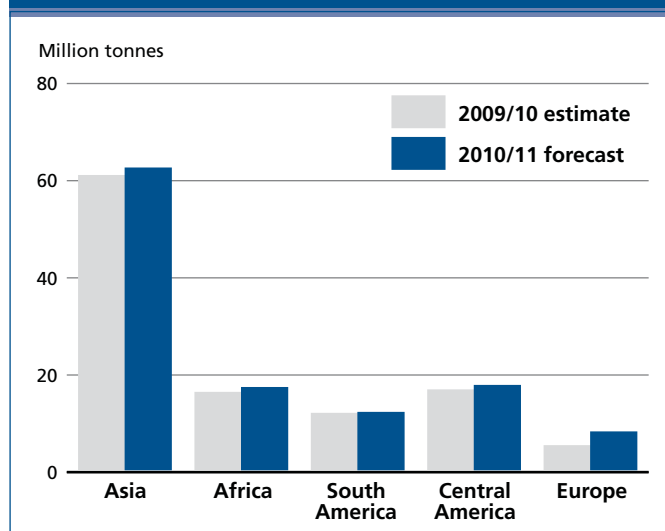
Higher demand for maize pushes up world trade in 2010/11

World trade in **coarse grains** is forecast to expand by 1.2 percent to 116 million tonnes in 2010/11 (July/June), reflecting an increase in maize import demand that is expected to drive up maize trade to 91 million tonnes, up 3 million tonnes from the previous season but still 11 million tonnes below the all time high reached in 2007/08. By contrast, exports of all other major coarse grains are likely to remain unchanged or even fall slightly below 2009/10 levels. Trade in **barley** is expected to decline by 300 000 tonnes to 16 million tonnes, while trade in **sorghum** is forecast to reach 6 million tonnes, down 1.1 million tonnes. Trade in **oats** is seen falling to 1.9 million tonnes, down 300 000 tonnes from the previous season, due to smaller imports by the United States.

Imports by nearly all regions are forecast to increase in 2010/11. In **Asia**, the biggest market for coarse grains, the largest increases in imports are forecast for **Mainland China** and the **Republic of Korea**. In Mainland China, despite expectation of a record crop, maize imports are forecast to reach at least 1.5 million tonnes, the highest since the mid-1990s. Strong feed demand and rising domestic maize prices are encouraging larger world purchases by China. Imports of coarse grains by the Republic of Korea are forecast to increase by 800 000 tonnes, to 9 million tonnes, the highest in three years, as low exportable supplies of feed wheat from the Black Sea region this season encouraged the country to increase its purchases of coarse grains (mostly maize).

Imports in **Africa** are also up from the previous season. However, the bulk of the increase is expected in the northern subregion, as most countries in sub-Saharan Africa are likely to import the same volume as, if not less than, the previous season because of good domestic production. **Egypt** is forecast to import 500 000 tonnes more maize than in 2009/10 because of growing feed demand while **Algeria**, **Morocco** and **Tunisia** are all expected to purchase more coarse grains, to compensate for sharp reductions in their barley production. **Sub-Saharan Africa's** aggregate imports have been put at 4.2 million tonnes, 100 000 tonnes below the previous season's level and the smallest since 2006/07. This is partly driven by an increase of nearly 500 000 tonnes in production, boosted by a record crop in eastern Africa. **The Sudan's** above average sorghum production could depress imports by at least 200 000 tonnes. **The Niger's** higher millet and sorghum production may also result in lower imports.

Figure 10. Coarse grain imports by region

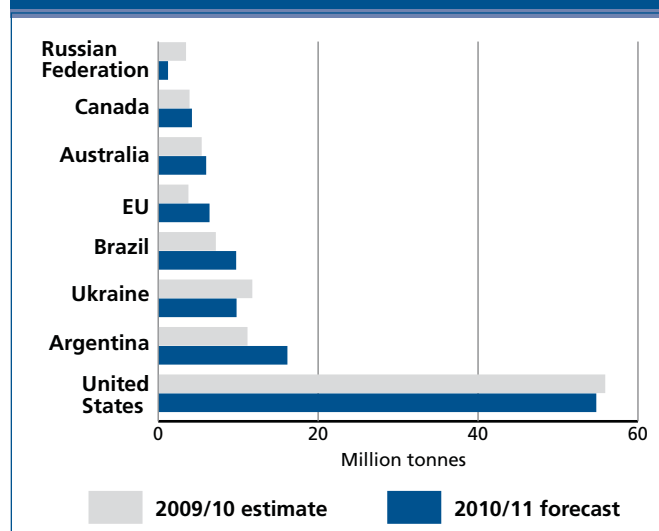


Total coarse grain imports by countries in **Latin America and the Caribbean** are forecast to reach 27 million tonnes, an increase of nearly 1 million tonnes. Most of the increase is expected in **Mexico**, the region's largest market, where imports are forecast to reach 11.5 million tonnes, up 1.1 million tonnes from the previous season. Larger imports of sorghum, due to a decline in domestic production and maize account for most of the increase.

In **Europe**, total imports are forecast up sharply, mostly because of larger purchases by the **EU** and the **Russian Federation**. In the EU, following smaller maize and barley harvests, imports of maize are forecast to increase by 2.1 million tonnes while the Russian Federation is also returning to the market as a major maize buyer this season, because of the feed shortages caused by the devastating drought.

Turning to **exports**, total shipments from the **EU** are forecast to rise by 2.6 million tonnes, with a surge in sales of barley more than offsetting a decline in maize exports. Larger exports of barley and sorghum are also forecast for **Australia**. By contrast, exports from the world's largest exporter, **United States**, could decline slightly, to 54 million tonnes. Among other exporting countries, the production shortfall in major producing CIS countries, in particular the **Russian Federation**, has hampered exports. After small early-season sales, the ban on grain exports from the Russian Federation has halted all shipments since August. In **Ukraine**, exports of barley are forecast to fall sharply because of smaller domestic production and the recent imposition of an export quota. However, this season's shrinking supplies from the CIS countries are likely to be largely offset by higher sales from **Brazil** and **South Africa**.

Figure 11. Coarse grain exporters



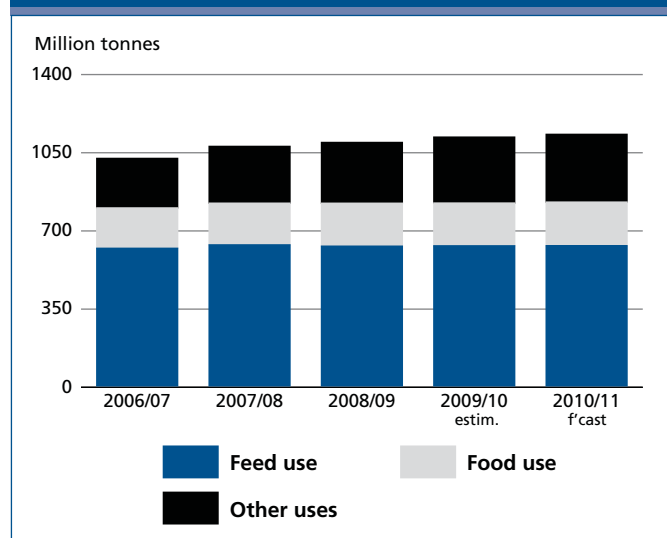
India and **Indonesia** may also export the same, if not more, than in 2009/10. As a result of significant maize surpluses, **Malawi** and **Zambia** have lifted their export restriction this season.

UTILIZATION

Utilization grows but remains below trend

World **total utilization of coarse grains** in 2010/11 is forecast to increase to 1 126 million tonnes, up 1.1 percent from the estimate for 2009/10 and nearly 2 percent, or 24 million tonnes, above the 2010 anticipated production. At this level, total utilization would be slightly below the ten-year trend for the first time in four years. Food use is forecast to grow fastest followed by industrial usage, whereas feed use is likely to remain stagnant, especially in the developed countries. As a whole, the developed countries account for slightly over one-half of total utilization of coarse grains, while the developing countries, with nearly four times the population, make up the other half. **Food use** of coarse grains is forecast to reach 196 million tonnes, 2 percent higher than in 2009/10. Developing countries account for 80 percent of the food use of coarse grains, with nearly 130 million tonnes in the Low-Income Food-Deficit Countries (LIFDCs). The expected increase from the previous season is to rely on larger local maize supplies, following production gains in Asia, especially in India, and several countries in sub-Saharan Africa.

Coarse grains are largely used for animal feed and, for 2010/11, world **feed utilization** of coarse grains is currently forecast to reach 627 million tonnes, up marginally (less than 1 percent) from 2009/10. In the developing countries,

Figure 12. Coarse grain utilization

feed use is anticipated to increase for the third season in a row, reaching 294 million tonnes, up 3 percent from 2009/10. Most of the expansion is expected in China but also in Argentina, Brazil, Egypt, Mexico and South Africa. However, in the developed countries, the aggregate feed use is forecast to contract for the third consecutive season, to 333 million tonnes, or 1.3 percent less than in 2009/10. The economic slow-down which has curbed demand for livestock products and reduced barley supply. The bulk of the anticipated contraction in feed use in the developed countries is expected in several CIS countries where barley is an important source of animal feed. The biggest decline is forecast for the Russian Federation, where the amount of barley used for feed in 2010/11 could be halved from the previous season's level, to around 5 million tonnes. Despite much higher maize prices this season, feed usage of maize in the United States, which is the world's largest producer and consumer of maize, could increase by 3 percent to 135 million tonnes. This would still fall below the record 156 million tonnes in 2004/05. The growing utilization of dried distillers grains (DDGs), a primary co-product of ethanol production, in feed rations has been mostly responsible for containing the growth in maize feed demand in the United States in recent years.

Among different **industrial usages** of coarse grains, growth in recent years has stemmed mainly from the ethanol sector. FAO does not compile information on industrial use of grains but bases its assessments on data and analyses published by the International Grains Council (IGC). According to the IGC, total industrial use of coarse grains in 2010/11 could approach roughly 263 million tonnes, up around 2 percent from the previous season. Ethanol is

expected to account for almost 144 million tonnes of this use, of which some 119.4 million tonnes for production of fuel-ethanol in the United States, up 3.6 million tonnes from the previous season. The United States Environmental Protection Agency's (EPA's) recent approval of 15 percent ethanol blends (E15) in cars built since 2007 will contribute to the growth in ethanol demand and hence maize usage in the longer term. However, its near-term impact, especially in the current season, is expected to be limited mostly because of logistical obstacles, such as the need for upgrading station tanks, pumps and general handling infrastructure. On the other hand, fuel-ethanol exports from the United States are increasing, mainly because of more limited export supplies of sugar-based ethanol from Brazil and a weak US Dollar, indirectly sustaining domestic demand for maize in the United States.

STOCKS

A sharp fall in world stocks

World coarse grain stocks are forecast to reach 198 million tonnes by the close of the 2011 seasons, down as much as 11.2 percent, or 26 million tonnes, from their opening levels. This anticipated sharp decrease follows three seasons of consecutive build-up in world inventories of coarse grains. The 198 million tonne figure is 5 million tonnes below the first forecast published in the June 2010 Food Outlook. Among the major coarse grains, maize stocks are set to decline by nearly 6 percent to 161 million tonnes, while inventories of barley could fall by as much as 35 percent, to a three-year low of 23 million tonnes. Nearly all the reductions are anticipated to occur in the major exporting countries and the large CIS producing countries. At the current forecast level, the **world stocks-to-use ratio** for coarse grains would fall from 20 to 17.1 percent, in 2010/11 but still above its 2006/07 low of 15.2 percent.

Among the major exporters, the largest decrease is anticipated in the **United States** where, based on a forecast decline in this year's production together with an expected increase in utilization, stocks may be drawn down by as much as 49 percent, or 24 million tonnes, to just under 25 million tonnes – the lowest since 1996. The bulk of the decline is associated with much smaller maize reserves, which are likely to dip to around 21 million tonnes. At this low level, the **stocks-to-use ratio for maize in the United States** would stand at 7 percent, the lowest in 15 years. A sharp decline is also forecast for the **EU**, with total inventories plunging to 14 million tonnes, down 43 percent, or 10.5 million tonnes, from their opening levels. Most of the decrease in the EU ending stocks would reflect barley

Figure 13. US maize stocks and stock-to-use-ratio

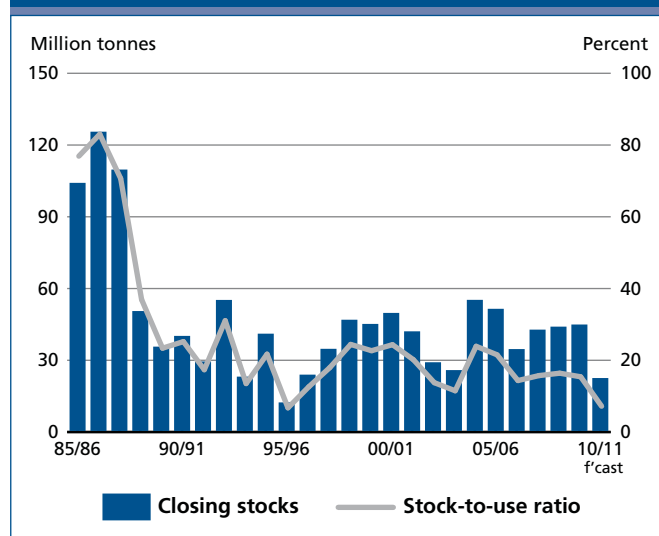
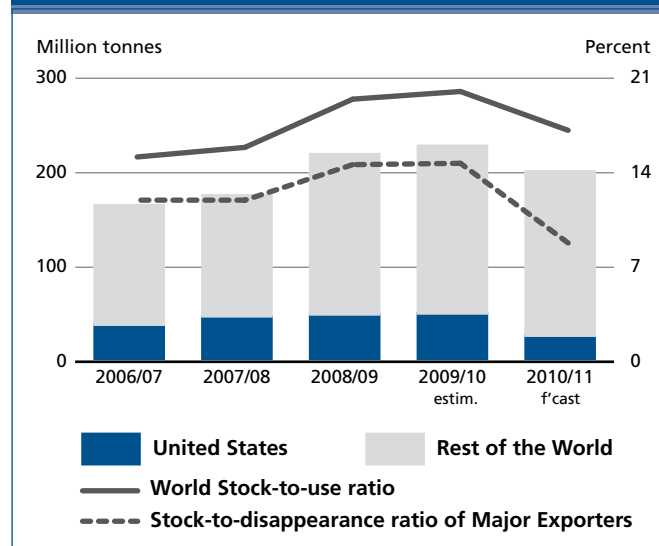


Figure 14. Coarse grain stocks and ratios



inventories, which are expected to fall by 8 million tonnes to 5.5 million tonnes because of smaller production and larger exports. Overall, the **major exporter's stock-to-disappearance ratio** (i.e. domestic consumption plus exports) in 2010/11 is expected to reach only 9 percent, down nearly 6 percentage points from the previous season and below the ten-year low of 12 percent registered in 2006/07.

Large drawdowns of stocks are forecast for the **Russian Federation** (mostly barley) as well as **Brazil, Canada** and the **Islamic Republic of Iran**. However, coarse grain stocks in several countries are also forecast to increase, mainly because of higher domestic production, most notably in **Argentina, China** and **South Africa**.

RICE

INTERNATIONAL PRICES

Rice prices remain relatively subdued

Against a backdrop of sharply rising agricultural commodity prices, the international rice market has stood out as rather quiet since July. Rice prices underwent only moderate increases, influenced by rising international wheat quotations, but also on fears of large losses from flooding in Pakistan and, subsequently, from the passage of storms in the Philippines, Thailand and Viet Nam. Based on the FAO All Rice Price Index, rice prices gained 14 percent between July and October, far less than the other cereals, as some of the pressure was mitigated by the release of ample rice supplies from stocks in Viet Nam and Thailand. In fact, despite their recent strength, prices in the first ten months of 2010 averaged 12 percent less than in the corresponding period in 2009, with all market segments, except lower quality rice, faring more poorly.

The price of the **"Thai white rice 100% B"** benchmark, which had reached a year low of USD 466 per tonne in July, stood at USD 510 per tonne in October 2010, reflecting renewed sales and the strength of the Thai baht, but still remaining short of the October 2009 level of USD 535 per tonne. By contrast, prices of the lower quality rice were well above one year ago, with fully broken rice particularly expensive in Thailand. However, virtually all qualities saw Thai prices jumping in the first weeks of November, under concern over flood damage. Export quotations in both Pakistan and Viet Nam were also substantially higher. In Pakistan, the rises reflected tightening supplies and logistical difficulties following the floods while, in Viet Nam, they were associated with dwindling reserves and the raising of minimum export prices.

Although of lesser relevance than for wheat or maize, **rice Chicago futures** have also risen sharply since early July 2010. For instance, the quotation of rice for delivery in January 2011 has gained over 40 percent since July, revealing expectations of further price strength in the coming months. Indeed, unless India relaxes its ban on non-premium rice exports, world supplies for trade may remain limited at least until the 2010/11 secondary crops are harvested in March/April next year. Until then, world rice prices are likely to remain on the rise, especially in a context of firm agricultural commodity prices and a weak US Dollar.

**Figure 15. Rice export price
(Thai 100% B, f.o.b. Bangkok)**

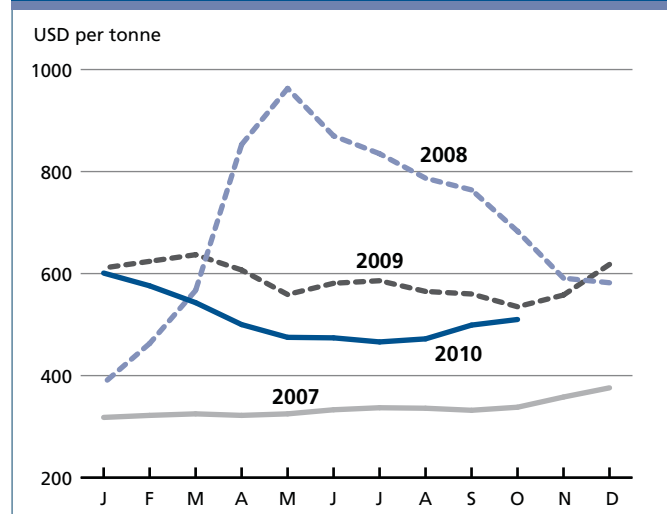


Figure 16. FAO rice price indices (2002-2004=100)

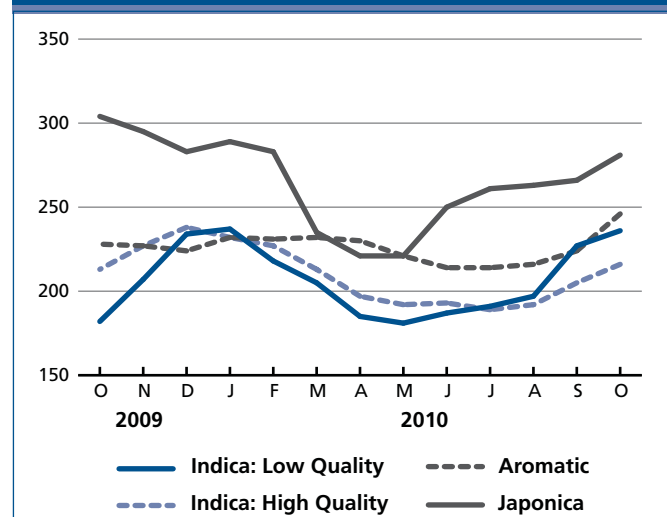
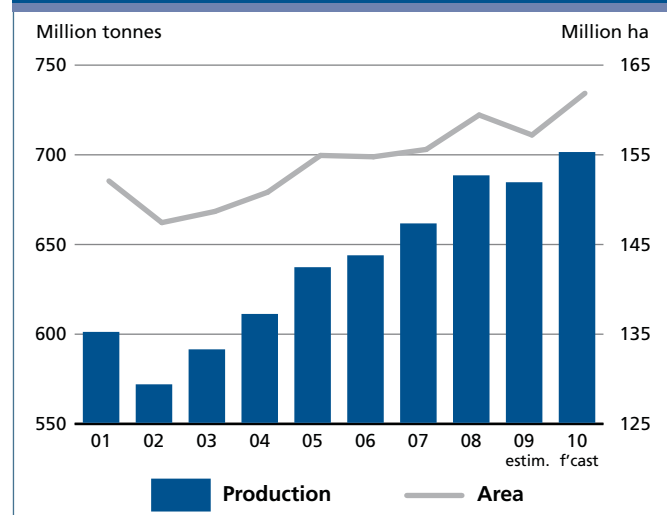


Figure 17. Global rice paddy production and area



PRODUCTION

Although deteriorating, the outlook for global rice production in 2010/11 remains positive

Global rice production² in the 2010/11 season is currently forecast to reach 467 million tonnes. This is substantially less than the 472 million tonnes foreseen at the beginning of the season and reported in the June issue of Food Outlook, but still 11 million tonnes above 2009/10. The downgrading of the outlook reflects problems resulting from the La Niña weather anomaly which has prevailed since mid-2010. Estimates for this year's production in **Argentina, Brazil** and **Peru** have been revised downward since June, but most of the recent worsening prospects concerned northern hemisphere countries, which are now harvesting their main crops. For instance, production forecasts were trimmed for **China**, where a combination of drought and floods depressed early rice crop results, but also for the **Democratic Republic of Korea, Lao People's Democratic Republic, Myanmar, the Philippines** and the **Republic of Korea**, which all faced setbacks. The most important factor in the worsening of this season's outlook was the dramatic floods that wiped out large tracts of maturing crops in **Pakistan** in August. Outside Asia, crop expectations for **Egypt, the EU** and **United States** were also curtailed. However, 2010/11 production forecasts have been raised for **Cambodia, Indonesia, Malaysia, Sri Lanka, Thailand** and **Viet Nam** and for several **West African countries**, which benefited from excellent growing conditions this season, as well as **Madagascar**.

Compared with the previous season, the outlook for world rice production in 2010/11 remains positive. The current estimate of 467 million tonnes puts global production at 2.4 percent, or 11 million tonnes, more than in 2009/10 when adverse weather conditions depressed rice output in Asia. The increase is expected to stem from a 3 percent rebound in the world area planted to rice, while yields are forecast to fall slightly to 2.88 tonnes (milled basis) per hectare. Much of the global production recovery would be accounted for by **India**, where the pattern of this year's monsoon rains has been far more favourable than in 2009. According to the latest forecasts, India's rice output may rise to a record 100 million tonnes, up from 89 million tonnes last season.

Notwithstanding the negative effects from drought, floods or typhoons, sizeable production gains are also

² Production figures all expressed in milled rice equivalent.

anticipated in **Bangladesh, China, Indonesia, the Philippines, Sri Lanka and Viet Nam** on the back of expansionary programmes, which often promote the use of hybrid rice. On the other hand, reduced harvests are predicted in **Cambodia, the Democratic Republic of Korea, Lao People's Democratic Republic, Myanmar, Pakistan, the Republic of Korea and Thailand**, mostly reflecting the late arrival of the rainy season and the subsequent excessive rains and storms. In **Pakistan**, the devastating August floods affected the important paddy-growing provinces of Balochistan, Punjab and Sindh, impairing 871 000 ha of rice plantings, mainly IRRI-6 rice varieties, but largely sparing basmati rice crops. Overall, the country is estimated to have lost around 2 million tonnes of standing rice crop (milled basis), bringing the production forecast down to 4.2 million tonnes, far less than the 6.7 million tonnes reaped in 2009/10. In Africa, the outlook for this season's rice crops is generally positive, with a few exceptions. Among these, the most important concerns **Egypt**, the leading African producer. Egypt's output is set to contract by 18 percent as a result of a sharp reduction in plantings to comply with the government ceiling of 462 000 ha (1.1 million *feddan*), a measure intended to save water. Apart from Egypt, **Benin, Cameroon, Malawi, Mozambique and Rwanda** may also face a contraction, mostly associated with negative growing conditions. The situation in these countries contrasts with sweeping production gains expected in the rest of the region, with particularly large increases forecast in **Burkina Faso, Chad, Cote d'Ivoire, the Gambia, Guinea, Madagascar, Mali, Mauritania, Nigeria and Sierra Leone**, on the back of generally good rainfalls and continued development assistance to the sector. In Latin America and the Caribbean, where the largest producers are already preparing for the new season, rice crops harvested early this year were substantially short of the previous season's level in **Argentina, Brazil and Uruguay**, reflecting the late arrival of rains at the end of 2009 followed by excessive precipitation and limited sunshine. Production is also expected to fall in **Bolivia, Chile, Peru and Venezuela**, following a cutback of plantings, often associated with unsatisfactory producer prices. By contrast, **Colombia, Ecuador, Mexico and Paraguay** are foreseen to harvest larger crops this season.

In the other regions, USDA's forecast as of November 2010 put production in the **United States** at a record 7.397 million tonnes, 7 percent above the previous season, much less than had been predicted in the past few months. The increase in the United States this season can be credited to a 17 percent expansion of plantings, as erratic weather conditions in the south central states

impaired yields. Larger water entitlements to producers boosted production in **Australia** to its highest level since 2006, with further large output increases predicted for 2011. By contrast, smaller harvests in France and Italy, which experienced unfavourable weather conditions, are foreseen to reduce the **EU's** rice production by 4 percent to 2.1 million tonnes.

TRADE

Larger imports by Asian countries to boost rice trade in 2010

FAO estimates of global rice trade in calendar 2010 stands at some 30.8 million tonnes, 5 percent, or about 1.5 million tonnes more than in 2009. The increase in 2010 world imports is being sustained through purchases by Asian countries, in particular **Bangladesh, Mainland China, Indonesia and the Philippines**, most of which were conducted under the aegis of government agencies with the purpose of taming domestic inflation. Deliveries to **Brazil, EU and Nigeria** are also predicted to end somewhat higher than last year.

The **United States** and **Viet Nam** are foreseen to account for much of the anticipated expansion of world exports in 2010, with shipments from both nations recording double digit growth. Reflecting very large deliveries before the floods, **Pakistan's** sales in 2010 are foreseen to hover around 3.1 million tonnes, outpacing the 2.9 million tonnes of last year. Strong demand by Near East countries is also boosting shipments from the **EU**. Despite the maintenance of restrictions, exports from both **Egypt** and **India** are

Figure 18. World rice trade and FAO rice export price index

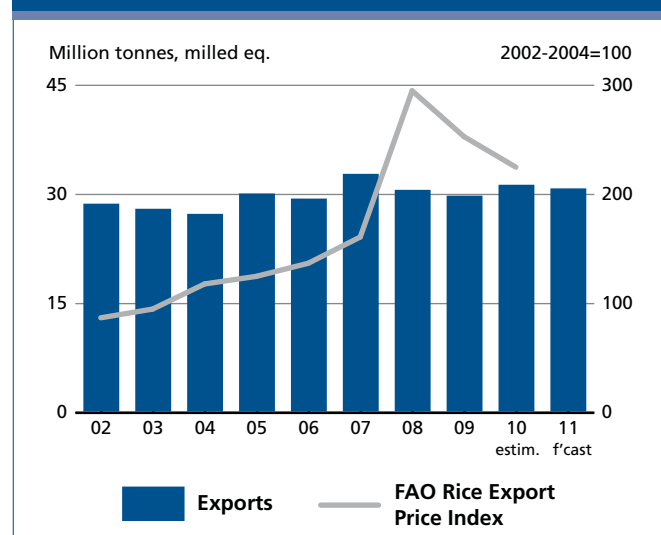


Figure 19. Rice imports by region

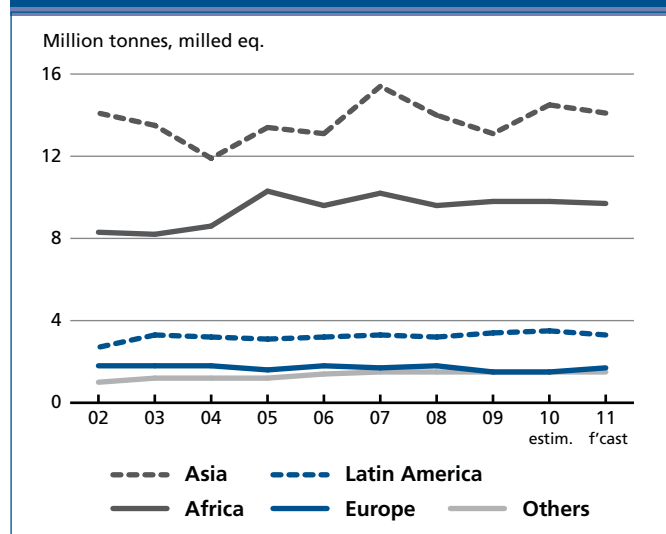
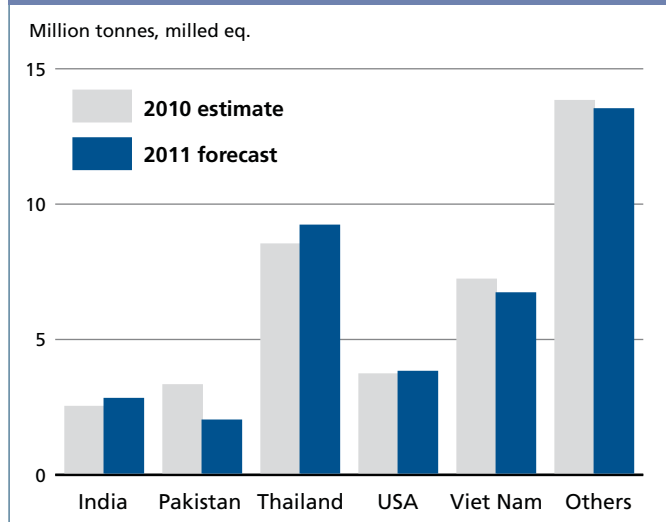


Figure 20. Rice exports by the major exporters



forecast to be higher than in 2009. By contrast, relatively high domestic prices may depress deliveries from **Thailand**, while administrative hindrances are reported to have slowed sales by **Myanmar**. Rice exports from **Argentina** and **Brazil** are also forecast to end lower.

Reduced imports by Asian countries may depress international trade in rice in 2011

Given the latest outlook for global production in 2010/11, which determines much of next year's individual country's needs for import and their availabilities for export, world rice trade in calendar 2011 is forecast at 30.3 million tonnes, which is 1.7 percent, or about 500 000 tonnes, less than the 2010 estimate.

The slight contraction mainly reflects expectations of reduced imports by Asian countries, which are anticipated to fall to 14.1 million tonnes in 2011 from 14.5 million tonnes this year. Indeed, good 2010/11 crops are expected to depress shipments to **Bangladesh**, **Sri Lanka** and especially **the Philippines** which was the most important destination for rice trade in 2010. On the other hand, **the Democratic Republic of Korea** and **Indonesia** are likely to step up their imports, in the first case to increase the size of national reserves and, in the second case, to compensate for a production shortfall this season. Both **Thailand** and **Viet Nam**, the two leading rice exporters, also may need to buy more rice to bolster their exports, with inflows from border countries facilitated under the Asean Free Trade Agreement. Among Near East Asian countries, **Afghanistan**, **Iraq** and **Saudi Arabia** are foreseen as well, to step up imports in 2011. Given expectations of bumper crops, the volume of rice delivered to African countries is foreseen to fall somewhat behind last year, to an overall 9.7 million tonnes, mainly reflecting reduced purchases by **Nigeria**. On the other hand, the sharp contraction of output in **Egypt** may require that authorities import around 100 000 tonnes, which would help the country maintain a minimum level of exports. In Latin America and the Caribbean, rice imports are now forecast to shrink by almost 6 percent to 3.3 million tonnes, two-thirds of which are destined for Central America and the Caribbean. The reduction would be mainly on account of **Brazil**, but also **Chile**, **Colombia** and **Ecuador**. Rice purchases by the **EU** are forecast to rise by 150 000 tonnes to 1.2 million tonnes in 2011, partly to compensate for the 2010 production shortfall.

Limited supplies are expected to hinder the ability of several of the major world rice suppliers to export next year. **Pakistan**, in particular, may have to cut shipments sharply, especially of the IRRI-6 varieties, which were greatly damaged by this year's floods, while sales of the high quality basmati rice could be maintained. Overall, Pakistan's exports are set to contract by 42 percent to 1.8 million tonnes. In the case of **Viet Nam**, extremely large deliveries this year may well constrain exports in 2011 to around 6.5 million tonnes, down from a 7.0 million tonne estimate for 2010. On the other hand, falling production this season is also likely to restrain shipments from **Cambodia**, **Egypt** and the **Lao People's Democratic Republic**. Much of these shortfalls are likely to be filled by **Brazil** and **India** and, especially, by **Thailand**, which may export 9 million tonnes, up from the 8.3 million tonnes estimate for the current year. Following hints of a strongly increased crop, to be harvested in April, **Australia** may also reappear as an active world rice supplier in 2011.

UTILIZATION

Rice food consumption set to expand largely in line with population

In 2011, global rice utilization, including food, feed and other uses, is anticipated to amount to some 460 million tonnes, 1.6 percent, or 7 million tonnes more than the current estimate for 2010. The bulk of the total is likely to be destined for human consumption, now foreseen to absorb 394 million tonnes, compared with 388 million tonnes this year. On the other hand, the volume of rice fed to animals in 2011 is gauged unchanged at around 12 million tonnes, while other scopes (including seeds, non-food industrial usage and waste) are forecast to take up around 54 million tonnes, up from less than 53 million tonnes in 2010.

Under present expectations, the expansion in world population would be the principal driver of rice food consumption growth, with per capita food intake projected stable at close to 57 kg per year. At the regional level, more rice per inhabitant is forecast to be available in 2011 than 2010 in Asia, Europe, North America and Oceania, but

less in Latin America and the Caribbean, with little change now foreseen in Africa. Although slowly converging, wide differences in per capita intake continue to prevail across continents, with over 82 kg consumed in Asia and barely 5.2 kg in Europe.

Domestic prices at the wholesale or retail levels in some representative locations evolved in different directions this year, reflecting the particular supply/demand situations prevailing in individual countries, rather than international price movements. Compared with one year ago, the latest domestic price quotations in Asia were reported stable or falling in **Nepal, the Republic of Korea, Sri Lanka and Thailand**, but rising in **Bangladesh, Cambodia, China, Indonesia and Viet Nam**. The pattern exhibited in Africa also was not uniform, with prices generally lower than in the previous year in eastern Africa, higher in the southern part of the continent and mixed in the rest of the region. Prices tended to weaken in Latin America and the Caribbean.

STOCKS

Good 2010/11 crops to boost global rice stocks in 2011

According to the latest forecasts, world rice production in 2010/11 would exceed global rice utilization by close to 7 million tonnes, which is expected to beef-up global rice carryover stocks from 126 million tonnes in 2010 to 133 million tonnes in 2011, the highest level since 2002. Much of the increase would accrue to **China and India**, the two largest rice holders, with a combined 71 percent of the world total. Expectations of larger 2010/11 crops are much behind the anticipated build-up of 2011 inventories

Table 6. World rice market at a glance

| | 2008/09 | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | Change 2010/11 over 2009/10 |
|---|--------------|--------------------------|--------------------------|---|
| <i>million tonnes</i> | | | <i>%</i> | |
| WORLD BALANCE (milled basis) | | | | |
| Production | 458.3 | 455.6 | 466.7 | 2.4 |
| Trade ¹ | 29.3 | 30.8 | 30.3 | -1.7 |
| Total utilization | 445.1 | 452.9 | 460.2 | 1.6 |
| Food | 382.1 | 388.0 | 393.9 | 1.5 |
| Ending stocks | 124.1 | 126.2 | 133.2 | 5.6 |
| SUPPLY AND DEMAND INDICATORS | | | | |
| Per caput food consumption: | | | | |
| World (kg/year) | 56.5 | 56.7 | 56.9 | 0.4 |
| LIFDC (Kg/year) | 68.8 | 68.9 | 69.0 | 0.1 |
| World stock-to-use ratio (%) | 27.4 | 27.4 | 28.5 | 3.8 |
| Major exporters' stock-to-disappearance ratio (%) ² | 21.3 | 16.6 | 17.6 | 6.0 |
| FAO rice price index (2002-2004=100) | | | | |
| | 2008 | 2009 | 2010 Jan-Oct | Change: Jan-Oct 2010 over Jan-Oct 2009 % |
| | 295 | 253 | 223 | -12.5 |

¹ Calendar year exports (second year shown)

² Major exporters include India, Pakistan, Thailand, the United States and Viet Nam. More detailed information on the rice market is available in the FAO Rice Market Monitor which can be accessed at: <http://www.fao.org/economic/est/publications/rice-publications/rice-market-monitor-rmm/en/>

Figure 21. Global rice closing stocks and stock-to-use ratio

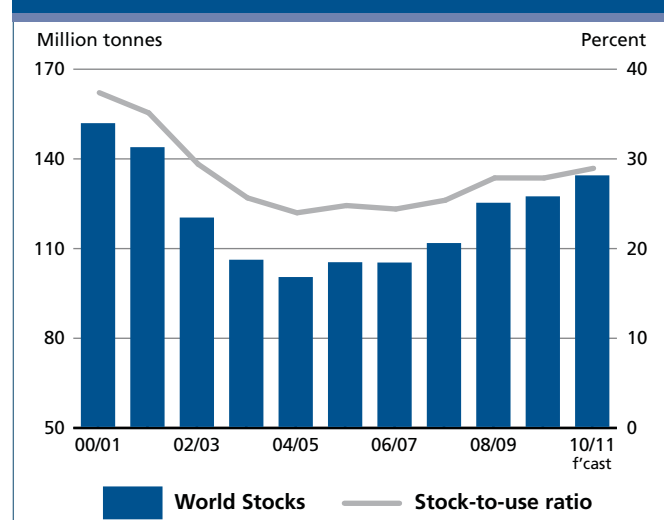
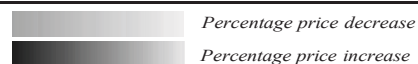


Table 7. Monthly retail prices of rice in selected markets

| Latest available quotation: | | | | Latest available quotation compared to: ^{/1} | | | |
|---|--------|--------|------------------|---|------------------|------------------|--|
| Asia | Month | USD/Kg | 3 months earlier | 6 months earlier | 1 year earlier | 2 years earlier | |
| Bangladesh: Ntl. Avg. (coarse) | Aug-10 | 0.42 | 12% <div></div> | 10% <div></div> | 52% <div></div> | -9% <div></div> | |
| Cambodia: Phnom Penh (mix)* | Aug-10 | 0.40 | -10% <div></div> | -10% <div></div> | 23% <div></div> | -20% <div></div> | |
| China: Hubei (Indica first quality)* | Oct-10 | 0.43 | 0% <div></div> | 2% <div></div> | 8% <div></div> | 7% <div></div> | |
| India: Delhi | Oct-10 | 0.48 | 0% <div></div> | -7% <div></div> | 0% <div></div> | 0% <div></div> | |
| Indonesia: Ntl. Avg. | Sep-10 | 0.95 | 11% <div></div> | 13% <div></div> | 26% <div></div> | 31% <div></div> | |
| Japan: Tokyo Ku-area (Non-glutinous) | Sep-10 | 5.34 | -1% <div></div> | 0% <div></div> | -2% <div></div> | -4% <div></div> | |
| Republic of Korea: Ntl. Avg. | Oct-10 | 1.81 | 0% <div></div> | -3% <div></div> | -7% <div></div> | -10% <div></div> | |
| Myanmar: Ntl. Avg. | Jul-10 | 0.40 | 0% <div></div> | 13% <div></div> | 13% <div></div> | 8% <div></div> | |
| Nepal: Kathmandu (coarse) | Jul-10 | 0.47 | 9% <div></div> | 9% <div></div> | -5% <div></div> | 3% <div></div> | |
| Pakistan: Karachi (irri) | Oct-10 | 0.42 | 6% <div></div> | 6% <div></div> | 10% <div></div> | -15% <div></div> | |
| Philippines: Ntl. Avg. (well-milled) | Jul-10 | 0.74 | 0% <div></div> | 1% <div></div> | 0% <div></div> | -11% <div></div> | |
| Sri Lanka: Colombo (white) | Oct-10 | 0.48 | 9% <div></div> | 3% <div></div> | -13% <div></div> | -13% <div></div> | |
| Thailand: Bangkok (5% broken)* | Aug-10 | 0.41 | 1% <div></div> | -19% <div></div> | -20% <div></div> | -36% <div></div> | |
| Viet Nam: Dong Thap (25% broken) | Sep-10 | 0.39 | 26% <div></div> | 20% <div></div> | 35% <div></div> | 19% <div></div> | |
| Western Africa | Month | USD/Kg | 3 months earlier | 6 months earlier | 1 year earlier | 2 years earlier | |
| Burkina Faso: Ouagadougou (imported)* | Oct-10 | 0.67 | 6% <div></div> | 6% <div></div> | -6% <div></div> | -11% <div></div> | |
| Cape Verde: Santiago (imported) | Sep-10 | 1.10 | 1% <div></div> | 1% <div></div> | 6% <div></div> | 23% <div></div> | |
| Chad: N'Djamena (imported) | Aug-10 | 0.90 | 0% <div></div> | 0% <div></div> | -1% <div></div> | -23% <div></div> | |
| Mali: Bamako (imported)* | Oct-10 | 0.57 | -3% <div></div> | 4% <div></div> | -12% <div></div> | -19% <div></div> | |
| Mauritania: Nouakchott (imported) | Aug-10 | 0.97 | 0% <div></div> | -13% <div></div> | 41% <div></div> | 30% <div></div> | |
| Senegal: Dakar (imported) | Aug-10 | 0.79 | 0% <div></div> | 0% <div></div> | 9% <div></div> | -8% <div></div> | |
| Central Africa | Month | USD/Kg | 3 months earlier | 6 months earlier | 1 year earlier | 2 years earlier | |
| Cameroon: Yaoundé | Aug-10 | 0.86 | -1% <div></div> | 0% <div></div> | -2% <div></div> | -1% <div></div> | |
| Dem. Rep. Congo: Kinshasa (imported) | Aug-10 | 1.09 | -1% <div></div> | -1% <div></div> | 8% <div></div> | 46% <div></div> | |
| Eastern Africa | Month | USD/Kg | 3 months earlier | 6 months earlier | 1 year earlier | 2 years earlier | |
| Burundi: Bujumbura | Jul-10 | 0.93 | -8% <div></div> | -16% <div></div> | -4% <div></div> | 15% <div></div> | |
| Djibouti: Djibouti (imported)* | Sep-10 | 0.61 | 2% <div></div> | -2% <div></div> | -13% <div></div> | -36% <div></div> | |
| Rwanda: Kigali* | Sep-10 | 0.82 | -18% <div></div> | -22% <div></div> | -29% <div></div> | -31% <div></div> | |
| Somalia: Mogadishu (imported) | Sep-10 | 0.68 | 2% <div></div> | 4% <div></div> | -25% <div></div> | - | |
| Uganda: Kampala* | Oct-10 | 0.57 | -16% <div></div> | -33% <div></div> | -36% <div></div> | -41% <div></div> | |
| United Rep. of Tanzania: Dar es Salaam* | Oct-10 | 0.68 | -2% <div></div> | -16% <div></div> | -24% <div></div> | -15% <div></div> | |
| Southern Africa | Month | USD/Kg | 3 months earlier | 6 months earlier | 1 year earlier | 2 years earlier | |
| Madagascar: Ntl. Avg. (local) | Oct-10 | 0.53 | 14% <div></div> | - | 3% <div></div> | -3% <div></div> | |
| Malawi: Lilongwe | Sep-10 | 1.23 | 0% <div></div> | - | 4% <div></div> | 3% <div></div> | |
| Mozambique: Maputo | Oct-10 | 0.80 | 15% <div></div> | 21% <div></div> | 42% <div></div> | 52% <div></div> | |
| Central America and the Caribbean | Month | USD/Kg | 3 months earlier | 6 months earlier | 1 year earlier | 2 years earlier | |
| Costa Rica: Ntl. Avg. (first quality) | Sep-10 | 1.53 | 1% <div></div> | 1% <div></div> | 19% <div></div> | 17% <div></div> | |
| Dominican Rep: Santo Domingo (first quality) | Sep-10 | 1.23 | -6% <div></div> | -5% <div></div> | -4% <div></div> | 4% <div></div> | |
| El Salvador: San Salvador | Jul-10 | 1.11 | 4% <div></div> | 9% <div></div> | -18% <div></div> | -19% <div></div> | |
| Guatemala: Ntl. Avg. (second quality) | Sep-10 | 1.07 | -1% <div></div> | -1% <div></div> | -1% <div></div> | -2% <div></div> | |
| Haiti: Port-au-Prince (imported) | Oct-10 | 0.95 | -5% <div></div> | -21% <div></div> | -13% <div></div> | -36% <div></div> | |
| Honduras: Tegucigalpa (second quality)* | Oct-10 | 0.71 | -5% <div></div> | -11% <div></div> | -16% <div></div> | -34% <div></div> | |
| Mexico: Mexico City (sinaloa)* | Oct-10 | 0.69 | -4% <div></div> | -9% <div></div> | -12% <div></div> | -24% <div></div> | |
| Nicaragua: Ntl. Avg. (second quality) | Sep-10 | 0.91 | -1% <div></div> | 1% <div></div> | -1% <div></div> | -17% <div></div> | |
| Panama: Panama City (first quality) | Oct-10 | 1.07 | 0% <div></div> | 4% <div></div> | 0% <div></div> | 0% <div></div> | |
| South America | Month | USD/Kg | 3 months earlier | 6 months earlier | 1 year earlier | 2 years earlier | |
| Bolivia: La Paz (grano de oro)* | Oct-10 | 0.87 | 5% <div></div> | -7% <div></div> | -4% <div></div> | -24% <div></div> | |
| Brazil: Ntl. Avg. | Sep-10 | 1.17 | -1% <div></div> | -2% <div></div> | -7% <div></div> | -17% <div></div> | |
| Colombia: Bogotá (first quality)* | Sep-10 | 1.00 | 0% <div></div> | -6% <div></div> | 12% <div></div> | -11% <div></div> | |
| Ecuador: Ntl. Avg. | Sep-10 | 0.85 | 2% <div></div> | -1% <div></div> | 1% <div></div> | -3% <div></div> | |
| Peru: Lima (corriente) | Sep-10 | 0.73 | 1% <div></div> | 1% <div></div> | -22% <div></div> | -30% <div></div> | |
| Uruguay: Ntl. Avg. | Sep-10 | 0.90 | -1% <div></div> | -2% <div></div> | -3% <div></div> | -8% <div></div> | |
| North America | Month | USD/Kg | 3 months earlier | 6 months earlier | 1 year earlier | 2 years earlier | |
| United States: City Avg. (long grain, uncooked) | Sep-10 | 1.59 | -2% <div></div> | -5% <div></div> | -5% <div></div> | -15% <div></div> | |
| Europe | Month | USD/Kg | 3 months earlier | 6 months earlier | 1 year earlier | 2 years earlier | |
| Italy: Milan (Arborio Volano)* | Oct-10 | 1.48 | 0% <div></div> | 17% <div></div> | 25% <div></div> | -2% <div></div> | |

^{1/} Quotations in the month specified in the second column were compared to their levels in the preceding three, six, twelve and twenty-four months. Price comparisons were made in nominal local currency units.

* Wholesale prices.

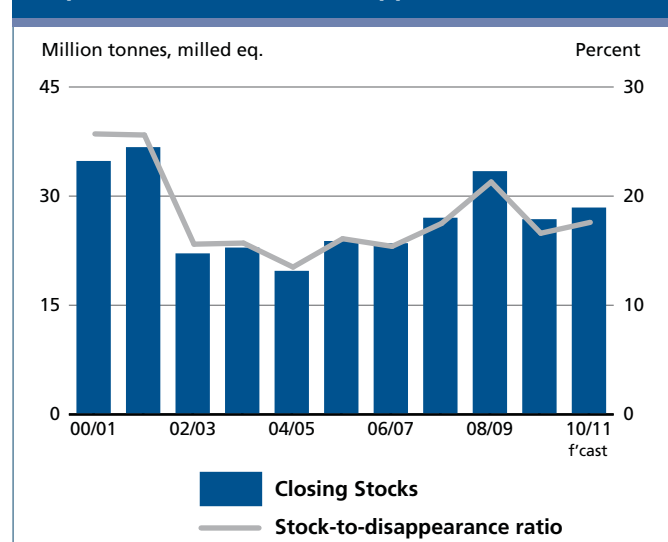


Sources: Associazione Industrie Risiere Italiane (AIR); FAO/GIEWS National Food Price database; Korea Agricultural Marketing Information Service (KAMIS); Monthly Report on the Retail Price Survey, Japan Ministry of Internal Affairs and Communications; Monthly Report on Socio Economic Data, Statistics Indonesia; U.S. Bureau of Labor Statistics (BLS).

in the two countries, as well as in **Bangladesh, Indonesia** and **Sri Lanka** in Asia, **Mali** and **Madagascar** in Africa, and **the United States** in North America. Conversely, a sizeable drawdown of reserves is predicted in **Myanmar, Nepal, Pakistan, the Philippines, the Republic of Korea, Thailand and Viet Nam**, as well as in **Brazil, Egypt, Nigeria** and **Venezuela**. From a trade-status perspective, stocks held by the five major rice exporting countries (**Thailand, Viet Nam, Pakistan, United States** and **India**) are anticipated to rise by 1.7 million tonnes to 27.9 million tonnes, mainly on account of increases in **India** and the **United States**. Rice stocks carried over by traditional importing countries, on the other hand, are forecast to remain stable around 22.8 million tonnes.

At the forecast level of 133 million tonnes, the world stocks-to-use ratio, an important indicator of world food security, would equal 28.5 percent next year, an improvement from the 27.4 percent estimated for 2010 and the highest value since 2002. The relation of rice inventories held by the five top rice exporters to their disappearance (utilization plus exports) gives an indication of the future availability for trade and, as such, is also forecast to move up from 16.6 percent in 2010 to 17.6 percent in 2011, a sign that the market may ease in the course of next year.

Figure 22. Stocks held by the five major rice exporters and stock-to-disappearance ratio



CASSAVA

PRICES

International quotations soar to record highs in 2010

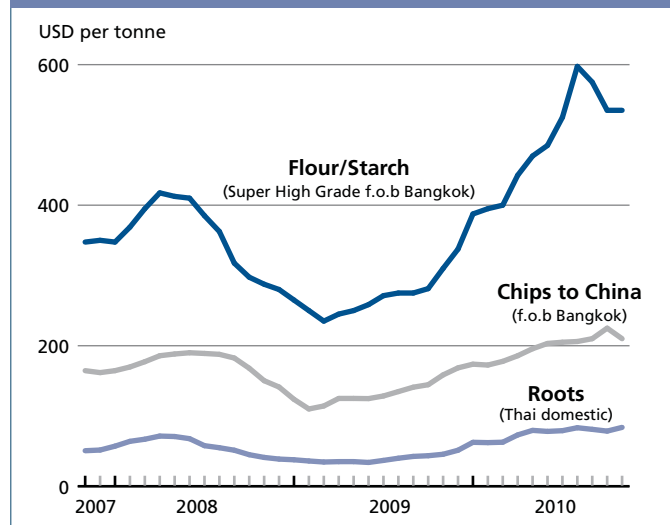
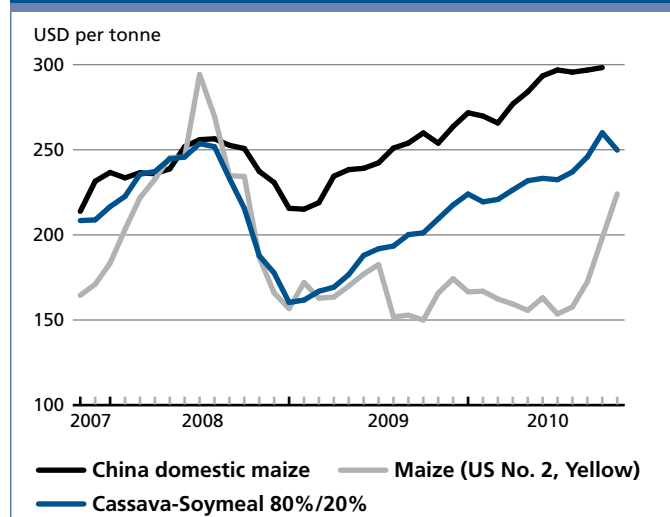
Prices of internationally traded cassava products have surged in 2010. The most pronounced increases were registered by **Thai cassava flour** and **starch** (f.o.b. Bangkok), which from January to October 2010, traded some 85 percent higher on average than the corresponding period last year. In July 2010, quotations reached an all-time high of almost USD 600 per tonne, although by October, they had lost around 10 percent of their value. International prices for **Thai cassava chips** (destined for Mainland China) have risen steadily month-by-month. Quotations surpassed a record high in April 2010, and had gained a further 15 percent, reaching USD 225 per tonne in September before falling back slightly in October.

Some of the support to Thai reference export prices has been provided by strong currency movements. Thai currency has risen 17 percent against the US Dollar since April 2009, with almost half of this strengthening occurring in the past four months. However, the principal factor behind across-the-board price rises has been the sharp cut in Thai exportable supplies, owing to an exceptional contraction in the country's cassava harvest in 2010. In an attempt to arrest the surge in prices and to shore up export competitiveness, Thailand's Ministry of Commerce has intervened by releasing into the marketplace small quantities from official stocks of cassava products from official stocks thought to be around 900 000 tonnes.

Against this backdrop, demand for cassava products continues to soar in Mainland China, the world's principal buyer of the commodity. Cassava constitutes a competitive substitute for maize as a raw material in the industrial sector, especially starch and ethanol. A policy that provides support to the domestic price of maize in Mainland China has boosted international inflows of cassava, providing an additional lift to quotations.

The upturn in quotations could have been even more pronounced were it not for the continued slump in demand for feed pellets in traditional import markets. Cassava blended with protein-rich meals, such as soymeal, is an effective substitute for coarse grains and wheat, but throughout much of 2010, adequate feed grain supplies in the EU, the traditional destination of cassava feed products, has limited its need to import cassava pellets.

The currently tight supply and demand balance is expected to lend substantial support to cassava product prices in 2011, and there could be scope for additional rises

Figure 23. International cassava and Thai domestic prices**Figure 24. Feed ingredient prices****Figure 25. Thai Baht - US dollar exchange rate**

in the near term. First and foremost is the strong likelihood of a consecutive contraction in Thailand's cassava crop in 2011. The sector, which is principally geared towards supplying the international marketplace, will face lower exportable supplies thus putting upward pressure on quotations. Second, the prospect of global maize shortages will raise the demand for cassava in markets where the two commodities compete with each other.

The growing use of cassava chips as a feedstock for ethanol distilleries in Asia has buoyed global demand for cassava in energy and alcohol production in recent years. However, now it could stall, given that ethanol prices reportedly have risen above gasoline prices in the region, particularly in Mainland China. This might only be temporary, given the current upward trend in crude oil prices. Finally, despite ample supplies, Viet Nam has struggled to participate in export markets in 2010 owing to uncompetitive pricing relative to Thai benchmark prices. Consequently, such large surpluses, estimated to be around 20 percent of global potential trade, will overhang markets next year.

PRODUCTION

Expansion in global cassava production could stall in 2010

After 15 years of uninterrupted growth, global cassava production is forecast to fall to 249 million tonnes in 2010,

Table 8. World cassava market at a glance

| | 2008 | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | Change 2010 over 2009 |
|--|------------------|-----------------------|-----------------------|---|
| <i>(million tonnes fresh root equiv)</i> | | | | % |
| WORLD BALANCE | | | | |
| Production | 239.9 | 251.0 | 248.7 | -0.9 |
| Trade | 18.9 | 28.2 | 29.2 | 3.8 |
| SUPPLY AND DEMAND INDICATORS | | | | |
| Per caput food consumption | | | | |
| World (kg/year) | 16.9 | 17.7 | 17.6 | -0.9 |
| Developing (kg/year) | 21.3 | 22.2 | 22.0 | -0.9 |
| LDC (kg/year) | 62.6 | 65.8 | 68.9 | -4.7 |
| Sub Saharan Africa (kg/year) | 106.4 | 111.2 | 114.8 | 3.2 |
| Trade - Share of prod (%) | 7.9 | 11.2 | 11.8 | 4.8 |
| FAO cassava prices | | | | |
| | 2008 | 2009 | 2010 Jan-Oct | Change: Jan-Oct 2010 over Jan-Oct 2009 |
| | <i>USD/tonne</i> | | | % |
| Chips to China (f.o.b. Bangkok) | 171.1 | 137.4 | 199.1 | 52.4 |
| Starch (f.o.b. Bangkok) | 383.6 | 281.3 | 496.0 | 87.1 |
| Thai domestic root prices | 57.2 | 41.4 | 76.1 | 98.8 |

Source: Thai Tapioca Trade Association

CASSAVA PESTS AND DISEASES

Pests, including the **pink cassava mealybug** (*Maconellicoccus hirsutus*), the traditional **cassava mealybug** (*Phenacoccus manihoti*) and the **cassava green mite** (*Mononychellus tanajoa*), pose a severe threat to cultivation in tropical and subtropical regions, especially Africa and Southeast Asia. Infestation can cause losses of up to 80 percent in cassava harvests. Pest outbreaks were common during the 1970s and 1980s, but in recent decades, the threat has been mitigated largely by control measures undertaken by the Institute of International Tropical Agriculture (IITA). IITA implemented biological countermeasures in the form of *Apoanagyrus lopezi* and *Anagyrus lopezi* (both parasitoid wasps), to fight mealybugs and *Typhlodromalus aripo* (a predatory mite), to fight the cassava green mite.

a decline of over 2 million tonnes from the record of the previous year. This potential contraction is mostly due to poor crops in **Asia**. Disease and drought problems in Thailand could see production fall by around 27 percent from the bumper crop gathered in 2009. Around 160 000 ha are thought to have been lost to pink mealybug infestation. Authorities have attempted to suppress the outbreak by importing wasps from West Africa and are conducting research into new resistant strains to protect the crop, which is cultivated by around 400 000 farm households.

Regarding diseases afflicting cassava, the **cassava mosaic virus** causes withering of plant leaves, limits photosynthesis and inhibits the growth of the tuberous root. The virus can be spread either by whitefly or by transplanting diseased material. Towards the latter half of the 1980s, the virus underwent a virulent mutation in Uganda causing the complete loss of leaves. Each year, the mutated virus is estimated to be spreading at a directional rate of 80 km, destroying in total an estimated 35 million tonnes of African cassava annually. Already the virus has infected the whole of Uganda, and parts of Burundi, the Republic of the Congo, the Democratic Republic of the Congo and Rwanda. In the past few years, **cassava brown streak disease** – a viral infection that destroys the root – has been identified as a major threat to cassava cultivation worldwide. Spread by

white flies, visible signs of the virus are not readily apparent and, worryingly, varieties engineered for resistance to cassava mosaic disease are increasingly susceptible to brown streak.

With high prices prevailing throughout much of the year, peaking at around USD 84 (2 500 baht) per tonne in October 2010, the Thai price insurance programme set at USD 54 (1 700 baht) per tonne has been redundant. This is also likely to continue next year, when the buying price has been set at USD 60 (1 900 baht) per tonne.

The industrial utilization of cassava in the form of ethanol has been the main driver of the sizeable expansion in the crop's cultivation throughout the region. Sectors have benefited from the allocation of additional land for cassava, and from subsidies and mandatory ethanol-gasoline blending requirements. Over the past few years, **Mainland China** has initiated large-scale investments within and outside its borders to expand cassava output for ethanol production. Food security concerns have compelled Mainland China to extend a moratorium on new grain-based ethanol plants and, as a result, roughly over half of Mainland China's fuel ethanol and alcohol output are now derived from root crops, namely cassava and sweet potato. In the space of five years, 2005-2009, Mainland China's cassava production more than doubled from 4 million tonnes to 8.7 million tonnes. Expectations initially pointed to yet another record for Mainland China's 2010 cassava harvest, but drought problems have affected yields with output potentially falling to 8 million tonnes.

Estimates for **Viet Nam** put the 2010 harvest at around 8.7 million tonnes, the second highest crop ever gathered in the country. In the past decade, the sector has undergone remarkable expansion, driven predominantly by the needs of the international market. However, progress is likely to be moderated by policy measures to limit cassava area to no more than 450 000 ha compared with 560 000 ha at present. This restraint is the reaction to the deforestation that has resulted from the expansion of cassava fields and concerns over land degradation. Officials have announced that productivity improvements will be stepped up to compensate for the area shortfall. Environmental concerns also have surfaced over the rapid expansion of cassava farming in **Cambodia**. Foreign direct investment by Mainland China to meet its growing appetite for cassava as an energy feedstock and for starch production has contributed to a surge in cassava plantings in Cambodia. Production in 2010, estimated at 3.6 million tonnes, could approach the record harvest of 2008. In the **Philippines**, sustained efforts to develop competitive national animal feed and ethanol industries could lead to another record cassava

Table 9. World cassava production

| | 2007 | 2008 | 2009* | 2010** |
|--------------------------|----------------|----------------|----------------|----------------|
| | (000 tonnes) | | | |
| WORLD | 116 207 | 124 778 | 130 395 | 134 604 |
| Africa | 117 449 | 104 952 | 118 461 | 121 469 |
| Nigeria | 43 410 | 44 582 | 45 000 | 45 700 |
| Congo, Dem. Rep. of | 15 004 | 15 013 | 15 027 | 15 100 |
| Ghana | 10 218 | 11 351 | 12 231 | 12 500 |
| Angola | 9 730 | 10 057 | 12 828 | 13 500 |
| Mozambique | 5 039 | 8 500 | 9 100 | 9 700 |
| Tanzania, United Rep. of | 6 600 | 6 600 | 6 600 | 8 700 |
| Uganda | 4 973 | 5 072 | 5 179 | 5 000 |
| Malawi | 3 239 | 3 491 | 3 000 | 2 300 |
| Madagascar | 2 400 | 2 400 | 2 400 | 2 400 |
| Other Africa | 15 593 | 17 711 | 19 032 | 19 704 |
| Latin America | 36 311 | 36 429 | 37 024 | 36 606 |
| Brazil | 26 639 | 26 541 | 26 600 | 26 000 |
| Paraguay | 4 800 | 5 100 | 5 300 | 5 400 |
| Colombia | 1 363 | 1 288 | 1 444 | 1 500 |
| Other Latin America | 3 509 | 3 500 | 3 680 | 3 706 |
| Asia | 76 398 | 80 280 | 85 641 | 78 167 |
| Thailand | 26 916 | 25 156 | 30 088 | 22 000 |
| Indonesia | 19 988 | 21 593 | 22 039 | 22 500 |
| Viet Nam | 8 193 | 9 396 | 8 557 | 8 700 |
| India | 8 232 | 9 056 | 9 623 | 10 000 |
| China, mainland | 7 875 | 8 300 | 8 700 | 8 000 |
| Cambodia | 2 215 | 3 676 | 3 497 | 3 600 |
| Philippines | 1 871 | 1 942 | 2 044 | 2 200 |
| Other Asia | 1 108 | 1 161 | 1 093 | 1 167 |
| Oceania | 284 | 278 | 271 | 277 |

* Estimate

** Forecast

output of 2.2 million tonnes. The country has earmarked doubling its cassava area by 2014 in order to meet its domestic requirements.

In other major producing countries of the region, cassava output has been characterized by robust growth in **India** and **Indonesia**. Both had exceptional outcomes last year, and 2010 is likely to continue the growth, with production projected to rise by around 500 000 tonnes in each country from 2009 levels. The **Lao People's Democratic Republic** has announced plans to construct a large cassava ethanol refinery funded by a Chinese firm, which reportedly has prompted a 50 000 ha expansion in cassava acreage. The country currently forecasts its cassava production to increase by 50 000 tonnes, reaching 200 000 tonnes in 2010.

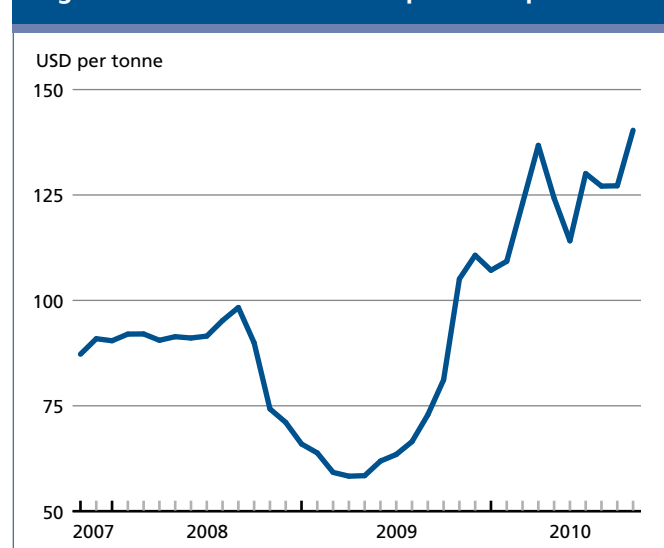
In **Africa**, continued turbulence in the global market for traded food staples constantly reminds many vulnerable countries to look toward indigenous crops, such as cassava,

as an alternative to potentially expensive and volatile imported cereals. As a "crisis crop", indigenous to the region, cassava roots require few inputs, and can be left in the ground for well over a year and harvested when food shortages arise or when prices of preferred cereals become prohibitive. While this attribute makes an accurate assessment of cassava production particularly difficult, it nonetheless is behind an anticipated expansion of African output of over 3 percent, to some 135 million tonnes in 2010.

Ongoing long-term programmes for the commercialization of cassava as a food crop constitute the major factor behind Africa's positive prospects, but government food-security initiatives with the support of international donors have also played an important role. Support often takes the form of distribution of high-yielding and disease-resistant planting material, extension activities to introduce "good agricultural practices", as well as measures to strengthen the value chain, notably food processing for value-added cassava products.

At the country level, **Nigeria**, the world's leading producer, could see production reach a new height of 45.5 million tonnes, up 1 percent from 2009, while **Ghana's** output could surpass 12 million tonnes for the second year in a row. Domestic investment in the sector assisted by good weather could yield strong gains in **Mozambique** and the **United Republic of Tanzania**, with estimates of the 2010 cassava crop approaching 9 million tonnes in each country. Foreign investment is also set to play a role in boosting production elsewhere in the region. For instance, Mainland China reportedly has provided substantial financial support to the cassava sector in **Liberia**, a new entrant to its rising

Figure 26. Brazil cassava root producer prices



investment portfolio in the region. In **Malawi**, drought conditions prevailing much of this year will likely lead to output contraction in the order of 20 percent. Similarly, in **Uganda**, 2010 harvest prospects are expected to be downgraded due to an outbreak of cassava brown streak disease.

The 2010 production outlook for **Latin America and the Caribbean** points to a small expansion reflecting an anticipated increase in harvested area in **Brazil**, the region's largest producer. Producer prices, while volatile, began moving upwards in the middle of last year and have had a positive effect on planting decisions. As for **Colombia** and **Paraguay**, the region's other major cassava producing countries, little is known about the current situation, but both countries have experienced firm growth in cassava production in recent years.

Outlook for 2011

Prospects for global production in 2011 appear somewhat mixed. For instance, in Thailand, early official estimates for the 2011 crop show a further contraction of around 4 percent. The decline was initially estimated to be much larger, but there has been improved confidence in the sector's ability to contain the mealybug infestation. Improved returns for competing crops, especially sugar cane, could also limit recovery in Asia. But, on the other hand, sustained public support and private investment in scaling-up cassava crops to meet the needs of the food sector in Africa and the industrial and energy sectors in Asia could provide an impetus for a return to global production growth. Regarding the energy sector, the recent reduction of the ethanol tariff in Mainland China from 30 to 5 percent is likely to trigger significant investment in integrated cassava-ethanol facilities involving new plantations.

TRADE

Asia drives global cassava trade to new heights in 2010

Despite the downturn in global production, world trade in cassava products in the current year is expected to rise by 4 percent to a record 14.7 million tonnes (chip and pellet weight equivalent). This forecast is based on rising international need for cassava as a feedstock for ethanol production combined with the sustained competitiveness of cassava starch relative to grain-based products.

Robust global demand has resulted in a stronger pace of cassava shipments from Thailand, by far the world's largest international supplier. Overall, the country is anticipated

Table 10. World exports of cassava (product weight equivalent)

| | 2007 | 2008 | 2009 | 2010 |
|--------------------------|---------------|--------------|---------------|---------------|
| <i>000 tonnes</i> | | | | |
| Total | 11 192 | 9 452 | 14 089 | 14 625 |
| Flour and Starch | 4 686 | 4 265 | 8 062 | 7 636 |
| Thailand | 4 416 | 3 963 | 4 991 | 5 626 |
| Viet Nam | 1 328 | 946 | 2 735 | 1 641 |
| Others | 269 | 302 | 335 | 369 |
| Chips and Pellets | 6 506 | 5 187 | 6 027 | 6 989 |
| Thailand | 4 824 | 2 848 | 4 411 | 5 964 |
| Viet Nam | 527 | 437 | 1 265 | 759 |
| Indonesia | 210 | 170 | 160 | 96 |
| Others | 156 | 169 | 191 | 170 |

¹ In product weight of chips and pellets

Table 11. Thai trade in cassava

| | 2005 | 2006 | 2007 | 2008 |
|-------------------------------|--------------|--------------|--------------|---------------|
| <i>000 tonnes</i> | | | | |
| Total | 9 240 | 6 810 | 9 402 | 11 590 |
| Flour and starch total | 4 416 | 3 963 | 4 991 | 5 626 |
| Japan | 729 | 873 | 746 | 744 |
| China | 694 | 611 | 1 220 | 1 368 |
| Chinese prov. of Taiwan | 548 | 483 | 684 | 631 |
| Indonesia | 667 | 417 | 617 | 901 |
| Malaysia | 256 | 296 | 412 | 483 |
| Others | 1 523 | 1 284 | 1 311 | 1 500 |
| Chips and pellets | 4 824 | 2 848 | 4 411 | 5 964 |
| China | 3 168 | 1 214 | 4 237 | 5 925 |
| Republic of Korea | 20 | 480 | 111 | 15 |
| European Union | 1 436 | 989 | 17 | 5 |
| Others | 200 | 170 | 46 | 20 |

¹ In product weight of chips and pellets

Source: Thai Tapioca Trade Association (TTTA)

to ship around 11.6 million tonnes (chip and pellet weight equivalent) of cassava chips, pellets and starch in 2010, up by 38 percent in volume from 2009. Shipments are likely to be sustained from the country's stocks given the huge downgrading of the 2010 cassava crop. Viet Nam recently emerged as a major competitor, but its 2010 cassava product exports are likely to contract by 40 percent from last year's excellent performance to around 2.4 million tonnes, owing to a rise in export quotations. Pegged to the US Dollar, currency movements have also adversely affected Viet Nam's competitiveness in export markets.

Mainland China looks set to strengthen its position as the most important buyer on the international stage, accounting

for almost 70 percent of all cassava imports in 2010. A policy introduced last November that subsidizes domestic maize purchases to meet demand in deficit areas rather than through imports, combined with inventory control, has pushed up maize prices considerably in the country. The policy has reinforced the competitiveness of imported cassava, even though cassava products are being traded around record price levels.

Global imports of **chips** are again expected to be dominated by Mainland China, principally to meet capacity of the burgeoning cassava-based ethanol sector. Indeed, demand for chips by the country is set to underpin world trade in chips and pellets in 2010, by 14 percent from the previous year to just over 7 million tonnes. In the past year, Viet Nam has assisted Thailand in meeting this demand, but is likely to play a very minor role in 2010. Regarding **cassava starch** and **flour**, global transactions are expected to fall moderately short of the record volume traded in 2009, with Thailand again expected to capture share at the expense of Viet Nam in a market orientated towards supplying neighbouring destinations.

These developments reaffirm that international cassava trade within Southeast Asia is being increasingly confined to fulfil industrial requirements in the subregion, with a small amount of cross-border transactions. Prospects for development of a truly global market for cassava are becoming more unlikely.

Outlook for 2011

The trade outlook for 2011 is once again on the positive side. However, much depends on Mainland China's continued presence in the global marketplace which, in turn, relies on the country's policy that gives cassava a competitive edge over grain-based substitutes, and on the likelihood of further increases in the price of imported maize. Cassava quotations are expected to be attractive in this context and could underpin a rise in pellet and chip shipments to the feed and industrial sectors around the world.

Indeed, the degree of capacity utilization and expansion in cassava-based ethanol industries in Mainland China will play an important role in determining trade prospects. The demand for processing cassava into energy will depend on the margin of ethanol returns, the competitiveness of other feedstocks and the ethanol price relative to petroleum. In this regard, the surge underway in global sugar and molasses quotations and an upward trend in the price of petroleum may well prompt Asian countries to rely more on cassava to meet ethanol mandates and industrial alcohol demand.

UTILIZATION

Food and ethanol drive cassava utilization in 2010

Regarding **food** utilization, initiatives that target cassava to meet rising dietary staple needs have been undertaken in many vulnerable countries. This is particularly evident in sub-Saharan Africa, where consumption of cassava (mostly in the form of fresh roots and basic processed products) is on the increase. With the expected overall production rising faster than population per capita food availability looks set to rise in the region by around 3.6 kg to around 115 kg.

Measures to promote domestic cassava flour over imported cereals, either for direct consumption or through blending, remain active throughout the world and constitute an important determinant in higher cassava food consumption. Brazil mandates to incorporate 10 percent cassava flour in wheat flour, which an estimated 50 percent of the country's cassava crop. Though several major producing countries in West Africa also have promoted this initiative, many have fallen short of enforcement, owing to the limited availability of cassava flour. At present, Nigeria is considering a parliamentary bill officially mandating a 10 percent blend.

The cassava demand from **ethanol** sectors for meeting mandatory blending will again emerge as a significant driver in the expansion of cassava utilization. A typical distillery can produce about 280 litres (222 kg) of 96 percent pure ethanol from 1 tonne of cassava roots with 30 percent starch content.

In Mainland China, an estimated 650 million litres of ethanol will be produced from cassava in 2010, requiring around 5 million tonnes of dried cassava. While the country has secured agreements with several neighbouring countries to supply its ethanol industry with the feedstock, the reduction in Mainland China's ethanol tariff has led several of them to gear up towards exporting the biofuel instead of the raw feedstock. For instance, in Lao People's Democratic Republic, construction could soon begin on an ethanol refinery with a productive capacity of around 390 million litres per year. Similarly, Viet Nam has plans to construct an ethanol facility with an annual capacity of 125 million litres. The factory will provide one-half of its volume to the domestic market, with the remainder going for export.

Utilization of cassava as **animal feed**, in the form of dried chips and pellets, is mostly concentrated in Brazil and Colombia in Latin America and the Caribbean, Nigeria in Africa, and Mainland China and the Republic of Korea in Asia. Little is known as to how feed usage has fared in the former two regions, but the demand for cassava feed

ingredients in Asia remains weak. Similarly, in Europe, cassava applications in the manufacture of feed ingredients have been virtually non-existent in the past two years. However, given the rising global scarcity of grain-based products, prospects of a resurgence in the feed usage of cassava have brightened.

OILSEEDS, OILS AND MEALS³

PRICES⁴

Strong rebound in world prices in recent months

Following the 2007/08 surge and subsequent decline, in early 2009 prices for oilcrops and oilcrop products again embarked on an upward trend. Renewed price firmness over the 2008/09 marketing season (October-September) mirrored market fundamentals, in that world production of both oilmeals and oils fell short of global demand for the second consecutive season, driving the respective stock-to-use ratios down.

During 2009/10, the overall supply and demand situation eased thanks in particular to a strong rise in world soybean production. However, international prices did not relax - for a number of reasons. For example, in the case of meals, during the first half of the season, the world market relied totally on supplies from the United States, where stocks had dropped to a historical low. Then, during the second half of 2009/10, South America's new crop took unusually long to reach the market, and rape, sunflower and fishmeal supplies became increasingly tight, thus sustaining prices. Also for oils and fats, global supplies remained tight relative to demand, and the global stock-to-use ratio recovered only partially from the previous season's critically low level. Forecasts of slowing growth in palm oil production caused additional concern. A number of external factors also added to the price firmness in the oilseed complex, in particular the growing weakness of the US Dollar and the relative strength of mineral oil prices.

³ Almost the entire volume of oilcrops harvested worldwide is crushed in order to obtain oils and fats for human nutrition or industrial purposes and cakes and meals used as feed ingredients. Therefore, rather than referring to oilseeds, the analysis of the market situation is mainly undertaken in terms of oils/fats and cakes/meals. Hence, production data for oils (cakes) derived from oilseeds refer to the oil (cake) equivalent of the current production of the relevant oilseeds, i.e. do not reflect the outcome of actual oilseed crushing nor take into account changes in oilseed stocks. Furthermore, the data on trade in and stocks of oils (cakes) refer to the sum of trade in and stocks of oils and cakes plus the oil (cake) equivalent of oilseed trade and stocks.

⁴ For details on prices and corresponding indices, see appendix Table A24.

Figure 27. FAO monthly international price indices for oilseeds, oils/fats and oilmeals/cakes (2002-2004=100)

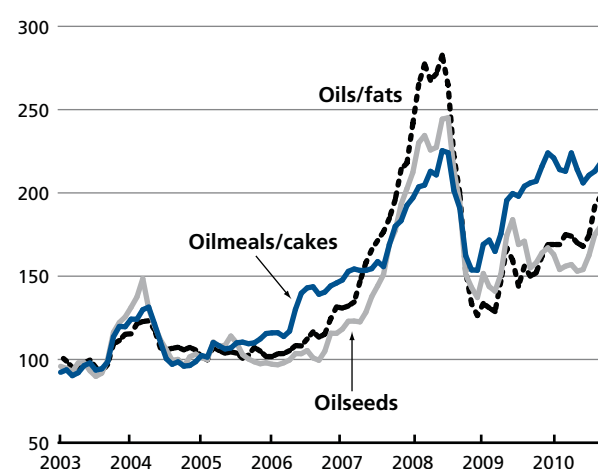
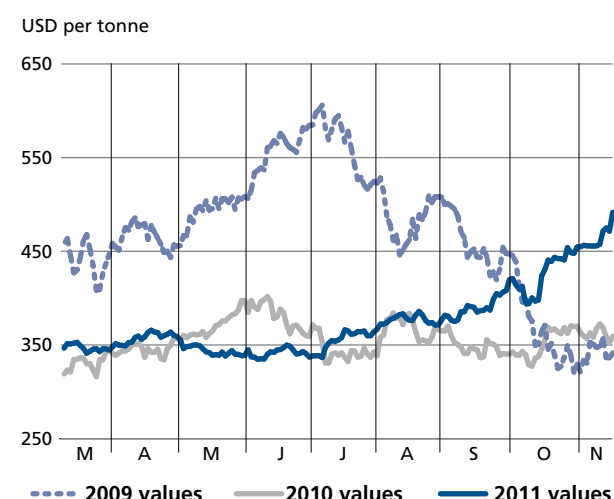


Figure 28. CBOT soybean futures for March



Towards the end of the 2009/10 season, the prospect of lower than expected outturns in 2010/11 oilcrops, but also grains, lent new support to prices in the oilseed complex. At the same time, unabated growth in soybean import demand (primarily from China), fears that some countries could contemplate restricting exports, prolonged weakness in the US Dollar and continued firmness in the energy market also helped to sustain prices. As a result, by October 2010, the FAO price indices for oilseeds, oils and meals had climbed to levels not reached during the preceding 24 months and, in the case of meals, the index even exceeded the values recorded during the 2008 price surge.

Figure 29. FAO monthly price index for oilseeds (2002-2004=100)

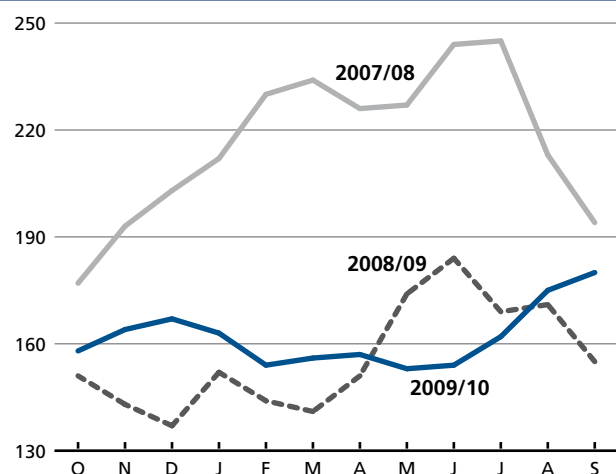


Figure 30. FAO monthly price index for meals/cakes (2002-2004=100)

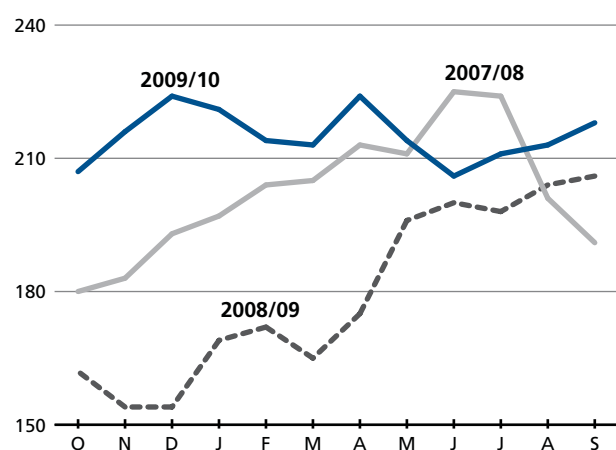
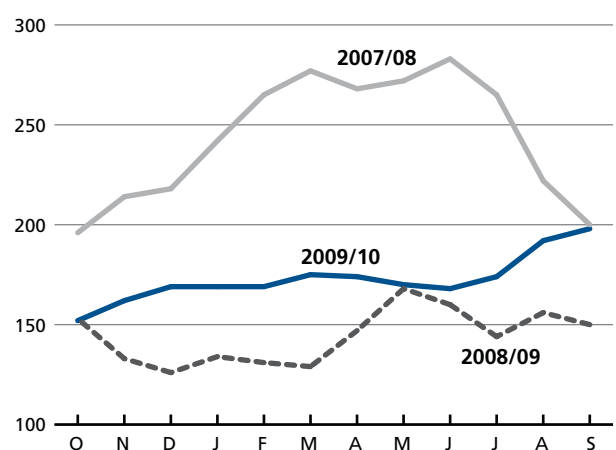


Figure 31. FAO monthly price index for oils/fats (2002-2004=100)



PRICE STRENGTH IN THE OILSEED COMPLEX COULD PERSIST THROUGHOUT 2010/11

Current forecasts for 2010/11 suggest that total oilcrop output could remain close to last season's record level. However, with meal and oil utilization expected to expand further, global production of meals is anticipated to exceed world demand by a very small margin, while a new production deficit is likely to develop for oils/fats. Global meal inventories could decrease marginally, while inventories of oils should fall markedly. Based on these forecasts, stock-to-use ratios for both meals and oils would drop, with the oils ratio reaching a critically low level. Meanwhile, tight export availabilities should slow expansion in oilseed product trade. These market fundamentals, together with the likely persisting strong price linkage between soy and maize/wheat, point toward continued strength - throughout 2010/11 - in world prices of oilseeds, meals and particularly, vegetable oils. Soybean futures in Chicago exceeded USD 460 per tonne in the first week of November, compared with USD 360 1 year earlier. Following the release of the USDA report on 9 November, which pointed to a tighter supply situation, the price of soybeans for delivery in March 2011 surged even higher, to USD 492 per tonne. There are, however, four key unknowns that will impact whether and by how much world prices will increase beyond their present level: (i) the impact of the currently developing La Niña weather pattern on the next South American soy crop and on Southeast Asia's palm oil production; (ii) next year's allocation of land among soy, maize and wheat, primarily in the United States, as all three commodities appear to be at risk of additional tightness in 2011/12; (iii) the pattern of energy prices, which will influence vegetable oil demand by biodiesel producers; and (iv) the development of the United States currency, given its influence on global trade patterns.

OILSEEDS

Global 2010/11 oilcrop output to match last season's record level

After last season's extraordinary rise in production, global oilcrop output is forecast to remain virtually unchanged in 2010/11. At the current estimate of 453.7 million tonnes, global output would closely trail last season's all-time record. As to individual oilseeds, a year-on-year fall in production is expected for soybeans, rapeseed and copra. However, these drops should be offset almost entirely by rising cottonseed, groundnut and palmkernel production. The anticipated recovery in cottonseed is particularly noteworthy, as output is anticipated to increase by more than 10 percent, mainly on account of improved crops in **India** and the **United States**. With regard to rapeseed, global output is expected to fall markedly below the average of recent years after adverse weather depressed production in major producing areas, notably **Canada**, the **EU** and the **Ukraine**. Production in **China** is also reported lower, due to continued gradual contraction in area. While unfavourable weather conditions in Eastern Europe also hampered sunflower seed cultivation, global output should remain unchanged thanks to production rises in **Argentina**, **India** and **Turkey**.

World soybean production is anticipated to reach 257.6 million tonnes, the second highest on record after last year's all-time high, as farmers respond to firm soybean prices and due to generally beneficial weather conditions. Among northern hemisphere producers, the **United States** reported a record-breaking harvest for the second

consecutive year. Record crops are also anticipated in **Canada** and the **Ukraine**. While extensive plantings and favourable weather also helped sustain production in **India**, a further shrinking in area and output is reported from **China**. In the southern hemisphere, where planting of the soybean crop has only just started, current forecasts point to a production decrease compared with last season's peak. Yields should revert to the historic average considering the ongoing transition from the rainy El Niño weather pattern to dryer La Niña conditions. In **Brazil**, attractive profit margins were expected to support plantings, but dry weather may eventually curtail sowings and negatively affect yields. Below normal rainfall also could affect the crop in **Argentina**, where, in addition, some areas may be shifted in favour of grain and sunflower seed. Consequently, South America's combined soy output could shrink by over 3 percent this season to about 130 million tonnes, still the second highest output on record.

OILS AND FATS⁵

Ample carry-in stocks to sustain global oil/fat supplies

Current 2010/11 crop forecasts translate into a 1.5 percent increase in global oils/fats production, much weaker than the average 4 percent growth experienced over the past five seasons. Oil extracted from annual oilcrops is in fact expected to shrink given the disappointing harvests of the two key high oil-yielding oilseeds - rape and sunflower - and increased reliance on low oil-content soybeans. However, perennial crops are expected to compensate this fall, particularly palm oil, production of which is forecast to grow by a healthy 6.5 percent (i.e. double the rate recorded last year), due to the developing La Niña weather pattern which tends to augment rainfall throughout Southeast Asia, as well as further increases in mature area, notably in **Indonesia**. Global oils/fats supplies, which comprise 2010/11 production plus global 2009/10 ending stocks, should expand by over 2 percent, thanks to good stock positions at the beginning of this season. However, the projected year-on-year supply growth remains weak in historic terms. Among the main producing countries, domestic availability of oils/fats is set to expand in particular in **Argentina**, **Brazil**, **India** and **Indonesia**, with abundant 2009/10 ending stocks contributing greatly in Argentina and Brazil. Availability should also expand, though less strongly, in the **United States**. However, modest or zero growth is

Table 12. World production of major oilseeds

| | 2008/09 | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | Change 2010/11 over 2009/10 % |
|------------------------|--------------|--------------------------|--------------------------|---|
| <i>million tonnes</i> | | | | |
| Soybeans | 211.7 | 260.5 | 257.6 | -1.1 |
| Cottonseed | 41.8 | 39.9 | 44.3 | 11.1 |
| Rapeseed | 58.4 | 60.8 | 56.5 | -7.1 |
| Groundnuts (unshelled) | 35.4 | 32.8 | 34.2 | 4.1 |
| Sunflower seed | 34.7 | 32.4 | 32.4 | 0 |
| Palm kernels | 11.6 | 12.0 | 12.6 | 5.4 |
| Copra | 5.2 | 5.8 | 5.3 | -10.0 |
| Total | 398.8 | 444.2 | 442.9 | -0.3 |

Note: The split years bring together northern hemisphere annual crops harvested in the latter part of the first year shown, with southern hemisphere annual crops harvested in the early part of the second year shown. For tree crops, which are produced throughout the year, calendar year production for the second year shown is used.

⁵ This section refers to oils from all origins, which – in addition to products derived from the oil crops discussed under the section on oilseeds – include palm oil, marine oils as well as animal fats.

Table 13. World oilseed and product markets at a glance

| | 2008/09 | 2009/10 estim. | 2010/11 f'cast | Change 2010/11 over 2009/10 |
|--|----------------|-------------------|-------------------|---|
| | million tonnes | | | % |
| TOTAL OILSEEDS | | | | |
| Production | 409.5 | 454.8 | 453.7 | -0.3 |
| OILS AND FATS¹ | | | | |
| Production | 161.5 | 172.0 | 174.6 | 1.5 |
| Supply ² | 184.8 | 194.2 | 198.8 | 2.4 |
| Utilization ³ | 163.6 | 169.9 | 178.0 | 4.7 |
| Trade ⁴ | 86.2 | 88.9 | 90.8 | 2.2 |
| Stock-to-utilization ratio (%) | 13.6 | 14.2 | 13.2 | |
| MEALS AND CAKES⁵ | | | | |
| Production | 100.0 | 116.0 | 115.4 | -0.5 |
| Supply ² | 117.9 | 130.6 | 134.6 | 3.1 |
| Utilization ³ | 104.6 | 109.5 | 114.9 | 4.9 |
| Trade ⁴ | 62.3 | 66.8 | 69.9 | 4.6 |
| Stock-to-utilization ratio (%) | 14.0 | 17.4 | 16.4 | |
| FAO price indices (Oct-Sep) (2002-2004=100) | 2007/08 | 2008/09 | 2009/10 | Change: 2009/10 over 2008/09 % |
| Oilseeds | 217 | 156 | 162 | 3.8 |
| Oilmeals/cakes | 202 | 180 | 215 | 19.4 |
| Oils/fats | 243 | 144 | 173 | 20.1 |

Note: Refer to footnote 3 in the text for further explanations regarding definitions and coverages

¹ Includes oils and fats of vegetable, animal and marine origin

² Production plus opening stocks

³ Residual of the balance

⁴ Trade data refer to exports based on a common October/September marketing season

⁵ All meal figures are expressed in protein equivalent; meals include all meals and cakes derived from oilcrops as well as meals of marine and animal origin

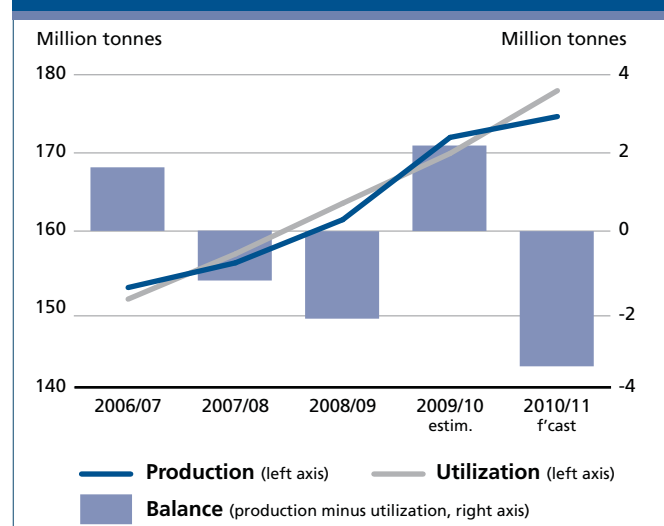
expected in **China** and **Malaysia**, while exceptional drops in supplies are forecast for **Canada**, the **EU** and the **Ukraine**, mostly owing to poor harvests.

Consumption growth to continue due to rising food use and biodiesel applications

Global demand for oils/fats is anticipated to continue expanding in 2010/11. With an estimated year-on-year rise of 4.7 percent, consumption growth would exceed the average rate of the last four seasons. Negative demand response to firming oils/fats prices should be limited as population and economic growth boost average per caput use among developing countries. Renewed growth in demand from the biodiesel industry will also contribute to the rise in consumption. Higher mandatory blending rates and the creation of additional production capacity in

numerous countries are behind such expansion. Biodiesel production is anticipated to account for at least half of this season's rise in global consumption.

As in past years, a major portion of global demand growth is expected to originate in Asia, with **China** as the dominant player and food uses as the main source of growth. With consumption exceeding 33 million tonnes, up more than 5 percent from last season, Mainland China remains the world's largest consuming nation. In **India** and **Indonesia**, Asia's second and third largest consumers, demand is expected to expand by 3-4 percent. Other developing countries with strong expansion rates include **Argentina** and **Brazil**, where consumption growth will be driven by rising purchases from the biofuel industry. Year-on-year, total consumption is estimated to rise almost 40 percent in Argentina and 15 percent in Brazil, with biodiesel production absorbing, respectively, around 60 and 30 percent of domestic soybean output. Also in **Canada**, the **EU** and the **United States** consumption growth should be driven primarily by biodiesel demand. In the EU, however, growth could be less strong than in recent years due to the implementation of complex directives on bioenergy use, which may temporarily slow activities. EU demand growth also should be constrained by the anticipated drop in domestic supplies, including low carryover stocks from last season. In the United States, consumption should recover from the recent drops thanks to renewed growth in biodiesel production following higher utilization mandates, although this assumes the reintroduction of the customary production incentives. Overall, increasingly ambitious biodiesel production/consumption targets are likely to significantly

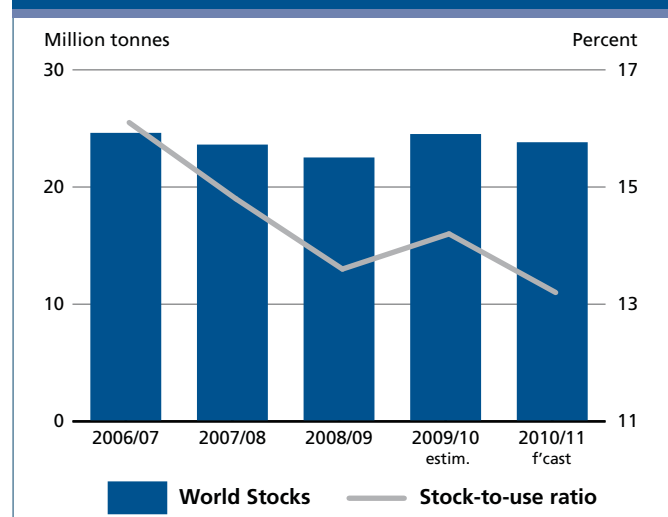
Figure 32. Global production and utilization of oils/fats

affect the availability and trade of vegetable oils for food and other traditional uses. Commodity-wise, consumption growth will be fuelled primarily by soyoil, followed by palm oil. The anticipated reliance on soyoil reflects this season's poor sunflower and rapeseed harvests and the fact that South America's expansion in biodiesel production will be largely soyoil based.

Production deficit *vis-à-vis* demand to drive inventories down

As opposed to last season, global oils/fats demand in 2010/11 is anticipated to exceed production and, in turn, lead to a drop in global inventories. The production shortfall is estimated to amount to 3.3 million tonnes or 2 percent. Global inventories (measured as oils/fats inventories *per se*, plus the oil contained in stored oilseeds) are projected to fall to 23.5 million tonnes, representing a year-on-year drop of 3 percent. Given this season's poor rape and sunflower seed harvests, global stocks of the respective oils are expected to contract markedly. The fall should however be partly offset by a build-up of palm oil and, to a lesser extent, soyoil inventories. With regard to major stockholding countries, a net decrease in stocks appears likely in **Canada**, primarily reflecting weak production; in **Argentina, Brazil and India**, mostly resulting from rising domestic consumption; and in the **EU**, due to both factors. Significant stocks rebuilding is expected only in **Indonesia** and **Malaysia**. The anticipated fall in global stocks combined with the projected rise in world consumption would cause the stock-to-use ratio to drop to 13.2, which, if confirmed, would be the lowest level

Figure 33. World closing stocks and stock-to-use ratio of oils/fats (including the oil contained in seeds stored)



recorded in the last ten years and would suggest additional price firmness in international oils/fats markets during 2010/11.

Oils/fats trade to expand further in 2010/11, though at a below average rate

In 2010/11, global trade in oils/fats (including the oil contained in traded oilseeds) is forecast to reach 90.8 million tonnes, expanding by 2 percent from last season's level. The anticipated growth is below-average and this is mostly because of higher biodiesel blending obligations that are expected to come into force in the world's leading suppliers of soy oil (the United States, Argentina and Brazil) which

Figure 34. Total oil/fat imports by region or major country (including the oil contained in seed imports)

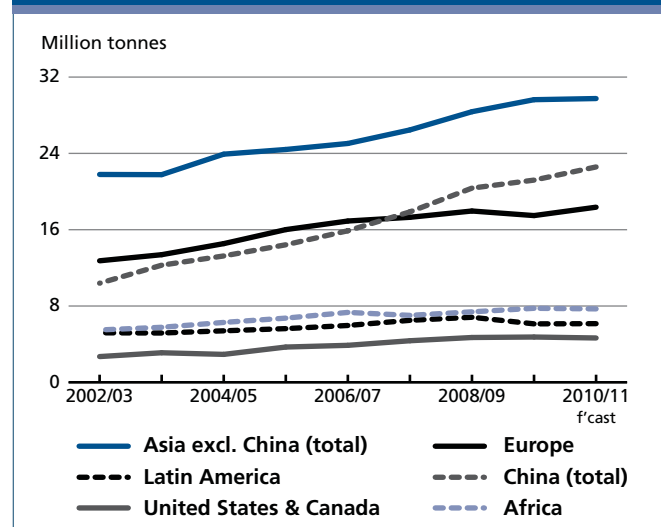
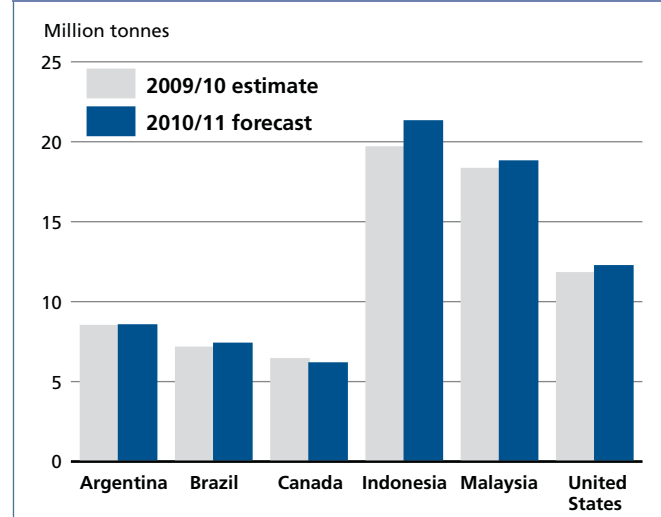


Figure 35. Oil/fat exports by major exporters (including the oil contained in seed exports)



could limit the growth in export availabilities. While total shipments should grow beyond last season's record volume in the **United States**, the sales of **Argentina** and **Brazil** are likely to fall short of past levels. Furthermore, poor harvests in certain oilcrops, notably rape and sunflower seed, are expected to reduce export availabilities in some nations, notably **Canada** and **CIS** countries. The key growth element in the export market will be **Indonesia's** and **Malaysia's** record palm oil shipments. Consequently, and contrary to last season, trade expansion is anticipated to rely primarily on palm oil and not soyoil. With regard to imports, **China** continues to account for close to one-quarter of global demand, while purchases by other Asian countries add up to another third. Both China and **India**, the region's two main importers, continue to rely on foreign purchases for domestic consumption - more than 60 percent in Mainland China and almost 50 percent in India. India's imports could fall slightly, due to this season's ample harvests and because rising domestic prices are likely to trigger a release of stocks and an acceleration in crushing. Purchases by the **EU**, the world's second largest importer, are expected to climb to a new record, given the concurrence of poor rapeseed harvests with further rising demand from biofuel producers.

MEALS AND CAKES⁶

Global meal supplies to rise, also thanks to abundant opening stocks

Assuming current 2010/11 crop forecasts materialize, global meals/cakes production should remain about unchanged compared with last season's all-time record. The anticipated 7 percent drop in rapeseed and 1 percent drop in soybean meal output should be partly offset by rising production of cottonseed, palmkernel, groundnut and fish meal. World supplies of meals/cakes (which comprise 2010/11 production plus 2009/10 ending stocks) are anticipated to expand by around 3 percent. Last season's strong recovery in soybean stocks should allow overall supplies to climb to an all-time record. With regard to main producers, higher supply estimates in **India** and the **United States** are based on this season's ample crops. By contrast, **Argentina**, **Brazil** and **China** would owe their improved availabilities primarily to high carry-in stocks. In the **EU**, the combination of low carry-in stocks with poor harvests is expected to result in an unusual drop in supplies.

⁶ This section refers to meals from all origins, which – in addition to products derived from the oil crops discussed under the section on oilseeds – include fish meal as well as meals of animal origin.

Meal consumption to grow in spite of firm prices

Global consumption of meals/cakes is forecast to expand by almost 5 percent in 2010/11 despite historically high prices. Commodity-wise, the share of soymeal in total consumption is likely to rise this season owing to reduced availabilities of sunflower and rapeseed meal. While consumption should expand worldwide, much of the growth is likely to be concentrated in Asia. **Mainland China** alone should account for over 40 percent of global demand expansion, driven by rising population and income combined with surging per capita consumption of livestock products, which can only be satisfied via industrial livestock rearing employing protein-rich feedstuffs. Mainland China's consumption is projected to grow by 10 percent, to almost 30 million tonnes (in protein equivalent), or roughly one-fourth of the world total. In **Africa**, **Latin America** and the **Caribbean**, average demand growth is expected to remain below 3 percent. In the **EU**, meal consumption could recover from its recent drops, given initial signs of a revival of livestock production and rising prices of competing feed grains. By contrast, with only modest gains in livestock production and continued availability of attractively priced distilled dried grain, **United States** meal demand is expected to remain below historic levels. Overall, the outlook for global feed demand and meal consumption remains uncertain, as additional strength in international prices of maize and other feedgrains could temper the projected increases in livestock production and thus feed demand.

Figure 36. Global production and utilization of meals/cakes

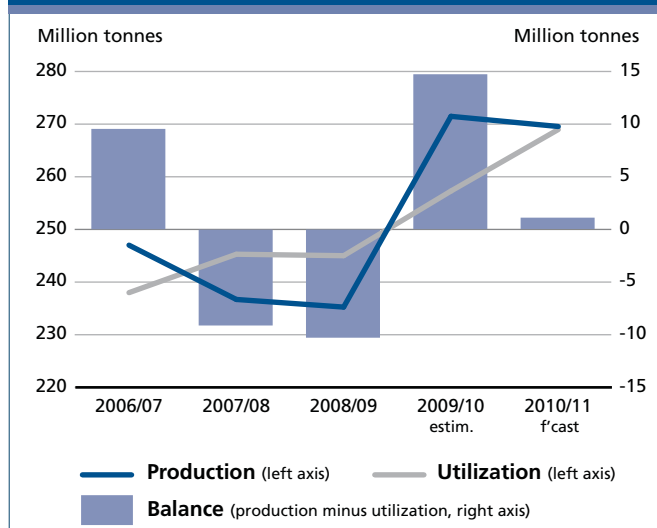
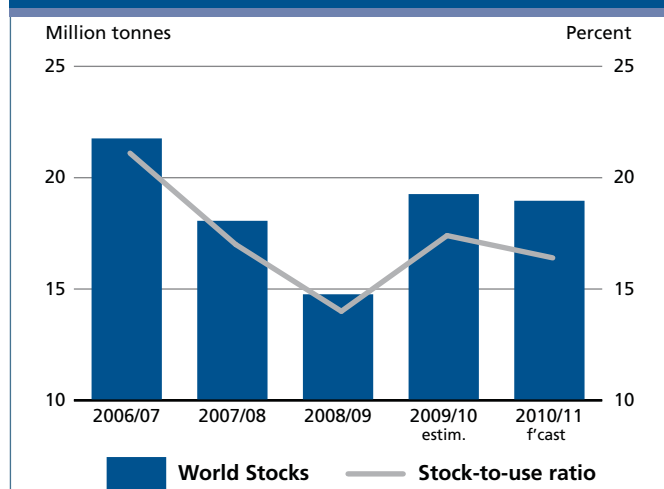


Figure 37. World closing stocks and stock-to-use ratio of meals/cakes (in protein equivalent and including the meal contained in seeds stored)



Global meal production expected to barely exceed demand

In 2010/11, world meal production is anticipated to surpass consumption by barely 0.5 percent, unlike last season when production exceeded demand by an ample margin. Global inventories (which include meal inventories plus the meal contained in stored oilseeds) should remain about unchanged with lower stocks in **Argentina**, the **EU** and **Brazil** offset by an increase in inventories held in the **United States**. As to the different meals, rising soymeal stocks are anticipated to compensate for the drop in global rapeseed meal inventories. Due to the projected solid increase in meal consumption, the global stock-to-use ratio could fall, compared with last season, but remain close to the average of the past three seasons.

Expansion in trade to slow down compared with last season

After last season's 7 percent rise in global meals/cakes transactions (expressed in protein equivalents and including the meal contained in oilseeds traded), trade is anticipated to grow by less than 5 percent in 2010/11. Global trade in meals, estimated at over 70 million tonnes, continues to rely to a very large extent on soy, which, forecast at a record 60 million tonnes, would be the basis for virtually all of this season's anticipated expansion. A contraction is expected in rapeseed and sunflower meal trade. **Argentina** and **Brazil** should account for the bulk of increased soy and soymeal exports. Although below-record harvests are forecast in both countries, they still should be in a position to expand shipments thanks to high carryover stocks from last season. Sales by the **United States** are forecast to grow only marginally from last season's record level, as increased supplies could be used

to reconstitute inventories that lingered well below average levels during the two past seasons. In **India**, a good harvest and releases from stocks are expected to allow a recovery in soymeal shipments. As to sunflower and rapeseed meal, an anticipated reduction in export availabilities stems mainly from recent production shortfalls in **CIS** countries. With regard to meal imports, more than 60 percent of the projected rise in import demand is expected to occur in Asia, primarily Mainland **China**, whose meal purchases are forecast to swell to a record 48 million tonnes (in product weight, including the meal contained in imported oilseeds), driven by the livestock sector's rapid expansion and disappointing domestic oilseed production. Other areas where imports are likely to rise are the **EU** and the **Russian Federation**, both of which have reported poor domestic harvests that are expected to lead to a deficit in meal supplies.

Figure 38. Total meal/cake imports by region or major country (including the meal contained in seed imports)

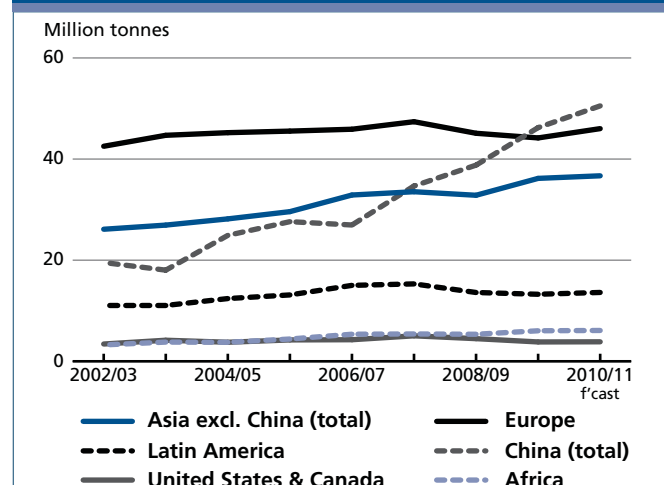
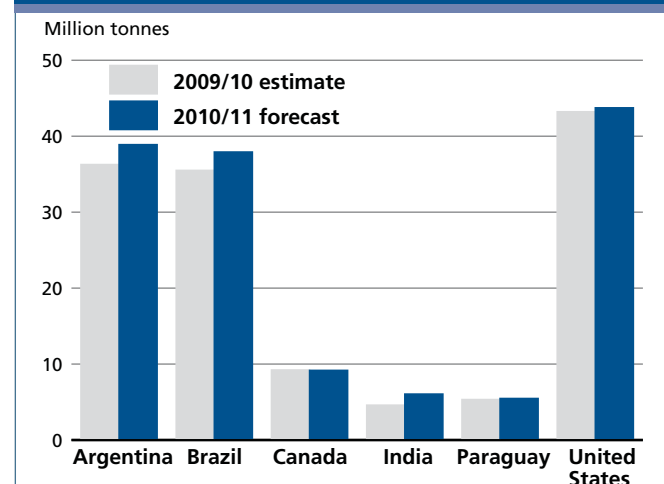


Figure 39. Meal/cake exports by major exporters (including the meal contained in seed exports)



SUGAR

PRICES

A tight market prospect underpins the increased prices

Soon after reaching a 30-year peak in January 2010, international prices declined for four straight months before trending upward in the second half of the year. They averaged US 15.85 cents per pound in June, rising further to US 18.51 cents per pound in August, and reaching US 24.6 cents per pound (USD 543 per tonne) in October. The surge in sugar quotations was prompted by the prospects of a tight sugar market for 2010/11, as less than ideal weather conditions impacted several sugar exporting countries in the form of floods and droughts, significantly reducing cane and beet yields. However, these expected reductions are foreseen to be compensated by gains in Brazil, the world's largest producer and exporter of sugar, and India, the world's largest sugar consuming country. As such, and based on the latest available supply and demand information, market fundamentals do not justify the extent of the current surge in prices, particularly as the stock-to-use ratio is projected to remain still at an acceptable level. Other factors contributing significantly to the rise in sugar prices include the depreciation of the US Dollar and the latest strengthening of energy prices.

PRODUCTION⁷

World sugar production to increase in 2010/11

World sugar production is expected to reach 168.80 million tonnes in 2010/11, which represents an increase of 7.7 percent over the 2009/10 season. The growth is mostly attributed to a significant recovery in production in India, as a result of an expansion in sugar-cane area and generally favourable weather. Also, higher prices witnessed over the past 12 months encouraged the use of fertilizers and other inputs, which contributed to higher yields in most producing countries. The bulk of the expansion is expected to take place in the developing countries, where production is forecast to grow by 10.3 percent, as opposed to almost no growth in the developed countries. For the first time since 2007/08, world production in 2010/11 is expected to surpass consumption – the surplus is predicted to hover around 2.7 million tonnes, but will likely be subject to downward revisions as the season progresses.

In *South America*, production is predicted to expand by 6.2 percent in 2010/11. Output in **Brazil** is set to reach just about 40 million tonnes, which is 7.2 percent above

Figure 40. International Sugar Agreement (ISA)

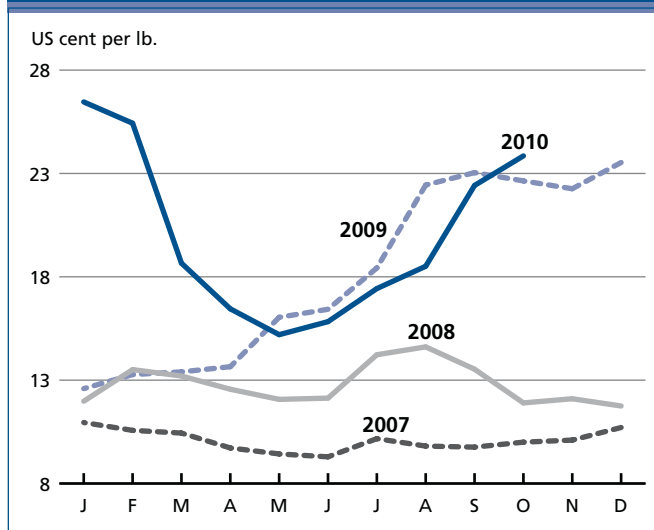


Table 14. World sugar market at a glance

| | 2008/09 | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | Change: 2010/11 over 2009/10 |
|--|---------|--------------------------|--------------------------|--|
| million tonnes | | | | % |
| WORLD BALANCE | | | | |
| Production | 151.05 | 156.66 | 168.80 | 7.75 |
| Trade | 47.50 | 53.30 | 50.62 | -5.03 |
| Utilization | 160.79 | 162.59 | 166.09 | 2.15 |
| Ending stocks | 60.89 | 54.80 | 56.37 | 2.87 |
| SUPPLY AND DEMAND INDICATORS | | | | |
| Per caput food consumption: | | | | |
| World (kg/year) | 22.96 | 22.94 | 23.16 | 0.96 |
| LIFDC (Kg/year) | 13.50 | 13.59 | 13.58 | -0.08 |
| World stock-to-use ratio (%) | 37.87 | 33.70 | 33.94 | |
| | | | | |
| ISA Daily Price Average (US cents/lb) | 2008 | 2009 | 2010 Jan-Oct | Change: Jan-Oct 2010 over Jan-Oct 2009 % |
| | 12.80 | 18.14 | 20.07 | 16.8 |

last season, although below early estimates, as drought hampered sugar-cane development of late season varieties. However, the drought period contributed to an increase in sugar content which helped offset some of the decrease in cane yields. It is estimated that by the end of the 2010/11 season, about 45 percent of total sugar-cane harvest will be allocated for the production of sugar. This is up from

⁷ Sugar production figures refer to centrifugal sugar derived from sugar cane or beet, expressed in raw equivalents. Data relate to the October/September season.

GROWING DEPENDENCE ON FEW EXPORTERS

Over the past ten months, world sugar market prices went from a 30-year monthly record level achieved in January to a 12-month low in May, before reverting back to an upward trend and eventually soaring to again a 30-year high by early November. So far, 2010 represented the sixth most volatile year since 1970, which, in part, reflects the increasing concentration in the export market. Between 2005 and 2009, the top five sugar exporters accounted for 66 percent of world trade, up from 62 percent in the period of 2000 to 2004. For 2010/11, that share is estimated to reach 74 percent, with Brazil accounting for 52 percent of world sugar trade. If the analysis takes into account only the raw sugar market, then Brazil would account for about 65 percent of all raw sugar traded globally. When accounting for the fact that the quantities exported to the EU and the United States under trade agreements do not enter the world market, then Brazil would account for about 75 percent of all the raw sugar traded at the world level. A high degree of export concentration implies that market uncertainties related to the size of supply in Brazil and the other four main sources of export can result in large price spikes and price swings such as those witnessed in recent months. With import expected to grow over the medium term, this will further exacerbate the pressure on the sugar industry of the major exporters – unless a broad-base expansion of supply takes place in other producing countries in reaction to the current high prices. A broad-base supply response would be conducive to a relative reduction in overall price volatility.

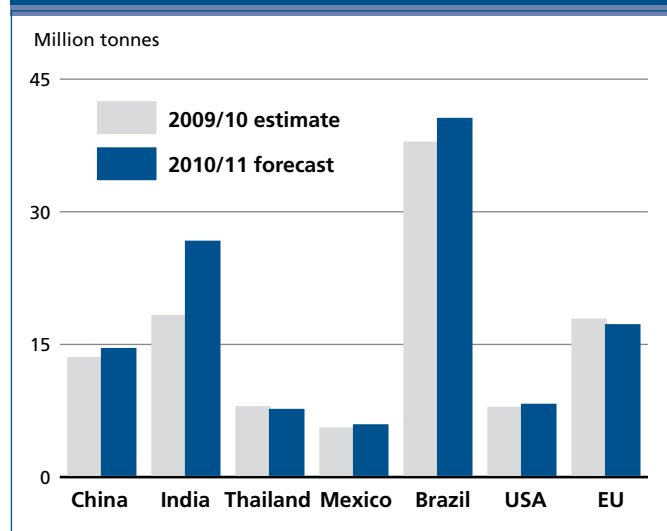
44 percent in 2009/10, driven by better margins than those realized when converting cane into ethanol. In **Colombia**, the second largest producer in the region, increases in sugar-cane area should boost production to 2.5 million tonnes in 2010/11, with high domestic sugar prices favouring the transformation of cane into sugar over ethanol. Assuming favourable growing conditions, output in **Argentina** should increase, despite the implementation of new ethanol mandates which could slow expansion in the coming years.

In *Central America*, sugar production in **Mexico** should increase significantly over last year's level, as more than adequate rains and improved use of fertilizers are set to boost cane harvest. The bumper crop should enable the country to export greater quantities of sugar to the United States under the North America Free Trade Agreement (NAFTA) and, at the same time, meet domestic demand – which in recent years has slowed due to greater usage of high fructose maize syrup (HFCS) imported from the United States by local industry at the expense of locally produced sugar. In **Guatemala**, rising domestic prices, driven by buoyant internal demand, should support output expansion despite less than ideal weather, while output in **Cuba** is set to fall, as poor infrastructure and low productivity continue to constrain the subsector.

In spite of difficult growing conditions in several sugar producing countries, total sugar production in *Africa* is projected to reach 11 million tonnes in 2010/11, which is 170 000 tonnes or 2 percent above the previous season. The increase in output is attributed to expansion of area and processing capacity. Strong domestic consumption growth and improved access to the EU market under the Everything-But-Arms Initiative (EBA) and the Economic Partnership Agreements (EPAs) are the factors behind large investment efforts in Africa. However, insufficient trade infrastructure and on-farm technology adoption constrain further gains in output and export. In **South Africa**, the largest sugar producer in the region, sugar production is forecast to decline by 1.7 percent to 2.3 million tonnes in 2010/11, because of dry weather in Zululand that is likely to reduce sugar-cane yields. Sugar production in **Egypt**, the second largest sugar producer in Africa, is expected to remain about the same as last year. While area under sugar cane has been stagnant over the years, due to scarce land and water resources, beet sugar is expanding, with area reportedly forecast to reach 151 200 ha. Production in **the Sudan** is now expected to reach 980 000 tonnes on the back of expansion in processing capacity. Although the Sudan plans to become a net exporter of sugar by 2014, with foreign direct investments from Gulf States and Brazil, it still will require imports this season to meet buoyant internal demand.

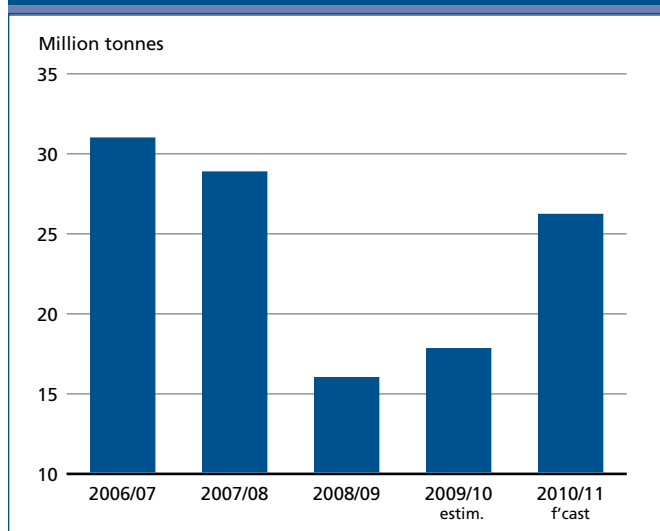
Table 15. World sugar production

| | 2009/10 | 2010/11 |
|----------------------|-----------------------|---------------|
| | <i>million tonnes</i> | |
| Asia | 52.53 | 61.27 |
| Africa | 10.83 | 11.05 |
| Central America | 11.67 | 11.82 |
| South America | 45.43 | 48.25 |
| North America | 7.31 | 7.69 |
| Europe | 23.96 | 23.78 |
| Oceania | 4.94 | 4.95 |
| World | 156.66 | 168.80 |
| Developing countries | 117.33 | 129.45 |
| Developed countries | 39.33 | 39.35 |

Figure 41. Sugar production by major producing countries

Gains are also foreseen in **Kenya**, where output is set to grow by about 3.1 percent due to near normal rainfall in the western part of the country where most of the sugar-cane farming takes place and to increased mill capacity in the newly revived sugar mill on the coast of the country. In **Mozambique**, sugar output is expected to reach 480 000 tonnes, up 17.4 percent from last season, prompted by expansion in planted area, which has increased by 20 percent per year since 2000. Sugar cane is also expected to become one of the main feedstocks used for biofuel production, as the Government has recently approved a national biofuel policy to limit dependence on imported fossil fuels. As such, sugar production and export will increasingly depend on the amount of cane diverted to ethanol production. Above-average rainfall is set to raise production in **the United Republic of Tanzania** to 340 000 tonnes, which is 14.6 percent higher than 2009/10. Projects are underway in the United Republic of Tanzania to introduce high-yielding varieties and improved technologies, both at the farm and mill level, to cut production cost which is a major hurdle to production growth.

The 2010/11 marketing season for sugar production in **Asia** remains extremely uncertain for a number of reasons, such as uncertainty as to the level of weather-related damage to sugar-cane crops in Pakistan and Thailand. For the moment, sugar output in Asia is expected to increase by 16.6 percent over 2009/10, mainly on the back of significant gains in **India**. Output in that country is estimated to reach 26 million tonnes, due to good monsoon rains and notable expansion in area, which is forecast to reach 4.8 million ha, up 15 percent from last season. Record sugar-cane prices

Figure 42. Sugar production in India

in 2009/10 encouraged farmers to plant additional area under sugar cane and encouraged better crop management practices and input use. Early estimates in **Thailand** indicate that sugar output will decline by 4 percent in 2010/11 due to dry conditions in major cane-growing areas. However, these estimates may be revised, most likely upwards, when the crushing season begins in early December. The offsetting effect could come from an increase in area allocated to sugar cane when farmgate prices surged to a record USD 38 per tonne (1 200 baht), up 26 percent from the support price. An increase in production is expected in **China** for 2010/11 as a result of a significant surge in area planted under beet (40 percent) in the three main beet producing regions. Propelled by high domestic prices in 2009/10, farmers shifted to beet, although smaller but still significant expansion is also expected in cane growing areas. In **Pakistan**, estimates for sugar production in 2010/11 are still very uncertain due to flood damages that hit the country early this summer. However, estimates have been constantly revised upward in recent weeks, as the damage to sugar cane turned out to be less than expected. Production is now predicted to overcome last year's level by 270 000 tonnes. Output in **Japan** is also set to increase in 2010/11, while losses are anticipated in **Indonesia** and **Turkey**.

In **Europe**, the latest estimates of sugar production in the **EU** indicate a decline of 3.6 percent over 2009/10, largely due to a 4 percent reduction in beet area and average level yields. Despite a significant increase of about 40 percent in area sown to beet, sugar output is expected to decline in the **Russian Federation** as a result of severe drought that impacted crop development. Gains are anticipated in

Ukraine, as the impact of the dry weather was less than early predictions.

In the *rest of the world*, production in the **United States** is forecast to surpass the 2009/10 level, on expectations of higher beet and cane yields. In **Australia**, high international prices in 2009 spurred a sharp increase in sugar-cane area, reversing the downward trend observed since 2002/03. However, excessive rains have delayed cane crushing meaning reduced sugar content and, as such, production will be lower than last season.

UTILIZATION

World sugar consumption to expand, but below long-term trend

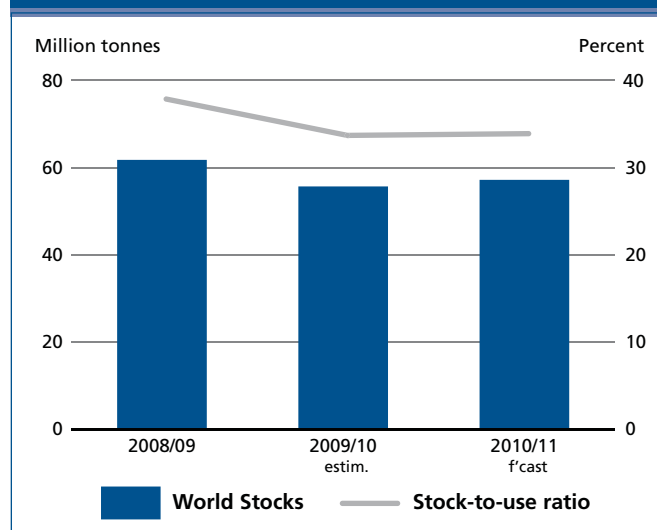
Global economic recovery is expected to stimulate consumption growth, mostly in emerging and developing countries and, as such, world sugar consumption in 2010/11 is to reach 166 million tonnes, about 2.1 percent more than in 2009/10. This would result in world per capita sugar consumption remaining steady at 23.2 kg per annum. Demand will likely be sustained by the manufacturing and food preparation sectors, including the beverage industries. These sectors constitute the bulk of total sugar consumption and are relatively sensitive to changes in income. Sugar intake in the developing countries is set to expand by 3.2 million tonnes, accounting for 71.4 percent of global consumption. In the generally more mature markets of the developed countries, consumption is to increase by 0.62 percent. Positive prospects for the global economy are expected to support sugar consumption growth, but high domestic sugar prices prevailing in many consuming regions, notably in China and Indonesia, will limit further expansion in sugar intake.

TRADE

World trade to contract as export availabilities decline

Latest FAO estimates of world sugar imports stand at about 50 million tonnes in 2010/11 (October/September), a 6 percent decline over the previous season, largely driven by high world prices. However, forecasts at this early stage of the season are subject to much uncertainty. After being the main driver of growth in world trade in 2009/10, **India** is expected to import about 1 million tonnes in the new season, down by 83 percent from last year. Due to a tight domestic market, India undertook a number of measures to relax import restrictions, such as the extension of duty free imports of raw and white sugar until 31 December 2010.

Figure 43. Sugar closing stocks and stock-to-use ratio



However, with supply expected to recover significantly in 2010/11, India is under pressure to revert to import restrictions to protect the local industry. In *Europe*, shipments to the **EU** are also set to decline on the back of lower imports under the EBA and EPA trade commitments, as international prices provide relatively better remunerative returns than the EU internal market. Imports by the **Russian Federation**, the third largest sugar importer in 2009/10, are expected to increase by about 10 percent to 2.5 million tonnes, in order to compensate for expected shortfalls in domestic supply, with the bulk of the raw imports originating in Brazil.

Asia's scenario is one of steady consumption growth led by increases in population and income. Purchases by **Indonesia** are expected to amount to 2.8 million tonnes, 27 percent above last year's total, and recent expansions in its refining capacity should strengthen its position as one of the major regional import destinations. Indonesia is expected to import most of its sugar from Thailand because of freight advantage and quality standards that meet its requirements. **China** is projected to purchase 93 200 tonnes more than last season to accommodate for increases in sugar intake and replenish critically low state reserves. Last year, China released large amounts of stocks to curb rising domestic sugar prices.

In the *rest of the world*, deliveries to the **United States** are forecast at 2.3 million tonnes, a 4 percent decline over the previous year, as gains in production are foreseen for 2010/11. Additional imports may be needed in the course of the season to rebuild reserves, as the United States' current stock level is at an historic low. Similarly, imports

by countries in *Africa* are expected to decline by around 3 percent to 9.7 million tonnes, as improving domestic supplies substitute for imports.

Despite higher production in some exporting countries, export availabilities are expected to decline due to strong domestic demand and the need for exporters to rebuild stocks that were used extensively during the first half of 2009/10 when international prices reached record levels. **Brazil**, the world's largest sugar exporter, is now expected to ship about 26 million tonnes, up 2.4 percent from 2009/10, prompted by large supply availability and attractive international prices in comparison with ethanol prices. However, bottlenecks in port infrastructure may limit further export growth. In 2010/11, Brazil will account for slightly more than half of global export and should be among those that benefit most from the elevated world sugar prices. Sales from **Thailand**, the world's second largest sugar exporter, are expected to decline by 5 percent to 4.8 million tonnes due to an anticipated reduction in production. Exports to the countries of *Asia* should be the main destination for Thai sugar, driven by the implementation of new trade agreements that allow duty free access, notably to the markets of South Korea and Malaysia. Exports from **Australia**, the world's third largest exporter, are likely to decrease slightly from their 2009/10 levels, as its exportable surplus may shrink. Similarly, shipments from **Cuba**, **Guatemala** and **South Africa** are foreseen to fall, given strong internal demand and a drop in domestic production.

MEAT AND MEAT PRODUCTS

BOVINE MEAT PRODUCTION

Reduced cattle numbers constrain output growth

Provisional estimates indicate that 2010 global beef production will be 65 million tonnes, a 1 percent decrease from 2009, as larger outputs from Brazil and India fail to offset production declines in other large producing countries. In **South America**, beef output in 2010 is expected to decrease by 3 percent, to 14.8 million tonnes. This stems from a record fall in Argentine beef production, estimated in excess of 800 000 tonnes, due to the combined effects of a severe drought in 2009 and the persistence of low farmgate prices. In **Australia** and **New Zealand**, output could stagnate due to herd rebuilding and, according to USDA, beef output in the **United States** may fall by 1 percent, to below 11.8 million tonnes. In the **EU**, 2010 production may stagnate at 8 million tonnes. In the

Russian Federation, where the national beef herd is down over 2 percent, due to the slaughtering of cattle during the severe summer drought that affected pasture growth, output is likely to expand slightly, by 1 percent to 1.76 million tonnes. In *Asia*, production is expected to contract in **China** by 4 percent because of low returns and high feed costs, to 6.2 million tonnes, and in **Pakistan** by 3 percent after severe floods affected livestock production. In **India**, where buffalo meat is a by-product of the dairy industry, production will grow by 4 percent to 2.95 million tonnes. In *Africa*, beef production is revised upwards from improved weather conditions, and is now expected to increase by 1 percent, to 4.9 million tonnes. In West Africa, the growing season brought abundant rains, and pastures recovered from the persistent dry conditions that affected **Chad** and the **Niger** earlier in the year. In East Africa, pasture conditions and water availability also have improved in **Ethiopia**, **Kenya** and **Southern Sudan**.

World production growth in 2011 is expected to be constrained once again by low cattle numbers and high feed costs. In the **United States**, according to USDA, the stagnation will be due to the high cow and heifer slaughter rates, while in **Australia**, output also could stagnate while farmers, encouraged by favourable weather, rebuild their herds. Output in **Argentina** and **Uruguay** are expected to fall as a direct consequence of the low calving rates during the severe drought of 2009, whose effects on output are expected to be felt mostly next year. Conversely, production in **Brazil** and **India** is set to continue expanding next year, thanks to higher cattle numbers and firm prices both at home and abroad.

Figure 44. FAO international meat price indices (2002-2004=100)

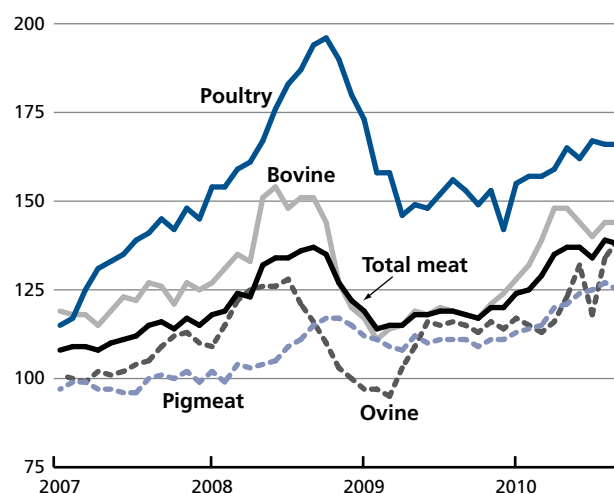
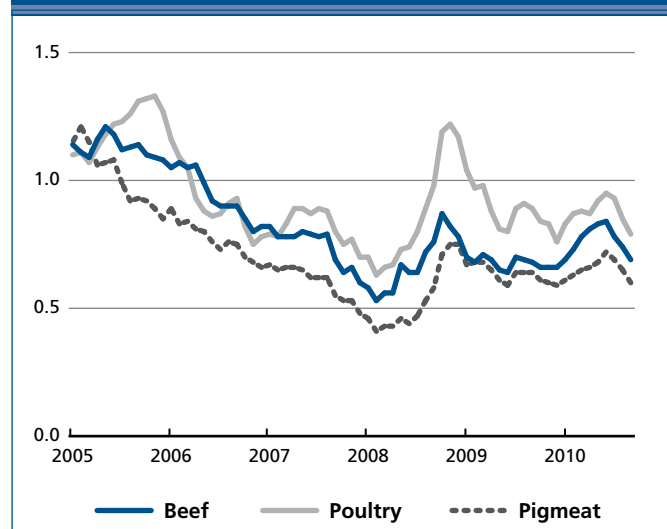


Figure 45. Evolution of meat/feed index prices (2002-2004=1)



TRADE AND PRICES

Exports expand but prices remain firm

World beef exports in **2010** will grow by 3 percent to reach 7.6 million tonnes, as lower shipments from Argentina may be offset by larger exports from Brazil, India and the United States. Despite the expansion in supply, 2010 beef prices are some 26 percent higher than last year and similar to those in 2008, during the soaring food prices episode.

Constrained by low domestic supplies, exports from **Argentina** may fall by 40 percent, to some 230 000 tonnes less than in 2009. However, the fall for the aggregate of South America is less severe, as ample cattle numbers in **Brazil** are allowing a positive response to the growing demand, with exports up by 5 percent, to almost 1.6 million tonnes. In the **United States**, USDA reports that exporters will expand their shipments this year by 17 percent in volume terms, to just over 1 million tonnes, due to favourable world beef prices. In **India**, buffalo meat exports are anticipated to expand by 5 percent to 785 000 tonnes, due to a growing demand for this meat in Asia and the Middle East. In **Australia**, poor sales performance at the beginning of the year brought fears of a significant fall in exports. However, exports accelerated in the second half, thanks to a higher demand from Japan and the United States, and are now expected to fall by only 1 percent, to 1.24 million tonnes.

Beef imports in the “foot-and-mouth disease (FMD) market” will expand significantly – in the **Russian Federation** by 8 percent to 1 million tonnes, and in Asian countries by 8.4 percent to 3 million tonnes. Conversely, tight supplies from Oceania restrict an expansion of trade in the “FMD-free market” (main importers

Table 16. World meat markets at a glance

| | 2008 | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | Change: 2010 over 2009 |
|---|--------------|-----------------------|--------------------------|---|
| <i>million tonnes</i> | | | <i>%</i> | |
| WORLD BALANCE | | | | |
| Production | 279.4 | 283.9 | 286.2 | 0.8 |
| Bovine meat | 65.2 | 65.7 | 65.0 | -1.1 |
| Poultry meat | 91.9 | 93.7 | 95.7 | 2.2 |
| Pigmeat | 104.0 | 106.1 | 107.0 | 0.9 |
| Ovine meat | 12.9 | 12.9 | 13.0 | 0.1 |
| Trade | 25.9 | 25.4 | 26.1 | 2.8 |
| Bovine meat | 7.4 | 7.4 | 7.6 | 3.0 |
| Poultry | 11.1 | 11.1 | 11.3 | 1.5 |
| Pigmeat | 6.3 | 5.8 | 6.1 | 5.3 |
| Ovine meat | 0.9 | 0.8 | 0.8 | 1.9 |
| SUPPLY AND DEMAND INDICATORS | | | | |
| Per caput food consumption: | | | | |
| World (<i>kg/year</i>) | 41.7 | 41.9 | 41.8 | -0.3 |
| Developed (<i>Kg/year</i>) | 81.5 | 81.1 | 80.7 | -0.4 |
| Developing (<i>kg/year</i>) | 31.0 | 31.5 | 31.5 | 0.1 |
| FAO meat price index (2002-2004=100) | 2008 | 2009 | 2010 Jan-Oct* | Change: Jan-Oct 2010 over Jan-Oct 2009 % |
| | 128 | 118 | 134 | 14.0 |

* September and October estimates

include Canada, Japan, Mexico and the United States), with imports forecast to be 490 000 tonnes in the **EU** and 688 000 tonnes in **Japan**. According to USDA, imports in the **United States** are down by 3 percent, to 1 million tonnes, because of tight supplies from Oceania and sanitary import restrictions imposed on Brazilian beef.

The **2011** trade forecast points to strong demand from the **United States**, **Russian Federation**, Asian countries and the EU, against tight export supplies caused by reduced herds and more expensive feed concentrates compared with 2010.

SHEEP AND GOAT MEAT PRODUCTION

Rebuilding of flocks constrains output growth

Sheep and goat meat production is set to remain virtually unchanged in 2010 at 13 million tonnes due to restocking. Dry weather in recent years reduced supply in key producing areas including Oceania, South America and parts of Africa, but timely and abundant rains this year, coupled with strong lamb prices, are encouraging farmers to rebuild their flocks and herds. Some output growth

has been observed in these areas which compensates for the decline in Europe. A steady decline of ovine meat production continues in the **EU**, as well as in the **Russian Federation** where a severe drought affected pasture growth and halted production growth. The outlook for 2011 is for better herd conditions, higher calving rates, and a 4 percent expansion of production.

TRADE AND PRICES

Record high sheep meat prices

Ovine meat exports in 2010 are up by 1.9 percent, to 848 000 tonnes, driven mainly by larger shipments from Oceania. In the **EU** – the largest market for ovine meat imports representing one-third of the world's total – imports are anticipated to fall by 5 percent, to 267 000 tonnes, due to reduced demand. However, sustained purchases from the Near East and **China**, where imports could expand by 10 percent to 365 000 tonnes, would more than compensate for the shortage. This strong demand has put an upward pressure on world prices, which reached record levels this year. Prices of carcasses from New Zealand reached USD 5 3344 per tonne in London in September, the highest in a decade. Favoured by attractive prices, sheep meat supplies from **Australia** and **New Zealand** expanded by 2.6 percent this year, capturing 85 percent of world sheep meat trade with a combined volume of 725 000 tonnes. The 2011 outlook is for demand from the Near East to remain strong and for a sustained expansion of exports from both Oceania and South America.

PIG MEAT PRODUCTION

Pig meat production stagnates

World pig meat production is set to increase by a mere 1 percent in 2010, to 107 million tonnes. This is the second poorest growth of the decade, after 2007 when production was affected by a massive culling of pigs in China following an outbreak of Porcine Reproductive and Respiratory Syndrome (PRRS) disease. In the **EU**, the second largest producer after China, a steady decline of pig meat prices since June 2010, coupled with higher feed prices, is constraining output growth, while analysts from USDA anticipate a 3 percent fall in the **United States**, the third largest producer, from lower slaughters and lighter carcass weights. In Asia, **China** this year may be the only large producing country with significant output growth, increasing some 2 percent to 50 million tonnes. Growth has been boosted by a government strategy to

achieve self-sufficiency in pig meat, which includes state purchases, producer price support and subsidies to scale-up production. Production is expected to remain unchanged in the **Philippines** and **Viet Nam**, and in **Japan** to fall by 2 percent due to the slaughtering of sows following an outbreak of FMD. In addition to China, output increases have been seen in **Brazil** and the **Russian Federation** – in **Brazil**, a mere 1.3 percent growth, spurred mainly by the steady increase of domestic demand, and in the Russian Federation, a steep expansion of pig meat production in the first half of the year suggested double digit growth, but a severe drought that affected feed availability has substantially reduced the foreseen expansion to below 4 percent. The global outlook for pig meat production in 2011 is for a 2 percent expansion, mainly due to higher growth in **China** from government support, and in **Brazil** from strong domestic demand, with production in developed countries stagnating due to an increase in the price of feed concentrate.

TRADE AND PRICES

Strong demand and sustained prices

Contrary to production, pig meat trade in 2010 is expected to expand significantly and reach 6 million tonnes, a 5 percent increase over 2009. This growth represents a significant recovery from the 8 percent decrease felt in 2009, when trade was disrupted by food safety issues. Pig meat price levels are firm from sustained demand, with levels some 30 percent higher than last year. In the **United States**, the world's largest pig meat exporter, the USDA has revised predictions of pig meat exports upwards to 8 percent growth this year, or 1.9 million tonnes. Exports by the **EU** also have recovered from the sharp contraction last year, growing by 19 percent to 1.68 million tonnes, owing to increased deliveries to the Russian Federation, its main customer.

Brazilian exports, however, have been revised downwards quite substantially because of a stronger than expected domestic demand, and may fall by 12 percent this year, to 631 000 tonnes. The expansion of import this year is driven by larger purchases from developing countries in Asia, which account for 60 percent of import growth, plus **Japan** and **Mexico**. Conversely, imports by the **Russian Federation** should fall by 4 percent, to 730 000 tonnes, due to sanitary import restrictions for non-heat treated pig meat, and the fact that it reduced its quota for preferential tariff imports by 11 percent, to 500 000 tonnes.

International pig meat demand in 2011 is expected to remain strong, in line with the progressive growth of the world economy. Pig meat trade is also expected to increase,

with higher demand from Asia expected to be fulfilled from higher shipments from Europe and the **United States**. However, the possibility that high feed costs may constrain output in the months to come brings much uncertainty to the availability of pig meat for export next year. Exports from the **EU** to the **Republic of Korea**, currently its fourth largest customer, are anticipated to increase next year following the signing of a free trade agreement between the two countries.

POULTRY MEAT PRODUCTION

Strong demand fosters production growth

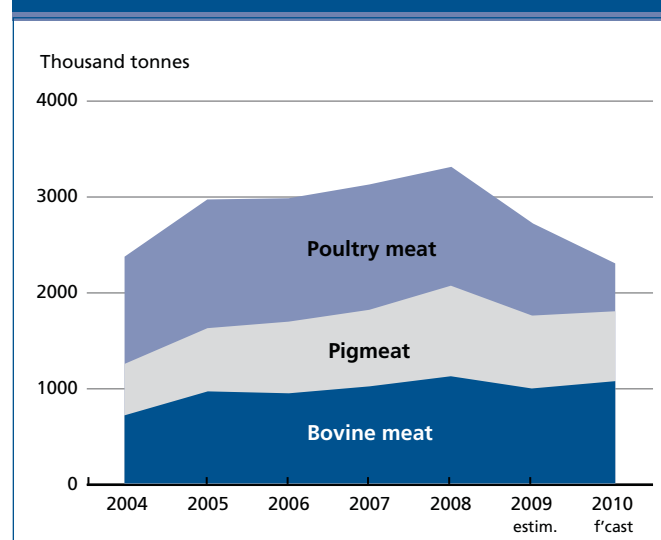
World poultry production in **2010** is expected to expand by over 2 percent to reach 95.7 million tonnes, with all major exporting countries experiencing some degree of growth. In the **United States**, the world's largest poultry producer and a top exporter, official estimates of broiler and turkey production point to an aggregate output growth of 1.8 percent, to 19.3 million tonnes. **Brazilian output is recovering** from the fall of last year and is set to grow by 3.6 percent, to 10.7 million tonnes, thanks to strong demand from domestic and world markets. Production in the **EU**, favoured by the high consumer cost of beef and pig meat, is expected to grow by 1.6 percent to 12.1 million tonnes. In Asia, **China's** poultry production, sustained by a strong domestic demand, is set to expand by 3.7 percent, to 16.3 million tonnes, and in **Thailand** production is predicted to expand by 6 percent, to 1.2 million tonnes, mainly for exports to Asian countries. In the **Russian Federation**, the sector experienced strong momentum the first half of the year, underpinned by investments in new large poultry processing plants and attractive prices following an increase in demand and reduced imports. A severe summer drought affected cereal crops, creating a tight feed supply situation and slowing production growth, but output is nevertheless estimated to expand by 11 percent, to 2.6 million tonnes. Conversely, output in **Pakistan** will fall by about 25 percent, to 500 000 tonnes, following severe floods that killed small livestock. Globally, the expansion of poultry production is set to continue in **2011**, as producers take advantage of the expected persistence of high prices in competing meats, although much will depend on the evolution of prices of feed concentrates as they represent a key component of total production costs.

TRADE AND PRICES

Changes in trade policy regimes create uncertainties

Poultry trade may grow by 1.5 percent in **2010**, reaching 11.3 million tonnes. An important fall in exports by the United States, which until 2009 was the world's largest poultry meat exporter, will be more than compensated by larger shipments from other major suppliers. Brazil is likely to become this year the world's largest poultry meat exporter. The fall of exports from the **United States** is mainly due to the Russian Federation's prohibition on imported chlorine-treated meats which began in January 2010. Although some exports are being shifted to Hong Kong, where United States exports almost trebled this year, and a depreciation of the US Dollar against major currencies has increased its competitiveness, **United States** exports may nevertheless fall this year by 5 percent to 3.7 million tonnes. The United States poultry trade was disrupted this year by Mainland China's January 2010 imposition of anti-dumping duties, which blocked its exports of chicken. **Brazil** is benefiting from these sanctions by expanding its deliveries to the Russian Federation, and not to the detriment of developing countries whose imports of Brazilian poultry remain unchanged. Brazil exports will grow by 4 percent, to just below 4 million tonnes, to become the world's largest poultry meat exporter. **China** is anticipated to expand its shipments of cooked poultry by 30 percent to Europe and Asian markets. **Thailand's** poultry exports, all of which are cooked, are expected to increase in response to higher demand from Asia, by 8 percent to 644 000 tonnes.

Figure 46. Russian Federation: Development of meat imports



The **Russian Federation** is expected to import some 511 000 tonnes of poultry meat this year, 47 percent less than in 2009, due mainly to reduced preferential tariff quotas and the imposition of import bans on the grounds of food safety. In addition, new legislation to be enacted by the Russian Federation in January 2011 will prohibit the use of frozen poultry for processing, a measure that will favour domestic producers and negatively affect exporters of frozen poultry, notably Brazil. In **Japan**, the third largest importer, slow imports in the first half of the year are accelerating in the second half, taking advantage of a stagnation of world prices due to surpluses in the United States, and will grow by 13 percent. Purchases from **Hong Kong SAR, Saudi Arabia** and the **United Arab Emirates** also may increase substantially. Contrary to other meats, where prices have increased steadily through the year, world poultry prices, measured in US Dollar terms, have been stable and only 4 percent higher than last year. It is remarkable how little international poultry prices increased this year, considering how expensive alternative animal proteins are. Its poor performance has been blamed on the relative abundance of poultry meat for export from the United States following the collapse of the Russian Federation market.

The outlook for poultry trade in 2011 is favourable. A tight supply situation in beef and pig meat should strengthen the demand for cheaper sources of animal proteins, and thus creating favourable conditions for trade expansion. However, trade routes are likely to experience some readjustments due to an intensification of quantitative import restrictions by the **Russian Federation**, which has announced that it is rapidly reaching self-sufficiency on poultry.

MILK AND MILK PRODUCTS

PRICES

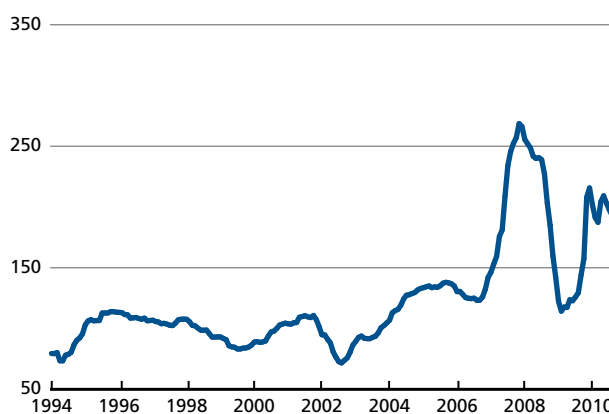
The monthly FAO price index of international dairy products, which consists of a basket of export prices in Oceania for whole milk powder (WMP), butter, skim milk powder (SMP) and cheese, has remained firm so far in 2010, in contrast with the significant swings observed in the past two years. The FAO index was 198 in September 2010, similar to its level in January 2010 but 38 percent higher than the average for 2009. While this represents a strong recovery from last year, it still remains 20 percent below its peak value in early 2008. However, compared with the base period of 2002–04, prices have doubled. Export prices in Oceania in September 2010 were USD/tonne 4 100 for butter, 3 140 for SMP, 3 360 for WMP and 3 950 for cheese.

Factors contributing to the sustained firm prices include strong demand from Asia, the Russian Federation and some oil exporting countries and, more recently, a steady weakening of the USD against major currencies which increases dollar-denominated commodity prices. On the supply side, relatively weak growth in milk production from reduced cattle herds, particularly in some exporting regions, has underpinned firm prices. International prices have passed through to farm gate prices in the EU and United States, and higher milk over feed price ratios have favoured more intensive use of feed concentrates and cow yields compared with last year. There has been an expectation that trade would expand from these countries towards the end of 2010, thus putting a downward pressure on milk prices. However, the rapid escalation of grain prices since August is putting upward pressure on feed prices and may curtail expansion of milk production next year.

PRODUCTION

World milk production in 2010 is expected to reach 710.3 million tonnes, an increase of 1.6 percent from last year. Although this represents a recovery from the low performance of 2009, it nevertheless remains below the 2.1 percent average annual growth experienced in the past decade. Additional output from **China** and **India**, the major contributors to the expansion of production, amount to 8.4 million tonnes, and account for 58 percent of the world increase. **Brazil**, the **EU** and the United States also play their parts by adding another 2.6 million tonnes.

Figure 47. FAO international dairy price index (2002–2004=100)



The index is derived from a trade-weighted average of a selection of representative internationally traded dairy products.

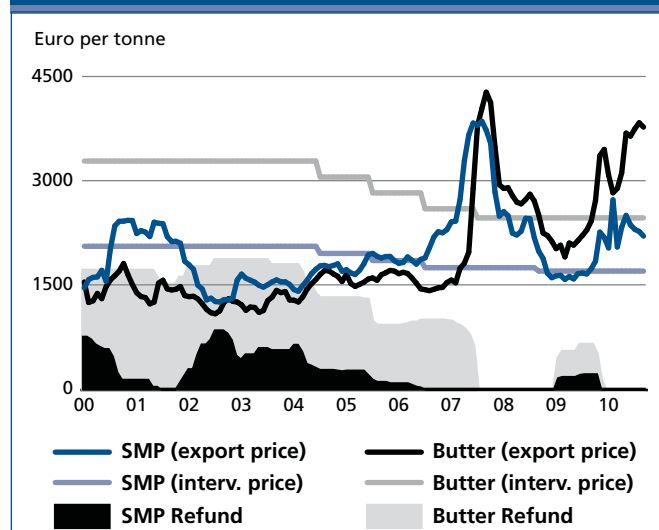
With an output of 257 million tonnes in 2010, Asia remains the region with both the largest milk production and the highest rate of annual growth. However, an initial forecast for 4 percent production growth has been reduced to 2.6 percent due to lower output in **Pakistan**, where production is expected to fall by 8 percent due to heavy floods: over 1.2 million head of livestock (excluding poultry) died in the flood, and another 14 million head decreased their yields from lower fodder supply and animal diseases. In addition, the loss of livestock represents a significant deterioration of the food situation of small farmers who rely on animal husbandry for a considerable share of their income. The most affected province was Punjab, followed by Sindh and Kyber Pakhtunkhwa (KPK). Conversely, milk output in **India** is forecast to reach 114 million tonnes, expanding by 4 percent and in **China** 44.2 million tonnes, expanding by 10 percent. These growth rates, conservative relative to their recent track records, are based on low farmgate milk prices and high feed prices and, in China, the recurrence of incidents related to milk contamination with melamine.

In **North America**, the USDA anticipates that United States' milk production in 2010 may increase by 1.1 percent this year, to 87 million tonnes, due to improvements in cow yields and a slowing of cow slaughter rates. Production in the **EU** is forecast to grow by only 1 percent, to 133 million tonnes, as producers and traders adapt to the new trade environment created by the reform of the milk sector, in particular the gradual increase in production quotas. In the **Russian Federation**, drought this summer led to poor pasture conditions and affected cereal production. Though export restrictions of cereals have somewhat contained the increase of feed prices, milk production growth is set to grow only slightly this year, reaching an estimated 32.9 million tonnes. As for **South America**, where pasture-based production systems prevail and a normal spring season is favouring pasture growth, the outlook points to a 2.5 percent growth in 2010, to 61.3 million tonnes.

In **Oceania**, firm farm-gate prices and good weather conditions have created a favourable environment for farmers to expand output this season (July-June 2010/11). Milk production in New Zealand is expected to reach 17.8 million tonnes representing 6 percent growth from the 2009/10 season, while in Australia growth may be more moderate, some 2 percent to 9.2 million tonnes, due to high feed prices.

In **Africa**, milk production is expected to expand slightly in 2010, by 1.3 percent to reach 37.4 million tonnes, mainly from output growth in **Kenya** and **South Africa**. In West Africa, the growing season brought abundant rains in May

Figure 48. EU intervention prices, price and export refund for butter and skim milk powder



and June, and pastures recovered from the persistent dry conditions that affected **Chad** and the **Niger** earlier in the year. Rains have also been adequate in Central Africa since the beginning of the cropping season. In East Africa, the availability of pasture and water has improved in most pastoralist areas such as southeastern **Ethiopia** (Somali region), inland **Djibouti** and **Somalia** (except Northeast and Central regions), with positive effects on milk production.

TRADE

World trade of dairy products may expand in 2010, driven by strong demand from Asian countries and the Russian Federation. Export growth mainly results from larger shipments from the United States, New Zealand and the EU. Export volumes of SMP, butter and cheese could increase considerably, and those of WMP would stagnate. Larger exports from the **EU** stem from the likely release of public stocks and, thus, larger volumes for export since October 2009, the last time intervention purchases were recorded. All public stocks of butter have been released, but 198 000 tonnes of SMP were still available in September 2010. Larger shipments from the **United States** are supply driven, the result of traders' increasing interest in attractive export prices, while the expansion of **New Zealand** exports is due to higher milk production, 90 percent of which is industrialized for exports. On the demand side, the bulk of dairy products traded, except for cheese, is traditionally bought by developing countries. In general terms, 2010 is seeing strong import growth

Table 17. World dairy market at a glance

| | 2008 | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | Change: 2010 over 2009 |
|---|-------|-----------------------|-----------------------|--|
| <i>million tonnes milk equiv.</i> | | | | % |
| WORLD BALANCE | | | | |
| Total milk production | 694.2 | 698.8 | 710.7 | 1.7 |
| Total trade | 42.0 | 43.5 | 46.0 | 5.7 |
| SUPPLY AND DEMAND INDICATORS | | | | |
| Per caput food consumption: | | | | |
| World (<i>kg/year</i>) | 104.0 | 103.5 | 104.1 | 0.6 |
| Developed countries (<i>Kg/year</i>) | 246.3 | 243.8 | 244.3 | 0.2 |
| Developing countries (<i>Kg/year</i>) | 66.0 | 66.4 | 67.5 | 1.5 |
| Trade - share of prod. (%) | 6.0 | 6.2 | 6.5 | |
| FAO dairy price index (2002-2004=100) | | | | |
| | 2008 | 2009 | 2010 Jan-Oct | Change: Jan-Oct 2010 over Jan-Oct 2009 % |
| | 220 | 142 | 199 | 57 |

in Asian countries and the **Russian Federation**, and a sluggish demand from Africa. Import markets, however, are substantially different according to the product considered, and should be looked at separately.

By product

Whole Milk Powder (WMP) prices are firm in 2010, as tight supplies are facing strong demand. World exports of WMP are slowly approaching the 2 million tonnes mark in product weight. **China** imported unprecedented volumes of this product in early 2010, almost twice as high as the total volumes imported last year, while higher purchases from **Algeria** and **Venezuela** during the second half of the year are contributing to sustaining prices at firm levels. On the export side, WMP shipments from **Argentina** virtually collapsed in the first half of 2010, but recovered in recent months thanks to an increase in availabilities. There is anticipation from traders that higher WMP stocks may be available soon from **New Zealand**, where farmers are looking forward to a record output in the (July-June) 2010/11 season. In **Oceania**, the WMP export price in October 2010 was USD/tonne 3 463, compared with USD/tonne 2 850 in October 2009.

The world cheese market is strong this year both in terms of prices and volumes. Trade will likely expand by 5 percent to over 2 million tonnes, mainly from larger supplies from the **EU** to developed countries and the **Russian Federation**, where the easing of recessionary pressures has progressively fostered an expansion of imports. Imports by **Japan**, the **Republic of Korea** and **Mexico**, significant players in the

world market, have recently expanded fast after a sluggish start. Cheese imports by **Mainland China** will double this year with an estimated volume of 28 000 tonnes. Factoring in imports from the Province of Taiwan and Hong Kong brings total import growth for China to an estimated 27 percent. Purchases from the **Russian Federation** will grow by about 10 percent in 2010. The export price of cheese in Oceania in October 2010 was USD/tonne 4 013, up from USD/tonne 3 213 in October 2009.

Butter trade may expand by 6 percent this year to 970 000 tonnes. Despite the expansion of exports, import demand is so firm that it has pushed prices to levels similar to their peaks during the price surge of 2008. Demand is strong from the **Russian Federation**, Southeast Asia and the Middle East, whose combined imports are expected to expand by 10 percent this year, to 388 000 tonnes. Exports increased mostly from the **EU** and **New Zealand**. Public stocks of butter in the EU are virtually exhausted, but abundant milk supplies from New Zealand this spring is contributing to easing some price pressure in the short run. The price of butter in **Oceania** in October 2010 was USD/tonne 4275, which compares with USD/tonne 2750 in October 2009.

World exports of skim milk powder (SMP) could expand significantly this year, by 13 percent in 2010 and beyond 1.5 million tonnes in product weight, mostly from larger shipments by **New Zealand** and the **United States** early in the year. This forecast, however, assumes the **EU** will speed up its release of intervention stocks towards the end of the year. **EU** stocks were 197 000 tonnes in September, down from 258 000 tonnes in January 2010. Exports from

Figure 49. FAO indices of dairy and feed prices (2002-2004=100)

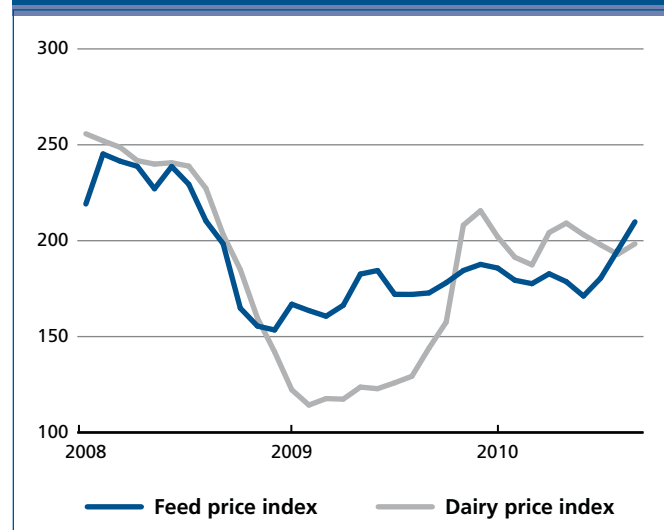


Table 18. Major exporters of dairy products

| | 2006-08 Average | 2009 prelim. | 2010 f'cast |
|--------------------------|--------------------|-----------------|----------------|
| thousand tonnes | | | |
| WHOLE MILK POWDER | | | |
| World | 1 919 | 1 962 | 1 982 |
| New Zealand | 644 | 818 | 880 |
| EU* | 428 | 420 | 420 |
| Australia | 142 | 133 | 105 |
| Argentina | 140 | 146 | 125 |
| SKIM MILK POWDER | | | |
| World | 1 180 | 1 347 | 1 526 |
| New Zealand | 279 | 408 | 470 |
| United States | 314 | 249 | 299 |
| EU* | 155 | 227 | 360 |
| Australia | 148 | 167 | 130 |
| BUTTER | | | |
| World | 854 | 916 | 968 |
| New Zealand | 370 | 475 | 500 |
| EU* | 202 | 143 | 160 |
| Belarus | 55 | 86 | 87 |
| Australia | 64 | 84 | 88 |
| CHEESE | | | |
| World | 1 835 | 2 000 | 2 098 |
| EU* | 579 | 577 | 660 |
| New Zealand | 285 | 290 | 284 |
| Australia | 195 | 162 | 186 |
| Belarus | 92 | 121 | 133 |

* Excluding trade between the EU Member States. From 2007: EU-27

Australia, traditionally the fourth largest exporter, could not expand because of short domestic production. Import demand is firm from **China, Indonesia, Malaysia** and **Mexico**. These countries import close to half of the world trade of SMP, and their sustained purchases have kept world prices firm throughout the year. African imports of SMP may fall by some 4 percent, mainly due to lower purchases by **Algeria**, the second largest world importer of this product. SMP export price in **Oceania** in October 2010 was USD/tonne 3 175, which compares with USD/tonne 2 488 in October 2009.

The dairy trade outlook in **2011** is for growth, sustained by larger shipments from **Argentina, Australia, New Zealand** and the **United States**. Meeting the optimistic forecast, however, depends on low feed prices towards the end of 2010 and early 2011. Should feed prices increase significantly in the next few months, then export growth may slow down, or even stagnate if exporters choose to rebuild their stocks of dairy products. Import demand should remain firm next

year, notably from the **Russian Federation**, where demand is growing strong but a shortage of feed could prevent an expansion of domestic production. A more uncertain output is foreseen for **China** imports, where domestic demand is also growing fast, but where a recurrence of incidents of melamine contamination of milk continues to erode consumer confidence in domestic produce.

FISH AND FISHERY PRODUCTS

GLOBAL FISH ECONOMY

The negative trends in international fishery trade registered in late 2008 and throughout 2009 have reversed, with all the major producing and exporting countries expected to increase sales this year. During January–July 2010, fishery exports from China, the number one supplier, grew by an impressive 26.8 percent, exports from Thailand were 7.8 percent higher than the same period last year, and Norway's exports were also up significantly.

Import value also increased by varying degrees in the traditional developed markets during January–June 2010. Compared with the same period in 2009, imports by the United States increased 16 percent, the EU was up 5.5 percent in extracommunity trade, Japan increased 5 percent and Australia, the largest seafood market in the Pacific, reported 20 percent growth in imports.

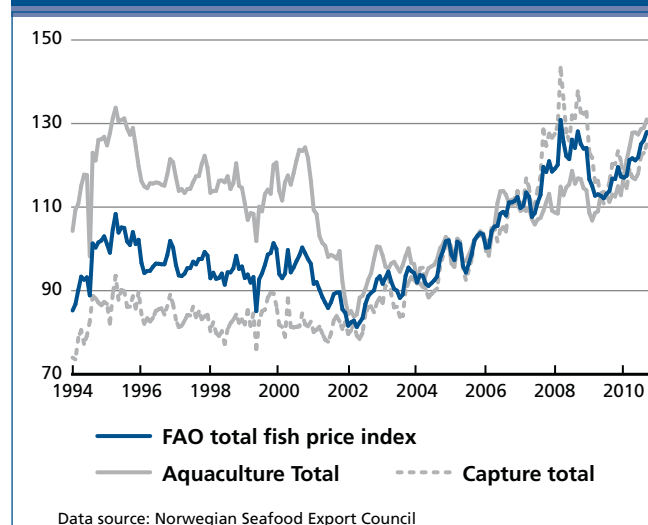
This trend is even more prominent in developing countries. Brazil, China, Hong Kong SAR, Republic of Korea, Malaysia and Mexico experienced double-digit growth in fishery import values. Strong national currencies relative to the USD and fast economic growth in Brazil, China, India, Indonesia and Malaysia have boosted domestic purchases of fishery products and prices throughout 2010 for export. The positive trend in global fishery trade is expected to continue for the remainder of the year.

In particular, demand for farmed shrimp, salmon, tilapia and pangasius catfish among others, has been strong this year, boosting exports from major producing countries such as China, Norway, Thailand and Viet Nam.

Emerging market demand is generally strong, with much higher growth rates than in any of the traditional developed country markets. As most world supply comes from developing countries, this is boosting regional trade and, at the same time, increasing exports from developed country producers.

Supplies of farmed shrimp from Asia and Latin America and the Caribbean have been affected by both lower

Figure 50. FAO Fish Price Index (2005=100)



stocking levels and some disease-related problems, resulting in higher international market prices. Improved consumer demand has also supported the price rise, keeping the market firm throughout 2010. In the farmed salmon sector, the supply shortage in Chile coupled with strong demand, particularly from Europe, Asia and Latin America (Brazil), have boosted prices worldwide. In Chile, however, production is now recovering.

Demand for tropical farmed fish, such as pangasius catfish and tilapia, has been strong across the world. These species are gaining consumer acceptance even in markets where they were totally unknown just a few years ago. Encouraged by the success of Vietnamese catfish and Chinese tilapia, producers in other countries have recently started to expand export markets for freshwater fish fillets.

In Asia, growing demand in the region for live fish has led to high market prices. In response, ASEAN country producers are aiming to develop full-cycle marine aquaculture of Asian seabass, groupers and brackish-water tilapia.

The tuna industry has suffered from supply shortages due to poor fishing and stricter resource management measures, particularly in the Pacific Ocean. The supply situation is expected to remain tight, thus keeping tuna prices firm. The United States and European tuna markets have been affected by economic downturn, but demand is expected to improve in 2011.

SHRIMP: MARKET TIGHT, PRICES RISING AND NO NEW FARMED SUPPLY UNTIL MARCH NEXT YEAR

The brisk international shrimp trade observed during January–June has continued during the second half of the

Table 19. World fish market at a glance

| | 2008 | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | Change 2010 over 2009 |
|-----------------------------------|---------------|-----------------------|-----------------------|---|
| | | | <i>million tonnes</i> | % |
| WORLD BALANCE | | | | |
| Production | 142.3 | 145.1 | 147.0 | 1.3 |
| Capture fisheries | 89.7 | 90.0 | 89.8 | -0.2 |
| Aquaculture | 52.5 | 55.1 | 57.2 | 3.8 |
| Trade value (exports USD billion) | 102.0 | 95.4 | 101.9 | 6.8 |
| Trade volume (live weight) | 55.2 | 54.9 | 55.3 | 0.7 |
| Total utilization | | | | |
| Food | 115.1 | 117.8 | 119.5 | 1.5 |
| Feed | 20.2 | 20.1 | 20.1 | -0.1 |
| Other uses | 7.0 | 7.2 | 7.4 | 2.8 |
| SUPPLY AND DEMAND INDICATORS | | | | |
| Per caput food consumption: | | | | |
| Food fish (kg/year) | 17.1 | 17.2 | 17.3 | 0.3 |
| From capture fisheries (kg/year) | 9.3 | 9.2 | 9.0 | -1.7 |
| From aquaculture (kg/year) | 7.8 | 8.1 | 8.3 | 2.6 |
| FAO Fish price index (1998-2000) | 2008 Sept. | 2009 Sept. | 2010 Sept | Change Sept. 2010 over Sept. 2009 % |
| | 128 | 117 | 127 | 8.5 |

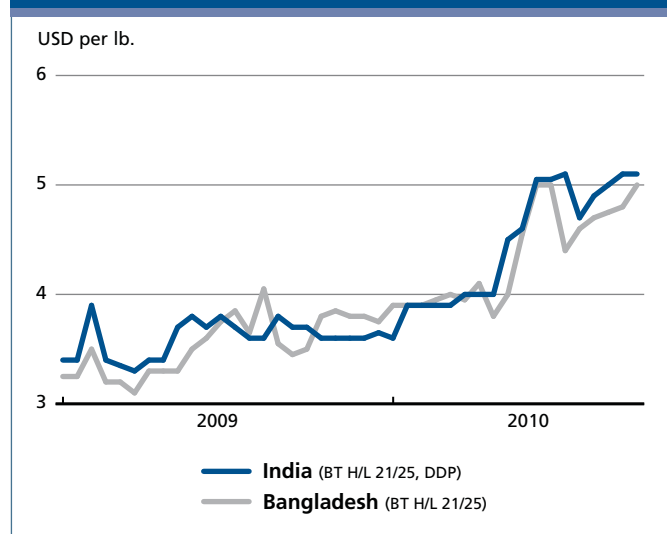
year. With lower than expected supplies of farmed shrimps, export prices moved up in July, August and September, reaching levels the export industry had not experienced for the last five years. Increasing imports in September–October by the United States together with European markets anticipate the Christmas festive season, but purchasing is likely to slow down in November.

Strong Asian currencies related to the US Dollar and a recovery in consumer demand have channelled products to the regional markets in East Asia firming prices. Chinese buyers have been particularly active, importing fresh and frozen *vannamei* from Thailand, often outbidding western or Japanese buyers.

In Japan this year, there is increasing demand for semi-processed and processed products in the national market. Total shrimp imports were up 2.5 percent in the first half of 2010, despite higher prices.

EU markets for shrimp are growing this year, reaching 250 000 tonnes, valued at around EUR 1.17 billion, up 2.6 percent in quantity and 6.5 percent in value during the first half year. Imports of processed/value-added shrimp products grew by 6.4 percent.

Shrimp sales in the United States are still supported by steady home consumption whereas the restaurant trade has

Figure 51. US frozen BT shrimp prices

not improved much. Higher imports of prepared products are indicative of this trend.

Reports from Indonesia and Viet Nam indicate that the current raw material shortage will continue in the coming months. Although harvests have improved in India, with the end of the shrimp farming season in Asia, no new crops are expected to come to market until March 2011.

TUNA: POOR FISHING KEEPS SUPPLY DOWN BUT PRICES DO NOT MOVE EXCEPT FOR CANNING MATERIAL

Lower fishing is reducing tuna supply as a lack of buying interest keeps prices low, further depressing landings. Over time, buyers will be forced to come back to the market to fulfil orders which should lead to some firming of prices.

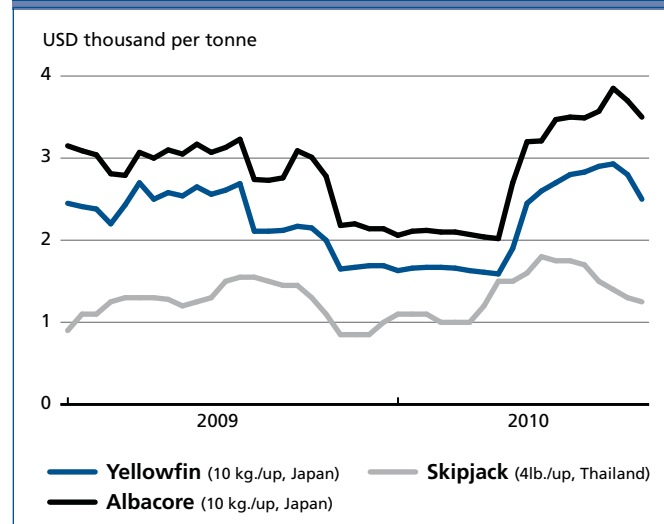
Canning sales were disappointing in 2009 but have recovered somewhat this year. Prices of skipjack and yellowfin tuna for canning continue to rise because of lower catches in the Eastern and Western Pacific. This year's canned tuna production in Italy and Spain will decline because of the shortage of material, in particular cooked loin supplies from Asia and Latin America. French canneries have fared better as their traditional sources in Cote d'Ivoire, Madagascar and Mauritius have remained stable.

In Japan, tuna supplies will be lower this year, with a reduction in both domestic production and imports. EU imports of cooked tuna loins were 11 percent lower at 51 600 tonnes during the first five months. Poor fishing in the Eastern Pacific contributed to declining supplies from

Ecuador and El Salvador. Supplies from Thailand fell by 31 percent, and Indonesia and Viet Nam were also down.

In the United States, the non-canned tuna market has been positive with frozen tuna loins and steaks gaining popularity in the retail and catering trade. The average import price of frozen tuna fillets has been stable at USD 8.50–8.70/kg. Overall, United States canned tuna sale value has been growing since 2004 but declining in volume, with average prices of canned tuna increasing during the period. Harsh economic times usually boost canned tuna sales, as consumers switch to cheaper products. However, last year's higher prices of the raw material made canned tuna more expensive and United States canned tuna consumption declined to 2.5 lbs per capita, down 10.7 percent. Imports by the United States of canned tuna have been growing strongly to compensate for a 22 percent decline in domestic packing. Imported quantities were up by 5.3 percent in 2009 and 24.9 percent in the first half of this year. However, total canned tuna supply to the United States dropped to 344 000 tonnes in 2009 from 382 000 tonnes the previous year.

The Thai tuna industry continues to expand in global markets, gaining a stronghold in the United States and Middle Eastern markets and successfully penetrating emerging markets in Africa and Latin America and the Caribbean.

Figure 52. Frozen tuna raw material prices

GROUND FISH: POSITIVE SHORT-TERM OUTLOOK ALTHOUGH LONG-TERM PROSPECTS HEAVILY INFLUENCED BY FARMED SPECIES

The outlook for groundfish markets is relatively positive in the short term, because of expected supply constraints for tilapia and pangasius. Fishing quota increases are expected next year for Alaska pollock and haddock, whereas hake supplies from Argentina are likely to remain tight with price increases foreseen.

Prices in the European Alaska pollock market are stable, both for whole fish and fillets. The fishing B-season in the United States went well. A quota increase between 900 000 and 1.1 million tonnes is forecast for next year.

The slow recovery in the European economy, is expected to strengthen demand for groundfish products, including value-added products such as surimi. Strong demand for cod in the United Kingdom and in southern Europe has boosted demand also thanks to a stronger Euro. EU cod prices increased slightly as a result of the new regulations on EU catch certificates that reduced import availability from the beginning of 2010.

United States cod consumption is in long-term decline, falling 59 percent between 1997 and 2009, to 0.2 kg/pc. United States hake imports are also falling.

CEPHALOPODS: BETTER DEMAND IN CEPHALOPOD MARKET IS THWARTED BY LOW SUPPLY

International markets for cephalopods have been influenced by disappointing squid catches in the Southwest Atlantic.

As this is the second weak season in a row, there is some concern about the health of the biomass. With demand for squid showing some upward movement, prices are rising quickly. The situation for octopus is not much better. Morocco's current two-month ban is limiting supply resulting in rising octopus prices.

In the Southeast Atlantic, squid catches have been moderate. A lack of squid from other sources has driven prices higher in Southern Africa. With low stock levels in the distribution pipeline, the market has reacted quickly to the growing shortages.

With a reduction in production over the last decade, the outlook for cephalopods is not very positive. Although catches of the various species historically have shown some cyclical variation, many observers fear that the major cause is inadequate management measures in the main fishing areas. The situation is aggravated by unclear borders in some of the richest fishing areas which has made it difficult to establish cooperation among the bordering states. This has left prospects quite uncertain, and prices are expected to rise further.

Imports by Spain, the leading market for squid, showed an 8 percent rebound in 2010 following a difficult 2009 when squid imports were down 25 percent from 2008. Italy's squid purchases also grew this year, up 15 percent with imports now at the same level as in 2008. Japan's squid imports in the first half year declined 15 percent from last year, while conversely, United States import volumes are on an upward trend, up 8 percent this year.

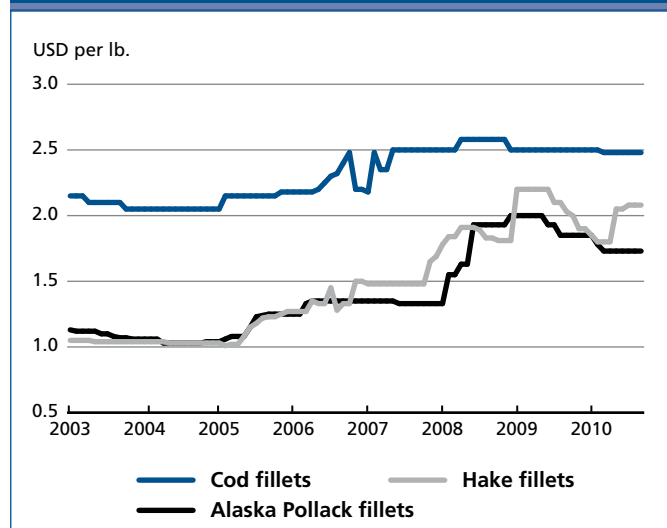
TILAPIA: RECORD CHINESE EXPORTS BUT GROWING SUPPLY CONSTRAINTS WILL BOOST PRICES

Prices of tilapia are expected to increase as a result of a 20 percent drop in production of China. Low prices last year led farmers to reduce stocking levels and a harsh winter decreased survival rates for the fish.

China, the leading producer, consumer and exporter of tilapia, saw its exports increase 288 percent during 2004-2009 to 260 000 tonnes. Exports in the first seven months of 2010 rose to 165 000 tonnes, up 30 percent from the same period in 2009.

Purchases by the United States, the world's largest tilapia market, remains steady, despite price increases at source. Tilapia has become the second most popular fish in United States retail stores, behind salmon, and the fifth most popular seafood product overall. During January–July 2010, imports of frozen tilapia, which comprise 87 percent of all imports, rose 15 percent to 98 500 tonnes with fillets increasingly replacing whole fish. Fresh fillet supplies are

Figure 53. US groundfish wholesale prices



dominated by Central American producers who expect improved opportunities under the Free Trade Agreement (FTA) signed in May this year between six producing countries in Central America and the EU.

Mexico has emerged as an important market for frozen tilapia from China, with its imports increasing 32 percent, to 25 500 tonnes.

In Europe, pangasius dominates the market for tropical finfish. However, tilapia is making inroads replacing traditional coldwater species. An estimated 25 000–30 000 tonnes of tilapia were imported by the EU in 2009 with China as the dominant supplier followed by Indonesia, Uganda, Thailand and Ecuador.

Exports are increasing from Southeast Asia, with Indonesia shipping nearly 10 000 tonnes of fillet to the United States and EU markets during the first seven months this year. Thai exports rose to 10 000 tonnes.

PANGASIOUS: TIGHTER MARKET AND GOOD DEMAND DRIVE PRICES HIGHER

Viet Nam, the largest producer and exporter of pangasius, reported growth of 8 percent in exports during the first seven months of 2010. However, the sector faces growing constraints, such as a shortage of raw material, rising feed and labour costs, and more stringent import requirements in many markets. Other Asian suppliers now entering foreign markets are Bangladesh, China and Thailand. From 2011, all Vietnamese pangasius will be exported as Basa, and at minimum export prices.

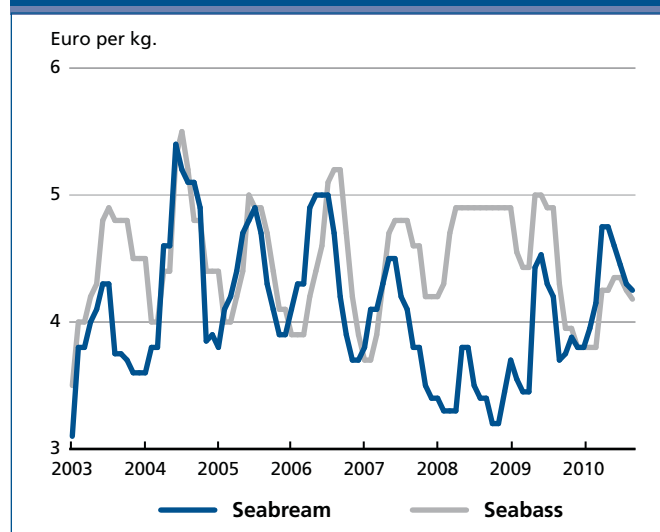
Demand is firm. The EU imported 85 400 tonnes of frozen pangasius fillet during January–May 2010. Viet Nam contributed 86 percent of total supply.

The single largest country market is the United States, where pangasius now ranks as the tenth most popular fish product. Imports of pangasius by the United States reached 32 600 tonnes by the end of July, up 8 percent. The United States' Department of Commerce has increased anti-dumping levies on catfish from several Vietnamese exporters by 100–120 percent. At USD 4.22/kg, the levy is higher than the current retail price, so these companies are likely to sell elsewhere.

The Russian Federation has become an important market for pangasius, importing 18 000 tonnes of freshwater fillets including pangasius during January–June 2010. Almost half (48 percent) was supplied by Viet Nam. However, because of temporary import restrictions, this represented a 40 percent decline in exports from Viet Nam compared with the same period last year.

Demand for pangasius will continue to grow because of its affordable price and high product versatility. With

Figure 54. Prices of seabass and seabream in Italy



increasing demand in domestic as well as international markets, many Asian countries are increasing production.

SEABASS AND SEABREAM: TIGHTER MARKET FOR BREAM WITH PRODUCTION DOWN FROM LAST YEAR

The markets for seabass and seabream are relatively stable with a good balance between demand and supply. Demand has proven to be more resilient than expected in markets such as France and Italy, while the situation in Portugal and Spain remains difficult. Prices have risen somewhat in the present quarter, due in part to a lower supply – last year, producers stocked fewer juveniles in response to the economic crisis. The outlook for prices is positive with rising quotations expected, especially for bream. Prospects for 2011 are also positive, although a lack of reliable biomass estimates makes projections of supply difficult.

SALMON

Tight market expecting relief from Chile in 2011

Atlantic salmon prices are firming in Europe in the run-up to Christmas with stable but high prices in the first two-quarters of 2010. Prices should ease from 2011 onwards, as Chilean supplies will start arriving on the market. Industry estimates indicate volume growth for world salmon supply of 8–10 percent in 2011, and a further 7–12 percent in 2012.

The value of Norway's salmon exports in 2010 continues to set record levels, reflecting higher production as well as higher prices. Chile saw significant drops in exports during

the first six months with values down 15 percent to USD 1 billion and overall salmon volumes dropping 34 percent to 181 000 tonnes from 274 000 tonnes in 2009.

The EU market held up remarkably well during the economic slowdown, with good underlying growth in demand. Growth has been particularly strong in the EU Member States of Central and Eastern Europe, due in part to the relocation of much of the European fish smoking industry to that region.

Japan's seafood consumption is in long-term decline and salmon demand is no exception. Imports of salmon in the first half of 2010 declined to just above 70 000 tonnes, 20 percent less than in 2008.

Salmon imports by the United States fell 6 percent in terms of volume in January–June 2010 but grew 6 percent in value, totalling 116 400 tonnes worth USD 897 million. Unit values were up 13 percent. Wild salmon catches in 2010 were excellent, including the high-value sock-eye salmon species.

SMALL PELAGICS

Supply situation mixed in Northern Europe

In the third-quarter of 2010, **mackerel** catches in Northern Europe picked up, with large quantities landed and traded. With supplies ample, prices have declined and are likely to remain at present levels or slightly lower for the months ahead.

For **herring**, supplies have been tighter but prices stable. Recent herring sales have focused on value-added products such as fillets and prepared herring. The resource has recovered well after the total collapse in the mid-1970s with good landings in the North Sea and the Norwegian Sea. However, worry remains about the resource, with scientists recommending cuts in the Norwegian spring spawning herring quota next year. Herring prices have declined slightly in most markets but are expected to remain at present levels for some months.

The **capelin** fishery sector in the Norwegian Sea and the Barents Sea has varied considerably, both from year to year and from one fishing area to the other. Traditionally, a reduction fishery (meal/oil), this is now changing. In 2010, it is estimated that as much as 80 percent of total landings will be used for human consumption, up from about 66 percent in 2009. The main markets for capelin for consumption are China, Japan, Lithuania, the Russian Federation and Ukraine. Prices are much higher on the Japanese market than on the eastern European markets.

FISH MEAL

Prices easing despite limited stocks and landings in South America

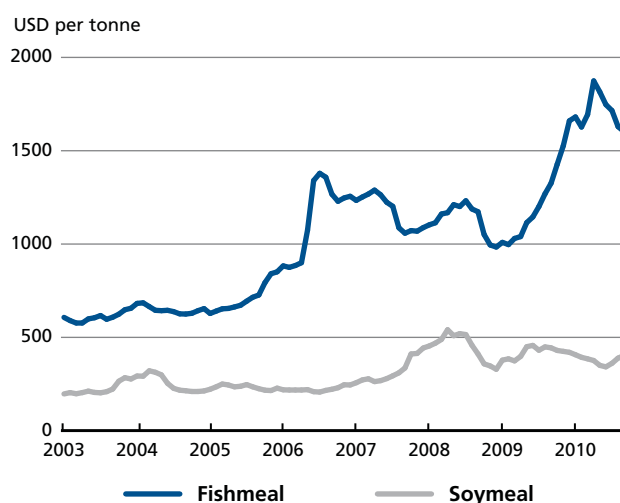
Production figures during the first half of 2010 by the five largest producers (Chile, Denmark, Iceland, Norway and Peru) dropped 2 percent with a 17 percent decline in South America, due to cold water conditions that caused poor fishing. However, figures doubled in Northern Europe. This will change over the next months as spring approaches. In Peru, the next fishing season in the North/Central area will open in November with a quota of 2.1 million tonnes.

In Northern Europe, Iceland reported good catches of herring with landings now at 83 percent of the 165 500 tonne quota. The Icelandic mackerel quota of 130 000 tonnes is almost filled. In Norway, landings for meal and oil remain low, with most catches going for human consumption. Less herring is expected for meal and oil this season compared with 2009.

Stocks in China are slightly up as the domestic aquaculture industry's main buying season is completed, and demand in the coming months is expected to come from the pig farming sector. Fish meal demand from Chile's salmon sector will grow next year.

Exports from Chile and Peru during the first half year were down drastically. Poor fishing is the cause for the decline in Peru whereas Chile was hurt by slow fishing plus damage to the fishmeal processing industry caused by the earthquake that struck in February 2010.

Figure 55. Prices of fishmeal and soybean meal



FISH OIL

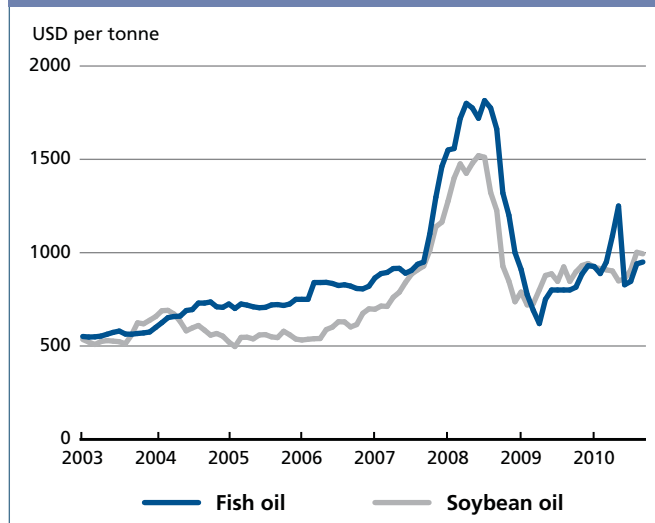
Tight market with further price increases forecast

As expected, fish oil prices have continued to rise as the recent poor catches in South America are restricting future supplies. Peruvian landings are expected to increase over the coming months but overall catches in the region are likely to be well below the level of 2009.

In Northern Europe, despite good harvests, most mackerel and herring are going for direct human consumption. Industrial deliveries appear lower than last year. Overall production of oil is expected to be below that of 2009, showing a severe drop during the first six months of 2010 with a 25 percent decrease in volume from the main exporters. As for fishmeal, production in Northern Europe increased, whereas the combined Chilean and Peruvian output fell back heavily. This was reflected in export, with both Chile and Peru showing lower volumes in 2010. Conversely, the United States increased its exports of fish oil by more than 50 percent in 2010, thanks to good harvests.

Given the high prices, buyers are closely watching catch levels in Chile and Peru. The foreseen growth in Chile's salmon production in 2011 and 2012 will put further upward momentum on prices.

Figure 56. Prices of fish oil and soybean oil



Special features

WHEAT RUST: A GROWING THREAT TO WORLD FOOD SECURITY

This special feature is courtesy of Mr D.P. Hodson, Global Cereal Rust Monitoring System, Plant Production and Protection Division, FAO, David.Hodson@fao.org

SUMMARY

Throughout recorded history rust fungi have been the most damaging diseases affecting wheat. Significant changes in both stem and stripe rust populations currently pose serious threats to wheat production. Stem rust, once the most feared disease of wheat, has re-emerged in a new virulent form, designated as Race Ug99. First identified in East Africa, Race Ug99 is migrating and mutating rapidly. Most global commercial wheat cultivars are susceptible to Ug99. In addition, new, highly aggressive races of stripe rust are devastating wheat crops in several regions. Breakdown of key resistance genes and genetic uniformity are driving these epidemics. Substantial and successful global initiatives are underway to address the stem rust threat, but similar efforts are urgently needed for stripe rust. Continued and sustained investment will be required to address both current and future challenges posed by wheat rusts.

EMERGING WHEAT RUST THREATS

Adverse weather effects are undoubtedly a primary driver of wheat production shortfalls and, with climate change, may increasingly be so. However, they are not the only factor capable of negatively impacting wheat production. An age-old threat to wheat has been the rust fungi and these too are increasingly making the headlines and causing grounds for renewed concern. The most feared disease of wheat – stem rust – has re-emerged in a new virulent form, and new aggressive stripe rust strains are devastating wheat crops in several countries.

Three species of rust fungi; stem (or black) rust, leaf (or brown) rust and stripe (or yellow) rust, are the most important economically damaging diseases affecting wheat and other small-grain cereals (except rice). Historically, stem rust was the most feared disease of wheat, inflicting devastating damage on a periodic basis. Under conditions highly favourable to stem rust, complete crop loss is possible

on susceptible cultivars. In the first half of the twentieth century, stem rust damaged wheat crops on a massive scale across continents. The last major set of epidemics in North America during the 1950s resulted in more than 40 percent of the North American spring wheat crop being lost (over 4 million tonnes in 1953/54 alone). These early 20th century major stem rust epidemics were the driving force behind national and international mitigation and control efforts. Predominantly through the widespread use of resistant cultivars, significant gains in the battle against rust, notably stem rust, were achieved. By the mid-1990s stem rust was largely considered to be under control, with low levels of incidence worldwide. However, the ever changing nature of rust pathogens and their ability to acquire new adaptive traits make them a formidable foe. Events of recent years have highlighted the re-current nature of the threat posed by rusts. Significant changes in both stem and stripe (yellow) rust populations make them serious global threats once again.

The notable successes of the previous decades resulted in a degree of complacency that stem rust was a vanquished disease. Priorities shifted and many countries halted breeding or monitoring activities for stem rust. The resistance incorporated into the semi-dwarf “green revolution” wheat varieties during the 1960/70s proved durable and was increasingly relied upon. Identification of a new virulent strain of stem rust in the wheat fields of Uganda in 1999 (race TTKSK – commonly known as Ug99), broke the complacency and saw stem rust re-emerge as a global threat. The unique virulence gained by Ug99 (and subsequent variants) has rendered a very large proportion of the world’s commercial wheat varieties susceptible to stem rust. Recognition of the sheer magnitude of current global vulnerability has spurred international initiatives to address the issue. Since 2005, the Borlaug Global Rust Initiative (BGRI) has coordinated an international coalition of institutions working to mitigate the re-emerging wheat rust threat.

Since its initial identification, Ug99 has continued to mutate and spread. The pathogen is wind-borne and capable of travelling vast distances (up to several thousand km). Accidental transmission on infected clothing or plant material is another concern. Several variants are now recognized and presence is confirmed in eight countries (Ethiopia, the Islamic Republic of Iran, Kenya, South Africa, the Sudan, Uganda, Yemen and Zimbabwe). To date, Kenya is the only country that has suffered any significant loss due to Ug99, but a serious threat remains and one that cannot be ignored. Millions of hectares of wheat are planted to very susceptible varieties and, under suitable conditions, rust epidemics can develop quickly. In addition, considerable and

unpredictable time lags can occur between identification of a new pathotype and a damaging outbreak. The devastating 1950s epidemics in North America were caused by a stem rust race named 15B, eleven years after its first detection.

Significant and rapid progress has been made in response to Ug99. New sources of resistance have been identified; several new resistant cultivars have been developed and released, many of which are now undergoing rapid seed multiplication in different countries. The principal breeding strategy being deployed is the pyramiding of several minor resistance genes in order to reduce the likelihood of rapid breakdown by the pathogen. Global awareness relating to the renewed vulnerability of wheat to stem rust has increased significantly and there has been an encouraging resurgence in surveillance and monitoring activities.

Pathogen changes also underpin the current stripe rust problems. Since 2000, two highly aggressive strains of stripe rust have been identified and spread globally. These new aggressive strains (PstS1 and PstS2) produce many more spores in a much shorter time than previous strains, and they appear to have adaptation to warmer temperatures. These factors combined, result in a significant competitive advantage for the pathogen and permit the rapid development of epidemics. Areas once considered too warm for the development of stripe rust are now experiencing serious outbreaks. Breakdown of widely deployed resistance genes by these aggressive strains is another factor driving the current stripe rust epidemics. Throughout large regions of Central, West and South Asia and North/East Africa, genetically uniform wheat cultivars are being grown. Single cultivars occupy millions of hectares and the same genetic material is often released in several countries under a different variety name. The presence of these so-called “mega-cultivars” has resulted in resistance to stripe rust often being based solely on the Yr27 resistance gene. The effectiveness of this Yr27 gene has now broken down and severe epidemics are occurring as a result.

In 2009, the regional drought that had engulfed much of the Near East receded, and environmental conditions favoured the development of stripe rust. Presence of aggressive stripe rust strains, coupled to virulence on Yr27, resulted in severe epidemics in several countries, notably: Algeria, Afghanistan, Azerbaijan, Morocco and Uzbekistan. Conditions favouring rust development have continued into 2010, with mild winters and adequate rainfall in several countries resulting in early outbreaks of stripe rust. Since early March, reports of serious outbreaks of stripe rust have been received from Azerbaijan, Iraq, Lebanon, Morocco, Turkey, Syria and Uzbekistan. Estimated losses of

over 1 million tonnes are thought to have occurred in Syria alone. Epidemics continue to devastate susceptible wheat crops, with Ethiopia currently experiencing the worst stripe rust outbreaks in many years. Widespread cultivation of susceptible varieties carrying the Yr27 gene is implicated in the Ethiopia epidemics.

The current stripe rust situation has highlighted the speed at which the new, adapted pathotypes is spreading globally. The range expansion detected for new aggressive strains of stripe rust (PstS1 and PstS2) may represent the most rapid spread of an important crop pathogen on a global scale. Natural airborne movements are one factor but accidental human-assisted movements are undoubtedly increasingly important. High disease levels raise the probability of natural dispersal, but the near exponential growth in international travel and trade is equally important. Accidental human-assisted transmission across continents is implicated in many instances. Genetic uniformity of cropping systems is another factor that amplifies the risk of significant disease outbreaks. The cultivation of genetically identical wheat mega-cultivars across millions of hectares creates ideal conditions for potential epidemics once resistance breaks down.

CONCLUSION

Given the changes occurring in wheat rust pathogen populations, how can these affect the future prospects for global wheat production and food security? At the outset, it must be clear that wheat rusts are unlikely to destroy the entire global wheat crop. However, if uncontrolled and conditions are favourable, they can cause severe periodic production shortfalls in some affected countries or regions. The very serious yellow rust epidemics observed in 2010, highlight the reality of this threat. Given favourable conditions, several factors indicate the possibility for further severe stripe (yellow) rust outbreaks; the amount of disease present, the aggressiveness of the pathogen strains and the slow replacement of susceptible varieties are all a concern. Stem rust, despite generally low levels of disease outside of East Africa, requires careful monitoring given current global vulnerability to the Ug99 lineage. For both rusts, the most at risk are likely to be small-scale farmers who lack access to either fungicide for emergency short-term control or seed of resistant varieties for sustainable long-term control. Regions with extremely high per capita consumption rates of wheat, e.g. the Near East, Central Asia, North Africa and South Asia, are of special concern. The current wheat rust situation indicates both failure of the existing control systems but also gives rise to some optimism. Ug99 and related strains provided a clear warning about excessive

complacency regarding rust pathogens. However, the global coordinated response to the re-emergence of stem rust has been extremely positive. A similar coordinated response is currently lacking for stripe (yellow) rust, but urgently needed. Continued investment in mitigation research, sustained surveillance and monitoring activities, deployment of durable resistant varieties and effective seed systems will all be needed to address both current and future challenges posed by wheat rusts.

SOURCES OF ADDITIONAL INFORMATION

Borlaug Global Rust Initiative (www.globalrust.org)
 FAO Global Rust Monitoring System: Rust SPORE (<http://www.fao.org/agriculture/crops/rust/stem/en/>)

Hovmøller, M.S., Yahyaoui, A., Milus, E.A. & Justesen, A.F. 2008. Rapid global spread of two aggressive strains of a wheat rust fungus. *Mol Ecol* 17:3818-3826

Mogens Støvring Hovmøller, Stephanie Walter, Annemarie Fejer Justesen. 2010. Escalating Threat of Wheat Rusts. *Science* Vol. 329. no. 5990, p. 369. Available on-line at: <http://www.sciencemag.org/cgi/content/summary/329/5990/369>

Singh, Ravi P., Hodson, David P., Huerta-Espino Julio et al. 2008. Will stem rust destroy the world's wheat crop? *Adv Agron* 98: 271-309

Red Menace: Stop the Ug99 Fungus Before Its Spores Bring Starvation. *Wired Magazine* March 2010. Available on-line at: http://www.wired.com/magazine/2010/02/ff_ug99_fungus/all/1

AGRICULTURAL FUTURES: STRENGTHENING MARKET SIGNALS FOR GLOBAL PRICE DISCOVERY

This special feature is courtesy of Ms Ann Berg, Consultant, Senior Commodity Trader.

The views expressed herein do not necessarily reflect the official opinion of the Food and Agriculture Organization of the United Nations.

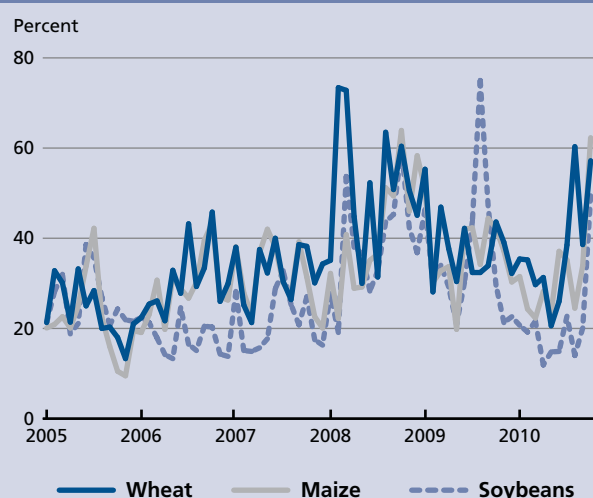
Agricultural commodity investing is big business. Following the 1990s deregulation of the financial service sector in the United States and in Europe, financial firms have poured colossal sums of money into commodity futures exchange products in hopes of capturing outsized returns from the volatile foodstuff market. Agricultural trading volumes have tripled on the world's most renowned exchange - CME Group¹, and doubled on Euronext Liffe's soft commodity complex during the last decade. Euronext Liffe has also developed liquid contracts in wheat and rapeseed. Described as "benchmarks," the price discovery in these contracts reverberates globally, often creating profound impacts on domestic policy-making in virtually every country. High volumes, however, have brought charges of excess speculation that is proving potentially disruptive to vast segments of the population. Whether speculation is causing prices to rise and whether producers benefit from high prices realized in futures contracts are central questions for debate. In addition, food price volatility needs addressing.

Globally, futures trading in agricultural markets have grown exponentially since 2000. Emerging markets exchanges such as China's Dalian Exchange and India's Multi-Commodity Exchange have experienced greater volume surges than CME or Euronext Liffe, but have not attracted large global investment flows. Currency inconvertibility, strict position limits, frequent government interventions in both the futures and physical markets or prohibitions against direct foreign investment have constrained emerging commodity markets growth globally. Indeed most recent agricultural exchanges developed as a response to markets liberalization and have focused on producer pricing. Following the abolition of government price supports in 1995, the South African Futures Exchange², for example, designated over 100 warehouses as delivery

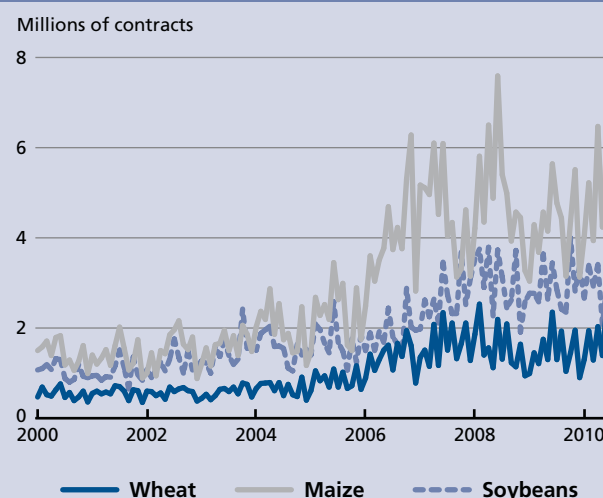
¹ The CME Group now comprises the Chicago Board of Trade and the New York Mercantile Exchange.

² SAFEX is now the Johannesburg Stock Exchange.

CME historical volatility



CME futures volume



points in its wheat and maize contracts to best suit producer risk management needs; China's and India's exchanges seek to promote producer marketing power and rural development.

Elsewhere, many exchanges have created contracts to suit their domestic commercial base. The Tokyo Grain Exchange (TGE) for example launched a yen denominated maize contract in 1992 that specified physical delivery of United States origin maize to Japanese ports. Argentina's and Brazil's exchanges, such as the Rosario Futures Exchange (ROFEX) and the Bolsa di Mercadorias & Futuros (BM&F) feature contracts customized to their export markets.

Although dwarfed by financial futures notional volumes which have exceeded one quadrillion US Dollars since 2006, volumes of agricultural futures are remarkable for their size as a multiple of physical crop productions. The CME Soft Red Wheat contract for example, which is used domestically to hedge a crop of about 400 million bushels (10 million tonnes), experienced a trading volume in 2008 of 90 billion bushels, the equivalent of trading the entire crop each business day.

REGULATORY BACKGROUND

Speculation and price distortions on commodity futures markets have existed as long as the markets themselves. Market manipulations – especially “squeezes” or “corners” – were alleged at least once every ten years at the Chicago Board of Trade after its establishment in the mid-19th century. In response, the Government of the United States enacted legislation in 1922 to exert regulatory authority

over commodity futures exchanges and strengthened that authority in 1936 under the Commodity Exchange Act (CEA). The CEA made market manipulation a criminal act and placed limits on individual trader's positions. In 1974, the United States Congress established the Commodity Futures Trading Commission, vesting it with broad oversight and anti-fraud powers.

An important role of the CFTC is to approve position limits and the specifications of all futures contracts listed on United States exchanges to ensure that they are resistant to manipulation. In 1996, it issued an ultimatum to the CBOT to revise its longstanding maize and soybean contracts³, advising that the contracts no longer complied with the Commission's mandate “to prevent or diminish price manipulation, market congestion, or the abnormal movement of such commodity in interstate commerce.”⁴

The CFTC also has authority over futures traders and trading firms, including commercial traders. In 1989, when it perceived that a large commercial exporter was distorting the price of CBOT soybeans, the CFTC ordered the firm to substantially reduce its soybean long positions prior to the May and July delivery periods.

Finally, the CFTC supports market transparency. Each week it publishes the Commitment of Traders Report (COT). This report, gathered from the United States exchanges, categorizes the long, short and spread positions of producer/users, swaps dealers, and managed money funds, giving

³ CBOT maize and soybean contracts were launched in 1877 and 1936 respectively.

⁴ The CBOT refigured the contracts from a Chicago/Toledo warehouse receipt system to an Illinois River shipping certificate system.

a clear picture of the market make-up for each futures contract.⁵ As a member of IOSCO, the CFTC promotes information sharing on a global basis and the adoption of “best practices” for overseeing futures contracts. It also holds round tables on various futures issues which are open to the public. Most recently, it held a round table focused on the lack of convergence between cash and futures prices⁶ in the Chicago, Kansas City and Minneapolis wheat contracts.

The European countries have very different futures trading regulatory models from the United States. In the United Kingdom, the Financial Service Authority (FSA) – a non-governmental organization – is granted statutory powers to regulate futures markets. As of June 2010, it announced a restructuring plan to be completed by 2012 to deal more adequately with systemic issues, particularly in the banking sector. Despite its endorsement of IOSCO principles, including the Toyko Communiqué,⁷ according to the FSA Web site, “[it] does not have dedicated rules for commodities and commodity derivatives markets.” Established in 2000 in the wake of the Barings Bank failure, the FSA originally viewed commodity futures trading as a professional users’ market and left its monitoring to the exchanges. By 2007, it recognized the growing volume in commodity futures and expressed the potential need for increased futures oversight. Most recently, following allegations of disorderly markets associated with the taking of large cocoa deliveries on Euronext Liffe cocoa contract by a hedge fund, it is assessing its regulatory role over commodity futures markets in the forthcoming restructuring.

Elsewhere in Europe, exchange products are under the purview of the national financial regulators. For example, the Autorité des marchés financiers oversees the former MATIF⁸

milling wheat contract. Similar to the FSA, the AMF has few delineated supervisory powers over futures exchanges, relying on exchanges to self-regulate. However, in response to the current run-up in wheat prices, the Government of France is calling for international reform to be introduced in the 2011 review of the Markets and Financial Instruments Directive (MIFED).

SPECULATIVE LIMITS AND INCREASED VOLUME

Since the CEA enactment, United States exchanges have placed limits on speculative trading in primary agricultural contracts. These limits increased dramatically beginning in the 1990s from the standard 600 contracts for grains and soybeans to now several thousand, although the spot month limit remains 600. In addition, the CME restricts any non-commercial entity from holding more than 600 shipping certificates or warehouse receipts received on delivery. Bona fide hedgers are exempt from all limits. The granting of hedge exemptions⁹ to index funds by the CFTC is currently under review.

The Euronext Liffe wheat, rapeseed and maize contracts have conservative all months limits compared with CMEs. Applied to speculators and hedgers alike, the futures delivery process of these contracts is intended to act as a price signal system and not a supply sourcing mechanism. Similar to CME’s tiered structure – limits must be reduced prior to contract expiry. The London Clearing House, not the exchange, determines the limits for the most actively traded grain and oilseed contracts.

CME Group agricultural positions limits – number of contracts and tonne equivalent

| Contract | Spot month | | Single month | All months |
|----------|------------|------------------------|--------------|------------------------------|
| Maize | 600 | (76.2 thousand tonnes) | 13 500 | 22 000 (2.79 million tonnes) |
| Soybeans | 600 | (81.6 thousand tonnes) | 6 500 | 10 000 (1.37 million tonnes) |
| Wheat | 600 | (81.6 thousand tonnes) | 5 000 | 6 500 (890 thousand tonnes) |
| Rice | 600 | (54.6 thousand tonnes) | 1 800 | 1 800 (163 thousand tonnes) |
| Oats | 600 | (51.6 thousand tonnes) | 1 400 | 2 000 (170 thousand tonnes) |

⁵ See addendum.

⁶ International Organization of Securities Commissions (IOSCO).

⁷ For various reasons the futures prices have tended to trade at a large premium (as much as 20 percent) to the underlying cash price for the last few years.

⁸ In 1997, regulators from 17 countries including Japan, the United Kingdom and United States, issued a communiqué (the Tokyo Communiqué) endorsing two guidance papers, one on best practices for the design and/or review of commodity contracts and another on market surveillance and information sharing. The guidances represent the first occasion on which regulators responsible for overseeing commodity derivatives markets agreed to international standards for the supervision of these markets.

⁹ MATIF merged with LIFFE in 1999.

⁹ A hedge exemption allows an index fund to exceed the speculative limits.

Euronext Liffe agricultural positions limits – number of contracts and tonne equivalent

| Contract | Spot month | All Months |
|---------------|-----------------------------|-----------------------------|
| Milling wheat | 2 000 (100 thousand tonnes) | 4 000 (200 thousand tonnes) |
| Rapeseed | 1 200 (60 thousand tonnes) | 2 400 (120 thousand tonnes) |
| Maize | 1 200 (60 thousand tonnes) | 2 400 (120 thousand tonnes) |

In contrast to all other exchange agricultural contracts, Euronext Liffe's sugar, coffee and cocoa contracts have no limits. The lack of limits allowed purportedly a single hedge fund to take delivery on the 2010 July contract of approximately 240 000 tonnes of cocoa -virtually all of the deliverable supplies and equivalent to 7 percent of the global production. Experts noted that the July price became so elevated that contract shorts shipped cocoa from New York warehouses to the Euronext Liffe delivery ports of Amsterdam, Antwerp and Hamburg to make delivery. Euronext Liffe recently announced it would collect internal numbers on the trading types and entities participating in the soft commodity sector and produce a report similar to the CFTC's COT report. To date, neither Euronext Liffe nor LCH have announced any plans to impose position limits on soft commodity futures.

Several factors have contributed to increased global speculative volume in foodstuffs:

- Markets liberalization and decline of price supports, particularly in the EU under the Common Agricultural Policy
- Deregulation of the financial service sector in the US that allowed proprietary trading by banks
- Declining margins in securities trading
- Diversion of foodstuffs into fuel products
- Rising demand for food in emerging markets
- Under-investment in agriculture due to prolonged low food prices
- Lack of price transmission to producers
- Sudden governmental interventions in the export market such as export bans, tariffs and quotas
- Ease of access to electronic market place
- Restructuring of primary exchanges from member organizations to for-profit corporations

GOING FORWARD

Regulatory harmonization

The United States model for creating a regulatory framework may be a good starting point for regulators in Europe.

Endorsement of IOSCO principles, for example, is ineffective without collecting information about trading activities and promulgating appropriate rules and regulations. Also, over 150 years of futures trading history demonstrates that position limits are necessary in commodities of finite supply to curb excessive speculation and hoarding. As far as agricultural commodities are concerned, FAO could lead this harmonization process, working with other international organizations.

Increased transparency

The most common question in futures markets is: To what degree is speculation driving prices versus commercial activity? Before the advent of electronic trading, various brokerage houses provided informal summaries of trading activities by players from the trading pits each day. Today, the exchanges themselves or their clearinghouses¹⁰ can address this question with great precision. The electronic marketplace produces instantaneous audit trails of order flow and transactions that are segregated by types of traders. The exchanges could furnish this data to the CFTC and have it published daily so that speculative versus commercial buying/selling could be quantified. Such information would greatly augment the market snapshot provided by the COT report by identifying trading types that are moving prices up or down. Exchanges in other countries should also adopt such reporting requirements.

Government policy

Sudden government interventions such as embargoes, heightened export tariffs or quotas have triggered dramatic futures price spikes over the last few years and are counterproductive.

Price transmission to producers

Poor price transmission from futures markets to producers is a critical issue for markets. The dilution of price from futures to growers results in a weak supply response several factors contribute to poor price transmission:

- Domestic price protections;
- Opaque local markets;
- Exploitive lending and buying practices by middleperson;
- Long supply chains;
- Futures delivery points geographically very distant from growing areas.

¹⁰ The CME Group clears its own trades internally, London Clearing House clears commodity futures transactions on Euronext Liffe.

Although most of these issues need addressing on a country by country basis, the last issue of delivery points can be addressed either by existing exchanges or by the creation of new ones. For example, although most of the world's cocoa production is in Western Africa – cocoa traded on the Euronext Liffe¹¹ contract is priced basis delivery in northern European ports such as Amsterdam, Antwerp, and Hamburg. A commodity and/or a futures exchange, in the major producing countries of Côte d'Ivoire and Ghana could help in price transmission from the European demand centres to growers.¹²

Similarly, in a market such as rice, commodity exchanges could aid regional pricing needs. Because of the varieties of rice and consumer preferences, no single contract can act as a global proxy mechanism. The most heavily traded contract – the CME rough rice contract - prices unmilled rice delivered in Arkansas warehouses and is most suited to domestic growers and millers. In Thailand, the Government conducts open auctions for export procurement via the Agricultural Futures Exchange of Thailand. This model is an attractive mechanism for signalling prices to farmers and could be replicated elsewhere, especially in countries with extensive rice protection policies. Several Latin American exchanges organize the trading of agricultural “tariff packages” as a means for ensuring transparency and price efficiency for the importation of “sensitive” goods, such as rice and maize. This too is a valuable price transmission model provided by exchanges.

Volatility

Volatility in commodity foodstuffs is a result of both fundamental factors and speculative inflows of managed money. Sharply differing opinions exist on how institutional money flows have changed the nature of the markets, particularly since the expansion of limits. While financial firms argue that they add volume and liquidity to the market, others maintain that large order size creates volatility and jagged price swings. In the August 2010 price hike of wheat, the CME wheat price moved up limit and down limit within two consecutive days. High frequency trading is also a controversial issue – one that a CFTC editorial recently stated needed “reining in,” commenting that “parasitical trading does not truly contribute to fundamental market functions.”¹³

Much debated also is the effect of passive fund money (index funds and swaps dealers), with experts on both sides arguing whether they have caused chronic price elevation and steep contango¹⁴ in some futures contracts. In its 2009 Trade and Development Report, the United Nations Conference on Trade and Development (UNCTAD) contends that the massive inflow of fund money has caused commodity futures markets to fail the “efficient market” hypothesis, as the purchase and sale of commodity futures by swap dealers and index funds is entirely unrelated to market supply and demand fundamentals,¹⁵ but depends rather on the funds’ ability to attract subscribers. Despite the risk transfer nature of futures trading, in which gains and losses are equally offset, passive funds have successfully packaged and sold futures contracts as an alternative investment class to institutional investors. However, most would agree that these passive funds do not affect volatility levels as their only trading activity is a forward “roll” of their positions and the timings of these rolls are announced in their prospectus. In the CME wheat contract, swaps dealers comprise about 40 percent of long open interest or almost one billion bushels (27 million tonnes) - equivalent to 2½ the size of the United States soft red winter wheat crop. Managed money (which includes active hedge funds and passive index funds), comprises another 20 percent of long open interest as of September 2010.

To address volatility levels, futures exchanges have relied on both position limits and price limits. Possibly some other volatility tools could be introduced:

- Limit the size of market orders entered within a particular time period;
- Ban high frequency trading;
- Apply spot month limit positions for a longer-time period prior to delivery month;
- Change physical delivery contracts to cash settlement;
- Settle contracts every month – either by delivery or cash;
- Allow shipping certificates or warehouse receipts to expire within one year of issuance;
- Reduce leverage by increasing margins;
- Reduce existing position limits.

None of these solutions is without controversy or downsides; many would be resisted by exchanges as some would tend to reduce volume and therefore profits.

¹¹ The United States InterContinental Exchange lists a cocoa contract with deliveries in New York harbour points.

¹² Efforts are under way in Ghana and Côte d'Ivoire to address commodity pricing.

¹³ “Rein in the Cyber-Cowboys,” Bart Chilton, CFTC Commissioner, Financial Times, Sept 6.

¹⁴ Contango is a market structure characterized by each successive futures contract trading at a higher price than the previous one.

¹⁵ Trade and Development Report, 2009, Chapter II, “Financialization of Commodity Markets,” UNCTAD

Alternatively, exchanges might consider the development of a global contract, tracking “cheapest global wheat,” for example. Although such a contract would have to be carefully constructed, there is a precedent: the Euronext Liffe white sugar contract (launched in 1983) is a global free-on-board contract with deliveries in 41 countries and 5 continents. Exchanges could construct a similar contract for wheat or alternatively develop an index to reflect wheat prices in several large producing countries (besides the EU and the United States) such as Argentina, Australia, Canada, China, India and South Africa and where commodity futures contracts serve as producer pricing mechanisms. Similarly, an index such as the one published by the International Grains Council could be expanded to include more countries. A global wheat contract could give governments an alternative view to the current commodity futures prices and enable better price transmission to producers.

Due to several structural changes in both the futures markets and the underlying agricultural commodities markets, prices and volatility levels will probably remain elevated for the foreseeable future. Higher prices will be necessary to encourage greater productivity and infrastructure development. Volatility, however, can be addressed in part by the exchanges and regulators. Finally, the world community needs to commence a debate on whether today’s primary futures exchanges still maintain their relevance to the underlying commodity markets as price discovery and risk transfer venues or whether they have transformed into a contest of players seeking triumph in “a zero sum game.”

REPORT OF THE EXTRAORDINARY INTERSESSIONAL MEETING OF THE INTERGOVERNMENTAL GROUPS ON GRAINS AND RICE, ROME, ITALY, 24 SEPTEMBER 2010

Following several months of rising international wheat prices, FAO called for an extraordinary Intersessional meeting of the Intergovernmental Groups on Grains and Rice. 162 delegates from 79 countries and nine organizations attended the one-day event on 24 September 2010. The Report of the meeting is reproduced herewith .

1. Global cereal supply and demand still appears sufficiently in balance. While acknowledging the sudden increase in prices and deterioration of prospects for cereal

markets in recent months, for wheat in particular, the Groups did not conclude that this situation was indicative of an impending food crisis. Unexpected crop failure in some major exporting countries followed by national responses and speculative behaviour rather than global market fundamentals, have been amongst the main factors behind the recent escalation of world prices and the prevailing high price volatility. The LIFDCs are most adversely affected by these high prices. The Groups expressed sympathy towards countries which were affected by natural disasters.

2. The Groups recognize that unexpected price hikes and volatility are amongst major threats to food security and that their root causes need to be addressed, in particular:

- a) The lack of reliable and up-to-date information on crop supply and demand and export availability;
- b) Insufficient market transparency at all levels including in relation to futures markets;
- c) Growing linkage with outside markets, in particular the impact of “financialization” on futures markets;
- d) Unexpected changes triggered by national food security situations;
- e) Panic buying and hoarding.

3. Given the growing complexity of factors influencing agricultural commodity markets, the Groups propose to enhance market information and transparency. The Groups recommend intensification of FAO’s information gathering and dissemination at all levels. They specifically recommend action, including capacity strengthening of all partners in relation to monitoring planting intentions, crop development and domestic market information. They further encourage analysis of different dimensions of futures markets behaviour, including involvement of non-commercial traders.

4. The Groups recognize that the CFS, at its next meeting, will consider issues of vulnerability and risk.

5. The Groups agree that additional work is needed in the following three areas:

- a) Analyses of alternative approaches to mitigating food price volatility, with a view to support policy decision-making;
- b) New mechanisms to enhance transparency and manage the risks associated with new sources of market volatility;

- c) Exploring ways of strengthening FAO's partnerships with other relevant organizations working on these issues.
- 6. As stated in the Declaration of the World Summit on Food Security of 2009, member countries "agreed to refrain from taking measures that are inconsistent with the WTO rules, with adverse impacts on global, regional and national food security."
- 7. The Groups agree that increased investment in agriculture, new technologies and good policies, amongst others, are key elements to ensure global food security.

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NOTES

General

- FAO estimates and forecasts are based on official and unofficial sources.
- Unless otherwise stated, all charts and tables refer to FAO data as source.
- Estimates of world imports and exports may not always match, mainly because shipments and deliveries do not necessarily occur in the same marketing year.
- Tonnes refer to metric tonnes.
- All totals are computed from unrounded data.
- Regional totals may include estimates for countries not listed. The countries shown in the tables were chosen based on their importance of either production or trade in each region. The totals shown for Central America include countries in the Caribbean.
- Estimates for China also include those for the Taiwan Province, Hong Kong SAR and Macao SAR, unless otherwise stated.
- Up to 2006 or 2006/07, the European Union includes 25 member states. From 2007 or 2007/08 onwards, the European Union includes 27 member states.
- ‘-’ means nil or negligible.

Production

- **Cereals:** Data refer to the calendar year in which the whole harvest or bulk of harvest takes place.
- **Sugar:** Figures refer to centrifugal sugar derived from sugar cane or beet, expressed in raw equivalents. Data relate to the October/September season.

Utilization

- **Cereals:** Data are on individual country's marketing year basis.
- **Sugar:** Figures refer to centrifugal sugar derived from sugar cane or beet, expressed in raw equivalents. Data relate to the October/September season.

Trade

- Trade between **European Union** member states is excluded, unless otherwise stated.
- **Wheat:** Trade data include wheat flour in wheat grain equivalent. The time reference period is July/June, unless otherwise stated.
- **Coarse grains:** The time reference period is July/June, unless otherwise stated.
- **Rice, dairy and meat products:** The time reference period is January/December.
- **Oilseeds, oils and fats and meals and sugar:** The time reference period is October/September, unless otherwise stated.

Stocks

- **Cereals:** Data refer to carry-overs at the close of national crop seasons ending in the year shown.

COUNTRY CLASSIFICATION

In the presentation of statistical material, countries are subdivided according to geographical location as well as into the following two main economic groupings: “developed countries” (including the developed market economies and the transition markets) and “developing countries” (including the developing market economies and the Asia centrally planned countries). The designation “Developed” and “Developing” economies is intended for statistical convenience and does not necessarily express a judgement about the stage reached by a particular country or area in the development process.

References are also made to special country groupings: Low-Income Food-Deficit Countries (LIFDCs), Least Developed Countries (LDCs). The LIFDCs include 77 countries that are net importers of

basic foodstuffs with per caput income below the level used by the World Bank to determine eligibility for International Development Aid (IDA) assistance (i.e. USD 1 735 in 2006). The LDCs group currently includes 50 countries with low income as well as weak human resources and low level of economic diversification. The list is reviewed every three years by the Economic and Social Council of the United Nations.

DISCLAIMER

The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Table A1 (a). Cereal statistics

| | Production | | | Imports | | | Exports | | |
|--------------------------------------|----------------------|-----------------------|-----------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|
| | 2006-2008 average | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> |
| (. million tonnes) | | | | | | | | | |
| ASIA | 952.5 | 987.2 | 999.3 | 127.7 | 135.1 | 128.0 | 45.1 | 44.7 | 43.1 |
| Bangladesh | 30.9 | 34.4 | 35.6 | 3.2 | 4.2 | 2.9 | - | - | - |
| China | 406.3 | 423.1 | 426.2 | 8.6 | 10.7 | 10.8 | 4.3 | 1.1 | 3.3 |
| India | 209.1 | 204.0 | 218.6 | 2.9 | 0.4 | 0.4 | 5.7 | 3.5 | 4.1 |
| Indonesia | 49.8 | 58.2 | 59.1 | 6.7 | 6.1 | 6.2 | 0.3 | 1.6 | 1.7 |
| Iran, Islamic Republic of | 18.9 | 17.6 | 19.1 | 7.9 | 8.7 | 6.6 | 0.5 | 1.0 | 1.0 |
| Iraq | 3.2 | 2.1 | 3.5 | 4.4 | 5.2 | 4.9 | - | - | - |
| Japan | 9.0 | 8.6 | 8.8 | 25.5 | 25.5 | 25.4 | 0.5 | 0.5 | 0.5 |
| Kazakhstan | 18.3 | 20.5 | 15.2 | 0.1 | 0.1 | - | 8.1 | 8.5 | 6.8 |
| Korea, Republic of | 5.0 | 5.3 | 4.8 | 12.2 | 12.9 | 12.4 | 0.1 | 0.1 | 0.1 |
| Myanmar | 20.9 | 21.0 | 20.8 | 0.1 | 0.2 | 0.2 | 0.7 | 1.0 | 1.0 |
| Pakistan | 31.8 | 34.5 | 32.1 | 1.6 | 0.2 | 0.6 | 4.0 | 3.6 | 2.3 |
| Philippines | 17.3 | 17.2 | 18.1 | 5.2 | 5.6 | 4.9 | - | - | - |
| Saudi Arabia | 2.6 | 1.4 | 1.1 | 9.8 | 11.7 | 11.9 | - | - | - |
| Thailand | 24.8 | 25.4 | 24.7 | 1.7 | 2.2 | 1.9 | 10.0 | 9.1 | 9.5 |
| Turkey | 30.8 | 33.2 | 32.0 | 3.5 | 3.7 | 3.6 | 2.0 | 4.5 | 3.2 |
| Viet Nam | 28.8 | 30.3 | 30.8 | 2.2 | 3.1 | 2.9 | 5.1 | 7.0 | 6.5 |
| AFRICA | 136.6 | 153.6 | 153.6 | 59.1 | 59.2 | 61.1 | 5.6 | 6.4 | 7.2 |
| Algeria | 3.3 | 6.0 | 4.5 | 7.8 | 7.0 | 7.7 | - | - | - |
| Egypt | 20.8 | 20.9 | 20.6 | 13.0 | 15.2 | 14.6 | 0.7 | 0.5 | 0.3 |
| Ethiopia | 14.7 | 16.3 | 15.9 | 1.3 | 1.2 | 1.1 | 0.2 | 0.4 | 0.1 |
| Morocco | 5.7 | 10.2 | 7.1 | 5.3 | 3.7 | 6.0 | 0.2 | 0.2 | 0.2 |
| Nigeria | 23.0 | 23.7 | 23.6 | 5.3 | 5.8 | 5.2 | 0.5 | 0.6 | 0.5 |
| South Africa | 11.4 | 15.1 | 15.8 | 2.7 | 2.5 | 2.6 | 1.4 | 2.2 | 2.5 |
| Sudan | 5.8 | 3.6 | 5.5 | 1.7 | 2.0 | 1.9 | 0.3 | - | 0.1 |
| CENTRAL AMERICA | 39.6 | 40.6 | 41.1 | 25.1 | 24.5 | 25.7 | 1.3 | 1.3 | 1.2 |
| Mexico | 33.8 | 34.4 | 34.7 | 14.7 | 14.2 | 15.6 | 1.0 | 1.1 | 1.0 |
| SOUTH AMERICA | 126.1 | 116.7 | 135.7 | 24.1 | 24.9 | 25.1 | 36.9 | 32.4 | 35.8 |
| Argentina | 37.9 | 24.9 | 41.0 | - | - | - | 25.0 | 20.6 | 21.9 |
| Brazil | 65.5 | 67.1 | 70.8 | 9.0 | 8.7 | 8.4 | 8.7 | 8.0 | 10.3 |
| Chile | 3.1 | 3.4 | 3.0 | 2.9 | 3.3 | 3.3 | 0.1 | - | - |
| Colombia | 3.5 | 3.8 | 3.9 | 4.8 | 5.0 | 5.0 | 0.1 | 0.1 | 0.1 |
| Peru | 3.5 | 4.1 | 3.9 | 3.1 | 3.1 | 3.3 | - | - | - |
| Venezuela | 3.8 | 3.3 | 3.3 | 2.6 | 3.1 | 3.5 | 0.1 | 0.1 | - |
| NORTH AMERICA | 434.0 | 466.3 | 444.7 | 9.2 | 8.3 | 7.7 | 114.1 | 104.3 | 111.6 |
| Canada | 50.9 | 49.5 | 44.3 | 2.7 | 2.8 | 2.5 | 22.3 | 21.2 | 20.5 |
| United States of America | 383.1 | 416.8 | 400.3 | 6.5 | 5.6 | 5.3 | 91.8 | 83.1 | 91.1 |
| EUROPE | 429.6 | 463.5 | 405.3 | 23.8 | 13.0 | 18.2 | 52.6 | 65.7 | 48.2 |
| European Union | 274.5 | 296.1 | 277.2 | 18.7 | 9.1 | 11.7 | 21.4 | 23.3 | 26.9 |
| Russian Federation | 87.5 | 95.8 | 62.2 | 1.1 | 0.7 | 3.2 | 16.4 | 20.3 | 4.1 |
| Serbia | 8.1 | 9.0 | 9.0 | 0.1 | - | 0.1 | 1.3 | 1.8 | 1.7 |
| Ukraine | 36.4 | 45.0 | 39.8 | 0.3 | 0.2 | 0.2 | 12.3 | 20.0 | 15.1 |
| OCEANIA | 27.1 | 35.5 | 36.7 | 1.2 | 1.3 | 1.3 | 14.7 | 18.8 | 20.3 |
| Australia | 26.2 | 34.7 | 35.8 | 0.2 | 0.2 | 0.1 | 14.7 | 18.8 | 20.3 |
| WORLD | 2 145.6 | 2 263.4 | 2 216.4 | 270.3 | 266.4 | 267.3 | 270.4 | 273.6 | 267.3 |
| Developing countries | 1 202.4 | 1 239.3 | 1 275.8 | 200.0 | 207.6 | 204.0 | 78.5 | 73.5 | 77.4 |
| Developed countries | 943.2 | 1 024.1 | 940.6 | 70.3 | 58.9 | 63.3 | 191.8 | 200.1 | 189.9 |
| LIFDCs | 914.0 | 954.2 | 974.0 | 86.8 | 90.4 | 86.6 | 20.8 | 15.8 | 17.9 |
| LDCs | 133.4 | 144.1 | 149.0 | 22.6 | 24.6 | 21.4 | 4.6 | 5.1 | 6.0 |

Table A1 (b). Cereal statistics

| | Total Utilization | | | Stocks ending in | | | Per caput food use | | |
|---------------------------|------------------------------------|--------------------------|--------------------------|----------------------|-----------------------|-----------------------|-----------------------------|--------------------------|--------------------------|
| | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | 2007-2009 average | 2010 <i>estim.</i> | 2011 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> |
| | <i>(..... million tonnes.....)</i> | | | | | | <i>(..... Kg/year.....)</i> | | |
| ASIA | 1 014.9 | 1 055.3 | 1 075.9 | 284.1 | 335.4 | 343.7 | 160.2 | 161.3 | 162.2 |
| Bangladesh | 33.8 | 36.8 | 37.9 | 5.6 | 8.0 | 8.5 | 174.4 | 182.0 | 184.9 |
| China | 395.6 | 411.5 | 420.9 | 175.0 | 215.6 | 228.0 | 151.1 | 151.6 | 152.2 |
| India | 200.8 | 207.0 | 212.0 | 35.3 | 35.8 | 38.6 | 153.8 | 153.3 | 154.9 |
| Indonesia | 55.6 | 60.8 | 62.8 | 5.9 | 8.6 | 9.4 | 206.3 | 210.6 | 211.8 |
| Iran, Islamic Republic of | 25.7 | 26.4 | 26.2 | 3.8 | 4.0 | 2.5 | 200.4 | 197.4 | 197.0 |
| Iraq | 7.7 | 7.4 | 8.1 | 2.9 | 2.4 | 2.7 | 178.4 | 178.9 | 179.6 |
| Japan | 34.3 | 33.6 | 33.8 | 3.9 | 3.8 | 3.7 | 131.5 | 130.5 | 130.4 |
| Kazakhstan | 9.9 | 10.5 | 10.3 | 3.8 | 7.2 | 5.3 | 161.2 | 166.2 | 166.4 |
| Korea, Republic of | 17.1 | 17.4 | 17.4 | 2.7 | 3.2 | 3.2 | 129.7 | 128.9 | 128.8 |
| Myanmar | 19.9 | 20.6 | 20.6 | 5.7 | 5.1 | 4.5 | 247.1 | 251.8 | 251.9 |
| Pakistan | 29.4 | 31.3 | 31.9 | 2.8 | 2.9 | 1.4 | 139.4 | 141.9 | 142.1 |
| Philippines | 22.0 | 22.1 | 23.1 | 3.4 | 4.9 | 4.8 | 159.4 | 161.9 | 163.8 |
| Saudi Arabia | 12.8 | 13.2 | 13.4 | 3.6 | 3.3 | 2.9 | 139.4 | 135.1 | 134.7 |
| Thailand | 16.7 | 17.6 | 17.6 | 4.9 | 6.4 | 6.0 | 142.1 | 148.5 | 149.6 |
| Turkey | 33.0 | 31.9 | 32.5 | 5.5 | 4.6 | 4.5 | 222.0 | 221.5 | 222.3 |
| Viet Nam | 25.9 | 27.2 | 27.1 | 5.9 | 5.1 | 5.1 | 208.4 | 212.0 | 211.8 |
| AFRICA | 190.0 | 203.0 | 208.2 | 28.7 | 32.7 | 31.7 | 148.3 | 149.8 | 148.9 |
| Algeria | 11.6 | 12.7 | 12.9 | 3.6 | 3.7 | 3.0 | 229.7 | 231.7 | 232.5 |
| Egypt | 32.4 | 34.3 | 35.2 | 4.6 | 7.4 | 7.1 | 267.4 | 269.4 | 269.2 |
| Ethiopia | 15.3 | 16.9 | 17.2 | 1.0 | 1.8 | 1.5 | 166.8 | 169.1 | 168.9 |
| Morocco | 11.0 | 12.6 | 12.8 | 2.6 | 2.9 | 2.9 | 239.7 | 244.6 | 246.3 |
| Nigeria | 27.8 | 28.6 | 28.6 | 1.5 | 1.4 | 1.0 | 141.2 | 139.2 | 137.7 |
| South Africa | 13.4 | 14.3 | 14.8 | 2.3 | 3.2 | 4.0 | 171.3 | 172.5 | 172.2 |
| Sudan | 7.1 | 6.7 | 7.4 | 2.3 | 1.2 | 1.1 | 154.7 | 154.1 | 154.6 |
| CENTRAL AMERICA | 63.2 | 65.2 | 66.1 | 5.2 | 4.9 | 4.7 | 167.3 | 168.0 | 167.8 |
| Mexico | 47.4 | 49.0 | 49.9 | 3.3 | 3.0 | 2.6 | 201.8 | 202.6 | 202.8 |
| SOUTH AMERICA | 111.7 | 117.4 | 122.3 | 15.4 | 14.8 | 16.4 | 120.9 | 123.1 | 121.8 |
| Argentina | 13.4 | 11.3 | 14.7 | 5.1 | 1.3 | 4.8 | 132.8 | 134.5 | 133.2 |
| Brazil | 63.9 | 69.0 | 70.4 | 5.2 | 8.2 | 6.5 | 117.7 | 117.4 | 117.0 |
| Chile | 6.1 | 6.7 | 6.4 | 0.5 | 0.4 | 0.4 | 151.9 | 175.4 | 151.8 |
| Colombia | 8.1 | 8.6 | 8.7 | 1.0 | 0.9 | 0.9 | 101.4 | 103.6 | 104.2 |
| Peru | 6.7 | 7.1 | 7.2 | 1.0 | 1.1 | 1.0 | 133.2 | 140.3 | 139.2 |
| Venezuela | 6.1 | 6.7 | 6.8 | 0.9 | 0.6 | 0.5 | 127.6 | 131.9 | 132.9 |
| NORTH AMERICA | 330.7 | 359.1 | 369.6 | 67.4 | 89.4 | 60.1 | 111.9 | 108.1 | 109.8 |
| Canada | 30.7 | 28.7 | 29.0 | 10.7 | 13.6 | 10.8 | 103.1 | 96.8 | 96.1 |
| United States of America | 300.0 | 330.4 | 340.6 | 56.7 | 75.8 | 49.3 | 112.9 | 109.3 | 111.3 |
| EUROPE | 401.0 | 409.5 | 395.4 | 52.6 | 68.9 | 48.4 | 140.0 | 139.5 | 140.0 |
| European Union | 274.0 | 280.2 | 274.4 | 32.5 | 43.1 | 30.2 | 132.8 | 133.5 | 134.4 |
| Russian Federation | 69.8 | 76.7 | 68.0 | 10.2 | 16.1 | 9.4 | 150.3 | 150.0 | 149.4 |
| Serbia | 7.0 | 7.1 | 7.5 | 1.0 | 1.3 | 1.1 | 164.6 | 164.3 | 164.0 |
| Ukraine | 24.2 | 24.9 | 25.3 | 4.7 | 5.6 | 5.3 | 169.3 | 169.7 | 169.8 |
| OCEANIA | 17.1 | 16.5 | 16.4 | 6.1 | 6.3 | 7.5 | 91.7 | 90.3 | 91.2 |
| Australia | 15.1 | 14.5 | 14.3 | 5.7 | 6.0 | 7.1 | 103.3 | 101.9 | 103.4 |
| WORLD | 2 128.6 | 2 226.0 | 2 253.8 | 459.5 | 552.4 | 512.5 | 151.4 | 152.2 | 152.7 |
| Developing countries | 1 300.7 | 1 359.7 | 1 391.1 | 319.3 | 370.1 | 380.5 | 156.0 | 157.1 | 157.6 |
| Developed countries | 827.9 | 866.3 | 862.8 | 140.1 | 182.3 | 132.0 | 133.6 | 132.5 | 133.2 |
| LIFDCs | 957.8 | 1 006.1 | 1 030.0 | 262.5 | 314.5 | 327.0 | 154.8 | 155.9 | 156.5 |
| LDCs | 149.3 | 161.8 | 165.6 | 26.4 | 29.7 | 28.6 | 147.5 | 150.9 | 150.8 |

Table A2 (a). Wheat statistics

| | Production | | | Imports | | | Exports | | |
|-------------------------------------|----------------------|-----------------------|-----------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|
| | 2006-2008 average | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> |
| <i>(..... million tonnes)</i> | | | | | | | | | |
| ASIA | 279.4 | 297.9 | 293.3 | 54.3 | 60.9 | 52.7 | 15.0 | 15.1 | 15.0 |
| Bangladesh | 0.8 | 1.0 | 1.0 | 2.1 | 3.5 | 2.5 | - | - | - |
| China | 110.1 | 115.1 | 115.1 | 1.9 | 3.1 | 2.2 | 1.1 | 0.1 | 2.1 |
| of which Taiwan Prov. | - | - | - | 1.1 | 1.2 | 1.2 | - | - | - |
| India | 74.6 | 80.7 | 80.7 | 2.9 | 0.3 | 0.3 | 0.1 | 0.2 | 0.5 |
| Indonesia | - | - | - | 5.3 | 5.4 | 5.4 | - | - | - |
| Iran, Islamic Republic of | 13.1 | 13.0 | 14.5 | 3.2 | 3.4 | 1.7 | 0.5 | 1.0 | 1.0 |
| Iraq | 1.9 | 1.4 | 2.0 | 3.4 | 3.9 | 3.6 | - | - | - |
| Japan | 0.9 | 0.7 | 0.8 | 5.3 | 5.3 | 5.3 | 0.3 | 0.3 | 0.3 |
| Kazakhstan | 15.3 | 17.0 | 13.0 | - | 0.1 | - | 7.6 | 7.9 | 6.5 |
| Korea, Republic of | - | - | - | 3.2 | 4.3 | 3.0 | 0.1 | 0.1 | 0.1 |
| Pakistan | 21.8 | 24.0 | 23.9 | 1.6 | 0.2 | 0.5 | 1.3 | 0.5 | 0.5 |
| Philippines | - | - | - | 2.7 | 2.8 | 2.9 | - | - | - |
| Saudi Arabia | 2.2 | 1.0 | 0.7 | 0.5 | 1.8 | 2.0 | - | - | - |
| Thailand | - | - | - | 1.1 | 1.5 | 1.1 | 0.1 | - | - |
| Turkey | 18.3 | 20.6 | 19.5 | 2.4 | 3.1 | 2.8 | 1.9 | 4.0 | 3.0 |
| AFRICA | 21.6 | 26.4 | 22.7 | 33.1 | 34.4 | 35.4 | 1.1 | 1.1 | 0.8 |
| Algeria | 2.3 | 3.6 | 3.0 | 5.3 | 4.7 | 5.2 | - | - | - |
| Egypt | 7.9 | 8.5 | 8.6 | 8.2 | 10.2 | 9.0 | - | - | - |
| Ethiopia | 2.6 | 3.1 | 3.0 | 1.1 | 1.0 | 0.9 | - | - | - |
| Morocco | 3.9 | 6.3 | 4.0 | 3.2 | 2.0 | 4.0 | 0.2 | 0.2 | 0.2 |
| Nigeria | 0.1 | 0.1 | 0.1 | 3.3 | 3.7 | 3.2 | 0.3 | 0.2 | 0.1 |
| South Africa | 2.1 | 2.0 | 1.6 | 1.1 | 1.4 | 1.5 | 0.2 | 0.2 | 0.3 |
| Tunisia | 1.2 | 1.7 | 0.9 | 1.8 | 1.4 | 2.1 | 0.2 | 0.2 | 0.1 |
| CENTRAL AMERICA | 3.7 | 4.1 | 3.7 | 7.0 | 6.7 | 7.0 | 1.0 | 1.1 | 1.0 |
| Cuba | - | - | - | 0.7 | 0.8 | 0.8 | - | - | - |
| Mexico | 3.7 | 4.1 | 3.7 | 3.4 | 3.0 | 3.3 | 0.9 | 1.0 | 0.9 |
| SOUTH AMERICA | 20.4 | 16.9 | 20.5 | 13.3 | 12.9 | 13.1 | 10.6 | 7.6 | 7.7 |
| Argentina | 13.1 | 7.5 | 11.5 | - | - | - | 9.6 | 5.2 | 6.0 |
| Brazil | 4.2 | 5.0 | 5.3 | 7.0 | 6.5 | 6.5 | 0.4 | 1.2 | 0.7 |
| Chile | 1.2 | 1.5 | 1.2 | 1.0 | 1.1 | 1.1 | - | - | - |
| Colombia | - | - | - | 1.4 | 1.3 | 1.3 | - | - | - |
| Peru | 0.2 | 0.2 | 0.2 | 1.4 | 1.6 | 1.6 | - | - | - |
| Venezuela | - | - | - | 1.6 | 1.5 | 1.7 | - | - | - |
| NORTH AMERICA | 82.3 | 87.2 | 82.3 | 2.8 | 2.8 | 2.6 | 46.3 | 42.2 | 50.5 |
| Canada | 24.6 | 26.8 | 22.2 | - | 0.1 | 0.1 | 17.8 | 18.0 | 17.0 |
| United States of America | 57.7 | 60.4 | 60.1 | 2.8 | 2.7 | 2.5 | 28.5 | 24.2 | 33.5 |
| EUROPE | 209.3 | 228.0 | 201.9 | 9.6 | 7.4 | 9.6 | 36.7 | 47.1 | 31.0 |
| European Union | 129.5 | 138.5 | 136.0 | 6.8 | 5.3 | 5.5 | 16.1 | 20.0 | 21.0 |
| Russian Federation | 52.8 | 61.7 | 42.0 | 0.4 | 0.1 | 2.0 | 13.8 | 17.5 | 3.5 |
| Ukraine | 17.4 | 20.9 | 17.6 | 0.1 | 0.1 | 0.1 | 5.7 | 9.0 | 6.0 |
| OCEANIA | 15.6 | 22.0 | 23.3 | 0.6 | 0.6 | 0.7 | 10.8 | 14.0 | 15.0 |
| Australia | 15.3 | 21.7 | 23.0 | - | - | - | 10.8 | 14.0 | 15.0 |
| WORLD | 632.2 | 682.6 | 647.7 | 120.8 | 125.8 | 121.0 | 121.4 | 128.1 | 121.0 |
| Developing countries | 295.6 | 313.8 | 313.1 | 95.5 | 101.8 | 95.3 | 19.1 | 16.4 | 17.4 |
| Developed countries | 336.6 | 368.8 | 334.6 | 25.3 | 24.0 | 25.6 | 102.3 | 111.7 | 103.6 |
| LIFDCs | 245.7 | 265.1 | 262.1 | 53.1 | 56.6 | 52.0 | 4.0 | 1.5 | 3.6 |
| LDCs | 9.5 | 11.8 | 11.6 | 13.0 | 15.6 | 12.8 | 0.1 | 0.2 | 0.1 |

Table A2 (b). Wheat statistics

| | Total Utilization | | | Stocks ending in | | | Per caput food use | | |
|---------------------------|--------------------------------------|--------------------------|--------------------------|----------------------|-----------------------|-----------------------|-------------------------------|--------------------------|--------------------------|
| | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | 2007-2009 average | 2010 <i>estim.</i> | 2011 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> |
| | (. million tonnes) | | | | | | (. Kg/year) | | |
| ASIA | 316.3 | 333.0 | 338.8 | 95.4 | 109.7 | 102.5 | 63.4 | 64.3 | 64.6 |
| Bangladesh | 3.1 | 3.4 | 3.2 | 0.9 | 2.2 | 2.5 | 18.6 | 19.4 | 18.3 |
| China | 109.3 | 114.2 | 116.6 | 53.0 | 57.0 | 55.7 | 64.6 | 64.6 | 64.9 |
| of which Taiwan Prov. | 1.2 | 1.2 | 1.2 | 0.3 | 0.3 | 0.4 | 46.1 | 46.9 | 47.3 |
| India | 75.4 | 79.6 | 81.5 | 16.3 | 19.0 | 18.0 | 58.4 | 59.9 | 60.7 |
| Indonesia | 5.0 | 5.2 | 5.5 | 2.3 | 2.6 | 2.6 | 18.9 | 19.4 | 20.3 |
| Iran, Islamic Republic of | 15.5 | 16.1 | 16.3 | 2.7 | 2.9 | 1.8 | 165.6 | 165.8 | 165.2 |
| Iraq | 5.3 | 5.4 | 5.5 | 2.7 | 2.3 | 2.5 | 131.1 | 130.7 | 130.6 |
| Japan | 5.9 | 5.7 | 5.7 | 0.7 | 0.6 | 0.8 | 41.6 | 41.3 | 41.3 |
| Kazakhstan | 7.3 | 7.8 | 8.2 | 3.3 | 6.6 | 5.0 | 147.4 | 151.3 | 151.5 |
| Korea, Republic of | 3.3 | 3.9 | 3.7 | 0.3 | 0.7 | 0.4 | 48.3 | 48.6 | 48.5 |
| Pakistan | 22.6 | 23.6 | 24.5 | 1.2 | 1.0 | 0.4 | 116.4 | 116.0 | 115.3 |
| Philippines | 2.7 | 2.8 | 2.9 | 0.4 | 0.6 | 0.6 | 25.6 | 25.5 | 25.6 |
| Saudi Arabia | 2.7 | 2.9 | 2.8 | 1.4 | 1.4 | 1.3 | 97.4 | 98.4 | 98.3 |
| Thailand | 1.0 | 1.3 | 1.2 | 0.2 | 0.3 | 0.2 | 11.4 | 13.9 | 14.3 |
| Turkey | 19.0 | 19.1 | 19.4 | 2.3 | 2.6 | 2.5 | 197.7 | 197.2 | 198.1 |
| AFRICA | 53.7 | 57.7 | 58.7 | 13.1 | 15.9 | 14.4 | 50.0 | 50.7 | 50.1 |
| Algeria | 8.0 | 8.5 | 8.8 | 2.8 | 2.7 | 2.1 | 207.5 | 209.5 | 210.3 |
| Egypt | 15.8 | 16.8 | 17.5 | 2.7 | 5.5 | 5.6 | 182.0 | 184.0 | 185.3 |
| Ethiopia | 3.5 | 4.0 | 4.0 | 0.2 | 0.6 | 0.5 | 39.9 | 41.1 | 40.9 |
| Morocco | 7.0 | 7.9 | 7.8 | 1.8 | 1.6 | 1.6 | 186.8 | 190.7 | 191.5 |
| Nigeria | 3.1 | 3.3 | 3.3 | 0.4 | 0.4 | 0.2 | 18.6 | 19.2 | 19.1 |
| South Africa | 2.9 | 3.0 | 3.0 | 0.5 | 0.8 | 0.7 | 57.7 | 57.3 | 57.3 |
| Tunisia | 2.8 | 3.0 | 3.0 | 1.2 | 1.1 | 1.0 | 213.5 | 217.1 | 216.9 |
| CENTRAL AMERICA | 9.9 | 10.1 | 10.0 | 1.0 | 0.8 | 0.8 | 46.0 | 46.4 | 46.0 |
| Cuba | 0.8 | 0.8 | 0.8 | - | - | - | 57.8 | 57.3 | 57.3 |
| Mexico | 6.3 | 6.4 | 6.3 | 0.5 | 0.4 | 0.4 | 50.2 | 51.1 | 50.6 |
| SOUTH AMERICA | 24.3 | 25.3 | 25.2 | 5.0 | 2.9 | 3.6 | 59.4 | 60.4 | 59.3 |
| Argentina | 4.9 | 4.8 | 5.0 | 2.8 | 0.2 | 0.9 | 116.8 | 116.7 | 116.8 |
| Brazil | 10.5 | 11.0 | 11.0 | 0.9 | 1.1 | 1.1 | 51.8 | 52.1 | 52.2 |
| Chile | 2.2 | 2.6 | 2.3 | 0.2 | 0.1 | 0.1 | 122.1 | 144.3 | 121.0 |
| Colombia | 1.3 | 1.3 | 1.3 | 0.1 | 0.1 | 0.1 | 27.2 | 27.1 | 26.5 |
| Peru | 1.7 | 1.8 | 1.8 | 0.1 | 0.2 | 0.2 | 57.4 | 57.3 | 56.6 |
| Venezuela | 1.6 | 1.6 | 1.7 | 0.4 | 0.1 | 0.1 | 56.5 | 56.0 | 56.8 |
| NORTH AMERICA | 38.8 | 38.2 | 39.5 | 18.8 | 34.4 | 29.1 | 83.0 | 79.5 | 80.4 |
| Canada | 7.7 | 7.3 | 7.6 | 5.9 | 7.8 | 6.0 | 86.6 | 81.1 | 79.7 |
| United States of America | 31.1 | 30.8 | 32.0 | 12.9 | 26.6 | 23.1 | 82.7 | 79.3 | 80.5 |
| EUROPE | 182.1 | 187.7 | 187.7 | 25.3 | 34.2 | 26.6 | 112.4 | 112.0 | 112.4 |
| European Union | 121.3 | 123.8 | 122.5 | 13.7 | 18.0 | 15.5 | 109.7 | 110.0 | 110.6 |
| Russian Federation | 38.0 | 43.4 | 44.8 | 7.0 | 12.0 | 7.7 | 115.0 | 115.4 | 115.2 |
| Ukraine | 11.6 | 12.2 | 12.1 | 2.6 | 2.8 | 2.4 | 122.5 | 123.0 | 123.3 |
| OCEANIA | 8.0 | 7.9 | 8.0 | 3.8 | 2.9 | 3.9 | 69.4 | 68.9 | 69.0 |
| Australia | 7.1 | 7.0 | 7.0 | 3.6 | 2.7 | 3.7 | 82.7 | 82.4 | 82.7 |
| WORLD | 633.2 | 659.8 | 668.0 | 162.5 | 200.9 | 180.9 | 67.1 | 67.4 | 67.5 |
| Developing countries | 371.1 | 391.2 | 397.9 | 106.5 | 118.0 | 112.0 | 59.3 | 60.1 | 60.1 |
| Developed countries | 262.1 | 268.5 | 270.1 | 56.0 | 82.8 | 68.9 | 97.7 | 96.8 | 97.3 |
| LIFDCs | 292.2 | 309.6 | 315.8 | 91.9 | 104.4 | 99.3 | 57.3 | 58.0 | 58.2 |
| LDCs | 22.3 | 25.5 | 25.4 | 5.5 | 8.1 | 7.1 | 25.5 | 26.7 | 26.3 |

Table A3 (a). Coarse grain statistics

| | Production | | | Imports | | | Exports | | |
|-----------------------------|----------------------|-----------------------|-----------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|
| | 2006-2008 average | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> |
| (..... million tonnes.....) | | | | | | | | | |
| ASIA | 271.6 | 278.6 | 283.7 | 59.2 | 59.7 | 61.2 | 5.7 | 5.4 | 4.6 |
| China | 167.4 | 173.2 | 175.5 | 5.9 | 6.7 | 7.7 | 2.1 | 0.2 | 0.2 |
| of which Taiwan Prov. | 0.1 | 0.1 | 0.1 | 4.4 | 4.5 | 4.6 | - | - | - |
| India | 38.1 | 34.2 | 37.6 | - | - | 0.1 | 1.7 | 1.0 | 1.0 |
| Indonesia | 13.7 | 17.6 | 18.0 | 0.6 | 0.2 | 0.2 | 0.3 | 1.5 | 1.6 |
| Iran, Islamic Republic of | 4.2 | 3.2 | 3.0 | 3.5 | 4.2 | 3.8 | - | - | - |
| Japan | 0.2 | 0.2 | 0.2 | 19.6 | 19.5 | 19.4 | - | - | - |
| Korea, D.P.R. | 1.8 | 1.8 | 1.8 | 0.3 | 0.4 | 0.5 | - | - | - |
| Korea, Republic of | 0.4 | 0.4 | 0.4 | 8.7 | 8.2 | 9.0 | - | - | - |
| Malaysia | 0.1 | 0.1 | 0.1 | 2.6 | 2.6 | 2.6 | - | - | - |
| Pakistan | 4.0 | 3.7 | 4.1 | - | - | - | - | - | - |
| Philippines | 6.6 | 7.0 | 7.0 | 0.5 | 0.3 | 0.2 | - | - | - |
| Saudi Arabia | 0.4 | 0.4 | 0.4 | 8.4 | 9.1 | 9.0 | - | - | - |
| Thailand | 4.2 | 4.5 | 4.2 | 0.3 | 0.4 | 0.4 | 0.5 | 0.8 | 0.5 |
| Turkey | 12.0 | 12.2 | 12.1 | 1.0 | 0.4 | 0.6 | 0.1 | 0.5 | 0.2 |
| Viet Nam | 4.3 | 4.4 | 4.8 | 0.7 | 0.7 | 0.8 | - | - | - |
| AFRICA | 100.3 | 111.1 | 114.9 | 16.1 | 15.1 | 16.0 | 3.8 | 4.9 | 6.0 |
| Algeria | 1.0 | 2.5 | 1.5 | 2.4 | 2.3 | 2.5 | - | - | - |
| Egypt | 8.1 | 8.6 | 8.9 | 4.8 | 5.0 | 5.5 | - | - | - |
| Ethiopia | 12.1 | 13.1 | 12.8 | 0.2 | 0.2 | 0.2 | 0.2 | 0.4 | 0.1 |
| Kenya | 2.9 | 2.6 | 3.2 | 0.7 | 0.9 | 0.9 | - | - | - |
| Morocco | 1.7 | 3.9 | 3.0 | 2.1 | 1.7 | 2.0 | - | - | - |
| Nigeria | 20.7 | 21.0 | 20.9 | 0.1 | 0.1 | 0.2 | 0.3 | 0.4 | 0.4 |
| South Africa | 9.4 | 13.1 | 14.2 | 0.7 | 0.2 | 0.2 | 1.2 | 2.0 | 2.2 |
| Sudan | 5.1 | 3.1 | 4.9 | 0.3 | 0.6 | 0.5 | 0.3 | - | 0.1 |
| Tanzania, United Rep. of | 4.5 | 4.3 | 4.7 | 0.1 | - | 0.1 | 0.1 | 0.1 | 0.1 |
| CENTRAL AMERICA | 34.3 | 34.6 | 35.4 | 15.8 | 15.6 | 16.5 | 0.2 | 0.1 | 0.1 |
| Mexico | 30.0 | 30.1 | 30.8 | 10.8 | 10.6 | 11.7 | 0.1 | 0.1 | 0.1 |
| SOUTH AMERICA | 90.3 | 82.7 | 99.5 | 9.8 | 10.7 | 10.9 | 24.3 | 22.7 | 25.7 |
| Argentina | 24.0 | 16.5 | 28.6 | - | - | - | 15.0 | 14.9 | 15.4 |
| Brazil | 53.5 | 53.7 | 57.9 | 1.4 | 1.4 | 1.3 | 7.9 | 6.5 | 9.0 |
| Chile | 1.8 | 1.8 | 1.8 | 1.8 | 2.1 | 2.1 | 0.1 | - | - |
| Colombia | 1.8 | 1.8 | 1.8 | 3.4 | 3.6 | 3.6 | 0.1 | - | - |
| Peru | 1.6 | 1.8 | 1.7 | 1.6 | 1.5 | 1.7 | - | - | - |
| Venezuela | 3.0 | 2.5 | 2.6 | 0.9 | 1.4 | 1.6 | - | - | - |
| NORTH AMERICA | 345.4 | 372.1 | 354.8 | 5.3 | 4.5 | 4.2 | 64.8 | 58.6 | 57.5 |
| Canada | 26.2 | 22.6 | 22.1 | 2.3 | 2.3 | 2.1 | 4.6 | 3.2 | 3.5 |
| United States of America | 319.2 | 349.5 | 332.7 | 3.0 | 2.2 | 2.1 | 60.2 | 55.4 | 54.0 |
| EUROPE | 217.9 | 232.6 | 200.5 | 12.5 | 4.1 | 6.9 | 15.7 | 18.3 | 16.9 |
| European Union | 143.1 | 155.5 | 139.0 | 10.7 | 2.7 | 5.0 | 5.2 | 3.0 | 5.7 |
| Russian Federation | 34.3 | 33.4 | 19.6 | 0.4 | 0.3 | 1.0 | 2.5 | 2.7 | 0.5 |
| Serbia | 6.1 | 6.9 | 7.3 | - | - | - | 0.9 | 1.4 | 1.4 |
| Ukraine | 19.0 | 24.0 | 22.1 | - | - | - | 6.6 | 11.0 | 9.1 |
| OCEANIA | 11.2 | 13.5 | 13.2 | 0.2 | 0.2 | 0.2 | 3.8 | 4.7 | 5.2 |
| Australia | 10.7 | 13.0 | 12.7 | - | - | - | 3.8 | 4.7 | 5.2 |
| WORLD | 1 071.0 | 1 125.2 | 1 102.0 | 119.0 | 109.9 | 116.0 | 118.3 | 114.7 | 116.0 |
| Developing countries | 481.7 | 488.0 | 514.9 | 78.8 | 79.6 | 83.2 | 32.4 | 30.4 | 33.9 |
| Developed countries | 589.3 | 637.3 | 587.2 | 40.2 | 30.2 | 32.8 | 86.0 | 84.3 | 82.1 |
| LIFDCs | 333.6 | 345.8 | 356.4 | 17.2 | 17.1 | 18.8 | 6.9 | 5.9 | 6.9 |
| LDCs | 58.7 | 61.3 | 65.0 | 2.5 | 2.6 | 2.5 | 2.6 | 2.5 | 3.5 |

Table A3 (b). Coarse grain statistics

| | Total Utilization | | | Stocks ending in | | | Per caput food use | | |
|---------------------------|------------------------------|-------------------|-------------------|----------------------|----------------|----------------|------------------------|-------------------|-------------------|
| | 06/07-08/09 average | 2009/10 estim. | 2010/11 f'cast | 2007-2009 average | 2010 estim. | 2011 f'cast | 06/07-08/09 average | 2009/10 estim. | 2010/11 f'cast |
| | (..... million tonnes) | | | | | | (..... Kg/year) | | |
| ASIA | 314.2 | 323.1 | 331.6 | 82.1 | 106.5 | 114.7 | 15.1 | 14.7 | 15.1 |
| China | 160.3 | 169.3 | 175.4 | 62.6 | 87.9 | 95.1 | 9.4 | 10.2 | 10.7 |
| of which Taiwan Prov. | 4.7 | 4.5 | 4.5 | 0.5 | 0.4 | 0.4 | 7.0 | 7.0 | 7.0 |
| India | 36.1 | 34.1 | 35.3 | 2.2 | 1.8 | 3.1 | 21.9 | 19.4 | 20.0 |
| Indonesia | 14.1 | 15.8 | 16.3 | 0.9 | 1.5 | 1.9 | 31.6 | 33.0 | 30.4 |
| Iran, Islamic Republic of | 7.5 | 7.7 | 7.3 | 0.8 | 0.9 | 0.4 | 1.4 | 1.4 | 1.4 |
| Japan | 20.0 | 19.6 | 19.8 | 1.9 | 1.8 | 1.6 | 29.0 | 29.2 | 29.3 |
| Korea, D.P.R. | 2.2 | 2.1 | 2.3 | 0.1 | 0.1 | 0.1 | 52.2 | 51.8 | 52.7 |
| Korea, Republic of | 8.9 | 8.4 | 8.8 | 1.7 | 1.5 | 2.0 | 4.4 | 4.4 | 4.4 |
| Malaysia | 2.7 | 2.7 | 2.7 | 0.3 | 0.3 | 0.3 | 1.8 | 1.7 | 1.7 |
| Pakistan | 3.8 | 3.9 | 4.2 | 1.0 | 1.0 | 0.9 | 8.7 | 8.5 | 11.4 |
| Philippines | 6.9 | 6.9 | 7.0 | 0.8 | 1.3 | 1.5 | 15.8 | 15.9 | 16.1 |
| Saudi Arabia | 9.1 | 9.5 | 9.7 | 2.1 | 1.9 | 1.6 | 3.9 | 3.7 | 3.7 |
| Thailand | 4.0 | 4.1 | 4.1 | 0.2 | 0.2 | 0.2 | 2.8 | 2.7 | 2.7 |
| Turkey | 13.4 | 12.2 | 12.5 | 3.2 | 2.0 | 2.0 | 16.9 | 17.0 | 16.8 |
| Viet Nam | 4.9 | 5.3 | 5.4 | 1.1 | 1.1 | 1.2 | 9.8 | 11.4 | 11.4 |
| AFRICA | 112.7 | 119.9 | 123.4 | 12.6 | 13.5 | 14.6 | 76.8 | 77.1 | 76.8 |
| Algeria | 3.5 | 4.1 | 4.1 | 0.8 | 1.1 | 0.9 | 20.0 | 20.1 | 20.0 |
| Egypt | 12.8 | 13.7 | 14.2 | 0.8 | 0.8 | 1.0 | 46.8 | 46.8 | 46.6 |
| Ethiopia | 11.8 | 12.9 | 13.1 | 0.8 | 1.2 | 1.1 | 126.1 | 126.6 | 126.5 |
| Kenya | 3.7 | 3.8 | 3.9 | 0.5 | 0.1 | 0.3 | 87.5 | 85.7 | 85.2 |
| Morocco | 4.0 | 4.7 | 5.0 | 0.8 | 1.3 | 1.3 | 52.0 | 52.9 | 53.9 |
| Nigeria | 20.4 | 20.8 | 20.7 | 0.9 | 0.7 | 0.6 | 97.9 | 95.0 | 93.7 |
| South Africa | 9.7 | 10.4 | 10.9 | 1.7 | 2.4 | 3.3 | 97.4 | 98.1 | 97.8 |
| Sudan | 5.1 | 4.5 | 5.1 | 1.0 | - | 0.2 | 104.0 | 97.6 | 97.8 |
| Tanzania, United Rep. of | 4.3 | 4.4 | 4.6 | 0.6 | 0.5 | 0.6 | 89.7 | 87.3 | 87.6 |
| CENTRAL AMERICA | 49.4 | 51.1 | 52.0 | 3.8 | 3.6 | 3.4 | 101.8 | 102.1 | 102.0 |
| Mexico | 40.4 | 41.8 | 42.8 | 2.8 | 2.6 | 2.2 | 144.6 | 144.5 | 144.9 |
| SOUTH AMERICA | 72.4 | 76.5 | 81.6 | 9.0 | 10.4 | 11.6 | 25.4 | 26.3 | 26.4 |
| Argentina | 8.1 | 6.0 | 9.2 | 2.2 | 1.0 | 3.8 | 7.5 | 7.5 | 7.4 |
| Brazil | 44.8 | 49.7 | 51.3 | 3.9 | 6.8 | 5.2 | 23.2 | 24.8 | 25.1 |
| Chile | 3.6 | 3.9 | 3.9 | 0.4 | 0.3 | 0.3 | 18.8 | 19.0 | 18.8 |
| Colombia | 5.0 | 5.4 | 5.4 | 0.7 | 0.6 | 0.6 | 38.0 | 37.9 | 37.4 |
| Peru | 3.2 | 3.3 | 3.4 | 0.6 | 0.5 | 0.5 | 19.1 | 20.0 | 19.4 |
| Venezuela | 3.7 | 4.1 | 4.2 | 0.4 | 0.3 | 0.4 | 49.8 | 49.5 | 50.4 |
| NORTH AMERICA | 287.6 | 316.8 | 325.5 | 47.5 | 53.8 | 29.4 | 18.1 | 18.2 | 18.4 |
| Canada | 22.6 | 21.0 | 21.0 | 4.7 | 5.7 | 4.8 | 6.5 | 5.8 | 6.7 |
| United States of America | 265.0 | 295.7 | 304.4 | 42.8 | 48.1 | 24.6 | 19.4 | 19.5 | 19.7 |
| EUROPE | 214.9 | 217.8 | 203.6 | 26.8 | 34.2 | 21.1 | 22.4 | 22.5 | 22.4 |
| European Union | 149.8 | 153.5 | 148.9 | 18.4 | 24.6 | 14.1 | 17.5 | 18.1 | 18.3 |
| Russian Federation | 31.1 | 32.6 | 22.4 | 3.1 | 4.1 | 1.7 | 30.5 | 29.9 | 29.4 |
| Serbia | 5.2 | 5.3 | 5.9 | 0.7 | 0.9 | 0.9 | 20.9 | 20.9 | 20.9 |
| Ukraine | 12.4 | 12.6 | 13.0 | 2.0 | 2.8 | 2.9 | 43.3 | 42.8 | 42.6 |
| OCEANIA | 8.5 | 8.1 | 7.9 | 2.2 | 3.4 | 3.6 | 7.4 | 7.3 | 7.2 |
| Australia | 7.8 | 7.3 | 7.1 | 2.1 | 3.3 | 3.4 | 10.6 | 10.6 | 10.5 |
| WORLD | 1 059.7 | 1 113.3 | 1 125.7 | 184.0 | 225.3 | 198.4 | 27.9 | 28.0 | 28.3 |
| Developing countries | 512.4 | 533.9 | 551.8 | 103.0 | 129.0 | 139.0 | 29.1 | 29.2 | 29.5 |
| Developed countries | 547.3 | 579.4 | 573.8 | 81.0 | 96.4 | 59.4 | 23.4 | 23.4 | 23.4 |
| LIFDCs | 331.4 | 347.4 | 358.3 | 79.2 | 105.2 | 114.8 | 28.7 | 28.7 | 29.1 |
| LDCs | 57.5 | 61.9 | 63.7 | 7.4 | 7.7 | 7.9 | 54.7 | 56.2 | 56.1 |

Table A4 (a). Maize statistics

| | Production | | | Imports | | | Exports | | |
|------------------------------|----------------------|-----------------------|-----------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|
| | 2006-2008 average | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> |
| (..... million tonnes) | | | | | | | | | |
| ASIA | 221.7 | 233.4 | 237.0 | 44.3 | 42.6 | 46.2 | 5.1 | 4.5 | 4.2 |
| China | 156.7 | 164.0 | 166.0 | 4.4 | 4.5 | 6.0 | 2.0 | 0.2 | 0.2 |
| of which Taiwan Prov. | - | - | - | 4.3 | 4.3 | 4.4 | - | - | - |
| India | 17.9 | 16.7 | 18.5 | - | - | 0.1 | 1.6 | 1.0 | 1.0 |
| Indonesia | 13.7 | 17.6 | 18.0 | 0.6 | 0.1 | 0.2 | 0.3 | 1.5 | 1.6 |
| Iran, Islamic Republic of | 1.5 | 1.2 | 1.0 | 2.5 | 2.7 | 2.8 | - | - | - |
| Japan | - | - | - | 16.6 | 16.2 | 16.5 | - | - | - |
| Korea, D.P.R. | 1.7 | 1.7 | 1.7 | 0.3 | 0.4 | 0.5 | - | - | - |
| Korea, Republic of | 0.1 | 0.1 | 0.1 | 8.5 | 8.0 | 8.8 | - | - | - |
| Malaysia | 0.1 | 0.1 | 0.1 | 2.6 | 2.6 | 2.6 | - | - | - |
| Pakistan | 3.4 | 3.2 | 3.6 | - | - | - | - | - | - |
| Philippines | 6.6 | 7.0 | 7.0 | 0.4 | 0.3 | 0.2 | - | - | - |
| Thailand | 4.0 | 4.3 | 3.9 | 0.3 | 0.4 | 0.4 | 0.5 | 0.8 | 0.5 |
| Turkey | 3.9 | 4.3 | 4.0 | 0.8 | 0.2 | 0.4 | - | 0.3 | 0.1 |
| Viet Nam | 4.3 | 4.4 | 4.8 | 0.7 | 0.7 | 0.7 | - | - | - |
| AFRICA | 51.9 | 61.3 | 65.1 | 13.5 | 13.0 | 14.1 | 2.6 | 4.0 | 5.3 |
| Algeria | - | - | - | 2.2 | 2.2 | 2.4 | - | - | - |
| Egypt | 7.1 | 7.7 | 8.0 | 4.8 | 5.0 | 5.5 | - | - | - |
| Ethiopia | 4.4 | 4.4 | 4.4 | 0.1 | - | 0.1 | 0.1 | 0.2 | 0.1 |
| Kenya | 2.6 | 2.4 | 3.0 | 0.7 | 0.9 | 0.8 | - | - | - |
| Morocco | 0.2 | 0.2 | 0.2 | 1.7 | 1.6 | 1.8 | - | - | - |
| Nigeria | 7.3 | 8.8 | 8.7 | 0.1 | 0.1 | 0.2 | 0.1 | 0.3 | 0.3 |
| South Africa | 8.9 | 12.6 | 13.6 | 0.6 | 0.1 | - | 1.1 | 2.0 | 2.2 |
| Tanzania, United Rep. of | 3.4 | 3.3 | 3.6 | 0.1 | - | 0.1 | 0.1 | 0.1 | 0.1 |
| CENTRAL AMERICA | 26.8 | 27.0 | 28.1 | 13.7 | 12.8 | 13.6 | 0.2 | 0.1 | 0.1 |
| Mexico | 23.0 | 23.0 | 24.0 | 8.7 | 7.8 | 8.8 | 0.1 | 0.1 | 0.1 |
| SOUTH AMERICA | 81.1 | 74.3 | 88.7 | 8.7 | 9.3 | 9.5 | 22.5 | 20.5 | 23.6 |
| Argentina | 19.4 | 13.1 | 22.7 | - | - | - | 13.4 | 13.0 | 13.5 |
| Brazil | 51.2 | 51.2 | 55.6 | 1.0 | 0.9 | 0.9 | 7.8 | 6.5 | 9.0 |
| Chile | 1.4 | 1.3 | 1.4 | 1.6 | 1.7 | 1.7 | 0.1 | - | - |
| Colombia | 1.7 | 1.7 | 1.7 | 3.1 | 3.3 | 3.3 | 0.1 | - | - |
| Peru | 1.4 | 1.5 | 1.5 | 1.5 | 1.4 | 1.6 | - | - | - |
| Venezuela | 2.5 | 2.0 | 2.2 | 0.8 | 1.4 | 1.6 | - | - | - |
| NORTH AMERICA | 312.6 | 342.6 | 329.4 | 2.6 | 2.3 | 2.3 | 55.2 | 51.1 | 50.5 |
| Canada | 10.4 | 9.6 | 10.9 | 2.2 | 2.3 | 2.0 | 0.5 | 0.1 | 0.5 |
| United States of America | 302.2 | 333.0 | 318.5 | 0.3 | 0.1 | 0.3 | 54.7 | 51.0 | 50.0 |
| EUROPE | 77.7 | 83.5 | 81.9 | 8.8 | 3.2 | 5.2 | 5.2 | 7.9 | 7.3 |
| European Union | 52.2 | 57.6 | 55.8 | 7.8 | 2.4 | 4.5 | 1.2 | 1.2 | 0.7 |
| Russian Federation | 4.6 | 4.3 | 3.0 | 0.3 | 0.3 | 0.3 | 0.5 | 0.3 | 0.2 |
| Serbia | 5.7 | 6.4 | 6.8 | - | - | - | 0.9 | 1.4 | 1.4 |
| Ukraine | 6.9 | 10.2 | 11.5 | - | - | - | 2.3 | 5.0 | 5.0 |
| OCEANIA | 0.5 | 0.6 | 0.5 | 0.1 | 0.1 | 0.1 | - | - | - |
| WORLD | 772.2 | 822.8 | 830.8 | 91.6 | 83.3 | 91.0 | 90.9 | 88.1 | 91.0 |
| Developing countries | 370.8 | 381.8 | 404.0 | 61.6 | 60.4 | 65.6 | 29.2 | 27.1 | 31.0 |
| Developed countries | 401.4 | 440.9 | 426.9 | 30.0 | 22.9 | 25.4 | 61.6 | 61.0 | 60.0 |
| LIFDCs | 251.5 | 268.6 | 275.1 | 13.6 | 13.2 | 15.7 | 5.6 | 5.0 | 6.2 |
| LDCs | 28.2 | 32.5 | 33.8 | 1.8 | 1.6 | 1.7 | 1.5 | 1.8 | 3.0 |

Table A4 (b). Maize statistics

| | Total Utilization | | | Stocks ending in | | | Per caput food use | | |
|---------------------------|--------------------------------------|-------------------|-------------------|----------------------|----------------|----------------|-------------------------------|-------------------|-------------------|
| | 06/07-08/09 average | 2009/10 estim. | 2010/11 f'cast | 2007-2009 average | 2010 estim. | 2011 f'cast | 06/07-08/09 average | 2009/10 estim. | 2010/11 f'cast |
| | (. million tonnes) | | | | | | (. Kg/year) | | |
| ASIA | 248.9 | 262.0 | 269.2 | 72.5 | 97.6 | 107.0 | 8.5 | 9.0 | 9.1 |
| China | 147.9 | 158.4 | 164.4 | 60.6 | 85.5 | 92.5 | 5.5 | 6.7 | 7.3 |
| of which Taiwan Prov. | 4.5 | 4.3 | 4.3 | 0.5 | 0.4 | 0.4 | 5.4 | 5.4 | 5.4 |
| India | 16.0 | 16.6 | 16.3 | 1.8 | 1.5 | 2.8 | 6.0 | 6.1 | 5.7 |
| Indonesia | 14.0 | 15.7 | 16.2 | 0.9 | 1.5 | 1.9 | 31.4 | 32.8 | 30.2 |
| Iran, Islamic Republic of | 3.9 | 4.1 | 3.9 | 0.3 | 0.3 | 0.2 | 1.0 | 1.0 | 1.0 |
| Japan | 16.8 | 16.3 | 16.4 | 1.2 | 0.9 | 1.0 | 26.7 | 26.7 | 26.8 |
| Korea, D.P.R. | 2.0 | 2.0 | 2.2 | 0.1 | 0.1 | 0.1 | 49.7 | 49.8 | 50.7 |
| Korea, Republic of | 8.4 | 7.9 | 8.3 | 1.6 | 1.4 | 1.9 | 1.8 | 1.9 | 1.9 |
| Malaysia | 2.7 | 2.7 | 2.7 | 0.3 | 0.3 | 0.3 | 1.8 | 1.7 | 1.7 |
| Pakistan | 3.3 | 3.4 | 3.7 | 1.0 | 1.0 | 0.9 | 6.9 | 7.0 | 10.1 |
| Philippines | 6.9 | 6.9 | 7.0 | 0.8 | 1.3 | 1.5 | 15.7 | 15.9 | 16.1 |
| Thailand | 3.8 | 3.9 | 3.8 | 0.2 | 0.2 | 0.2 | 1.3 | 1.3 | 1.2 |
| Turkey | 4.6 | 4.3 | 4.4 | 0.7 | 0.6 | 0.5 | 13.1 | 13.2 | 13.1 |
| Viet Nam | 4.8 | 5.2 | 5.3 | 1.1 | 1.1 | 1.2 | 9.7 | 11.4 | 11.4 |
| AFRICA | 63.2 | 69.0 | 71.8 | 6.9 | 7.9 | 9.7 | 39.0 | 40.0 | 40.0 |
| Algeria | 2.2 | 2.1 | 2.3 | 0.3 | 0.3 | 0.4 | 3.7 | 3.7 | 3.7 |
| Egypt | 11.8 | 12.8 | 13.3 | 0.8 | 0.8 | 1.0 | 43.3 | 43.4 | 43.2 |
| Ethiopia | 4.3 | 4.4 | 4.4 | 0.2 | 0.2 | 0.2 | 45.3 | 42.9 | 42.8 |
| Kenya | 3.4 | 3.5 | 3.7 | 0.4 | 0.1 | 0.2 | 81.8 | 79.7 | 80.4 |
| Morocco | 1.8 | 1.8 | 2.0 | 0.4 | 0.3 | 0.3 | 10.9 | 10.6 | 10.5 |
| Nigeria | 7.1 | 8.5 | 8.6 | 0.4 | 0.5 | 0.5 | 31.7 | 34.3 | 34.4 |
| South Africa | 9.1 | 9.8 | 10.3 | 1.6 | 2.2 | 3.1 | 92.6 | 93.4 | 93.2 |
| Tanzania, United Rep. of | 3.4 | 3.4 | 3.5 | 0.2 | 0.1 | 0.2 | 69.4 | 66.4 | 66.4 |
| CENTRAL AMERICA | 39.8 | 40.7 | 41.4 | 3.2 | 2.6 | 2.7 | 100.7 | 100.9 | 100.9 |
| Mexico | 31.2 | 31.8 | 32.7 | 2.2 | 1.6 | 1.5 | 144.2 | 144.1 | 144.6 |
| SOUTH AMERICA | 64.0 | 68.4 | 72.5 | 7.8 | 9.3 | 9.9 | 23.9 | 24.7 | 24.9 |
| Argentina | 5.2 | 4.0 | 6.2 | 1.6 | 0.5 | 2.5 | 7.3 | 7.3 | 7.3 |
| Brazil | 42.1 | 46.8 | 48.4 | 3.6 | 6.5 | 5.0 | 22.1 | 23.7 | 24.1 |
| Chile | 3.0 | 3.0 | 3.1 | 0.3 | 0.2 | 0.2 | 16.8 | 16.9 | 16.7 |
| Colombia | 4.6 | 4.9 | 4.9 | 0.7 | 0.6 | 0.6 | 36.4 | 36.4 | 35.9 |
| Peru | 2.8 | 2.9 | 3.0 | 0.6 | 0.5 | 0.5 | 13.0 | 13.1 | 13.0 |
| Venezuela | 3.2 | 3.6 | 3.7 | 0.3 | 0.3 | 0.4 | 49.3 | 49.0 | 49.9 |
| NORTH AMERICA | 263.1 | 293.4 | 303.6 | 40.5 | 45.1 | 22.9 | 14.8 | 15.0 | 15.1 |
| Canada | 12.3 | 11.7 | 12.0 | 1.6 | 1.8 | 1.9 | 3.4 | 3.3 | 3.3 |
| United States of America | 250.7 | 281.7 | 291.6 | 39.0 | 43.4 | 21.0 | 16.0 | 16.2 | 16.4 |
| EUROPE | 82.9 | 80.6 | 79.6 | 9.6 | 8.4 | 8.6 | 7.4 | 7.3 | 7.3 |
| European Union | 60.0 | 60.8 | 60.1 | 6.8 | 6.0 | 5.5 | 7.3 | 7.7 | 7.7 |
| Russian Federation | 4.6 | 4.4 | 3.1 | 0.2 | 0.2 | 0.2 | 2.8 | 2.8 | 2.8 |
| Serbia | 4.8 | 4.9 | 5.4 | 0.6 | 0.9 | 0.9 | 19.3 | 19.3 | 19.2 |
| Ukraine | 4.7 | 5.0 | 5.7 | 0.3 | 0.6 | 1.4 | 11.9 | 11.6 | 11.9 |
| OCEANIA | 0.5 | 0.5 | 0.5 | 0.1 | 0.1 | 0.2 | 2.7 | 2.6 | 2.6 |
| WORLD | 762.4 | 814.6 | 838.6 | 140.6 | 171.1 | 160.9 | 16.6 | 17.2 | 17.3 |
| Developing countries | 387.0 | 411.0 | 425.4 | 87.3 | 114.2 | 125.0 | 17.3 | 18.0 | 18.1 |
| Developed countries | 375.4 | 403.6 | 413.2 | 53.3 | 56.9 | 35.9 | 13.8 | 13.8 | 13.9 |
| LIFDCs | 247.4 | 266.5 | 274.6 | 71.4 | 97.8 | 107.5 | 14.5 | 15.3 | 15.5 |
| LDCs | 28.0 | 31.4 | 32.2 | 3.7 | 4.8 | 5.1 | 25.4 | 26.6 | 26.6 |

Table A5 (a). Barley statistics

| | Production | | | Imports | | | Exports | | |
|------------------------------|----------------------|-----------------------|-----------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|
| | 2006-2008 average | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> |
| (..... million tonnes) | | | | | | | | | |
| ASIA | 20.8 | 20.1 | 19.3 | 12.8 | 14.5 | 12.9 | 0.6 | 0.8 | 0.3 |
| China | 3.6 | 2.9 | 2.7 | 1.4 | 2.1 | 1.6 | - | - | - |
| India | 1.3 | 1.7 | 1.3 | - | - | - | - | - | - |
| Iran, Islamic Republic of | 2.8 | 2.0 | 2.0 | 1.0 | 1.5 | 1.0 | - | - | - |
| Iraq | 0.7 | 0.5 | 1.2 | - | 0.1 | - | - | - | - |
| Japan | 0.2 | 0.2 | 0.2 | 1.4 | 1.4 | 1.3 | - | - | - |
| Kazakhstan | 2.1 | 2.6 | 1.5 | 0.1 | - | - | 0.4 | 0.6 | 0.2 |
| Saudi Arabia | - | - | - | 6.6 | 7.4 | 7.0 | - | - | - |
| Syria | 0.6 | 0.9 | 0.8 | 0.8 | 0.3 | 0.4 | - | - | - |
| Turkey | 7.6 | 7.3 | 7.5 | 0.1 | 0.2 | 0.2 | 0.1 | 0.2 | 0.1 |
| AFRICA | 5.1 | 9.4 | 6.9 | 1.6 | 0.8 | 1.0 | - | - | - |
| Algeria | 0.9 | 2.4 | 1.4 | 0.2 | 0.1 | - | - | - | - |
| Ethiopia | 1.6 | 1.9 | 1.9 | - | - | - | - | - | - |
| Libya | 0.1 | 0.1 | 0.1 | 0.3 | 0.4 | 0.4 | - | - | - |
| Morocco | 1.5 | 3.7 | 2.8 | 0.4 | 0.1 | 0.2 | - | - | - |
| Tunisia | 0.4 | 0.9 | 0.3 | 0.6 | 0.2 | 0.3 | - | - | - |
| CENTRAL AMERICA | 0.8 | 0.8 | 0.8 | 0.2 | 0.3 | 0.2 | - | - | - |
| Mexico | 0.8 | 0.8 | 0.8 | 0.2 | 0.3 | 0.2 | - | - | - |
| SOUTH AMERICA | 2.5 | 2.4 | 2.9 | 0.7 | 0.8 | 0.7 | 0.8 | 0.7 | 1.0 |
| Argentina | 1.5 | 1.4 | 1.9 | - | - | - | 0.7 | 0.6 | 0.9 |
| NORTH AMERICA | 15.4 | 14.5 | 12.2 | 0.6 | 0.4 | 0.2 | 2.4 | 1.3 | 1.5 |
| Canada | 10.8 | 9.5 | 8.3 | - | - | - | 1.8 | 1.1 | 1.3 |
| United States of America | 4.6 | 4.9 | 3.9 | 0.5 | 0.3 | 0.2 | 0.5 | 0.1 | 0.2 |
| EUROPE | 92.2 | 95.3 | 73.4 | 0.9 | 0.4 | 0.9 | 9.9 | 10.0 | 8.9 |
| Belarus | 2.0 | 2.0 | 1.8 | - | - | - | - | - | - |
| European Union | 59.4 | 62.0 | 52.4 | 0.4 | 0.1 | 0.2 | 3.6 | 1.5 | 4.5 |
| Russian Federation | 19.0 | 17.9 | 8.5 | 0.2 | 0.1 | 0.5 | 2.0 | 2.4 | 0.3 |
| Ukraine | 9.8 | 11.7 | 9.0 | - | - | - | 4.2 | 6.0 | 4.0 |
| OCEANIA | 6.8 | 8.4 | 9.1 | - | - | - | 3.0 | 3.6 | 4.3 |
| Australia | 6.5 | 8.0 | 8.8 | - | - | - | 3.0 | 3.6 | 4.3 |
| WORLD | 143.4 | 150.8 | 124.5 | 16.8 | 17.2 | 16.0 | 16.7 | 16.3 | 16.0 |
| Developing countries | 25.5 | 28.6 | 26.9 | 13.5 | 14.5 | 13.0 | 0.9 | 0.9 | 1.1 |
| Developed countries | 117.9 | 122.2 | 97.6 | 3.3 | 2.8 | 3.1 | 15.8 | 15.4 | 14.9 |
| LIFDCs | 11.3 | 13.7 | 12.8 | 2.5 | 2.5 | 2.1 | 0.1 | - | - |
| LDCs | 2.1 | 2.5 | 2.4 | - | - | - | - | - | - |

Table A5 (b). Barley statistics

| | Total Utilization | | | Stocks ending in | | | Per caput food use | | |
|---------------------------|------------------------------|--------------------------|--------------------------|----------------------|-----------------------|-----------------------|------------------------|--------------------------|--------------------------|
| | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | 2007-2009 average | 2010 <i>estim.</i> | 2011 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> |
| | (..... million tonnes) | | | | | | (..... Kg/year) | | |
| ASIA | 34.1 | 33.7 | 32.8 | 7.8 | 7.2 | 6.1 | 0.6 | 0.7 | 0.6 |
| China | 5.0 | 4.4 | 4.2 | 1.0 | 1.7 | 1.8 | 0.1 | 0.1 | 0.1 |
| India | 1.2 | 1.7 | 1.3 | - | - | - | 0.9 | 1.2 | 0.9 |
| Iran, Islamic Republic of | 3.6 | 3.6 | 3.4 | 0.5 | 0.6 | 0.2 | 0.4 | 0.4 | 0.4 |
| Iraq | 0.7 | 0.5 | 1.1 | 0.1 | - | 0.1 | 4.1 | 4.0 | 4.1 |
| Japan | 1.6 | 1.5 | 1.6 | 0.5 | 0.5 | 0.4 | 2.2 | 2.4 | 2.4 |
| Kazakhstan | 1.8 | 1.9 | 1.5 | 0.5 | 0.5 | 0.3 | 1.3 | 1.2 | 1.2 |
| Saudi Arabia | 7.0 | 7.4 | 7.3 | 2.0 | 1.8 | 1.5 | 1.1 | 1.1 | 1.1 |
| Syria | 1.4 | 1.5 | 1.4 | 0.5 | 0.4 | 0.1 | 12.6 | 12.6 | 12.5 |
| Turkey | 8.3 | 7.3 | 7.5 | 2.4 | 1.3 | 1.4 | 1.1 | 1.1 | 1.1 |
| AFRICA | 6.9 | 8.7 | 8.5 | 1.7 | 2.6 | 2.0 | 3.4 | 3.4 | 3.4 |
| Algeria | 1.2 | 2.0 | 1.7 | 0.5 | 0.8 | 0.5 | 16.2 | 16.3 | 16.4 |
| Ethiopia | 1.6 | 1.9 | 1.9 | 0.2 | 0.2 | 0.2 | 15.7 | 16.4 | 16.1 |
| Libya | 0.4 | 0.4 | 0.5 | - | - | - | 13.3 | 12.9 | 12.6 |
| Morocco | 2.1 | 2.9 | 3.0 | 0.5 | 1.0 | 1.0 | 41.0 | 42.2 | 43.2 |
| Tunisia | 1.0 | 1.0 | 0.9 | 0.4 | 0.5 | 0.2 | 8.8 | 8.8 | 8.7 |
| CENTRAL AMERICA | 1.0 | 1.1 | 1.1 | 0.1 | 0.2 | 0.1 | - | - | - |
| Mexico | 1.0 | 1.1 | 1.1 | 0.1 | 0.2 | 0.1 | - | - | - |
| SOUTH AMERICA | 2.3 | 2.4 | 2.4 | 0.3 | 0.4 | 0.7 | 0.5 | 0.6 | 0.5 |
| Argentina | 0.7 | 0.7 | 0.7 | 0.2 | 0.3 | 0.6 | - | - | - |
| NORTH AMERICA | 12.9 | 12.3 | 12.0 | 3.6 | 5.1 | 3.9 | 0.5 | 0.5 | 0.5 |
| Canada | 8.2 | 7.7 | 7.4 | 2.0 | 2.6 | 2.0 | 0.4 | 0.4 | 0.3 |
| United States of America | 4.7 | 4.6 | 4.7 | 1.6 | 2.5 | 1.9 | 0.6 | 0.6 | 0.6 |
| EUROPE | 81.8 | 83.8 | 75.4 | 12.2 | 18.2 | 8.2 | 1.2 | 1.4 | 1.4 |
| Belarus | 2.0 | 2.0 | 2.0 | 0.2 | 0.3 | 0.1 | - | - | - |
| European Union | 55.9 | 57.6 | 56.1 | 8.5 | 13.5 | 5.5 | 0.8 | 0.8 | 0.8 |
| Russian Federation | 16.2 | 16.9 | 10.0 | 1.8 | 2.3 | 1.0 | 0.4 | 0.4 | 0.4 |
| Ukraine | 5.4 | 5.4 | 5.5 | 1.3 | 1.8 | 1.3 | 8.1 | 10.9 | 10.8 |
| OCEANIA | 4.6 | 4.2 | 4.6 | 1.6 | 2.5 | 2.5 | 0.2 | 0.2 | 0.2 |
| Australia | 4.2 | 3.8 | 4.3 | 1.5 | 2.5 | 2.5 | 0.3 | 0.3 | 0.3 |
| WORLD | 143.5 | 146.1 | 136.9 | 27.2 | 36.2 | 23.5 | 1.0 | 1.1 | 1.1 |
| Developing countries | 39.2 | 40.6 | 39.9 | 8.6 | 9.1 | 8.0 | 1.0 | 1.1 | 1.0 |
| Developed countries | 104.3 | 105.5 | 97.0 | 18.6 | 27.0 | 15.5 | 1.1 | 1.2 | 1.2 |
| LIFDCs | 14.0 | 15.2 | 15.0 | 2.4 | 3.6 | 3.4 | 1.0 | 1.1 | 1.0 |
| LDCs | 2.0 | 2.5 | 2.4 | 0.2 | 0.3 | 0.2 | 1.6 | 1.7 | 1.7 |

Table A6 (a). Sorghum statistics

| | Production | | | Imports | | | Exports | | |
|------------------------------|----------------------|-----------------------|-----------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|
| | 2006-2008 average | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> |
| (..... million tonnes) | | | | | | | | | |
| ASIA | 10.8 | 9.6 | 10.4 | 1.6 | 1.9 | 1.6 | 0.1 | 0.1 | 0.1 |
| China | 2.3 | 1.6 | 1.9 | 0.1 | 0.1 | 0.1 | - | - | - |
| India | 7.4 | 7.0 | 7.5 | - | - | - | - | - | - |
| Japan | - | - | - | 1.3 | 1.7 | 1.4 | - | - | - |
| AFRICA | 25.7 | 23.4 | 25.5 | 0.9 | 1.1 | 0.8 | 0.8 | 0.5 | 0.4 |
| Burkina Faso | 1.6 | 1.5 | 1.7 | - | - | - | 0.1 | 0.1 | 0.1 |
| Ethiopia | 2.7 | 3.0 | 2.9 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | - |
| Nigeria | 9.4 | 8.7 | 8.7 | - | - | - | 0.1 | 0.1 | 0.1 |
| Sudan | 4.4 | 2.6 | 4.2 | 0.3 | 0.6 | 0.4 | 0.3 | - | 0.1 |
| CENTRAL AMERICA | 6.5 | 6.7 | 6.4 | 1.8 | 2.4 | 2.6 | - | - | - |
| Mexico | 6.1 | 6.2 | 5.9 | 1.8 | 2.4 | 2.6 | - | - | - |
| SOUTH AMERICA | 5.3 | 4.9 | 6.4 | 0.3 | 0.5 | 0.5 | 0.9 | 1.4 | 1.1 |
| Argentina | 2.7 | 1.8 | 3.6 | - | - | - | 0.9 | 1.3 | 1.0 |
| Brazil | 1.6 | 1.8 | 1.6 | - | - | 0.1 | 0.1 | - | - |
| Venezuela | 0.5 | 0.5 | 0.4 | - | - | - | - | - | - |
| NORTH AMERICA | 10.6 | 9.7 | 8.6 | - | - | - | 4.9 | 4.2 | 3.8 |
| United States of America | 10.6 | 9.7 | 8.6 | - | - | - | 4.9 | 4.2 | 3.8 |
| EUROPE | 0.6 | 0.6 | 0.6 | 2.4 | 0.2 | 0.3 | 0.1 | - | - |
| European Union | 0.5 | 0.6 | 0.6 | 2.3 | 0.1 | 0.2 | 0.1 | - | - |
| OCEANIA | 2.3 | 2.7 | 1.2 | 0.1 | 0.1 | 0.1 | 0.6 | 0.8 | 0.7 |
| Australia | 2.3 | 2.7 | 1.2 | - | - | - | 0.6 | 0.8 | 0.7 |
| WORLD | 61.8 | 57.6 | 59.1 | 7.0 | 6.3 | 6.0 | 7.3 | 7.1 | 6.0 |
| Developing countries | 48.2 | 44.3 | 48.4 | 3.1 | 4.1 | 4.1 | 1.7 | 2.0 | 1.5 |
| Developed countries | 13.6 | 13.3 | 10.7 | 3.9 | 2.1 | 1.9 | 5.5 | 5.1 | 4.5 |
| LIFDCs | 36.1 | 32.4 | 35.3 | 0.9 | 1.2 | 0.9 | 0.8 | 0.5 | 0.4 |
| LDCs | 14.8 | 13.0 | 15.0 | 0.7 | 0.9 | 0.7 | 0.7 | 0.4 | 0.3 |

Table A7 (a). Other coarse grain statistics - millet, rye, oats and other grains

| | Production | | | Imports | | | Exports | | |
|------------------------------|----------------------|-----------------------|-----------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|
| | 2006-2008 average | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> |
| (..... million tonnes) | | | | | | | | | |
| ASIA | 18.4 | 15.5 | 17.1 | 0.6 | 0.6 | 0.5 | 0.1 | - | - |
| AFRICA | 17.7 | 16.9 | 17.4 | 0.1 | 0.1 | 0.1 | 0.4 | 0.4 | 0.3 |
| CENTRAL AMERICA | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | - | - | - |
| SOUTH AMERICA | 1.4 | 1.1 | 1.4 | 0.1 | 0.2 | 0.1 | - | - | - |
| NORTH AMERICA | 6.9 | 5.4 | 4.6 | 2.2 | 1.8 | 1.7 | 2.3 | 2.0 | 1.8 |
| EUROPE | 47.4 | 53.2 | 44.6 | 0.4 | 0.3 | 0.5 | 0.5 | 0.4 | 0.6 |
| OCEANIA | 1.6 | 1.9 | 2.4 | - | - | - | 0.2 | 0.3 | 0.2 |
| WORLD | 93.6 | 94.1 | 87.7 | 3.5 | 3.1 | 3.0 | 3.5 | 3.1 | 3.0 |

Table A6 (b). Sorghum statistics

| | Total Utilization | | | Stocks ending in | | | Per caput food use | | |
|--------------------------|--------------------------------------|--------------------------|--------------------------|----------------------|-----------------------|-----------------------|-------------------------------|--------------------------|--------------------------|
| | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | 2007-2009 average | 2010 <i>estim.</i> | 2011 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> |
| | (. million tonnes) | | | | | | (. Kg/year) | | |
| ASIA | 12.2 | 11.4 | 12.1 | 1.0 | 1.1 | 0.9 | 2.0 | 1.7 | 1.8 |
| China | 2.4 | 1.7 | 1.8 | 0.4 | 0.3 | 0.4 | 0.9 | 0.6 | 0.4 |
| India | 7.4 | 7.0 | 7.5 | 0.2 | 0.2 | 0.2 | 5.4 | 4.8 | 5.2 |
| Japan | 1.2 | 1.5 | 1.6 | 0.1 | 0.4 | 0.2 | - | - | - |
| AFRICA | 25.5 | 25.0 | 25.8 | 2.5 | 1.6 | 1.7 | 20.1 | 19.7 | 19.7 |
| Burkina Faso | 1.5 | 1.6 | 1.6 | 0.1 | 0.1 | 0.1 | 83.2 | 83.7 | 83.5 |
| Ethiopia | 2.7 | 3.0 | 3.1 | 0.2 | 0.3 | 0.3 | 27.1 | 28.3 | 28.0 |
| Nigeria | 9.4 | 8.7 | 8.7 | 0.2 | 0.1 | 0.1 | 46.9 | 43.1 | 43.2 |
| Sudan | 4.3 | 3.8 | 4.3 | 0.7 | - | 0.2 | 86.5 | 80.7 | 81.6 |
| CENTRAL AMERICA | 8.3 | 9.2 | 9.3 | 0.5 | 0.9 | 0.7 | 0.9 | 1.0 | 1.0 |
| Mexico | 7.9 | 8.7 | 8.8 | 0.5 | 0.8 | 0.6 | - | - | - |
| SOUTH AMERICA | 4.6 | 4.4 | 5.2 | 0.8 | 0.6 | 1.0 | 0.1 | 0.1 | 0.1 |
| Argentina | 1.7 | 1.0 | 1.9 | 0.4 | 0.2 | 0.7 | - | - | - |
| Brazil | 1.6 | 1.8 | 1.8 | 0.2 | 0.3 | 0.1 | - | - | - |
| Venezuela | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - |
| NORTH AMERICA | 5.8 | 5.9 | 4.6 | 1.2 | 1.0 | 1.0 | - | - | - |
| United States of America | 5.8 | 5.9 | 4.6 | 1.2 | 1.0 | 1.0 | - | - | - |
| EUROPE | 2.7 | 1.0 | 1.0 | 0.5 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 |
| European Union | 2.6 | 0.9 | 0.8 | 0.5 | 0.4 | 0.3 | 0.4 | 0.4 | 0.4 |
| OCEANIA | 1.9 | 1.6 | 0.9 | 0.4 | 0.6 | 0.5 | 0.2 | 0.2 | 0.2 |
| Australia | 1.8 | 1.5 | 0.7 | 0.4 | 0.6 | 0.5 | - | - | - |
| WORLD | 61.1 | 58.5 | 58.8 | 6.8 | 6.2 | 6.1 | 4.2 | 4.0 | 4.1 |
| Developing countries | 49.1 | 48.2 | 50.5 | 4.6 | 3.7 | 4.0 | 5.1 | 4.9 | 5.0 |
| Developed countries | 12.0 | 10.3 | 8.3 | 2.2 | 2.5 | 2.1 | 0.3 | 0.3 | 0.3 |
| LIFDCs | 35.8 | 34.2 | 35.7 | 3.2 | 2.1 | 2.3 | 6.4 | 6.1 | 6.2 |
| LDCs | 14.3 | 14.6 | 15.4 | 2.2 | 1.4 | 1.6 | 14.1 | 14.3 | 14.2 |

Table A7 (b). Other coarse grain statistics - millet, rye, oats and other grains

| | Total Utilization | | | Stocks ending in | | | Per caput food use | | |
|-----------------|--------------------------------------|--------------------------|--------------------------|----------------------|-----------------------|-----------------------|-------------------------------|--------------------------|--------------------------|
| | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | 2007-2009 average | 2010 <i>estim.</i> | 2011 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> |
| | (. million tonnes) | | | | | | (. Kg/year) | | |
| ASIA | 19.1 | 16.0 | 17.5 | 0.9 | 0.7 | 0.7 | 4.0 | 3.3 | 3.6 |
| AFRICA | 17.1 | 17.1 | 17.3 | 1.6 | 1.3 | 1.1 | 14.3 | 13.9 | 13.7 |
| CENTRAL AMERICA | 0.2 | 0.2 | 0.3 | - | - | - | 0.2 | 0.2 | 0.2 |
| SOUTH AMERICA | 1.6 | 1.3 | 1.5 | 0.1 | 0.1 | 0.1 | 0.9 | 0.9 | 0.9 |
| NORTH AMERICA | 5.8 | 5.2 | 5.2 | 2.2 | 2.5 | 1.6 | 2.8 | 2.7 | 2.8 |
| EUROPE | 47.5 | 52.4 | 47.7 | 4.5 | 7.1 | 4.0 | 13.5 | 13.5 | 13.5 |
| OCEANIA | 1.5 | 1.7 | 1.9 | 0.2 | 0.1 | 0.4 | 4.3 | 4.3 | 4.2 |
| WORLD | 92.8 | 94.0 | 91.4 | 9.5 | 11.8 | 7.9 | 6.2 | 5.7 | 5.9 |

Table A8 (a). Rice statistics

| | Production | | | Imports | | | Exports | | |
|---|------------------------|-------------------|-------------------|----------------------|----------------|----------------|----------------------|----------------|----------------|
| | 06/07-08/09 average | 2009/10 estim. | 2010/11 f'cast | 2007-2009 average | 2010 estim. | 2011 f'cast | 2007-2009 average | 2010 estim. | 2011 f'cast |
| (..... million tonnes, milled equivalent) (.....) | | | | | | | | | |
| ASIA | 401.5 | 410.7 | 422.3 | 14.2 | 14.5 | 14.1 | 24.4 | 24.2 | 23.5 |
| Bangladesh | 29.2 | 32.4 | 33.5 | 1.1 | 0.7 | 0.3 | - | - | - |
| China | 128.9 | 134.8 | 135.6 | 0.8 | 0.9 | 0.9 | 1.1 | 0.8 | 1.1 |
| of which Taiwan Prov. | 1.1 | 1.2 | 1.1 | 0.1 | 0.1 | 0.1 | - | - | 0.1 |
| India | 96.4 | 89.1 | 100.3 | 0.1 | 0.1 | 0.1 | 4.0 | 2.3 | 2.6 |
| Indonesia | 36.1 | 40.6 | 41.0 | 0.8 | 0.5 | 0.6 | - | 0.1 | 0.1 |
| Iran, Islamic Republic of | 1.6 | 1.4 | 1.6 | 1.1 | 1.1 | 1.1 | - | - | - |
| Iraq | 0.2 | 0.1 | 0.2 | 0.9 | 1.2 | 1.2 | - | - | - |
| Japan | 7.9 | 7.7 | 7.8 | 0.6 | 0.7 | 0.7 | 0.2 | 0.2 | 0.2 |
| Korea, D.P.R. | 1.4 | 1.5 | 1.5 | 0.5 | 0.4 | 0.5 | - | - | - |
| Korea, Republic of | 4.6 | 4.9 | 4.3 | 0.3 | 0.3 | 0.3 | 0.1 | - | - |
| Malaysia | 1.5 | 1.6 | 1.7 | 0.9 | 0.9 | 0.9 | - | - | - |
| Myanmar | 19.5 | 19.5 | 19.4 | - | - | - | 0.6 | 0.8 | 0.8 |
| Pakistan | 6.0 | 6.7 | 4.2 | - | - | - | 2.8 | 3.1 | 1.8 |
| Philippines | 10.7 | 10.2 | 11.1 | 2.0 | 2.5 | 1.9 | - | - | - |
| Saudi Arabia | - | - | - | 0.9 | 0.8 | 0.9 | - | - | - |
| Sri Lanka | 2.3 | 2.5 | 2.8 | 0.1 | 0.1 | - | - | - | - |
| Thailand | 20.6 | 20.8 | 20.5 | 0.3 | 0.3 | 0.4 | 9.3 | 8.3 | 9.0 |
| Viet Nam | 24.6 | 25.9 | 26.1 | 0.3 | 0.5 | 0.6 | 5.1 | 7.0 | 6.5 |
| AFRICA | 14.8 | 16.0 | 16.1 | 9.9 | 9.8 | 9.7 | 0.7 | 0.5 | 0.4 |
| Cote d'Ivoire | 0.4 | 0.4 | 0.5 | 0.8 | 0.9 | 0.9 | - | - | - |
| Egypt | 4.8 | 3.8 | 3.1 | 0.1 | - | 0.1 | 0.7 | 0.5 | 0.3 |
| Madagascar | 2.5 | 3.0 | 3.2 | 0.1 | - | - | - | - | - |
| Nigeria | 2.3 | 2.6 | 2.7 | 1.9 | 2.0 | 1.8 | - | - | - |
| Senegal | 0.2 | 0.4 | 0.4 | 0.9 | 0.8 | 0.8 | - | - | - |
| South Africa | - | - | - | 0.9 | 0.9 | 1.0 | - | - | - |
| Tanzania, United Rep. of | 0.9 | 0.9 | 0.9 | 0.1 | 0.2 | 0.2 | - | - | - |
| CENTRAL AMERICA | 1.7 | 1.9 | 1.9 | 2.3 | 2.3 | 2.3 | - | - | 0.1 |
| Cuba | 0.3 | 0.4 | 0.4 | 0.6 | 0.5 | 0.5 | - | - | - |
| Mexico | 0.2 | 0.2 | 0.2 | 0.6 | 0.6 | 0.6 | - | - | - |
| SOUTH AMERICA | 15.5 | 17.1 | 15.8 | 1.0 | 1.3 | 1.1 | 2.1 | 2.1 | 2.4 |
| Argentina | 0.8 | 0.9 | 0.8 | - | - | - | 0.4 | 0.5 | 0.5 |
| Brazil | 7.8 | 8.4 | 7.5 | 0.6 | 0.8 | 0.6 | 0.4 | 0.4 | 0.6 |
| Peru | 1.7 | 2.0 | 2.0 | 0.1 | - | - | - | - | - |
| Uruguay | 0.9 | 0.9 | 0.8 | - | - | - | 0.8 | 0.7 | 0.7 |
| NORTH AMERICA | 6.2 | 6.9 | 7.6 | 1.0 | 1.0 | 1.0 | 3.1 | 3.5 | 3.6 |
| Canada | - | - | - | 0.3 | 0.3 | 0.3 | - | - | - |
| United States of America | 6.2 | 6.9 | 7.4 | 0.7 | 0.7 | 0.7 | 3.1 | 3.5 | 3.6 |
| EUROPE | 2.4 | 2.9 | 2.9 | 1.7 | 1.5 | 1.7 | 0.2 | 0.3 | 0.3 |
| European Union | 1.9 | 2.2 | 2.1 | 1.1 | 1.1 | 1.2 | 0.1 | 0.2 | 0.2 |
| Russian Federation | 0.5 | 0.6 | 0.6 | 0.3 | 0.2 | 0.2 | - | 0.1 | 0.1 |
| OCEANIA | 0.3 | 0.1 | 0.1 | 0.4 | 0.5 | 0.4 | 0.1 | 0.1 | 0.1 |
| Australia | 0.3 | - | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 |
| WORLD | 442.4 | 455.6 | 466.7 | 30.5 | 30.8 | 30.3 | 30.5 | 30.8 | 30.3 |
| Developing countries | 425.2 | 437.6 | 447.9 | 25.8 | 26.2 | 25.5 | 27.1 | 26.7 | 26.2 |
| Developed countries | 17.2 | 18.0 | 18.8 | 4.7 | 4.6 | 4.8 | 3.5 | 4.1 | 4.2 |
| LIFDCs | 334.7 | 343.3 | 355.5 | 16.5 | 16.7 | 15.8 | 9.9 | 8.4 | 7.4 |
| LDCs | 65.2 | 71.0 | 72.3 | 7.1 | 6.4 | 6.1 | 1.9 | 2.4 | 2.4 |

Table A8 (b). Rice statistics

| | Total Utilization | | | Stocks ending in | | | Per caput food use | | |
|---------------------------|--|--------------|--------------|------------------|--------------|--------------|----------------------|-------------|-------------|
| | 06/07-08/09 | 2009/10 | 2010/11 | 2007-2009 | 2010 | 2011 | 06/07-08/09 | 2009/10 | 2010/11 |
| | average | estim. | f'cast | average | estim. | f'cast | average | estim. | f'cast |
| | (..... million tonnes, milled equivalent.....) | | | | | | (..... Kg/year.....) | | |
| ASIA | 384.3 | 399.2 | 405.5 | 106.5 | 119.2 | 126.6 | 81.8 | 82.3 | 82.6 |
| Bangladesh | 29.7 | 32.4 | 33.6 | 4.7 | 5.8 | 6.0 | 151.2 | 157.3 | 161.3 |
| China | 126.1 | 128.0 | 128.9 | 59.5 | 70.6 | 77.2 | 77.1 | 76.9 | 76.6 |
| of which Taiwan Prov. | 1.1 | 1.1 | 1.1 | 0.1 | 0.2 | 0.1 | 46.6 | 45.6 | 45.3 |
| India | 89.2 | 93.3 | 95.3 | 16.8 | 15.0 | 17.5 | 73.5 | 74.0 | 74.2 |
| Indonesia | 36.5 | 39.8 | 41.1 | 2.8 | 4.5 | 4.9 | 155.8 | 158.2 | 161.2 |
| Iran, Islamic Republic of | 2.8 | 2.5 | 2.6 | 0.3 | 0.3 | 0.3 | 33.3 | 30.2 | 30.4 |
| Iraq | 1.2 | 1.3 | 1.3 | 0.1 | 0.1 | 0.1 | 40.0 | 41.5 | 42.1 |
| Japan | 8.4 | 8.2 | 8.3 | 1.4 | 1.4 | 1.4 | 60.9 | 60.0 | 59.9 |
| Korea, D.P.R. | 1.9 | 1.9 | 1.9 | - | - | 0.1 | 74.9 | 73.4 | 73.1 |
| Korea, Republic of | 4.9 | 5.1 | 4.9 | 0.7 | 1.0 | 0.8 | 77.0 | 75.9 | 76.0 |
| Malaysia | 2.4 | 2.5 | 2.5 | 0.1 | 0.1 | 0.1 | 81.0 | 81.6 | 81.7 |
| Myanmar | 18.6 | 19.1 | 19.2 | 5.6 | 5.0 | 4.4 | 236.6 | 239.7 | 239.8 |
| Pakistan | 2.9 | 3.7 | 3.2 | 0.6 | 0.9 | 0.1 | 14.4 | 17.5 | 15.4 |
| Philippines | 12.5 | 12.3 | 13.3 | 2.2 | 3.1 | 2.8 | 118.0 | 120.5 | 122.0 |
| Saudi Arabia | 1.0 | 0.9 | 0.9 | 0.1 | 0.1 | 0.1 | 38.1 | 33.0 | 32.8 |
| Sri Lanka | 2.3 | 2.6 | 2.8 | 0.2 | 0.3 | 0.4 | 108.0 | 113.5 | 117.3 |
| Thailand | 11.6 | 12.2 | 12.2 | 4.6 | 5.9 | 5.6 | 128.0 | 131.9 | 132.6 |
| Viet Nam | 20.0 | 20.4 | 20.4 | 4.5 | 3.3 | 3.1 | 186.0 | 186.1 | 186.2 |
| AFRICA | 23.6 | 25.4 | 26.0 | 2.9 | 3.3 | 2.7 | 21.6 | 22.0 | 22.0 |
| Cote d'Ivoire | 1.3 | 1.3 | 1.3 | - | - | - | 59.9 | 57.2 | 57.7 |
| Egypt | 3.8 | 3.8 | 3.6 | 1.1 | 1.2 | 0.5 | 38.5 | 38.6 | 37.3 |
| Madagascar | 2.6 | 2.9 | 3.1 | 0.1 | 0.3 | 0.3 | 119.6 | 122.4 | 118.2 |
| Nigeria | 4.2 | 4.5 | 4.6 | 0.3 | 0.3 | 0.2 | 24.8 | 25.0 | 25.0 |
| Senegal | 1.1 | 1.2 | 1.2 | 0.2 | 0.2 | 0.2 | 83.6 | 83.2 | 83.4 |
| South Africa | 0.8 | 0.9 | 0.9 | 0.1 | - | - | 16.2 | 17.1 | 17.1 |
| Tanzania, United Rep. of | 1.0 | 1.1 | 1.1 | 0.1 | 0.1 | 0.1 | 20.2 | 20.1 | 20.1 |
| CENTRAL AMERICA | 3.9 | 4.0 | 4.1 | 0.4 | 0.4 | 0.4 | 19.5 | 19.6 | 19.8 |
| Cuba | 0.9 | 0.9 | 0.9 | - | - | - | 72.0 | 71.9 | 72.8 |
| Mexico | 0.8 | 0.8 | 0.8 | - | - | - | 7.1 | 7.0 | 7.2 |
| SOUTH AMERICA | 15.0 | 15.6 | 15.4 | 1.4 | 1.6 | 1.2 | 36.1 | 36.4 | 36.1 |
| Argentina | 0.4 | 0.5 | 0.4 | 0.1 | 0.1 | 0.1 | 8.5 | 10.3 | 9.0 |
| Brazil | 8.5 | 8.3 | 8.1 | 0.4 | 0.3 | 0.2 | 42.6 | 40.4 | 39.7 |
| Peru | 1.8 | 2.1 | 2.1 | 0.3 | 0.4 | 0.3 | 56.7 | 63.1 | 63.3 |
| Uruguay | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 11.7 | 13.4 | 13.7 |
| NORTH AMERICA | 4.3 | 4.2 | 4.5 | 1.1 | 1.2 | 1.7 | 10.8 | 10.3 | 11.0 |
| Canada | 0.3 | 0.3 | 0.3 | 0.1 | 0.1 | 0.1 | 10.0 | 9.8 | 9.7 |
| United States of America | 3.9 | 3.8 | 4.2 | 1.0 | 1.2 | 1.5 | 10.8 | 10.4 | 11.1 |
| EUROPE | 4.0 | 4.0 | 4.1 | 0.5 | 0.5 | 0.7 | 5.1 | 5.1 | 5.1 |
| European Union | 2.9 | 2.9 | 3.0 | 0.4 | 0.5 | 0.6 | 5.5 | 5.4 | 5.5 |
| Russian Federation | 0.7 | 0.7 | 0.7 | - | - | - | 4.8 | 4.8 | 4.9 |
| OCEANIA | 0.6 | 0.5 | 0.6 | 0.1 | - | - | 14.9 | 14.1 | 14.9 |
| Australia | 0.2 | 0.2 | 0.2 | 0.1 | - | - | 9.9 | 8.9 | 10.2 |
| WORLD | 435.7 | 452.9 | 460.2 | 112.9 | 126.2 | 133.2 | 56.4 | 56.8 | 56.9 |
| Developing countries | 417.2 | 434.6 | 441.4 | 109.8 | 123.1 | 129.5 | 67.5 | 67.9 | 67.9 |
| Developed countries | 18.5 | 18.3 | 18.8 | 3.1 | 3.2 | 3.8 | 12.5 | 12.2 | 12.4 |
| LIFDCs | 334.1 | 349.2 | 355.9 | 91.4 | 104.8 | 112.9 | 68.8 | 69.2 | 69.3 |
| LDCs | 69.6 | 74.4 | 76.4 | 13.5 | 13.9 | 13.6 | 67.2 | 68.0 | 68.3 |

Table A9. Cereal supply and utilization in main exporting countries (million tonnes)

| | Wheat ¹ | | | Coarse Grains ² | | | Rice (milled basis) | | |
|---------------------------------|--------------------|-------------------|-------------------|----------------------------|-------------------|-------------------|---|-------------------|-------------------|
| | 2008/09 | 2009/10 estim. | 2010/11 f'cast | 2008/09 | 2009/10 estim. | 2010/11 f'cast | 2008/09 | 2009/10 estim. | 2010/11 f'cast |
| UNITED STATES (June/May) | | | | UNITED STATES | | | UNITED STATES (Aug./July) | | |
| Opening stocks | 8.3 | 17.9 | 26.6 | 45.1 | 47.1 | 48.1 | 0.9 | 1.0 | 1.2 |
| Production | 68.0 | 60.4 | 60.1 | 326.3 | 349.5 | 332.7 | 6.4 | 6.9 | 7.4 |
| Imports | 3.0 | 2.7 | 2.4 | 3.0 | 2.3 | 2.1 | 0.6 | 0.6 | 0.6 |
| Total Supply | 79.3 | 81.0 | 89.1 | 374.4 | 398.9 | 382.9 | 7.9 | 8.5 | 9.1 |
| Domestic use | 34.1 | 30.8 | 32.0 | 276.2 | 295.7 | 304.4 | 4.0 | 3.9 | 4.0 |
| Exports | 27.3 | 23.6 | 34.0 | 51.1 | 55.0 | 53.9 | 3.0 | 3.5 | 3.6 |
| Closing stocks | 17.9 | 26.6 | 23.1 | 47.1 | 48.1 | 24.6 | 1.0 | 1.2 | 1.5 |
| CANADA (August/July) | | | | CANADA | | | THAILAND (Nov./Oct.)³ | | |
| Opening stocks | 4.4 | 6.5 | 7.8 | 4.1 | 6.4 | 5.7 | 4.2 | 5.3 | 5.9 |
| Production | 28.6 | 26.8 | 22.2 | 27.4 | 22.6 | 22.1 | 21.0 | 20.8 | 20.5 |
| Imports | 0.0 | 0.1 | 0.1 | 2.0 | 2.3 | 1.9 | 0.4 | 0.3 | 0.4 |
| Total Supply | 33.0 | 33.5 | 30.1 | 33.4 | 31.3 | 29.7 | 25.5 | 26.4 | 26.8 |
| Domestic use | 7.9 | 7.3 | 7.6 | 21.6 | 21.0 | 21.0 | 11.7 | 12.2 | 12.2 |
| Exports | 18.6 | 18.4 | 16.5 | 5.4 | 4.6 | 3.9 | 8.5 | 8.3 | 9.0 |
| Closing stocks | 6.5 | 7.8 | 6.0 | 6.4 | 5.7 | 4.8 | 5.3 | 5.9 | 5.6 |
| ARGENTINA (Dec./Nov.) | | | | ARGENTINA | | | INDIA (Oct./Sept.)³ | | |
| Opening stocks | 4.0 | 1.3 | 0.2 | 3.0 | 2.2 | 1.0 | 16.7 | 21.4 | 15.0 |
| Production | 8.4 | 7.5 | 11.5 | 27.0 | 16.5 | 28.6 | 99.2 | 89.1 | 100.3 |
| Imports | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 |
| Total Supply | 12.4 | 8.7 | 11.7 | 30.0 | 18.7 | 29.7 | 116.0 | 110.6 | 115.4 |
| Domestic use | 4.8 | 4.8 | 5.0 | 7.5 | 6.0 | 9.2 | 92.4 | 93.3 | 95.3 |
| Exports | 6.3 | 3.7 | 5.8 | 20.4 | 11.8 | 16.6 | 2.1 | 2.3 | 2.6 |
| Closing stocks | 1.3 | 0.2 | 0.9 | 2.2 | 1.0 | 3.8 | 21.4 | 15.0 | 17.5 |
| AUSTRALIA (Oct./Sept.) | | | | AUSTRALIA | | | PAKISTAN (Nov./Oct.)³ | | |
| Opening stocks | 3.5 | 3.1 | 2.7 | 1.8 | 2.5 | 3.3 | 0.4 | 1.0 | 0.9 |
| Production | 21.4 | 21.7 | 23.0 | 13.8 | 13.0 | 12.7 | 7.0 | 6.7 | 4.2 |
| Imports | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Supply | 24.9 | 24.8 | 25.7 | 15.5 | 15.5 | 16.0 | 7.3 | 7.7 | 5.1 |
| Domestic use | 7.1 | 7.0 | 7.0 | 8.6 | 7.3 | 7.1 | 3.5 | 3.7 | 3.2 |
| Exports | 14.7 | 15.1 | 15.0 | 4.5 | 4.9 | 5.4 | 2.9 | 3.1 | 1.8 |
| Closing stocks | 3.1 | 2.7 | 3.7 | 2.5 | 3.3 | 3.4 | 1.0 | 0.9 | 0.1 |
| EU (July/June) | | | | EU | | | VIET NAM (Nov./Oct.)³ | | |
| Opening stocks | 9.5 | 18.5 | 18.0 | 15.8 | 23.0 | 24.6 | 4.4 | 4.3 | 3.3 |
| Production | 150.5 | 138.5 | 136.0 | 163.3 | 155.5 | 139.0 | 25.8 | 25.9 | 26.1 |
| Imports | 7.9 | 5.3 | 5.5 | 4.1 | 2.7 | 5.0 | 0.4 | 0.5 | 0.6 |
| Total Supply | 167.9 | 162.3 | 159.5 | 183.2 | 181.1 | 168.7 | 30.6 | 30.7 | 30.0 |
| Domestic use | 124.3 | 123.8 | 122.5 | 154.8 | 153.5 | 148.9 | 20.4 | 20.4 | 20.4 |
| Exports | 25.1 | 20.5 | 21.5 | 5.5 | 3.0 | 5.7 | 6.0 | 7.0 | 6.5 |
| Closing stocks | 18.5 | 18.0 | 15.5 | 23.0 | 24.6 | 14.1 | 4.3 | 3.3 | 3.1 |
| TOTAL OF ABOVE | | | | TOTAL OF ABOVE | | | TOTAL OF ABOVE | | |
| Opening stocks | 29.7 | 47.3 | 55.3 | 69.7 | 81.1 | 82.7 | 26.5 | 32.9 | 26.3 |
| Production | 276.9 | 254.8 | 252.8 | 557.7 | 557.1 | 535.1 | 159.3 | 149.6 | 158.5 |
| Imports | 10.9 | 8.2 | 8.0 | 9.1 | 7.3 | 9.1 | 1.5 | 1.5 | 1.7 |
| Total Supply | 317.5 | 310.3 | 316.0 | 636.5 | 645.5 | 626.9 | 187.3 | 183.9 | 186.5 |
| Domestic use | 178.2 | 173.7 | 174.1 | 468.7 | 483.5 | 490.7 | 132.0 | 133.5 | 135.1 |
| Exports | 92.0 | 81.3 | 92.8 | 86.8 | 79.3 | 85.5 | 22.5 | 24.2 | 23.5 |
| Closing stocks | 47.3 | 55.3 | 49.2 | 81.1 | 82.7 | 50.7 | 32.9 | 26.3 | 27.8 |

¹ Trade data include wheat flour in wheat grain equivalent. For the EU semolina is also included.

² **Argentina** (December/November) for rye, barley and oats, (March/February) for maize and sorghum; **Australia** (November/October) for rye, barley and oats, (March/February) for maize and sorghum; **Canada** (August/July); **EU** (July/June); **United States** (June/May) for rye, barley and oats, (September/August) for maize and sorghum.

³ Rice trade data refer to the calendar year of the second year shown.

Table A10. Total oilcrops statistics (million tonnes)

| | Production ¹ | | | Imports | | | Exports | | |
|---------------------------|-------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|
| | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> |
| ASIA | 124.2 | 123.6 | 125.5 | 58.8 | 76.0 | 79.9 | 2.6 | 2.1 | 2.2 |
| China | 57.9 | 56.5 | 55.9 | 40.0 | 55.3 | 60.4 | 1.4 | 1.2 | 1.2 |
| of which Taiwan Prov. | 0.1 | 0.1 | 0.1 | 2.3 | 2.2 | 2.3 | - | - | - |
| India | 35.1 | 33.9 | 36.5 | 0.1 | 0.2 | 0.2 | 0.6 | 0.3 | 0.4 |
| Indonesia | 8.0 | 9.1 | 9.6 | 1.5 | 1.9 | 2.0 | 0.1 | 0.1 | 0.1 |
| Iran, Islamic Republic of | 0.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | - | - | - |
| Japan | 0.3 | 0.3 | 0.3 | 6.4 | 6.2 | 6.1 | - | - | - |
| Korea, Republic of | 0.2 | 0.2 | 0.2 | 1.4 | 1.5 | 1.5 | - | - | - |
| Malaysia | 4.5 | 4.7 | 4.8 | 0.7 | 0.7 | 0.7 | - | - | - |
| Pakistan | 4.8 | 5.2 | 4.6 | 1.0 | 1.5 | 1.1 | - | 0.1 | 0.1 |
| Thailand | 0.8 | 0.8 | 0.8 | 1.7 | 1.7 | 1.8 | - | - | - |
| Turkey | 2.1 | 1.9 | 2.2 | 2.0 | 2.3 | 2.2 | - | 0.1 | 0.1 |
| AFRICA | 16.3 | 16.2 | 16.5 | 2.6 | 3.1 | 3.0 | 0.8 | 0.8 | 0.8 |
| Nigeria | 4.7 | 4.8 | 4.8 | - | - | - | 0.1 | 0.2 | 0.2 |
| CENTRAL AMERICA | 1.1 | 1.1 | 1.1 | 5.9 | 6.1 | 6.0 | 0.1 | 0.1 | 0.1 |
| Mexico | 0.7 | 0.7 | 0.7 | 5.3 | 5.4 | 5.4 | - | - | - |
| SOUTH AMERICA | 118.7 | 142.9 | 139.0 | 3.4 | 1.7 | 1.3 | 42.1 | 49.1 | 50.2 |
| Argentina | 46.9 | 58.5 | 56.5 | 2.3 | 0.1 | 0.1 | 10.3 | 13.9 | 12.7 |
| Brazil | 61.7 | 71.5 | 70.3 | 0.1 | 0.1 | - | 26.6 | 28.1 | 30.5 |
| Paraguay | 6.2 | 7.9 | 7.3 | - | 0.1 | 0.1 | 4.1 | 4.9 | 5.1 |
| NORTH AMERICA | 104.8 | 116.6 | 118.0 | 2.0 | 2.1 | 1.9 | 42.6 | 51.4 | 53.7 |
| Canada | 14.8 | 17.2 | 15.7 | 0.7 | 0.8 | 0.8 | 9.2 | 10.2 | 9.8 |
| United States of America | 90.0 | 99.4 | 102.3 | 1.3 | 1.3 | 1.1 | 33.4 | 41.2 | 43.9 |
| EUROPE | 43.5 | 51.5 | 49.7 | 19.6 | 19.4 | 20.3 | 3.4 | 3.9 | 3.6 |
| European Union | 25.6 | 30.2 | 29.1 | 18.5 | 17.8 | 18.4 | 0.9 | 1.0 | 1.0 |
| Russian Federation | 7.9 | 8.1 | 8.2 | 0.5 | 0.9 | 1.3 | 0.3 | 0.2 | 0.2 |
| Ukraine | 8.1 | 10.8 | 10.3 | - | - | - | 2.0 | 2.5 | 2.3 |
| OCEANIA | 2.1 | 3.0 | 3.8 | 0.1 | 0.1 | 0.1 | 0.7 | 1.4 | 1.8 |
| Australia | 1.7 | 2.6 | 3.4 | 0.1 | 0.1 | 0.1 | 0.7 | 1.3 | 1.8 |
| WORLD | 410.7 | 454.8 | 453.7 | 92.4 | 108.5 | 112.4 | 92.4 | 108.7 | 112.5 |
| Developing countries | 255.3 | 279.0 | 277.1 | 63.3 | 79.6 | 83.1 | 45.4 | 51.9 | 53.2 |
| Developed countries | 155.4 | 175.8 | 176.6 | 29.2 | 28.8 | 29.2 | 47.0 | 56.8 | 59.3 |
| LIFDCs | 127.9 | 127.5 | 128.9 | 43.7 | 60.6 | 65.0 | 3.2 | 2.6 | 2.7 |
| LDCs | 10.0 | 9.9 | 9.9 | 0.3 | 0.4 | 0.3 | 0.4 | 0.4 | 0.4 |

¹ The split years bring together northern hemisphere annual crops harvested in the latter part of the first year shown, with southern hemisphere annual crops harvested in the early part of the second year shown; for tree crops which are produced throughout the year, calendar year production for the second year shown is used.

Table A11. Total oils and fats statistics ¹ (million tonnes)

| | Imports | | | Exports | | | Utilization | | |
|--------------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|
| | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | 06/07-08/09 average | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> |
| ASIA | 33.0 | 35.9 | 36.9 | 37.2 | 41.6 | 43.4 | 77.7 | 85.2 | 88.3 |
| Bangladesh | 1.2 | 1.2 | 1.2 | - | - | - | 1.4 | 1.4 | 1.4 |
| China | 10.6 | 10.8 | 11.3 | 0.6 | 0.8 | 0.9 | 29.5 | 32.8 | 34.5 |
| of which Taiwan Prov. | 0.4 | 0.4 | 0.4 | - | - | - | 0.9 | 0.9 | 0.9 |
| India | 6.7 | 8.8 | 8.6 | 0.5 | 0.3 | 0.3 | 16.2 | 18.0 | 18.6 |
| Indonesia | 0.1 | 0.1 | 0.1 | 16.5 | 19.3 | 20.9 | 5.5 | 6.5 | 6.8 |
| Iran | 1.2 | 1.2 | 1.2 | 0.2 | 0.1 | 0.1 | 1.6 | 1.6 | 1.7 |
| Japan | 1.1 | 1.1 | 1.2 | - | - | - | 3.1 | 3.0 | 3.1 |
| Korea, Republic of | 0.8 | 0.9 | 0.9 | - | - | - | 1.1 | 1.2 | 1.2 |
| Malaysia | 1.2 | 1.9 | 1.9 | 16.3 | 17.9 | 18.4 | 3.9 | 4.2 | 4.0 |
| Pakistan | 2.0 | 2.0 | 2.1 | 0.1 | 0.1 | 0.1 | 3.4 | 3.7 | 3.8 |
| Philippines | 0.4 | 0.5 | 0.5 | 0.9 | 1.4 | 0.9 | 0.9 | 1.1 | 1.1 |
| Singapore | 0.6 | 0.6 | 0.9 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.6 |
| Turkey | 1.2 | 1.0 | 1.0 | 0.3 | 0.2 | 0.2 | 2.3 | 2.3 | 2.3 |
| AFRICA | 6.7 | 7.2 | 7.1 | 1.2 | 1.2 | 1.2 | 12.1 | 12.7 | 12.9 |
| Algeria | 0.6 | 0.6 | 0.6 | 0.1 | - | - | 0.6 | 0.7 | 0.8 |
| Egypt | 1.5 | 1.8 | 1.7 | 0.1 | 0.1 | 0.1 | 1.8 | 2.1 | 2.2 |
| Nigeria | 0.3 | 0.4 | 0.4 | 0.1 | 0.1 | 0.1 | 2.0 | 2.0 | 2.1 |
| South Africa | 0.7 | 0.7 | 0.7 | 0.1 | 0.1 | 0.1 | 1.1 | 1.1 | 1.1 |
| CENTRAL AMERICA | 2.3 | 2.3 | 2.3 | 0.6 | 0.6 | 0.6 | 4.5 | 4.5 | 4.6 |
| Mexico | 1.1 | 1.2 | 1.2 | 0.1 | 0.1 | 0.1 | 2.9 | 2.9 | 3.0 |
| SOUTH AMERICA | 2.2 | 2.4 | 2.5 | 10.7 | 8.4 | 8.6 | 10.9 | 13.4 | 15.7 |
| Argentina | 0.1 | - | 0.1 | 6.9 | 5.4 | 5.8 | 1.5 | 2.8 | 3.9 |
| Brazil | 0.4 | 0.5 | 0.5 | 2.4 | 1.7 | 1.5 | 6.0 | 6.8 | 7.8 |
| NORTH AMERICA | 3.7 | 4.2 | 4.1 | 5.6 | 6.5 | 6.5 | 17.2 | 16.8 | 18.2 |
| Canada | 0.5 | 0.6 | 0.6 | 2.1 | 2.6 | 2.6 | 0.9 | 0.9 | 1.0 |
| United States of America | 3.2 | 3.6 | 3.5 | 3.6 | 3.9 | 3.9 | 16.4 | 15.9 | 17.2 |
| EUROPE | 13.3 | 13.4 | 14.2 | 5.0 | 5.9 | 5.5 | 33.9 | 36.3 | 37.2 |
| European Union | 10.8 | 10.9 | 11.7 | 1.9 | 2.1 | 2.1 | 28.4 | 30.3 | 31.1 |
| Russian Federation | 1.2 | 1.1 | 1.1 | 0.7 | 0.8 | 0.7 | 3.5 | 3.5 | 3.6 |
| Ukraine | 0.5 | 0.5 | 0.5 | 2.0 | 2.7 | 2.5 | 0.8 | 1.1 | 1.1 |
| OCEANIA | 0.5 | 0.5 | 0.5 | 1.7 | 1.8 | 1.8 | 1.0 | 1.1 | 1.1 |
| Australia | 0.3 | 0.4 | 0.4 | 0.6 | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 |
| WORLD | 61.9 | 66.0 | 67.6 | 61.9 | 66.0 | 67.6 | 157.3 | 169.9 | 178.0 |
| Developing countries | 42.1 | 45.6 | 46.6 | 50.1 | 52.4 | 54.4 | 100.1 | 110.7 | 116.4 |
| Developed countries | 19.7 | 20.3 | 21.1 | 11.8 | 13.6 | 13.2 | 57.2 | 59.2 | 61.6 |
| LIFDCs | 28.1 | 31.1 | 31.5 | 20.1 | 23.6 | 24.9 | 69.8 | 77.1 | 79.9 |
| LDCs | 4.2 | 4.3 | 4.4 | 0.4 | 0.4 | 0.4 | 7.0 | 7.1 | 7.1 |

¹ Includes oils and fats of vegetable, marine and animal origin.

Table A12. Total meals and cakes statistics¹ (million tonnes)

| | Imports | | | Exports | | | Utilization | | |
|--------------------------|------------------------|-------------------|-------------------|------------------------|-------------------|-------------------|------------------------|-------------------|-------------------|
| | 06/07-08/09 average | 2009/10 estim. | 2010/11 f'cast | 06/07-08/09 average | 2009/10 estim. | 2010/11 f'cast | 06/07-08/09 average | 2009/10 estim. | 2010/11 f'cast |
| ASIA | 24.2 | 27.1 | 28.6 | 13.6 | 13.0 | 14.2 | 103.0 | 118.4 | 126.5 |
| China | 2.4 | 3.2 | 3.3 | 1.4 | 1.8 | 1.9 | 52.0 | 65.3 | 71.0 |
| of which Taiwan Prov. | 0.5 | 0.5 | 0.5 | - | - | - | 2.4 | 2.3 | 2.3 |
| India | 0.1 | 0.1 | 0.1 | 5.6 | 3.8 | 5.2 | 11.1 | 11.8 | 12.4 |
| Indonesia | 2.6 | 2.9 | 3.0 | 2.6 | 3.0 | 3.0 | 2.9 | 3.2 | 3.4 |
| Japan | 2.4 | 2.6 | 2.8 | - | - | - | 7.1 | 7.0 | 7.0 |
| Korea, Republic of | 3.4 | 3.6 | 3.6 | - | - | - | 4.5 | 4.6 | 4.7 |
| Malaysia | 0.9 | 1.1 | 1.2 | 2.3 | 2.3 | 2.2 | 1.7 | 1.8 | 2.0 |
| Pakistan | 0.4 | 0.5 | 0.5 | 0.1 | 0.2 | 0.1 | 2.8 | 3.0 | 3.0 |
| Philippines | 1.8 | 1.6 | 1.7 | 0.4 | 0.6 | 0.5 | 2.3 | 2.3 | 2.4 |
| Saudi Arabia | 0.6 | 0.5 | 0.5 | - | - | - | 0.6 | 0.5 | 0.5 |
| Thailand | 2.6 | 2.9 | 3.0 | 0.1 | 0.1 | 0.1 | 4.5 | 4.7 | 4.9 |
| Turkey | 0.9 | 0.9 | 0.9 | 0.1 | - | - | 3.1 | 3.2 | 3.3 |
| Viet Nam | 2.2 | 3.1 | 3.3 | - | - | - | 2.5 | 3.1 | 3.5 |
| AFRICA | 3.5 | 3.9 | 4.0 | 0.9 | 0.9 | 0.8 | 9.1 | 9.8 | 10.1 |
| Egypt | 0.5 | 0.6 | 0.6 | - | - | - | 1.7 | 2.0 | 2.1 |
| South Africa | 1.2 | 1.1 | 1.2 | 0.1 | 0.1 | 0.1 | 1.8 | 1.8 | 1.8 |
| CENTRAL AMERICA | 3.5 | 3.4 | 3.4 | 0.2 | 0.2 | 0.2 | 8.2 | 8.0 | 8.1 |
| Mexico | 1.9 | 1.8 | 2.0 | 0.1 | 0.1 | 0.1 | 6.1 | 5.9 | 6.1 |
| SOUTH AMERICA | 4.2 | 4.2 | 4.9 | 43.2 | 41.1 | 45.4 | 23.5 | 24.8 | 25.7 |
| Argentina | - | - | - | 26.5 | 24.8 | 28.4 | 3.7 | 4.6 | 4.8 |
| Bolivia | - | - | - | 1.0 | 1.1 | 1.0 | 0.3 | 0.4 | 0.4 |
| Brazil | 0.2 | 0.2 | 0.3 | 12.6 | 12.6 | 13.1 | 14.0 | 13.9 | 14.3 |
| Chile | 0.9 | 0.8 | 1.0 | 0.6 | 0.4 | 0.4 | 1.3 | 1.2 | 1.3 |
| Paraguay | - | - | - | 0.9 | 0.8 | 0.7 | 0.3 | 0.6 | 0.7 |
| Peru | 0.7 | 0.8 | 0.9 | 1.5 | 1.2 | 1.5 | 0.9 | 0.9 | 1.0 |
| Venezuela | 1.1 | 1.0 | 1.2 | - | - | - | 1.2 | 1.3 | 1.3 |
| NORTH AMERICA | 3.5 | 2.6 | 2.8 | 11.0 | 13.1 | 11.8 | 36.2 | 32.3 | 32.7 |
| Canada | 1.5 | 1.2 | 1.2 | 2.6 | 2.7 | 3.0 | 2.3 | 1.9 | 2.0 |
| United States of America | 2.0 | 1.5 | 1.6 | 8.4 | 10.4 | 8.8 | 33.9 | 30.4 | 30.7 |
| EUROPE | 32.3 | 30.4 | 31.5 | 4.2 | 4.9 | 4.4 | 60.5 | 61.5 | 63.4 |
| European Union | 29.7 | 28.0 | 29.1 | 1.1 | 1.1 | 1.0 | 55.2 | 55.4 | 56.5 |
| Russian Federation | 0.7 | 0.5 | 0.6 | 1.1 | 1.1 | 0.9 | 2.7 | 3.0 | 3.7 |
| Ukraine | 0.1 | 0.1 | 0.1 | 1.6 | 2.2 | 2.1 | 0.3 | 0.6 | 0.5 |
| OCEANIA | 1.7 | 1.8 | 1.8 | 0.2 | 0.2 | 0.2 | 2.4 | 2.4 | 2.5 |
| Australia | 0.8 | 0.8 | 0.8 | - | - | - | 1.4 | 1.4 | 1.5 |
| WORLD | 72.9 | 73.4 | 77.1 | 73.2 | 73.3 | 76.9 | 242.8 | 257.3 | 269.0 |
| Developing countries | 31.5 | 34.5 | 36.6 | 57.7 | 55.0 | 60.4 | 133.1 | 150.5 | 159.8 |
| Developed countries | 41.4 | 38.9 | 40.5 | 15.5 | 18.4 | 16.5 | 109.7 | 106.8 | 109.2 |
| LIFDCs | 9.9 | 11.4 | 11.7 | 11.2 | 10.4 | 11.8 | 79.0 | 94.2 | 100.8 |
| LDCs | 0.4 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 3.2 | 3.4 | 3.4 |

¹ Includes meals and cakes derived from oilcrops as well as fish meal and other meals from animal origin.

Table A13. Sugar statistics (*million tonnes, raw value*)

| | Production | | Utilization | | Imports | | Exports | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> | 2009/10 <i>estim.</i> | 2010/11 <i>f'cast</i> |
| ASIA | 52.5 | 61.3 | 76.5 | 77.2 | 29.4 | 26.5 | 9.7 | 9.5 |
| China | 12.8 | 13.9 | 17.0 | 17.0 | 1.9 | 2.0 | 0.1 | 0.1 |
| India | 17.6 | 26.0 | 24.6 | 24.7 | 6.0 | 1.0 | 0.1 | 1.1 |
| Indonesia | 3.1 | 2.8 | 5.3 | 5.5 | 2.2 | 2.9 | - | - |
| Japan | 0.9 | 0.9 | 2.3 | 2.3 | 1.5 | 1.3 | - | - |
| Malaysia | - | - | 1.3 | 1.4 | 1.6 | 1.7 | 0.2 | 0.2 |
| Pakistan | 3.3 | 3.6 | 4.3 | 4.3 | 0.8 | 1.5 | 0.1 | 0.1 |
| Philippines | 2.1 | 2.1 | 2.3 | 2.5 | 0.2 | 0.1 | 0.2 | 0.1 |
| Thailand | 7.3 | 7.0 | 2.7 | 2.7 | - | - | 5.1 | 4.8 |
| Turkey | 2.6 | 2.5 | 2.2 | 2.2 | - | - | - | 0.1 |
| Viet Nam | 1.1 | 1.0 | 1.5 | 1.5 | 0.4 | 0.5 | - | - |
| AFRICA | 10.8 | 11.1 | 15.5 | 16.1 | 9.5 | 9.7 | 5.0 | 3.9 |
| Egypt | 1.8 | 1.8 | 2.8 | 2.9 | 1.1 | 1.2 | 0.2 | 0.2 |
| Ethiopia | 0.3 | 0.3 | 0.4 | 0.5 | 0.2 | 0.1 | 0.1 | - |
| Kenya | 0.6 | 0.7 | 0.9 | 0.9 | 0.3 | 0.3 | - | - |
| Mauritius | 0.5 | 0.5 | - | 0.1 | - | - | 0.6 | 0.5 |
| Mozambique | 0.4 | 0.5 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 |
| South Africa | 2.3 | 2.3 | 1.6 | 1.6 | 0.1 | 0.3 | 1.0 | 0.9 |
| Sudan | 0.9 | 1.0 | 1.3 | 1.3 | 0.6 | 0.5 | 0.2 | 0.2 |
| Swaziland | 0.6 | 0.7 | - | 0.1 | - | - | 0.6 | 0.6 |
| Tanzania, United Rep. of | 0.3 | 0.3 | 0.5 | 0.5 | 0.2 | 0.2 | - | 0.1 |
| CENTRAL AMERICA | 11.7 | 11.8 | 8.9 | 9.1 | 1.3 | 1.0 | 4.1 | 4.0 |
| Cuba | 1.4 | 1.3 | 0.7 | 0.7 | 0.1 | - | 0.8 | 0.7 |
| Dominican Republic | 0.5 | 0.5 | 0.4 | 0.4 | - | - | 0.2 | 0.2 |
| Guatemala | 2.3 | 2.4 | 0.8 | 0.8 | 0.1 | 0.1 | 1.6 | 1.5 |
| Mexico | 4.9 | 5.2 | 5.3 | 5.4 | 0.7 | 0.5 | 0.3 | 0.3 |
| SOUTH AMERICA | 45.4 | 48.2 | 20.9 | 22.4 | 1.4 | 1.3 | 27.4 | 27.5 |
| Argentina | 2.4 | 2.5 | 1.9 | 2.0 | - | - | 0.8 | 0.5 |
| Brazil | 37.2 | 39.9 | 13.1 | 14.6 | - | - | 25.2 | 25.8 |
| Colombia | 2.5 | 2.5 | 1.6 | 1.6 | 0.1 | - | 0.9 | 0.9 |
| Peru | 1.1 | 1.1 | 1.2 | 1.0 | 0.2 | 0.2 | 0.1 | - |
| Venezuela | 0.6 | 0.7 | 1.2 | 1.2 | 0.4 | 0.4 | - | - |
| NORTH AMERICA | 7.3 | 7.7 | 10.7 | 10.9 | 3.7 | 3.7 | 0.2 | 0.2 |
| United States of America | 7.2 | 7.6 | 9.4 | 9.5 | 2.4 | 2.3 | 0.2 | 0.1 |
| EUROPE | 24.0 | 23.8 | 28.8 | 28.8 | 7.6 | 6.6 | 3.0 | 1.7 |
| European Union | 17.2 | 16.6 | 18.5 | 18.7 | 3.7 | 2.7 | 2.0 | 0.7 |
| Russian Federation | 3.6 | 3.4 | 6.1 | 5.8 | 2.3 | 2.5 | 0.1 | 0.1 |
| Ukraine | 1.5 | 2.1 | 2.1 | 2.1 | 0.4 | 0.4 | - | 0.3 |
| OCEANIA | 4.9 | 4.9 | 1.3 | 1.5 | 0.4 | 0.3 | 3.8 | 3.8 |
| Australia | 4.7 | 4.6 | 1.0 | 1.0 | - | - | 3.6 | 3.6 |
| Fiji | 0.2 | 0.3 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 |
| WORLD | 156.7 | 168.8 | 162.6 | 166.1 | 53.1 | 49.9 | 53.2 | 50.6 |
| Developing countries | 117.3 | 129.5 | 115.4 | 118.6 | 37.2 | 34.4 | 45.0 | 43.9 |
| Developed countries | 39.3 | 39.3 | 47.2 | 47.5 | 16.0 | 15.6 | 8.3 | 6.8 |
| LIFDCs | 49.3 | 58.8 | 72.6 | 73.6 | 24.4 | 21.1 | 5.2 | 5.1 |
| LDCs | 3.8 | 4.0 | 7.0 | 7.2 | 5.0 | 5.2 | 1.9 | 1.3 |

Table A14. Total meat statistics¹ (thousand tonnes, carcass weight equivalent)

| | Production | | Imports | | Exports | | Utilization | |
|---------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 2009 <i>estim.</i> | 2010 <i>f'cast</i> |
| ASIA | 118 683 | 120 205 | 11 481 | 12 271 | 3 347 | 3 606 | 126 817 | 128 870 |
| China | 78 020 | 79 490 | 3 046 | 3 293 | 1 480 | 1 620 | 79 585 | 81 164 |
| of which Hong Kong, SAR | 179 | 183 | 1 735 | 2 001 | 726 | 755 | 1 188 | 1 428 |
| India | 6 816 | 7 026 | 2 | 2 | 708 | 812 | 6 110 | 6 216 |
| Indonesia | 2 658 | 2 701 | 110 | 118 | 6 | 5 | 2 762 | 2 814 |
| Iran, Islamic Republic of | 2 565 | 2 314 | 184 | 298 | 27 | 27 | 2 723 | 2 585 |
| Japan | 3 233 | 3 194 | 2 610 | 2 760 | 17 | 16 | 5 827 | 5 938 |
| Korea, Republic of | 1 952 | 2 034 | 731 | 772 | 25 | 13 | 2 658 | 2 793 |
| Malaysia | 1 303 | 1 334 | 230 | 244 | 33 | 33 | 1 500 | 1 544 |
| Pakistan | 2 540 | 2 318 | 21 | 21 | 26 | 29 | 2 536 | 2 310 |
| Philippines | 2 829 | 2 846 | 245 | 261 | 15 | 16 | 3 060 | 3 091 |
| Saudi Arabia | 766 | 779 | 782 | 820 | 56 | 57 | 1 493 | 1 542 |
| Singapore | 109 | 111 | 268 | 288 | 26 | 23 | 350 | 376 |
| Thailand | 2 165 | 2 206 | 5 | 5 | 619 | 668 | 1 552 | 1 544 |
| Turkey | 1 952 | 1 933 | 92 | 97 | 122 | 95 | 1 923 | 1 935 |
| Viet Nam | 3 477 | 3 461 | 625 | 671 | 33 | 33 | 4 069 | 4 098 |
| AFRICA | 13 485 | 13 672 | 1 818 | 1 918 | 132 | 147 | 15 170 | 15 443 |
| Algeria | 606 | 608 | 87 | 86 | - | - | 693 | 694 |
| Angola | 130 | 144 | 360 | 383 | - | - | 490 | 527 |
| Egypt | 1 278 | 1 256 | 238 | 262 | 9 | 10 | 1 507 | 1 508 |
| Nigeria | 1 165 | 1 186 | 2 | 2 | - | - | 1 166 | 1 188 |
| South Africa | 2 234 | 2 273 | 290 | 313 | 38 | 49 | 2 487 | 2 537 |
| CENTRAL AMERICA | 8 270 | 8 376 | 2 385 | 2 576 | 308 | 340 | 10 347 | 10 613 |
| Cuba | 291 | 298 | 222 | 290 | - | - | 512 | 588 |
| Mexico | 5 694 | 5 751 | 1 659 | 1 722 | 135 | 154 | 7 218 | 7 319 |
| SOUTH AMERICA | 36 255 | 36 295 | 790 | 857 | 7 824 | 7 781 | 29 221 | 29 370 |
| Argentina | 5 054 | 4 339 | 41 | 45 | 836 | 637 | 4 260 | 3 746 |
| Brazil | 22 383 | 23 092 | 39 | 48 | 5 971 | 6 110 | 16 450 | 17 030 |
| Chile | 1 366 | 1 377 | 202 | 220 | 277 | 255 | 1 291 | 1 342 |
| Colombia | 2 161 | 2 169 | 56 | 59 | 109 | 113 | 2 108 | 2 115 |
| Uruguay | 741 | 742 | 17 | 18 | 387 | 388 | 371 | 372 |
| Venezuela | 1 276 | 1 244 | 372 | 399 | - | - | 1 648 | 1 643 |
| NORTH AMERICA | 46 065 | 45 951 | 2 382 | 2 355 | 8 243 | 8 401 | 40 204 | 39 905 |
| Canada | 4 450 | 4 447 | 652 | 650 | 1 664 | 1 715 | 3 438 | 3 383 |
| United States of America | 41 614 | 41 502 | 1 711 | 1 685 | 6 579 | 6 686 | 36 746 | 36 501 |
| EUROPE | 55 269 | 55 831 | 5 392 | 4 956 | 2 947 | 3 244 | 57 714 | 57 543 |
| Belarus | 907 | 932 | 58 | 71 | 182 | 176 | 784 | 827 |
| European Union | 43 802 | 43 966 | 1 748 | 1 702 | 2 591 | 2 907 | 42 959 | 42 761 |
| Russian Federation | 6 543 | 6 919 | 2 710 | 2 299 | 70 | 57 | 9 183 | 9 161 |
| Ukraine | 1 922 | 1 898 | 364 | 345 | 39 | 36 | 2 247 | 2 207 |
| OCEANIA | 5 868 | 5 880 | 359 | 381 | 2 550 | 2 545 | 3 678 | 3 716 |
| Australia | 4 048 | 4 025 | 179 | 197 | 1 673 | 1 660 | 2 554 | 2 561 |
| New Zealand | 1 341 | 1 371 | 50 | 50 | 874 | 883 | 517 | 538 |
| WORLD | 283 895 | 286 210 | 24 607 | 25 314 | 25 351 | 26 063 | 283 151 | 285 462 |
| Developing countries | 168 622 | 170 439 | 13 058 | 14 015 | 11 523 | 11 773 | 170 157 | 172 681 |
| Developed countries | 115 273 | 115 771 | 11 549 | 11 299 | 13 828 | 14 290 | 112 994 | 112 781 |
| LIFDCs | 107 142 | 108 937 | 3 908 | 4 001 | 1 835 | 2 062 | 109 214 | 110 876 |
| LDCs | 7 859 | 8 027 | 1 000 | 1 068 | 4 | 4 | 8 854 | 9 091 |

¹ Including "other meat".

Table A15. Bovine meat statistics (thousand tonnes, carcass weight equivalent)

| | Production | | Imports | | Exports | | Utilization | |
|---------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 2009 <i>estim.</i> | 2010 <i>f'cast</i> |
| ASIA | 16 266 | 16 065 | 2 736 | 2 966 | 906 | 1 021 | 18 039 | 18 017 |
| China | 6 425 | 6 189 | 410 | 503 | 109 | 124 | 6 706 | 6 568 |
| India | 2 848 | 2 950 | 1 | 1 | 683 | 785 | 2 166 | 2 166 |
| Indonesia | 443 | 454 | 89 | 100 | 1 | 1 | 531 | 554 |
| Iran, Islamic Republic of | 370 | 250 | 123 | 195 | - | - | 493 | 445 |
| Japan | 517 | 510 | 689 | 688 | 7 | 6 | 1 196 | 1 193 |
| Korea, Republic of | 267 | 280 | 276 | 302 | 4 | 1 | 507 | 588 |
| Malaysia | 28 | 28 | 145 | 150 | 6 | 6 | 167 | 172 |
| Pakistan | 1 441 | 1 400 | 5 | 5 | 17 | 20 | 1 429 | 1 385 |
| Philippines | 284 | 287 | 118 | 115 | 6 | 7 | 395 | 396 |
| AFRICA | 4 829 | 4 882 | 551 | 549 | 71 | 72 | 5 309 | 5 358 |
| Algeria | 127 | 129 | 81 | 80 | - | - | 208 | 209 |
| Angola | 74 | 87 | 101 | 102 | - | - | 175 | 189 |
| Egypt | 355 | 330 | 180 | 190 | 5 | 5 | 530 | 515 |
| South Africa | 780 | 780 | 13 | 15 | 7 | 8 | 786 | 788 |
| CENTRAL AMERICA | 2 383 | 2 436 | 448 | 472 | 185 | 205 | 2 647 | 2 704 |
| Mexico | 1 700 | 1 731 | 323 | 335 | 52 | 61 | 1 971 | 2 005 |
| SOUTH AMERICA | 15 361 | 14 840 | 381 | 324 | 2 791 | 2 681 | 12 951 | 12 482 |
| Argentina | 3 376 | 2 532 | 2 | 2 | 580 | 348 | 2 798 | 2 186 |
| Brazil | 8 935 | 9 230 | 31 | 40 | 1 510 | 1 586 | 7 456 | 7 684 |
| Chile | 210 | 215 | 155 | 160 | 11 | 11 | 354 | 364 |
| Colombia | 936 | 940 | 2 | 2 | 106 | 110 | 833 | 832 |
| Uruguay | 590 | 600 | 2 | 2 | 348 | 357 | 244 | 245 |
| Venezuela | 320 | 320 | 180 | 108 | - | - | 500 | 428 |
| NORTH AMERICA | 13 146 | 13 083 | 1 367 | 1 322 | 1 357 | 1 552 | 13 178 | 12 912 |
| Canada | 1 255 | 1 285 | 240 | 228 | 448 | 489 | 1 047 | 1 024 |
| United States of America | 11 891 | 11 798 | 1 123 | 1 090 | 909 | 1 063 | 12 127 | 11 884 |
| EUROPE | 10 929 | 10 933 | 1 557 | 1 630 | 340 | 354 | 12 146 | 12 209 |
| European Union | 7 927 | 7 895 | 495 | 490 | 150 | 160 | 8 272 | 8 225 |
| Russian Federation | 1 741 | 1 758 | 934 | 1 008 | 37 | 33 | 2 638 | 2 733 |
| Ukraine | 454 | 450 | 13 | 12 | 19 | 21 | 447 | 441 |
| OCEANIA | 2 805 | 2 770 | 47 | 49 | 1 726 | 1 710 | 1 126 | 1 108 |
| Australia | 2 148 | 2 118 | 9 | 9 | 1 255 | 1 242 | 902 | 885 |
| New Zealand | 637 | 632 | 9 | 10 | 470 | 466 | 177 | 176 |
| WORLD | 65 719 | 65 008 | 7 088 | 7 312 | 7 376 | 7 596 | 65 397 | 64 790 |
| Developing countries | 36 065 | 35 433 | 3 263 | 3 460 | 3 936 | 3 966 | 35 339 | 34 934 |
| Developed countries | 29 654 | 29 575 | 3 825 | 3 853 | 3 440 | 3 631 | 30 058 | 29 857 |
| LIFDCs | 17 377 | 17 319 | 763 | 777 | 999 | 1 134 | 17 141 | 16 963 |
| LDCs | 2 840 | 2 927 | 152 | 149 | 2 | 2 | 2 990 | 3 074 |

Table A16. Ovine meat statistics (*thousand tonnes, carcass weight equivalent*)

| | Production | | Imports | | Exports | | Utilization | |
|---------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 2009 <i>estim.</i> | 2010 <i>f'cast</i> |
| ASIA | 7 631 | 7 687 | 333 | 365 | 49 | 51 | 7 915 | 8 001 |
| Bangladesh | 220 | 225 | - | - | - | - | 220 | 225 |
| China | 3 868 | 3 904 | 103 | 110 | 15 | 15 | 3 957 | 4 000 |
| India | 719 | 720 | - | - | 20 | 21 | 699 | 699 |
| Iran, Islamic Republic of | 497 | 498 | 1 | 2 | - | - | 498 | 500 |
| Pakistan | 425 | 400 | - | - | 8 | 8 | 418 | 392 |
| Saudi Arabia | 104 | 105 | 65 | 70 | 5 | 5 | 164 | 170 |
| Syria | 198 | 200 | - | - | - | - | 198 | 200 |
| Turkey | 299 | 300 | 1 | 1 | - | - | 300 | 301 |
| AFRICA | 2 256 | 2 278 | 47 | 45 | 15 | 15 | 2 287 | 2 308 |
| Algeria | 201 | 201 | 5 | 5 | - | - | 206 | 206 |
| Nigeria | 258 | 264 | - | - | - | - | 258 | 264 |
| South Africa | 131 | 131 | 12 | 10 | 1 | 1 | 143 | 140 |
| Sudan | 343 | 345 | - | - | 1 | 1 | 342 | 344 |
| CENTRAL AMERICA | 122 | 123 | 34 | 30 | - | - | 156 | 153 |
| Mexico | 97 | 97 | 21 | 16 | - | - | 118 | 113 |
| SOUTH AMERICA | 332 | 322 | 7 | 7 | 36 | 29 | 303 | 300 |
| Brazil | 109 | 111 | 7 | 7 | - | - | 116 | 117 |
| NORTH AMERICA | 119 | 113 | 103 | 106 | 9 | 9 | 213 | 210 |
| United States of America | 103 | 98 | 80 | 83 | 8 | 9 | 175 | 172 |
| EUROPE | 1 331 | 1 255 | 300 | 285 | 16 | 18 | 1 615 | 1 521 |
| European Union | 1 030 | 948 | 280 | 267 | 10 | 12 | 1 300 | 1 203 |
| Russian Federation | 183 | 185 | 10 | 8 | - | - | 192 | 193 |
| OCEANIA | 1 155 | 1 184 | 40 | 40 | 707 | 725 | 488 | 499 |
| Australia | 675 | 675 | - | - | 335 | 342 | 340 | 333 |
| New Zealand | 480 | 508 | 5 | 4 | 372 | 383 | 112 | 129 |
| WORLD | 12 948 | 12 963 | 863 | 878 | 832 | 848 | 12 978 | 12 993 |
| Developing countries | 9 733 | 9 789 | 417 | 445 | 100 | 95 | 10 049 | 10 139 |
| Developed countries | 3 215 | 3 174 | 446 | 434 | 732 | 753 | 2 928 | 2 854 |
| LIFDCs | 8 083 | 8 145 | 111 | 121 | 39 | 41 | 8 155 | 8 225 |
| LDCs | 1 495 | 1 515 | 7 | 7 | 1 | 1 | 1 500 | 1 521 |

Table A17. Pigmeat statistics (thousand tonnes, carcass weight equivalent)

| | Production | | Imports | | Exports | | Utilization | |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 2009 <i>estim.</i> | 2010 <i>f'cast</i> |
| ASIA | 59 724 | 60 788 | 2 624 | 2 842 | 505 | 476 | 61 918 | 63 161 |
| China | 49 881 | 50 958 | 787 | 909 | 423 | 407 | 50 244 | 51 460 |
| of which Hong Kong, SAR | 120 | 122 | 546 | 628 | 185 | 150 | 481 | 600 |
| India | 481 | 483 | 1 | 1 | 3 | 3 | 479 | 481 |
| Indonesia | 650 | 670 | 1 | 1 | 1 | 1 | 650 | 671 |
| Japan | 1 310 | 1 280 | 1 085 | 1 128 | 1 | - | 2 414 | 2 415 |
| Korea, D.P.R. | 185 | 190 | 4 | 4 | - | - | 189 | 194 |
| Korea, Republic of | 1 062 | 1 097 | 366 | 360 | 9 | - | 1 474 | 1 457 |
| Malaysia | 199 | 204 | 21 | 25 | 7 | 5 | 213 | 224 |
| Philippines | 1 710 | 1 700 | 54 | 70 | 2 | 2 | 1 763 | 1 768 |
| Thailand | 756 | 700 | - | 1 | 16 | 16 | 740 | 685 |
| Viet Nam | 2 553 | 2 550 | 45 | 55 | 33 | 33 | 2 565 | 2 572 |
| AFRICA | 1 080 | 1 096 | 172 | 180 | 11 | 12 | 1 240 | 1 265 |
| Madagascar | 55 | 55 | - | - | - | - | 55 | 55 |
| Nigeria | 222 | 225 | - | - | - | - | 222 | 225 |
| South Africa | 313 | 320 | 33 | 35 | 4 | 4 | 342 | 351 |
| Uganda | 110 | 110 | - | - | - | - | 110 | 110 |
| CENTRAL AMERICA | 1 658 | 1 667 | 716 | 731 | 87 | 96 | 2 287 | 2 302 |
| Cuba | 179 | 182 | 27 | 30 | - | - | 206 | 212 |
| Mexico | 1 162 | 1 161 | 574 | 580 | 72 | 82 | 1 664 | 1 659 |
| SOUTH AMERICA | 4 674 | 4 725 | 84 | 89 | 856 | 776 | 3 902 | 4 038 |
| Argentina | 230 | 230 | 32 | 36 | 2 | 2 | 261 | 264 |
| Brazil | 2 924 | 2 962 | 1 | 1 | 714 | 631 | 2 210 | 2 332 |
| Chile | 514 | 515 | 7 | 5 | 140 | 143 | 380 | 377 |
| Colombia | 179 | 180 | 9 | 7 | - | - | 188 | 187 |
| Venezuela | 168 | 175 | 11 | 15 | - | - | 179 | 190 |
| NORTH AMERICA | 12 387 | 11 988 | 604 | 629 | 2 751 | 2 901 | 10 236 | 9 716 |
| Canada | 1 945 | 1 902 | 182 | 200 | 1 016 | 1 022 | 1 111 | 1 080 |
| United States of America | 10 442 | 10 086 | 416 | 424 | 1 735 | 1 879 | 9 119 | 8 631 |
| EUROPE | 26 075 | 26 233 | 1 132 | 1 142 | 1 507 | 1 766 | 25 700 | 25 609 |
| Belarus | 380 | 385 | 26 | 40 | 45 | 40 | 360 | 385 |
| European Union | 21 888 | 21 976 | 38 | 40 | 1 413 | 1 680 | 20 513 | 20 336 |
| Russian Federation | 2 169 | 2 252 | 760 | 730 | 25 | 21 | 2 904 | 2 961 |
| Serbia | 620 | 620 | 15 | 16 | 6 | 6 | 628 | 629 |
| Ukraine | 527 | 500 | 156 | 167 | - | - | 682 | 667 |
| OCEANIA | 460 | 465 | 212 | 230 | 35 | 34 | 637 | 661 |
| Australia | 324 | 325 | 164 | 182 | 35 | 34 | 453 | 473 |
| Papua New Guinea | 68 | 68 | 3 | 4 | - | - | 71 | 72 |
| WORLD | 106 058 | 106 962 | 5 544 | 5 846 | 5 754 | 6 061 | 105 919 | 106 752 |
| Developing countries | 65 314 | 66 476 | 2 388 | 2 575 | 1 455 | 1 355 | 66 301 | 67 696 |
| Developed countries | 40 744 | 40 485 | 3 157 | 3 271 | 4 299 | 4 707 | 39 618 | 39 056 |
| LIFDCs | 53 471 | 54 589 | 534 | 619 | 301 | 313 | 53 705 | 54 895 |
| LDCs | 1 098 | 1 122 | 121 | 125 | - | - | 1 219 | 1 247 |

Table A18. Poultry meat statistics (thousand tonnes, carcass weight equivalent)

| | Production | | Imports | | Exports | | Utilization | |
|---------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 2009 <i>estim.</i> | 2010 <i>f'cast</i> |
| ASIA | 33 153 | 33 738 | 5 746 | 6 055 | 1 853 | 2 023 | 37 046 | 37 770 |
| China | 16 439 | 17 022 | 1 740 | 1 765 | 916 | 1 056 | 17 263 | 17 731 |
| of which Hong Kong, SAR | 44 | 45 | 891 | 989 | 490 | 550 | 445 | 484 |
| India | 2 624 | 2 726 | - | - | 1 | 2 | 2 623 | 2 724 |
| Indonesia | 1 435 | 1 435 | 15 | 12 | - | - | 1 450 | 1 447 |
| Iran, Islamic Republic of | 1 682 | 1 550 | 60 | 100 | 26 | 26 | 1 716 | 1 624 |
| Japan | 1 394 | 1 392 | 797 | 903 | 9 | 10 | 2 183 | 2 285 |
| Korea, Republic of | 613 | 647 | 78 | 99 | 12 | 12 | 679 | 734 |
| Kuwait | 44 | 44 | 280 | 300 | 2 | 2 | 322 | 342 |
| Malaysia | 1 075 | 1 100 | 45 | 50 | 19 | 22 | 1 101 | 1 128 |
| Saudi Arabia | 580 | 590 | 620 | 647 | 40 | 41 | 1 160 | 1 196 |
| Singapore | 91 | 95 | 119 | 125 | 8 | 7 | 203 | 213 |
| Thailand | 1 134 | 1 208 | 1 | 1 | 596 | 644 | 539 | 565 |
| Turkey | 1 308 | 1 300 | 90 | 95 | 117 | 90 | 1 281 | 1 305 |
| Yemen | 140 | 145 | 110 | 130 | - | - | 250 | 275 |
| AFRICA | 3 933 | 4 002 | 1 019 | 1 113 | 27 | 39 | 4 925 | 5 076 |
| Angola | 8 | 8 | 174 | 190 | - | - | 182 | 198 |
| South Africa | 988 | 1 020 | 232 | 253 | 20 | 31 | 1 200 | 1 242 |
| CENTRAL AMERICA | 3 987 | 4 030 | 1 167 | 1 322 | 34 | 37 | 5 119 | 5 315 |
| Cuba | 33 | 34 | 180 | 240 | - | - | 213 | 274 |
| Mexico | 2 633 | 2 659 | 725 | 776 | 9 | 10 | 3 349 | 3 425 |
| SOUTH AMERICA | 15 650 | 16 167 | 316 | 435 | 4 074 | 4 228 | 11 892 | 12 374 |
| Argentina | 1 263 | 1 389 | 7 | 7 | 214 | 246 | 1 055 | 1 150 |
| Brazil | 10 385 | 10 759 | 1 | 1 | 3 724 | 3 870 | 6 662 | 6 890 |
| Chile | 615 | 620 | 40 | 55 | 118 | 94 | 537 | 581 |
| Venezuela | 779 | 740 | 181 | 275 | - | - | 960 | 1 015 |
| NORTH AMERICA | 20 165 | 20 516 | 299 | 288 | 4 089 | 3 901 | 16 423 | 16 920 |
| Canada | 1 212 | 1 223 | 204 | 196 | 181 | 185 | 1 235 | 1 234 |
| United States of America | 18 953 | 19 293 | 85 | 81 | 3 907 | 3 716 | 15 178 | 15 676 |
| EUROPE | 15 740 | 16 218 | 2 243 | 1 738 | 999 | 1 020 | 16 984 | 16 936 |
| European Union | 11 914 | 12 105 | 835 | 805 | 936 | 973 | 11 813 | 11 937 |
| Russian Federation | 2 360 | 2 635 | 964 | 511 | 7 | 2 | 3 318 | 3 144 |
| Ukraine | 894 | 900 | 195 | 165 | 19 | 14 | 1 070 | 1 051 |
| OCEANIA | 1 039 | 1 046 | 56 | 58 | 40 | 34 | 1 055 | 1 070 |
| Australia | 880 | 885 | 4 | 4 | 34 | 27 | 850 | 862 |
| New Zealand | 137 | 140 | 1 | 1 | 6 | 7 | 131 | 134 |
| WORLD | 93 668 | 95 717 | 10 845 | 11 010 | 11 116 | 11 282 | 93 443 | 95 461 |
| Developing countries | 53 640 | 54 815 | 6 911 | 7 455 | 5 927 | 6 252 | 54 622 | 56 016 |
| Developed countries | 40 028 | 40 903 | 3 934 | 3 555 | 5 189 | 5 030 | 38 821 | 39 445 |
| LIFDCs | 24 995 | 25 621 | 2 461 | 2 445 | 464 | 541 | 26 991 | 27 525 |
| LDCs | 1 807 | 1 829 | 695 | 762 | - | - | 2 502 | 2 591 |

Table A19. Milk and milk products statistics (million tonnes, milk equivalent)

| | Production | | | Imports | | | Exports | | |
|---------------------------|----------------------|-----------------------|-----------------------|----------------------|-----------------------|-----------------------|----------------------|-----------------------|-----------------------|
| | 2006-2008 average | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 2006-2008 average | 2009 <i>estim.</i> | 2010 <i>f'cast</i> | 2006-2008 average | 2009 <i>estim.</i> | 2010 <i>f'cast</i> |
| ASIA | 238.6 | 250.9 | 257.4 | 20.5 | 22.4 | 25.2 | 5.4 | 5.0 | 4.8 |
| China | 38.8 | 40.6 | 44.6 | 2.1 | 3.3 | 4.1 | 0.5 | 0.2 | 0.2 |
| India ¹ | 103.9 | 110.0 | 114.4 | 0.1 | 0.2 | 0.2 | 0.5 | 0.5 | 0.6 |
| Indonesia | 1.0 | 1.2 | 1.3 | 1.5 | 1.4 | 1.5 | 0.3 | 0.2 | 0.2 |
| Iran, Islamic Republic of | 7.6 | 7.8 | 8.0 | 0.4 | 0.6 | 0.7 | - | - | 0.1 |
| Japan | 8.0 | 7.9 | 7.9 | 1.4 | 1.2 | 1.2 | - | - | - |
| Korea, Republic of | 2.2 | 2.1 | 2.1 | 0.3 | 0.4 | 0.4 | - | - | - |
| Malaysia | - | 0.1 | 0.1 | 1.2 | 1.0 | 1.2 | 0.4 | 0.3 | 0.2 |
| Pakistan | 32.2 | 34.4 | 31.6 | 0.2 | 0.1 | 0.2 | - | - | - |
| Philippines | - | - | - | 1.2 | 1.4 | 1.4 | 0.3 | 0.2 | 0.2 |
| Saudi Arabia | 1.8 | 2.1 | 2.2 | 2.2 | 1.9 | 2.0 | 1.3 | 1.4 | 1.3 |
| Singapore | - | - | - | 1.3 | 1.3 | 1.4 | 0.7 | 0.6 | 0.6 |
| Thailand | 0.8 | 0.8 | 0.9 | 0.8 | 0.7 | 0.7 | 0.2 | 0.1 | 0.1 |
| Turkey | 12.2 | 12.5 | 12.2 | 0.2 | 0.3 | 0.3 | 0.1 | 0.1 | 0.1 |
| AFRICA | 35.7 | 36.9 | 37.4 | 7.1 | 7.4 | 7.1 | 0.7 | 1.0 | 1.0 |
| Algeria | 2.0 | 2.0 | 2.0 | 2.1 | 2.4 | 1.8 | 0.7 | 1.0 | 1.0 |
| Egypt | 5.5 | 5.9 | 6.0 | 0.6 | 1.0 | 1.0 | 0.3 | 0.6 | 0.6 |
| Kenya | 4.1 | 4.2 | 4.4 | - | - | - | - | - | - |
| South Africa | 3.1 | 3.1 | 3.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Sudan | 7.4 | 7.4 | 7.5 | 0.3 | 0.3 | 0.3 | - | - | - |
| Tunisia | 1.0 | 1.1 | 1.2 | 0.1 | 0.1 | 0.1 | 0.1 | - | 0.1 |
| CENTRAL AMERICA | 15.4 | 16.0 | 16.2 | 4.0 | 4.2 | 4.1 | 0.4 | 0.4 | 0.5 |
| Costa Rica | 0.9 | 0.9 | 0.9 | - | - | - | 0.1 | - | 0.1 |
| Mexico | 10.6 | 11.0 | 11.1 | 2.1 | 2.4 | 2.4 | 0.1 | 0.1 | 0.1 |
| SOUTH AMERICA | 57.2 | 59.8 | 61.3 | 1.6 | 2.0 | 2.0 | 3.2 | 3.0 | 3.1 |
| Argentina | 10.2 | 10.4 | 10.4 | - | - | - | 1.6 | 1.6 | 1.7 |
| Brazil | 26.8 | 28.9 | 30.0 | 0.3 | 0.6 | 0.6 | 0.5 | 0.2 | 0.3 |
| Colombia | 7.0 | 7.5 | 7.5 | - | - | - | 0.1 | - | - |
| Uruguay | 1.5 | 1.4 | 1.5 | - | - | - | 0.6 | 0.8 | 0.7 |
| Venezuela | 1.8 | 1.7 | 1.6 | 0.9 | 1.0 | 1.0 | - | - | - |
| NORTH AMERICA | 92.4 | 94.1 | 95.3 | 2.4 | 2.1 | 1.7 | 3.7 | 3.1 | 3.6 |
| Canada | 8.1 | 8.2 | 8.3 | 0.5 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 |
| United States of America | 84.3 | 85.9 | 87.1 | 1.9 | 1.7 | 1.4 | 3.5 | 2.9 | 3.5 |
| EUROPE | 215.5 | 215.0 | 217.2 | 4.7 | 4.5 | 4.9 | 12.9 | 13.2 | 14.5 |
| Belarus | 6.0 | 6.6 | 6.9 | - | - | 0.1 | 1.7 | 2.2 | 2.2 |
| European Union | 151.1 | 153.0 | 154.9 | 1.4 | 1.2 | 1.1 | 9.5 | 9.4 | 10.8 |
| Russian Federation | 32.0 | 32.6 | 32.9 | 2.5 | 2.4 | 2.7 | 0.2 | 0.2 | 0.2 |
| Ukraine | 12.4 | 11.6 | 11.3 | 0.1 | 0.2 | 0.2 | 1.0 | 0.6 | 0.6 |
| OCEANIA | 25.0 | 26.1 | 25.9 | 0.7 | 0.8 | 0.8 | 14.8 | 17.8 | 18.5 |
| Australia ² | 9.6 | 9.4 | 9.0 | 0.5 | 0.5 | 0.5 | 3.7 | 3.7 | 3.3 |
| New Zealand ³ | 15.3 | 16.7 | 16.8 | 0.1 | 0.1 | 0.1 | 11.1 | 14.1 | 15.2 |
| WORLD | 679.7 | 698.8 | 710.7 | 40.9 | 43.4 | 45.9 | 41.0 | 43.5 | 46.0 |
| Developing countries | 318.5 | 334.2 | 342.1 | 31.0 | 34.1 | 35.2 | 9.5 | 9.2 | 9.1 |
| Developed countries | 361.2 | 364.6 | 368.5 | 9.9 | 9.7 | 9.7 | 31.5 | 34.6 | 35.8 |
| LIFDCs | 239.8 | 253.0 | 260.1 | 11.1 | 12.8 | 14.3 | 4.2 | 4.6 | 4.6 |
| LDCs | 24.3 | 25.0 | 25.2 | 2.7 | 2.8 | 2.9 | 0.1 | 0.1 | 0.1 |

¹ Dairy years starting April of the year stated (production only).

² Dairy years ending June of the year stated (production only).

³ Dairy years ending May of the year stated (production only).

Note: Trade figures refer to the milk equivalent trade in the following products: butter (6.60), cheese (4.40), milk powder (7.60), skim condensed/evaporated milk (1.90), whole condensed/evaporated milk (2.10), yoghurt (1.0), cream (3.60), casein (7.40), skim milk (0.70). The conversion factors cited refer to the solids content method. Refer to IDF Bulletin No. 390 (March 2004).

Table A20. Fish and fishery products statistics ¹

| | Capture fisheries production | | Aquaculture fisheries production | | Exports | | | Imports | | |
|-----------------------------|--|-------------|----------------------------------|-------------|--------------------|-----------------------|------------------------|--------------------|-----------------------|------------------------|
| | 2007 | 2008 | 2007 | 2008 | 2008 | 2009 <i>estim.</i> | 2010 <i>f'cast.</i> | 2008 | 2009 <i>estim.</i> | 2010 <i>f'cast.</i> |
| | <i>Million tonnes (live weight equivalent)</i> | | | | <i>USD billion</i> | | | <i>USD billion</i> | | |
| ASIA | 46.3 | 46.9 | 44.2 | 46.7 | 35.0 | 34.1 | 37.7 | 32.9 | 30.5 | 33.7 |
| China ² | 16.0 | 16.0 | 31.7 | 33.1 | 12.1 | 12.2 | 14.3 | 8.3 | 8.3 | 9.6 |
| of which: Hong Kong SAR | 0.2 | 0.2 | - | - | 0.5 | 0.8 | 0.8 | 2.4 | 2.5 | 2.8 |
| Taiwan Prov. | 1.2 | 1.0 | 0.3 | 0.3 | 1.5 | 1.2 | 1.3 | 0.7 | 0.8 | 0.9 |
| India | 3.9 | 4.1 | 3.1 | 3.5 | 1.6 | 1.6 | 1.6 | 0.1 | 0.1 | 0.1 |
| Indonesia | 5.1 | 5.0 | 1.4 | 1.7 | 2.5 | 2.3 | 2.4 | 0.2 | 0.2 | 0.3 |
| Japan | 4.3 | 4.2 | 0.8 | 0.7 | 1.7 | 1.6 | 1.9 | 14.9 | 13.2 | 14.0 |
| Korea, Rep. of | 1.9 | 1.9 | 0.6 | 0.5 | 1.3 | 1.3 | 1.5 | 2.9 | 2.7 | 3.2 |
| Philippines | 2.5 | 2.6 | 0.7 | 0.7 | 0.6 | 0.6 | 0.6 | 0.1 | 0.2 | 0.2 |
| Thailand | 2.3 | 2.5 | 1.4 | 1.4 | 6.5 | 6.2 | 7.1 | 2.4 | 2.0 | 2.1 |
| Viet Nam | 2.0 | 2.1 | 2.1 | 2.5 | 4.6 | 4.7 | 5.0 | 0.4 | 0.5 | 0.5 |
| AFRICA | 7.2 | 7.2 | 0.8 | 0.9 | 4.8 | 4.6 | 4.8 | 3.0 | 3.1 | 3.4 |
| Ghana | 0.3 | 0.3 | - | - | - | - | - | 0.1 | 0.1 | 0.1 |
| Morocco | 0.9 | 1.0 | - | - | 1.7 | 1.5 | 1.6 | 0.1 | 0.1 | 0.1 |
| Namibia | 0.4 | 0.4 | - | - | 0.6 | 0.6 | 0.6 | - | - | - |
| Nigeria | 0.5 | 0.5 | 0.1 | 0.1 | 0.1 | 0.3 | 0.4 | 0.6 | 0.8 | 0.9 |
| Senegal | 0.4 | 0.4 | - | - | 0.2 | 0.2 | 0.3 | - | - | - |
| South Africa | 0.7 | 0.6 | - | - | 0.5 | 0.4 | 0.5 | 0.2 | 0.3 | 0.3 |
| CENTRAL AMERICA | 2.0 | 2.1 | 0.3 | 0.3 | 2.2 | 1.8 | 1.9 | 1.2 | 1.0 | 1.1 |
| Mexico | 1.5 | 1.6 | 0.1 | 0.2 | 0.8 | 0.8 | 0.8 | 0.6 | 0.4 | 0.4 |
| Panama | 0.2 | 0.2 | - | - | 0.4 | 0.3 | 0.3 | - | - | - |
| SOUTH AMERICA | 13.9 | 13.8 | 1.4 | 1.4 | 10.4 | 9.4 | 9.9 | 1.9 | 1.9 | 2.0 |
| Argentina | 1.0 | 1.0 | - | - | 1.3 | 1.1 | 1.2 | 0.1 | 0.1 | 0.1 |
| Brazil | 0.8 | 0.8 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.7 | 0.7 | 0.8 |
| Chile | 3.8 | 3.6 | 0.8 | 0.8 | 3.9 | 3.6 | 3.8 | 0.3 | 0.1 | 0.1 |
| Ecuador | 0.4 | 0.4 | 0.2 | 0.2 | 1.8 | 1.6 | 1.7 | 0.2 | 0.2 | 0.2 |
| Peru | 7.2 | 7.4 | - | - | 2.4 | 2.2 | 2.3 | 0.1 | 0.1 | 0.1 |
| NORTH AMERICA | 6.0 | 5.5 | 0.7 | 0.6 | 8.5 | 7.8 | 8.5 | 16.2 | 15.1 | 16.4 |
| Canada | 1.0 | 0.9 | 0.2 | 0.1 | 3.7 | 3.3 | 3.7 | 2.0 | 2.0 | 2.2 |
| United States of America | 4.8 | 4.3 | 0.5 | 0.5 | 4.5 | 4.1 | 4.5 | 14.1 | 13.1 | 14.2 |
| EUROPE | 13.2 | 13.0 | 2.4 | 2.3 | 38.9 | 35.5 | 36.9 | 50.5 | 46.6 | 48.2 |
| European Union ² | 5.2 | 5.1 | 1.3 | 1.3 | 26.2 | 23.6 | 24.7 | 44.7 | 41.4 | 42.5 |
| of which Extra -EU | | | | | 4.4 | 3.8 | 4.1 | 23.9 | 22.0 | 22.2 |
| Iceland | 1.4 | 1.3 | - | - | 2.1 | 1.7 | 1.8 | 0.1 | 0.1 | 0.1 |
| Norway | 2.4 | 2.4 | 0.8 | 0.8 | 6.9 | 6.9 | 7.0 | 1.2 | 1.1 | 1.2 |
| Russian Federation | 3.5 | 3.4 | 0.1 | 0.1 | 2.6 | 2.3 | 2.4 | 2.4 | 2.0 | 2.3 |
| OCEANIA | 1.3 | 1.1 | 0.2 | 0.2 | 2.3 | 2.2 | 2.2 | 1.3 | 1.3 | 1.4 |
| Australia | 0.2 | 0.2 | 0.1 | 0.1 | 0.9 | 0.8 | 0.9 | 1.1 | 1.1 | 1.1 |
| New Zealand | 0.5 | 0.5 | 0.1 | 0.1 | 0.9 | 0.9 | 0.9 | 0.1 | 0.1 | 0.1 |
| WORLD³ | 89.9 | 89.7 | 49.9 | 52.5 | 102.0 | 95.4 | 101.9 | 107.4 | 99.5 | 106.1 |
| Developing countries | 65.6 | 66.3 | 45.9 | 48.7 | 51.1 | 48.8 | 52.8 | 24.2 | 23.4 | 26.2 |
| Developed countries | 24.2 | 23.4 | 4.0 | 3.9 | 50.9 | 46.6 | 49.0 | 83.2 | 75.8 | 79.7 |
| LIFDCs | 35.4 | 35.9 | 38.8 | 41.0 | 19.8 | 19.5 | 21.7 | 8.2 | 8.4 | 9.4 |
| LDCs | 7.9 | 8.1 | 1.8 | 1.9 | 2.6 | 2.6 | 2.1 | 0.5 | 0.5 | 0.5 |

¹ Production and trade data exclude whales, seals, other aquatic mammals and aquatic plants. Trade data include fish meal and fish oil.² Including intra-trade. Cyprus is included in the European Union as well as in Asia.³ For capture fisheries production, the aggregate includes also 63 346 tonnes in 2007 and 59 408 in 2008 of not identified countries, data not included in any other aggregates.

Table A21. Selected international prices of wheat and coarse grains (USD/tonne)

| Period | Wheat | | | Maize | | Barley | | Sorghum |
|---------------------------|---|---|-------------------------------------|---------------------------------|------------------------|----------------------|-------------------------------------|---------------------------------|
| | US No. 2 Hard Red Winter Ord. Prot. ¹ | US Soft Red Winter No. 2 ² | Argentina Trigo Pan ³ | US No. 2 Yellow ² | Argentina ³ | France feed Rouen | Australia feed Eastern States | US No. 2 Yellow ² |
| Annual (July/June) | | | | | | | | |
| 2004/05 | 154 | 138 | 123 | 97 | 90 | 132 | 123 | 99 |
| 2005/06 | 175 | 138 | 138 | 104 | 101 | 133 | 128 | 109 |
| 2006/07 | 212 | 176 | 188 | 150 | 145 | 185 | 185 | 155 |
| 2007/08 | 361 | 311 | 322 | 200 | 192 | 319 | 300 | 206 |
| 2008/09 | 270 | 201 | 234 | 188 | 180 | 178 | 179 | 170 |
| 2009/10 | 209 | 185 | 224 | 160 | 168 | 146 | 154 | 165 |
| 2009 – October | 212 | 175 | 214 | 168 | 176 | 153 | 149 | 174 |
| 2009 – November | 227 | 204 | 214 | 172 | 175 | 158 | 156 | 175 |
| 2009 – December | 221 | 207 | 240 | 166 | 177 | 153 | 154 | 182 |
| 2010 – January | 213 | 197 | 236 | 167 | 177 | 149 | 149 | 177 |
| 2010 – February | 207 | 192 | 221 | 162 | 164 | 140 | 147 | 169 |
| 2010 – March | 204 | 191 | 211 | 158 | 160 | 138 | 148 | 167 |
| 2010 – April | 200 | 187 | 228 | 156 | 161 | 143 | 153 | 160 |
| 2010 – May | 196 | 190 | 243 | 163 | 170 | 136 | 159 | 164 |
| 2010 – June | 181 | 183 | 206 | 152 | 163 | 131 | 159 | 156 |
| 2010 – July | 212 | 218 | 212 | 160 | 171 | 173 | 180 | 168 |
| 2010 – August | 272 | 257 | 277 | 174 | 198 | 261 | 253 | 185 |
| 2010 – September | 303 | 276 | 299 | 206 | 229 | 255 | 259 | 215 |
| 2010 – October | 291 | 266 | 294 | 236 | 248 | 264 | 263 | 231 |

¹ Delivered United States f.o.b. Gulf² Delivered United States Gulf³ Up River f.o.b.

Sources: International Grain Council and USDA

Table A22. Wheat and maize futures prices (USD/tonne)

| | December | | March | | May | | July | |
|--------------|----------|----------|-----------|-----------|----------|----------|-----------|-----------|
| | Dec 2010 | Dec 2009 | Mar. 2011 | Mar. 2010 | May 2011 | May 2010 | July 2011 | July 2010 |
| Wheat | | | | | | | | |
| Sept 27 | 260 | 167 | 270 | 174 | 274 | 180 | 270 | 186 |
| Oct 5 | 244 | 163 | 257 | 170 | 262 | 174 | 262 | 179 |
| Oct 12 | 261 | 182 | 274 | 189 | 279 | 193 | 279 | 198 |
| Oct 19 | 247 | 190 | 261 | 197 | 268 | 201 | 272 | 205 |
| Oct 26 | 254 | 194 | 269 | 201 | 276 | 205 | 279 | 208 |
| Nov 2 | 255 | 190 | 270 | 197 | 278 | 202 | 281 | 206 |
| Nov 9 | 265 | 191 | 280 | 198 | 290 | 203 | 293 | 208 |
| Maize | | | | | | | | |
| Sept 27 | 202 | 133 | 207 | 138 | 209 | 142 | 210 | 145 |
| Oct 5 | 193 | 134 | 198 | 139 | 200 | 143 | 201 | 146 |
| Oct 12 | 228 | 150 | 232 | 155 | 234 | 158 | 213 | 161 |
| Oct 19 | 215 | 152 | 220 | 157 | 222 | 160 | 222 | 163 |
| Oct 26 | 225 | 149 | 230 | 154 | 232 | 157 | 234 | 160 |
| Nov 2 | 227 | 150 | 232 | 156 | 235 | 159 | 236 | 163 |
| Nov 9 | 227 | 152 | 232 | 158 | 235 | 162 | 237 | 165 |

Source: Chicago Board of Trade (CBOT)

Table A23. Selected international prices for rice and price indices

| Period | International prices (USD per tonne) | | | | FAO indices (2002-2004=100) | | | | |
|------------------|--------------------------------------|--------------------------|----------------------------|------------------------------|-----------------------------|--------------|-------------|----------|----------|
| | Thai 100% B ¹ | Thai broken ² | US long grain ³ | Pakisan Basmati ⁴ | Total | Indica | | Japonica | Aromatic |
| | | | | | | High quality | Low quality | | |
| Annual (Jan/Dec) | | | | | | | | | |
| 2006 | 311 | 217 | 394 | 516 | 137 | 135 | 129 | 153 | 117 |
| 2007 | 335 | 275 | 436 | 677 | 161 | 156 | 159 | 168 | 157 |
| 2008 | 695 | 506 | 782 | 1 077 | 295 | 296 | 289 | 314 | 251 |
| 2009 | 587 | 329 | 545 | 937 | 253 | 229 | 197 | 341 | 232 |
| Monthly | | | | | | | | | |
| 2009 – October | 535 | 303 | 504 | 750 | 232 | 213 | 182 | 304 | 228 |
| 2009 – November | 558 | 338 | 528 | 750 | 241 | 227 | 207 | 295 | 227 |
| 2009 – December | 618 | 394 | 544 | 750 | 249 | 238 | 234 | 283 | 224 |
| 2010 – January | 601 | 426 | 542 | 830 | 251 | 232 | 237 | 289 | 232 |
| 2010 – February | 576 | 410 | 590 | 865 | 242 | 227 | 218 | 283 | 231 |
| 2010 – March | 543 | 388 | 522 | 880 | 219 | 213 | 205 | 235 | 232 |
| 2010 – April | 500 | 341 | 510 | 856 | 204 | 197 | 185 | 221 | 230 |
| 2010 – May | 475 | 322 | 485 | 760 | 200 | 192 | 181 | 221 | 221 |
| 2010 – June | 474 | 327 | 467 | 760 | 210 | 193 | 187 | 250 | 214 |
| 2010 – July | 466 | 345 | 452 | 752 | 214 | 189 | 191 | 261 | 214 |
| 2010 – August | 472 | 373 | 441 | 750 | 217 | 192 | 197 | 263 | 216 |
| 2010 – September | 499 | 414 | 449 | 750 | 232 | 205 | 227 | 266 | 224 |
| 2010 – October | 510 | 432 | 488 | 975 | 244 | 216 | 236 | 281 | 246 |

¹ White rice, 100 percent second grade, f.o.b. Bangkok, indicative traded prices.

² A1 super, f.o.b. Bangkok, indicative traded prices.

³ United States No.2, 4 percent broken, f.o.b.

⁴ Basmati: ordinary, f.o.b. Karachi.

Note: The FAO Rice Price Index is based on 16 rice export quotations. 'Quality' is defined by the percentage of broken kernels, with high (low) quality referring to rice with less (equal to or more) than 20 percent broken. The sub-index for Aromatic Rice follows movements in prices of Basmati and Fragrant rice.

Sources: FAO for indices. Rice prices: Jackson Son & Co. (London) Ltd., Thai Department of Foreign Trade (DFT) and other public sources.

Table A24. Selected international prices for oilcrop products and price indices

| Period | International prices (USD per tonne) | | | | | FAO indices (2002-2004=100) | | |
|--------------------------|--------------------------------------|--------------------------|-----------------------|---------------------------|----------------------------|-----------------------------|-----------------------|----------------|
| | Soybeans ¹ | Soybean oil ² | Palm oil ³ | Soybean cake ⁴ | Rapeseed meal ⁵ | Oilseeds | Edible/soap fats/oils | Oilcakes/meals |
| Annual (Oct/Sept) | | | | | | | | |
| 2003/04 | 322 | 632 | 488 | 257 | 178 | 121 | 116 | 114 |
| 2004/05 | 275 | 545 | 419 | 212 | 130 | 105 | 105 | 104 |
| 2005/06 | 259 | 572 | 451 | 202 | 130 | 100 | 125 | 107 |
| 2006/07 | 335 | 772 | 684 | 264 | 184 | 129 | 153 | 148 |
| 2007/08 | 549 | 1325 | 1050 | 445 | 296 | 217 | 202 | 243 |
| 2008/09 | 422 | 826 | 627 | 385 | 196 | 156 | 144 | 180 |
| 2009/10 | 429 | 924 | 806 | 388 | 220 | 162 | 173 | 215 |
| Monthly | | | | | | | | |
| 2008 - October | 394 | 928 | 545 | 338 | 156 | 151 | 153 | 162 |
| 2008 - November | 378 | 824 | 488 | 323 | 155 | 143 | 133 | 154 |
| 2008 - December | 366 | 737 | 508 | 307 | 172 | 137 | 126 | 154 |
| 2009 - January | 411 | 788 | 553 | 369 | 202 | 152 | 134 | 169 |
| 2009 - February | 386 | 744 | 571 | 378 | 215 | 144 | 131 | 172 |
| 2009 - March | 380 | 728 | 590 | 346 | 208 | 141 | 129 | 165 |
| 2009 - April | 410 | 802 | 699 | 383 | 220 | 151 | 147 | 175 |
| 2009 - May | 472 | 893 | 799 | 441 | 230 | 174 | 168 | 196 |
| 2009 - June | 504 | 894 | 734 | 445 | 227 | 184 | 160 | 200 |
| 2009 - July | 467 | 834 | 641 | 428 | 186 | 169 | 144 | 198 |
| 2009 - August | 474 | 891 | 722 | 437 | 186 | 171 | 156 | 204 |
| 2009 - September | 424 | 850 | 676 | 428 | 192 | 155 | 150 | 206 |
| 2009 - October | 427 | 891 | 676 | 413 | 187 | 158 | 152 | 207 |
| 2009 - November | 442 | 939 | 728 | 422 | 196 | 164 | 162 | 216 |
| 2009 - December | 448 | 931 | 791 | 425 | 219 | 167 | 169 | 224 |
| 2010 - January | 435 | 919 | 793 | 407 | 243 | 163 | 169 | 221 |
| 2010 - February | 406 | 915 | 804 | 393 | 230 | 154 | 169 | 214 |
| 2010 - March | 410 | 920 | 832 | 381 | 200 | 156 | 175 | 213 |
| 2010 - April | 412 | 900 | 826 | 378 | 205 | 157 | 174 | 224 |
| 2010 - May | 406 | 864 | 813 | 353 | 226 | 153 | 170 | 214 |
| 2010 - June | 408 | 860 | 794 | 342 | 194 | 154 | 168 | 206 |
| 2010 - July | 426 | 911 | 811 | 361 | 225 | 162 | 174 | 211 |
| 2010 - August | 457 | 1002 | 901 | 389 | 245 | 175 | 192 | 213 |
| 2010 - September | 468 | 1036 | 910 | 398 | 277 | 180 | 198 | 218 |
| 2010 - October* | 490 | 1149 | 985 | 413 | 288 | 191 | 217 | 227 |

* Preliminary.

¹ Soybeans: US, No.2 yellow, c.i.f. Rotterdam.² Soybean oil: Dutch, f.o.b. ex-mill.³ Palm oil: Crude, c.i.f. Northwest Europe.⁴ Soybean cake: Pellets, 44/45 percent, Argentina, c.i.f. Rotterdam.⁵ Rapeseed meal: 34 percent, Hamburg, f.o.b. ex-mill.

Note: The FAO indices are calculated using the Laspeyres formula; the weights used are the average export values of each commodity for the 2002-2004 period. The indices are based on the international prices of five selected seeds, ten selected oils and fats and seven selected cakes and meals.

Sources: FAO and Oil World.

Table A25. Selected international prices for milk products and dairy price index

| | International prices (USD per tonne) | | | | FAO dairy price index (2002-2004=100) |
|------------------|--------------------------------------|-------------------------------|--------------------------------|-----------------------------|--|
| Period | Butter ¹ | Skim milk powder ² | Whole milk powder ³ | Cheddar cheese ⁴ | |
| Annual (Jan/Dec) | | | | | |
| 2006 | 1 774 | 2 218 | 2 193 | 2 681 | 128 |
| 2007 | 2 959 | 4 291 | 4 185 | 4 055 | 212 |
| 2008 | 3 607 | 3 278 | 3 846 | 4 633 | 220 |
| 2009 | 2 335 | 2 255 | 2 400 | 2 957 | 142 |
| Monthly | | | | | |
| 2009 - October | 2 725 | 2 488 | 2 850 | 3 213 | 158 |
| 2009 - November | 3 688 | 3 375 | 3 525 | 4 263 | 208 |
| 2009 - December | 4 100 | 3 375 | 3 550 | 4 425 | 216 |
| 2010 - January | 3 800 | 3 063 | 3 300 | 4 200 | 202 |
| 2010 - February | 3 688 | 2 750 | 3 125 | 4 013 | 191 |
| 2010 - March | 3 725 | 2 875 | 3 175 | 3 800 | 187 |
| 2010 - April | 3 800 | 3 550 | 3 750 | 3 963 | 204 |
| 2010 - May | 4 075 | 3 500 | 3 963 | 4 025 | 209 |
| 2010 - June | 4 050 | 3 225 | 3 850 | 3 950 | 203 |
| 2010 - July | 4 000 | 3 138 | 3 375 | 3 950 | 198 |
| 2010 - August | 4 000 | 2 982 | 3 150 | 3 900 | 193 |
| 2010 - September | 4 100 | 3 138 | 3 357 | 3 950 | 198 |
| 2010 - October | 4 275 | 3 175 | 3 463 | 4 013 | 203 |

¹ Butter, 82 percent butterfat, f.o.b. Oceania; indicative traded prices

² Skim Milk Powder, 1.25 percent butterfat, f.o.b. Oceania, indicative traded prices

³ Whole Milk Powder, 26 percent butterfat, f.o.b. Oceania, indicative traded prices

⁴ Cheddar Cheese, 39 percent max. moisture, f.o.b. Oceania, indicative traded prices

Note: The FAO Dairy Price Index is derived from a trade-weighted average of a selection of representative internationally-traded dairy products

Sources: FAO for indices. Product prices: Mid-point of price ranges reported by Dairy Market News (USDA)

Table A26. Selected international meat prices

| Period | Pigmeat prices (USD per tonne) | | | Bovine meat prices (USD per tonne) | | | |
|-------------------------|--------------------------------|--------|-------|------------------------------------|-----------|-------|-----------|
| | United States | Brazil | Japan | United States | Argentina | Japan | Australia |
| Annual (Jan/Dec) | | | | | | | |
| 2006 | 1 986 | 1 964 | 4 540 | 3 803 | 2 270 | 5 685 | 2 547 |
| 2007 | 2 117 | 2 034 | 4 500 | 4 023 | 2 385 | 5 925 | 2 603 |
| 2008 | 2 270 | 2 834 | 5 117 | 4 325 | 3 615 | 6 275 | 3 138 |
| 2009 | 2 202 | 2 020 | 5 617 | 3 897 | 2 526 | 5 409 | 2 636 |
| Monthly | | | | | | | |
| 2009 - August | 2 246 | 1 889 | 5 533 | 3 883 | 2 357 | 5 494 | 2 727 |
| 2009 - September | 2 169 | 1 956 | 5 762 | 3 855 | 2 252 | 5 406 | 2 727 |
| 2009 - October | 2 105 | 2 071 | 5 798 | 3 648 | 2 476 | 5 566 | 2 648 |
| 2009 - November | 2 121 | 2 179 | 5 890 | 3 739 | 2 581 | 5 845 | 2 756 |
| 2009 - December | 2 169 | 2 167 | 5 830 | 3 862 | 2 813 | 5 830 | 2 800 |
| 2010 - January | 2 229 | 2 316 | 5 753 | 3 986 | 2 930 | 5 874 | 2 951 |
| 2010 - February | 2 233 | 2 309 | 5 813 | 4 076 | 3 016 | 5 813 | 3 125 |
| 2010 - March | 2 286 | 2 385 | 5 786 | 4 337 | 3 270 | 5 963 | 3 349 |
| 2010 - April | 2 533 | 2 576 | 5 619 | 4 426 | 4 438 | 5 961 | 3 596 |
| 2010 - May | 2 557 | 2 563 | 5 705 | 4 428 | 4 562 | 6 172 | 3 478 |
| 2010 - June | 2 624 | 2 499 | 5 780 | 4 577 | 4 440 | 6 000 | 3 197 |
| 2010 - July | 2 574 | 2 473 | 6 010 | 4 514 | 3 387 | 6 147 | 3 210 |
| 2010 - August | 2 576 | 2 578 | 6 152 | 4 653 | 3 765 | 5 988 | 3 365 |

Pig Meat Prices

UNITED STATES - Export unit value for frozen product - Foreign Trade Statistics of the United States Census Bureau

BRAZIL - Export unit value for pig meat, fob - A.B.I.P.E.C.

JAPAN - Pork Import Price (cif) : Frozen Boneless Cuts - A.L.I.C..

Bovine Meat Prices

UNITED STATES - Frozen beef, export unit value - Foreign Trade Statistics of the United States Census Bureau

ARGENTINA - Export unit value of frozen beef cuts - S.A.G.PyA.

JAPAN - Beef Import Price (c.i.f.) : Boneless Cuts, fresh or chilled - A.L.I.C.

AUSTRALIA - Up to Oct 02: cow forequarters frozen boneless, 85 percent chemical lean, cif the United States port (East Coast) ex-dock
From Nov 02: chucks and cow forequarters - World Bank.

Table A27. Selected international meat prices and FAO meat price indices

| Period | Poultry meat prices (USD per tonne) | | | FAO indices (2002-2004=100) ¹ | | | |
|-------------------------|-------------------------------------|-------|--------|--|-------------|----------|--------------|
| | USA | Japan | Brazil | Total meat | Bovine meat | Pig meat | Poultry meat |
| Annual (Jan/Dec) | | | | | | | |
| 2006 | 734 | 1 852 | 1 180 | 107 | 117 | 95 | 114 |
| 2007 | 935 | 1 964 | 1 443 | 112 | 121 | 98 | 135 |
| 2008 | 997 | 3 064 | 1 896 | 128 | 139 | 108 | 175 |
| 2009 | 989 | 2 541 | 1 552 | 118 | 118 | 110 | 153 |
| Monthly | | | | | | | |
| 2009 - August | 1 022 | 2 318 | 1 734 | 119 | 119 | 111 | 156 |
| 2009 - September | 1 002 | 2 311 | 1 695 | 118 | 118 | 111 | 153 |
| 2009 - October | 974 | 2 191 | 1 683 | 117 | 117 | 109 | 149 |
| 2009 - November | 1 019 | 2 165 | 1 743 | 120 | 121 | 111 | 153 |
| 2009 - December | 1 029 | 2 036 | 1 470 | 120 | 124 | 111 | 142 |
| 2010 - January | 1 052 | 2 196 | 1 725 | 124 | 128 | 112 | 155 |
| 2010 - February | 1 048 | 2 341 | 1 707 | 125 | 132 | 114 | 157 |
| 2010 - March | 1 034 | 2 392 | 1 693 | 129 | 139 | 115 | 157 |
| 2010 - April | 1 043 | 2 430 | 1 742 | 135 | 148 | 120 | 159 |
| 2010 - May | 1 055 | 2 649 | 1 748 | 137 | 148 | 121 | 165 |
| 2010 - June | 1 011 | 2 675 | 1 706 | 137 | 144 | 124 | 162 |
| 2010 - July | 1 038 | 2 742 | 1 788 | 134 | 140 | 125 | 167 |
| 2010 - August | 996 | 2 836 | 1 752 | 138 | 144 | 126 | 166 |

Poultry Meat Prices

UNITED STATES - Broiler cuts, export unit value - Foreign Trade Statistics of the United States Census Bureau

JAPAN - Broiler Import Price, cif; Frozen, other than leg quarters - A.L.I.C.

BRAZIL - Export unit value for chicken, fob - A.B.E.F.

The FAO Meat Price Indices consist of three poultry meat product quotations (the average weighted by assumed fixed trade weights), four bovine meat product quotations (average weighted by assumed fixed trade weights), two pig meat product quotations (average weighted by assumed fixed trade weights), one ovine meat product quotation (average weighted by assumed fixed trade weights): the four meat group average prices are weighted by world average export trade shares for 2002-2004.

Table A28. Selected international commodity prices

| | Currency and unit | Effective date | Latest quotation | One month ago | One year ago | Average 2005-2009 |
|-------------------------------------|-------------------|----------------|------------------|---------------|--------------|-------------------|
| Sugar (ISA daily price) | US cents per lb | 02-11-10 | 27.83 | 21.35 | 22.89 | 13.13 |
| Coffee (ICO daily price) | US cents per lb | 03-11-10 | 170.14 | 151.68 | 121.09 | 106.54 |
| Cocoa (ICCO daily price) | US cents per lb | 03-11-10 | 130.87 | 129.66 | 152.97 | 95.71 |
| Tea (FAO Tea Composite Price) | USD per kg | 30-09-10 | 2.85 | 2.83 | 3.18 | 2.10 |
| Cotton (NYBOT) ¹ | US cents per lb | 29-10-10 | 123.59 | 100.37 | 66.88 | 58.92 |
| Jute "BTD" (Fob Bangladesh Port) | USD per tonne | 29-10-10 | 800.00 | 820.00 | 630.00 | 425.40 |
| Wool (64's, London) ² | Pence per kg | | | | | |

¹ Quotation is from NYBOT (New York Board of Trade) as of July 2007

² Quotation discontinued as of July 2007

Market indicators

DEVELOPMENTS IN THE FUTURES: THE ROLE OF SWAP DEALERS, MONEY MANAGERS AND INDEX TRADERS IN THE UNITED STATES MAIZE, WHEAT AND SOYBEAN FUTURES AND OPTIONS MARKETS – AN UPDATE

Contributed by Frank S. Rose, College of Business, Lewis University, Romeoville, Illinois, United States

Introduction

In the June 2010 issue of Food Outlook, an article entitled “Futures Markets, Portfolio Diversification and Food Prices” examined the growing use of the maize, wheat and soybean futures and options markets at the Chicago Board of Trade (CBOT) for investment purposes. Some have expressed concern that this structural change in the markets’ composition has had deleterious effects on pricing, and the article presented some of the recent literature addressing this issue as well as descriptive data on market participation made available on a weekly basis by the United States market regulator, the Commodity Futures Trading Commission (CFTC).

This note provides updated data from the CFTC with a focus on how the market composition has changed between 2009 and 2010, and in the past six months, with respect to the activity of “non-traditional” market users such as swap dealers, money managers, and index traders.

Recent Price Volatility and Commentary on the Role of Speculators in the Markets

Concerns about speculation in the futures markets are not new, but recent price volatility has once again brought the issue into the headlines. For example, on 8 October, the United States Department of Agriculture released its World Agricultural Supply and Demand Estimates and Crop Production reports. The reports revised downward previous estimates of the production and stocks of maize, wheat and soybeans. The estimates took many analysts by surprise. At the CBOT that day, futures prices for all three commodities rose by the maximum allowable amount -- USD 0.30/bushel for maize, USD 0.60/bushel for wheat, and USD 0.70/bushel for soybeans.

On 10 October, the Financial Times reported the results of a poll which indicated that respondents in several countries believe speculators are more responsible than weather, government action or other factors for rising food prices. The article cited the recent price rises, commenting that they have raised fears of another food crisis.

Updated Data on Participation in the Maize, Wheat and Soybean Futures Markets

Tables 1-3 provide data on the open positions, or “open interest,” held by various participants in the three markets.

“Long” (or buy) positions in futures and options on futures are combined. Data are drawn from three CFTC databases permitting “snapshot” comparisons between April 2009 and April 2010, October 2009 and October 2010, and April 2010 and October 2010. Data are given for both 5 and 12 October 2010 to examine whether the limit day at the CBOT on 8 October triggered any immediate adjustments in open positions. The explanatory notes for the tables provide more detail on the various categories of market participants.

Table 1 illustrates a big jump in year-over-year open interest in all three markets and the increase in open interest that occurred following the 8 October 2010 limit move. In the maize market, the share of this open interest held by commercial traders (i.e. hedgers) is sharply lower in October 2010. Conversely, the share held by non-commercials (i.e. investors), and their net long positions, are sharply higher. There were significant increases in soybeans, as well. Non-commercials in the wheat market were net short on each date examined.

Table 2 focuses on “Index Traders”; i.e. managed funds, pension funds, certain swap dealers and other traders which engage in futures trading, mostly on the long side, with positions aimed at replicating commodity indexes, as part of portfolio diversification strategies. These participants have been broken out from the commercial and non-commercial categories, and placed in a separate category. Index traders’ share of long open interest is lower in October 2010 than it was in April 2010 or October 2009. These traders account for a larger share of the long open interest in the wheat market relative to maize or soybeans. Net long positions in October 2010 were large in all three markets.

Table 3 draws on a database that provides further insights on market participation. Data are given on traditional market users, “Producers/Merchants/Processors/Users,” as well as “Swap Dealers” and “Money Managers”. Here, all swap dealers are included in one category, those which do index trading and those that do not. (Swap dealers that use the markets for hedging are included in the commercial category in Tables 1 and 2.) Money managers conduct futures trading on behalf of investors. Market shares of swap dealers on the long side have fallen somewhat in the past 6 and 12 months in all three markets. As for money managers, their shares of long open interest and net long positions have risen significantly in the case of maize. In the wheat market, their relative importance in long open interest has declined

Market indicators

year-over-year but remained stable in 2010. In the soybean market, the share of long open interest year-over-year has not changed but the share has increased somewhat between April and October 2010. Net long positions of money managers in the soybean market increased substantially in October 2010.

Conclusion

Of the three CBOT markets considered, maize and soybean futures and options experienced the most noteworthy increases in the long open interest of “non-traditional”, investment-driven participants in the past 6 and 12 months. The data show a low, and often falling, share of long open interest held by “traditional” participants, but much of their activity is on the short side, hedging against price declines.

Going forward, it can be expected that investors seeking portfolio diversification will continue to watch for opportunities in futures and options. As recovery from the financial crisis proceeds, investors’ risk tolerances are likely to change, impacting the flow of investment funds into these markets. Returns in the stock and bond markets, and the impact of the US Dollar’s value on commodity prices are among the considerations that will influence investors’ decisions on market positioning.

It is important to note that this descriptive examination of the composition of open interest in the maize, wheat and soybean markets at the CBOT says nothing about the impact of the changes in market participation on prices. More rigorous analysis would be required before statements of cause and effect could be made.

References

Barchart, www.barchart.com.

Blas, Javier, “Speculators at Fault for Food Prices, says Poll,” Financial Times, October 10, 2010, www.ft.com.

Commodity Futures Trading Commission (CFTC), “Commitments of Traders Reports (Futures and Options Combined),” 2009 – 2010, www.cftc.gov.

Commodity Futures Trading Commission (CFTC), “Commitments of Traders Supplemental Reports (Futures and Options Combined),” 2009 – 2010, www.cftc.gov.

Commodity Futures Trading Commission (CFTC), “Disaggregated Commitments of Traders Reports (Futures and Options Combined),” 2009 – 2010, www.cftc.gov.

Rose, Frank S., “Futures Markets, Portfolio Diversification and Food Prices,” Food Outlook; Food and Agriculture Organization, June 2010, www.fao.org.

United States Department of Agriculture (USDA), Crop Production, October 8, 2010, www.usda.gov.

United States Department of Agriculture (USDA), World Agricultural Supply and Demand Estimates, October 8, 2010, www.usda.gov.

Explanatory Notes for Tables 1 - 3

Table 1: Open interest data were taken from the CFTC’s Commitments of Traders Reports (Futures and Options Combined) for April 7, 2009, April 6, 2010, October 6, 2009, October 5, 2010 and October 12, 2010. Cash prices were taken from Barchart. Open interest is the total of all futures and options contracts (5 000 bushels/contract) entered into and not yet offset by a transaction, delivery or exercise. “Long positions” are outstanding buy positions. “Commercial Traders” are those who are hedging a cash market position. “Non-Commercial Traders” are those holding positions for other reasons, usually investing.

Table 2: Data were taken from the CFTC’s Commitments of Traders Supplemental Reports (Futures and Options Combined). In this database, managed funds, pension funds and other passive investors from the “Non-Commercial Traders” category, and certain swap dealers and other non-traditional hedgers from the “Commercial Traders” category, are placed in the “Index Traders” category. “Index Traders” establish predominantly long positions aimed at replicating commodity indexes for portfolio diversification purposes.

Table 3: Data were taken from the CFTC’s Disaggregated Commitments of Traders Reports (Futures and Options Combined). In this database, the open interest data are separated into four different categories. “Producers/Merchants/Processors/Users” primarily engage in the production, processing, packing or handling of the physical commodity, and use futures and options to hedge associated risks. “Swap Dealers” engage primarily in swap transactions related to the commodity, and use futures and options to hedge or manage associated risks. “Money Managers” are engaged in managing and conducting futures and options trading on behalf of clients. The database also has an “Other Reportables” category which includes other traders with large open interest positions which are not placed in one of the other categories. This category is not included in Table 3 since its open interest positions are primarily reported as spreads; i.e., long and short positions are nearly equivalent.

Market indicators

Table 1: Open Interest of Commercial and Non-Commercial Traders; Selected Chicago Board of Trade Markets

| | CBOT Maize | CBOT Wheat | CBOT Soybeans |
|--|-----------------|---------------|---------------|
| Total Open Interest | | | |
| April 2009 | 1 252.0 | 417.1 | 476.9 |
| April 2010 | 1 522.8 | 552.8 | 578.1 |
| October 2009 | 1 378.0 | 430.2 | 607.9 |
| October 5, 2010 | 2 110.8 | 624.8 | 802.3 |
| October 12, 2010 | 2 357.1 | 649.0 | 882.9 |
| Commercial Traders – Long Positions | | | |
| April 2009 | 554.6 (44.3%) | 185.5 (44.4%) | 174.8 (36.7%) |
| April 2010 | 731.8 (48.1%) | 293.4 (53.1%) | 288.2 (49.8%) |
| October 2009 | 589.5 (42.8%) | 203.9 (47.4%) | 267.4 (44.0%) |
| October 5, 2010 | 718.4 (34.0%) | 329.8 (52.8%) | 320.3 (39.9%) |
| October 12, 2010 | 768.4 (32.6%) | 337.0 (51.9%) | 351.8 (39.9%) |
| Non-Commercial Traders – Long Positions | | | |
| April 2009 | 562.0 (44.9%) | 200.6 (48.1%) | 252.7 (53.0%) |
| April 2010 | 642.6 (42.2%) | 220.8 (39.9%) | 241.0 (41.7%) |
| October 2009 | 661.7 (48.0%) | 192.3 (44.7%) | 288.7 (47.5%) |
| October 5, 2010 | 1 189.7 (56.4%) | 249.3 (39.9%) | 419.8 (52.3%) |
| October 12, 2010 | 1 367.1 (58.0%) | 265.4 (40.9%) | 467.1 (52.9%) |
| Non-Commercial Traders – Net Long Positions | | | |
| April 2009 | 85.7 | -1.1 | 75.3 |
| April 2010 | 8.7 | -49.3 | 10.5 |
| October 2009 | 140.0 | -23.0 | 31.4 |
| October 5, 2010 | 434.6 | -9.6 | 149.7 |
| October 12, 2010 | 449.8 | -16.1 | 162.7 |
| Cash Prices (USD) | | | |
| April 2009 | 4.05/bushel | 4.62/bushel | 10.47/bushel |
| April 2010 | 3.45 | 3.97 | 9.20 |
| October 2009 | 3.93 | 3.27 | 9.85 |
| October 5, 2010 | 4.62 | 5.97 | 10.33 |
| October 12, 2010 | 5.56 | 6.51 | 11.37 |

Thousands of Contracts, with percent of total open interest in parentheses

Market indicators

Table 2: Open Interest of Commercial, Non-Commercial and Index Traders; Selected Chicago Board of Trade Markets

| | CBOT Maize | CBOT Wheat | CBOT Soybeans |
|--|-----------------|---------------|---------------|
| Commercial Traders – Long Positions | | | |
| April 2009 | 325.0 (26.0%) | 55.6 (13.3%) | 75.5 (15.8%) |
| April 2010 | 312.4 (20.5%) | 67.7 (12.2%) | 126.5 (21.9%) |
| October 2009 | 277.7 (20.2%) | 46.6 (10.8%) | 131.4 (21.6%) |
| October 5, 2010 | 294.8 (14.0%) | 117.9 (18.9%) | 146.6 (18.3%) |
| October 12, 2010 | 337.4 (14.3%) | 121.0 (18.6%) | 173.2 (19.6%) |
| Non-Commercial Traders – Long Positions | | | |
| April 2009 | 497.6 (39.7%) | 166.9 (40.0%) | 223.6 (46.9%) |
| April 2010 | 567.9 (37.3%) | 190.1 (34.4%) | 211.9 (36.6%) |
| October 2009 | 573.5 (41.6%) | 149.4 (34.7%) | 255.6 (42.1%) |
| October 5, 2010 | 1 102.3 (52.2%) | 218.1 (34.9%) | 388.5 (48.4%) |
| October 12, 2010 | 1 279.3 (54.3%) | 233.9 (36.0%) | 435.1 (49.3%) |
| Index Traders – Long Positions | | | |
| April 2009 | 294.0 (23.5%) | 163.6 (39.2%) | 128.5 (26.9%) |
| April 2010 | 494.1 (32.4%) | 256.5 (46.4%) | 190.8 (26.9%) |
| October 2009 | 399.9 (29.0%) | 200.2 (46.6%) | 169.0 (27.8%) |
| October 5, 2010 | 511.0 (24.2%) | 243.2 (38.9%) | 204.9 (25.5%) |
| October 12, 2010 | 518.8 (22.0%) | 247.6 (38.1%) | 210.7 (23.9%) |
| Index Traders – Net Long Positions | | | |
| April 2009 | 251.3 | 136.3 | 111.2 |
| April 2010 | 452.1 | 220.1 | 169.9 |
| October 2009 | 355.2 | 175.6 | 145.9 |
| October 5, 2010 | 480.5 | 196.3 | 193.0 |
| October 12, 2010 | 479.7 | 197.7 | 194.4 |

Thousands of Contracts, with percent of total open interest in parentheses

Market indicators

Table 3: Open Interest of Producers/Merchants/Processors/Users Swap Dealers and Money managers;

| | CBOT Maize | CBOT Wheat | CBOT Soybeans |
|--|---------------|---------------|---------------|
| Producers/Merchants/Processors/Users - Long Positions | | | |
| April 2009 | 294.0 (23.5%) | 45.7 (11.0%) | 67.4 (14.1%) |
| April 2010 | 279.5 (18.4%) | 59.1 (10.6%) | 119.8 (20.7%) |
| October 2009 | 243.5 (17.7%) | 38.4 (8.9%) | 121.3 (20.0%) |
| October 5, 2010 | 252.5 (12.0%) | 91.7 (14.7%) | 135.2 (16.9%) |
| October 12, 2010 | 290.6 (12.3%) | 95.5 (14.7%) | 161.7 (18.3%) |
| Swap Dealers - Long Positions | | | |
| April 2009 | 260.6 (20.8%) | 139.7 (33.5%) | 107.5 (22.5%) |
| April 2010 | 452.3 (29.7%) | 234.3 (42.4%) | 168.4 (29.1%) |
| October 2009 | 346.0 (25.1%) | 165.5 (38.5%) | 146.0 (24.0%) |
| October 5, 2010 | 466.0 (22.1%) | 238.1 (38.1%) | 185.1 (23.1%) |
| October 12, 2010 | 477.9 (20.3%) | 241.5 (37.2%) | 190.1 (21.5%) |
| Swap Dealers – Net Long Positions | | | |
| April 2009 | 182.6 | 98.7 | 85.1 |
| April 2010 | 389.6 | 174.8 | 141.8 |
| October 2009 | 270.8 | 118.8 | 104.9 |
| October 5, 2010 | 382.7 | 176.0 | 157.4 |
| October 12, 2010 | 380.6 | 177.4 | 161.2 |
| Money Managers - Long Positions | | | |
| April 2009 | 216.6 (17.3%) | 93.9 (22.5%) | 127.0 (26.6%) |
| April 2010 | 292.6 (19.2%) | 101.0 (18.3%) | 120.4 (20.8%) |
| October 2009 | 305.0 (22.1%) | 98.9 (23.0%) | 141.0 (23.2%) |
| October 5, 2010 | 598.6 (28.4%) | 118.3 (18.9%) | 207.4 (25.9%) |
| October 12, 2010 | 646.6 (27.4%) | 128.8 (19.9%) | 221.3 (25.1%) |
| Money Managers - Net Long Positions | | | |
| April 2009 | 61.1 | 7.5 | 67.4 |
| April 2010 | -18.2 | -50.2 | 19.0 |
| October 2009 | 132.0 | -11.9 | 38.1 |
| October 5, 2010 | 401.1 | 16.2 | 138.5 |
| October 12, 2010 | 410.4 | 11.9 | 146.1 |

Thousands of Contracts, with percent of total open interest in parentheses

Market indicators

OCEAN FREIGHT RATES

Contributed by the International Grains Council (www.igc.org.uk)

OCEAN FREIGHT MARKET (December 2009 – mid-May 2010)

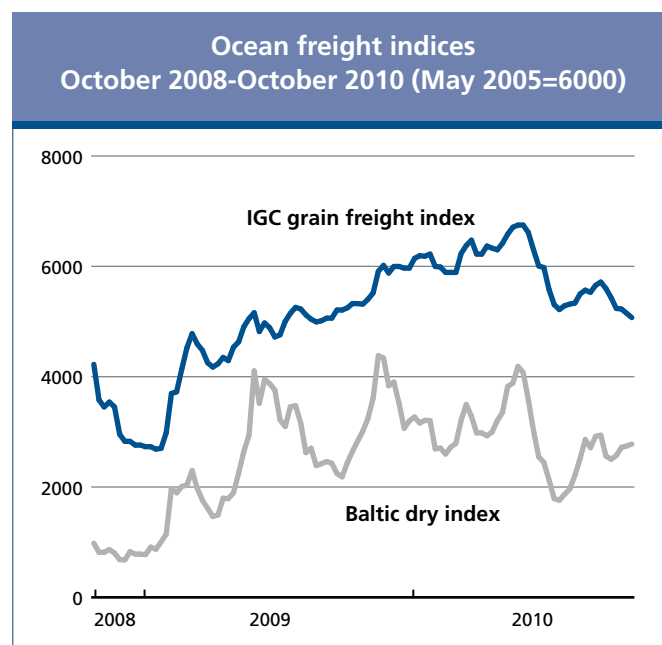
While remaining volatile, ocean freight rates for grains and oilseeds eased between mid-May and October 2010, reflecting surplus tonnage capacity and the northern hemisphere summer slowdown in chartering activity. In June and July dry bulk rates fell sharply in all market sectors, especially for larger-sized tonnage; the leading negative factors included weaker demand for minerals caused by higher prices for raw materials, a reduction in steel output in China and a build-up of prompt tonnage. The arrival of newly-built ships, which this year are expected to be more than double those commissioned in 2009, added to the bearish sentiment.

In August, however, Capesize and Panamax rates increased markedly due to a renewed surge in demand for minerals, both in Asia and Europe, as well as a tightening tonnage supply in the Pacific. Despite steady demand for grains and oilseeds, handysize rates showed only a modest rise as surplus spot tonnage increased, particularly in the Atlantic, on routes from the US Gulf and out of South America. Following a sharp drop in Black Sea grain exports, additional volumes were shipped from the EU and US.

The Baltic Dry Index (BDI) in mid-July having dipped to its lowest point in 15 months, bounced back in August, mainly because of increased Capesize activity. However, by the end of October it was still nearly one-third lower than in May. Over the same period, the IGC Grain Freight Index (GFI)¹ declined by only 13 percent.

In June/July, **Panamax** rates fell in both basins due to an oversupply of tonnage, with owners struggling to find cargoes, largely due to seasonal factors. Towards August, however, the sector found some support from improved demand, higher freight futures and some tightening in tonnage availability. Due to Black Sea cancellations, after the Russian Federation's export ban, several buyers looked for wheat tonnage out

¹ The GFI distinguishes grain routes from mineral and other dry bulk routes also included in more general dry bulk indices such as the Baltic Dry Index (BDI). The GFI is composed of 15 major grain routes, representing the main grain trade flows, with five rates from the United States, and two each from Argentina, Australia, Canada, the European Union and the Black Sea. Vessel sizes are adequately represented, with ten Panamax rates and five in the Handysize sector. The GFI is calculated weekly, with the average for the four weeks to 18 May 2005 taken as its base of 6000.



of Argentina and other origins. However, the rise in rates was short-lived: the market fell back in mid-September due to reduced trading activity and excess tonnage, particularly in the US Gulf, as more ships headed into the area. Heavy September rains delayed loading in the Brazilian ports of Santos and Paranagua, creating considerable congestion. In the six months to the end of October, rates for transatlantic roundtrips fell by more than half to about USD 17 700 daily. In Southeast Asia, rates remained weak in October due to the oversupply of tonnage, particularly on routes from Indonesia.

The Atlantic **Handysize/Supramax** market, after falling in mid-2010, remained depressed, despite some increase in chartering activity on routes from the US Gulf and South America in September. The weakness was largely attributed to excess fleet capacity, with a number of ballasters looking for cargoes, notably in the eastern Mediterranean. October grain fixtures included a cargo from Argentina to the EU (Italy) at USD 28.00/tonne, while business from the US Gulf to the Mediterranean ranged between USD 27 500 and USD 28 750 daily. In the Pacific, a trip from China and Indonesia was fixed at USD 20 500 daily.

Capesize rates fell most steeply in the middle of the year, as China curtailed its mineral imports following a 23 percent increase in iron ore prices. Tonnage overcapacity also weighed. However, the sector rebounded in August after China stepped up its purchases of thermal coal because of higher electricity

Market indicators

| SELECTED ROUTES (monthly averages) USD/tonne | | | | |
|--|----------------|-----------------|---------------|------------------|
| | Brazil/EU ARAH | US Gulf/EU ARAH | US Gulf/Japan | US Gulf/S. Korea |
| Vessel size | Handysize | Panamax | Panamax | Panamax |
| Oct'09 | 40 | 32 | 58 | 61 |
| Nov'09 | 40 | 36 | 64 | 67 |
| Dec'09 | 41 | 36 | 69 | 72 |
| Jan'10 | 42 | 38 | 72 | 75 |
| Feb'10 | 42 | 36 | 68 | 71 |
| Mar'10 | 44 | 37 | 69 | 71 |
| Apr'10 | 47 | 38 | 71 | 73 |
| May'10 | 50 | 40 | 73 | 75 |
| Jun'10 | 49 | 37 | 70 | 72 |
| Jul'10 | 42 | 31 | 55 | 57 |
| Aug'10 | 45 | 32 | 57 | 59 |
| Sep'10 | 44 | 32 | 62 | 64 |
| Oct'10 | 41 | 28 | 59 | 61 |

needs during the hot summer. In October, a reduction in iron ore prices triggered restocking at China's steel mills, further boosting rates and almost returning Capesize levels to those seen in May.

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IMPLIED VOLATILITIES

With concerns rising about the increasing un-predictability in international markets, Food Outlook now regularly features an analysis of implied volatility. Based on the expectation of major commodity exchanges, the metric provides an insight into which direction global markets for several key commodities are likely headed as well as the uncertainty about future price movements.

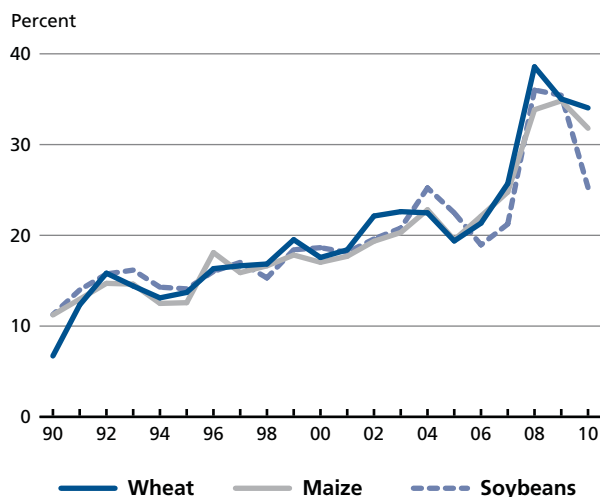
In the aftermath of the 2007/08 turmoil, implied volatilities for wheat, maize and soybeans steadily fell after more certainty was reinstated into markets. Soybean volatility for instance fell to a 32 month low in May 2010. However, soon afterward when doubts began to emerge over Russia's ability to meet grain export commitments, followed by similar concerns over United States maize prospects and with expected demand outstripping soybean supply, implied volatility began to move

upwards again for all three commodities. As implied volatility is measured as a percentage of the deviation in the futures price (six months ahead) from underlying expected value, under reasonable assumptions, one can say using the most recent data in October 'the market estimates with 68 percent certainty that prices will change by 36 percent for wheat, 35 percent for maize and 28 percent for soybeans'.

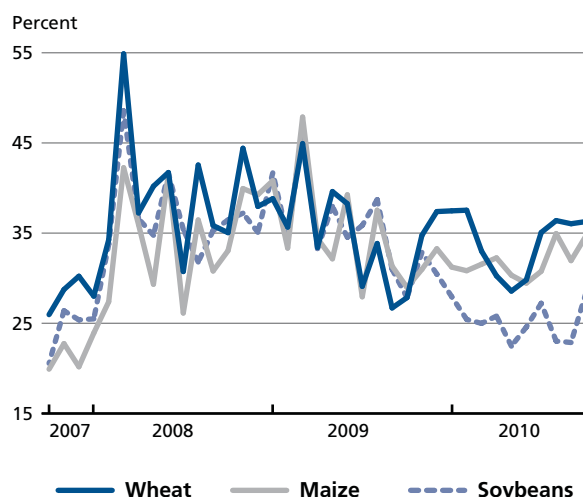
In broad perspective, unpredictable events in the past few months, many of which were profound, have translated to higher uncertainty ahead for traders, but the scale of increases in implied volatility suggest that markets to not expect that the world is heading towards a repeat of the 2007/08 event, at least for the moment.

Market indicators

**Implied volatilities (annual)
1990-2010**



**Implied volatilities (monthly)
October 2007 to October 2010**



Implied Volatilities: 1990-2010 and October-2007 to October-2010

The Black-Scholes model was used to compute implied volatilities from Chicago Board of Trade underlying data. Key inputs and assumptions are as follows: (i) 6-month time expiration on contracts; (ii) settlement premium for the call options 'at the money' i.e. with a strike price nearest to the settlement price for the futures contract associated with the call option contract (mid-monthly prices were used); (iii) option strike price; (iv) futures settlement price and (v) 6-month US treasury bill yields were assumed for the risk-free rate.

Measuring Implied Volatility

Implied volatility represents the market's expectation of how much the price of a commodity is likely to move in the future. It is called "implied" because, by dealing with future events, it cannot be observed, and can only be inferred from the prices of derivative contracts such as "options".

An "option" gives the bearer the right to sell a commodity (put option) or buy a commodity (call option) at a specified price for a specified future delivery date. Options are just like any other financial instrument, such as futures contracts, and are priced based on the market estimates of future prices, as well as the uncertainty surrounding these estimates. The more divergent are traders' expectations about future prices, the higher the underlying uncertainty and hence the implied volatility of the underlying commodity.

Does implied volatility matter? Prices of derivative commodities are determined by underlying expectations and uncertainties about such expectations, pertinent to the market and the commodity. Hence, implied volatility, as reflected or inferred by the prices of derivative contracts, is an important component of the price discovery process and is a barometer as to how traders expect prices to evolve in the shorter term.

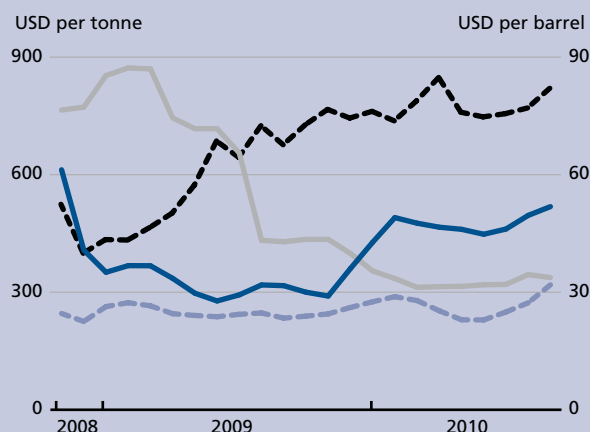
In a broad perspective, unpredictable events in the past few months, many of which were profound, have translated to higher uncertainty ahead for traders, but the scale of increases in implied volatility suggest that markets do not expect that the world is heading towards a repeat of the 2007/08 event, at least for the moment.

Market indicators

FOOD IMPORT BILLS

Monthly fertilizers and crude oil prices November 2008 to November 2010

Soaring crop prices in the past few months have begun translating into higher demand for fertilizers. After remaining flat in the first six months of 2010, international fertilizer quotations are on the rise, especially those for urea and diammonium phosphate (DAP). Rising petroleum and natural gas prices also contributed to their strengthening after phosphate prices had been under strain from large exports by China and increased supplies from Saudi Arabia. Ample availabilities, however, are still bearing down on potash quotations. With substantial pressure for larger global harvests next year, fertilizer usage could further intensify, resulting in higher fertilizer quotations. In addition, the prospect of additional gains in crude oil prices could push the cost of derived nitrate production, which would also shore up fertilizer prices in 2011.

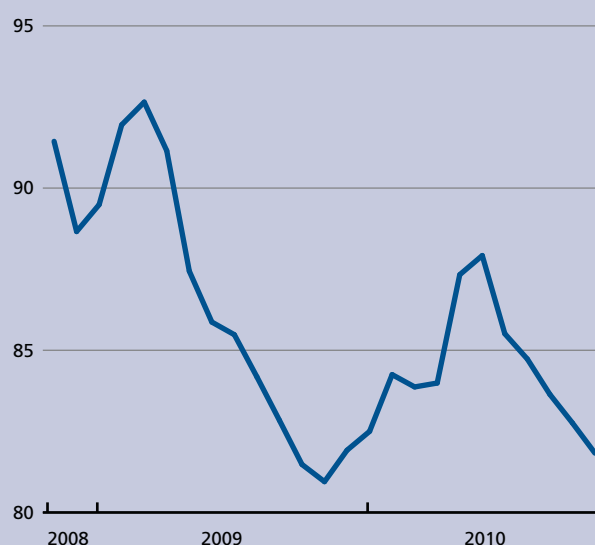


Sources: IMF, World Bank

Evolution of the US Dollar exchange rate¹ November 2008 to November 2010

The US Dollar has experienced a fair degree of volatility over the past 12 months, but since June it has fallen interruptedly against major currencies, losing around 7 percent of its value in real terms. The decline in the dollar has given significant support to commodity prices in world markets over this period.

January 1980=100



¹ Price-adjusted major currencies US Dollar index

Source: US Federal Reserve

Global cost of imported food could again surpass USD 1 trillion in 2010

At USD 1.026 trillion, the forecast cost of importing foodstuffs at the global level in 2010 would be some USD 133 billion or 15 percent more than in 2009, and only a fraction short of the landmark USD 1.031 trillion reached in 2008. Under a new methodology, which re-categorizes products in concordance with international trade classifications, global food import bills in 2010 are strongly characterized by sharply rising expenditures on products other than cereals and stable cereal costs, confirming the trend that emerged in the June report.

On the back of sustained economic recovery and rising freight costs, particularly in the latter half of the year, non-cereals are expected to account for almost all the annual growth in global food bills, with values foreseen to surpass the record levels registered in 2008. The cost of imported livestock products, especially dairy, is expected to increase by

almost USD 50 billion, under the combined effect of higher import volumes and prices.

The composition of the imported food basket, by and large, mirrors a return to economic growth in many countries, with large increases expected for the high-value products. In particular, expenditures on vegetables and fruits could climb by USD 25 billion to USD 191 billion, firmly establishing this product group as the most expensive in the globally traded food basket. Strong gains are also anticipated for vegetable oils and for fish products. In spite of soaring sugar quotations since mid-2010, the annual rise in the global sugar bill could be limited to around 8 percent owing to a foreseen contraction in trade. In contrast, the world cereal import bill in 2010 is expected to remain virtually unchanged from the previous year's level. Compared with 2009, a reduction in

Market indicators

Forecast import bills of total food and major foodstuffs (USD billion)

| | World | | Developed | | Developing | | LDC | | LIFDC | | Sub-Saharan Africa | |
|---------------------------------|--------------|----------------|--------------|--------------|--------------|--------------|-------------|-------------|--------------|--------------|--------------------|-------------|
| | 2009 | 2010 | 2009 | 2010 | 2009 | 2010 | 2009 | 2010 | 2009 | 2010 | 2009 | 2010 |
| TOTAL FOOD | 892.8 | 1 026.0 | 587.0 | 676.9 | 305.8 | 349.1 | 22.5 | 24.9 | 136.1 | 163.6 | 25.1 | 27.8 |
| Vegetable and Fruits | 165.9 | 191.4 | 130.9 | 151.0 | 35.0 | 40.4 | 2.0 | 2.3 | 13.9 | 16.0 | 1.8 | 2.0 |
| Cereals | 127.9 | 128.8 | 60.0 | 61.8 | 67.9 | 67.1 | 8.5 | 7.5 | 29.1 | 25.6 | 9.9 | 9.6 |
| Meat | 113.7 | 133.8 | 84.4 | 98.1 | 29.3 | 35.7 | 1.4 | 1.7 | 6.9 | 8.4 | 1.7 | 2.0 |
| Fish | 93.8 | 108.2 | 72.3 | 83.4 | 21.5 | 24.8 | 0.4 | 0.5 | 7.2 | 8.3 | 2.3 | 2.6 |
| Dairy | 57.7 | 86.7 | 39.8 | 59.5 | 17.9 | 27.2 | 1.4 | 2.2 | 6.6 | 10.9 | 1.6 | 2.4 |
| Vegetable, Oils and Animal Fats | 66.1 | 81.8 | 31.3 | 38.7 | 34.8 | 43.1 | 3.4 | 4.4 | 21.8 | 27.9 | 2.5 | 3.2 |
| Oilseeds | 52.2 | 58.5 | 19.7 | 20.5 | 32.5 | 38.0 | 0.4 | 0.7 | 23.7 | 36.1 | 0.2 | 0.2 |
| Sugar | 38.6 | 41.6 | 21.8 | 24.2 | 16.8 | 17.4 | 2.4 | 2.8 | 9.1 | 10.7 | 2.4 | 2.6 |

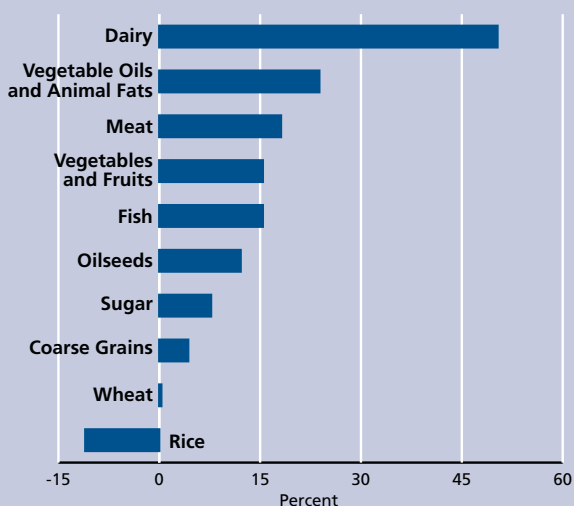
wheat traded volume and in rice quotations could offset the impact of higher prices of wheat and coarse grains on global cereal trade value. The recent turmoil in grain markets is not expected to dent the overall benefit of relatively stable expenditures on imported cereals in 2010. The cost of purchasing food on the international market place for the

most economically vulnerable groups is also set to increase in 2010. LDCs expenditures could register an 11 percent rise, but at 20 percent, the foreseen rise in Low-Income Food Deficit Countries (LIFDCs) bills would be the highest of all economic groups, far exceeding the increase at the global level. Putting this in a broader perspective, foodstuffs could account for roughly 17 percent of all expenditures on imports of vulnerable countries, compared with a world average of only 7 percent. Much respite for them could come by way of a considerable fall in the cost of importing cereals on account of robust domestic production prospects, but much higher expenditures on other foods easily counteract these gains.

With 2010 drawing to a close, attention is now on prospects for next year. Sharp increases in international quotations for grains, sugar and products in the oilseed complex in recent months are already a cause for concern. It is unlikely that the effects of higher prices will be contained within their respective sectors, as many of these commodities constitute major feedstock ingredients for the livestock or biofuel sectors. With price increases largely reflecting scarcity in export supply, global competition for securing foodstuffs is set to intensify.

Forecast changes in global food import bills by type
2010 over 2009 (%)

Rising global demand for non-staple foodstuffs has boosted food import bills to near record levels. Higher international prices for livestock products and vegetable oils twinned with larger trade volumes are likely to lead to much greater import costs for those commodities compared to 2009. On the other hand, rice bills are expected to fall by the end of the year, since quotations are still foreseen to average lower than last year and transactions virtually unchanged.



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THE FAO PRICE INDICES

FAO Global Food Consumption Price Index

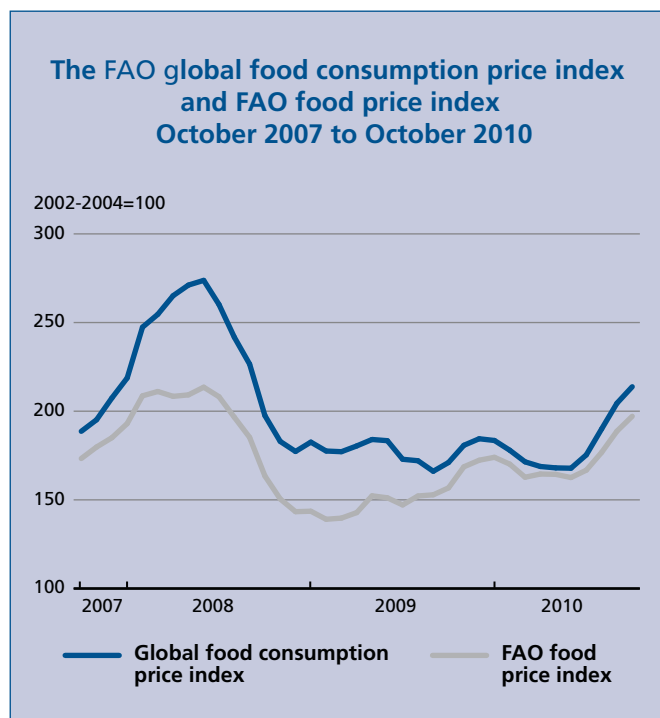
The **FAO Global Food Consumption Price Index** tracks changes in the cost of the global food basket as portrayed by the latest FAO world food balance sheet (see <http://fao-stat.fao.org/>). After falling almost to a three-year low in June 2010, the index began rebounding sharply thereafter, reaching a 24-month high of 214 points in October. This implies that the cost of the typical food basket around the world is now more than double its cost in 2002-2004. Rising grain prices in recent months, which carry a higher weight in food consumption, are responsible for most of the gain in 2010, but across the board increases in quotations of most other commodities, especially vegetable oils and animal fats, also contributed.

FAO Food Price Index *

The **FAO Food Price Index** averaged 197 points in October 2010, up 25 percent from the corresponding period last year and 4 percent above the September average. The Index climbed for the fourth consecutive month, reaching its highest level in 27 months. The October average was only 7 percent, or 16 points, below its record high value of June 2008. International prices of nearly all the commodities included in the index rose, but in particular sugar, soybeans and coarse grains.

The **FAO Cereal Price Index** averaged 219 points in October 2010, 5 percent above the September average, but up as much as 32 percent, or 53 points, from October 2009. Despite increasing steadily in recent months, the Index still falls short of the peak value of 274 points reached in April 2008. International prices of all cereals increased in recent months with export prices of barley, maize and wheat climbing fastest, mostly because of production shortfalls in major producing countries, especially in the CIS. Between July and October, prices of wheat and coarse grains increased by 35 and 47 percent, respectively, while rice prices gained 14 percent.

The **FAO Oils/Fats Price Index** averaged 217 points in October 2010, which is high in historic terms. Compared with October 2009 the index was up 66 points or 43 percent, remaining,



however, some 23 percent below the June 2008 peak. The firmness in prices is the result of relatively slow growth in global oils/fats production, not keeping pace with a sustained expansion in demand from both food and biodiesel sectors.

The **FAO Meat Price Index** averaged 138 points in October 2010, up 12 percent from January and 18 percent from October last year. International poultry and pig meat prices experienced a steady upward trend all through the year; reflecting in the early months the recovering world economy and more recently a tightening of supplies due to increasing production costs. Beef and ovine meat prices constrained by tight supplies from reduced herds remained at firm levels.

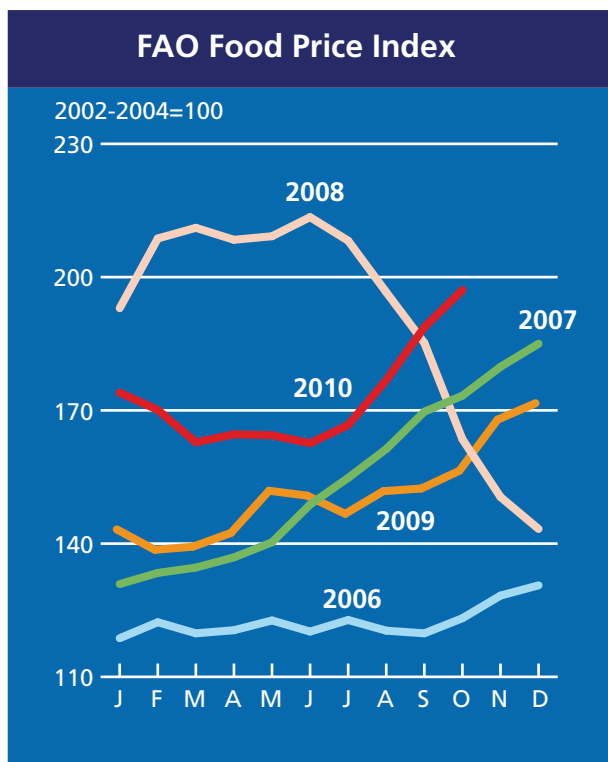
The **FAO Dairy Price Index** averaged 203 points in October 2010. The index hovered around 200 points between January

* The FAO food price indices are updated on monthly basis and are available on <http://www.fao.org/worldfoodsituation/>

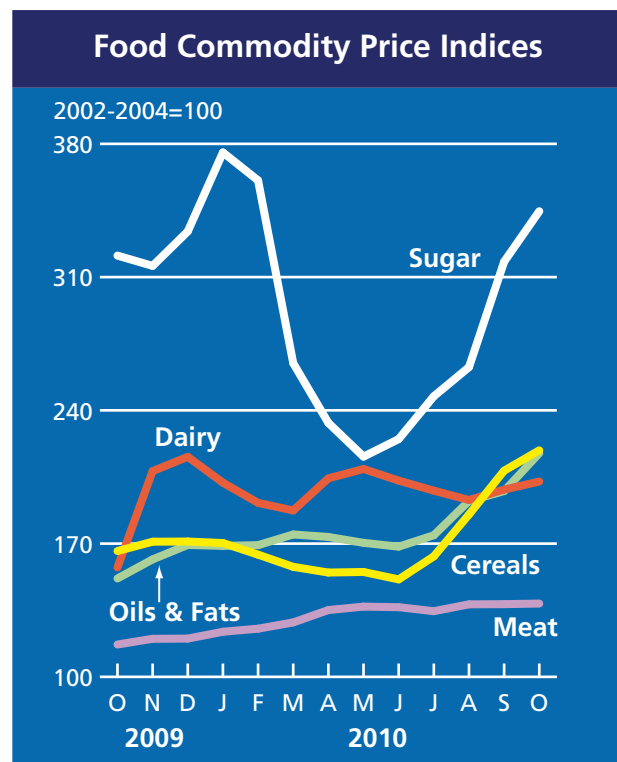
Market indicators

and October 2010, reaching a mean of 199 over the period, 56 percent more than in January-October 2009. The strength reflected a dynamic demand from Asia and some oil exporting countries and relatively tight world availabilities for export. Despite their 2010 rally, in October dairy prices were still 25 percent cheaper than their November 2007 peak. However, at USD 4150 per tonne in October, butter prices had overshoot that record by 3 percent.

The **FAO Sugar Price Index** averaged 345 points in October 2010, up 7 percent from the corresponding period last year, but still 8 percent down from the 30-year peak reached in January 2010. International sugar prices rose steadily between May 2010 and October 2010 on the back of deteriorating supply prospects for the new 2010/11 season and an expected increase in import demand.



The **FAO Food Price Index** is a measure of the monthly change in international prices of a basket of food commodities.



The **FAO Food Commodity Price Indices** show changes in monthly international prices of major food commodities.

Market indicators

| FAO Food Price Index | | | | | | |
|----------------------|-------------------------------|-------------------|--------------------|----------------------|----------------------------|--------------------|
| | Food Price Index ¹ | Meat ² | Dairy ³ | Cereals ⁴ | Oils and Fats ⁵ | Sugar ⁶ |
| 2000 | 90 | 94 | 95 | 85 | 68 | 116 |
| 2001 | 92 | 94 | 107 | 86 | 68 | 123 |
| 2002 | 90 | 90 | 82 | 95 | 87 | 98 |
| 2003 | 98 | 99 | 95 | 98 | 101 | 101 |
| 2004 | 111 | 111 | 123 | 107 | 112 | 102 |
| 2005 | 115 | 113 | 135 | 103 | 104 | 140 |
| 2006 | 122 | 107 | 128 | 121 | 112 | 210 |
| 2007 | 154 | 112 | 212 | 167 | 169 | 143 |
| 2008 | 191 | 128 | 220 | 239 | 225 | 182 |
| 2009 | 152 | 118 | 142 | 174 | 150 | 257 |
| 2009 October | 157 | 117 | 158 | 166 | 152 | 321 |
| November | 169 | 120 | 208 | 171 | 162 | 316 |
| December | 172 | 120 | 216 | 171 | 169 | 334 |
| 2010 January | 174 | 124 | 202 | 170 | 169 | 376 |
| February | 170 | 125 | 191 | 164 | 169 | 361 |
| March | 163 | 129 | 187 | 158 | 175 | 265 |
| April | 165 | 135 | 204 | 155 | 174 | 233 |
| May | 164 | 137 | 209 | 155 | 170 | 216 |
| June | 163 | 137 | 203 | 151 | 168 | 225 |
| July | 167 | 134 | 198 | 163 | 174 | 247 |
| August | 177 | 138 | 193 | 185 | 192 | 263 |
| September | 189 | 138 | 198 | 208 | 198 | 318 |
| October | 197 | 138 | 203 | 219 | 217 | 345 |

¹ **Food Price Index:** Consists of the average of six commodity group price indices mentioned above weighted with the average export shares of each of the groups for 2002-2004: in total 55 commodity quotations considered by FAO Commodity Specialists as representing the international prices of the food commodities noted are included in the overall index.

² **Meat Price Index:** Consists of three poultry meat product quotations (the average weighted by assumed fixed trade weights), four bovine meat product quotations (average weighted by assumed fixed trade weights), two pigmeat product quotations (average weighted by assumed fixed trade weights), one ovine meat product quotation (average weighted by assumed fixed trade weights): the four meat group average prices are weighted by world average export trade shares for 2002-2004.

³ **Dairy Price Index:** Consists of butter, SMP, WMP, cheese, casein price quotations; the average is weighted by world average export trade shares for 2002-2004.

⁴ **Cereals Price Index:** This index is compiled using the grains and rice price indices weighted by their average trade share for 2002-2004. The grains Price Index consists of International Grains Council (IGC) wheat price index, itself average of nine different wheat price quotations, and one maize export quotation; after expressing the maize price into its index form and converting the base of the IGC index to 2002-2004. The Rice Price Index consists of three components containing average prices of 16 rice quotations: the components are Indica, Japonica and Aromatic rice varieties and the weights for combining the three components are assumed (fixed) trade shares of the three varieties.

⁵ **Oil and Fat Price Index:** Consists of an average of 11 different oils (including animal and fish oils) weighted with average export value shares of each oil product for 2002-2004.

⁶ **Sugar Price Index:** Index form of the International Sugar Agreement prices with 2002-2004 as base.



Food Outlook is published by the Trade and Market Division of FAO under Global Information and Early Warning System (GIEWS). It is a biannual publication (June and November) focusing on developments affecting global food and feed markets. Each report provides comprehensive assessments and short term forecasts for production, utilization, trade, stocks and prices on a commodity by commodity basis and includes feature articles on topical issues. Food Outlook maintains a close synergy with another major GIEWS publication, Crop Prospects and Food Situation, especially with regard to the coverage of cereals. Food outlook is available in English, French, Spanish and Chinese.

Food Outlook and other GIEWS reports are available on the internet as part of the FAO world wide web (<http://www.fao.org/>) at the following URL address: <http://www.fao.org/gIEWS/>. Other relevant studies on markets and global food situation can be found at <http://www.fao.org/worldfoodsituation>.

This report is based on information available up to early November 2010.

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